



SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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

RECEIVED

FEB 03 2017

Well File No.

28756

ND Oil & Gas Div.

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

<input type="checkbox"/> Notice of Intent	Approximate Start Date
<input checked="" type="checkbox"/> Report of Work Done	Date Work Completed January 19, 2017
<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
Kline Federal 5300 31-18 6B

Footages	Qtr-Qtr	Section	Township	Range
2457 F S L	238 F W L	LOT3	18	153 N 100 W
Field Baker	Pool Bakken		County McKenzie	

24-HOUR PRODUCTION RATE

Before	After
Oil	Bbls
Water	Bbls
Gas	MCF

Name of Contractor(s)

Address	City	State	Zip Code
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DETAILS OF WORK

Effective 01/19/2017 the above referenced well was converted to rod pump.

End of Tubing: 2-7/8" L-80 tubing @ 10335.99'

Pump: 2-1/2" x 2.0" x 24' insert pump @ 9906.62'

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 February 2, 2017	
Email Address jswenson@oasispetroleum.com		

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date 2-15-2017	
By 	
Title TAYLOR ROTH	
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.

28756

Received

FEB 22 2016

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

Notice of Intent

Approximate Start Date

Report of Work Done

Date Work Completed

December 4, 2015

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

ND OIL & GAS

Drilling Prognosis

Spill Report

Redrilling or Repair

Shooting

Casing or Liner

Acidizing

Plug Well

Fracture Treatment

Supplemental History

Change Production Method

Temporarily Abandon

Reclamation

Other

Well is now on pump

Well Name and Number

Kline Federal 5300 31-18 6B

Footages

2457

F

S

L

238

F

W

L

LOT3

Qtr-Qtr

Section 18

Township 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 12/04/2015 the above referenced well is on pump.

End of Tubing: 2-7/8" L-80 tubing @ 9808.86'

Pump: ESP @ 10040'

Company Oasis Petroleum North America LLC		Telephone Number 281-404-9436
Address 1001 Fannin, Suite 1500		
City Houston		State TX
Signature 		Printed Name Jennifer Swenson
Title Regulatory Specialist		Date February 19, 2016
Email Address jswenson@oasispetroleum.com		

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date 3-8-2016	
By Taylor Roth	
Title TAYLOR ROTH	
Engineering Technician	



WELL COMPLETION OR RECOMPLETION REPORT - FORM

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



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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 Kline Federal 5300 31-18 6B				Spacing Unit Description Sec. 17/18 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				
<input type="checkbox"/> Wildcat					<input checked="" type="checkbox"/> Development	<input type="checkbox"/> Extension	

LOCATION OF WELL

At Surface 2457 F S L		238 F WL	Qtr-Qtr LOT3	Section 18	Township 153 N	Range 100 W	County McKenzie
Spud Date February 23, 2015	Date TD Reached April 16, 2015	Drilling Contractor and Rig Number Nabors B22		KB Elevation (Ft) 2033	Graded Elevation (Ft) 2008		

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)

PERFORATION & OPEN HOLE INTERVALS

PRODUCTION

Current Producing Open Hole or Perforated Interval(s), This Completion, Top and Bottom, (MD Ft) Lateral 1- 11108' to 20592'							Name of Zone (If Different from Pool Name)	
Date Well Completed (SEE INSTRUCTIONS) September 13, 2015			Producing Method flowing		Pumping-Size & Type of Pump			Well Status (Producing or Shut-In) Producing
Date of Test 09/14/2015	Hours Tested 24	Choke Size 32 /64	Production for Test		Oil (Bbls) 1174	Gas (MCF) 1006	Water (Bbls) 2959	Oil Gravity-API (Corr.) °
Flowing Tubing Pressure (PSI)	Flowing Casing Pressure (PSI)	Calculated 24-Hour Rate	Oil (Bbls) 1174	Gas (MCF) 1006	Water (Bbls) 2959	Gas-Oil Ratio 857	Disposition of Gas	
1900								

GEOLOGICAL MARKERS

PLUG BACK INFORMATION

CORES CUT

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

Drill Stem Test

Well Specific Stimulation

Date Stimulated 07/13/2015	Stimulated Formation Bakken		Top (Ft) 11108	Bottom (Ft) 20592	Stimulation Stages 36	Volume 220489	Volume Units Barrels
Type Treatment Sand Frac	Acid %	Lbs Proppant 4243874	Maximum Treatment Pressure (PSI) 9096		Maximum Treatment Rate (BBLS/Min) 71.0		
Details 100 Mesh White: 314040 40/70 White: 1556974 30/50 White: 2372860							
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 10/05/2015
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Signature 	Printed Name Jennifer Swenson	Title Regulatory Specialist
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AUTHORIZATION TO PURCHASE AND TRANSPORT OIL FROM LEASE - Form 8

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

Well File No.
28756
NDIC CTB No.
115883

228651

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND FOUR COPIES.

Well Name and Number	Qtr-Qtr LOT3	Section 18	Township 153	Range 100	County McKenzie
KLINE FEDERAL 5300 31-18 6B					

Operator Oasis Petroleum North America LLC	Telephone Number (281) 404-9573	Field BAKER
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Address 1001 Fannin, Suite 1500	City Houston	State TX	Zip Code 77002
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Name of First Purchaser Oasis Petroleum Marketing LLC	Telephone Number (281) 404-9627	% Purchased 100%	Date Effective September 13, 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 September 13, 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
Power Crude Transport	25%	September 13, 2015
Other Transporters Transporting From This Lease	% Transported	Date Effective
		September 13, 2015
Comments		

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

Date
October 22, 2015

Signature 	Printed Name Brianna Salinas	Title Marketing Assistant
---------------	---------------------------------	------------------------------

Above Signature Witnessed By:

Signature 	Printed Name Laura Whitten	Title Marketing Analyst II
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FOR STATE USE ONLY

Date Approved By Title	OCT 27 2015 Eric Robertson Oil & Gas Production Analyst
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Oil & Gas Production Analyst



WELL COMPLETION OR RECOMPLETION REPORT - FORM 6

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

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 Kline Federal 5300 31-18 6B				Spacing Unit Description Sec. 17/18 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 <input type="checkbox"/> Wildcat <input checked="" type="checkbox"/> Development <input type="checkbox"/> Extension			

LOCATION OF WELL

At Surface 2457 F S L	238 F WL	Qtr-Qtr LOT3	Section 18	Township 153 N	Range 100 W	County McKenzie
Spud Date/ February 23, 2015	Date TD Reached April 16, 2015	Drilling Contractor and Rig Number Nabors B22		KB Elevation (Ft) 2033	Graded Elevation (Ft) 2008	

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)

PERFORATION & OPEN HOLE INTERVALS

PRODUCTION

Current Producing Open Hole or Perforated Interval(s), This Completion, Top and Bottom, (MD Ft) Lateral 1-						Name of Zone (If Different from Pool Name)	
Date Well Completed (SEE INSTRUCTIONS)			Producing Method		Pumping-Size & Type of Pump		Well Status (Producing or Shut-In)
Date of Test	Hours Tested	Choke Size /64	Production for Test	Oil (Bbls)	Gas (MCF)	Water (Bbls)	Oil Gravity-API (Corr.)
Flowing Tubing Pressure (PSI)	Flowing Casing Pressure (PSI)	Calculated 24-Hour Rate	Oil (Bbls)	Gas (MCF)	Water (Bbls)	Gas-Oil Ratio	

GEOLOGICAL MARKERS

PLUG BACK INFORMATION

CORES CUT

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

Drill Stem Test

Well Specific Stabilizations

Date Stimulated	Stimulated Formation		Top (Ft)	Bottom (Ft)	Stimulation Stages		Volume	Volume Units Barrels		
Type Treatment	Sand Frac	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										
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

This is a preliminary completion report. A supplemental report will be filed upon first production of the well.

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 08/31/2015
Signature 	Printed Name Jennifer Swenson	Title Regulatory Specialist



Directional Survey Certification

Operator: Oasis Petroleum LLC **Well Name:** Kline Federal 5300 31-18 6B **API:** 33-053-06057

Enseco Job#: S15072-02 **Job Type:** MWD D&I **County, State:** McKenzie County, N. Dakota

Well Surface Hole Location (SHL): Lot 3, Sec. 18, T153N, R100W (2457' FSL & 238 FWL)

Latitude: 48° 04' 27.510 N **Longitude:** 103° 36' 11.380 W **Datum:** Nad 83

Final MWD Report Date: Feb. 25, 2015 **MWD Survey Run Date:** Feb. 23, 2015 to Feb. 24, 2015

Tied In to Surveys Provided By: Enseco Directional Drilling D&I MWD **MD:** Surface

MWD Surveyed from 00 ft to 2,047.0 ft MD **Survey Type:** Positive Pulse D&I MWD **Sensor to Bit:** 63 ft

Rig Contractor: Noble **Rig Number:** 2 **RKB Height:** 2,026.0 ft **GL Elevation:** 2,026.0 ft

MWD Surveyor Name: Brett McClain

"The data and calculations for this survey have been checked by me and conform to the calibration standards and operational procedures set forth by Enseco Energy Services USA Corp. I am authorized and qualified to review the data, calculations and this report and that the report represents a true and correct Directional Survey of this well based on the original data corrected to True North and obtained at the well site. Wellbore coordinates are calculated using the minimum curvature method."

Jonathan Hovland, Well Planner

Enseco Representative Name, Title

Jonathan Hovland

Signature

February 27th 2015

Date Signed

On this the day of , 20 , before me personally appeared First & Last Name, to me known as the person described in and who executed the foregoing instrument and acknowledged the (s)he executed the same as his/her free act and deed.

Seal: _____
Notary Public

Commission Expiry



Enseco Survey Report

27 February, 2015

Oasis Petroleum LLC

McKenzie County, North Dakota
Lot 3 Sec.18 Twp.153N Rge.100W
Kline Federal 5300 31-18 6B
Job # S15072-02
API#: 33-053-06057

Survey: Final Surveys Vertical Section





ENSECO Energy Services

Survey Report



Company:	Oasis Petroleum LLC	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	McKenzie County, North Dakota	Ground Level Elevation:	2,026.00usft
Site:	Lot 3 Sec.18 Twp.153N Rge.100W	Wellhead Elevation:	WELL @ 2026.00usft (Original Well Elev)
Well:	Kline Federal 5300 31-18 6B	North Reference:	True
Wellbore:	Job # S15072-02	Survey Calculation Method:	Minimum Curvature
Design:	Final Surveys Vertical Section	Database:	EDM5000

Project	McKenzie County, North Dakota		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	North Dakota Northern Zone		Using geodetic scale factor

Site	Lot 3 Sec.18 Twp.153N Rge.100W		
Site Position:	Northing:	407,221.74 usft	Latitude: 48° 4' 28.160 N
From: Lat/Long	Easting:	1,210,091.04 usft	Longitude: 103° 36' 11.380 W
Position Uncertainty:	0.00 usft	Slot Radius: 13-3/16 "	Grid Convergence: -2.309°

Well	Kline Federal 5300 31-18 6B	API#: 33-053-06057				
Well Position	+N/-S +E/-W	-65.87 usft 0.00 usft	Northing: Easting:	407,155.93 usft 1,210,088.38 usft	Latitude: Longitude:	48° 4' 27.510 N 103° 36' 11.380 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,026.00usft

Wellbore	Job # S15072-02				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/27/2015	8.304	72.942	56,271

Design:	Final Surveys Vertical Section	Survey Error Model:	Standard ISCWSA MWD Tool
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°)
			13.34



ENSECO Energy Services

Survey Report



Company:	Oasis Petroleum LLC	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	McKenzie County, North Dakota	Ground Level Elevation:	2,026.00usft
Site:	Lot 3 Sec.18 Twp.153N Rge.100W	Wellhead Elevation:	WELL @ 2026.00usft (Original Well Elev)
Well:	Kline Federal 5300 31-18 6B	North Reference:	True
Wellbore:	Job # S15072-02	Survey Calculation Method:	Minimum Curvature
Design:	Final Surveys Vertical Section	Database:	EDM5000

Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (%/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Tie-in from Surface										
0.00	0.00	0.00	0.00	2,026.00	0.00	0.00	0.00	0.00	0.00	0.00
132.00	0.50	35.70	132.00	1,894.00	0.47	0.34	0.53	0.38	0.38	0.00
223.00	0.90	34.30	222.99	1,803.01	1.38	0.97	1.57	0.44	0.44	-1.54
314.00	0.90	41.50	313.98	1,712.02	2.51	1.85	2.86	0.12	0.00	7.91
407.00	0.70	50.50	406.97	1,619.03	3.41	2.77	3.96	0.25	-0.22	9.68
493.00	0.90	57.50	492.96	1,533.04	4.11	3.74	4.86	0.26	0.23	8.14
579.00	1.20	62.40	578.95	1,447.05	4.89	5.11	5.94	0.36	0.35	5.70
669.00	0.80	60.50	668.93	1,357.07	5.64	6.49	6.98	0.45	-0.44	-2.11
751.00	0.30	36.00	750.93	1,275.07	6.09	7.12	7.57	0.66	-0.61	-29.88
839.00	0.30	314.30	838.93	1,187.07	6.44	7.09	7.90	0.45	0.00	-92.84
927.00	0.40	277.80	926.93	1,099.07	6.64	6.62	7.99	0.27	0.11	-41.48
1,013.00	0.10	282.10	1,012.93	1,013.07	6.70	6.25	7.96	0.35	-0.35	5.00
1,100.00	0.10	342.70	1,099.93	926.07	6.79	6.15	8.02	0.12	0.00	69.66
1,189.00	0.10	29.40	1,188.93	837.07	6.93	6.17	8.17	0.09	0.00	52.47
1,276.00	0.20	179.90	1,275.93	750.07	6.84	6.20	8.09	0.33	0.11	172.99
1,364.00	0.30	255.30	1,363.93	662.07	6.63	5.98	7.83	0.36	0.11	85.68
1,450.00	0.40	274.00	1,449.92	576.08	6.60	5.46	7.68	0.18	0.12	21.74
1,536.00	0.60	252.80	1,535.92	490.08	6.48	4.74	7.40	0.31	0.23	-24.65
1,623.00	0.50	245.10	1,622.92	403.08	6.19	3.96	6.93	0.14	-0.11	-8.85
1,711.00	0.30	285.40	1,710.92	315.08	6.09	3.39	6.71	0.38	-0.23	45.80
1,799.00	0.40	274.60	1,798.91	227.09	6.17	2.86	6.67	0.14	0.11	-12.27
1,886.00	0.60	222.40	1,885.91	140.09	5.86	2.25	6.22	0.55	0.23	-60.00
1,974.00	0.70	219.60	1,973.90	52.10	5.11	1.59	5.34	0.12	0.11	-3.18
Last MWD Survey										
2,047.00	0.90	211.10	2,046.90	-20.90	4.27	1.01	4.39	0.32	0.27	-11.64

Survey Annotations					
Local Coordinates					
MD (usft)	TVD (usft)	+N-S (usft)	+E/-W (usft)	Comment	
0.00	0.00	0.00	0.00	Tie-in from Surface	
2,047.00	2,046.90	4.27	1.01	Last MWD Survey	



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

Thursday, April 16, 2015

State of North Dakota

Subject: **Surveys**

Re: **Oasis**
Kline Federal 5300 31-18 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
Sammy Hayman	MWD Operator	O.H.	2047'	20533'	04/04/15	04/15/15	MWD	20597'

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

Wednesday, April 15, 2015

State of North Dakota
County of McKenzie

Subject: **Survey Certification Letter**

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

Job Number: **8830**

Surface: **48 4' 27.510 N / 103 36' 11.380 W**

Survey Job Type: **Ryan MWD**

A.P.I. No: **33-053-06057**

Customer: **Oasis Petroleum**

Location: **McKenzie, North Dakota**

Well Name: **Kline Federal 5300 31-18 6B**

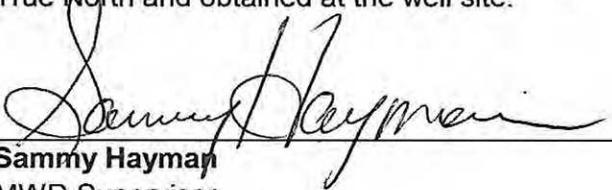
RKB Height: **2033'**

Rig Name: **Nabors B-22**

Distance to Bit: **64'**

<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>
Sammy Hayman	MWD Supervisor	OH	2140'	20533'	04/04/15	04/15/15	MWD	20597'

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.


Sammy Hayman
MWD Supervisor
Ryan Directional Services, Inc.



SURVEY REPORT

Customer: Oasis Petroleum
 Well Name: Kline Federal 5300 31-18 6B
 Rig #: Nabors B-22
 API #: 33-053-06057
 Calculation Method: Minimum Curvature Calculation

MWD Operator: M McCommand / S Hayman
 Directional Drillers: RPM
 Survey Corrected To: True North
 Vertical Section Direction: 94.93
 Total Correction: 8.29
 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	2047	0.90	211.10		2046.89	0.64	4.27	1.01	0.30
1	2140	1.50	209.80	77.00	2139.87	-0.19	2.59	0.03	0.65
2	2154	1.50	210.40	77.00	2153.86	-0.35	2.27	-0.16	0.11
3	2247	0.60	224.20	80.00	2246.85	-1.18	0.87	-1.11	1.00
4	2341	0.40	56.50	82.00	2340.85	-1.24	0.70	-1.18	1.06
5	2434	0.70	79.20	82.00	2433.84	-0.44	0.99	-0.35	0.39
6	2527	0.80	50.70	84.00	2526.83	0.58	1.50	0.71	0.41
7	2621	0.80	108.40	87.00	2620.83	1.68	1.71	1.84	0.82
8	2714	0.50	159.80	89.00	2713.82	2.49	1.13	2.59	0.67
9	2808	0.80	171.40	89.00	2807.82	2.82	0.09	2.83	0.35
10	2901	0.70	162.40	91.00	2900.81	3.19	-1.09	3.10	0.17
11	2994	1.10	152.50	93.00	2993.80	3.88	-2.42	3.69	0.46
12	3088	1.10	148.70	95.00	3087.78	4.90	-4.00	4.57	0.08
13	3181	0.90	149.60	96.00	3180.76	5.85	-5.39	5.41	0.22
14	3274	0.30	205.40	98.00	3273.76	6.19	-6.24	5.67	0.83
15	3368	0.40	219.40	100.00	3367.76	5.91	-6.71	5.36	0.14
16	3461	0.50	224.30	102.00	3460.75	5.47	-7.26	4.87	0.12
17	3554	0.30	232.80	104.00	3553.75	5.04	-7.69	4.39	0.22
18	3648	0.40	241.70	105.00	3647.75	4.58	-8.00	3.91	0.12
19	3741	0.40	223.70	107.00	3740.75	4.10	-8.39	3.40	0.13
20	3835	0.30	240.50	109.00	3834.75	3.70	-8.74	2.95	0.15
21	3928	0.40	254.70	111.00	3927.74	3.19	-8.95	2.43	0.14
22	4022	0.30	253.20	111.00	4021.74	2.65	-9.11	1.88	0.11
23	4115	0.40	253.90	113.00	4114.74	2.12	-9.27	1.33	0.11
24	4208	0.20	71.70	114.00	4207.74	1.97	-9.31	1.17	0.65
25	4302	0.40	48.40	116.00	4301.74	2.35	-9.04	1.58	0.25
26	4395	0.20	69.00	118.00	4394.74	2.72	-8.76	1.97	0.24
27	4489	0.40	120.30	120.00	4488.74	3.16	-8.87	2.41	0.34
28	4582	0.20	88.70	122.00	4581.74	3.61	-9.03	2.85	0.27
29	4675	0.40	106.00	123.00	4674.73	4.09	-9.12	3.32	0.23
30	4769	0.50	106.30	123.00	4768.73	4.82	-9.32	4.03	0.11
31	4862	0.40	206.40	125.00	4861.73	5.10	-9.73	4.28	0.75
32	4956	0.50	253.50	127.00	4955.73	4.60	-10.14	3.74	0.39
33	5049	0.40	310.70	129.00	5048.72	3.95	-10.04	3.10	0.47
34	5142	0.70	239.40	131.00	5141.72	3.23	-10.12	2.37	0.74
35	5236	1.40	247.90	132.00	5235.70	1.74	-10.84	0.81	0.76
36	5329	0.80	232.10	132.00	5328.69	0.25	-11.67	-0.75	0.72
37	5423	0.80	201.30	134.00	5422.68	-0.42	-12.68	-1.51	0.45
38	5516	0.90	225.80	136.00	5515.67	-1.08	-13.80	-2.27	0.40
39	5609	0.60	242.70	138.00	5608.66	-1.97	-14.53	-3.23	0.40
40	5703	0.60	258.20	140.00	5702.66	-2.85	-14.86	-4.15	0.17
41	5796	0.30	201.10	141.00	5795.65	-3.39	-15.18	-4.71	0.54
42	5889	0.70	119.40	143.00	5888.65	-2.94	-15.69	-4.30	0.77
43	5982	0.50	130.50	145.00	5981.65	-2.09	-16.23	-3.50	0.25
44	6076	0.70	157.20	147.00	6075.64	-1.49	-17.03	-2.96	0.36
45	6169	0.80	162.30	149.00	6168.63	-0.98	-18.17	-2.55	0.13
46	6263	1.00	179.70	150.00	6262.62	-0.65	-19.61	-2.34	0.36
47	6356	1.10	187.20	152.00	6355.61	-0.61	-21.31	-2.45	0.18
48	6449	1.40	169.70	154.00	6448.58	-0.35	-23.32	-2.36	0.52
49	6543	1.80	169.90	156.00	6542.55	0.34	-25.90	-1.90	0.43
50	6636	2.00	183.90	156.00	6635.50	0.74	-28.96	-1.75	0.54
51	6729	1.30	172.00	159.00	6728.46	1.01	-31.62	-1.71	0.83
52	6823	1.20	169.00	159.00	6822.43	1.52	-33.64	-1.38	0.13
53	6916	1.60	164.40	163.00	6915.41	2.24	-35.85	-0.84	0.45
54	7009	0.70	186.20	165.00	7008.39	2.68	-37.66	-0.55	1.06
55	7103	0.40	198.20	167.00	7102.38	2.60	-38.55	-0.72	0.34
56	7196	0.50	196.60	170.00	7195.38	2.44	-39.24	-0.94	0.11
57	7289	0.70	220.00	172.00	7288.38	2.03	-40.07	-1.42	0.34
58	7382	0.70	220.70	172.00	7381.37	1.37	-40.93	-2.15	0.01
59	7475	0.70	195.70	174.00	7474.36	0.93	-41.91	-2.68	0.33
60	7569	0.70	196.40	176.00	7568.35	0.71	-43.01	-2.99	0.01
61	7662	0.90	211.10	177.00	7661.35	0.28	-44.18	-3.53	0.31
62	7755	0.30	196.30	177.00	7754.34	-0.09	-45.04	-3.98	0.66
63	7849	0.00	193.00	177.00	7848.34	-0.14	-45.28	-4.05	0.32
64	7942	0.20	319.10	179.00	7941.34	-0.26	-45.16	-4.15	0.22
65	8035	0.40	332.90	181.00	8034.34	-0.55	-44.75	-4.41	0.23

Report #: **1**
Date: _____



RYAN DIRECTIONAL SERVICES, INC.
A NABORS COMPANY

Ryan Job # **8830**

SURVEY REPORT

Customer:	Oasis Petroleum
Well Name:	Kline Federal 5300 31-18 6B
Rig #:	Nabors B-22
API #:	33-053-06057
Calculation Method:	Minimum Curvature Calculation

MWD Operator:	M McCommand / S Hayman
Directional Drillers:	RPM
Survey Corrected To:	True North
Vertical Section Direction:	94.93
Total Correction:	8.29
Temperature Forecasting Model (Chart Only):	Logarithmic

Survey #	MD	Inc	Azm	Temp	TVD	VS	N/S	E/W	DLS
66	8129	0.20	196.00	177.00	8128.34	-0.75	-44.61	-4.60	0.60
67	8222	0.40	195.80	179.00	8221.34	-0.84	-45.08	-4.74	0.22
68	8315	0.30	198.70	183.00	8314.33	-0.96	-45.62	-4.90	0.11
69	8409	0.40	210.90	170.00	8408.33	-1.17	-46.14	-5.15	0.13
70	8502	0.50	206.80	172.00	8501.33	-1.46	-46.78	-5.50	0.11
71	8596	0.60	236.20	176.00	8595.33	-2.00	-47.42	-6.09	0.31
72	8689	0.50	220.10	174.00	8688.32	-2.61	-48.00	-6.76	0.20
73	8782	0.30	193.50	181.00	8781.32	-2.88	-48.55	-7.08	0.29
74	8876	0.00	114.80	185.00	8875.32	-2.92	-48.79	-7.13	0.32
75	8969	0.20	0.70	188.00	8968.32	-2.93	-48.62	-7.13	0.22
76	9062	0.20	37.80	190.00	9061.32	-2.85	-48.33	-7.03	0.14
77	9155	0.30	333.00	192.00	9154.32	-2.89	-47.99	-7.04	0.30
78	9249	0.50	28.30	188.00	9248.32	-2.86	-47.41	-6.96	0.44
79	9342	1.00	106.90	192.00	9341.31	-1.90	-47.29	-5.99	1.10
80	9435	1.10	116.00	194.00	9434.29	-0.28	-47.91	-4.41	0.21
81	9529	1.00	118.00	194.00	9528.28	1.32	-48.69	-2.88	0.11
82	9622	1.00	114.40	199.00	9621.26	2.83	-49.41	-1.42	0.07
83	9715	0.80	103.60	201.00	9714.25	4.24	-49.90	-0.05	0.28
84	9808	0.70	99.20	203.00	9807.24	5.45	-50.14	1.14	0.12
85	9902	0.70	116.60	201.00	9901.24	6.55	-50.49	2.22	0.23
86	9995	0.20	97.60	197.00	9994.23	7.24	-50.77	2.89	0.55
87	10057	0.20	16.80	199.00	10056.23	7.37	-50.68	3.03	0.42
88	10093	0.20	0.80	176.00	10092.23	7.38	-50.55	3.05	0.15
89	10124	1.50	122.40	174.00	10123.23	7.74	-50.72	3.39	5.21
90	10155	6.10	124.00	179.00	10154.15	9.54	-51.86	5.10	14.84
91	10186	10.60	128.40	181.00	10184.82	13.36	-54.55	8.70	14.65
92	10217	13.70	131.20	183.00	10215.12	18.70	-58.74	13.70	10.18
93	10248	15.20	131.20	185.00	10245.14	24.93	-63.83	19.52	4.84
94	10279	17.80	128.80	186.00	10274.86	32.15	-69.48	26.27	8.67
95	10310	20.40	125.00	186.00	10304.15	40.76	-75.55	34.39	9.29
96	10342	22.90	122.20	190.00	10333.89	51.12	-82.07	44.23	8.45
97	10373	25.40	120.50	190.00	10362.18	62.48	-88.66	55.06	8.37
98	10404	28.60	120.20	192.00	10389.79	75.19	-95.77	67.21	10.33
99	10435	32.70	120.90	192.00	10416.46	89.43	-103.80	80.81	13.28
100	10466	36.70	120.90	194.00	10441.94	105.30	-112.86	95.95	12.90
101	10497	39.00	119.70	194.00	10466.42	122.48	-122.46	112.38	7.79
102	10528	42.10	117.70	194.00	10489.97	140.93	-132.12	130.06	10.84
103	10559	44.60	116.90	195.00	10512.51	160.61	-141.88	148.97	8.26
104	10591	46.90	119.50	195.00	10534.84	181.65	-152.72	169.16	9.25
105	10622	49.80	119.80	195.00	10555.44	202.69	-164.17	189.28	9.38
106	10653	51.90	121.40	195.00	10575.01	224.36	-176.42	209.97	7.87
107	10684	53.30	123.90	197.00	10593.84	246.15	-189.70	230.70	7.84
108	10715	55.30	127.10	197.00	10611.93	267.82	-204.33	251.19	10.58
109	10746	59.30	128.90	197.00	10628.68	289.67	-220.39	271.73	13.80
110	10777	63.80	128.80	197.00	10643.44	312.28	-237.48	292.95	14.52
111	10809	69.00	128.60	199.00	10656.25	336.65	-255.81	315.83	16.26
112	10840	70.20	128.20	197.00	10667.06	360.88	-273.86	338.60	4.06
113	10871	70.40	127.80	197.00	10677.51	385.34	-291.82	361.60	1.38
114	10902	73.40	128.30	197.00	10687.14	410.02	-309.98	384.80	9.80
115	10933	76.80	128.20	199.00	10695.11	435.05	-328.53	408.32	10.97
116	10964	78.90	128.10	199.00	10701.63	460.40	-347.25	432.15	6.78
117	10995	80.70	127.90	199.00	10707.12	485.96	-366.03	456.20	5.84
118	11026	81.00	127.10	199.00	10712.05	511.76	-384.66	480.48	2.73
119	11057	83.50	124.30	199.00	10716.23	538.14	-402.58	505.42	12.05
120	11089	87.10	121.90	201.00	10718.85	566.25	-419.99	532.13	13.51
121	11120	89.90	120.90	201.00	10719.66	593.99	-436.14	558.58	9.59
122	11133	90.20	121.20	224.00	10719.65	605.66	-442.84	569.71	3.26
123	11163	90.90	121.20	224.00	10719.36	632.56	-458.38	595.37	2.33
124	11194	91.60	120.20	224.00	10718.69	660.47	-474.20	622.02	3.94
125	11225	91.60	119.20	222.00	10717.82	688.61	-489.56	648.94	3.22
126	11257	91.50	119.20	221.00	10716.96	717.77	-505.16	676.86	0.31
127	11287	91.20	117.50	222.00	10716.25	745.29	-519.40	703.26	5.75
128	11317	89.20	115.60	222.00	10716.14	773.18	-532.81	730.09	9.20
129	11348	88.80	115.50	224.00	10716.69	802.19	-546.18	758.05	1.33
130	11378	88.70	115.30	224.00	10717.34	830.29	-559.05	785.15	0.75



SURVEY REPORT

Customer: Oasis Petroleum
 Well Name: Kline Federal 5300 31-18 6B
 Rig #: Nabors B-22
 API #: 33-053-06057
 Calculation Method: Minimum Curvature Calculation

MWD Operator: M McCommand / S Hayman
 Directional Drillers: RPM
 Survey Corrected To: True North
 Vertical Section Direction: 94.93
 Total Correction: 8.29
 Temperature Forecasting Model (Chart Only): Logarithmic

Survey #	MD	Inc	Azm	Temp	TVD	VS	N/S	E/W	DLS
131	11409	88.70	115.30	224.00	10718.04	859.34	-572.29	813.17	0.00
132	11439	88.50	115.30	226.00	10718.78	887.46	-585.11	840.28	0.67
133	11471	88.70	115.20	224.00	10719.56	917.46	-598.75	869.22	0.70
134	11502	89.10	114.30	226.00	10720.15	946.61	-611.73	897.36	3.18
135	11532	89.50	113.40	226.00	10720.52	974.99	-623.86	924.80	3.28
136	11563	89.70	113.70	226.00	10720.74	1004.37	-636.24	953.22	1.16
137	11593	90.10	113.60	226.00	10720.79	1032.78	-648.28	980.70	1.37
138	11623	90.70	112.70	228.00	10720.58	1061.27	-660.07	1008.28	3.61
139	11655	90.70	111.60	228.00	10720.19	1091.84	-672.14	1037.91	3.44
140	11686	90.80	111.50	228.00	10719.78	1121.54	-683.52	1066.74	0.46
141	11718	91.00	111.60	231.00	10719.28	1152.20	-695.27	1096.50	0.70
142	11749	91.20	111.40	230.00	10718.68	1181.91	-706.63	1125.34	0.91
143	11781	91.20	111.30	230.00	10718.01	1212.59	-718.28	1155.14	0.31
144	11812	91.10	111.80	233.00	10717.39	1242.29	-729.67	1183.97	1.64
145	11844	90.10	110.40	231.00	10717.06	1273.02	-741.18	1213.82	5.38
146	11874	88.20	108.90	231.00	10717.50	1302.03	-751.27	1242.07	8.07
147	11905	87.90	109.00	230.00	10718.56	1332.09	-761.33	1271.37	1.02
148	11936	87.60	108.00	228.00	10719.77	1362.20	-771.16	1300.74	3.37
149	11966	87.80	106.20	228.00	10720.98	1391.51	-779.97	1329.39	6.03
150	11996	88.00	106.20	230.00	10722.08	1420.91	-788.34	1358.18	0.67
151	12028	88.70	105.50	228.00	10723.00	1452.31	-797.07	1388.95	3.09
152	12058	89.50	103.30	228.00	10723.47	1481.90	-804.53	1418.00	7.80
153	12089	89.80	102.90	230.00	10723.66	1512.58	-811.56	1448.20	1.61
154	12121	90.20	101.80	230.00	10723.66	1544.32	-818.40	1479.46	3.66
155	12153	91.60	100.80	230.00	10723.16	1576.11	-824.67	1510.83	5.38
156	12184	91.70	100.80	230.00	10722.26	1606.94	-830.48	1541.27	0.32
157	12216	91.50	99.20	230.00	10721.37	1638.80	-836.03	1572.77	5.04
158	12247	91.10	96.60	230.00	10720.67	1669.75	-840.29	1603.47	8.48
159	12279	91.20	96.40	231.00	10720.02	1701.73	-843.92	1635.25	0.70
160	12311	91.20	95.30	231.00	10719.35	1733.72	-847.18	1667.08	3.44
161	12342	91.30	92.90	231.00	10718.68	1764.70	-849.39	1697.99	7.75
162	12374	91.20	92.80	233.00	10717.98	1796.67	-850.98	1729.94	0.44
163	12405	90.70	91.60	233.00	10717.47	1827.63	-852.17	1760.91	4.19
164	12437	89.80	91.30	233.00	10717.33	1859.58	-852.98	1792.90	2.96
165	12469	89.70	91.50	233.00	10717.47	1891.51	-853.76	1824.89	0.70
166	12500	89.00	89.90	233.00	10717.82	1922.43	-854.14	1855.89	5.63
167	12532	87.80	89.60	233.00	10718.71	1954.28	-854.00	1887.88	3.87
168	12627	88.20	90.00	237.00	10722.03	2048.84	-853.67	1982.82	0.60
169	12722	88.40	89.30	239.00	10724.85	2143.40	-853.09	2077.77	0.77
170	12816	88.50	88.70	239.00	10727.39	2236.86	-851.45	2171.72	0.65
171	12911	88.70	89.60	239.00	10729.71	2331.35	-850.04	2266.68	0.97
172	13006	91.40	90.90	239.00	10729.63	2426.02	-850.46	2361.67	3.15
173	13101	92.00	90.30	240.00	10726.81	2520.71	-851.45	2456.62	0.89
174	13196	89.50	91.00	240.00	10725.56	2615.43	-852.53	2551.60	2.73
175	13291	89.90	91.20	242.00	10726.06	2710.21	-854.35	2646.58	0.47
176	13385	89.50	89.50	244.00	10726.55	2803.91	-854.93	2740.58	1.86
177	13480	89.60	88.70	244.00	10727.30	2898.41	-853.43	2835.56	0.85
178	13575	89.90	90.40	244.00	10727.71	2992.99	-852.69	2930.55	1.82
179	13670	89.90	90.00	246.00	10727.88	3087.67	-853.02	3025.55	0.42
180	13765	89.60	89.40	248.00	10728.30	3182.27	-852.52	3120.55	0.71
181	13859	89.10	87.90	248.00	10729.36	3275.70	-850.31	3214.51	1.68
182	13954	88.90	87.00	249.00	10731.02	3369.87	-846.08	3309.40	0.97
183	14049	89.20	86.90	248.00	10732.59	3463.94	-841.03	3404.26	0.33
184	14144	90.20	89.80	248.00	10733.09	3558.30	-838.29	3499.20	3.23
185	14239	90.70	89.90	249.00	10732.35	3652.92	-838.05	3594.20	0.54
186	14334	91.20	89.90	251.00	10730.77	3747.55	-837.88	3689.19	0.53
187	14429	89.20	90.00	249.00	10730.44	3842.18	-837.80	3784.18	2.11
188	14524	89.40	89.60	251.00	10731.60	3936.79	-837.46	3879.17	0.47
189	14618	90.40	90.20	253.00	10731.76	4030.43	-837.30	3973.17	1.24
190	14713	88.80	91.80	251.00	10732.43	4125.20	-838.96	4068.15	2.38
191	14808	88.90	92.70	253.00	10734.33	4220.07	-842.69	4163.06	0.95
192	14903	89.10	92.10	253.00	10735.99	4314.97	-846.66	4257.96	0.67
193	14998	89.10	91.00	255.00	10737.48	4409.79	-849.23	4352.91	1.16
194	15092	89.50	90.40	255.00	10738.63	4503.52	-850.38	4446.89	0.77
195	15187	89.90	90.10	257.00	10739.13	4598.21	-850.80	4541.89	0.53



SURVEY REPORT

Customer: **Oasis Petroleum**
 Well Name: **Kline Federal 5300 31-18 6B**
 Rig #: **Nabors B-22**
 API #: **33-053-06057**
 Calculation Method: **Minimum Curvature Calculation**

MWD Operator: **M McCommand / S Hayman**
 Directional Drillers: **RPM**
 Survey Corrected To: **True North**
 Vertical Section Direction: **94.93**
 Total Correction: **8.29**
 Temperature Forecasting Model (Chart Only): **Logarithmic**

Survey #	MD	Inc	Azm	Temp	TVD	VS	N/S	E/W	DLS
196	15282	90.30	89.70	257.00	10738.96	4692.84	-850.63	4636.89	0.60
197	15377	89.80	91.40	255.00	10738.88	4787.56	-851.54	4731.88	1.87
198	15472	89.80	90.70	257.00	10739.21	4882.34	-853.28	4826.87	0.74
199	15567	90.20	90.80	257.00	10739.21	4977.09	-854.53	4921.86	0.43
200	15661	88.60	91.30	255.00	10740.20	5070.86	-856.25	5015.83	1.78
201	15756	89.20	91.30	257.00	10742.02	5165.65	-858.40	5110.79	0.63
202	15851	89.40	90.60	257.00	10743.18	5260.42	-859.98	5205.77	0.77
203	15946	89.80	90.10	258.00	10743.84	5355.11	-860.56	5300.77	0.67
204	16041	90.00	89.90	258.00	10744.01	5449.76	-860.56	5395.77	0.30
205	16135	90.20	88.60	257.00	10743.85	5543.30	-859.33	5489.76	1.40
206	16230	89.80	88.40	258.00	10743.85	5637.70	-856.84	5584.72	0.47
207	16325	89.50	90.70	258.00	10744.43	5732.27	-856.10	5679.71	2.44
208	16420	89.40	91.10	258.00	10745.34	5827.03	-857.59	5774.70	0.43
209	16515	89.70	90.50	258.00	10746.08	5921.78	-858.92	5869.68	0.71
210	16609	90.70	90.50	260.00	10745.76	6015.50	-859.74	5963.68	1.06
211	16704	89.00	91.20	258.00	10746.01	6110.25	-861.14	6058.66	1.94
212	16799	88.50	90.90	260.00	10748.08	6205.01	-862.89	6153.62	0.61
213	16894	88.70	90.60	260.00	10750.40	6299.73	-864.13	6248.59	0.38
214	16989	88.80	90.00	260.00	10752.47	6394.40	-864.63	6343.56	0.64
215	17083	89.30	89.40	262.00	10754.03	6487.99	-864.13	6437.55	0.83
216	17178	89.90	88.80	262.00	10754.69	6582.50	-862.64	6532.53	0.89
217	17273	90.10	88.70	262.00	10754.69	6676.95	-860.57	6627.51	0.24
218	17368	90.30	87.70	262.00	10754.36	6771.29	-857.58	6722.46	1.07
219	17463	88.50	88.70	260.00	10755.36	6865.63	-854.60	6817.40	2.17
220	17557	89.50	90.60	260.00	10757.00	6959.21	-854.03	6911.38	2.28
221	17652	89.80	89.60	260.00	10757.58	7053.87	-854.19	7006.38	1.10
222	17747	91.00	92.20	260.00	10756.91	7148.62	-855.68	7101.36	3.01
223	17842	91.50	92.40	262.00	10754.84	7243.50	-859.50	7196.26	0.57
224	17937	91.20	91.60	262.00	10752.60	7338.35	-862.81	7291.17	0.90
225	18031	91.60	90.80	264.00	10750.31	7432.12	-864.78	7385.12	0.95
226	18126	91.70	89.30	264.00	10747.57	7526.73	-864.86	7480.08	1.58
227	18221	89.60	92.00	260.00	10746.49	7621.45	-865.94	7575.05	3.60
228	18316	89.20	92.10	262.00	10747.49	7716.32	-869.34	7669.99	0.43
229	18411	90.10	91.30	264.00	10748.07	7811.17	-872.16	7764.94	1.27
230	18505	90.30	90.50	264.00	10747.74	7904.93	-873.63	7858.93	0.88
231	18600	91.30	90.50	264.00	10746.41	7999.64	-874.46	7953.91	1.05
232	18695	89.80	90.30	262.00	10745.50	8094.33	-875.12	8048.90	1.59
233	18789	90.20	90.20	264.00	10745.50	8188.02	-875.53	8142.90	0.44
234	18884	90.40	90.30	264.00	10745.00	8282.70	-875.95	8237.90	0.24
235	18979	90.50	89.00	264.00	10744.26	8377.29	-875.37	8332.89	1.37
236	19074	91.20	88.50	264.00	10742.85	8471.73	-873.30	8427.86	0.91
237	19169	89.50	89.70	264.00	10742.27	8566.23	-871.80	8522.84	2.19
238	19263	89.20	88.80	264.00	10743.34	8659.76	-870.57	8616.83	1.01
239	19358	88.90	88.00	264.00	10744.91	8754.13	-867.92	8711.78	0.90
240	19453	89.40	87.60	264.00	10746.32	8848.39	-864.28	8806.69	0.67
241	19548	90.00	86.90	266.00	10746.82	8942.53	-859.72	8901.58	0.97
242	19643	91.40	88.40	262.00	10745.66	9036.76	-855.82	8996.49	2.16
243	19737	91.70	88.20	262.00	10743.11	9130.09	-853.04	9090.41	0.38
244	19832	90.70	90.30	262.00	10741.12	9224.60	-851.79	9185.38	2.45
245	19927	90.50	90.00	260.00	10740.13	9319.26	-852.04	9280.37	0.38
246	20022	91.50	89.60	262.00	10738.47	9413.87	-851.71	9375.36	1.13
247	20117	92.70	89.40	264.00	10734.99	9508.38	-850.88	9470.29	1.28
248	20211	88.20	88.80	262.00	10734.25	9601.86	-849.41	9564.25	4.83
249	20306	87.10	88.50	264.00	10738.15	9696.21	-847.17	9659.14	1.20
250	20401	87.00	88.70	264.00	10743.04	9790.51	-844.85	9753.99	0.24
251	20496	88.30	89.10	264.00	10746.93	9884.90	-843.03	9848.89	1.43
252	20533	88.60	89.00	264.00	10747.93	9921.69	-842.42	9885.87	0.85
Projection	20597	88.60	89.00		10749.50	9985.33	-841.30	9949.84	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 5748 (09-2006)



Well File No.
28756

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 14, 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.		<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
Approximate Start Date		<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
		<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
		<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
		<input type="checkbox"/> Other	Waiver from tubing/packer requirement

Well Name and Number Kline Federal 5300 31-18 6B					
Footages	2457 F S L	238 F W L	Qtr-Qtr LOT3	Section 18	Township 153 N
Field Baker	Pool Bakken			County McKenzie	Range 100 W

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

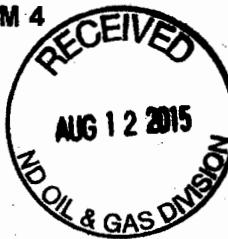
Company Oasis Petroleum North America LLC	Telephone Number 281-404-9436	
Address 1001 Fannin, Suite 1500		
City Houston	State TX	Zip Code 77002
Signature 	Printed Name Jennifer Swenson	
Title Regulatory Specialist	Date July 14, 2015	
Email Address jswenson@oasispetroleum.com		

FOR STATE USE ONLY	
<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date <i>July 31, 2015</i>	
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.
28756

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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date August 12, 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.		<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		Change well status to CONFIDENTIAL	

Well Name and Number
Kline Federal 5300 31-18 6B

Footages 2457 F S L	Qtr-Qtr 238 F W L	Section LOT3	Township 18	Range 153 N 100 W
Field Baker	Pool Bakken	County McKenzie		

24-HOUR PRODUCTION RATE

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

Name of Contractor(s)

Address	City	State	Zip Code
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DETAILS OF WORK

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

This well has not been completed

OFF CONFIDENTIAL 2/12/16.

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 August 12, 2015	
Email Address jswenson@oasispetroleum.com		

FOR STATE USE ONLY

<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date 8/13/15	
By 	
Title Engineering Technician	



Oasis Petroleum North America, LLC

Kline Federal 5300 31-18 6B

2,457' FSL & 238' FWL

Lot 3 Section 18, T153N, R100W

Baker Field / Middle Bakken Member

McKenzie County, North Dakota

BOTTOM HOLE LOCATION:

841.30' south & 9,949.84' east of surface location or approx.

1,615.70' FSL & 301.31' FEL, NE SE Section 17, T153N, R100W

Prepared for:

Brendan Hargrove

Oasis Petroleum North America, LLC

1001 Fannin Suite 1500

Houston, TX 77002

Prepared by:

Michelle Baker, Zachary Moses

PO Box 80507; Billings, MT 59108

(406) 259-4124

geology@sunburstconsulting.com

www.sunburstconsulting.com

WELL EVALUATION



Figure 1. Nabors Drilling rig B22 at the Oasis Petroleum Kline Federal 5300 31-18 6B; April, 2015 McKenzie County, North Dakota.

INTRODUCTION

The ***Oasis Petroleum North America, LLC Kline Federal 5300 31-18 6B*** [Lot 3 Section 18, T153N, R100W] is located in Baker Field of the Williston Basin in western North Dakota. This section lies approximately 7 miles south of the town of Williston and adjacent to Lake Sakakawea in McKenzie County. The Kline Federal 5300 31-18 6B is a horizontal Middle Bakken well, in a double-section, laydown spacing unit permitted to drill to the east from the surface location within Section 18, continuing through Section 17 to the proposed bottom-hole location (PBHL) in that section. There are 500' setbacks along the north and south borders and 200' setbacks from the east and west borders within the 1,280 acre spacing unit. The well consists of one Middle Bakken lateral. The vertical hole was planned to be drilled to approximately 10,221'. The curve would be built at 12 degrees per 100' to land within the Middle Bakken. Directional drilling technologies and geosteering techniques were used to land in the Middle Bakken reservoir and maintain exposure to the ideal target rock. Oasis Petroleum is targeting a silty sandstone facies of the Middle Bakken with intent to intersect porosity and fracture trends enhancing reservoir quality.

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 providing control data, making it possible to develop a prognosis of formation tops and landing target depth. By referencing the gamma signature of these offsets, a model was formed for the target interval

pinpointing a strategic landing. 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 Mission Canyon Formation [Mississippian Madison Group] was logged 9,391' MD 9,390' TVD (-7,357' SS). The Mission Canyon Formation consisted of a lime mudstone that was described as light gray, light brown to brown, gray brown, trace dark gray in color. The lime mudstone was predominately friable to firm, with an earthy to rare crystalline texture. Some intervals contained a trace of black-brown algal material, traces 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. Gas shows were not present. Rare intercrystalline porosity was noted as well as trace *spotty light brown oil stain* while logging the Mission Canyon Formation.

The Upper Bakken Shale [Mississippian-Devonian Bakken Formation] was drilled at 10,866' MD 10,676' TVD (-8,643' 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 sub blocky to sub platy texture. Fracture porosity was noted, and trace minerals were observed including disseminated pyrite and calcite fracture fill. Hydrocarbons evaluated in this interval reached a maximum of 4,577 units of drilling gas.

The Middle Bakken [Mississippian-Devonian Bakken Formation] was reached at 10,926' MD 10,693' TVD (-8,660' SS) which was -6' low to the Oasis Petroleum NA LLC Kline Federal 5300 31-19 8B. The target zone of the Middle Bakken was to be drilled in a predominately 16 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, occasional light gray brown, rare light 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 occasional intergranular porosity. Also noted was *common light to medium brown spotty to even oil stain*.



Figure 2 & 3. Predominate silty sandstone dry (Left) and wet (Right) samples from the target zone.

Hydrocarbon Shows

Gas monitoring and fluid gains provided evidence of a hydrocarbon saturated reservoir during the drilling of the Kline Federal 5300 31-18 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 varied according to stratigraphic position and penetration rates which may have reflected increased porosity. During the vertical, gas peaks of 23 to 75 units were noted, against a 9.4-10.2 lb/gal diesel-invert mud weight. Background concentrations in the lateral ranged from 100 to 4,100 units, against a 9.57-9.6 lb/gal saltwater gel drilling fluid. Connection peaks of 3,000 to 5,000 units were observed, as were drilling gas shows of 500 units to 5,690 units coinciding with the best shows. Chromatography of gas revealed typical concentrations of methane, ethane, propane and butane characteristic of Middle Bakken Member gas.

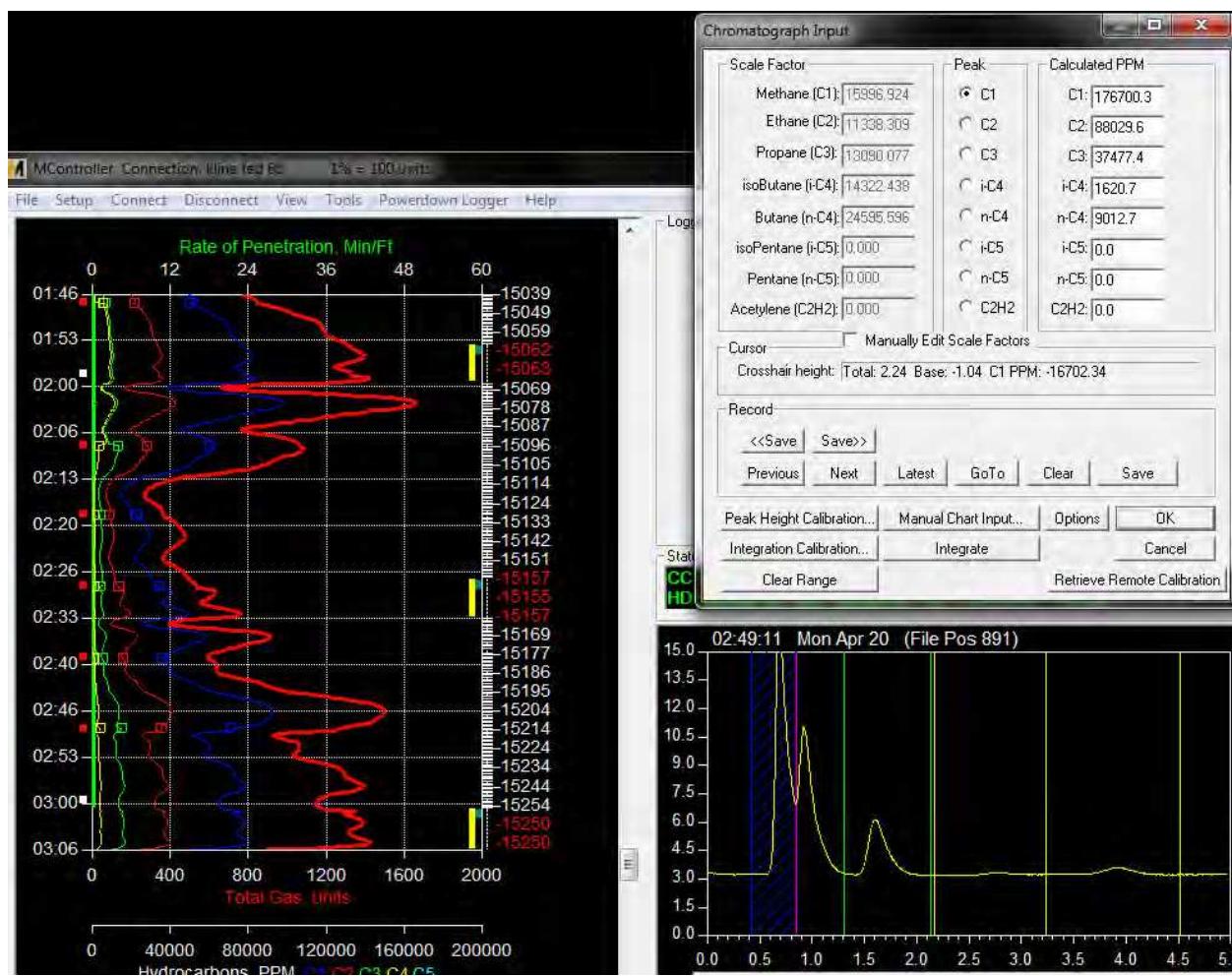


Figure 4. Chromatography of a gas sample on the Kline Federal 5300 31-18 6B.

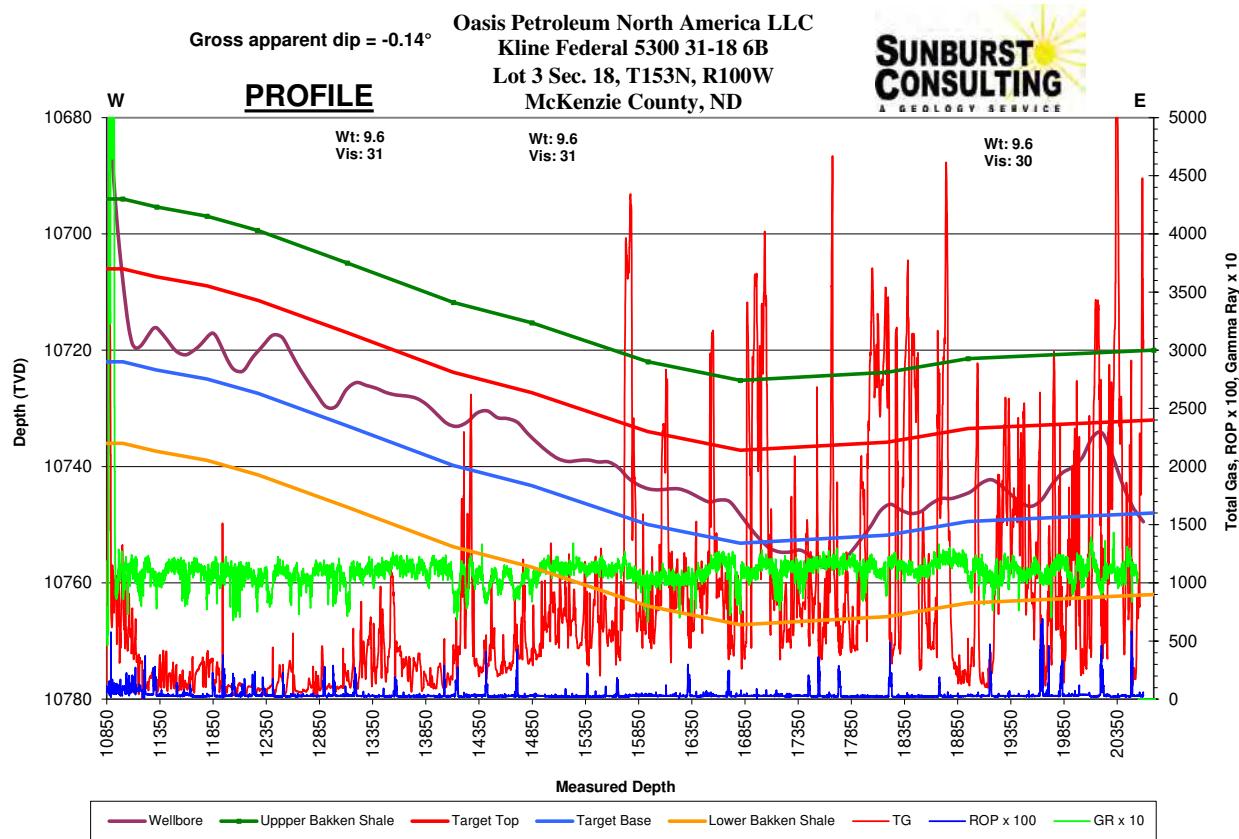


Figure 5. Profile displaying total gas, gamma ray and rate of penetration.

Geosteering

Ryan Energy Technologies provided personnel and equipment for measurement-while-drilling (MWD) services. The RPM directional drillers, 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 1,068' curve was drilled in 26 hours. It was drilled with a bottom hole assembly (BHA) consisting of bit #4, a Security MMD55M PDC bit, attached to a 2.38 degree fixed NOV stage 7/8 5.0 motor and MWD tools. The curve was successfully landed at 11,182' MD and 10,719' TVD, approximately 26' into the Middle Bakken. Seven inch diameter 29# & 32# HCP-110 intermediate casing was set to 11,108' MD.

Geologic structure maps of the Kline Federal 5300 31-18 6B and surrounding control wells had estimated gross formation dip to be down at approximately -0.2° to the TD of the lateral. The preferred drilling interval consisted of a sixteen 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.

Target Definition: Kline Federal 5300 31-18 6B

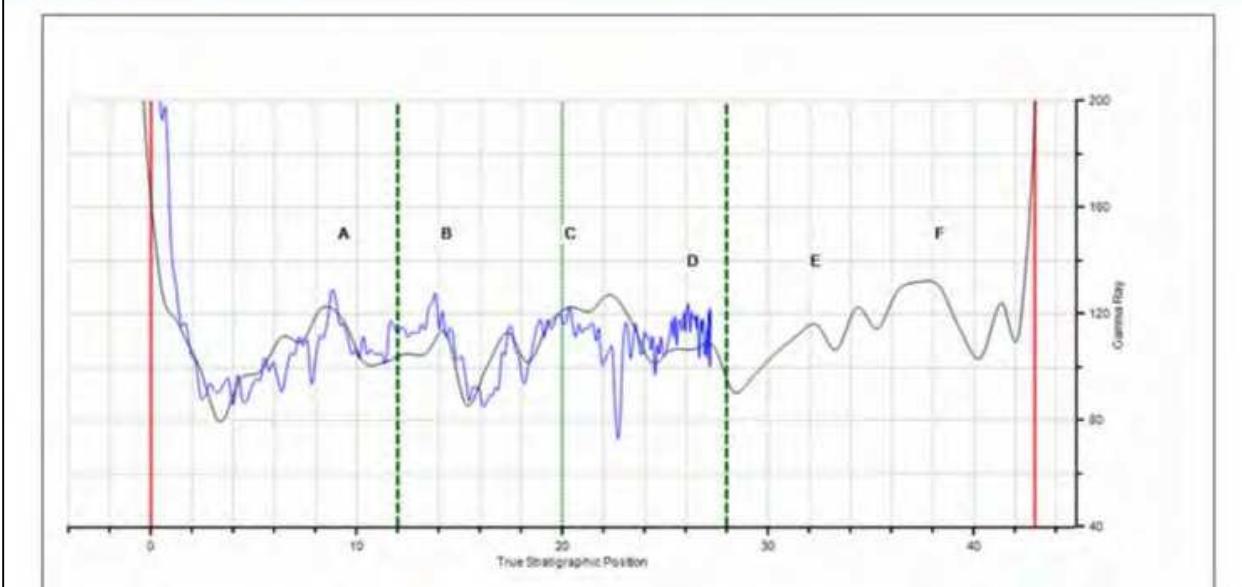


Figure 6. Offset Well Target Definition, Indian Hills Prospect (Oasis).

Steering decisions were made by using gamma markers identified by Oasis representatives. The high gamma (C) in the central portion of the drilling zone was useful in identifying the well-bore placement in formation. The slightly lower gamma (between B & C) was observed as the well-bore moved to the top of the target zone, followed by lower gamma as the well-bore moved higher, out of the target zone. Low gamma in the middle of the target zone (D) was noted as the well-bore moved to the middle of the target zone. 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. This lateral was drilled in 4 days from casing exit to TD, with one necessitated trip at 11,936' for a MWD tool failure at which time the bit was replaced. Well site teams worked closely together with directional to maximize penetration rates averaging 200 to 280 feet per hour while rotating, resulting in 2 days of over 3,000' of lateral progress. The well site team was able to keep the well bore in the desired target the entire well with the exception of approximately 800' at 17,850' when the wellbore was drilled below the preferred target interval. The TD of 20,597' MD was achieved at 23:30 hours CST April 15, 2015. The wellbore was completed with 92% of the lateral in target, opening 9,489' (measurement taken from uncased lateral portion) of potentially productive reservoir rock. The hole was then circulated and reamed for completion.

SUMMARY

The Kline Federal 5300 31-18 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 12 days. The TD of 20,597' MD was achieved at 23:30 hours CST April 15, 2015. The well site team worked together to maintain the well bore in the desired target interval for 92% of the lateral, opening 9,489' of potentially productive reservoir rock.

Samples in the Middle Bakken were predominantly silty sandstone which was described as light-medium brown, occasional light gray brown, rare light 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 occasional intergranular porosity. Also noted was *common light to medium brown spotty to even oil stain*.

Gas on the Kline Federal 5300 31-18 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. Kline Federal 5300 31-18 6B awaits completion operations to determine its ultimate production potential.

Respectfully submitted,

Michelle R. Baker

Sunburst Consulting, Inc.

April 20, 2015

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>	Kline Federal 5300 31-18 6B
<u>API #:</u>	33-053-06057
<u>WELL FILE #:</u>	28756
<u>SURFACE LOCATION:</u>	2,457' FSL & 238' FWL Lot 3 Section 18, T153N, R100W
<u>FIELD/ OBJECTIVE:</u>	Baker Field / Middle Bakken Member
<u>COUNTY, STATE</u>	McKenzie County, North Dakota
<u>BASIN:</u>	Williston
<u>WELL TYPE:</u>	Middle Bakken Member
<u>ELEVATION:</u>	GL: 2,008' KB: 2,033'
<u>SPUD/ RE-ENTRY DATE:</u>	April 4, 2015
<u>BOTTOM HOLE LOCATION:</u>	841.30' south & 9,949.84' east of surface location or approx. 1,615.70' FSL & 301.31' FEL, NE SE Section 17, T153N, R100W
<u>CLOSURE COORDINATES:</u>	Closure Azimuth: 94.83° Closure Distance: 9,985.34'
<u>TOTAL DEPTH / DATE:</u>	20,597' on April 15, 2015 92% within target interval
<u>TOTAL DRILLING DAYS:</u>	12 days
<u>CONTRACTOR:</u>	Nabors B22

<u>PUMPS:</u>	H&H Triplex (stroke length - 12")
<u>TOOLPUSHERS:</u>	Darren Birkeland, Jesse Tibbets
<u>FIELD SUPERVISORS:</u>	John Gordan, Dan Thompson, Mike Bader, Doug Rakstad
<u>CHEMICAL COMPANY:</u>	NOV
<u>MUD ENGINEER:</u>	Adam Fallis, Ken Rockeman
<u>MUD TYPE:</u>	Fresh water in surface hole Diesel invert in curve; Salt water in lateral
<u>MUD LOSSES:</u>	Invert Mud: 284 bbls., Salt Water: Not tracked
<u>PROSPECT GEOLOGIST:</u>	Brendan Hargrove
<u>WELLSITE GEOLOGISTS:</u>	Michelle Baker, Zachary Moses
<u>GEOSTEERING SYSTEM:</u>	Sunburst Digital Wellsite Geological System
<u>ROCK SAMPLING:</u>	30' from 8,240' - 10,940' 10' from 10,940' - 11,182' 30' from 11,182' - 20,597' (TD)
<u>SAMPLE EXAMINATION:</u>	Binocular microscope & fluoroscope
<u>SAMPLE CUTS:</u>	Trichloroethylene
<u>GAS DETECTION:</u>	MSI (Mudlogging Systems, Inc.) TGC - total gas with chromatograph Serial Number(s): ML-414
<u>DIRECTIONAL DRILLERS:</u>	RPM, Inc. John Gordan, Dan Thompson, Mike Bader, Doug Rakstad
<u>MWD:</u>	Ryan Directional Services Mike McCammond, Sammy Hayman
<u>CASING:</u>	Surface: 9 5/8" 36# J-55 set to 2,140' Intermediate: 7" 32# P-110 set to 11,108'

KEY OFFSET WELLS:

Oasis Petroleum North America, LLC

Ash Federal 5300 11-18T

Lot 1 Section 18, T153N, R100W

McKenzie County, ND

KB: 2,078'

Oasis Petroleum North America, LLC

Kline 5300 11-18H

NE NE Section 18 T153N R100W

McKenzie County, ND

KB: 2,079'

Oasis Petroleum North America, LLC

Kline Federal 5300 31-18 8B

Lot 3 Section 18, T153N, R100W

McKenzie County, ND

KB: 2,033'

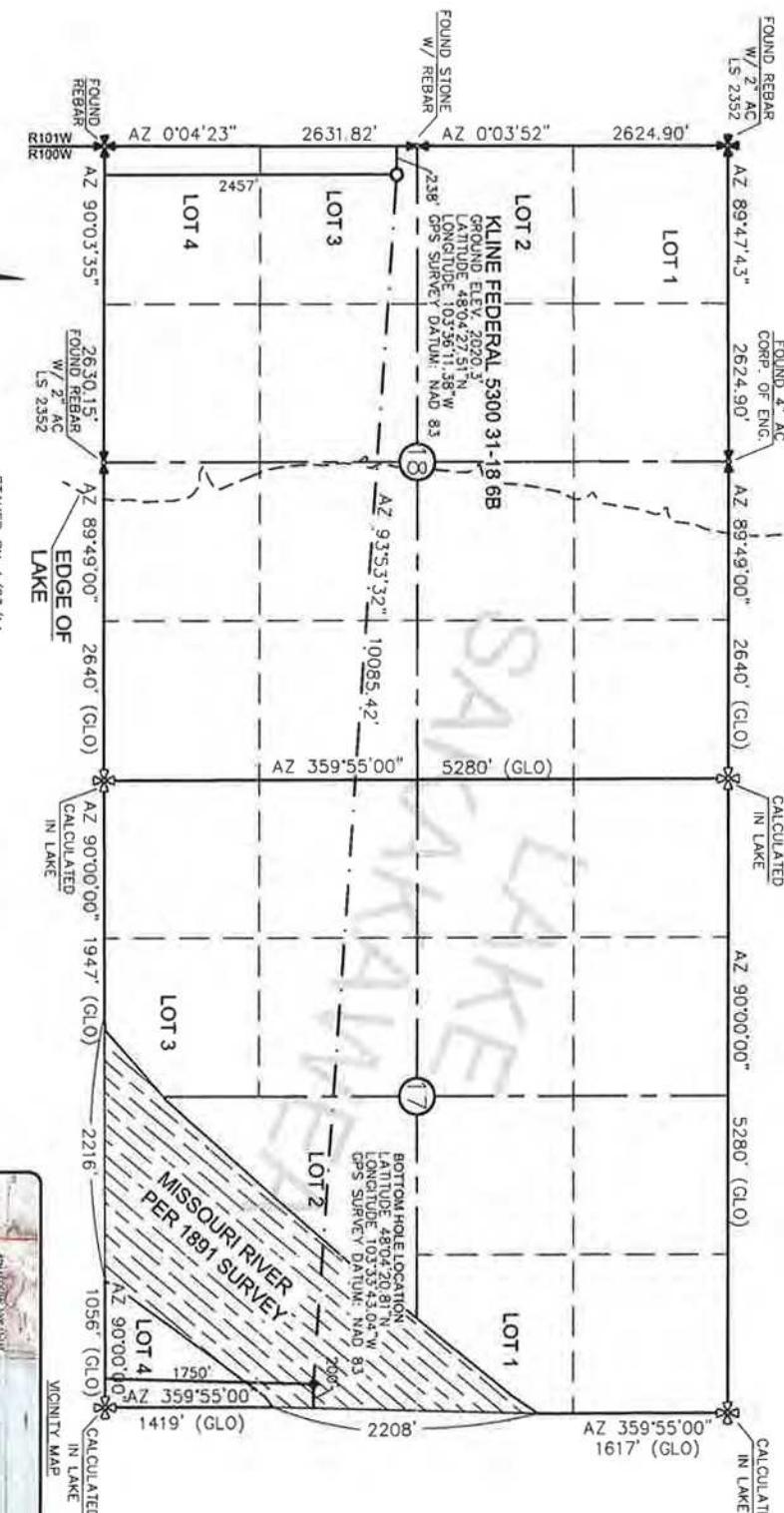
WELL LOCATION PLAT

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

KLINE FEDERAL 5300 31-18 6B

SECTION 18, T153N, R100W, 5th PM., MCKENZIE COUNTY, NORTH DAKOTA
245 FEET FROM SOUTH LINE AND 238 FEET FROM WEST LINE

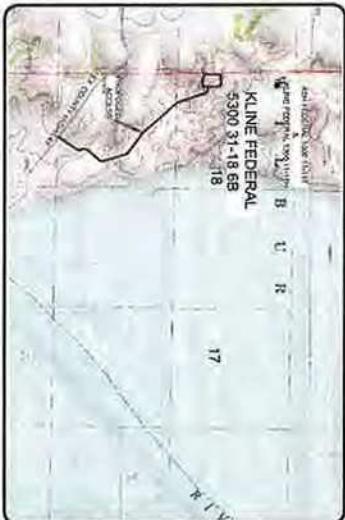
THE JOURNAL OF CLIMATE VOL. 17, NO. 10, OCTOBER 2004



ISSUED AND SEALED BY DARYL D.
KASEMAN, PLS. REGISTRATION NUMBER
3880 ON 4/25/14 AND THE
ORIGINAL DOCUMENTS ARE STORED AT
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MONUMENT - RECOVERED

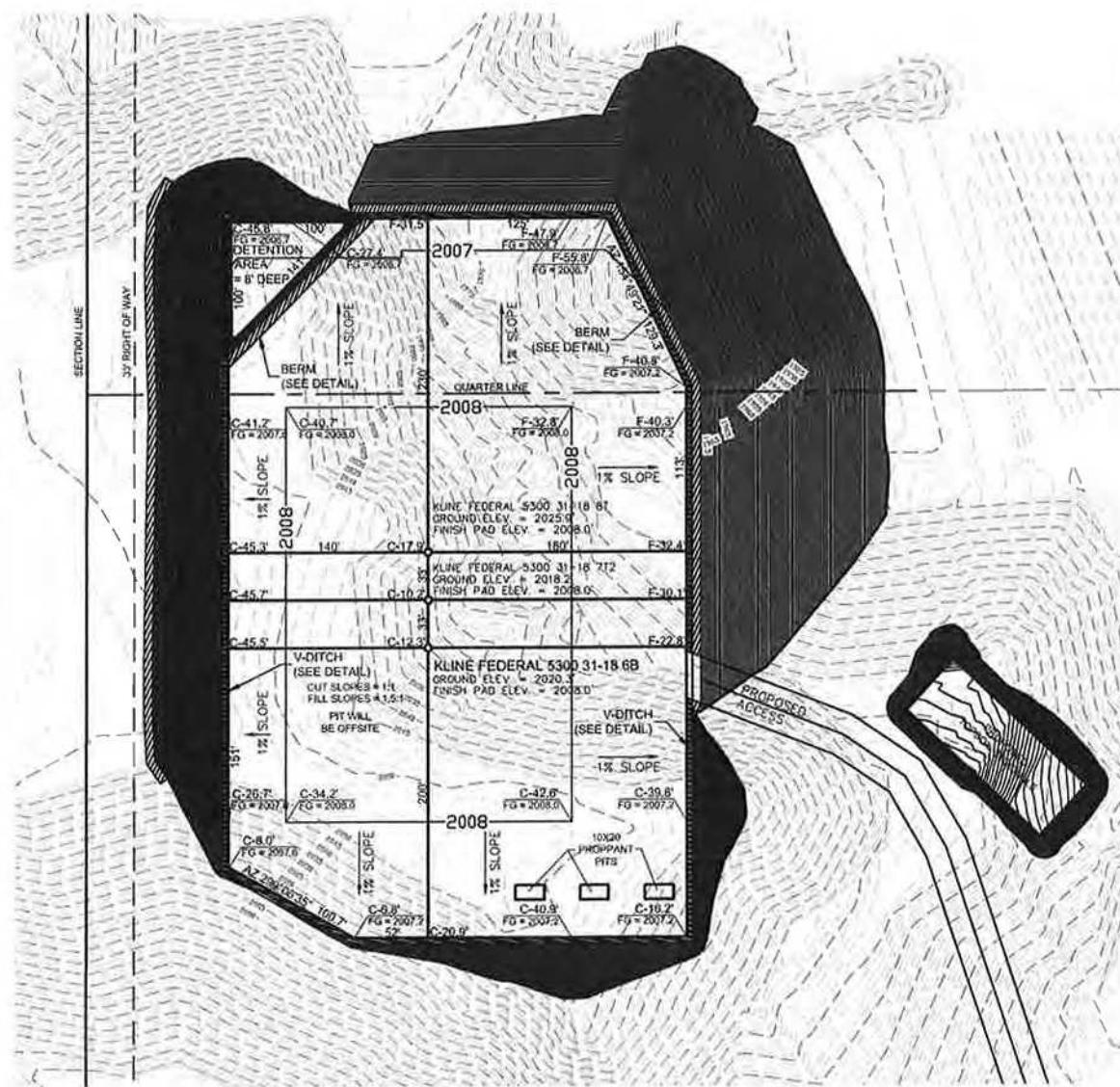
DAR'L D. KASEMAN LS-3880



VERTICAL SURVEY
VERTICAL CONTROL DATUM WAS BASED UPON
CONTROL POINT #4 WITH AN ELEVATION OF 2090.8'
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

© 2014, INTERSTATE ENGINEERING, INC.

PAD LAYOUT
 OASIS PETROLEUM NORTH AMERICA, LLC
 1001 FANNIN, SUITE 1500, HOUSTON, TX 77002
 KLINE FEDERAL 5300 31-18 6B
 2457 FEET FROM SOUTH LINE AND 238 FEET FROM WEST LINE
 SECTION 18, T153N, R100W, 5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

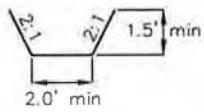


THIS DOCUMENT WAS ORIGINALLY ISSUED
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 PLS, REGISTRATION NUMBER 3880 ON
 4/25/14 AND THE ORIGINAL
 DOCUMENTS ARE STORED AT THE
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 INC.



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

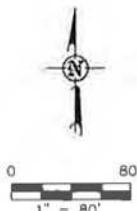
V-DITCH DETAIL



Proposed Contours ————
 Original Contours - - - - -

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

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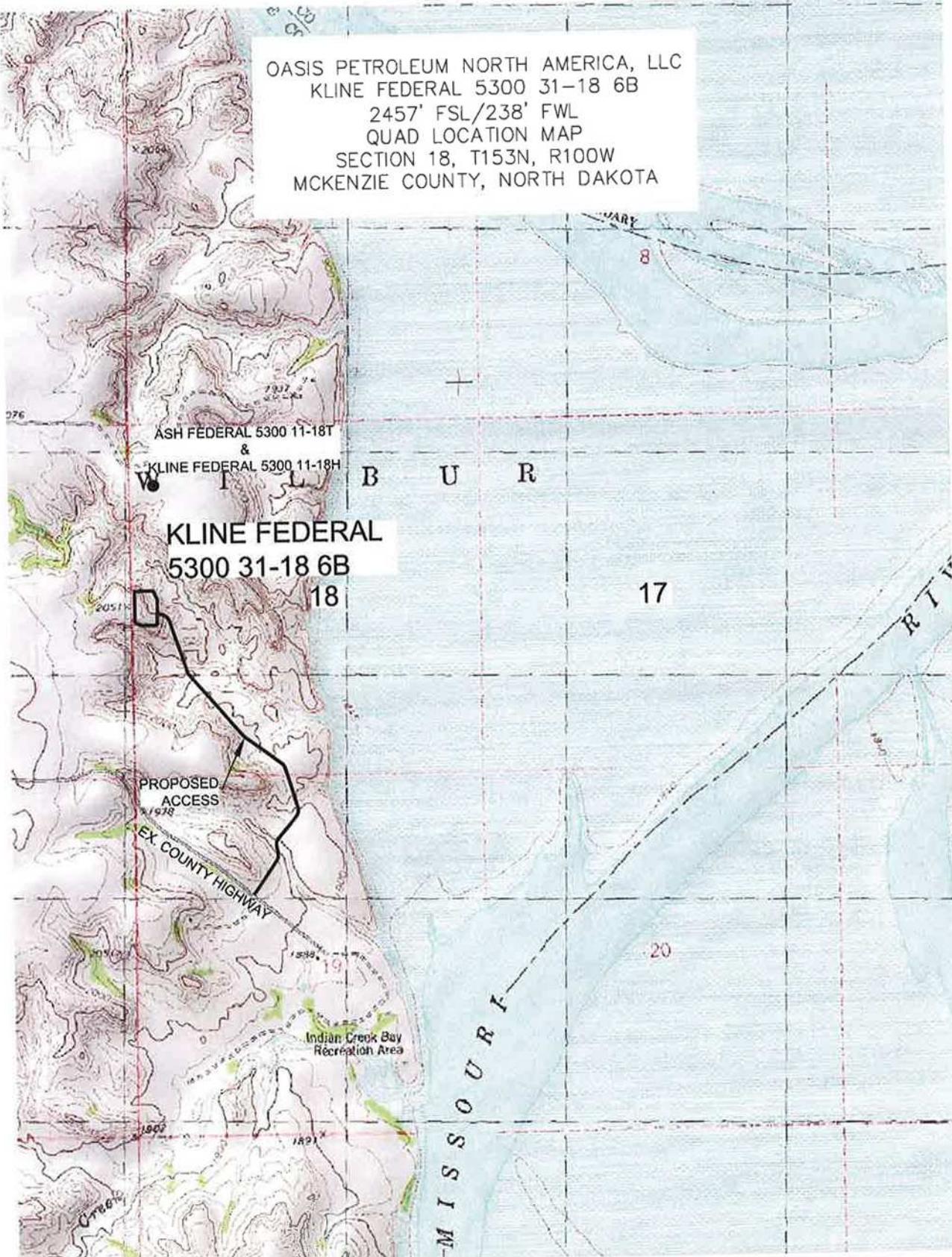
Interstate Engineering, Inc.
 P.O. Box 648
 425 East Main Street
 Sidney, Montana 59270
 Ph (406) 433-5617
 Fax (406) 433-5618
www.interstateeng.com

OASIS PETROLEUM NORTH AMERICA, LLC
 PAD LAYOUT
 SECTION 18, T153N, R100W

MCKENZIE COUNTY, NORTH DAKOTA

Drawn By: DJM Project No.: S14-08-100
 Checked By: DJM Date: APR 24 2014

Revised No.	Date	By	Description



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**INTERSTATE
ENGINEERING**

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Other offices in Minnesota, North Dakota and South Dakota

OASIS PETROLEUM NORTH AMERICA, LLC
QUAD LOCATION MAP
SECTION 18, T153N, R100W

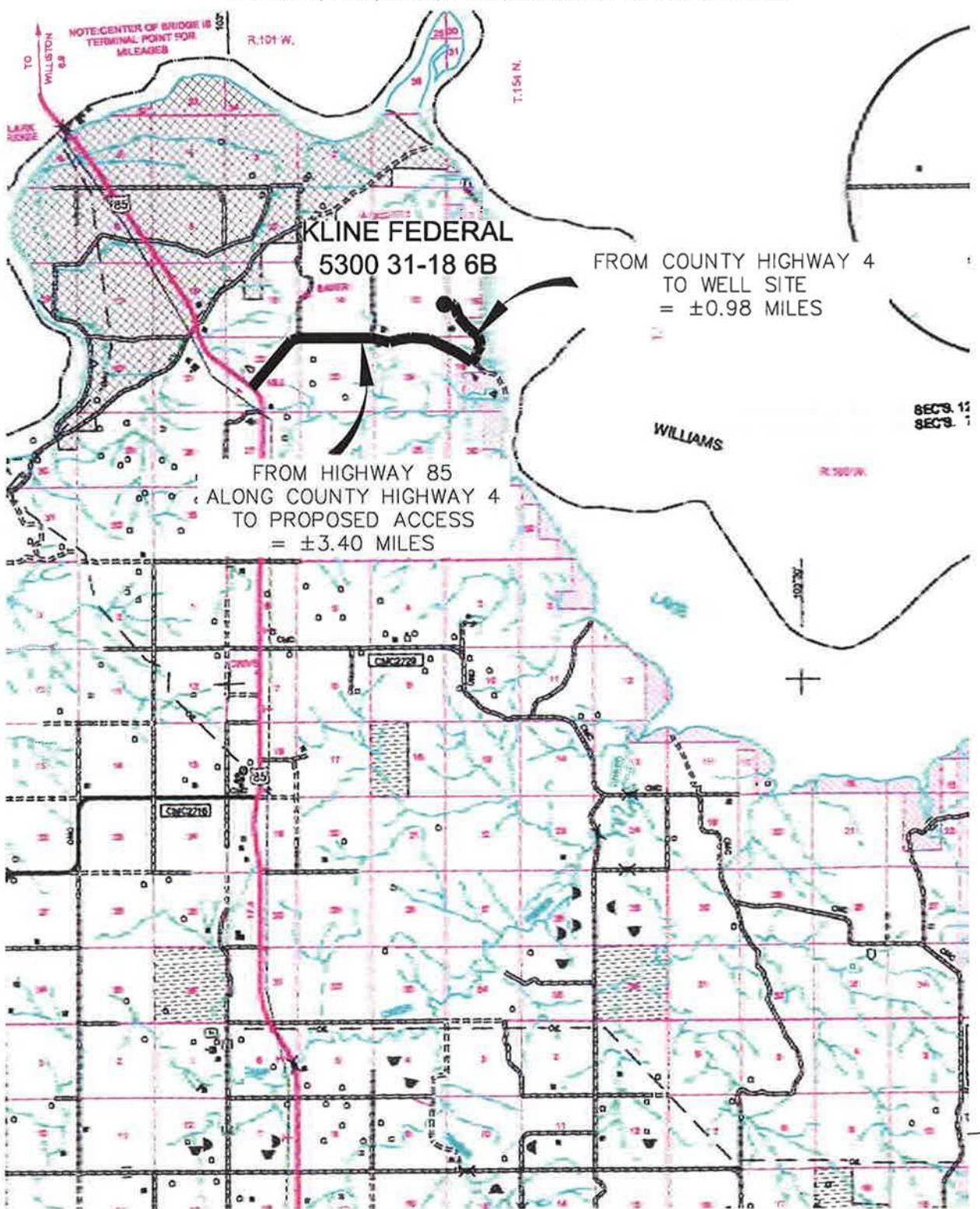
MCKENZIE COUNTY, NORTH DAKOTA

COUNTY ROAD MAP

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

"KLINE FEDERAL 5300 31-18 6B"

KEENEY ESTATE #2000-37-0002
2457 FEET FROM SOUTH LINE AND 238 FEET FROM WEST LINE
SECTION 18, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA



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SCALE: 1" = 2 MILE

6/8



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ENGINEERING**

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Sites in Memphis, North Dakota and South Dakota

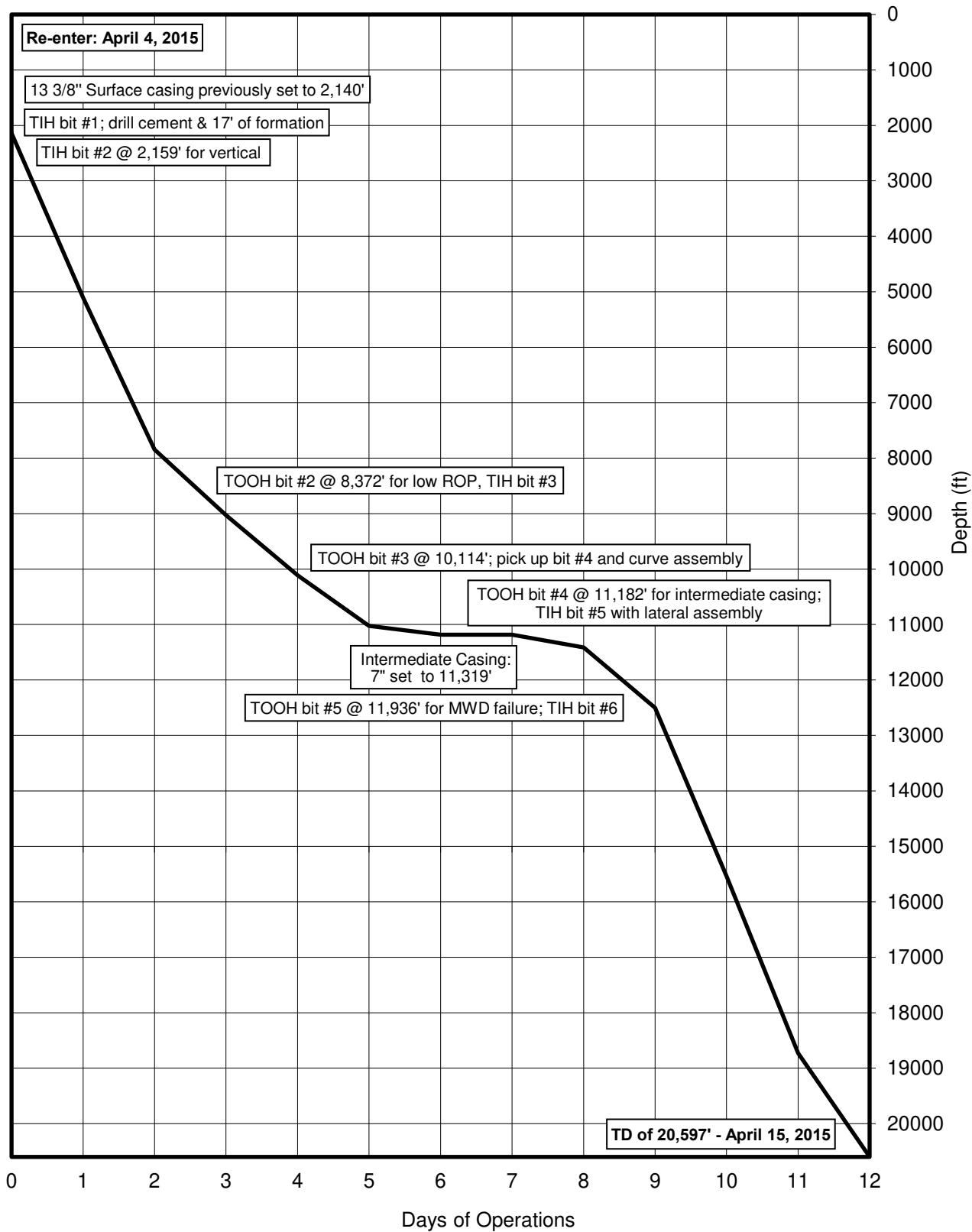
OASIS PETROLEUM NORTH AMERICA, LLC
COUNTY ROAD MAP
SECTION 18, T153N, R100W
MCKENZIE COUNTY, NORTH DAKOTA

Revision No.	Date	By	Description

TIME VS. DEPTH

Oasis Petroleum North America, LLC

Kline Federal 5300 31-18 6B



MORNING REPORT SUMMARY

Day	Date 2015	Depth (0600 Hrs)	24 Hr Footage	WOB (Klbs) Bit # RT	RPM (RT)	WOB (Klbs) MM	RPM (MM)	24 Hr Activity Summary			Formation
								PP	SPM 1	SPM 2	
0	4/4	2,140'	-	-	-	-	-	-	-	-	Skid rig, rig accepted at 18:00 hrs CDT on 4/4/15. Nipple up BOPs. Rig up choke line, flow line, fill line, catwalk, mouse hole, drip pan. Test BOP.
1	4/5	5,106'	2,966' 1/2	28	75	-	132	3500	78	78	Test BOPs. Test casing. Pick up 12 1/4" BHA. TH. Drill out casing and cement, shoe at 2,140'-2,159'. Build volume. TOOH. Pick up tools and BHA with a 8 3/4" bit. Slip and cut. Change out swivel packing. Rotate ahead from 2,159'-5,106'.
2	4/6	7,843'	2,737'	2	30	75	-	132	3500	78	549
											Drill and survey vertical, sliding as needed, from 5,106'-7,035'; Rig service. Drill and survey vertical, sliding as needed, from 7,035'-7,848'; BOP drill. Rig service.
3	4/7	9,026'	1,183'	2/3	28	65	28	144	3500	78	549
											Drill and survey vertical hole, sliding as needed, from 7,843'-8,372'. TOOH for diminished ROP. Lay down BHA. Pick up new bit. TH. Remove trip nipple and install rotating head rubber. Servicer rig. Drill and survey vertical hole, sliding as needed, from 8,372'-9,026'.
4	4/8	10,114'	1,088'	3	44	65	33	147	3500	66	507
											Drill and survey vertical hole from 9,026'-10,114'. TD vertical hole. Circulate and condition, send dry job. TOH, remove RHR, and install trip nipple. Lay down BHA. Pick up curve assembly. TH. Remove trip nipple, install rotating head rubber. Rig service. Prepare to orientate curve.
5	4/9	11,024'	910'	4	32	20	44	156	3600	70	537
											Orientate curve and survey, rotating as needed, from 10,114'-10,450'; Service top drive. Drill curve and survey from 10,450'-11,024'. Rig service.
6	4/10	11,182'	158'	4	32	20	44	156	3600	70	537
											Drill and survey from 11,026'-11,182'. Short trip 11 stands. Circulate and condition to bottoms up. Lay down drill pipe. Service rig. Lay down drill pipe. Remove RHR and install trip nipple. Lay down BHA. Install/remove wear bushing. Rig up/down to run casing. Run casing. Service rig.
7	4/11	11,182'	-	-	-	-	-	-	-	-	Middle Bakken Member
											Run casing, wash through curve. Circulate and condition, get pumps to 6 GPM then one bottoms up. Primary cementing. Lay down 3rd party tools, Rig down Schlumberger. Nipple down BOPS. Set slips, drain casing, cut off casing, laydown casing joint. Put bevel on 7" casing and install bit guide. Nipple up BOPS. Service rig.
8	4/12	11,412'	230'	5	8	40	15	265	3800	-	94
											Test BOPS, load pipe racks, clean pits. Pick up BHA, put BHA on racks. Pick up drill line. Cut drilling line. Pick up drill pipe. Service rig. Pick up drill pipe. Remove trip nipple, install rotating head rubber. Service rig. Pressure test casing, good test. Drill cement, float at 11,018', see at 11,108'. FIT, good. Drill 331 and survey lateral, sliding as needed, from 11,182'-11,412'.
9	4/13	12,501'	1,089'	5	15	30	18	104	4100	-	94
											Middle Bakken Member

MORNING REPORT SUMMARY

Day	Date 2015	Depth (0600 Hrs)	24 Hr Footage	WOB (Klbs) Bit # RT	RPM (RT)	WOB (Klbs) MM	RPM (MM)	PP	SPM 1	SPM 2	GPM	24 Hr Activity Summary		Formation
10	4/14	15,536'	3,035'	5 14	35	30	104	4100	-	80	282	Drill and survey lateral, sliding as needed, from 12,501'-12,880'. Service rig.	Service rig.	Middle Bakken Member
11	4/15	18,727'	3,191'	5 14	40	35	104	4000	-	74	261	Drill and survey lateral, sliding as needed, from 15,536'-17,242'. Service top drive. Drill and survey lateral, sliding as needed, from 17,242'-18,727'. Rig service.	Rig service.	Middle Bakken Member
12	4/16	20,597'	1,870'	5 15	30	70	104	3850	-	72	253	Drill and survey lateral, sliding as needed, from 18,727'-20,023'. Service top drive. Drill and survey lateral, sliding as needed, from 20,023'-20,597'. Reach TD. TD at 20,597' MD at 23:30 hrs CDT on April 15, 2015. Circulate and condition. Short trip 15 stands. Rig service. Circulate bottoms up twice. Spot pill, spot lube. OOH.	Reach TD.	Middle Bakken Member

DAILY MUD SUMMARY

Date 2015	Mud Depth	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 (%)	Oil/H ₂ O (%)	Alk	pH	Excess Lime (lb/bbl)	Cl ⁻ (mg/L)	LGS/HGS (%)	Salinity (ppm)	ES	Gain/Loss (bbls)
04/04	2,159'	9.4	78	12	8	5/9/11	32/20	83.2/16.8	74.5/15	2	8.5	-	2.8	-	3.6	35K	5/3.5	264,320	548	/-
04/05	6,070'	9.7	61	17	8	7/11/14	42/25	83/17	73/15	2	10	-	2.4	-	3.1	34K	5.6/4.4	264,320	654	/-
04/06	7,150'	9.65	53	17	9	7/9/11	43/26	83.3/16.7	72.5/14.5	2	11.1	-	3	-	3.9	42K	4.9/6.1	264,320	724	/93
04/07	9,212'	9.74	60	21	14	12/16/18	56/35	80.5/19.5	70/17	2	10.8	-	2.9	-	3.8	36K	5.2/5.6	309,151	636	/31
04/08	10,215'	10	65	24	11	11/13/15	59/35	81.4/18.6	70/16	2	11.9	-	3.4	-	4.4	43K	6.2/5.6	264,320	748	/30
04/09	11,182'	10.2	67	24	11	11/14/-	59/35	80.6/19.4	68.5/16.5	3	12.8	-	3	-	3.9	41K	6.6/3.2	264,320	686	/130
04/10	11,182'	10.42	87	24	11	11/15/-	59/35	80.6/19.4	67.5/16.2	3	14.1	-	2.8	-	3.6	40K	7.7/6.4	264,320	606	/0
04/11																				
04/12	11,938'	9.6	31	2	-	4/2	-	-	-	9	1/90	-	9.5	-	143K	-0.7	-	-	-	-
04/13	12,501'	9.6	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04/14	16,768'	9.57	30	1	1	-	3/2	-	-	8.8	-	-	-	-	-	141K	-0.5	-	-	-
04/15	18,725'	9.57	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04/16	20,557'	9.6	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Switch from invert oil based mud to salt water gel

BOTTOM HOLE ASSEMBLY RECORD

Bit #	Size (in.)	Type	Make	Model	Bit Data					Motor Data				Reason For Removal		
					Depth In	Depth Out	Footage	Hours	Σ hrs	Vert. Dev.	Make	Model	Bend	Rev/Gal		
1	12 1/4	PDC	Atlas Copco	-	2,140'	2,159'	19'	1	1	Vertical	-	-	-	Drill cement		
2	8 3/4	PDC	Halliburton	MM65D	2,159'	8,372'	6,213'	41	42	Vertical	Hunting	7/8	5.7	1.50°	0.24	Low ROP
3	8 3/4	PDC	Halliburton	MMD55M	8,372'	10,114'	1,742'	20	62	Vertical	NOV	7/8	5.0	2.38°	0.29	TD vertical
4	8 3/4	PDC	Halliburton	MMD55M	10,114'	11,182'	1,068'	26	88	Curve	NOV	7/8	5.0	2.38°	0.29	TD curve
5	6	PDC	NOV	SK516-M-A1-Z	11,182'	11,936'	754'	9	97	Lateral	Ryan	RY503	1.50°	0.8	MWD tool	
6	6	PDC	NOV	SK516M-A1-Z	11,936'	20,597'	8,661'	67	164	Lateral	Ryan	RY503	1.50°	0.8	TD lateral	



PLAN VIEW

Note: 1,280 acre laydown spacing unit
with 500' N/S & 200' E/W setbacks

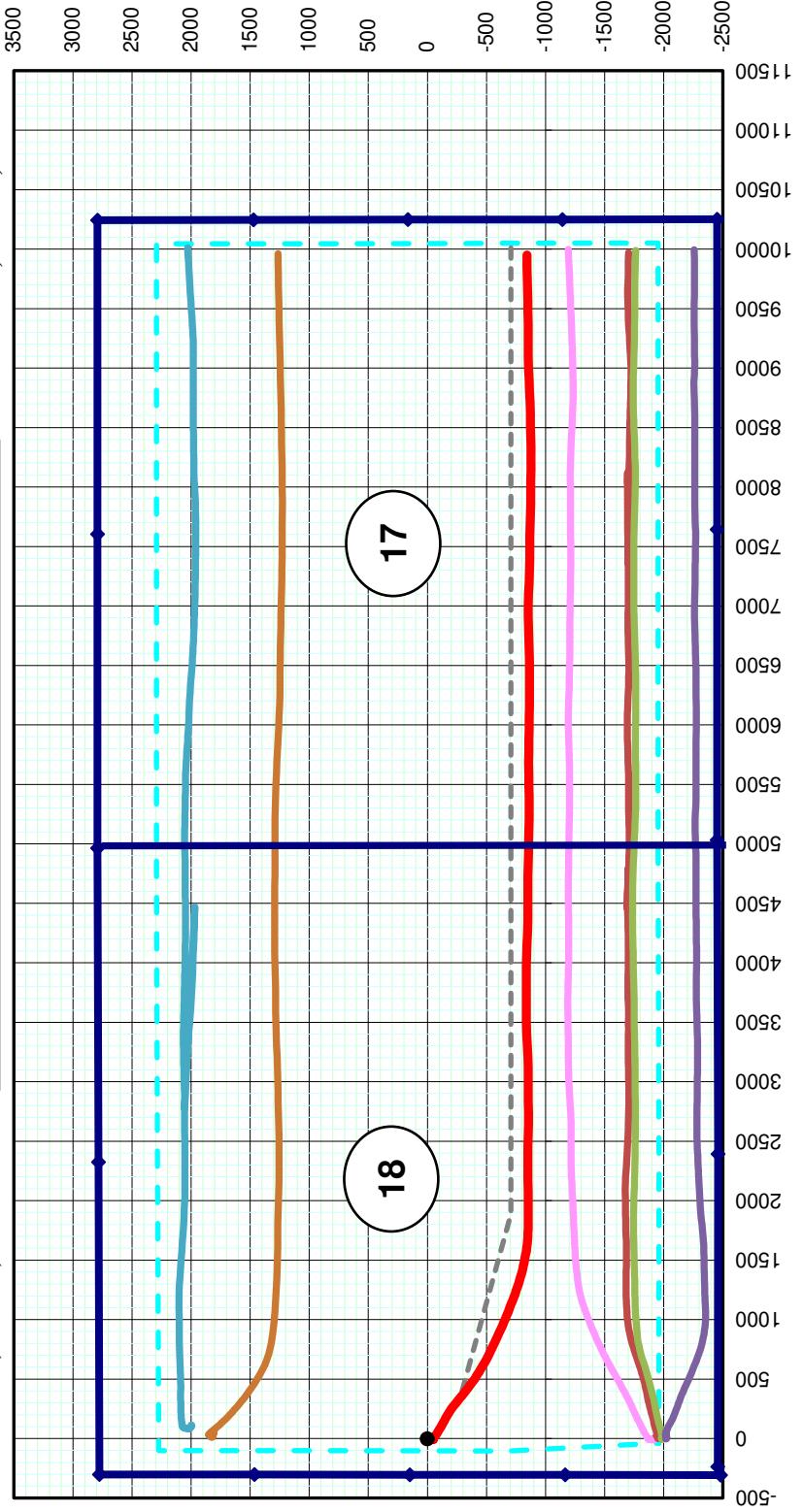


Oasis Petroleum North America LLC
Kline Federal 5300 31-18 6B

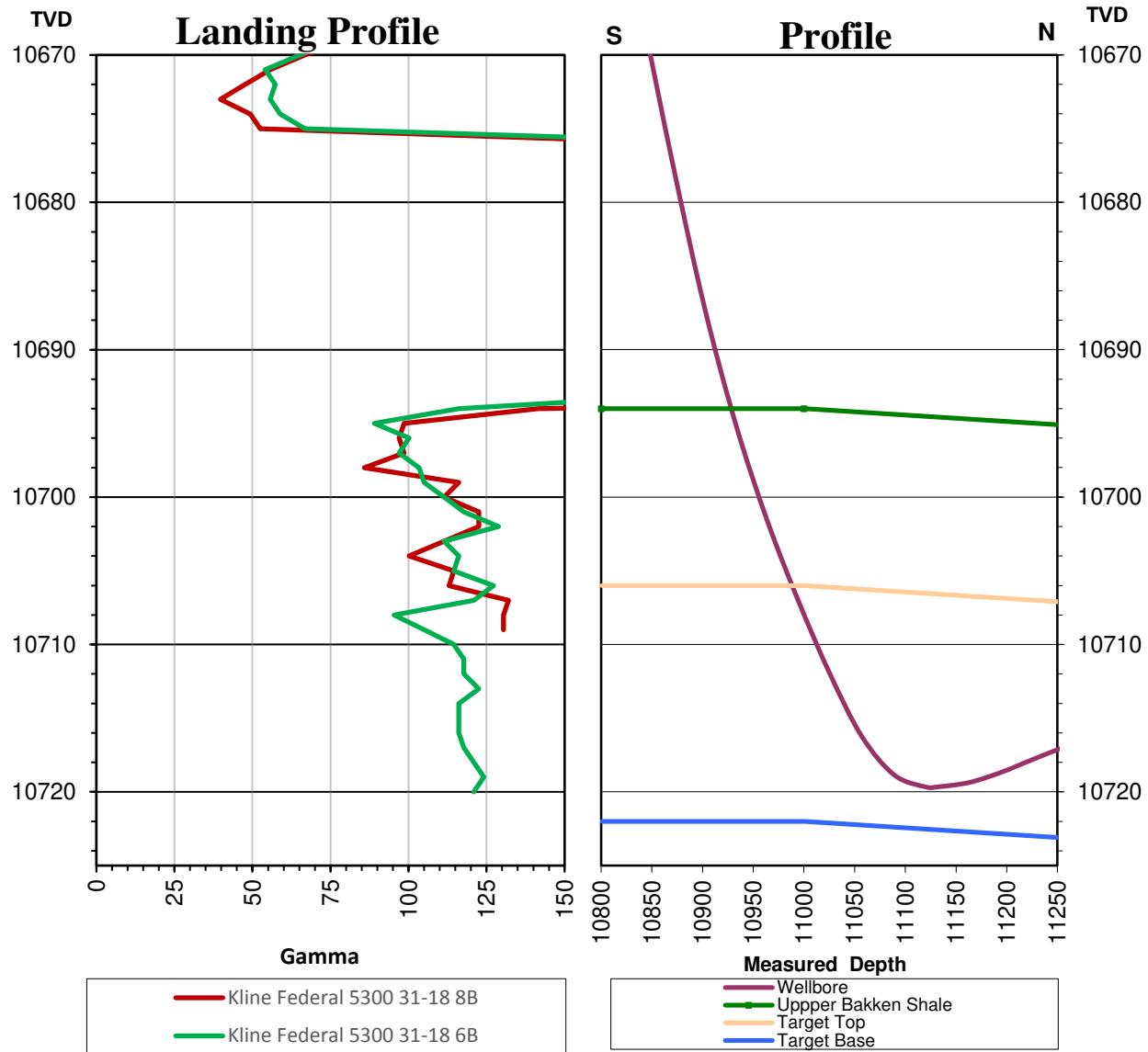
Surface Location

2,457' FSL & 238' FWL
Lot 3 Sec. 18, T153N, R100W

Bottom Hole Location
841.30' S & 9,949.84' E
of surface location or approx.
1,615.70' FSL & 301.31' FEL
NE SE Sec. 17, T153N, R100W



Oasis Petroleum
Kline Federal 5300 31-
 2,457' FSL & 238' FWL
Lot 3 Sec. 18, T153N, R100W
 McKenzie County, ND





Oasis Petroleum North America LLC
Kline Federal 5300 31-18 6B
Lot 3 Sec. 18, T153N, R100W
McKenzie County, ND

PROFILE

Gross apparent dip = -0.14°

Wt: 9.6

Vis: 31

E

W

Total Gas, ROP x 100, Gamma Ray x 10

Depth (TVD)

Measured Depth

- Wellbore — Upper Bakken Shale — Target Top — Target Base — Lower Bakken Shale — TG — ROP x 100 — GR x 10

FORMATION MARKERS & DIP ESTIMATES

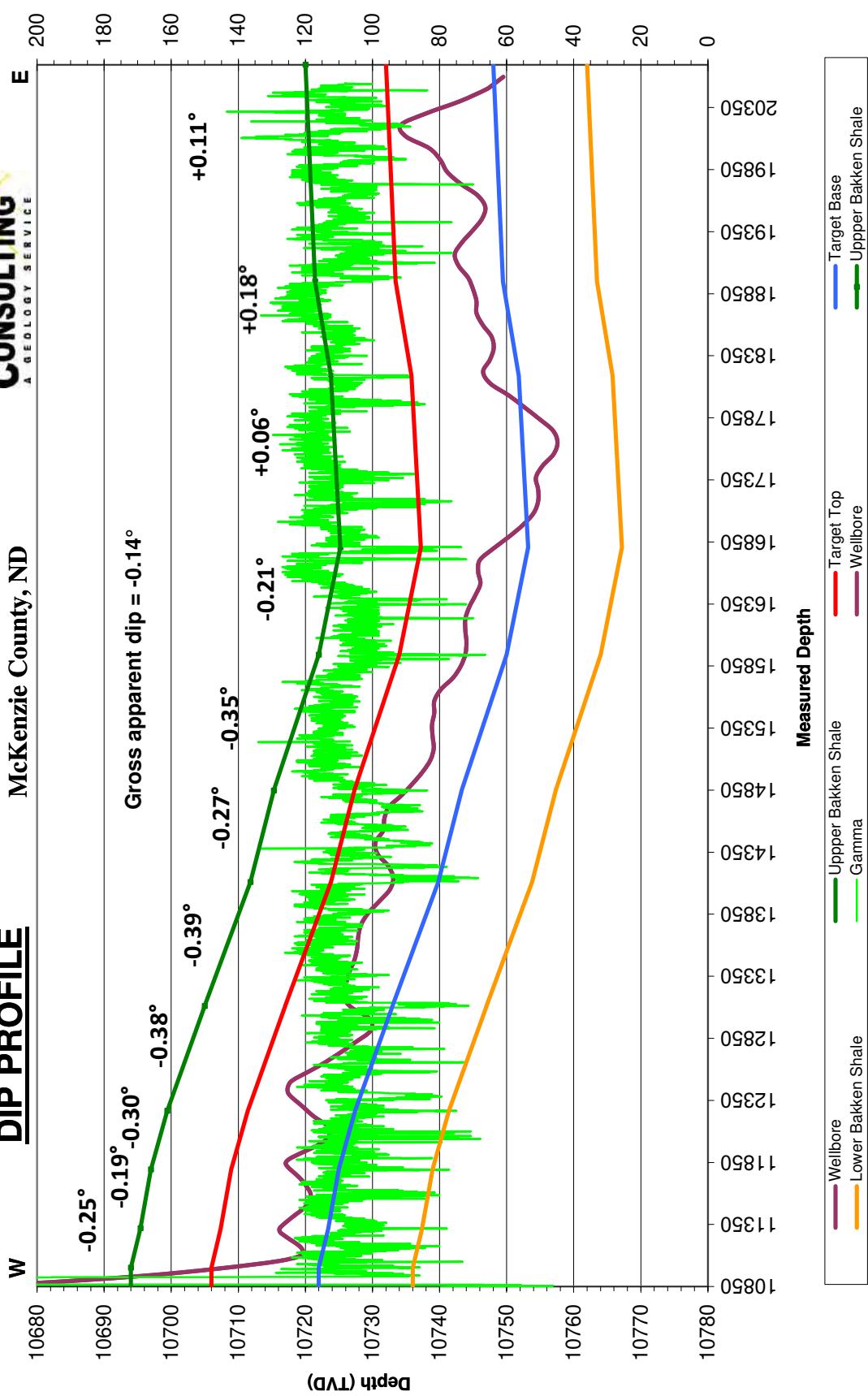
Oasis Petroleum North America LLC - Kline Federal 5300 31-18 6B

Dip Change Points	MD	TVD	TVD diff.	MD diff.	Dip	Dipping up/down	Type of Marker
Marker							
Cool gamma between C & D	11,000'	10,706.00					Gamma
Cool gamma between C & D	11,320'	10,707.40	1.40	320.00	-0.25	Down	Gamma
Cool gamma between C & D	11,792'	10,708.95	1.55	472.00	-0.19	Down	Gamma
Cool gamma between C & D	12,265'	10,711.40	2.45	473.00	-0.30	Down	Gamma
Cool gamma between C & D	13,110'	10,717.00	5.60	845.00	-0.38	Down	Gamma
Cool gamma between C & D	14,108'	10,723.80	6.80	998.00	-0.39	Down	Gamma
Cool gamma between C & D	14,846'	10,727.30	3.50	738.00	-0.27	Down	Gamma
Cool gamma between C & D	15,940'	10,734.00	6.70	1094.00	-0.35	Down	Gamma
Cool gamma between C & D	16,806'	10,737.20	3.20	866.00	-0.21	Down	Gamma
Marker D	18,186'	10,735.80	-1.40	1380.00	0.06	Up	Gamma
Marker D	18,947'	10,733.45	-2.35	761.00	0.18	Up	Gamma
Marker D	20,597'	10,730.20	-3.25	1650.00	0.11	Up	Gamma
Gross Dip							
Initial Target Contact	11,000'	10,706.00					
Projected Final Target Contact	20,597'	10,730.20	24.20	9597.00	-0.14	Down	Projection

Oasis Petroleum North America LLC
 Kline Federal 5300 31-18 6B
 Lot 3 Sec. 18, T153N, R100W
 McKenzie County, ND



DIP PROFILE



<

SUNBURST CONSULTING, INC.

>

Operator:	Oasis Petroleum North America LLC
Well:	Kline Federal 5300 31-18 6B
Surface Coordinates:	2,457' FSL & 238' FWL
Surface Location:	Lot 3 Sec. 18, T153N, R100W
County State:	McKenzie County, ND

Kick-off:	4/8/2015
Finish:	4/15/2015

Directional Supervision:
Ryan Directional

Minimum Curvature Method (SPE-3362) Proposed dir [] 94.93

[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	2047.00	0.90	211.10	2046.89	4.27	1.01	0.64	
1	2140.00	1.50	209.80	2139.87	2.59	0.03	-0.19	0.65
2	2154.00	1.50	210.40	2153.86	2.27	-0.16	-0.35	0.11
3	2247.00	0.60	224.20	2246.85	0.87	-1.11	-1.18	1.00
4	2341.00	0.40	56.50	2340.85	0.70	-1.18	-1.24	1.06
5	2434.00	0.70	79.20	2433.84	0.99	-0.35	-0.44	0.39
6	2527.00	0.80	50.70	2526.83	1.50	0.71	0.58	0.41
7	2621.00	0.80	108.40	2620.83	1.71	1.84	1.68	0.82
8	2714.00	0.50	159.80	2713.82	1.13	2.59	2.49	0.67
9	2808.00	0.80	171.40	2807.82	0.09	2.83	2.82	0.35
10	2901.00	0.70	162.40	2900.81	-1.09	3.10	3.19	0.17
11	2994.00	1.10	152.50	2993.80	-2.42	3.69	3.88	0.46
12	3088.00	1.10	148.70	3087.78	-4.00	4.57	4.90	0.08
13	3181.00	0.90	149.60	3180.76	-5.39	5.41	5.85	0.22
14	3274.00	0.30	205.40	3273.76	-6.24	5.67	6.19	0.83
15	3368.00	0.40	219.40	3367.76	-6.71	5.36	5.91	0.14
16	3461.00	0.50	224.30	3460.75	-7.26	4.87	5.47	0.12
17	3554.00	0.30	232.80	3553.75	-7.69	4.39	5.04	0.22
18	3648.00	0.40	241.70	3647.75	-8.00	3.91	4.58	0.12
19	3741.00	0.40	223.70	3740.75	-8.39	3.40	4.10	0.13
20	3835.00	0.30	240.50	3834.75	-8.74	2.95	3.70	0.15
21	3928.00	0.40	254.70	3927.74	-8.95	2.43	3.19	0.14
22	4022.00	0.30	253.20	4021.74	-9.11	1.88	2.65	0.11
23	4115.00	0.40	253.90	4114.74	-9.27	1.33	2.12	0.11
24	4208.00	0.20	71.70	4207.74	-9.31	1.17	1.97	0.65
25	4302.00	0.40	48.40	4301.74	-9.04	1.58	2.35	0.25
26	4395.00	0.20	69.00	4394.74	-8.76	1.97	2.72	0.24
27	4489.00	0.40	120.30	4488.74	-8.87	2.41	3.16	0.34
28	4582.00	0.20	88.70	4581.74	-9.03	2.85	3.61	0.27
29	4675.00	0.40	106.00	4674.73	-9.12	3.32	4.09	0.23
30	4769.00	0.50	106.30	4768.73	-9.32	4.03	4.82	0.11
31	4862.00	0.40	206.40	4861.73	-9.73	4.28	5.10	0.75
32	4956.00	0.50	253.50	4955.73	-10.14	3.74	4.60	0.39
33	5049.00	0.40	310.70	5048.72	-10.04	3.10	3.95	0.47
34	5142.00	0.70	239.40	5141.72	-10.12	2.37	3.23	0.74
35	5236.00	1.40	247.90	5235.70	-10.84	0.81	1.74	0.76
36	5329.00	0.80	232.10	5328.69	-11.67	-0.75	0.25	0.72
37	5423.00	0.80	201.30	5422.68	-12.68	-1.51	-0.42	0.45
38	5516.00	0.90	225.80	5515.67	-13.80	-2.27	-1.08	0.40
39	5609.00	0.60	242.70	5608.66	-14.53	-3.23	-1.97	0.40

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SUNBURST CONSULTING, INC.

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Operator:	Oasis Petroleum North America LLC
Well:	Kline Federal 5300 31-18 6B
Surface Coordinates:	2,457' FSL & 238' FWL
Surface Location:	Lot 3 Sec. 18, T153N, R100W
County State:	McKenzie County, ND

Kick-off:	4/8/2015
Finish:	4/15/2015

Directional Supervision:
Ryan Directional

Minimum Curvature Method (SPE-3362) Proposed dir [] 94.93
 [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		
40	5703.00	0.60	258.20	5702.66	-14.86	-4.15	-2.85	0.17
41	5796.00	0.30	201.10	5795.65	-15.18	-4.71	-3.39	0.54
42	5889.00	0.70	119.40	5888.65	-15.69	-4.30	-2.94	0.77
43	5982.00	0.50	130.50	5981.65	-16.23	-3.50	-2.09	0.25
44	6076.00	0.70	157.20	6075.64	-17.03	-2.96	-1.49	0.36
45	6169.00	0.80	162.30	6168.63	-18.17	-2.55	-0.98	0.13
46	6263.00	1.00	179.70	6262.62	-19.61	-2.34	-0.65	0.36
47	6356.00	1.10	187.20	6355.61	-21.31	-2.45	-0.61	0.18
48	6449.00	1.40	169.70	6448.58	-23.32	-2.36	-0.35	0.52
49	6543.00	1.80	169.90	6542.55	-25.90	-1.90	0.34	0.43
50	6636.00	2.00	183.90	6635.50	-28.96	-1.75	0.74	0.54
51	6729.00	1.30	172.00	6728.46	-31.62	-1.71	1.01	0.83
52	6823.00	1.20	169.00	6822.43	-33.64	-1.38	1.52	0.13
53	6916.00	1.60	164.40	6915.41	-35.85	-0.84	2.24	0.45
54	7009.00	0.70	186.20	7008.39	-37.66	-0.55	2.68	1.06
55	7103.00	0.40	198.20	7102.38	-38.55	-0.72	2.60	0.34
56	7196.00	0.50	196.60	7195.38	-39.24	-0.94	2.44	0.11
57	7289.00	0.70	220.00	7288.38	-40.07	-1.42	2.03	0.34
58	7382.00	0.70	220.70	7381.37	-40.93	-2.15	1.37	0.01
59	7475.00	0.70	195.70	7474.36	-41.91	-2.68	0.93	0.33
60	7569.00	0.70	196.40	7568.35	-43.01	-2.99	0.71	0.01
61	7662.00	0.90	211.10	7661.35	-44.18	-3.53	0.28	0.31
62	7755.00	0.30	196.30	7754.34	-45.04	-3.98	-0.09	0.66
63	7849.00	0.00	193.00	7848.34	-45.28	-4.05	-0.14	0.32
64	7942.00	0.20	319.10	7941.34	-45.16	-4.15	-0.26	0.22
65	8035.00	0.40	332.90	8034.34	-44.75	-4.41	-0.55	0.23
66	8129.00	0.20	196.00	8128.34	-44.61	-4.60	-0.75	0.60
67	8222.00	0.40	195.80	8221.34	-45.08	-4.74	-0.84	0.22
68	8315.00	0.30	198.70	8314.33	-45.62	-4.90	-0.96	0.11
69	8409.00	0.40	210.90	8408.33	-46.14	-5.15	-1.17	0.13
70	8502.00	0.50	206.80	8501.33	-46.78	-5.50	-1.46	0.11
71	8596.00	0.60	236.20	8595.33	-47.42	-6.09	-2.00	0.31
72	8689.00	0.50	220.10	8688.32	-48.00	-6.76	-2.61	0.20
73	8782.00	0.30	193.50	8781.32	-48.55	-7.08	-2.88	0.29
74	8876.00	0.00	114.80	8875.32	-48.79	-7.13	-2.92	0.32
75	8969.00	0.20	0.70	8968.32	-48.62	-7.13	-2.93	0.22
76	9062.00	0.20	37.80	9061.32	-48.33	-7.03	-2.85	0.14
77	9155.00	0.30	333.00	9154.32	-47.99	-7.04	-2.89	0.30
78	9249.00	0.50	28.30	9248.32	-47.41	-6.96	-2.86	0.44
79	9342.00	1.00	106.90	9341.31	-47.29	-5.99	-1.90	1.10

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SUNBURST CONSULTING, INC.

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Operator:	Oasis Petroleum North America LLC
Well:	Kline Federal 5300 31-18 6B
Surface Coordinates:	2,457' FSL & 238' FWL
Surface Location:	Lot 3 Sec. 18, T153N, R100W
County State:	McKenzie County, ND

Kick-off:	4/8/2015
Finish:	4/15/2015

Directional Supervision:
Ryan Directional

Minimum Curvature Method (SPE-3362) Proposed dir [] 94.93
 [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		
80	9435.00	1.10	116.00	9434.29	-47.91	-4.41	-0.28	0.21
81	9528.00	1.00	118.00	9527.28	-48.69	-2.89	1.30	0.11
82	9622.00	1.00	114.40	9621.26	-49.41	-1.42	2.83	0.07
83	9715.00	0.80	103.60	9714.25	-49.90	-0.05	4.24	0.28
84	9808.00	0.70	99.20	9807.24	-50.14	1.14	5.45	0.12
85	9902.00	0.70	116.60	9901.24	-50.49	2.22	6.55	0.23
86	9995.00	0.20	97.60	9994.23	-50.77	2.89	7.24	0.55
87	10057.00	0.20	16.80	10056.23	-50.68	3.03	7.37	0.42
88	10093.00	0.20	0.80	10092.23	-50.55	3.05	7.38	0.15
89	10124.00	1.50	122.40	10123.23	-50.72	3.39	7.74	5.21
90	10155.00	6.10	124.00	10154.15	-51.86	5.10	9.54	14.84
91	10186.00	10.60	128.40	10184.82	-54.55	8.70	13.36	14.65
92	10217.00	13.70	131.20	10215.12	-58.74	13.70	18.70	10.18
93	10248.00	15.20	131.20	10245.14	-63.83	19.52	24.93	4.84
94	10279.00	17.80	128.80	10274.86	-69.48	26.27	32.15	8.67
95	10310.00	20.40	125.00	10304.15	-75.55	34.39	40.76	9.29
96	10342.00	22.90	122.20	10333.89	-82.07	44.23	51.12	8.45
97	10373.00	25.40	120.50	10362.18	-88.66	55.06	62.48	8.37
98	10404.00	28.60	120.20	10389.79	-95.77	67.21	75.19	10.33
99	10435.00	32.70	120.90	10416.46	-103.80	80.81	89.43	13.28
100	10466.00	36.70	120.90	10441.94	-112.86	95.95	105.30	12.90
101	10497.00	39.00	119.70	10466.42	-122.45	112.38	122.48	7.79
102	10528.00	42.10	117.70	10489.97	-132.12	130.05	140.93	10.84
103	10559.00	44.60	116.90	10512.51	-141.88	148.96	160.61	8.26
104	10591.00	46.90	119.50	10534.84	-152.71	169.16	181.65	9.25
105	10622.00	49.80	119.80	10555.44	-164.17	189.28	202.69	9.38
106	10653.00	51.90	121.40	10575.01	-176.41	209.97	224.36	7.87
107	10684.00	53.30	123.90	10593.84	-189.70	230.70	246.15	7.84
108	10715.00	55.30	127.10	10611.93	-204.33	251.18	267.82	10.58
109	10746.00	59.30	128.90	10628.68	-220.39	271.73	289.67	13.80
110	10777.00	63.80	128.80	10643.44	-237.48	292.95	312.28	14.52
111	10809.00	69.00	128.60	10656.25	-255.81	315.83	336.65	16.26
112	10840.00	70.20	128.20	10667.06	-273.86	338.60	360.88	4.06
113	10871.00	70.40	127.80	10677.51	-291.82	361.60	385.34	1.38
114	10902.00	73.40	128.30	10687.14	-309.98	384.80	410.02	9.80
115	10933.00	76.80	128.20	10695.11	-328.53	408.32	435.04	10.97
116	10964.00	78.90	128.10	10701.63	-347.25	432.15	460.40	6.78
117	10995.00	80.70	127.90	10707.12	-366.03	456.19	485.96	5.84
118	11026.00	81.00	127.10	10712.05	-384.66	480.48	511.76	2.73
119	11057.00	83.50	124.30	10716.23	-402.58	505.42	538.14	12.05

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SUNBURST CONSULTING, INC.

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Operator:	Oasis Petroleum North America LLC
Well:	Kline Federal 5300 31-18 6B
Surface Coordinates:	2,457' FSL & 238' FWL
Surface Location:	Lot 3 Sec. 18, T153N, R100W
County State:	McKenzie County, ND

Kick-off:	4/8/2015
Finish:	4/15/2015

Directional Supervision:
Ryan Directional

Minimum Curvature Method (SPE-3362) Proposed dir [] 94.93

[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		
120	11089.00	87.10	121.90	10718.85	-419.99	532.13	566.25	13.51
121	11120.00	89.90	120.90	10719.66	-436.14	558.58	593.99	9.59
122	11133.00	90.20	121.20	10719.65	-442.84	569.71	605.66	3.26
123	11163.00	90.90	121.20	10719.36	-458.38	595.37	632.56	2.33
124	11194.00	91.60	120.20	10718.69	-474.20	622.02	660.47	3.94
125	11225.00	91.60	119.20	10717.82	-489.56	648.94	688.61	3.22
126	11257.00	91.50	119.20	10716.96	-505.16	676.86	717.77	0.31
127	11287.00	91.20	117.50	10716.25	-519.40	703.26	745.29	5.75
128	11317.00	89.20	115.60	10716.14	-532.81	730.09	773.18	9.20
129	11348.00	88.80	115.50	10716.69	-546.18	758.05	802.19	1.33
130	11378.00	88.70	115.30	10717.34	-559.04	785.15	830.29	0.75
131	11409.00	88.70	115.30	10718.04	-572.29	813.17	859.34	0.00
132	11439.00	88.50	115.30	10718.78	-585.11	840.28	887.46	0.67
133	11471.00	88.70	115.20	10719.56	-598.75	869.21	917.45	0.70
134	11502.00	89.10	114.30	10720.15	-611.73	897.36	946.61	3.18
135	11532.00	89.50	113.40	10720.52	-623.86	924.80	974.99	3.28
136	11563.00	89.70	113.70	10720.74	-636.24	953.21	1004.37	1.16
137	11593.00	90.10	113.60	10720.79	-648.28	980.69	1032.78	1.37
138	11623.00	90.70	112.70	10720.58	-660.07	1008.28	1061.27	3.61
139	11655.00	90.70	111.60	10720.19	-672.14	1037.91	1091.84	3.44
140	11686.00	90.80	111.50	10719.78	-683.52	1066.74	1121.54	0.46
141	11718.00	91.00	111.60	10719.28	-695.27	1096.50	1152.20	0.70
142	11749.00	91.20	111.40	10718.68	-706.63	1125.34	1181.91	0.91
143	11781.00	91.20	111.30	10718.01	-718.28	1155.14	1212.59	0.31
144	11812.00	91.10	111.80	10717.39	-729.66	1183.97	1242.29	1.64
145	11844.00	90.10	110.40	10717.06	-741.18	1213.82	1273.02	5.38
146	11874.00	88.20	108.90	10717.50	-751.27	1242.07	1302.03	8.07
147	11905.00	87.90	109.00	10718.56	-761.33	1271.37	1332.09	1.02
148	11936.00	87.60	108.00	10719.77	-771.16	1300.74	1362.20	3.37
149	11966.00	87.80	106.20	10720.98	-779.97	1329.39	1391.50	6.03
150	11996.00	88.00	106.20	10722.08	-788.34	1358.18	1420.91	0.67
151	12028.00	88.70	105.50	10723.00	-797.07	1388.95	1452.31	3.09
152	12058.00	89.50	103.30	10723.47	-804.53	1418.00	1481.90	7.80
153	12089.00	89.80	102.90	10723.66	-811.56	1448.20	1512.58	1.61
154	12121.00	90.20	101.80	10723.66	-818.40	1479.46	1544.31	3.66
155	12153.00	91.60	100.80	10723.16	-824.67	1510.83	1576.11	5.38
156	12184.00	91.70	100.80	10722.26	-830.48	1541.27	1606.94	0.32
157	12216.00	91.50	99.20	10721.37	-836.03	1572.77	1638.80	5.04
158	12247.00	91.10	96.60	10720.67	-840.29	1603.46	1669.75	8.48
159	12279.00	91.20	96.40	10720.02	-843.91	1635.25	1701.73	0.70

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SUNBURST CONSULTING, INC.

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Operator:	Oasis Petroleum North America LLC	Kick-off:	4/8/2015
Well:	Kline Federal 5300 31-18 6B	Finish:	4/15/2015
Surface Coordinates:	2,457' FSL & 238' FWL	Directional Supervision:	
Surface Location:	Lot 3 Sec. 18, T153N, R100W	Ryan Directional	
County State:	McKenzie County, ND		

Minimum Curvature Method (SPE-3362) Proposed dir [] 94.93

[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		
160	12311.00	91.20	95.30	10719.35	-847.18	1667.08	1733.72	3.44
161	12342.00	91.30	92.90	10718.68	-849.39	1697.99	1764.70	7.75
162	12374.00	91.20	92.80	10717.98	-850.98	1729.94	1796.67	0.44
163	12405.00	90.70	91.60	10717.47	-852.17	1760.91	1827.63	4.19
164	12437.00	89.80	91.30	10717.33	-852.98	1792.90	1859.57	2.96
165	12469.00	89.70	91.50	10717.47	-853.76	1824.89	1891.51	0.70
166	12500.00	89.00	89.90	10717.82	-854.14	1855.89	1922.43	5.63
167	12532.00	87.80	89.60	10718.71	-854.00	1887.87	1954.28	3.87
168	12627.00	88.20	90.00	10722.03	-853.67	1982.82	2048.84	0.60
169	12722.00	88.40	89.30	10724.85	-853.09	2077.77	2143.40	0.77
170	12816.00	88.50	88.70	10727.39	-851.45	2171.72	2236.86	0.65
171	12911.00	88.70	89.60	10729.71	-850.04	2266.68	2331.35	0.97
172	13006.00	91.40	90.90	10729.63	-850.46	2361.67	2426.02	3.15
173	13101.00	92.00	90.30	10726.81	-851.45	2456.62	2520.71	0.89
174	13196.00	89.50	91.00	10725.56	-852.53	2551.60	2615.43	2.73
175	13291.00	89.90	91.20	10726.06	-854.35	2646.58	2710.21	0.47
176	13385.00	89.50	89.50	10726.55	-854.93	2740.57	2803.91	1.86
177	13480.00	89.60	88.70	10727.30	-853.43	2835.56	2898.41	0.85
178	13575.00	89.90	90.40	10727.71	-852.69	2930.55	2992.99	1.82
179	13670.00	89.90	90.00	10727.88	-853.02	3025.55	3087.67	0.42
180	13765.00	89.60	89.40	10728.30	-852.52	3120.55	3182.27	0.71
181	13859.00	89.10	87.90	10729.36	-850.31	3214.51	3275.70	1.68
182	13954.00	88.90	87.00	10731.02	-846.08	3309.40	3369.87	0.97
183	14049.00	89.20	86.90	10732.59	-841.03	3404.26	3463.94	0.33
184	14144.00	90.20	89.80	10733.09	-838.29	3499.20	3558.30	3.23
185	14239.00	90.70	89.90	10732.35	-838.04	3594.20	3652.92	0.54
186	14334.00	91.20	89.90	10730.77	-837.88	3689.19	3747.54	0.53
187	14429.00	89.20	90.00	10730.44	-837.80	3784.18	3842.18	2.11
188	14524.00	89.40	89.60	10731.60	-837.46	3879.17	3936.79	0.47
189	14618.00	90.40	90.20	10731.76	-837.30	3973.17	4030.43	1.24
190	14713.00	88.80	91.80	10732.43	-838.96	4068.15	4125.20	2.38
191	14808.00	88.90	92.70	10734.33	-842.69	4163.06	4220.07	0.95
192	14903.00	89.10	92.10	10735.99	-846.66	4257.96	4314.97	0.67
193	14998.00	89.10	91.00	10737.48	-849.23	4352.91	4409.79	1.16
194	15092.00	89.50	90.40	10738.63	-850.38	4446.89	4503.52	0.77
195	15187.00	89.90	90.10	10739.13	-850.80	4541.89	4598.20	0.53
196	15282.00	90.30	89.70	10738.96	-850.63	4636.89	4692.84	0.60
197	15377.00	89.80	91.40	10738.88	-851.54	4731.88	4787.56	1.87
198	15472.00	89.80	90.70	10739.21	-853.28	4826.87	4882.34	0.74
199	15567.00	90.20	90.80	10739.21	-854.53	4921.86	4977.09	0.43

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SUNBURST CONSULTING, INC.

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Operator:	Oasis Petroleum North America LLC
Well:	Kline Federal 5300 31-18 6B
Surface Coordinates:	2,457' FSL & 238' FWL
Surface Location:	Lot 3 Sec. 18, T153N, R100W
County State:	McKenzie County, ND

Kick-off:	4/8/2015
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Directional Supervision:
Ryan Directional

Minimum Curvature Method (SPE-3362) Proposed dir [] 94.93

[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		
200	15661.00	88.60	91.30	10740.20	-856.25	5015.83	5070.86	1.78
201	15756.00	89.20	91.30	10742.02	-858.40	5110.79	5165.65	0.63
202	15851.00	89.40	90.60	10743.18	-859.98	5205.77	5260.42	0.77
203	15946.00	89.80	90.10	10743.84	-860.56	5300.77	5355.11	0.67
204	16041.00	90.00	89.90	10744.01	-860.56	5395.77	5449.76	0.30
205	16135.00	90.20	88.60	10743.85	-859.33	5489.75	5543.29	1.40
206	16230.00	89.80	88.40	10743.85	-856.84	5584.72	5637.70	0.47
207	16325.00	89.50	90.70	10744.43	-856.10	5679.71	5732.27	2.44
208	16420.00	89.40	91.10	10745.34	-857.59	5774.69	5827.03	0.43
209	16515.00	89.70	90.50	10746.08	-858.91	5869.68	5921.78	0.71
210	16609.00	90.70	90.50	10745.76	-859.73	5963.68	6015.50	1.06
211	16704.00	89.00	91.20	10746.01	-861.14	6058.66	6110.25	1.94
212	16799.00	88.50	90.90	10748.08	-862.88	6153.62	6205.01	0.61
213	16894.00	88.70	90.60	10750.40	-864.13	6248.59	6299.73	0.38
214	16989.00	88.80	90.00	10752.47	-864.62	6343.56	6394.40	0.64
215	17083.00	89.30	89.40	10754.03	-864.13	6437.55	6487.99	0.83
216	17178.00	89.90	88.80	10754.69	-862.64	6532.53	6582.50	0.89
217	17273.00	90.10	88.70	10754.69	-860.57	6627.51	6676.95	0.24
218	17368.00	90.30	87.70	10754.36	-857.58	6722.46	6771.29	1.07
219	17463.00	88.50	88.70	10755.36	-854.60	6817.40	6865.62	2.17
220	17557.00	89.50	90.60	10757.00	-854.03	6911.38	6959.21	2.28
221	17652.00	89.80	89.60	10757.58	-854.19	7006.38	7053.87	1.10
222	17747.00	91.00	92.20	10756.91	-855.68	7101.35	7148.62	3.01
223	17842.00	91.50	92.40	10754.84	-859.50	7196.26	7243.50	0.57
224	17937.00	91.20	91.60	10752.60	-862.81	7291.17	7338.34	0.90
225	18031.00	91.60	90.80	10750.31	-864.78	7385.12	7432.12	0.95
226	18126.00	91.70	89.30	10747.57	-864.86	7480.08	7526.73	1.58
227	18221.00	89.60	92.00	10746.49	-865.94	7575.05	7621.45	3.60
228	18316.00	89.20	92.10	10747.49	-869.34	7669.99	7716.32	0.43
229	18411.00	90.10	91.30	10748.07	-872.16	7764.94	7811.17	1.27
230	18505.00	90.30	90.50	10747.74	-873.63	7858.93	7904.93	0.88
231	18600.00	91.30	90.50	10746.41	-874.46	7953.91	7999.64	1.05
232	18695.00	89.80	90.30	10745.50	-875.12	8048.90	8094.33	1.59
233	18789.00	90.20	90.20	10745.50	-875.53	8142.90	8188.02	0.44
234	18884.00	90.40	90.30	10745.00	-875.95	8237.90	8282.70	0.24
235	18979.00	90.50	89.00	10744.26	-875.37	8332.89	8377.29	1.37
236	19074.00	91.20	88.50	10742.85	-873.30	8427.86	8471.73	0.91
237	19169.00	89.50	89.70	10742.27	-871.80	8522.84	8566.23	2.19
238	19263.00	89.20	88.80	10743.34	-870.57	8616.83	8659.76	1.01
239	19358.00	88.90	88.00	10744.91	-867.92	8711.77	8754.13	0.90

SUNBURST CONSULTING, INC.

Operator:	Oasis Petroleum North America LLC
Well:	Kline Federal 5300 31-18 6B
Surface Coordinates:	2,457' FSL & 238' FWL
Surface Location:	Lot 3 Sec. 18, T153N, R100W
County State:	McKenzie County, ND

Kick-off:	4/8/2015
Finish:	4/15/2015

Directional Supervision:
Ryan Directional

Minimum Curvature Method (SPE-3362) Proposed dir 94.93
[North and East are positive and South and West are negative, relative to surface location]

No.	MD	INC	TRUE					DLS/ 100
			AZM	TVD	N-S	E-W	SECT	
240	19453.00	89.40	87.60	10746.32	-864.28	8806.69	8848.39	0.67
241	19548.00	90.00	86.90	10746.82	-859.72	8901.58	8942.53	0.97
242	19643.00	91.40	88.40	10745.66	-855.82	8996.49	9036.76	2.16
243	19737.00	91.70	88.20	10743.11	-853.03	9090.41	9130.09	0.38
244	19832.00	90.70	90.30	10741.12	-851.79	9185.38	9224.60	2.45
245	19927.00	90.50	90.00	10740.13	-852.04	9280.37	9319.26	0.38
246	20022.00	91.50	89.60	10738.47	-851.71	9375.36	9413.87	1.13
247	20117.00	92.70	89.40	10734.99	-850.88	9470.29	9508.37	1.28
248	20211.00	88.20	88.80	10734.25	-849.40	9564.25	9601.86	4.83
249	20306.00	87.10	88.50	10738.15	-847.17	9659.14	9696.21	1.20
250	20401.00	87.00	88.70	10743.04	-844.85	9753.99	9790.51	0.24
251	20496.00	88.30	89.10	10746.93	-843.03	9848.89	9884.90	1.43
252	20533.00	88.60	89.00	10747.93	-842.42	9885.87	9921.69	0.85
253	20597.00	88.60	89.00	10749.50	-841.30	9949.84	9985.33	0.00

DEVIATION SURVEYS

Depth	Inclination	Azimuth
0	0	0
132	0.5	35.7
223	0.9	34.3
314	0.9	41.5
407	0.7	50.5
493	0.9	57.5
579	1.2	62.4
669	0.8	60.5
751	0.3	36
839	0.3	314.3
927	0.4	277.8
1013	0.1	282.1
1100	0.1	342.7
1189	0.1	29.4
1276	0.2	179.9
1364	0.3	255.3
1450	0.4	274
1536	0.6	252.8
1623	0.5	245.1
1711	0.3	285.4
1799	0.4	274.6
1886	0.6	222.4
1974	0.7	219.6
2047	0.9	211.1

FORMATION TOPS & STRUCTURAL RELATIONSHIPS

CONTROL DATA

Operator: Well Name: Location: Elevation:		Oasis Petroleum North America, LLC Kline 5300 11-18H NE NE Section 18 T153N R100W McKenzie County, ND ~900' N of Kline 5300 31-18 15T				Oasis Petroleum North America, LLC Kline Federal 5300 31-18 8B Lot 3 Section 18, T153N, R100W McKenzie County, ND shares pad with subject well				Oasis Petroleum North America, LLC Kline 5300 31-18 8B Lot 3 Section 18, T153N, R100W McKenzie County, ND shares pad with subject well					
Formation/ Zone	E-Log Top	Datum (MSL)	Interval Thickness	E-Log Top	Datum (MSL)	Interval Thickness	E-Log Top	Datum (MSL)	Interval (MSL)	E-Log Top	Datum (MSL)	Interval (MSL)	E-Log Top	Datum (MSL)	Interval (MSL)
Kibbey Lime	8,346'	-6,268'	145'	2,386'	8,371'	-6,292'	148'	2,374'	8,320'	-6,287'	158'	-	2,390'	-	-
Charles Salt	8,491'	-6,413'	612'	2,241'	8,519'	-6,440'	622'	2,226'	8,478'	-6,445'	605'	-	2,232'	-	-
UB	9,103'	-7,025'	84'	1,629'	9,141'	-7,062'	75'	1,604'	9,083'	-7,050'	64'	-	1,627'	-	-
Base of Last Salt	9,187'	-7,109'	33'	1,545'	9,216'	-7,137'	48'	1,529'	9,147'	-7,114'	34'	-	1,563'	-	-
Ratcliffe	9,220'	-7,142'	194'	1,512'	9,264'	-7,185'	176'	1,481'	9,181'	-7,148'	211'	-	1,529'	-	-
Mission Canyon	9,414'	-7,336'	550'	1,318'	9,440'	-7,361'	556'	1,305'	9,392'	-7,359'	555'	-	1,318'	-	-
Lodgepole	9,964'	-7,886'	-	768'	9,996'	-7,917'	103'	749'	9,947'	-7,914'	102'	-	763'	-	-
LP A	-	-	-	-	10,099'	-8,020'	121'	646'	10,049'	-8,016'	108'	-	661'	-	-
LP Fracture Zone	-	-	-	-	10,220'	-8,141'	37'	525'	10,157'	-8,124'	18'	-	553'	-	-
LP C	-	-	-	-	10,257'	-8,178'	153'	488'	10,175'	-8,142'	186'	-	535'	-	-
LP D	10,393'	-8,315'	132'	339'	10,410'	-8,331'	130'	335'	10,361'	-8,328'	138'	-	349'	-	-
LP E	10,525'	-8,447'	115'	207'	10,540'	-8,461'	112'	205'	10,499'	-8,466'	85'	-	211'	-	-
LP F	10,640'	-8,562'	49'	92'	10,652'	-8,573'	45'	93'	10,584'	-8,551'	75'	-	126'	-	-
False Bakken	10,689'	-8,611'	2'	43'	10,697'	-8,618'	4'	48'	10,659'	-8,626'	4'	-	51'	-	-
Scallion	10,691'	-8,613'	4'	41'	10,701'	-8,622'	6'	44'	10,663'	-8,630'	8'	-	47'	-	-
Upper Bakken Shale	10,695'	-8,617'	14'	37'	10,707'	-8,628'	15'	38'	10,671'	-8,638'	16'	-	39'	-	-
Middle Bakken	10,709'	-8,631'	12'	23'	10,722'	-8,643'	12'	23'	10,687'	-8,654'	12'	-	23'	-	-
Target Top	10,721'	-8,643'	11'	11'	10,734'	-8,655'	11'	11'	10,699'	-8,666'	11'	-	11'	-	-
Target Landing	10,732'	-8,654'	5'	0'	10,745'	-8,666'	5'	0'	10,710'	-8,677'	5'	-	0'	-	-
Target Base	10,737'	-8,659'	17'	-5'	10,750'	-8,671'	18'	-5'	10,715'	-8,682'	19'	-	5'	-	-
Lower Bakken Shale	10,754'	-8,676'	-	-	10,768'	-8,689'	-	-	10,734'	-8,701'	-	-	-	-	-

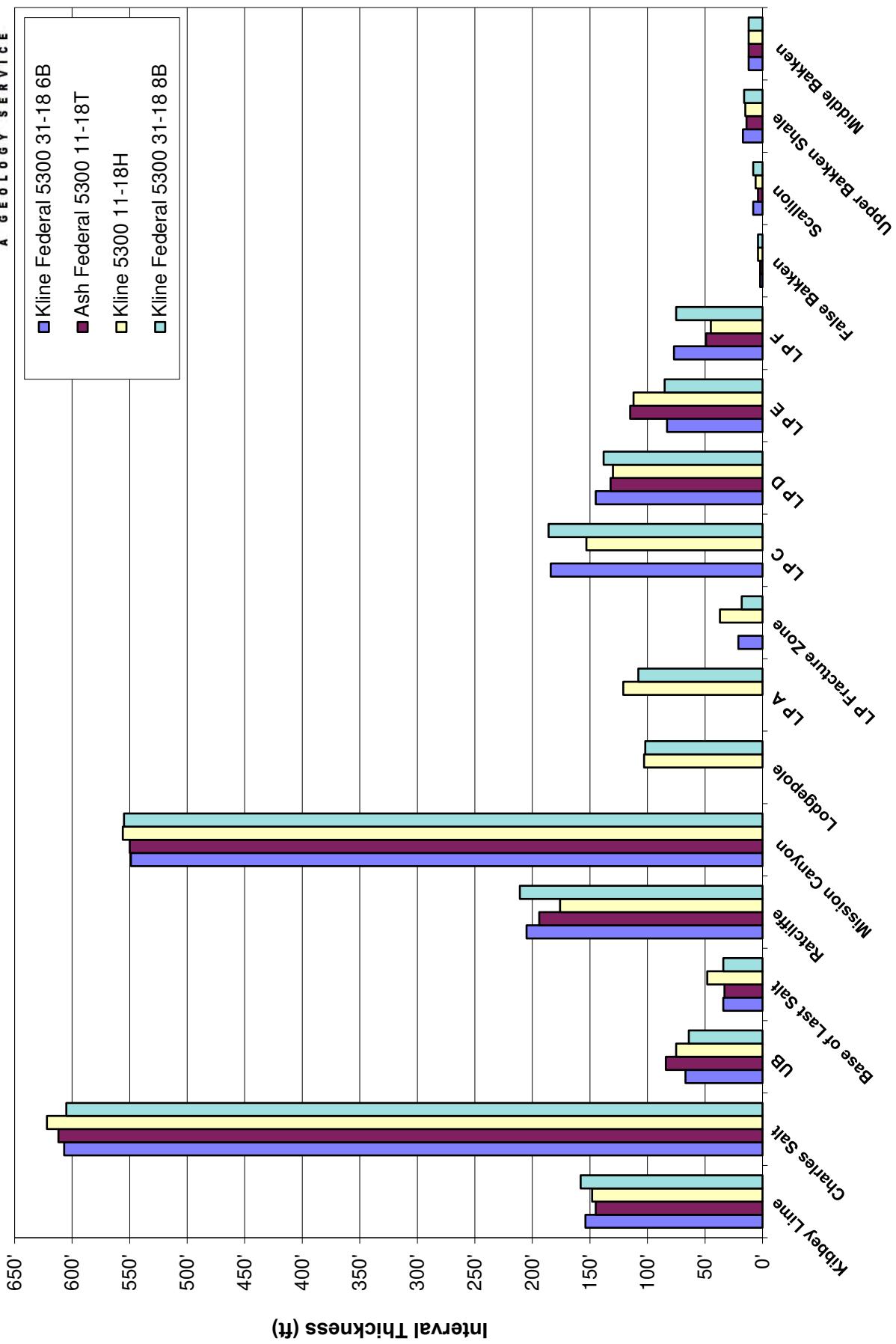
LANDING PROJECTION

Formation/ Zone:	Proposed Top of Target From:			
	Ash Federal 5300 11-18T	Kline 5300 11-18H	Kline Federal 5300 31-18 8B	Average of Offset Wells
Kibbey Lime	10,709'	10,697'	10,713'	10,706'
Charles Salt	10,718'	10,703'	10,709'	10,710'
UB	10,713'	10,688'	10,711'	10,704'
Base of Last Salt	10,696'	10,680'	10,714'	10,697'
Ratcliffe	10,697'	10,666'	10,714'	10,692'
Mission Canyon	10,708'	10,695'	10,708'	10,704'
Lodgepole	10,707'	10,688'	10,702'	10,699'
LP A	-	-	-	-
LP Fracture Zone	-	10,681'	10,709'	10,695'
LP C	-	10,665'	10,712'	10,689'
LP D	10,700'	10,696'	10,710'	10,702'
LP E	10,713'	10,711'	10,717'	10,714'
LP F	10,681'	10,682'	10,715'	10,693'
False Bakken	10,709'	10,714'	10,717'	10,713'
Scallion	10,709'	10,712'	10,715'	10,712'
Upper Bakken Shale	10,713'	10,714'	10,715'	10,714'
Middle Bakken	10,716'	10,716'	10,716'	10,716'
Target Top	10,716'	10,716'	10,716'	10,716'
Target Landing	10,716'	10,716'	10,716'	10,716'

Current Landing Target (~23' below the base of the UBS): **10,716'**

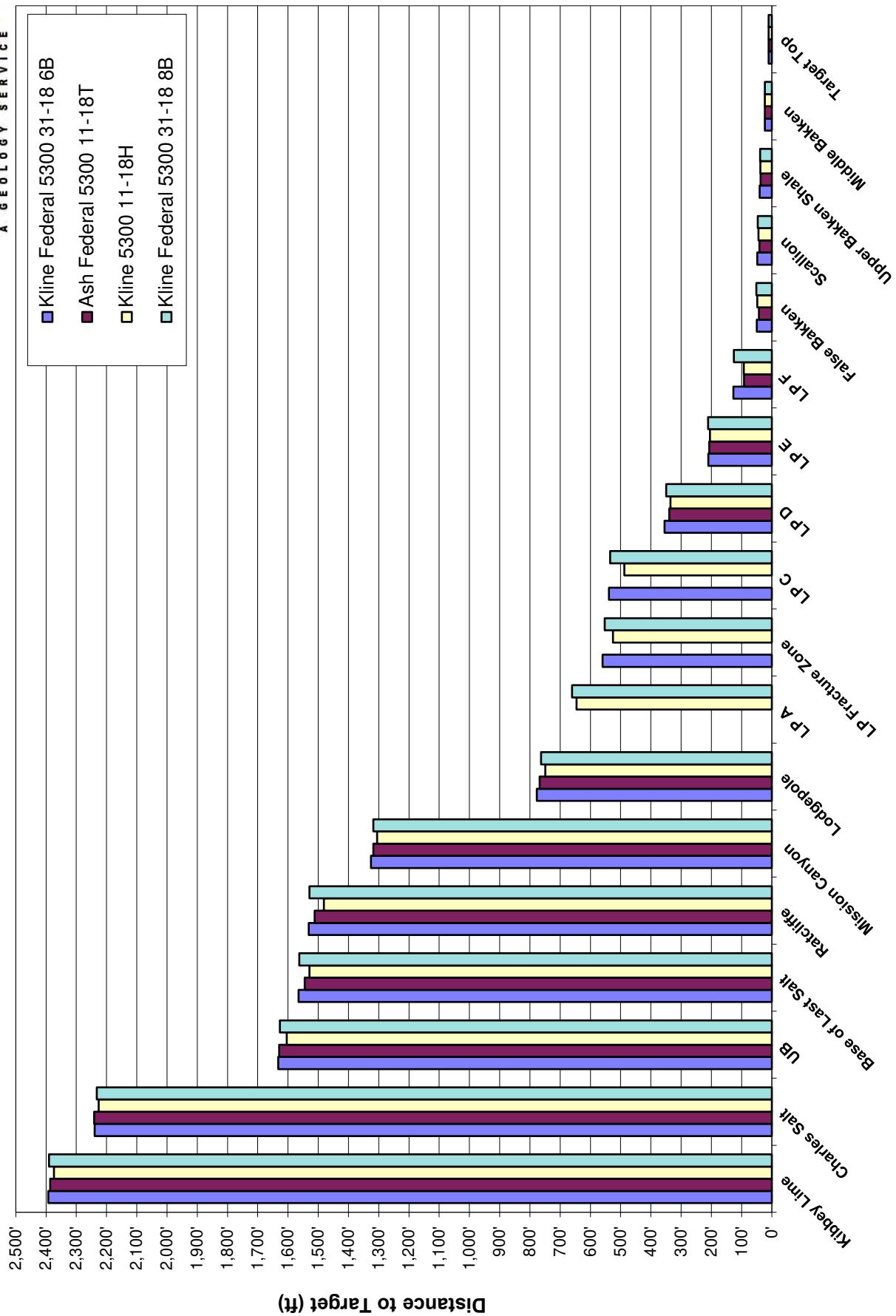
INTERVAL THICKNESS

Oasis Petroleum North America, LLC - Kline Federal 5300 31-18 6B



ISOPACH TO TARGET

Oasis Petroleum North America, LLC - Kline Federal 5300 31-18 6B



LITHOLOGY

**Oasis Petroleum North America, LLC
Kline Federal 5300 31-18 6B**

Rig crews caught 30' sample intervals, under the supervision of Sunburst geologists, from 8,240' to the TD of the lateral at 20,597'. 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: orange-red brown, friable-firm, sub blocky, calcareous cement moderately cemented, possible intergranular porosity, no visible oil stain; SILTY SANDSTONE: tan-off white, very fine grained, sub rounded, moderately sorted, calcite cement, poorly cemented

8,270-8,300 SILTSTONE: orange-red brown, friable-firm, sub blocky, calcareous cement moderately cemented, possible intergranular porosity, no visible oil stain; SILTY SANDSTONE: tan-off white, very fine grained, sub rounded, moderately sorted, calcite cement, poorly cemented

Kibbey Lime

8,324' MD / 8,323' TVD (-6,290')

8,300-8,330 ANHYDRITE: off white, light red, soft, amorphous texture rare SILTSTONE: orange-red brown, friable-firm, sub blocky, calcareous cement moderately cemented, possible intergranular porosity, no visible oil stain; trace LIMESTONE: mudstone-wackestone, light brown, light gray brown, microcrystalline, friable, dense, earthy-chalky, trace vuggy porosity

8,330-8,360 LIMESTONE: mudstone-wackestone, light brown, light gray brown, microcrystalline, friable, dense, earthy-chalky, trace vuggy porosity, trace dead oil stain, ANHYDRITE: off white, light red, soft, amorphous texture trace SILTSTONE: orange-red brown, friable-firm, sub blocky, calcareous cement moderately cemented, possible intergranular porosity, no visible oil stain

8,360-8,390 SILTSTONE: dark orange-light brown, tan, pink, soft, sub blocky, calcite cement, poorly cement; trace SILTY SANDSTONE: tan-off white, very fine grained, sub rounded, moderately sorted, calcite cement, poorly cemented

8,390-8,420 SILTSTONE: dark orange-light brown, tan, pink, soft, sub blocky, calcite cement, poorly cement; trace SILTY SANDSTONE: tan-off white, very fine grained, sub rounded, moderately sorted, calcite cement, poorly cemented

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

Charles Formation [Mississippian Madison Group]

8,478' MD / 8,477' TVD (-6,444')

8,450-8,480 SILTSTONE: dark orange-light brown, tan, pink, soft, sub blocky, calcite cement, poorly cement; trace SILTY SANDSTONE: tan-off white, very fine grained, sub rounded, moderately sorted, calcite cement, poorly cemented; common SALT: clear-translucent, rarely frosted, crystalline, firm, euhedral, crystalline

8,480-8,510 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

8,510-8,540 SALT: clear-translucent, rarely frosted, crystalline, firm, euhedral, crystalline

8,540-8,570 SALT: clear-translucent, rarely frosted, crystalline, firm, euhedral, crystalline

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 LIMESTONE: mudstone-wackestone, light-medium gray brown, tan, rare light-medium gray, micro crystalline, firm, earthy, argillaceous in part, no visible porosity, no visible porosity; rare SALT: as above; trace DOLOMITE: mudstone, tan, light gray, micro crystalline, firm, earthy, argillaceous in part, no visible porosity, no visible oil stain

8,690-8,720 SALT: clear-translucent, rarely frosted, crystalline, firm, euhedral, crystalline, massive; rare LIMESTONE: mudstone-wackestone, light-medium gray , tan, rare light-medium gray brown, micro crystalline, firm, earthy, argillaceous in part, no visible porosity, no visible oil stain; trace DOLOMITE: as above

8,720-8,750 SALT: clear-translucent, rarely frosted, crystalline, firm, euhedral, crystalline, massive; rare LIMESTONE: mudstone-wackestone, light-medium gray , tan, rare light-medium gray brown, micro crystalline, firm, earthy, argillaceous in part, no visible porosity, no visible oil stain; trace DOLOMITE: as above

8,750-8,780 SALT: translucent-transparent, clear, micro crystalline, hard, euhedral, crystalline; occasional LIMESTONE: mudstone, tan, off white-cream, light gray, light brown, fine crystalline, firm, dense, earthy-crystalline texture, rare white-clear calcite, no visible porosity, no visible oil stain; rare ANHYDRITE: off white-cream, tan, white, microcrystalline, soft, massive, earthy

8,780-8,810 LIMESTONE: mudstone, tan, off white-cream, light gray, light brown, fine crystalline, firm, dense, earthy-crystalline texture, rare white-clear calcite, no visible porosity, no visible oil stain; ANHYDRITE: off white-cream, tan, white, microcrystalline, soft, massive, earthy; rare SALT: translucent-transparent, clear, micro crystalline, hard, euhedral, crystalline

8,810-8,840 SALT: translucent-transparent, clear, microcrystalline, hard, euhedral, crystalline

8,840-8,870 LIMESTONE: mudstone, light brown, light gray brown, off white-cream, microcrystalline, firm, laminated, earthy, possible intercrystalline porosity, no oil stain; trace SALT: translucent-transparent, clear, microcrystalline, hard, euhedral, crystalline

8,870-8,900 LIMESTONE: mudstone, light brown, light gray brown, off white-cream, microcrystalline, firm, laminated, earthy, possible intercrystalline porosity, no oil stain; common DOLOMITE: mudstone, light brown, light gray brown, microcrystalline, friable-firm, laminated, earthy, possible intercrystalline porosity, no visible oil stain

8,900-8,930 ANHYDRITE: off white-cream, tan-pink, white, microcrystalline, soft, massive, earthy; LIMESTONE: mudstone, light brown, light gray brown, off white-cream, microcrystalline, firm, laminated, earthy, possible intercrystalline porosity, no oil stain; DOLOMITE: mudstone, light brown, light gray brown, microcrystalline, friable-firm, laminated, earthy, calcareous in part, possible intercrystalline porosity, no visible oil stain

8,930-8,960 SALT: translucent-transparent, clear, microcrystalline, hard, euhedral, crystalline; common CALCAREOUS DOLOMITE: light gray, off white, light brown gray, very fine crystalline, firm, dense, earthy, no visible porosity, no visible oil stain; ANHYDRITE: off white, micro crystalline, soft, massive, earthy

8,960-8,990 SALT: translucent-transparent, clear, microcrystalline, hard, euhedral, crystalline; common DOLOMITE: light gray, off white, light brown gray, very fine crystalline, firm, dense, earthy, no visible porosity, no visible oil stain; ANHYDRITE: off white, micro crystalline, soft, massive, earthy

8,990-9,020 ANHYDRITE: cream-off white, microcrystalline, soft-firm, massive, earthy; LIMESTONE: mudstone, tan, light brown, cream, very fine crystalline, firm-soft, dense, earthy-crystalline texture, argillaceous in part, no visible porosity, no visible oil stain

9,020-9,050 LIMESTONE: mudstone, tan, light brown, cream, very fine crystalline, firm-soft, dense, earthy-crystalline texture, no visible porosity, no visible oil stain; DOLOMITE: mudstone, light brown, light gray brown, microcrystalline, friable-firm, laminated, earthy, possible intercrystalline porosity, no visible oil stain

9,050-9,080 ANHYDRITE: cream-off white, microcrystalline, soft-firm, massive, earthy; LIMESTONE-ARGILLACEOUS LIMESTONE: mudstone, tan, light brown, cream, very fine crystalline, firm-soft, dense, earthy-crystalline texture, argillaceous in part, no visible porosity, no visible oil stain

9,080-9,110 ANHYDRITE: cream-off white, microcrystalline, soft-firm, massive, earthy; LIMESTONE-ARGILLACEOUS LIMESTONE: mudstone, off white-cream, tan-light brown, very fine crystalline, firm-soft, dense, earthy-crystalline texture, argillaceous in part, no visible porosity, no visible oil stain; DOLOMITE: mudstone, light brown, tan, rare light gray brown, microcrystalline, friable-firm, laminated, earthy, calcareous in part, possible intercrystalline porosity, no visible oil stain

9,110-9,140 SALT: translucent-transparent, clear, micro crystalline, hard, euhedral, crystalline

Base Last Salt /Charles Formation]

9,152' MD / 9,151' TVD (-7,118')

9,140-9,170 SALT: as above; common DOLOMITIC LIMESTONE-DOLOMITE: mudstone, light brown, tan, microcrystalline, firm-friable, dense, crystalline-earthly texture, possible intercrystalline porosity, trace light brown spotty

9,170-9,200 DOLOMITIC LIMESTONE-DOLOMITE: mudstone, light brown, tan, microcrystalline, firm-friable, dense, crystalline-earthly texture, possible intercrystalline porosity, trace light brown spotty; rare ANHYDRITE: cream-tan, off white, microcrystalline, soft, massive, earthy

9,200-9,230 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

9,230-9,260 LIMESTONE: mudstone, light gray, light gray brown, rare light brown, firm, earthy-crystalline texture, possible intercrystalline porosity, trace disseminated pyrite, no visible oil stain; trace ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous

9,260-9,290 LIMESTONE: mudstone, light gray, light gray brown, rare light brown, firm, earthy-crystalline texture, possible intercrystalline porosity, trace disseminated pyrite, no visible oil stain; trace ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous

9,290-9,320 LIMESTONE: mudstone, tan, light gray, light gray brown, rare light brown, firm, earthy-crystalline texture, possible intercrystalline porosity, trace disseminated pyrite, no visible oil stain; trace ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous

9,320-9,350 ARGILLACEOUS LIMESTONE: mudstone, tan, light gray, light gray brown, rare light brown, firm, earthy-crystalline texture, possible intercrystalline porosity, trace disseminated pyrite, no visible oil stain; trace ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous

9,350-9,380 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, light gray brown, firm, earthy-crystalline texture, possible intercrystalline porosity, trace disseminated pyrite, trace light brown oil stain

Mission Canyon Formation /Mississippian Madison Group] 9,391' MD / 9,390' TVD (-7,357')

9,380-9,410 LIMESTONE: mudstone, light gray-gray, light gray brown, firm, earthy-crystalline texture, possible intercrystalline porosity, trace disseminated pyrite, trace fossil fragments, trace spotty light brown oil stain

9,410-9,440 LIMESTONE: mudstone, light gray-gray, light gray brown, firm, earthy-crystalline texture, trace fossil fragments, possible intercrystalline porosity, trace disseminated pyrite, trace spotty light brown oil stain

9,440-9,470 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, light gray brown, firm, earthy-crystalline texture, possible intercrystalline porosity, trace fossil fragments, trace disseminated pyrite, trace spotty light brown oil stain

9,470-9,500 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, light gray brown, rare tan, firm-friable, earthy-crystalline texture, trace fossil fragments, possible intercrystalline porosity, trace spotty disseminated pyrite, trace light brown oil stain

9,500-9,530 ARGILLACEOUS LIMESTONE: mudstone, light gray, light gray brown, rare light brown, firm-friable, earthy-crystalline texture, trace fossil fragments, possible intercrystalline porosity, trace disseminated pyrite, trace spotty light brown oil stain

9,530-9,560 ARGILLACEOUS LIMESTONE: mudstone, light gray, light gray brown, rare light brown, firm-friable, earthy-crystalline texture, trace fossil fragments, trace algal material, possible intercrystalline porosity, trace disseminated pyrite, trace spotty light brown oil stain

9,560-9,590 ARGILLACEOUS LIMESTONE: mudstone, light gray, light gray brown, rare light brown, firm-friable, earthy-crystalline texture, trace fossil fragments, trace algal material, possible intercrystalline porosity, trace disseminated pyrite, trace spotty light brown oil stain

9,590-9,620 ARGILLACEOUS LIMESTONE: mudstone, light brown, light gray brown, rare light gray, firm-friable, earthy-crystalline texture, trace fossil fragments, trace algal material, trace vuggy porosity, possible intercrystalline porosity, trace spotty disseminated pyrite, trace light brown oil stain

9,620-9,650 ARGILLACEOUS LIMESTONE: mudstone, light brown, light gray brown, rare light gray, firm-friable, earthy-crystalline texture, trace fossil fragments, trace algal material, trace vuggy porosity, possible intercrystalline porosity, trace spotty disseminated pyrite, trace light brown oil stain

9,650-9,680 LIMESTONE-ARGILLACEOUS LIMESTONE: mudstone, light brown, light gray brown, rare light gray, firm-friable, earthy-crystalline texture, possible intercrystalline porosity, trace disseminated pyrite, occasional spotty light brown oil stain

9,680-9,710 LIMESTONE: mudstone, light brown, light gray brown, rare light gray, firm-friable, earthy-crystalline texture, possible intercrystalline porosity, trace disseminated pyrite, occasional spotty light brown oil stain

9,710-9,740 LIMESTONE: mudstone, light brown-rarely brown, light gray brown, rare light gray, firm-friable, earthy-crystalline texture, trace algal material, trace fossil fragments, possible intercrystalline porosity, trace disseminated pyrite, occasional spotty light brown oil stain

9,740-9,770 LIMESTONE: mudstone, light brown-rarely brown, light gray brown, rare light gray, firm-friable, earthy-crystalline texture, trace algal material, trace fossil fragments, possible intercrystalline porosity, trace disseminated pyrite, occasional spotty light brown oil stain

9,770-9,800 LIMESTONE: mudstone, light brown-rarely brown, light gray brown, rare light gray, firm-friable, earthy-crystalline texture, trace algal material, trace fossil fragments, possible intercrystalline porosity, trace disseminated pyrite, occasional spotty light brown oil stain

9,800-9,830 LIMESTONE: mudstone, brown-light brown, light gray brown, rare light gray, firm-friable, earthy-crystalline texture, common algal material, trace fossil fragments, possible intercrystalline porosity, trace disseminated pyrite, trace spotty light brown oil stain

9,830-9,860 LIMESTONE: mudstone, brown-light brown, light gray brown, rare light gray, firm-friable, earthy-crystalline texture, common algal material, trace fossil fragments, possible intercrystalline porosity, trace disseminated pyrite, trace spotty light brown oil stain

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

9,890-9,920 LIMESTONE: mudstone, light gray-gray, rare light gray brown, trace dark gray, firm-friable, earthy-crystalline texture, trace fossil fragments, trace disseminated pyrite, trace spotty light brown oil stain

Lodgepole /Mississippian Madison Group/

9,940' MD / 9,939' TVD (-7,906')

9,920-9,950 LIMESTONE: mudstone, light gray-gray, rare light gray brown, trace dark gray, firm-friable, earthy-crystalline texture, trace fossil fragments, trace disseminated pyrite, no visible oil stain

9,950-9,980 ARGILLACEOUS LIMESTONE: mudstone, off white, light gray, light gray tan, microcrystalline, firm, dense earthy-crystalline texture, trace disseminated pyrite, no visible porosity no visible oil stain; common LIMESTONE: mudstone, light gray-gray, rare gray brown, trace dark gray, firm-friable, earthy-crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

9,980-10,010 ARGILLACEOUS LIMESTONE: mudstone, off white, light gray, light gray tan, microcrystalline, firm, dense earthy-crystalline texture, trace disseminated pyrite, no visible porosity no visible oil stain

10,010-10,040 ARGILLACEOUS LIMESTONE: mudstone, off white, light gray, light gray tan, microcrystalline, firm, dense earthy-crystalline texture, trace disseminated pyrite, no visible porosity no visible oil stain

10,040-10,070 ARGILLACEOUS LIMESTONE: mudstone, off white, light gray, light gray tan, microcrystalline, firm, dense earthy-crystalline texture, trace disseminated pyrite, no visible porosity no visible oil stain

10,070-10,100 ARGILLACEOUS LIMESTONE: mudstone, off white, light gray, light gray tan, microcrystalline, firm, dense earthy-crystalline texture, trace disseminated pyrite, no visible porosity no visible oil stain

10,100-10,114 ARGILLACEOUS LIMESTONE: mudstone, light gray, light gray tan, medium gray, microcrystalline, firm, dense earthy-crystalline texture, trace disseminated pyrite, no visible porosity no visible oil stain

10,114-10,130 ARGILLACEOUS LIMESTONE: mudstone, light gray, light gray tan, trace cream-off white, microcrystalline, firm, dense, earthy texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,130-10,160 ARGILLACEOUS LIMESTONE: mudstone, light-medium gray, tan gray, trace light brown, micro crystalline, firm, dense, earthy-trace crystalline texture, no visible porosity, no visible oil stain

10,160-10,190 ARGILLACEOUS LIMESTONE: mudstone, light gray, light gray tan, trace cream-off white, microcrystalline, firm, dense, earthy texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,190-10,220 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, occasional gray brown, trace cream-off white, firm, crystalline-earthy texture, trace disseminated pyrite, no visible porosity, no visible oil stain

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

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

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

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

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

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

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

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

10,460-10,490 ARGILLACEOUS LIMESTONE: mudstone, medium gray-light gray, rare light gray brown, trace dark gray AND off white, firm, crystalline-earthy texture, trace disseminated pyrite, no visible porosity, no visible oil stain

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

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

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

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

10,610-10,640 ARGILLACEOUS LIMESTONE: mudstone, light gray, medium gray, rare light brown gray, firm, crystalline-earthy texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,640-10,670 ARGILLACEOUS LIMESTONE: mudstone, light gray, medium gray, rare light brown gray, trace dark gray, firm, crystalline-earthy texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,670-10,700 ARGILLACEOUS LIMESTONE: mudstone, light gray, medium gray, rare light brown gray, trace dark gray, firm, crystalline-earthy texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,700-10,730 ARGILLACEOUS LIMESTONE: mudstone, light gray, medium gray, rare light brown gray, trace dark gray, firm, crystalline-earthy texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,730-10,760 ARGILLACEOUS LIMESTONE: mudstone, light gray, medium gray, rare light brown gray, trace dark gray, firm, crystalline-earthy texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,760-10,790 ARGILLACEOUS LIMESTONE: mudstone, light gray, medium gray, rare light brown gray, trace dark gray, firm, crystalline-earthy texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,790-10,820 ARGILLACEOUS LIMESTONE: mudstone, light gray, medium gray, rare light brown gray, trace dark gray, firm, crystalline-earthy texture, trace disseminated pyrite, no visible porosity, no visible oil stain

False Bakken **10,837' MD / 10,666' TVD (-8,633')**

Scallion **10,842' MD / 10,668' TVD (-8,635')**

10,820-10,850 LIMESTONE: mudstone, light gray, medium gray, rare light brown gray, firm, crystalline-earthy texture, trace disseminated pyrite, possible intercrystalline porosity, no visible oil stain; SHALE: dark grey, black gray, hard, splintery, smooth, pyritic, carbonaceous, fracture porosity

Upper Bakken Shale /Bakken Formation Devonian Period| **10,866' MD / 10,676' TVD (-8,643')**

10,850-10,880 SHALE: black, black gray, hard, splintery, smooth, pyritic, carbonaceous, fracture porosity

10,880-10,910 SHALE: black, black gray, hard, splintery, smooth, pyritic, carbonaceous, fracture porosity

Middle Bakken Member /Bakken Formation Devonian Period| **10,926' MD / 10,693' TVD (-8,660')**

10,910-10,940 SHALE: as above; SILTSTONE: light gray brown, light brown, trace light gray, very fine grained, friable sub rounded, smooth, moderately sorted, calcite cement moderately cemented, trace disseminated and nodular pyrite, fair intercrystalline porosity, occasional light brown spotty oil stain

15,320-15,350 SILTY SANDSTONE: light-medium brown gray, occasional light-medium gray, trace off white, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, good intercrystalline porosity, occasional light brown spotty oil stain; fast yellow streaming cut fluorescence

15,350-15,380 SILTY SANDSTONE: light-medium brown gray, occasional light-medium gray, trace off white, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, good intercrystalline porosity, occasional light brown spotty oil stain; fast yellow streaming cut fluorescence

15,380-15,410 SILTY SANDSTONE: light-medium gray brown, occasional light-medium brown, rare light gray-off white, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, rare disseminated pyrite, good intercrystalline porosity, occasional light brown spotty oil stain; moderately yellow streaming cut fluorescence

15,410-15,440 SILTY SANDSTONE: light-medium gray brown, occasional light-medium brown, rare light gray-off white, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, rare disseminated pyrite, good intercrystalline porosity, occasional light brown spotty oil stain; moderately yellow streaming cut fluorescence

15,440-15,470 SILTY SANDSTONE: light-medium brown, rare light-medium gray brown, trace off white-light gray, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, good intercrystalline porosity, common light-medium brown spotty oil stain; fast yellow streaming cut fluorescence

15,470-15,500 SILTY SANDSTONE: light-medium brown, rare light-medium gray brown, trace off white-light gray, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, good intercrystalline porosity, common light-medium brown spotty oil stain; fast yellow streaming cut fluorescence

15,500-15,530 SILTY SANDSTONE: light-medium brown, rare light-medium gray brown, trace off white-light gray, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, good intercrystalline porosity, common light-medium brown spotty oil stain; fast yellow streaming cut fluorescence

15,530-15,560 SILTY SANDSTONE: light-medium brown, rare light-medium gray brown, trace off white-light gray, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, good intercrystalline porosity, common light-medium brown spotty oil stain; fast yellow streaming cut fluorescence

15,560-15,590 SILTY SANDSTONE: light-medium brown, rare light-medium gray brown, trace off white-light gray, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, good intercrystalline porosity, common light-medium brown spotty oil stain; fast yellow streaming cut fluorescence

15,590-15,620 SILTY SANDSTONE: light-medium brown, rare light-medium gray brown, trace off white-light gray, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, good intercrystalline porosity, common light-medium brown spotty oil stain; fast yellow streaming cut fluorescence

15,620-15,650 SILTY SANDSTONE: light-medium brown, rare light-medium gray brown, trace off white-light gray, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, good intercrystalline porosity, common light-medium brown spotty oil stain; fast yellow streaming cut fluorescence

15,650-15,680 SILTY SANDSTONE: light-medium brown, rare light-medium gray brown, trace off white-light gray, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, good intercrystalline porosity, common light-medium brown spotty oil stain; fast yellow streaming cut fluorescence

20,390-20,420 SILTY SANDSTONE: medium gray brown, common light-medium gray brown, trace cream-off white, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated, good intercrystalline porosity, common light-medium brown spotty oil stain

20,420-20,450 SILTY SANDSTONE: medium gray brown, common light-medium gray brown, trace cream-off white, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated, good intercrystalline porosity, common light-medium brown spotty oil stain

20,450-20,480 SILTY SANDSTONE: medium gray brown, common light-medium gray brown, trace cream-off white, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated, good intercrystalline porosity, common light-medium brown spotty oil stain

20,480-20,510 SILTY SANDSTONE: medium gray brown, common light-medium gray brown, trace cream-off white, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated pyrite, good intercrystalline porosity, common light-medium brown spotty oil stain

20,510-20,540 SILTY SANDSTONE: medium gray brown, common light-medium gray brown, trace cream-off white, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated, good intercrystalline porosity, common light-medium brown spotty oil stain

20,540-20,570 SILTY SANDSTONE: medium gray brown, common light-medium gray brown, trace cream-off white, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated, good intercrystalline porosity, common light-medium brown spotty oil stain

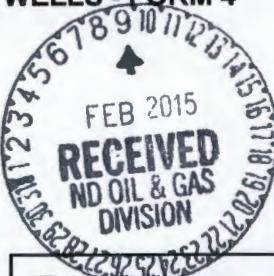
20,570-20,597 SILTY SANDSTONE: medium gray brown, common light-medium gray brown, trace cream-off white, very fine grained, friable, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated, good intercrystalline porosity, common light-medium brown spotty oil stain



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.
28756



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 15, 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.		<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	Physical Address

Well Name and Number
Kline Federal 5300 31-18 6B

Footages 2457 F S L	Qtr-Qtr 238 F W L	Lot 3	Section 18	Township 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

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

**13767 45th Street NW
Alexander, ND 58831**

See attached McKenzie County address letter.

Company Oasis Petroleum North America LLC		Telephone Number (281) 404-9652
Address 1001 Fannin Suite 1500		
City Houston		State TX
Signature 	Printed Name Victoria Siemieniewski	
Title Regulatory Specialist	Date February 6, 2015	
Email Address vsiemieniewski@oasispetroleum.com		

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date 3/16/2015	
By 	
Title ENGINEERING TECHNICIAN	

July 10, 2014

UPDATED: February 4, 2015

Proposed Address for:

Oasis Petroleum North America, LLC

Kline Federal 5300 31-18 6B, 7T, 8B & 15T Pad

Attn: Kristy Aasheim

Section: 18 Township: 153 N Range: 100 W

McKenzie County, ND

This address will be located within Alexander, ND 58831

The following address is assuming that the driveway or access road connects with 45th Street NW. If this is not the case, then the address will need to be re-evaluated.

1.) Physical Address for Kline Federal 5300 31-18 6B, 7T, 8B & 15T Pad:

**13767 45th Street NW
Alexander, ND 58831**

Approximate Geographical Location:

103° 36' 10.401" W 48° 4' 28.178" N

Sincerely,

Aaron Chisholm

GIS Coordinator
McKenzie County, ND
701 - 444- 7417
achisholm@co.mckenzie.nd.us

Oasis Petroleum North America, LLC

Kline Federal 5300 31-18 6B, 7T, 8B & 15T Pad

Attn: Kristy Aasheim

Section: 18 Township: 153 N Range: 100 W

McKenzie County, ND

***This image is meant to be used as a visual aid and is not intended to be used for
geographical accuracy***

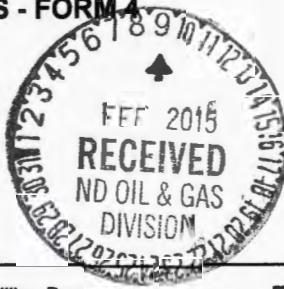




SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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.
28756



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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date March 15, 2015	<input type="checkbox"/> Drilling Program	<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	Well Permit Changes

Well Name and Number
Kline Federal 5300 31-18 6B

Footages 2457 F S L	238 F W L	Qtr-Qtr Lot 3	Section 18	Township 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

Oasis Petroleum respectfully requests approval to make the following changes to the original APD as follows:

281 NDIC Calc
BHL change: 1595' FSL & 250' FEL Sec 18 T153N R100W
(previously: 1751' FSL & 201' FEL)

Surface casing design:

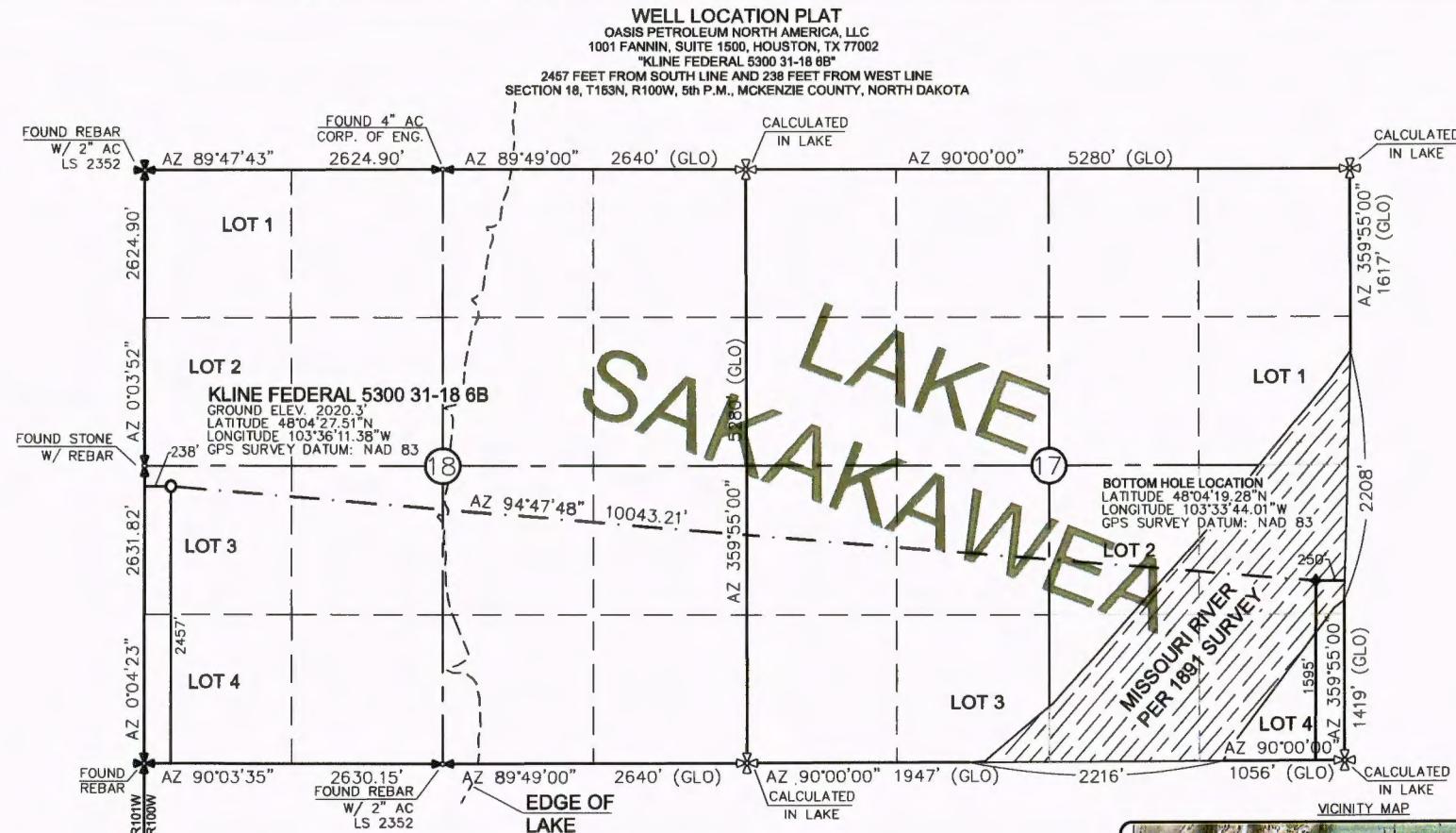
Contingency Casing of 9 5/8" set at 6,437' (previously set at 6,101')
Intermediate Casing of 7" set at 10,970' (previously set at 10,978')
Production liner of 4 1/2" set from 10,171' to 20,752' (previously set from 10,179' to 20,695')

See attached supporting documents.

Company Oasis Petroleum North America LLC	Telephone Number (281) 404-9652	
Address 1001 Fannin Suite 1500		
City Houston	State TX	Zip Code 77002
Signature 	Printed Name Victoria Siemieniewski	
Title Regulatory Specialist	Date February 5, 2015	
Email Address vsiemieniewski@oasispetroleum.com		

FOR STATE USE ONLY

<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date 02-18-2015	
By 	
Title David Burns Engineering Tech.	



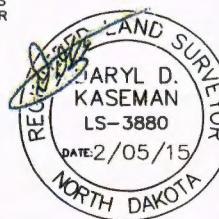
THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY DARYL D. KASEMAN, PLS, REGISTRATION NUMBER 3880 ON 2/05/15 AND THE ORIGINAL DOCUMENTS ARE STORED AT THE OFFICES OF INTERSTATE ENGINEERING, INC.



0 1000
1" = 1000'

- MONUMENT - RECOVERED
- MONUMENT - NOT RECOVERED

DARYL D. KASEMAN LS-3880



DRILLING PLAN									
OPERATOR	Oasis Petroleum		COUNTY/STATE	McKenzie Co ND					
WELL NAME	Kline Federal 5300 31-18 NW		RIG	0					
WELL TYPE	Horizontal Middle Bakken								
LOCATION	NWGW 18-153N-100W		Surface Location (survey plat): 2457' ft		238' fwl				
EST. T.D.	20,895'				GROUND ELEV:	2008 Finished Pad Elev.	Sub Height: 25		
	TOTAL LATERA 9,725'				KB ELEV:	2033			
PROGNOSIS:	Based on 2 033' KB(est)		LOGS:	Type	Interval				
MARKER	DEPTH (Surf Loc)	DATUM (Surf Loc)			OH Logs: Triple Combo KOP to Kirby (or min run of 1800' whichever is greater). GR/Res to BSC; GR to surf; CND through the Dakota				
Pierre	NDIC MAP	1,923			CBL/GR: Above top of cement/GR to base of casing				
Greenhorn		4,597	(2,564)		MWD GR: KOP to lateral TD				
Mowry		5,008	(2,575)						
Dakota		5,422	(3,389)						
Rierdon		6,437	(4,404)		Surf:	3 deg. max., 1 deg / 100'; svny every 500'			
Dunham Salt		6,765	(4,732)		Prod:	5 deg. max., 1 deg / 100'; svny every 100'			
Dunham Salt Base		6,880	(4,847)						
Spearfish		6,975	(4,942)						
Pine Salt		7,234	(5,201)						
Pine Salt Base		7,269	(5,236)						
Opeche Salt		7,325	(5,292)						
Opeche Salt Base		7,354	(5,321)						
Broom Creek (Top of Minnelusa Gp.)		7,556	(5,523)		DST'S: None planned				
Amsden		7,635	(5,602)						
Tyler		7,804	(5,771)						
Otter (Base of Minnelusa Gp.)		7,998	(5,965)						
Kibbey Lime		8,341	(6,308)						
Charles Salt		8,493	(6,460)		CORES: None planned				
UB		9,110	(7,077)						
Base Last Salt		9,181	(7,148)						
Ratcliffe		9,244	(7,211)						
Mission Canyon		9,387	(7,354)		MUDLOGGING:				
Lodgepole		9,955	(7,922)		Two-Man:	8,293'			
Lodgepole Fracture Zone		10,142	(8,109)		~200' above the Charles (Kibbey) to Casing point; Casing point to TD				
False Bakken		10,659	(8,626)		30' samples at direction of wellsite geologist; 10' through target @ curve land				
Upper Bakken		10,668	(8,635)						
Middle Bakken		10,684	(8,651)						
Middle Bakken Sand Target		10,693	(8,660)						
Base Middle Bakken Sand Target		10,703	(8,670)						
Lower Bakken		10,718	(8,685)						
Three Forks		10,746	(8,713)		BOP: 11" 5000 psi blind, pipe & annular				
Dip Rate:	-0.2								
Max. Anticipated BHP:	4644		Surface Formation: Glacial till						
MUD:	Interval	Type	WT	Vis	WL	Remarks			
Surface:	0' -	2,023'	FW/Gel - Lime Sweeps	8.4-9.0	28-32	NC	Circ Mud Tanks		
Intermediate:	2,023' -	10,970'	Invert	9.5-10.4	40-50	30+HHP	Circ Mud Tanks		
Laterals:	10,970' -	20,695'	Salt Water	9.8-10.2	28-32	NC	Circ Mud Tanks		
CASING:	Size	Wt pfp	Hole	Depth	Cement	WOC	Remarks		
Surface:	13-3/8"	54.5#	17-1/2"	2,023'	To Surface	12	100' into Pierre		
Dakota Contingency:	9-5/8"	36#	12-1/4"	8,437'	To Surface	12	Below Dakota		
Intermediate:	7"	32#	8-3/4"	10,970'	4922	24	500' above Dakota		
Production Liner:	4.5"	13.5#	6"	20,695'	TOL @ 10,171'		50' above KOP		
PROBABLE PLUGS, IF REQ'D:									
OTHER:	MD	TVD	FNL/FSL	FEL/FWL	S-T-R	AZI			
Surface:	2,023	2,023	2457' FSL	238' FWL	SEC 18-T153N-R100W				
KOP:	10,221'	10,221'	2407' FSL	238' FWL	SEC 18-T153N-R100W				
EOC:	10,970'	10,698'	2130' FSL	626' FWL	SEC 18-T153N-R100W	125.80	Build Rate: 12 deg /100'		
Casing Point:	10,970'	10,698'	2130' FSL	626' FWL	SEC 18-T153N-R100W	125.80			
Middle Bakken Lateral TD:	20,695'	10,732'	1595' FSL	250' FEL	SEC 17-T153N-R100W	90.00			
Comments:									
Request a Sundry for an Open Hole Log Waiver									
<u>Exception well:</u> Oasis Petroleum's Kline Federal 5300 11-18H (153N 100W 18 NW NW)									
Completion Notes: 35 packers, 35 sleeves, no frac string									
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) 6008-20-6 (Primary Name: Kerosene)									
OASIS PETROLEUM									
Geology: M. Steed 5/12/2014			Engineering: hbader rpm 7/17/14		TR 1/29/15				

Oasis Petroleum
Well Summary
Kline Federal 5300 31-18 6B
Section 18 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
13-3/8"	0' - 2023'	54.5	J-55	STC	12.615"	12.459"	4160	5470	6840

Interval	Description	Collapse	Burst	Tension
		(psi) / a	(psi) / b	(1000 lbs) / c
0' - 2023'	13-3/8", 54.5#, J-55, LTC, 8rd	1130 / 1.19	2730 / 1.99	514 / 2.63

API Rating & Safety Factor

- a) Collapse based on full casing evacuation with 9 ppg fluid on backside (2023' setting depth).
- b) Burst pressure based on 13 ppg fluid with no fluid on backside (2023' setting depth).
- c) Based on string weight in 9 ppg fluid at 2023' TVD plus 100k# overpull. (Buoyed weight equals 95k lbs.)

Cement volumes are based on 13-3/8" casing set in 17-1/2 " 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: **677 sks** (350 bbls), 11.5 lb/gal, 2.97 cu. Ft./sk Varicem Cement with 0.125 gal/sk Lost Circulation Additive

Tail Slurry: **300 sks** (62 bbls), 13.0 lb/gal, 2.01 cu.ft./sk Varicem with .125 lb/sk Lost Circulation Agent

Oasis Petroleum
Well Summary
Kline Federal 5300 31-18 6B
Section 18 T153N R100W
McKenzie County, ND

Contingency INTERMEDIATE CASING AND CEMENT DESIGN

Size	Interval	Weight	Grade	Coupling	I.D.	Drift	Make-up Torque (ft-lbs)		
							Minimum	Optimum	Max
9-5/8"	0' - 6437'	36	HCL-80	LTC	8.835"	8.75"	5450	7270	9090

Interval	Description	Collapse	Burst	Tension
		(psi) / a	(psi) / b	(1000 lbs) / c
0' - 6437'	9-5/8", 36#, J-55, LTC, 8rd	2020 / 2.16	3520 / 1.29	453 / 1.53

API Rating & Safety Factor

- a) Collapse based on full casing evacuation with 10.4 ppg fluid on backside (6437' setting depth).
- b) 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 15.2#/ft fracture gradient. Backup of 9 ppg fluid..
- c) Tension based on string weight in 10.4 ppg fluid at 6437' TVD plus 100k# overpull. (Buoyed weight equals 195k lbs.)

Cement volumes are based on 9-5/8" casing set in 12-1/4 " hole with 10% excess to circulate cement back to surface.

Pre-flush (Spacer): 20 bbls Chem wash

Lead Slurry: 564 sks (291 bbls), 2.90 ft3/sk, 11.5 lb/gal Conventional system with 94 lb/sk cement, 4% D079 extender, 2% D053 expanding agent, 2% CaCl2 and 0.250 lb/sk D130 lost circulation control agent.

Tail Slurry: 615 sks (127 bbls), 1.16 ft3/sk 15.8 lb/gal Conventional system with 94 lb/sk cement, 0.25% CaCl2, and 0.250 lb/sk lost circulation control agent

Oasis Petroleum
Well Summary
Kline Federal 5300 31-18 6B
Section 18 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' - 10969'	32	HCP-110	LTC	6.094"	6.000***	6730	8970	9870

**Special Drift 7"32# to 6.0"

Interval	Length	Description	Collapse	Burst	Tension
			(psi) a	(psi) b	(1000 lbs) / c
0' - 10969'	10969'	7", 32#, HCP-110, LTC, 8rd	11820 / 2.12*	12460 / 1.28	897 / 2.25
6765' - 9181'	2416'	7", 32#, HCP-110, LTC, 8rd	11820 / 1.07**	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 10698' TVD.
- c) Based on string weight in 10 ppg fluid, (297k 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
20 bbls Tuned Spacer III

Lead Slurry: **177 sks** (82 bbls), 11.8 ppg, 2.55 cu. ft./sk Econocem Cement with .3% Fe-2 and .25 lb/sk Lost Circulation Additive

Tail Slurry: **575 sks** (168 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
Kline Federal 5300 31-18 6B
Section 18 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"	10171' - 20695'	13.5	P-110	BTC	3.920"	3.795"	2270	3020	3780

Interval	Length	Description	Collapse (psi) a	Burst (psi) b	Tension (1000 lbs) c
10171' - 20695'	10524	4-1/2", 13.5 lb, P-110, BTC	10670 / 2.01	12410 / 1.28	445 / 2.0

API Rating & Safety Factor

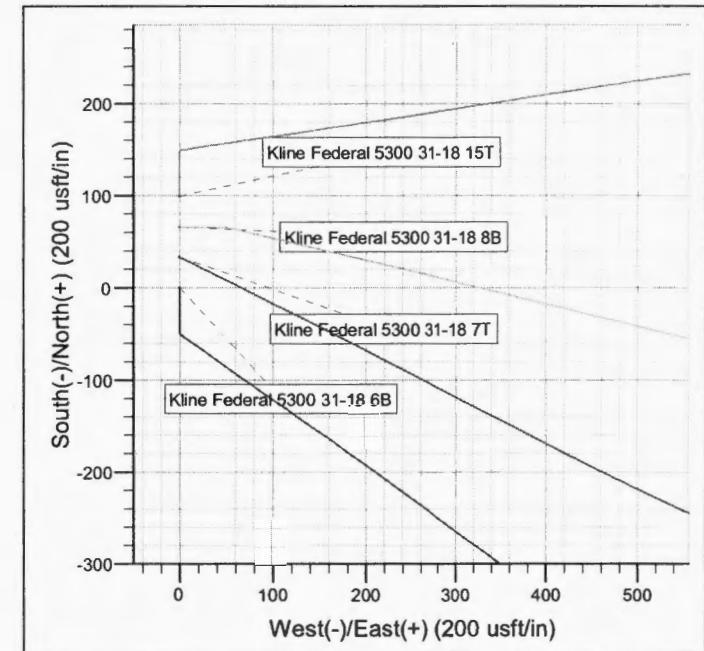
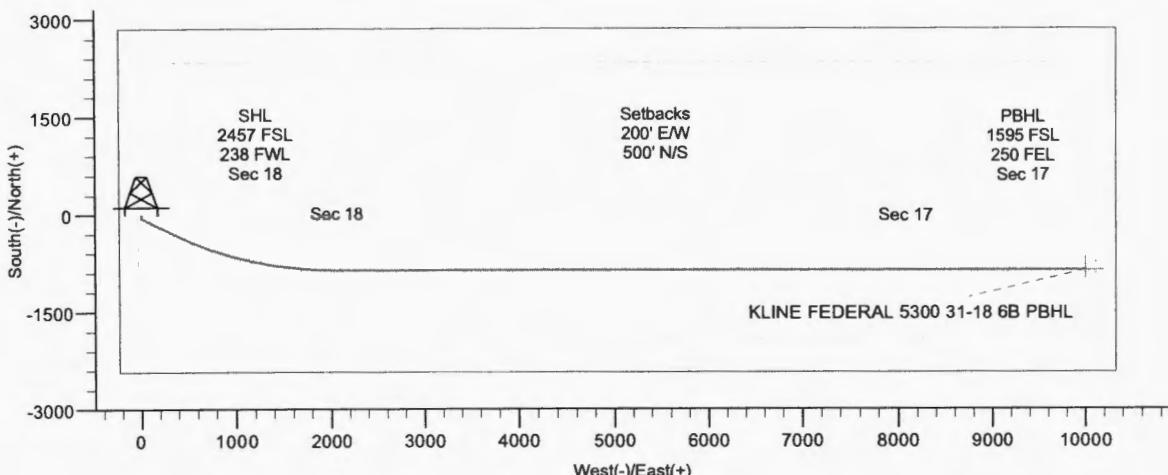
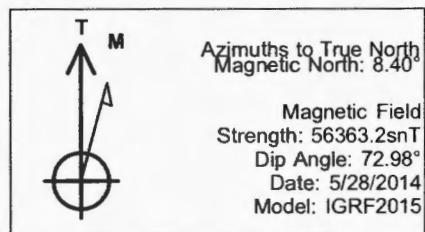
- a) Based on full casing evacuation with 9.5 ppg fluid on backside @ 10732' TVD.
- b) Burst pressure based on 9000 psi treating pressure with 10.2 ppg internal fluid gradient and 9 ppg external fluid gradient @ 10732' TVD.
- c) Based on string weight in 9.5 ppg fluid (Buoyed weight: 121k lbs.) plus 100k lbs overpull.

Project: Indian Hills
 Site: 153N-100W-17/18
 Well: Kline Federal 5300 31-18 6B
 Wellbore: Kline Federal 5300 31-18 6B
 Design: Design #2



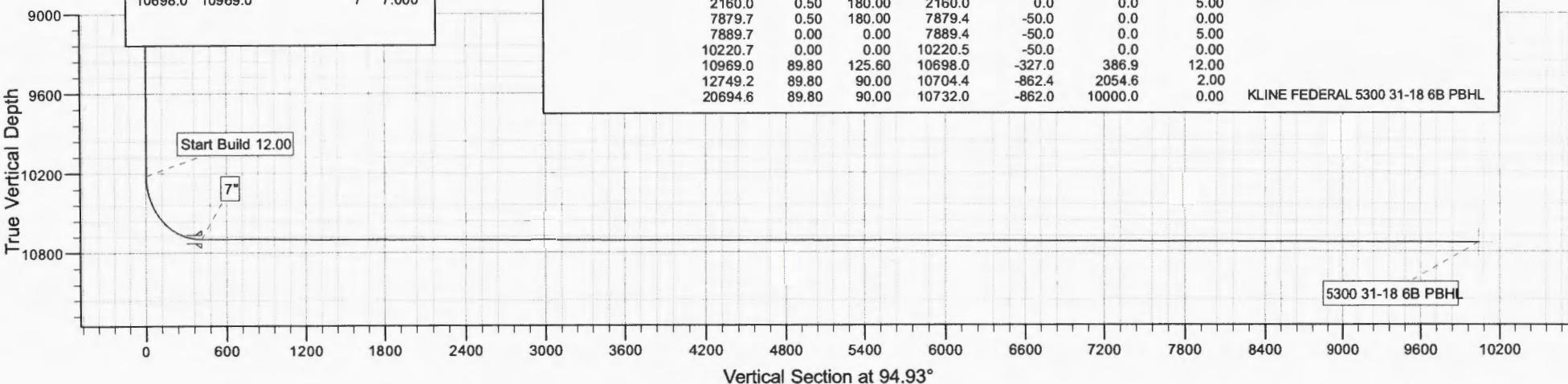
WELL DETAILS: Kline Federal 5300 31-18 6B

Northing 407155.92	Ground Level: 2008.0
Easting 1210088.38	Latitude 48° 4' 27.510 N
	Longitude 103° 36' 11.380 W



CASING DETAILS			
TVD	MD	Name	Size
2023.0	2023.0	13 3/8"	13.375
6437.0	6437.2	9 5/8"	9.625
10698.0	10969.0	7"	7.000

SECTION DETAILS								
MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	Target	
0.0	0.00	0.00	0.0	0.0	0.0	0.00		
2150.0	0.00	0.00	2150.0	0.0	0.0	0.00		
2160.0	0.50	180.00	2160.0	0.0	0.0	5.00		
7879.7	0.50	180.00	7879.4	-50.0	0.0	0.00		
7889.7	0.00	0.00	7889.4	-50.0	0.0	5.00		
10220.7	0.00	0.00	10220.5	-50.0	0.0	0.00		
10969.0	89.80	125.60	10698.0	-327.0	386.9	12.00		
12749.2	89.80	90.00	10704.4	-862.4	2054.6	2.00		
20694.6	89.80	90.00	10732.0	-862.0	10000.0	0.00	KLINE FEDERAL 5300 31-18 6B PBHL	



Oasis

Indian Hills

153N-100W-17/18

Kline Federal 5300 31-18 6B

Kline Federal 5300 31-18 6B

Kline Federal 5300 31-18 6B

Plan: Design #2

Standard Planning Report

17 February, 2015

Planning Report

Database:	OpenWellsCompass - EDM Prod	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #2		

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

Site	153N-100W-17/18				
Site Position:		Northing:	407,189.34 usft	Latitude:	48° 4' 27.840 N
From:	Lat/Long	Easting:	1,210,089.73 usft	Longitude:	103° 36' 11.380 W
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence:	-2.31 °

Well	Kline Federal 5300 31-18 6B				
Well Position	+N/S +E/W	-33.4 usft 0.0 usft	Northing: Easting:	407,155.92 usft 1,210,088.38 usft	Latitude: Longitude:
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:
Wellbore		Kline Federal 5300 31-18 6B		2,008.0 usft	

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/28/2014	8.40	72.98	56,363

Design	Design #2				
Audit Notes:					
Version:		Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:		Depth From (TVD) (usft)	+N/S (usft)	+E/W (usft)	Direction (°)
		0.0	0.0	0.0	94.93

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (%)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	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	0.00
2,160.0	0.50	180.00	2,160.0	0.0	0.0	5.00	5.00	0.00	180.00	
7,879.7	0.50	180.00	7,879.4	-50.0	0.0	0.00	0.00	0.00	0.00	
7,889.7	0.00	0.00	7,889.4	-50.0	0.0	5.00	-5.00	0.00	180.00	
10,220.7	0.00	0.00	10,220.5	-50.0	0.0	0.00	0.00	0.00	0.00	
10,969.0	89.80	125.60	10,698.0	-327.0	386.9	12.00	12.00	0.00	125.60	
12,749.2	89.80	90.00	10,704.4	-862.4	2,054.6	2.00	0.00	-2.00	-90.06	
20,694.6	89.80	90.00	10,732.0	-862.0	10,000.0	0.00	0.00	0.00	0.00	5300 31-18 6B PBHL

Planning Report

Database:	OpenWellsCompass - EDM Prod	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
2,150.0	0.00	0.00	2,150.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Start Build 5.00										
2,160.0	0.50	180.00	2,160.0	0.0	0.0	0.0	5.00	5.00	0.00	0.00
Start 5719.7 hold at 2160.0 MD										
2,200.0	0.50	180.00	2,200.0	-0.4	0.0	0.0	0.00	0.00	0.00	0.00
2,300.0	0.50	180.00	2,300.0	-1.3	0.0	0.1	0.00	0.00	0.00	0.00
2,400.0	0.50	180.00	2,400.0	-2.1	0.0	0.2	0.00	0.00	0.00	0.00
2,500.0	0.50	180.00	2,500.0	-3.0	0.0	0.3	0.00	0.00	0.00	0.00
2,600.0	0.50	180.00	2,600.0	-3.9	0.0	0.3	0.00	0.00	0.00	0.00
2,700.0	0.50	180.00	2,700.0	-4.8	0.0	0.4	0.00	0.00	0.00	0.00
2,800.0	0.50	180.00	2,800.0	-5.6	0.0	0.5	0.00	0.00	0.00	0.00
2,900.0	0.50	180.00	2,900.0	-6.5	0.0	0.6	0.00	0.00	0.00	0.00
3,000.0	0.50	180.00	3,000.0	-7.4	0.0	0.6	0.00	0.00	0.00	0.00
3,100.0	0.50	180.00	3,100.0	-8.2	0.0	0.7	0.00	0.00	0.00	0.00
3,200.0	0.50	180.00	3,200.0	-9.1	0.0	0.8	0.00	0.00	0.00	0.00
3,300.0	0.50	180.00	3,300.0	-10.0	0.0	0.9	0.00	0.00	0.00	0.00
3,400.0	0.50	180.00	3,400.0	-10.9	0.0	0.9	0.00	0.00	0.00	0.00
3,500.0	0.50	180.00	3,499.9	-11.7	0.0	1.0	0.00	0.00	0.00	0.00
3,600.0	0.50	180.00	3,599.9	-12.6	0.0	1.1	0.00	0.00	0.00	0.00
3,700.0	0.50	180.00	3,699.9	-13.5	0.0	1.2	0.00	0.00	0.00	0.00
3,800.0	0.50	180.00	3,799.9	-14.4	0.0	1.2	0.00	0.00	0.00	0.00
3,900.0	0.50	180.00	3,899.9	-15.2	0.0	1.3	0.00	0.00	0.00	0.00
4,000.0	0.50	180.00	3,999.9	-16.1	0.0	1.4	0.00	0.00	0.00	0.00
4,100.0	0.50	180.00	4,099.9	-17.0	0.0	1.5	0.00	0.00	0.00	0.00
4,200.0	0.50	180.00	4,199.9	-17.8	0.0	1.5	0.00	0.00	0.00	0.00
4,300.0	0.50	180.00	4,299.9	-18.7	0.0	1.6	0.00	0.00	0.00	0.00
4,400.0	0.50	180.00	4,399.9	-19.6	0.0	1.7	0.00	0.00	0.00	0.00
4,500.0	0.50	180.00	4,499.9	-20.5	0.0	1.8	0.00	0.00	0.00	0.00
4,600.0	0.50	180.00	4,599.9	-21.3	0.0	1.8	0.00	0.00	0.00	0.00
4,700.0	0.50	180.00	4,699.9	-22.2	0.0	1.9	0.00	0.00	0.00	0.00
4,800.0	0.50	180.00	4,799.9	-23.1	0.0	2.0	0.00	0.00	0.00	0.00
4,900.0	0.50	180.00	4,899.9	-24.0	0.0	2.1	0.00	0.00	0.00	0.00
5,000.0	0.50	180.00	4,999.9	-24.8	0.0	2.1	0.00	0.00	0.00	0.00
5,100.0	0.50	180.00	5,099.9	-25.7	0.0	2.2	0.00	0.00	0.00	0.00
5,200.0	0.50	180.00	5,199.9	-26.6	0.0	2.3	0.00	0.00	0.00	0.00
5,300.0	0.50	180.00	5,299.9	-27.4	0.0	2.4	0.00	0.00	0.00	0.00
5,400.0	0.50	180.00	5,399.9	-28.3	0.0	2.4	0.00	0.00	0.00	0.00
5,500.0	0.50	180.00	5,499.9	-29.2	0.0	2.5	0.00	0.00	0.00	0.00
5,600.0	0.50	180.00	5,599.9	-30.1	0.0	2.6	0.00	0.00	0.00	0.00
5,700.0	0.50	180.00	5,699.9	-30.9	0.0	2.7	0.00	0.00	0.00	0.00
5,800.0	0.50	180.00	5,799.9	-31.8	0.0	2.7	0.00	0.00	0.00	0.00
5,900.0	0.50	180.00	5,899.9	-32.7	0.0	2.8	0.00	0.00	0.00	0.00
6,000.0	0.50	180.00	5,999.9	-33.6	0.0	2.9	0.00	0.00	0.00	0.00
6,100.0	0.50	180.00	6,099.8	-34.4	0.0	3.0	0.00	0.00	0.00	0.00
6,200.0	0.50	180.00	6,199.8	-35.3	0.0	3.0	0.00	0.00	0.00	0.00
6,300.0	0.50	180.00	6,299.8	-36.2	0.0	3.1	0.00	0.00	0.00	0.00
6,400.0	0.50	180.00	6,399.8	-37.0	0.0	3.2	0.00	0.00	0.00	0.00
6,437.2	0.50	180.00	6,437.0	-37.4	0.0	3.2	0.00	0.00	0.00	0.00
9 5/8"										
6,500.0	0.50	180.00	6,499.8	-37.9	0.0	3.3	0.00	0.00	0.00	0.00
6,600.0	0.50	180.00	6,599.8	-38.8	0.0	3.3	0.00	0.00	0.00	0.00
6,700.0	0.50	180.00	6,699.8	-39.7	0.0	3.4	0.00	0.00	0.00	0.00
6,800.0	0.50	180.00	6,799.8	-40.5	0.0	3.5	0.00	0.00	0.00	0.00
6,900.0	0.50	180.00	6,899.8	-41.4	0.0	3.6	0.00	0.00	0.00	0.00
7,000.0	0.50	180.00	6,999.8	-42.3	0.0	3.6	0.00	0.00	0.00	0.00

Planning Report

Database:	OpenWellsCompass - EDM Prod	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (/100ft)	Build Rate (/100ft)	Turn Rate (/100ft)	
7,100.0	0.50	180.00	7,099.8	-43.2	0.0	3.7	0.00	0.00	0.00	0.00
7,200.0	0.50	180.00	7,199.8	-44.0	0.0	3.8	0.00	0.00	0.00	0.00
7,300.0	0.50	180.00	7,299.8	-44.9	0.0	3.9	0.00	0.00	0.00	0.00
7,400.0	0.50	180.00	7,399.8	-45.8	0.0	3.9	0.00	0.00	0.00	0.00
7,500.0	0.50	180.00	7,499.8	-46.6	0.0	4.0	0.00	0.00	0.00	0.00
7,600.0	0.50	180.00	7,599.8	-47.5	0.0	4.1	0.00	0.00	0.00	0.00
7,700.0	0.50	180.00	7,699.8	-48.4	0.0	4.2	0.00	0.00	0.00	0.00
7,800.0	0.50	180.00	7,799.8	-49.3	0.0	4.2	0.00	0.00	0.00	0.00
7,879.7	0.50	180.00	7,879.4	-50.0	0.0	4.3	0.00	0.00	0.00	0.00
Start Drop -5.00										
7,889.7	0.00	0.00	7,889.4	-50.0	0.0	4.3	5.00	-5.00	0.00	0.00
Start 2331.1 hold at 7889.7 MD										
10,220.7	0.00	0.00	10,220.5	-50.0	0.0	4.3	0.00	0.00	0.00	0.00
Start Build 12.00										
10,300.0	9.51	125.60	10,299.4	-53.8	5.3	9.9	12.00	12.00	0.00	0.00
10,400.0	21.51	125.60	10,395.6	-69.4	27.0	32.9	12.00	12.00	0.00	0.00
10,500.0	33.51	125.60	10,484.1	-96.2	64.5	72.6	12.00	12.00	0.00	0.00
10,600.0	45.51	125.60	10,561.1	-133.2	116.2	127.2	12.00	12.00	0.00	0.00
10,700.0	57.51	125.60	10,623.3	-178.7	179.7	194.4	12.00	12.00	0.00	0.00
10,800.0	69.51	125.60	10,667.8	-230.7	252.4	271.2	12.00	12.00	0.00	0.00
10,900.0	81.51	125.60	10,692.7	-286.9	330.9	354.4	12.00	12.00	0.00	0.00
10,969.0	89.79	125.60	10,698.0	-326.9	386.8	413.5	12.00	12.00	0.00	0.00
Start DLS 2.00 TFO -90.06 - 7"										
11,000.0	89.80	124.98	10,698.1	-344.9	412.1	440.2	2.00	0.02	-2.00	
11,100.0	89.80	122.98	10,698.4	-400.7	495.1	527.6	2.00	0.00	-2.00	
11,200.0	89.80	120.98	10,698.8	-453.7	579.9	616.7	2.00	0.00	-2.00	
11,300.0	89.79	118.98	10,699.1	-503.7	666.5	707.3	2.00	0.00	-2.00	
11,400.0	89.79	116.98	10,699.5	-550.6	754.8	799.3	2.00	0.00	-2.00	
11,500.0	89.79	114.98	10,699.9	-594.4	844.7	892.6	2.00	0.00	-2.00	
11,600.0	89.79	112.98	10,700.2	-635.0	936.0	987.1	2.00	0.00	-2.00	
11,700.0	89.79	110.98	10,700.6	-672.5	1,028.8	1,082.7	2.00	0.00	-2.00	
11,800.0	89.79	108.98	10,701.0	-706.6	1,122.7	1,179.3	2.00	0.00	-2.00	
11,900.0	89.79	106.98	10,701.3	-737.5	1,217.9	1,276.7	2.00	0.00	-2.00	
12,000.0	89.79	104.98	10,701.7	-765.0	1,314.0	1,374.8	2.00	0.00	-2.00	
12,100.0	89.79	102.98	10,702.0	-789.2	1,411.0	1,473.6	2.00	0.00	-2.00	
12,200.0	89.79	100.98	10,702.4	-809.9	1,508.8	1,572.8	2.00	0.00	-2.00	
12,300.0	89.79	98.98	10,702.8	-827.3	1,607.3	1,672.4	2.00	0.00	-2.00	
12,400.0	89.79	96.98	10,703.1	-841.2	1,706.3	1,772.3	2.00	0.00	-2.00	
12,500.0	89.80	94.98	10,703.5	-851.6	1,805.8	1,872.2	2.00	0.00	-2.00	
12,600.0	89.80	92.98	10,703.8	-858.5	1,905.5	1,972.2	2.00	0.00	-2.00	
12,700.0	89.80	90.98	10,704.2	-862.0	2,005.5	2,072.1	2.00	0.00	-2.00	
12,749.2	89.80	90.00	10,704.4	-862.4	2,054.6	2,121.1	2.00	0.00	-2.00	
Start 7945.4 hold at 12749.2 MD										
12,800.0	89.80	90.00	10,704.5	-862.4	2,105.5	2,171.8	0.00	0.00	0.00	
12,900.0	89.80	90.00	10,704.9	-862.4	2,205.5	2,271.4	0.00	0.00	0.00	
13,000.0	89.80	90.00	10,705.2	-862.4	2,305.5	2,371.0	0.00	0.00	0.00	
13,100.0	89.80	90.00	10,705.6	-862.4	2,405.5	2,470.6	0.00	0.00	0.00	
13,200.0	89.80	90.00	10,705.9	-862.4	2,505.5	2,570.3	0.00	0.00	0.00	
13,300.0	89.80	90.00	10,706.3	-862.4	2,605.5	2,669.9	0.00	0.00	0.00	
13,400.0	89.80	90.00	10,706.6	-862.4	2,705.5	2,769.5	0.00	0.00	0.00	
13,500.0	89.80	90.00	10,707.0	-862.4	2,805.5	2,869.2	0.00	0.00	0.00	
13,600.0	89.80	90.00	10,707.3	-862.3	2,905.5	2,968.8	0.00	0.00	0.00	
13,700.0	89.80	90.00	10,707.7	-862.3	3,005.5	3,068.4	0.00	0.00	0.00	
13,800.0	89.80	90.00	10,708.0	-862.3	3,105.5	3,168.0	0.00	0.00	0.00	

Planning Report

Database:	OpenWellsCompass - EDM Prod	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13,900.0	89.80	90.00	10,708.4	-862.3	3,205.5	3,267.7	0.00	0.00	0.00
14,000.0	89.80	90.00	10,708.7	-862.3	3,305.5	3,367.3	0.00	0.00	0.00
14,100.0	89.80	90.00	10,709.1	-862.3	3,405.5	3,466.9	0.00	0.00	0.00
14,200.0	89.80	90.00	10,709.4	-862.3	3,505.5	3,566.6	0.00	0.00	0.00
14,300.0	89.80	90.00	10,709.8	-862.3	3,605.5	3,666.2	0.00	0.00	0.00
14,400.0	89.80	90.00	10,710.1	-862.3	3,705.5	3,765.8	0.00	0.00	0.00
14,500.0	89.80	90.00	10,710.5	-862.3	3,805.5	3,865.5	0.00	0.00	0.00
14,600.0	89.80	90.00	10,710.8	-862.3	3,905.5	3,965.1	0.00	0.00	0.00
14,700.0	89.80	90.00	10,711.2	-862.3	4,005.5	4,064.7	0.00	0.00	0.00
14,800.0	89.80	90.00	10,711.5	-862.3	4,105.5	4,164.3	0.00	0.00	0.00
14,900.0	89.80	90.00	10,711.8	-862.3	4,205.5	4,264.0	0.00	0.00	0.00
15,000.0	89.80	90.00	10,712.2	-862.3	4,305.5	4,363.6	0.00	0.00	0.00
15,100.0	89.80	90.00	10,712.5	-862.3	4,405.5	4,463.2	0.00	0.00	0.00
15,200.0	89.80	90.00	10,712.9	-862.3	4,505.5	4,562.9	0.00	0.00	0.00
15,300.0	89.80	90.00	10,713.2	-862.3	4,605.5	4,662.5	0.00	0.00	0.00
15,400.0	89.80	90.00	10,713.6	-862.3	4,705.5	4,762.1	0.00	0.00	0.00
15,500.0	89.80	90.00	10,713.9	-862.3	4,805.5	4,861.8	0.00	0.00	0.00
15,600.0	89.80	90.00	10,714.3	-862.3	4,905.5	4,961.4	0.00	0.00	0.00
15,700.0	89.80	90.00	10,714.6	-862.2	5,005.5	5,061.0	0.00	0.00	0.00
15,800.0	89.80	90.00	10,715.0	-862.2	5,105.5	5,160.6	0.00	0.00	0.00
15,900.0	89.80	90.00	10,715.3	-862.2	5,205.5	5,260.3	0.00	0.00	0.00
16,000.0	89.80	90.00	10,715.7	-862.2	5,305.5	5,359.9	0.00	0.00	0.00
16,100.0	89.80	90.00	10,716.0	-862.2	5,405.5	5,459.5	0.00	0.00	0.00
16,200.0	89.80	90.00	10,716.4	-862.2	5,505.4	5,559.2	0.00	0.00	0.00
16,300.0	89.80	90.00	10,716.7	-862.2	5,605.4	5,658.8	0.00	0.00	0.00
16,400.0	89.80	90.00	10,717.1	-862.2	5,705.4	5,758.4	0.00	0.00	0.00
16,500.0	89.80	90.00	10,717.4	-862.2	5,805.4	5,858.0	0.00	0.00	0.00
16,600.0	89.80	90.00	10,717.8	-862.2	5,905.4	5,957.7	0.00	0.00	0.00
16,700.0	89.80	90.00	10,718.1	-862.2	6,005.4	6,057.3	0.00	0.00	0.00
16,800.0	89.80	90.00	10,718.5	-862.2	6,105.4	6,156.9	0.00	0.00	0.00
16,900.0	89.80	90.00	10,718.8	-862.2	6,205.4	6,256.6	0.00	0.00	0.00
17,000.0	89.80	90.00	10,719.2	-862.2	6,305.4	6,356.2	0.00	0.00	0.00
17,100.0	89.80	90.00	10,719.5	-862.2	6,405.4	6,455.8	0.00	0.00	0.00
17,200.0	89.80	90.00	10,719.8	-862.2	6,505.4	6,555.5	0.00	0.00	0.00
17,300.0	89.80	90.00	10,720.2	-862.2	6,605.4	6,655.1	0.00	0.00	0.00
17,400.0	89.80	90.00	10,720.5	-862.2	6,705.4	6,754.7	0.00	0.00	0.00
17,500.0	89.80	90.00	10,720.9	-862.2	6,805.4	6,854.3	0.00	0.00	0.00
17,600.0	89.80	90.00	10,721.2	-862.2	6,905.4	6,954.0	0.00	0.00	0.00
17,700.0	89.80	90.00	10,721.6	-862.1	7,005.4	7,053.6	0.00	0.00	0.00
17,800.0	89.80	90.00	10,721.9	-862.1	7,105.4	7,153.2	0.00	0.00	0.00
17,900.0	89.80	90.00	10,722.3	-862.1	7,205.4	7,252.9	0.00	0.00	0.00
18,000.0	89.80	90.00	10,722.6	-862.1	7,305.4	7,352.5	0.00	0.00	0.00
18,100.0	89.80	90.00	10,723.0	-862.1	7,405.4	7,452.1	0.00	0.00	0.00
18,200.0	89.80	90.00	10,723.3	-862.1	7,505.4	7,551.7	0.00	0.00	0.00
18,300.0	89.80	90.00	10,723.7	-862.1	7,605.4	7,651.4	0.00	0.00	0.00
18,400.0	89.80	90.00	10,724.0	-862.1	7,705.4	7,751.0	0.00	0.00	0.00
18,500.0	89.80	90.00	10,724.4	-862.1	7,805.4	7,850.6	0.00	0.00	0.00
18,600.0	89.80	90.00	10,724.7	-862.1	7,905.4	7,950.3	0.00	0.00	0.00
18,700.0	89.80	90.00	10,725.1	-862.1	8,005.4	8,049.9	0.00	0.00	0.00
18,800.0	89.80	90.00	10,725.4	-862.1	8,105.4	8,149.5	0.00	0.00	0.00
18,900.0	89.80	90.00	10,725.8	-862.1	8,205.4	8,249.2	0.00	0.00	0.00
19,000.0	89.80	90.00	10,726.1	-862.1	8,305.4	8,348.8	0.00	0.00	0.00
19,100.0	89.80	90.00	10,726.5	-862.1	8,405.4	8,448.4	0.00	0.00	0.00
19,200.0	89.80	90.00	10,726.8	-862.1	8,505.4	8,548.0	0.00	0.00	0.00
19,300.0	89.80	90.00	10,727.2	-862.1	8,605.4	8,647.7	0.00	0.00	0.00

Planning Report

Database:	OpenWellsCompass - EDM Prod	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
19,400.0	89.80	90.00	10,727.5	-862.1	8,705.4	8,747.3	0.00	0.00	0.00	
19,500.0	89.80	90.00	10,727.8	-862.1	8,805.4	8,846.9	0.00	0.00	0.00	
19,600.0	89.80	90.00	10,728.2	-862.1	8,905.4	8,946.6	0.00	0.00	0.00	
19,700.0	89.80	90.00	10,728.5	-862.0	9,005.4	9,046.2	0.00	0.00	0.00	
19,800.0	89.80	90.00	10,728.9	-862.0	9,105.4	9,145.8	0.00	0.00	0.00	
19,900.0	89.80	90.00	10,729.2	-862.0	9,205.4	9,245.4	0.00	0.00	0.00	
20,000.0	89.80	90.00	10,729.6	-862.0	9,305.4	9,345.1	0.00	0.00	0.00	
20,100.0	89.80	90.00	10,729.9	-862.0	9,405.4	9,444.7	0.00	0.00	0.00	
20,200.0	89.80	90.00	10,730.3	-862.0	9,505.4	9,544.3	0.00	0.00	0.00	
20,300.0	89.80	90.00	10,730.6	-862.0	9,605.4	9,644.0	0.00	0.00	0.00	
20,400.0	89.80	90.00	10,731.0	-862.0	9,705.4	9,743.6	0.00	0.00	0.00	
20,500.0	89.80	90.00	10,731.3	-862.0	9,805.4	9,843.2	0.00	0.00	0.00	
20,600.0	89.80	90.00	10,731.7	-862.0	9,905.4	9,942.9	0.00	0.00	0.00	
20,694.6	89.80	90.00	10,732.0	-862.0	10,000.0	10,037.1	0.00	0.00	0.00	

TD at 20694.6 - 5300 31-18 6B PBHL

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/S (usft)	+E/W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
5300 31-18 6B PBHL	0.00	0.00	10,732.0	-862.0	10,000.0	405,891.71	1,220,045.53	48° 4' 18.977 N	103° 33' 44.127 W	
- plan hits target center										
- Point										

Casing Points										
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)						
2,023.0	2,023.0 13 3/8"		13.375	17.500						
6,437.2	6,437.0 9 5/8"		9.625	12.250						
10,969.0	10,698.0 7"		7.000	8.750						

Planning Report

Database:	OpenWellsCompass - EDM Prod	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #2		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,923.0	1,923.0	Pierre			
4,597.1	4,597.0	Greenhorn			
5,008.1	5,008.0	Mowry			
5,422.1	5,422.0	Dakota			
6,437.2	6,437.0	Rierdon			
6,765.2	6,765.0	Dunham Salt			
6,880.2	6,880.0	Dunham Salt Base			
6,975.2	6,975.0	Spearfish			
7,234.2	7,234.0	Pine Salt			
7,269.2	7,269.0	Pine Salt Base			
7,325.2	7,325.0	Opeche Salt			
7,354.2	7,354.0	Opeche Salt Base			
7,556.2	7,556.0	Broom Creek (Top of Minnelusa Gp.)			
7,635.2	7,635.0	Amsden			
7,804.2	7,804.0	Tyler			
7,998.2	7,998.0	Otter (Base of Minnelusa Gp.)			
8,341.2	8,341.0	Kibbey Lime			
8,493.2	8,493.0	Charles Salt			
9,110.2	9,110.0	UB			
9,181.2	9,181.0	Base Last Salt			
9,244.2	9,244.0	Ratcliffe			
9,387.2	9,387.0	Mission Canyon			
9,955.2	9,955.0	Lodgepole			
10,142.2	10,142.0	Lodgepole Fracture Zone			
10,776.5	10,659.0	False Bakken			
10,800.7	10,668.0	Upper Bakken			
10,855.0	10,684.0	Middle Bakken			
10,901.8	10,693.0	Middle Bakken Sand Target			
12,362.4	10,703.0	Base Middle Bakken Sand Target			
16,668.6	10,718.0	Lower Bakken			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
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 5719.7 hold at 2160.0 MD
7,879.7	7,879.4	-50.0	0.0	Start Drop -5.00
7,889.7	7,889.4	-50.0	0.0	Start 2331.1 hold at 7889.7 MD
10,220.7	10,220.5	-50.0	0.0	Start Build 12.00
10,969.0	10,698.0	-327.0	386.9	Start DLS 2.00 TFO -90.06
12,749.2	10,704.4	-862.4	2,054.6	Start 7945.4 hold at 12749.2 MD
20,694.6	10,732.0	-862.0	10,000.0	TD at 20694.6

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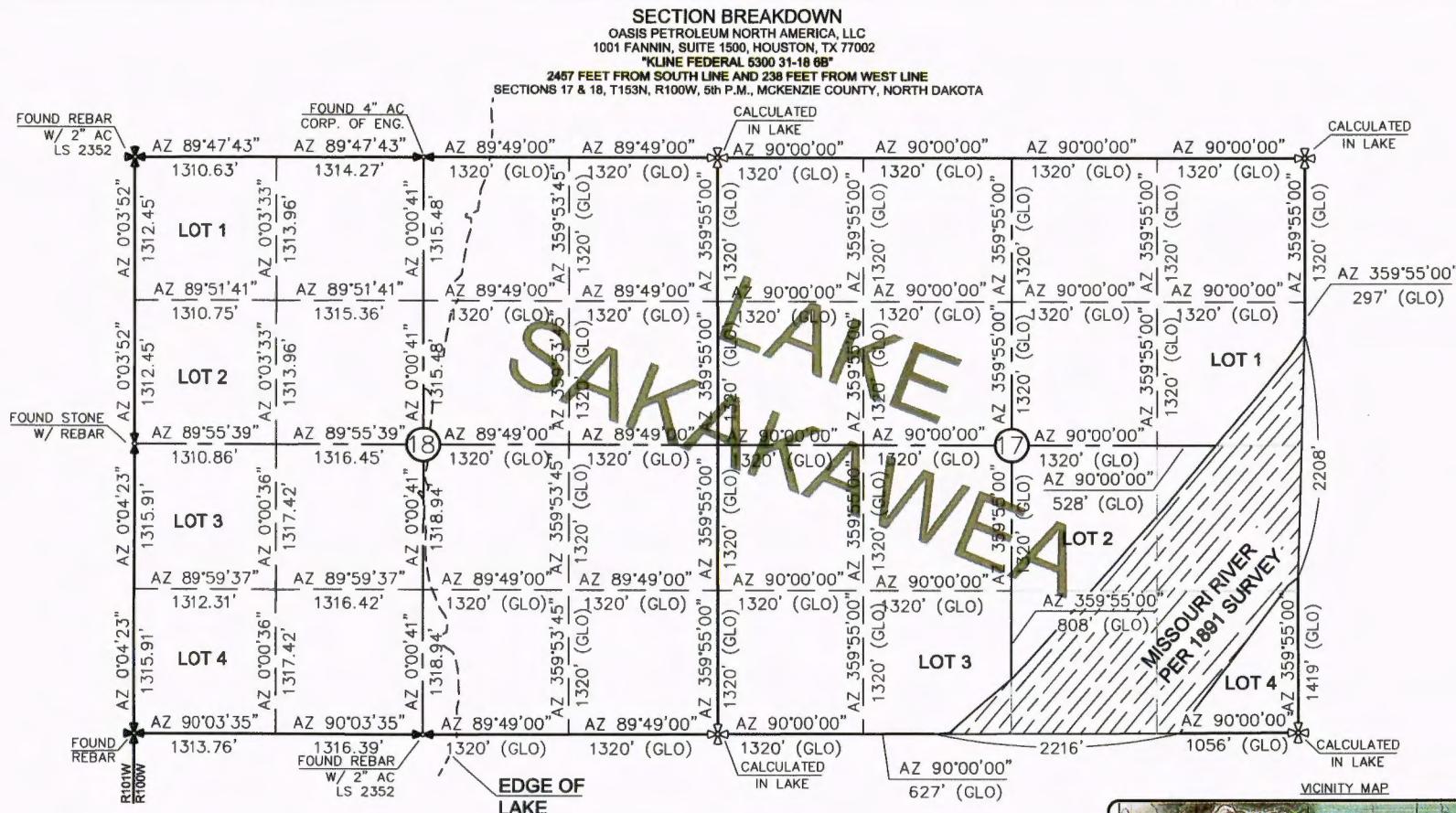
Residence No.	Date	By	Description
REC 1	7/27/15	B.M.	CHANGED WELL NAMES & BM.
REC 2	8/26/15	J.D.	UPDATED ACCESS ROAD ROUTE

Residence No.	Date	By	Description
REC 1	7/27/15	B.M.	CHANGED WELL NAMES & BM.

Other offices in Dickinson, North Dakota and Sioux City, Iowa



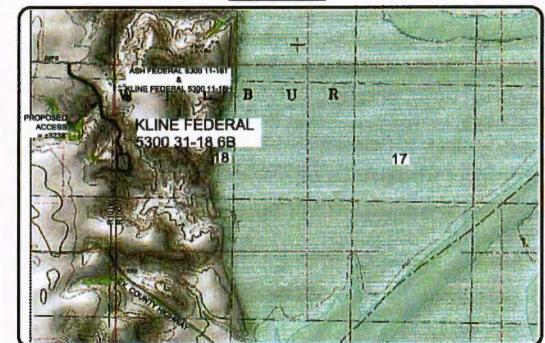
2/8
SHEET NO.



THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY DARYL D. KASEMAN, PLS, REGISTRATION NUMBER 3880 ON 2/05/15 AND THE ORIGINAL DOCUMENTS ARE STORED AT THE OFFICES OF INTERSTATE ENGINEERING, INC.

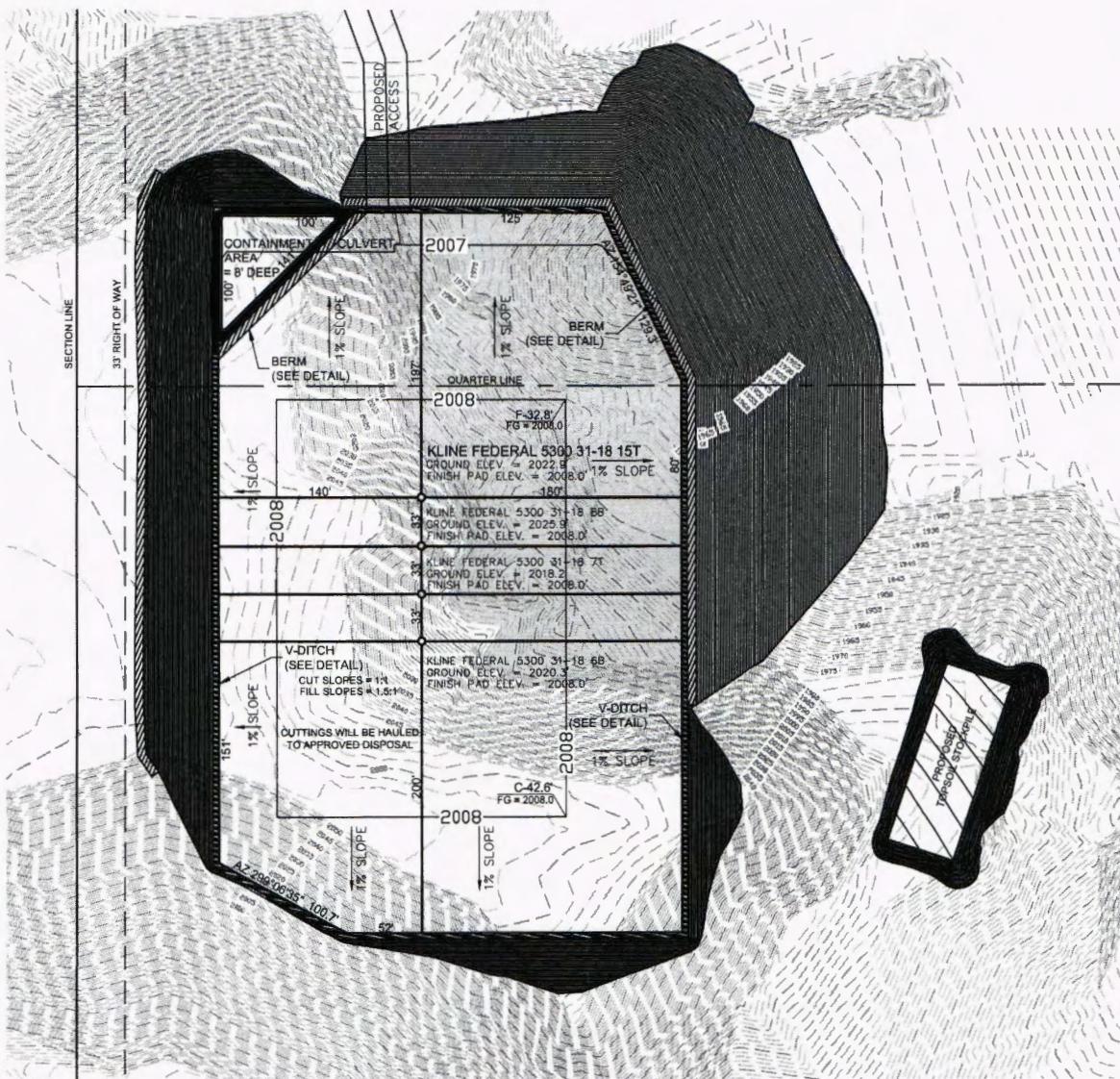
ALL AZIMUTHS ARE BASED ON G.P.S. OBSERVATIONS. THE ORIGINAL SURVEY OF THIS AREA FOR THE GENERAL LAND OFFICE (G.L.O.) WAS 1891. THE CORNERS FOUND ARE AS INDICATED AND ALL OTHERS ARE COMPUTED FROM THOSE CORNERS FOUND AND BASED ON G.L.O. DATA. THE MAPPING ANGLE FOR THIS AREA IS APPROXIMATELY 0°03'.

- MONUMENT - RECOVERED
- MONUMENT - NOT RECOVERED



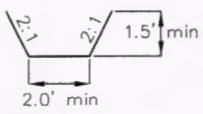
EXISTING CONTOURS
 OASIS PETROLEUM NORTH AMERICA, LLC
 1001 FANNIN, SUITE 1500, HOUSTON, TX 77002
 "KLINE FEDERAL 5300 31-18 15T"
 2556 FEET FROM SOUTH LINE AND 238 FEET FROM WEST LINE
 SECTION 18, T153N, R100W, 5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

4 well pad

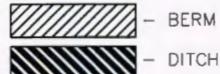


NOTE: Pad dimensions shown are to usable area, the v-ditch and berm areas shall be built to the outside of the pad dimensions.

V-DITCH DETAIL

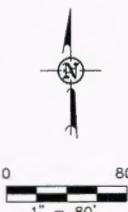


Proposed Contours
 - - - - Original Contours



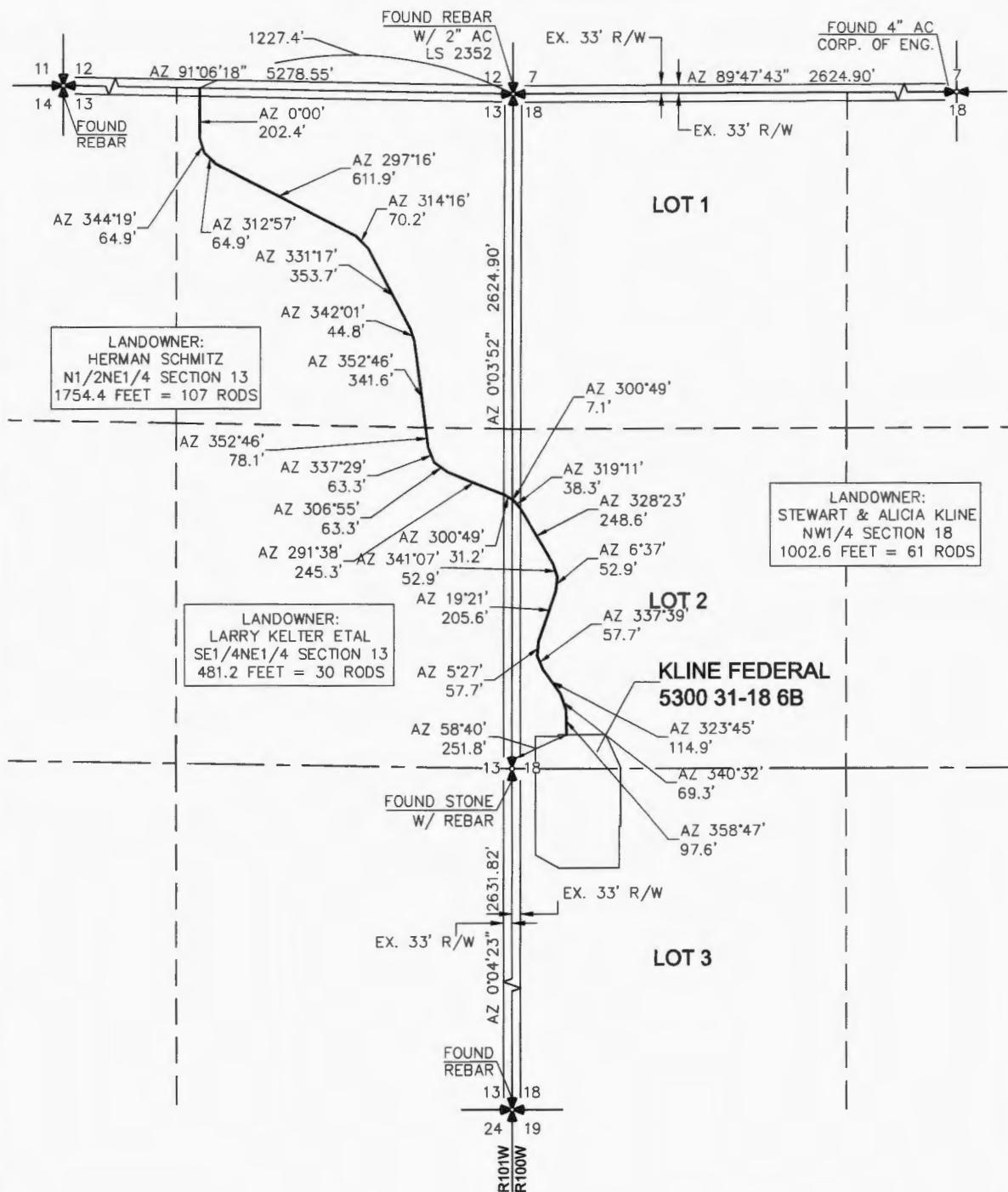
NOTE: All utilities shown are preliminary only, a complete utilities location is recommended before construction.

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Revision No.	Date	By	Description
REV 1	2/7/10	B.H.M.	UPDATED ACCESS

ACCESS APPROACH
 OASIS PETROLEUM NORTH AMERICA, LLC
 1001 FANNIN, SUITE 1500, HOUSTON, TX 77002
 "KLINE FEDERAL 5300 31-18 6B"
 2457 FEET FROM SOUTH LINE AND 238 FEET FROM WEST LINE
 SECTION 18, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA



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



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 Fax: (402) 433-8816
www.interstateengineering.com

Other offices in Minnesota, North Dakota and South Dakota

OASIS PETROLEUM NORTH AMERICA, LLC

ACCESS APPROACH

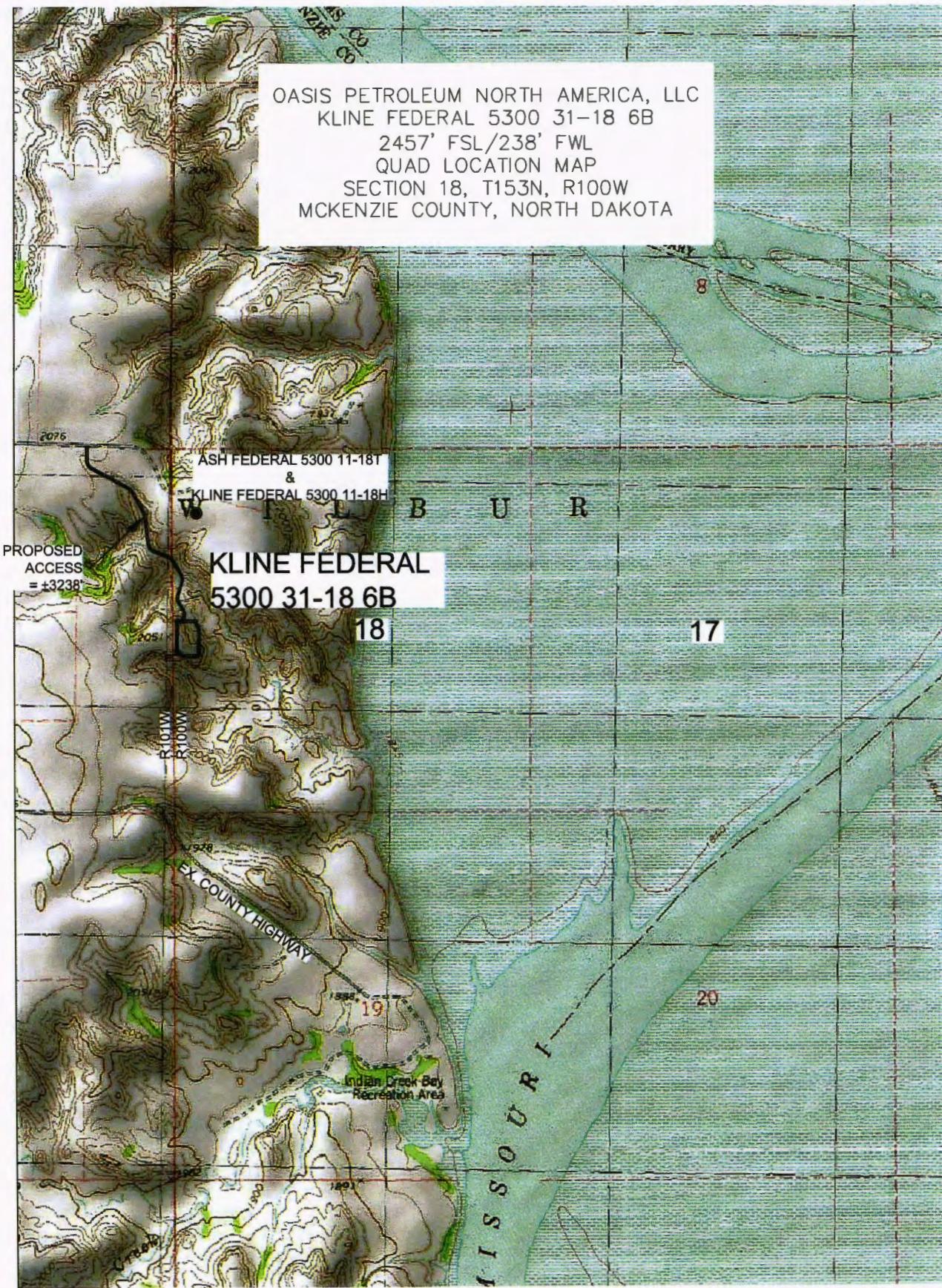
SECTION 18, T153N, R100W

MCKENZIE COUNTY, NORTH DAKOTA

Drawn By: B.J.H. Project No.: 814-08-109

Checked By: D.D.K. Date: APRIL 2014

Rev. No.	Date	By	Description
REV 1	1/27/15	B.H.	CHANGED WELL NAMES & RL.
REV 2	2/05/15	J.S.	UPDATED ACCESS ROAD ROUTE



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OASIS PETROLEUM NORTH AMERICA, LLC
QUAD LOCATION MAP
SECTION 18, T153N, R100W
MCKENZIE COUNTY, NORTH DAKOTA

Drawn By: B.H.H. Project No.: S14-09-109
Checked By: D.D.K. Date: APRIL 2014

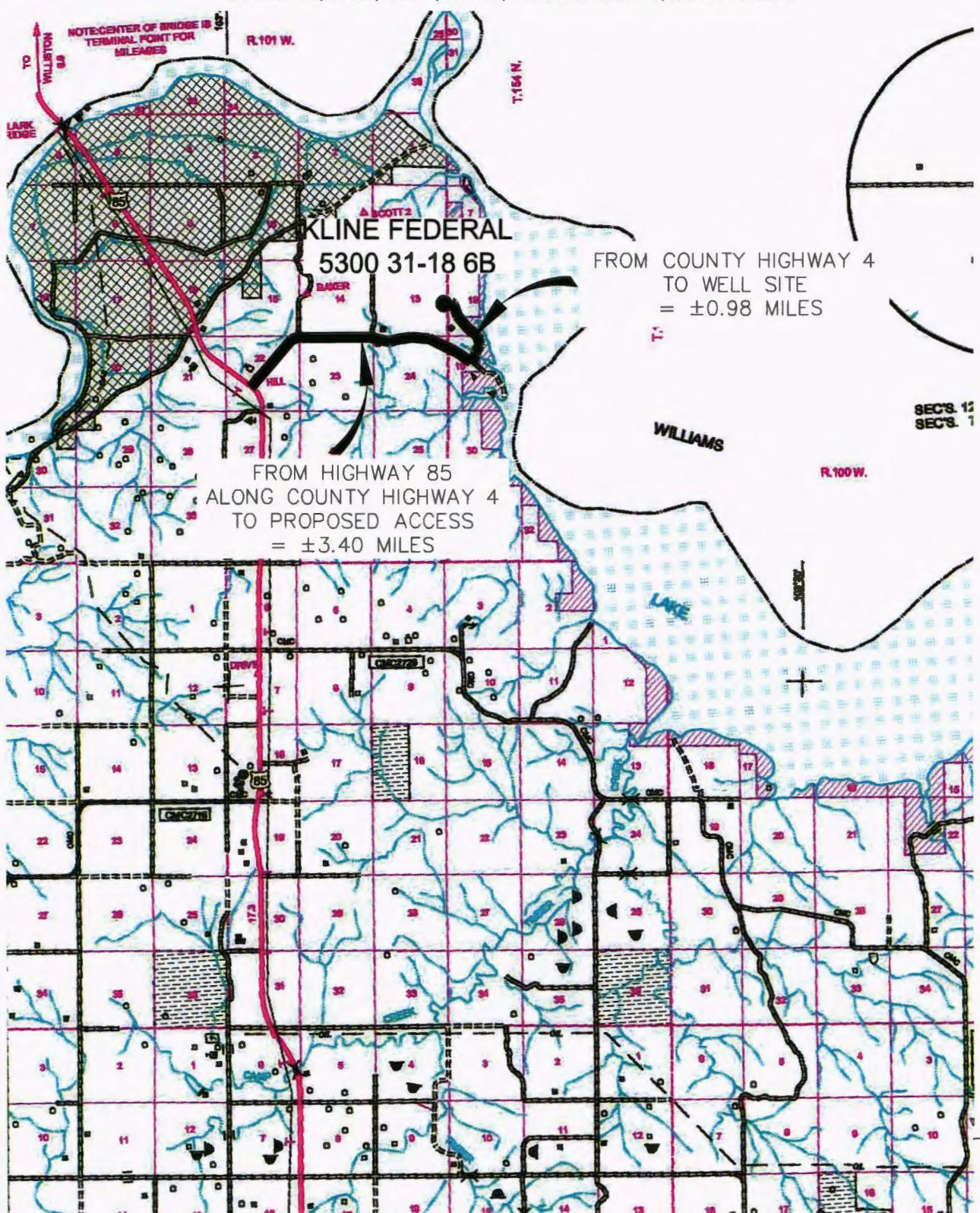
Revision No.	Date	By	Description
REV 1	1/27/15	B.H.H.	CHANGED WELL NAMES & BHL
REV 2	2/05/15	JJS	UPDATED ACCESS ROAD ROUTE

COUNTY ROAD MAP

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

"KLINE FEDERAL 5300 31-18 6B"

2457 FEET FROM SOUTH LINE AND 238 FEET FROM WEST LINE
SECTION 18, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA



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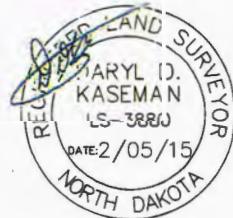
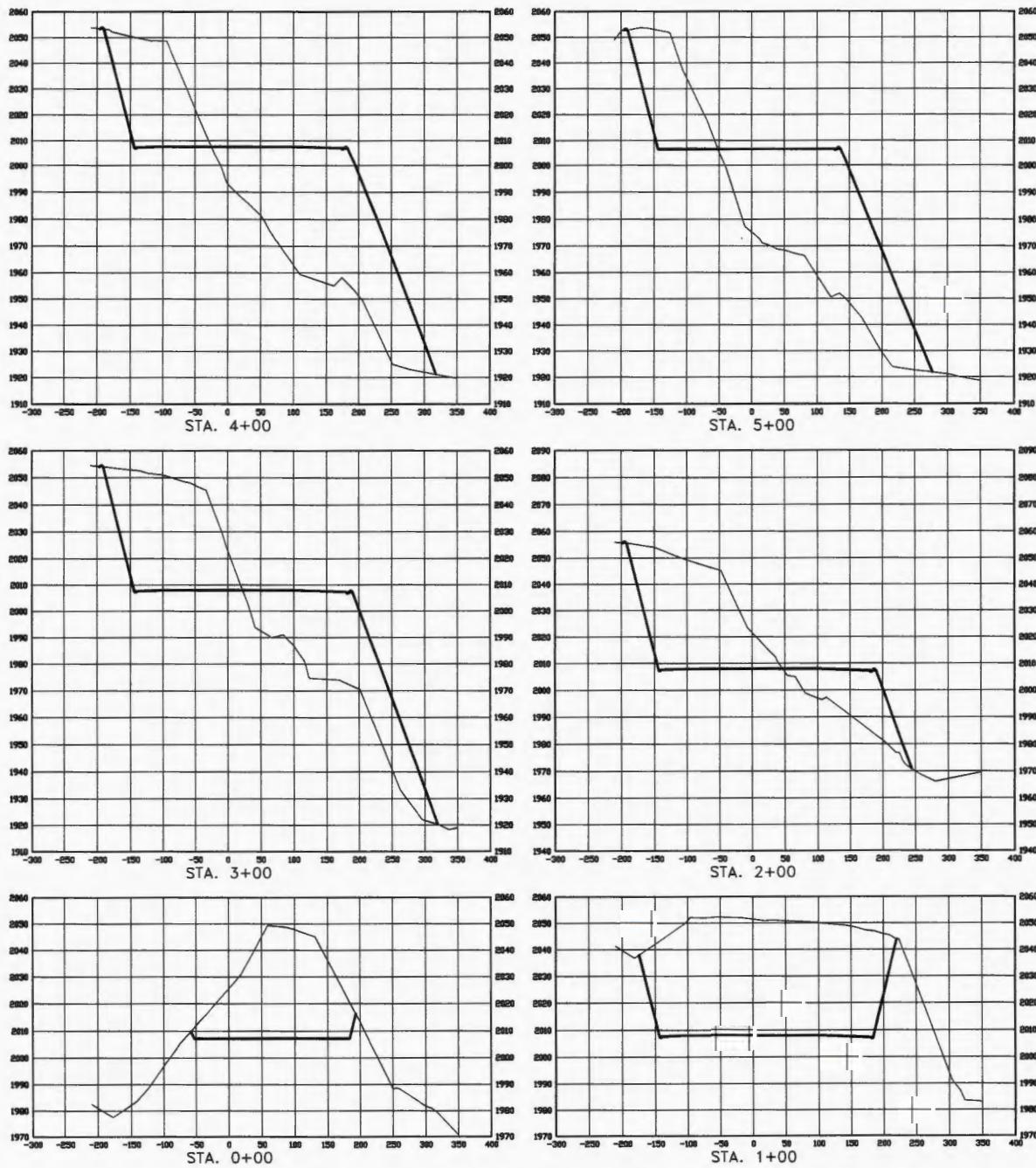
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www.Interstateeng.com
Other offices in Minnesota, North Dakota and South Dakota

OASIS PETROLEUM NORTH AMERICA, LLC
COUNTY ROAD MAP
SECTION 18, T153N, R100W
MCKENZIE COUNTY, NORTH DAKOTA

Drawn By:	B.H.H.	Project No.:	S14-09-109
Checked By:	D.D.K.	Date:	APRIL 2014

Revision No.	Date	By	Description
REV 1	1/27/15	B.H.H.	CHANGED WELL NAMES & SHL
REV 2	2/05/15	J.S.	UPDATED ACCESS ROAD ROUTE

CROSS SECTIONS
 OASIS PETROLEUM NORTH AMERICA, LLC
 1001 FANNIN, SUITE 1500, HOUSTON, TX 77002
 "KLINE FEDERAL 5300 31-18 6B"
 2457 FEET FROM SOUTH LINE AND 238 FEET FROM WEST LINE
 SECTION 18, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA



THIS DOCUMENT WAS
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 PLS, REGISTRATION NUMBER
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SCALE
 HORIZ 1'=160'
 VERT 1"=40'

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OASIS PETROLEUM NORTH AMERICA, LLC
 CROSS SECTIONS
 SECTION 18, T153N, R100W

MCKENZIE COUNTY, NORTH DAKOTA

Drawn by: [initials] Project No.: S14-06-108
 Checked by: [initials] Date: APRIL 2014

Revision No.	Date	By	Description
REV 1	1/27/15	BHK	CHANGED WELL NAMES & BBL
REV 2	2/05/15	AJS	UPDATED ACCESS ROAD ROUTE

Printed on Federal Stock 31-18-6B Reprinted 1-27-15 by J.S. 6-19 AD

WELL LOCATION SITE QUANTITIES
 OASIS PETROLEUM NORTH AMERICA, LLC
 1001 FANNIN, SUITE 1500, HOUSTON, TX 77002
 "KLINE FEDERAL 5300 31-18 6B"
 2457 FEET FROM SOUTH LINE AND 238 FEET FROM WEST LINE
 SECTION 18, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA

WELL SITE ELEVATION	2020.3
WELL PAD ELEVATION	2008.0
EXCAVATION	146,179
PLUS PIT	0
	<u>146,179</u>
EMBANKMENT	113,287
PLUS SHRINKAGE (25%)	<u>28,322</u>
	<u>141,609</u>
STOCKPILE PIT	0
STOCKPILE TOP SOIL (6")	4,701
BERMS	1,076 LF = 349 CY
DITCHES	1,350 LF = 207 CY
CONTAINMENT AREA	1,238 CY
STOCKPILE MATERIAL	965
DISTURBED AREA FROM PAD	5.83 ACRES

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

CUT END SLOPES AT 1:1

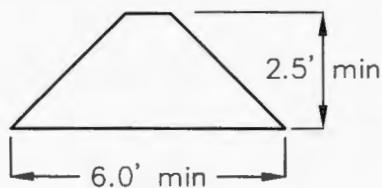
FILL END SLOPES AT 1.5:1

WELL SITE LOCATION

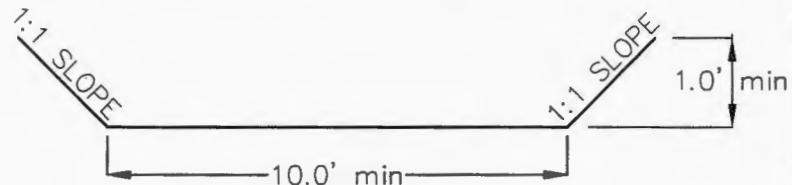
2457' FSL

238' FWL

BERM DETAIL



DIVERSION DITCH DETAIL



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OASIS PETROLEUM NORTH AMERICA, LLC
 QUANTITIES
 SECTION 18, T153N, R100W
 MCKENZIE COUNTY, NORTH DAKOTA

Drawn By:	B.H.H.	Project No.:	S14-09-109
Checked By:	D.D.K.	Date:	APRIL 2014

Revision No.	Date	By	Description
REV 1	1/27/15	B.H.H.	CHANGED WELL NAMES & B.H.L.
REV 2	2/05/15	J.S.	UPDATED ACCESS ROAD ROUTE



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.
28756

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

Notice of Intent

Approximate Start Date

July 28, 2014

Report of Work Done

Date Work Completed

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

Approximate Start Date

Drilling Prognosis

Spill Report

Redrilling or Repair

Shooting

Casing or Liner

Acidizing

Plug Well

Fracture Treatment

Supplemental History

Change Production Method

Temporarily Abandon

Reclamation

Other

Change casing

Well Name and Number

Kline Federal 5300 31-18 6B

Footages	Qtr-Qtr	Section	Township	Range	
2457 F S L	238 F W L	LOT3	18	153 N	100 W

Field	Pool	County
Baker	Bakken	McKenzie

24-HOUR PRODUCTION RATE

Before	After	Oil	Bbls	Oil	Bbls
Oil	Bbls	Water	Bbls	Water	Bbls
Gas	MCF	Gas	MCF	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: 13-3/8, 54.5#, 17-1/2" Hole, 2,023' MD

Dakota Contingency: 9-5/8, 40#, 12-1/4" Hole, 6,101' MD

Attached are revised plats, 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 28, 2014	
Email Address hmccowan@oasispetroleum.com		

FOR STATE USE ONLY

<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date 8-5-14	
By 	
Title Petroleum Resource Specialist	

Oasis

Indian Hills

153N-100W-17/18

Kline Federal 5300 31-18 6B

Kline Federal 5300 31-18 6B

Design #1

Anticollision Report

21 July, 2014

Anticollision Report

Company:	Oasis	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	Indian Hills	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Reference Site:	153N-100W-17/18	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Well Error:	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Kline Federal 5300 31-18 6B	Database:	EDM_new
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference	Design #1
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	Stations
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 10,000.0 us
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic
Casing Method:	Not applied

Survey Tool Program		Date	7/21/2014	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	20,694.5	Design #1 (Kline Federal 5300 31-18 6B)	MWD	MWD - Standard

Summary		Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance			Warning
Site Name	Offset Well - Wellbore - Design			Between Centres (usft)	Between Ellipses (usft)	Separation Factor	
153N-100W-17/18	Kline Federal 5300 31-18 7T2 - Kline Federal 5300 31-18	2,200.0	2,200.0	33.4	23.0	3.213	CC
	Kline Federal 5300 31-18 7T2 - Kline Federal 5300 31-18	20,694.5	20,831.2	124.1	-26.5	0.824	Level 1, ES, SF
	Kline Federal 5300 31-18 8T - Kline Federal 5300 31-18	2,200.0	2,200.0	65.9	55.5	6.328	CC
	Kline Federal 5300 31-18 8T - Kline Federal 5300 31-18	20,694.5	20,655.9	507.7	-69.9	0.879	Level 1, ES, SF

Offset Design 153N-100W-17/18 - Kline Federal 5300 31-18 7T2 - Kline Federal 5300 31-18 7T2 - Design #1											Offset Site Error:	0.0 usft	
Survey Program: 0-MWD											Offset Well Error:	2.0 usft	
Reference	Offset	Semi Major Axis			Distance								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	Offset Wellbore Centre +E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	2.0	2.0	0.00	33.4	0.0	33.4				
100.0	100.0	100.0	100.0	2.0	2.0	0.00	33.4	0.0	33.4	29.4	4.00	8.353	
200.0	200.0	200.0	200.0	2.0	2.0	0.00	33.4	0.0	33.4	29.4	4.05	8.262	
300.0	300.0	300.0	300.0	2.1	2.1	0.00	33.4	0.0	33.4	29.3	4.14	8.077	
400.0	400.0	400.0	400.0	2.1	2.1	0.00	33.4	0.0	33.4	29.2	4.28	7.817	
500.0	500.0	500.0	500.0	2.2	2.2	0.00	33.4	0.0	33.4	29.0	4.46	7.502	
600.0	600.0	600.0	600.0	2.3	2.3	0.00	33.4	0.0	33.4	28.8	4.67	7.156	
700.0	700.0	700.0	700.0	2.5	2.5	0.00	33.4	0.0	33.4	28.5	4.92	6.796	
800.0	800.0	800.0	800.0	2.6	2.6	0.00	33.4	0.0	33.4	28.2	5.20	6.437	
900.0	900.0	900.0	900.0	2.7	2.7	0.00	33.4	0.0	33.4	27.9	5.49	6.088	
1,000.0	1,000.0	1,000.0	1,000.0	2.9	2.9	0.00	33.4	0.0	33.4	27.6	5.81	5.755	
1,100.0	1,100.0	1,100.0	1,100.0	3.1	3.1	0.00	33.4	0.0	33.4	27.3	6.14	5.442	
1,200.0	1,200.0	1,200.0	1,200.0	3.2	3.2	0.00	33.4	0.0	33.4	26.9	6.49	5.151	
1,300.0	1,300.0	1,300.0	1,300.0	3.4	3.4	0.00	33.4	0.0	33.4	26.6	6.85	4.880	
1,400.0	1,400.0	1,400.0	1,400.0	3.6	3.6	0.00	33.4	0.0	33.4	26.2	7.22	4.631	
1,500.0	1,500.0	1,500.0	1,500.0	3.8	3.8	0.00	33.4	0.0	33.4	25.8	7.60	4.400	
1,600.0	1,600.0	1,600.0	1,600.0	4.0	4.0	0.00	33.4	0.0	33.4	25.5	7.99	4.188	
1,700.0	1,700.0	1,700.0	1,700.0	4.2	4.2	0.00	33.4	0.0	33.4	25.1	8.38	3.992	
1,800.0	1,800.0	1,800.0	1,800.0	4.4	4.4	0.00	33.4	0.0	33.4	24.7	8.78	3.811	
1,900.0	1,900.0	1,900.0	1,900.0	4.6	4.6	0.00	33.4	0.0	33.4	24.3	9.18	3.644	
2,000.0	2,000.0	2,000.0	2,000.0	4.8	4.8	0.00	33.4	0.0	33.4	23.9	9.58	3.489	
2,100.0	2,100.0	2,100.0	2,100.0	5.0	5.0	0.00	33.4	0.0	33.4	23.4	9.99	3.346	
2,200.0	2,200.0	2,200.0	2,200.0	5.2	5.2	0.00	33.4	0.0	33.4	23.0	10.41	3.213 CC	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	Oasis	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	Indian Hills	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Reference Site:	153N-100W-17/18	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Well Error:	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Kline Federal 5300 31-18 6B	Database:	EDM_new
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design 153N-100W-17/18 - Kline Federal 5300 31-18 7T2 - Kline Federal 5300 31-18 7T2 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	2.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis			Distance				Minimum Separation (usft)	Separation Factor	Warning
				Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/S (usft)	+E/W (usft)	Between Centres (usft)	Between Ellipses (usft)			
2,216.7	2,216.7	2,216.7	2,216.7	5.2	5.2	180.00	33.4	0.0	33.5	23.0	10.47	3.200	
2,300.0	2,300.0	2,300.0	2,300.0	5.4	5.4	180.00	33.4	0.0	34.2	23.5	10.78	3.178	
2,400.0	2,400.0	2,400.0	2,400.0	5.5	5.6	180.00	33.4	0.0	35.1	24.0	11.14	3.151	
2,500.0	2,500.0	2,500.0	2,500.0	5.7	5.8	180.00	33.4	0.0	36.0	24.5	11.52	3.124	
2,600.0	2,600.0	2,600.0	2,600.0	5.9	6.0	180.00	33.4	0.0	36.9	25.0	11.90	3.097	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.3	180.00	33.4	0.0	37.7	25.4	12.28	3.072	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.5	180.00	33.4	0.0	38.6	25.9	12.67	3.046	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.7	180.00	33.4	0.0	39.5	26.4	13.07	3.021	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.9	180.00	33.4	0.0	40.3	26.9	13.46	2.997	
3,100.0	3,100.0	3,100.0	3,100.0	6.7	7.1	180.00	33.4	0.0	41.2	27.4	13.86	2.974	
3,200.0	3,200.0	3,200.0	3,200.0	6.9	7.3	180.00	33.4	0.0	42.1	27.8	14.26	2.951	
3,300.0	3,300.0	3,300.0	3,300.0	7.1	7.5	180.00	33.4	0.0	43.0	28.3	14.67	2.929	
3,400.0	3,400.0	3,400.0	3,400.0	7.3	7.8	180.00	33.4	0.0	43.8	28.8	15.08	2.908	
3,500.0	3,500.0	3,500.0	3,500.0	7.5	8.0	180.00	33.4	0.0	44.7	29.2	15.49	2.887	
3,600.0	3,599.9	3,599.9	3,599.9	7.7	8.2	180.00	33.4	0.0	45.6	29.7	15.90	2.867	
3,700.0	3,699.9	3,699.9	3,699.9	7.9	8.4	180.00	33.4	0.0	46.5	30.1	16.31	2.848	
3,800.0	3,799.9	3,799.9	3,799.9	8.1	8.6	180.00	33.4	0.0	47.3	30.6	16.73	2.829	
3,900.0	3,899.9	3,899.9	3,899.9	8.3	8.9	180.00	33.4	0.0	48.2	31.1	17.14	2.811	
4,000.0	3,999.9	3,999.9	3,999.9	8.5	9.1	180.00	33.4	0.0	49.1	31.5	17.56	2.794	
4,100.0	4,099.9	4,099.9	4,099.9	8.7	9.3	180.00	33.4	0.0	49.9	32.0	17.98	2.777	
4,200.0	4,199.9	4,199.9	4,199.9	8.9	9.5	180.00	33.4	0.0	50.8	32.4	18.41	2.761	
4,300.0	4,299.9	4,299.9	4,299.9	9.1	9.7	180.00	33.4	0.0	51.7	32.9	18.83	2.745	
4,400.0	4,399.9	4,399.9	4,399.9	9.3	10.0	180.00	33.4	0.0	52.6	33.3	19.25	2.730	
4,500.0	4,499.9	4,499.9	4,499.9	9.5	10.2	180.00	33.4	0.0	53.4	33.8	19.68	2.715	
4,600.0	4,599.9	4,599.9	4,599.9	9.7	10.4	180.00	33.4	0.0	54.3	34.2	20.11	2.701	
4,700.0	4,699.9	4,699.9	4,699.9	9.9	10.6	180.00	33.4	0.0	55.2	34.6	20.53	2.687	
4,800.0	4,799.9	4,799.9	4,799.9	10.1	10.8	180.00	33.4	0.0	56.1	35.1	20.96	2.674	
4,900.0	4,899.9	4,899.9	4,899.9	10.4	11.1	180.00	33.4	0.0	56.9	35.5	21.39	2.661	
5,000.0	4,999.9	4,999.9	4,999.9	10.6	11.3	180.00	33.4	0.0	57.8	36.0	21.82	2.649	
5,100.0	5,099.9	5,099.9	5,099.9	10.8	11.5	180.00	33.4	0.0	58.7	36.4	22.25	2.637	
5,200.0	5,199.9	5,199.9	5,199.9	11.0	11.7	180.00	33.4	0.0	59.5	36.9	22.69	2.625	
5,300.0	5,299.9	5,299.9	5,299.9	11.2	11.9	180.00	33.4	0.0	60.4	37.3	23.12	2.613	
5,400.0	5,399.9	5,399.9	5,399.9	11.4	12.2	180.00	33.4	0.0	61.3	37.7	23.55	2.602	
5,500.0	5,499.9	5,499.9	5,499.9	11.6	12.4	180.00	33.4	0.0	62.2	38.2	23.99	2.592	
5,600.0	5,599.9	5,599.9	5,599.9	11.8	12.6	180.00	33.4	0.0	63.0	38.6	24.42	2.581	
5,700.0	5,699.9	5,699.9	5,699.9	12.0	12.8	180.00	33.4	0.0	63.9	39.1	24.85	2.571	
5,800.0	5,799.9	5,799.9	5,799.9	12.3	13.0	180.00	33.4	0.0	64.8	39.5	25.29	2.562	
5,900.0	5,899.9	5,899.9	5,899.9	12.5	13.3	180.00	33.4	0.0	65.7	39.9	25.73	2.552	
6,000.0	5,999.9	5,999.9	5,999.9	12.7	13.5	180.00	33.4	0.0	66.5	40.4	26.16	2.543	
6,100.0	6,099.9	6,099.9	6,099.9	12.9	13.7	180.00	33.4	0.0	67.4	40.8	26.60	2.534	
6,200.0	6,199.8	6,199.8	6,199.8	13.1	13.9	180.00	33.4	0.0	68.3	41.2	27.04	2.525	
6,300.0	6,299.8	6,299.8	6,299.8	13.3	14.2	180.00	33.4	0.0	69.1	41.7	27.47	2.517	
6,400.0	6,399.8	6,399.8	6,399.8	13.6	14.4	180.00	33.4	0.0	70.0	42.1	27.91	2.509	
6,500.0	6,499.8	6,499.8	6,499.8	13.8	14.6	180.00	33.4	0.0	70.9	42.5	28.35	2.501	
6,600.0	6,599.8	6,599.8	6,599.8	14.0	14.8	180.00	33.4	0.0	71.8	43.0	28.79	2.493	
6,700.0	6,699.8	6,699.8	6,699.8	14.2	15.1	180.00	33.4	0.0	72.6	43.4	29.23	2.485	
6,800.0	6,799.8	6,799.8	6,799.8	14.4	15.3	180.00	33.4	0.0	73.5	43.8	29.67	2.478	
6,900.0	6,899.8	6,899.8	6,899.8	14.6	15.5	180.00	33.4	0.0	74.4	44.3	30.11	2.471	
7,000.0	6,999.8	6,999.8	6,999.8	14.9	15.7	180.00	33.4	0.0	75.3	44.7	30.55	2.464	
7,100.0	7,099.8	7,099.8	7,099.8	15.1	15.9	180.00	33.4	0.0	76.1	45.1	30.99	2.457	
7,200.0	7,199.8	7,199.8	7,199.8	15.3	16.2	180.00	33.4	0.0	77.0	45.6	31.43	2.450	
7,300.0	7,299.8	7,299.8	7,299.8	15.5	16.4	180.00	33.4	0.0	77.9	46.0	31.87	2.444	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	Oasis	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	Indian Hills	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Reference Site:	153N-100W-17/18	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Well Error:	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Kline Federal 5300 31-18 6B	Database:	EDM_new
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design 153N-100W-17/18 - Kline Federal 5300 31-18 7T2 - Kline Federal 5300 31-18 7T2 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	2.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis			Distance				Warning		
		Reference	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Hightside Toolface (°)	Offset Wellbore Centre +N/S (usft)	+E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor
7,400.0	7,399.8	7,399.8	7,399.8	15.7	16.6	180.00	33.4	0.0	78.7	46.4	32.31	2.437	
7,500.0	7,499.8	7,499.8	7,499.8	16.0	16.8	180.00	33.4	0.0	79.6	46.9	32.75	2.431	
7,600.0	7,599.8	7,599.8	7,599.8	16.2	17.1	180.00	33.4	0.0	80.5	47.3	33.19	2.425	
7,700.0	7,699.8	7,699.8	7,699.8	16.4	17.3	180.00	33.4	0.0	81.4	47.7	33.63	2.419	
7,800.0	7,799.8	7,799.8	7,799.8	16.6	17.5	180.00	33.4	0.0	82.2	48.2	34.08	2.413	
7,900.0	7,899.8	7,899.8	7,899.8	16.8	17.7	180.00	33.4	0.0	83.1	48.6	34.52	2.408	
7,926.7	7,926.4	7,926.4	7,926.4	16.9	17.8	180.00	33.4	0.0	83.3	48.7	34.64	2.406	
7,943.3	7,943.1	7,943.1	7,943.1	16.9	17.8	0.01	33.4	0.0	83.4	48.7	34.75	2.401	
8,000.0	7,999.8	7,999.8	7,999.8	17.1	18.0	0.01	33.4	0.0	83.4	48.4	34.99	2.304	
8,100.0	8,099.8	8,099.8	8,099.8	17.2	18.2	0.01	33.4	0.0	83.4	48.0	35.40	2.356	
8,200.0	8,199.8	8,199.8	8,199.8	17.4	18.4	0.01	33.4	0.0	83.4	47.6	35.82	2.329	
8,300.0	8,299.8	8,299.8	8,299.8	17.6	18.6	0.01	33.4	0.0	83.4	47.2	36.23	2.302	
8,400.0	8,399.8	8,399.8	8,399.8	17.8	18.8	0.01	33.4	0.0	83.4	46.8	36.65	2.278	
8,500.0	8,499.8	8,499.8	8,499.8	18.0	19.1	0.01	33.4	0.0	83.4	46.3	37.07	2.250	
8,600.0	8,599.8	8,599.8	8,599.8	18.2	19.3	0.01	33.4	0.0	83.4	45.9	37.48	2.225	
8,700.0	8,699.8	8,699.8	8,699.8	18.4	19.5	0.01	33.4	0.0	83.4	45.5	37.90	2.201	
8,800.0	8,799.8	8,799.8	8,799.8	18.6	19.7	0.01	33.4	0.0	83.4	45.1	38.32	2.177	
8,900.0	8,899.8	8,899.8	8,899.8	18.8	20.0	0.01	33.4	0.0	83.4	44.7	38.74	2.153	
9,000.0	8,999.8	8,999.8	8,999.8	19.0	20.2	0.01	33.4	0.0	83.4	44.3	39.16	2.130	
9,100.0	9,099.8	9,099.8	9,099.8	19.2	20.4	0.01	33.4	0.0	83.4	43.8	39.58	2.107	
9,200.0	9,199.8	9,199.8	9,199.8	19.4	20.6	0.01	33.4	0.0	83.4	43.4	40.00	2.085	
9,300.0	9,299.8	9,299.8	9,299.8	19.6	20.9	0.01	33.4	0.0	83.4	43.0	40.43	2.063	
9,400.0	9,399.8	9,399.8	9,399.8	19.8	21.1	0.01	33.4	0.0	83.4	42.6	40.85	2.042	
9,500.0	9,499.8	9,499.8	9,499.8	20.0	21.3	0.01	33.4	0.0	83.4	42.1	41.27	2.021	
9,600.0	9,599.8	9,599.8	9,599.8	20.2	21.5	0.01	33.4	0.0	83.4	41.7	41.70	2.000	
9,700.0	9,699.8	9,699.8	9,699.8	20.4	21.8	0.01	33.4	0.0	83.4	41.3	42.12	1.980	
9,800.0	9,799.8	9,799.8	9,799.8	20.6	22.0	0.01	33.4	0.0	83.4	40.9	42.55	1.961	
9,900.0	9,899.8	9,899.8	9,899.8	20.8	22.2	0.01	33.4	0.0	83.4	40.4	42.97	1.941	
10,000.0	9,999.8	9,999.8	9,999.8	21.0	22.4	0.01	33.4	0.0	83.4	40.0	43.40	1.922	
10,100.0	10,099.8	10,099.8	10,099.8	21.2	22.6	0.01	33.4	0.0	83.4	39.6	43.83	1.903	
10,200.0	10,199.8	10,199.8	10,199.8	21.4	22.9	0.01	33.4	0.0	83.4	39.2	44.25	1.885	
10,228.8	10,228.6	10,228.6	10,228.6	21.4	22.9	0.01	33.4	0.0	83.4	39.0	44.38	1.880	
10,250.0	10,249.8	10,249.8	10,249.8	21.5	23.0	-121.30	33.4	0.0	83.7	39.2	44.44	1.883	
10,275.0	10,274.7	10,274.7	10,274.7	21.5	23.0	-122.22	33.4	0.0	84.6	40.1	44.52	1.900	
10,300.0	10,299.5	10,299.5	10,299.5	21.6	23.1	-123.77	33.4	0.0	86.3	41.7	44.56	1.936	
10,325.0	10,324.1	10,324.1	10,324.1	21.7	23.2	-125.84	33.4	0.0	88.8	44.2	44.56	1.992	
10,350.0	10,348.5	10,350.4	10,350.4	21.7	23.2	-128.44	33.3	0.2	92.1	47.6	44.50	2.070	
10,375.0	10,372.5	10,378.6	10,378.5	21.8	23.3	-131.05	32.4	1.6	95.6	51.2	44.37	2.154	
10,400.0	10,396.1	10,407.2	10,406.9	21.8	23.3	-133.45	30.5	4.5	99.1	54.9	44.17	2.243	
10,425.0	10,419.3	10,436.2	10,435.4	21.9	23.4	-135.65	27.6	8.8	102.5	58.6	43.91	2.335	
10,450.0	10,442.0	10,465.6	10,464.0	21.9	23.4	-137.67	23.7	14.7	105.9	62.4	43.57	2.432	
10,475.0	10,464.0	10,495.4	10,492.4	22.0	23.5	-139.53	18.8	22.1	109.2	66.1	43.16	2.531	
10,500.0	10,485.4	10,525.6	10,520.6	22.1	23.6	-141.23	12.8	31.1	112.4	69.7	42.68	2.632	
10,525.0	10,506.1	10,556.2	10,548.4	22.2	23.6	-142.79	5.7	41.8	115.3	73.2	42.15	2.736	
10,550.0	10,526.1	10,587.2	10,575.7	22.2	23.7	-144.23	-2.4	54.0	118.1	76.5	41.56	2.841	
10,575.0	10,545.2	10,618.5	10,602.2	22.3	23.8	-145.55	-11.6	67.9	120.6	79.7	40.92	2.948	
10,600.0	10,563.5	10,650.2	10,627.9	22.4	23.9	-146.76	-21.8	83.3	122.9	82.6	40.23	3.054	
10,625.0	10,580.9	10,682.2	10,652.5	22.5	24.0	-147.87	-33.1	100.4	124.8	85.3	39.52	3.159	
10,650.0	10,597.2	10,714.4	10,675.9	22.7	24.1	-148.89	-45.4	118.9	126.5	87.7	38.79	3.261	
10,675.0	10,612.6	10,746.9	10,697.8	22.8	24.2	-149.82	-58.6	138.8	127.8	89.8	38.04	3.360	
10,700.0	10,626.9	10,779.6	10,718.3	23.0	24.4	-150.66	-72.7	160.0	128.8	91.5	37.30	3.454	
10,725.0	10,640.2	10,812.4	10,737.0	23.1	24.6	-151.43	-87.6	182.5	129.5	92.9	36.58	3.540	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	Oasis	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	Indian Hills	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Reference Site:	153N-100W-17/18	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Well Error:	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Kline Federal 5300 31-18 6B	Database:	EDM_new
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design 153N-100W-17/18 - Kline Federal 5300 31-18 7T2 - Kline Federal 5300 31-18 7T2 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	2.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/S (usft)	Offset Wellbore Centre +E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,750.0	10,652.3	10,845.3	10,753.8	23.3	24.8	-152.12	-103.2	206.1	129.7	93.9	35.88	3.616	
10,775.0	10,663.2	10,878.3	10,768.7	23.5	25.0	-152.73	-119.5	230.6	129.6	94.4	35.22	3.681	
10,800.0	10,673.0	10,911.4	10,781.6	23.8	25.3	-153.28	-136.3	256.0	129.2	94.5	34.83	3.730	
10,825.0	10,681.5	10,944.4	10,792.3	24.0	25.6	-153.75	-153.6	282.0	128.3	94.2	34.11	3.762	
10,850.0	10,688.8	10,977.3	10,800.8	24.2	25.9	-154.15	-171.1	308.5	127.1	93.4	33.67	3.773	
10,875.0	10,694.8	11,010.1	10,807.0	24.5	26.2	-154.48	-188.9	335.3	125.5	92.1	33.34	3.762	
10,900.0	10,699.6	11,042.7	10,811.0	24.8	26.6	-154.74	-206.8	362.3	123.5	90.3	33.13	3.727	
10,925.0	10,703.0	11,075.1	10,812.9	25.1	26.9	-154.92	-224.7	389.3	121.1	88.1	33.04	3.687	
10,950.0	10,705.2	11,101.7	10,813.0	25.4	27.3	-155.08	-239.3	411.5	118.9	85.8	33.04	3.598	
10,975.0	10,706.0	11,126.2	10,813.1	25.8	27.6	-155.33	-252.7	432.1	117.8	84.7	33.10	3.560	
10,978.0	10,706.0	11,129.2	10,813.1	25.8	27.7	-155.37	-254.3	434.5	117.8	84.7	33.11	3.557	
11,000.0	10,706.1	11,150.8	10,813.2	26.1	28.0	-155.65	-265.9	452.8	117.6	84.4	33.21	3.541	
11,100.0	10,706.3	11,249.2	10,813.5	27.6	29.4	-156.94	-316.9	536.9	116.6	82.9	33.67	3.463	
11,200.0	10,706.4	11,347.6	10,813.9	29.3	31.1	-158.28	-365.0	622.7	115.7	81.5	34.15	3.387	
11,300.0	10,706.6	11,446.1	10,814.2	31.2	32.9	-159.67	-410.1	710.3	114.8	80.2	34.63	3.315	
11,400.0	10,706.8	11,544.8	10,814.6	33.2	34.9	-161.10	-452.3	799.5	114.0	78.9	35.07	3.250	
11,500.0	10,707.0	11,643.5	10,815.0	35.4	37.0	-162.57	-491.4	890.1	113.2	77.7	35.45	3.193	
11,600.0	10,707.2	11,742.3	10,815.3	37.6	39.1	-164.08	-527.4	982.1	112.5	76.7	35.76	3.145	
11,700.0	10,707.3	11,841.3	10,815.7	39.9	41.4	-165.63	-560.3	1,075.5	111.8	75.8	36.01	3.106	
11,800.0	10,707.5	11,940.3	10,816.0	42.3	43.7	-167.21	-589.9	1,170.0	111.3	75.1	36.19	3.075	
11,900.0	10,707.7	12,039.5	10,816.4	44.8	46.1	-168.83	-616.3	1,265.5	110.8	74.5	36.33	3.050	
12,000.0	10,707.9	12,138.7	10,816.8	47.2	48.5	-170.47	-639.4	1,362.1	110.4	74.0	36.46	3.028	
12,100.0	10,708.1	12,238.1	10,817.1	49.7	51.0	-172.13	-659.1	1,459.5	110.1	73.5	36.61	3.007	
12,200.0	10,708.2	12,337.6	10,817.5	52.3	53.5	-173.82	-675.5	1,557.6	109.9	73.0	36.84	2.983	
12,300.0	10,708.4	12,437.2	10,817.8	54.8	56.0	-175.51	-688.5	1,656.3	109.8	72.6	37.19	2.951	
12,378.8	10,708.6	12,515.8	10,818.1	56.8	58.0	-176.86	-696.3	1,734.5	109.7	72.1	37.60	2.918	
12,400.0	10,708.6	12,536.9	10,818.2	57.4	58.5	-177.22	-698.0	1,755.6	109.7	72.0	37.73	2.908	
12,500.0	10,708.8	12,636.7	10,818.6	59.9	61.1	-178.93	-704.1	1,855.2	109.8	71.3	38.51	2.852	
12,530.5	10,708.8	12,667.1	10,818.7	60.7	61.8	-179.45	-705.2	1,885.6	109.8	71.0	38.80	2.831	
12,600.0	10,708.9	12,736.6	10,818.9	62.5	63.6	-179.80	-706.7	1,955.1	110.0	70.4	39.54	2.781	
12,700.0	10,709.1	12,836.6	10,819.3	65.1	66.1	-179.75	-706.8	2,055.1	110.1	69.5	40.65	2.709	
12,800.0	10,709.3	12,936.6	10,819.6	67.7	68.7	-179.75	-706.8	2,155.1	110.3	68.5	41.78	2.640	
12,900.0	10,709.5	13,036.6	10,820.0	70.3	71.3	-179.75	-706.8	2,255.1	110.5	67.6	42.93	2.574	
13,000.0	10,709.6	13,136.6	10,820.3	73.0	73.9	-179.75	-706.8	2,355.1	110.7	66.6	44.10	2.509	
13,100.0	10,709.8	13,236.6	10,820.6	75.7	76.6	-179.75	-706.8	2,455.1	110.8	65.5	45.28	2.448	
13,200.0	10,710.0	13,336.6	10,821.0	78.4	79.2	-179.75	-706.8	2,555.1	111.0	64.5	46.49	2.388	
13,300.0	10,710.2	13,436.6	10,821.3	81.1	81.9	-179.75	-706.8	2,655.1	111.2	63.5	47.70	2.331	
13,400.0	10,710.3	13,536.6	10,821.7	83.9	84.6	-179.75	-706.8	2,755.1	111.4	62.4	48.93	2.276	
13,500.0	10,710.5	13,636.6	10,822.0	86.6	87.3	-179.75	-706.8	2,855.1	111.5	61.4	50.18	2.223	
13,600.0	10,710.7	13,736.6	10,822.4	89.4	90.1	-179.75	-706.8	2,955.1	111.7	60.3	51.43	2.172	
13,700.0	10,710.9	13,836.6	10,822.7	92.1	92.8	-179.75	-706.8	3,055.1	111.9	59.2	52.70	2.123	
13,800.0	10,711.0	13,936.6	10,823.1	94.9	95.6	-179.75	-706.8	3,155.1	112.1	58.1	53.97	2.076	
13,900.0	10,711.2	14,036.6	10,823.4	97.7	98.3	-179.75	-706.8	3,255.1	112.2	57.0	55.26	2.031	
14,000.0	10,711.4	14,136.6	10,823.8	100.5	101.1	-179.75	-706.8	3,355.1	112.4	55.9	56.55	1.988	
14,100.0	10,711.6	14,236.6	10,824.1	103.3	103.9	-179.75	-706.8	3,455.1	112.6	54.7	57.86	1.946	
14,200.0	10,711.7	14,336.6	10,824.5	106.1	106.7	-179.75	-706.8	3,555.1	112.8	53.6	59.17	1.906	
14,300.0	10,711.9	14,436.6	10,824.8	108.9	109.5	-179.75	-706.8	3,655.1	112.9	52.4	60.48	1.867	
14,400.0	10,712.1	14,536.6	10,825.2	111.7	112.3	-179.75	-706.8	3,755.1	113.1	51.3	61.81	1.830	
14,500.0	10,712.3	14,636.6	10,825.5	114.6	115.1	-179.75	-706.8	3,855.1	113.3	50.1	63.14	1.794	
14,600.0	10,712.4	14,736.6	10,825.9	117.4	117.9	-179.75	-706.8	3,955.1	113.5	49.0	64.48	1.760	
14,700.0	10,712.6	14,836.6	10,826.2	120.2	120.7	-179.75	-706.8	4,055.1	113.6	47.8	65.82	1.726	
14,800.0	10,712.8	14,936.6	10,826.6	123.1	123.6	-179.75	-706.8	4,155.1	113.8	46.6	67.17	1.694	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	Oasis	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	Indian Hills	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Reference Site:	153N-100W-17/18	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Well Error:	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Kline Federal 5300 31-18 6B	Database:	EDM_new
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design 153N-100W-17/18 - Kline Federal 5300 31-18 7T2 - Kline Federal 5300 31-18 7T2 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	2.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis			Distance				Minimum Separation (usft)	Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset	Wellbore Centre +N/S (usft)	Centre +E/W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,900.0	10,713.0	15,036.6	10,826.9	125.9	126.4	179.76	-706.8	4,255.1	114.0	45.5	68.52	1.663		
15,000.0	10,713.1	15,136.6	10,827.3	128.8	129.2	179.76	-706.8	4,355.1	114.1	44.3	69.87	1.634		
15,100.0	10,713.3	15,236.6	10,827.6	131.6	132.1	179.76	-706.8	4,455.1	114.3	43.1	71.24	1.605		
15,200.0	10,713.5	15,336.6	10,828.0	134.5	134.9	179.76	-706.8	4,555.1	114.5	41.9	72.60	1.577		
15,300.0	10,713.7	15,436.6	10,828.3	137.4	137.8	179.76	-706.8	4,655.1	114.7	40.7	73.97	1.550		
15,400.0	10,713.8	15,536.6	10,828.7	140.2	140.6	179.76	-706.8	4,755.1	114.8	39.5	75.34	1.524		
15,500.0	10,714.0	15,636.6	10,829.0	143.1	143.5	179.76	-706.8	4,855.1	115.0	38.3	76.72	1.499 Level 3	Level 3	
15,600.0	10,714.2	15,736.6	10,829.4	146.0	146.3	179.76	-706.8	4,955.1	115.2	37.1	78.10	1.475 Level 3	Level 3	
15,700.0	10,714.4	15,836.6	10,829.7	148.8	149.2	179.76	-706.8	5,055.1	115.4	35.9	79.48	1.452 Level 3	Level 3	
15,800.0	10,714.5	15,936.6	10,830.1	151.7	152.0	179.76	-706.8	5,155.1	115.5	34.7	80.87	1.429 Level 3	Level 3	
15,900.0	10,714.7	16,036.6	10,830.4	154.6	154.9	179.76	-706.8	5,255.1	115.7	33.5	82.26	1.407 Level 3	Level 3	
16,000.0	10,714.9	16,136.6	10,830.8	157.5	157.8	179.76	-706.8	5,355.1	115.9	32.2	83.65	1.385 Level 3	Level 3	
16,100.0	10,715.1	16,236.6	10,831.1	160.3	160.7	179.76	-706.8	5,455.1	116.1	31.0	85.04	1.365 Level 3	Level 3	
16,200.0	10,715.2	16,336.6	10,831.5	163.2	163.5	179.76	-706.8	5,555.1	116.2	29.8	86.44	1.345 Level 3	Level 3	
16,300.0	10,715.4	16,436.6	10,831.8	166.1	166.4	179.76	-706.8	5,655.1	116.4	28.6	87.84	1.325 Level 3	Level 3	
16,400.0	10,715.6	16,536.6	10,832.2	169.0	169.3	179.76	-706.8	5,755.1	116.6	27.4	89.24	1.307 Level 3	Level 3	
16,500.0	10,715.8	16,636.6	10,832.5	171.9	172.2	179.76	-706.8	5,855.1	116.8	26.1	90.64	1.288 Level 3	Level 3	
16,600.0	10,715.9	16,736.6	10,832.9	174.8	175.0	179.76	-706.8	5,955.1	116.9	24.9	92.05	1.270 Level 3	Level 3	
16,700.0	10,716.1	16,836.6	10,833.2	177.6	177.9	179.76	-706.8	6,055.1	117.1	23.7	93.45	1.253 Level 3	Level 3	
16,800.0	10,716.3	16,936.6	10,833.6	180.5	180.8	179.76	-706.8	6,155.1	117.3	22.4	94.86	1.236 Level 2		
16,900.0	10,716.5	17,036.6	10,833.9	183.4	183.7	179.76	-706.8	6,255.1	117.5	21.2	96.27	1.220 Level 2		
17,000.0	10,716.6	17,136.6	10,834.3	186.3	186.6	179.76	-706.8	6,355.1	117.6	20.0	97.69	1.204 Level 2		
17,100.0	10,716.8	17,236.6	10,834.6	189.2	189.5	179.76	-706.8	6,455.1	117.8	18.7	99.10	1.189 Level 2		
17,200.0	10,717.0	17,336.6	10,835.0	192.1	192.3	179.76	-706.8	6,555.1	118.0	17.5	100.52	1.174 Level 2		
17,300.0	10,717.1	17,436.6	10,835.3	195.0	195.2	179.76	-706.8	6,655.1	118.2	16.2	101.93	1.159 Level 2		
17,400.0	10,717.3	17,536.6	10,835.7	197.9	198.1	179.76	-706.8	6,755.1	118.3	15.0	103.35	1.145 Level 2		
17,500.0	10,717.5	17,636.6	10,836.0	200.8	201.0	179.76	-706.8	6,855.1	118.5	13.7	104.77	1.131 Level 2		
17,600.0	10,717.7	17,736.6	10,836.4	203.7	203.9	179.76	-706.8	6,955.1	118.7	12.5	106.19	1.118 Level 2		
17,700.0	10,717.8	17,836.6	10,836.7	206.6	206.8	179.77	-706.8	7,055.1	118.9	11.2	107.61	1.105 Level 2		
17,800.0	10,718.0	17,936.6	10,837.1	209.5	209.7	179.77	-706.8	7,155.1	119.0	10.0	109.04	1.092 Level 2		
17,900.0	10,718.2	18,036.6	10,837.4	212.4	212.6	179.77	-706.8	7,255.1	119.2	8.8	110.46	1.079 Level 2		
18,000.0	10,718.4	18,136.6	10,837.8	215.3	215.5	179.77	-706.8	7,355.1	119.4	7.5	111.89	1.067 Level 2		
18,100.0	10,718.5	18,236.6	10,838.1	218.2	218.4	179.77	-706.8	7,455.1	119.6	6.2	113.31	1.055 Level 2		
18,200.0	10,718.7	18,336.6	10,838.5	221.1	221.3	179.77	-706.8	7,555.1	119.7	5.0	114.74	1.044 Level 2		
18,300.0	10,718.9	18,436.6	10,838.8	224.0	224.2	179.77	-706.8	7,655.1	119.9	3.7	116.17	1.032 Level 2		
18,400.0	10,719.1	18,536.6	10,839.2	226.9	227.1	179.77	-706.8	7,755.1	120.1	2.5	117.60	1.021 Level 2		
18,500.0	10,719.2	18,636.6	10,839.5	229.8	230.0	179.77	-706.8	7,855.1	120.3	1.2	119.03	1.010 Level 2		
18,600.0	10,719.4	18,736.6	10,839.8	232.7	232.9	179.77	-706.8	7,955.1	120.4	0.0	120.46	1.000 Level 1		
18,700.0	10,719.6	18,836.6	10,840.2	235.7	235.8	179.77	-706.8	8,055.1	120.6	-1.3	121.89	0.989 Level 1		
18,800.0	10,719.8	18,936.6	10,840.5	238.6	238.7	179.77	-706.8	8,155.1	120.8	-2.5	123.32	0.979 Level 1		
18,900.0	10,719.9	19,036.6	10,840.9	241.5	241.6	179.77	-706.8	8,255.1	121.0	-3.8	124.76	0.970 Level 1		
19,000.0	10,720.1	19,136.6	10,841.2	244.4	244.5	179.77	-706.8	8,355.1	121.1	-5.1	126.19	0.960 Level 1		
19,100.0	10,720.3	19,236.6	10,841.6	247.3	247.4	179.77	-706.8	8,455.1	121.3	-6.3	127.63	0.950 Level 1		
19,200.0	10,720.5	19,336.6	10,841.9	250.2	250.3	179.77	-706.8	8,555.1	121.5	-7.6	129.06	0.941 Level 1		
19,300.0	10,720.6	19,436.6	10,842.3	253.1	253.2	179.77	-706.8	8,655.1	121.7	-8.8	130.50	0.932 Level 1		
19,400.0	10,720.8	19,536.6	10,842.6	256.0	256.2	179.77	-706.8	8,755.1	121.8	-10.1	131.94	0.923 Level 1		
19,500.0	10,721.0	19,636.6	10,843.0	258.9	259.1	179.77	-706.8	8,855.1	122.0	-11.4	133.38	0.915 Level 1		
19,600.0	10,721.2	19,736.6	10,843.3	261.9	262.0	179.77	-706.8	8,955.1	122.2	-12.6	134.82	0.906 Level 1		
19,700.0	10,721.3	19,836.6	10,843.7	264.8	264.9	179.77	-706.8	9,055.0	122.4	-13.9	136.25	0.898 Level 1		
19,800.0	10,721.5	19,936.6	10,844.0	267.7	268.7	179.77	-706.8	9,155.0	122.5	-15.2	137.69	0.890 Level 1		
19,900.0	10,721.7	20,036.6	10,844.4	270.6	270.7	179.77	-706.8	9,255.0	122.7	-16.4	139.13	0.882 Level 1		
20,000.0	10,721.9	20,136.6	10,844.7	273.5	273.6	179.77	-706.8	9,355.0	122.9	-17.7	140.58	0.874 Level 1		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	Oasis	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	Indian Hills	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Reference Site:	153N-100W-17/18	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Well Error:	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore:	Kline Federal 5300 31-18 6B	Database:	EDM_new
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design 153N-100W-17/18 - Kline Federal 5300 31-18 7T2 - Kline Federal 5300 31-18 7T2 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	2.0 usft
Reference	Offset		Semi Major Axis				Distance						Warning
	Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor
20,100.0	10,722.0	20,236.6	10,845.1	276.4	276.5	179.77	-706.8	9,455.0	123.1	-19.0	142.02	0.866	Level 1
20,200.0	10,722.2	20,336.6	10,845.4	279.3	279.4	179.77	-706.8	9,555.0	123.2	-20.2	143.46	0.859	Level 1
20,300.0	10,722.4	20,436.6	10,845.8	282.2	282.3	179.77	-706.8	9,655.0	123.4	-21.5	144.90	0.852	Level 1
20,400.0	10,722.6	20,536.6	10,846.1	285.2	285.3	179.77	-706.8	9,755.0	123.6	-22.8	146.34	0.844	Level 1
20,500.0	10,722.7	20,636.6	10,846.5	288.1	288.2	179.77	-706.8	9,855.0	123.7	-24.0	147.79	0.837	Level 1
20,600.0	10,722.9	20,736.6	10,846.8	291.0	291.1	179.77	-706.8	9,955.0	123.9	-25.3	149.23	0.830	Level 1
20,694.5	10,723.1	20,831.2	10,847.2	293.8	293.8	179.78	-706.8	10,049.6	124.1	-26.5	150.60	0.824	Level 1, ES, SF

Anticollision Report

Company:	Oasis	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	Indian Hills	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Reference Site:	153N-100W-17/18	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Well Error:	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Kline Federal 5300 31-18 6B	Database:	EDM_new
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design 153N-100W-17/18 - Kline Federal 5300 31-18 8T - Kline Federal 5300 31-18 8T - Design #1											Offset Site Error:	0.0 usft	
Survey Program: 0-MWD											Offset Well Error:	2.0 usft	
Reference			Offset		Semi Major Axis			Distance					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Offset (usft)	Reference Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	2.0	2.0	0.00	65.9	0.0	65.9	61.9	4.00	16.451	
100.0	100.0	100.0	100.0	2.0	2.0	0.00	65.9	0.0	65.9	61.8	4.05	16.272	
200.0	200.0	200.0	200.0	2.0	2.0	0.00	65.9	0.0	65.9	61.7	4.14	15.908	
300.0	300.0	300.0	300.0	2.1	2.1	0.00	65.9	0.0	65.9	61.6	4.28	15.395	
400.0	400.0	400.0	400.0	2.1	2.1	0.00	65.9	0.0	65.9	61.4	4.46	14.776	
500.0	500.0	500.0	500.0	2.2	2.2	0.00	65.9	0.0	65.9	61.2	4.67	14.094	
600.0	600.0	600.0	600.0	2.3	2.3	0.00	65.9	0.0	65.9	60.9	4.92	13.385	
700.0	700.0	700.0	700.0	2.5	2.5	0.00	65.9	0.0	65.9	60.7	5.20	12.677	
800.0	800.0	800.0	800.0	2.6	2.6	0.00	65.9	0.0	65.9	60.4	5.49	11.990	
900.0	900.0	900.0	900.0	2.7	2.7	0.00	65.9	0.0	65.9	60.1	5.81	11.335	
1,000.0	1,000.0	1,000.0	1,000.0	2.9	2.9	0.00	65.9	0.0	65.9	59.7	6.14	10.719	
1,100.0	1,100.0	1,100.0	1,100.0	3.1	3.1	0.00	65.9	0.0	65.9	59.4	6.49	10.145	
1,200.0	1,200.0	1,200.0	1,200.0	3.2	3.2	0.00	65.9	0.0	65.9	59.0	6.85	9.612	
1,300.0	1,300.0	1,300.0	1,300.0	3.4	3.4	0.00	65.9	0.0	65.9	58.6	7.22	9.120	
1,400.0	1,400.0	1,400.0	1,400.0	3.6	3.6	0.00	65.9	0.0	65.9	58.3	7.60	8.666	
1,500.0	1,500.0	1,500.0	1,500.0	3.8	3.8	0.00	65.9	0.0	65.9	57.9	7.99	8.247	
1,600.0	1,600.0	1,600.0	1,600.0	4.0	4.0	0.00	65.9	0.0	65.9	57.5	8.38	7.861	
1,700.0	1,700.0	1,700.0	1,700.0	4.2	4.2	0.00	65.9	0.0	65.9	57.1	8.78	7.505	
1,800.0	1,800.0	1,800.0	1,800.0	4.4	4.4	0.00	65.9	0.0	65.9	56.7	9.18	7.176	
1,900.0	1,900.0	1,900.0	1,900.0	4.6	4.6	0.00	65.9	0.0	65.9	56.3	9.58	6.872	
2,000.0	2,000.0	2,000.0	2,000.0	4.8	4.8	0.00	65.9	0.0	65.9	55.9	6.590	6.328 CC	
2,100.0	2,100.0	2,100.0	2,100.0	5.0	5.0	0.00	65.9	0.0	65.9	55.5	10.41	6.303	
2,200.0	2,200.0	2,200.0	2,200.0	5.2	5.2	0.00	65.9	0.0	65.9	55.1	10.77	6.261	
2,216.7	2,216.7	2,216.1	2,216.1	5.2	5.2	180.00	65.9	0.0	66.0	55.5	11.14	6.210	
2,300.0	2,300.0	2,299.4	2,299.4	5.4	5.4	180.00	66.7	0.0	67.5	56.7	11.52	6.160	
2,400.0	2,400.0	2,399.4	2,399.4	5.5	5.6	180.00	67.5	0.0	69.2	58.1	11.90	6.110	
2,500.0	2,500.0	2,499.4	2,499.4	5.7	5.8	180.00	68.4	0.0	70.9	59.4	12.28	6.060	
2,600.0	2,600.0	2,599.4	2,599.4	5.9	6.0	180.00	69.3	0.0	72.7	60.8	12.67	6.012	
2,700.0	2,700.0	2,699.4	2,699.3	6.0	6.3	180.00	70.1	0.0	74.4	62.2	13.07	5.965	
2,800.0	2,800.0	2,799.3	2,799.3	6.2	6.5	180.00	71.0	0.0	76.2	63.5	13.46	5.919	
2,900.0	2,900.0	2,899.3	2,899.3	6.4	6.7	180.00	71.9	0.0	77.9	64.9	13.86	5.875	
3,000.0	3,000.0	2,999.3	2,999.3	6.6	6.9	180.00	72.8	0.0	79.7	66.2	14.26	5.831	
3,100.0	3,100.0	3,099.3	3,099.3	6.7	7.1	180.00	73.6	0.0	81.4	67.6	14.67	5.789	
3,200.0	3,200.0	3,199.3	3,199.2	6.9	7.3	180.00	74.5	0.0	83.2	68.9	15.09	5.734	
3,300.0	3,300.0	3,299.3	3,299.2	7.1	7.5	180.00	75.4	0.0	84.9	70.2	15.50	5.688	
3,400.0	3,400.0	3,399.2	3,399.2	7.3	7.8	180.00	76.3	0.0	86.7	71.6	15.87	5.644	
3,500.0	3,500.0	3,499.2	3,499.2	7.5	8.0	180.00	77.1	0.0	88.4	72.9	16.26	5.601	
3,600.0	3,599.9	3,599.2	3,599.2	7.7	8.2	180.00	78.0	0.0	90.1	74.3	16.67	5.552	
3,700.0	3,699.9	3,699.2	3,699.1	7.9	8.4	180.00	78.9	0.0	91.9	75.6	17.08	5.508	
3,800.0	3,799.9	3,799.2	3,799.1	8.1	8.6	180.00	79.7	0.0	93.6	76.9	17.49	5.464	
3,900.0	3,899.9	3,899.2	3,899.1	8.3	8.9	180.00	80.6	0.0	95.4	78.2	17.89	5.420	
4,000.0	3,999.9	3,999.2	3,999.1	8.5	9.1	180.00	81.5	0.0	97.1	79.6	18.28	5.379	
4,100.0	4,099.9	4,099.1	4,099.1	8.7	9.3	180.00	82.4	0.0	98.9	80.9	18.69	5.335	
4,200.0	4,199.9	4,199.1	4,199.0	8.9	9.5	180.00	83.2	0.0	100.6	82.2	19.04	5.291	
4,300.0	4,299.9	4,299.1	4,299.0	9.1	9.7	180.00	84.1	0.0	102.4	83.5	19.43	5.247	
4,400.0	4,399.9	4,399.1	4,399.0	9.3	10.0	180.00	85.0	0.0	104.1	84.9	19.82	5.203	
4,500.0	4,499.9	4,499.1	4,499.0	9.5	10.2	180.00	85.9	0.0	105.9	86.2	19.88	5.159	
4,600.0	4,599.9	4,599.1	4,599.0	9.7	10.4	180.00	86.7	0.0	107.6	87.5	20.21	5.115	
4,700.0	4,699.9	4,699.0	4,699.0	9.9	10.6	180.00	87.6	0.0	109.3	88.8	20.53	5.072	
4,800.0	4,799.9	4,799.0	4,798.9	10.1	10.8	180.00	88.5	0.0	111.1	90.1	20.96	5.030	
4,900.0	4,899.9	4,899.0	4,898.9	10.4	11.1	180.00	89.3	0.0	112.8	91.4	21.39	5.275	
5,000.0	4,999.9	4,999.0	4,998.9	10.6	11.3	180.00	90.2	0.0	114.6	92.8	21.82	5.251	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	Oasis	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	Indian Hills	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Reference Site:	153N-100W-17/18	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Well Error:	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Kline Federal 5300 31-18 6B	Database:	EDM_new
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design 153N-100W-17/18 - Kline Federal 5300 31-18 8T - Kline Federal 5300 31-18 8T - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	2.0 usft
Reference			Offset		Semi Major Axis			Distance					Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,099.9	5,099.0	5,098.9	10.8	11.5	180.00	91.1	0.0	116.3	94.1	22.25	5.227	
5,200.0	5,199.9	5,199.0	5,198.9	11.0	11.7	180.00	92.0	0.0	118.1	95.4	22.68	5.205	
5,300.0	5,299.9	5,299.0	5,298.9	11.2	11.9	180.00	92.8	0.0	119.8	96.7	23.12	5.183	
5,400.0	5,399.9	5,398.9	5,398.8	11.4	12.2	180.00	93.7	0.0	121.6	98.0	23.55	5.162	
5,500.0	5,499.9	5,498.9	5,498.8	11.6	12.4	180.00	94.6	0.0	123.3	99.3	23.98	5.141	
5,600.0	5,599.9	5,598.9	5,598.8	11.8	12.6	180.00	95.4	0.0	125.1	100.6	24.42	5.121	
5,700.0	5,699.9	5,698.9	5,698.8	12.0	12.8	180.00	96.3	0.0	126.8	101.9	24.85	5.102	
5,800.0	5,799.9	5,798.9	5,798.7	12.3	13.0	180.00	97.2	0.0	128.5	103.3	25.29	5.083	
5,900.0	5,899.9	5,898.9	5,898.7	12.5	13.3	180.00	98.1	0.0	130.3	104.6	25.72	5.065	
6,000.0	5,999.9	5,998.9	5,998.7	12.7	13.5	180.00	98.9	0.0	132.0	105.9	26.16	5.047	
6,100.0	6,098.9	6,098.8	6,098.7	12.9	13.7	180.00	99.8	0.0	133.8	107.2	26.60	5.030	
6,200.0	6,199.8	6,198.8	6,198.7	13.1	13.9	180.00	100.7	0.0	135.5	108.5	27.04	5.013	
6,300.0	6,299.8	6,298.8	6,298.6	13.3	14.2	180.00	101.6	0.0	137.3	109.8	27.47	4.996	
6,400.0	6,399.8	6,398.8	6,398.6	13.6	14.4	180.00	102.4	0.0	139.0	111.1	27.91	4.981	
6,500.0	6,499.8	6,498.8	6,498.6	13.8	14.6	180.00	103.3	0.0	140.8	112.4	28.35	4.965	
6,600.0	6,599.8	6,598.8	6,598.6	14.0	14.8	180.00	104.2	0.0	142.5	113.7	28.79	4.950	
6,700.0	6,699.8	6,698.7	6,698.6	14.2	15.1	180.00	105.0	0.0	144.2	115.0	29.23	4.935	
6,800.0	6,799.8	6,798.7	6,798.6	14.4	15.3	180.00	105.9	0.0	146.0	116.3	29.67	4.921	
6,900.0	6,899.8	6,898.7	6,898.5	14.6	15.5	180.00	106.8	0.0	147.7	117.6	30.11	4.907	
7,000.0	6,999.8	6,998.7	6,998.5	14.9	15.7	180.00	107.7	0.0	149.5	118.9	30.55	4.894	
7,100.0	7,099.8	7,098.7	7,098.5	15.1	15.9	180.00	108.5	0.0	151.2	120.2	30.99	4.880	
7,200.0	7,199.8	7,198.7	7,198.5	15.3	16.2	180.00	109.4	0.0	153.0	121.5	31.43	4.868	
7,300.0	7,299.8	7,298.6	7,298.5	15.5	16.4	180.00	110.3	0.0	154.7	122.9	31.87	4.855	
7,400.0	7,399.8	7,398.6	7,398.4	15.7	16.6	180.00	111.2	0.0	156.5	124.2	32.31	4.843	
7,500.0	7,499.8	7,498.6	7,498.4	16.0	16.8	180.00	112.0	0.0	158.2	125.5	32.75	4.831	
7,600.0	7,599.8	7,598.6	7,598.4	16.2	17.1	180.00	112.9	0.0	160.0	126.8	33.19	4.819	
7,700.0	7,699.8	7,698.6	7,698.4	16.4	17.3	180.00	113.8	0.0	161.7	128.1	33.63	4.808	
7,800.0	7,799.8	7,798.6	7,798.4	16.6	17.5	180.00	114.6	0.0	163.4	129.4	34.08	4.796	
7,900.0	7,899.8	7,898.6	7,898.3	16.8	17.7	180.00	115.5	0.0	165.2	130.7	34.52	4.786	
7,926.7	7,926.4	7,925.2	7,925.0	16.9	17.8	180.00	115.7	0.0	165.7	131.0	34.64	4.783	
7,943.3	7,943.1	7,943.3	7,943.1	16.9	17.8	0.01	115.8	0.0	165.8	131.1	34.73	4.774	
8,000.0	7,999.8	8,000.0	7,999.8	17.1	17.9	0.01	115.8	0.0	165.8	130.8	34.96	4.743	
8,100.0	8,099.8	8,100.0	8,099.8	17.2	18.2	0.01	115.8	0.0	165.8	130.4	35.37	4.688	
8,200.0	8,199.8	8,200.0	8,199.8	17.4	18.4	0.01	115.8	0.0	165.8	130.0	35.79	4.633	
8,300.0	8,299.8	8,300.0	8,299.8	17.6	18.6	0.01	115.8	0.0	165.8	129.6	36.20	4.580	
8,400.0	8,399.8	8,400.0	8,399.8	17.8	18.8	0.01	115.8	0.0	165.8	129.2	36.62	4.528	
8,500.0	8,499.8	8,500.0	8,499.8	18.0	19.1	0.01	115.8	0.0	165.8	128.8	37.03	4.477	
8,600.0	8,599.8	8,600.0	8,599.8	18.2	19.3	0.01	115.8	0.0	165.8	128.4	37.45	4.427	
8,700.0	8,699.8	8,700.0	8,699.8	18.4	19.5	0.01	115.8	0.0	165.8	127.9	37.87	4.378	
8,800.0	8,799.8	8,800.0	8,799.8	18.6	19.7	0.01	115.8	0.0	165.8	127.5	38.29	4.330	
8,900.0	8,899.8	8,900.0	8,899.8	18.8	19.9	0.01	115.8	0.0	165.8	127.1	38.71	4.284	
9,000.0	8,999.8	9,000.0	8,999.8	19.0	20.2	0.01	115.8	0.0	165.8	126.7	39.13	4.238	
9,100.0	9,099.8	9,100.0	9,099.8	19.2	20.4	0.01	115.8	0.0	165.8	126.3	39.55	4.192	
9,200.0	9,199.8	9,200.0	9,199.8	19.4	20.6	0.01	115.8	0.0	165.8	125.8	39.97	4.148	
9,300.0	9,299.8	9,300.0	9,299.8	19.6	20.8	0.01	115.8	0.0	165.8	125.4	40.39	4.105	
9,400.0	9,399.8	9,400.0	9,399.8	19.8	21.1	0.01	115.8	0.0	165.8	125.0	40.82	4.062	
9,500.0	9,499.8	9,500.0	9,499.8	20.0	21.3	0.01	115.8	0.0	165.8	124.6	41.24	4.021	
9,600.0	9,599.8	9,600.0	9,599.8	20.2	21.5	0.01	115.8	0.0	165.8	124.1	41.66	3.980	
9,700.0	9,699.8	9,700.0	9,699.8	20.4	21.7	0.01	115.8	0.0	165.8	123.7	42.09	3.940	
9,800.0	9,799.8	9,800.0	9,799.8	20.6	22.0	0.01	115.8	0.0	165.8	123.3	42.51	3.900	
9,900.0	9,899.8	9,900.0	9,899.8	20.8	22.2	0.01	115.8	0.0	165.8	122.9	42.94	3.862	
10,000.0	9,999.8	10,000.0	9,999.8	21.0	22.4	0.01	115.8	0.0	165.8	122.4	43.36	3.824	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	Oasis	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	Indian Hills	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Reference Site:	153N-100W-17/18	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Well Error:	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Kline Federal 5300 31-18 6B	Database:	EDM_new
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design 153N-100W-17/18 - Kline Federal 5300 31-18 8T - Kline Federal 5300 31-18 8T - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	2.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis			Distance					Warning	
		Reference	Offset	Reference	Offset	Hightside Toolface (")	Offset Wellbore Centre +N-S (usft)	Centre +E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
10,100.0	10,099.8	10,100.0	10,099.8	21.2	22.6	0.01	115.8	0.0	165.8	122.0	43.79	3.786	
10,200.0	10,199.8	10,200.0	10,199.8	21.4	22.9	0.01	115.8	0.0	165.8	121.6	44.22	3.750	
10,228.8	10,228.6	10,228.8	10,228.6	21.4	22.9	0.01	115.8	0.0	165.8	121.5	44.34	3.739	
10,250.0	10,249.8	10,250.0	10,249.8	21.5	23.0	-121.16	115.8	0.0	166.1	121.6	44.42	3.738	
10,275.0	10,274.7	10,274.9	10,274.7	21.5	23.0	-121.59	115.8	0.0	167.0	122.5	44.49	3.753	
10,300.0	10,299.5	10,301.5	10,301.2	21.6	23.1	-122.32	115.8	0.2	168.5	124.0	44.54	3.784	
10,325.0	10,324.1	10,330.0	10,329.7	21.7	23.1	-123.03	115.2	1.8	170.4	125.8	44.58	3.824	
10,350.0	10,348.5	10,358.7	10,358.2	21.7	23.2	-123.59	114.1	5.0	172.4	127.9	44.55	3.870	
10,375.0	10,372.5	10,387.6	10,386.7	21.8	23.2	-124.02	112.4	9.8	174.6	130.1	44.52	3.922	
10,400.0	10,396.1	10,416.7	10,414.9	21.8	23.3	-124.29	110.1	16.3	177.0	132.5	44.46	3.980	
10,425.0	10,419.3	10,445.9	10,442.8	21.9	23.4	-124.43	107.2	24.4	179.5	135.1	44.39	4.043	
10,450.0	10,442.0	10,475.2	10,470.2	21.9	23.4	-124.42	103.7	34.2	182.1	137.8	44.30	4.110	
10,475.0	10,464.0	10,504.7	10,497.1	22.0	23.5	-124.28	99.7	45.6	184.8	140.6	44.21	4.180	
10,500.0	10,485.4	10,534.2	10,523.2	22.1	23.6	-124.01	95.1	58.6	187.6	143.5	44.12	4.253	
10,525.0	10,506.1	10,563.8	10,548.5	22.2	23.7	-123.61	89.9	73.1	190.6	146.5	44.05	4.326	
10,550.0	10,526.1	10,593.5	10,572.8	22.2	23.7	-123.09	84.3	89.1	193.6	149.6	44.01	4.400	
10,575.0	10,545.2	10,623.1	10,596.0	22.3	23.8	-122.45	78.1	106.5	196.7	152.7	44.00	4.471	
10,600.0	10,563.5	10,652.8	10,618.1	22.4	24.0	-121.71	71.5	125.2	200.0	155.9	44.04	4.541	
10,625.0	10,580.9	10,682.4	10,638.8	22.5	24.1	-120.87	64.4	145.2	203.2	159.1	44.13	4.606	
10,650.0	10,597.2	10,712.0	10,658.1	22.7	24.2	-119.94	57.0	166.3	206.6	162.3	44.28	4.666	
10,675.0	10,612.6	10,741.5	10,676.0	22.8	24.4	-118.93	49.1	188.4	210.1	165.6	44.51	4.721	
10,700.0	10,626.9	10,771.0	10,692.4	23.0	24.6	-117.84	41.0	211.4	213.6	168.8	44.80	4.768	
10,725.0	10,640.2	10,800.3	10,707.2	23.1	24.8	-116.68	32.5	235.3	217.3	172.1	45.17	4.810	
10,750.0	10,652.3	10,829.5	10,720.3	23.3	25.0	-115.46	23.8	259.9	221.0	175.3	45.62	4.843	
10,775.0	10,663.2	10,858.6	10,731.8	23.5	25.2	-114.19	14.9	285.1	224.8	178.6	46.15	4.871	
10,800.0	10,673.0	10,887.6	10,741.6	23.8	25.5	-112.88	5.8	310.8	228.6	181.9	46.74	4.891	
10,825.0	10,681.5	10,916.4	10,749.7	24.0	25.8	-111.52	-3.4	336.8	232.6	185.2	47.40	4.906	
10,850.0	10,688.8	10,945.0	10,756.1	24.2	26.1	-110.14	-12.8	363.1	236.6	188.5	48.12	4.917	
10,875.0	10,694.8	10,973.4	10,760.7	24.5	26.4	-108.73	-22.1	389.6	240.7	191.8	48.88	4.923	
10,900.0	10,699.6	11,001.7	10,763.7	24.8	26.7	-107.31	-31.5	416.1	244.8	195.1	49.69	4.927	
10,925.0	10,703.0	11,029.8	10,765.0	25.1	27.1	-105.87	-40.9	442.6	249.0	198.5	50.53	4.928	
10,950.0	10,705.2	11,053.4	10,765.1	25.4	27.4	-104.64	-48.7	464.8	253.4	202.1	51.31	4.939	
10,975.0	10,706.0	11,075.9	10,765.3	25.8	27.7	-103.65	-56.0	486.1	258.3	206.3	52.06	4.963	
10,978.0	10,706.0	11,078.5	10,765.3	25.8	27.7	-103.55	-56.8	488.6	259.0	206.8	52.14	4.966	
11,000.0	10,706.1	11,100.0	10,765.4	26.1	28.0	-103.30	-63.6	508.9	263.6	210.8	52.76	4.996	
11,100.0	10,706.3	11,187.7	10,765.8	27.6	29.4	-102.39	-89.7	592.6	284.4	228.7	55.70	5.106	
11,200.0	10,708.4	11,276.5	10,766.3	29.3	30.9	-101.59	-113.6	678.2	304.9	245.9	58.99	5.168	
11,300.0	10,708.6	11,384.9	10,766.8	31.2	32.6	-100.91	-134.6	764.0	325.1	262.5	62.56	5.195	
11,400.0	10,708.6	11,452.7	10,767.2	33.2	34.4	-100.32	-152.9	849.9	344.9	278.5	66.36	5.197	
11,500.0	10,707.0	11,540.1	10,767.7	35.4	36.2	-99.80	-168.5	935.9	364.3	294.0	70.33	5.180	
11,600.0	10,707.2	11,627.1	10,768.2	37.6	38.1	-99.35	-181.4	1,021.9	383.3	308.9	74.43	5.150	
11,700.0	10,707.3	11,713.6	10,768.6	39.9	40.1	-98.95	-191.7	1,107.8	401.9	323.2	78.63	5.111	
11,800.0	10,707.5	11,800.0	10,769.1	42.3	42.1	-98.59	-199.3	1,193.9	420.0	337.1	82.90	5.066	
11,900.0	10,707.7	11,885.4	10,769.5	44.8	44.1	-98.27	-204.3	1,279.1	437.7	350.5	87.20	5.019	
12,000.0	10,707.9	11,970.7	10,770.0	47.2	46.2	-97.98	-206.8	1,364.4	454.9	363.3	91.51	4.970	
12,100.0	10,708.1	12,063.1	10,770.5	49.7	48.4	-97.71	-207.0	1,456.8	471.1	375.1	96.00	4.908	
12,200.0	10,708.2	12,162.2	10,771.0	52.3	50.9	-97.51	-207.0	1,555.9	484.3	383.6	100.65	4.812	
12,300.0	10,708.4	12,261.7	10,771.5	54.8	53.5	-97.37	-207.0	1,655.4	494.0	388.8	105.29	4.692	
12,400.0	10,708.6	12,361.5	10,772.0	57.4	56.0	-97.30	-207.0	1,755.2	500.3	390.5	109.87	4.554	
12,500.0	10,708.8	12,461.5	10,772.6	59.9	58.7	-97.28	-207.0	1,855.2	503.2	388.8	114.39	4.399	
12,530.5	10,708.8	12,491.9	10,772.7	60.7	59.5	-97.29	-207.0	1,885.6	503.3	387.6	115.74	4.349	
12,600.0	10,708.9	12,561.5	10,773.1	62.5	61.3	-97.32	-207.0	1,955.2	503.4	383.9	119.44	4.214	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	Oasis	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	Indian Hills	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Reference Site:	153N-100W-17/18	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Well Error:	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Kline Federal 5300 31-18 6B	Database:	EDM_new
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design 153N-100W-17/18 - Kline Federal 5300 31-18 8T - Kline Federal 5300 31-18 8T - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	2.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis			Distance					Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Hightside Toolface (°)	Offset Wellbore Centre +N/S (usft)	Centre +E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,700.0	10,709.1	12,861.5	10,773.6	65.1	64.0	-97.36	-207.0	2,055.1	503.4	378.6	124.80	4.034	
12,800.0	10,709.3	12,761.5	10,774.1	67.7	66.7	-97.40	-207.0	2,155.1	503.5	373.3	130.19	3.867	
12,900.0	10,709.5	12,861.5	10,774.7	70.3	69.4	-97.44	-207.0	2,255.1	503.5	367.9	135.61	3.713	
13,000.0	10,709.6	12,961.5	10,775.2	73.0	72.1	-97.48	-207.0	2,355.1	503.5	362.5	141.07	3.570	
13,100.0	10,709.8	13,061.5	10,775.7	75.7	74.8	-97.52	-207.0	2,455.1	503.6	357.0	146.55	3.436	
13,200.0	10,710.0	13,161.5	10,776.2	78.4	77.6	-97.56	-207.0	2,555.1	503.6	351.6	152.05	3.312	
13,300.0	10,710.2	13,261.5	10,776.7	81.1	80.4	-97.60	-207.0	2,655.1	503.7	346.1	157.57	3.197	
13,400.0	10,710.3	13,361.5	10,777.3	83.9	83.1	-97.64	-207.0	2,755.1	503.7	340.6	163.11	3.088	
13,500.0	10,710.5	13,461.5	10,777.8	86.6	85.9	-97.67	-207.0	2,855.1	503.8	335.1	168.67	2.987	
13,600.0	10,710.7	13,561.5	10,778.3	89.4	88.7	-97.71	-207.0	2,955.1	503.8	329.6	174.24	2.891	
13,700.0	10,710.9	13,661.5	10,778.8	92.1	91.5	-97.75	-207.0	3,055.1	503.9	324.0	179.83	2.802	
13,800.0	10,711.0	13,761.5	10,779.4	94.9	94.4	-97.79	-207.0	3,155.1	503.9	318.5	185.42	2.718	
13,900.0	10,711.2	13,861.5	10,779.9	97.7	97.2	-97.83	-207.0	3,255.1	504.0	312.9	191.03	2.638	
14,000.0	10,711.4	13,961.5	10,780.4	100.5	100.0	-97.87	-207.0	3,355.1	504.0	307.4	196.65	2.563	
14,100.0	10,711.6	14,061.5	10,780.9	103.3	102.8	-97.91	-207.0	3,455.1	504.1	301.8	202.28	2.492	
14,200.0	10,711.7	14,161.5	10,781.5	106.1	105.7	-97.95	-207.0	3,555.1	504.1	296.2	207.91	2.425	
14,300.0	10,711.9	14,261.5	10,782.0	108.9	108.5	-97.99	-207.0	3,655.1	504.2	290.6	213.55	2.361	
14,400.0	10,712.1	14,361.5	10,782.5	111.7	111.4	-98.03	-207.0	3,755.1	504.2	285.0	219.20	2.300	
14,500.0	10,712.3	14,461.5	10,783.0	114.6	114.2	-98.07	-207.0	3,855.1	504.3	279.4	224.85	2.243	
14,600.0	10,712.4	14,561.5	10,783.6	117.4	117.1	-98.11	-207.0	3,955.1	504.3	273.8	230.51	2.188	
14,700.0	10,712.6	14,661.5	10,784.1	120.2	119.9	-98.15	-207.0	4,055.1	504.3	268.2	236.18	2.135	
14,800.0	10,712.8	14,761.5	10,784.6	123.1	122.8	-98.19	-207.0	4,155.1	504.4	262.6	241.85	2.086	
14,900.0	10,713.0	14,861.5	10,785.1	125.9	125.7	-98.22	-207.0	4,255.1	504.4	256.9	247.52	2.038	
15,000.0	10,713.1	14,961.4	10,785.6	128.8	128.5	-98.26	-207.0	4,355.1	504.5	251.3	253.20	1.993	
15,100.0	10,713.3	15,061.4	10,786.2	131.6	131.4	-98.30	-207.0	4,455.1	504.5	245.7	258.88	1.949	
15,200.0	10,713.5	15,161.4	10,786.7	134.5	134.3	-98.34	-207.0	4,555.1	504.6	240.0	264.56	1.907	
15,300.0	10,713.7	15,261.4	10,787.2	137.4	137.2	-98.38	-207.0	4,655.1	504.6	234.4	270.25	1.867	
15,400.0	10,713.8	15,361.4	10,787.7	140.2	140.1	-98.42	-207.0	4,755.1	504.7	228.8	275.93	1.829	
15,500.0	10,714.0	15,461.4	10,788.3	143.1	142.9	-98.46	-207.0	4,855.1	504.8	223.1	281.63	1.792	
15,600.0	10,714.2	15,561.4	10,788.8	146.0	145.8	-98.50	-207.0	4,955.1	504.8	217.5	287.32	1.757	
15,700.0	10,714.4	15,661.4	10,789.3	148.8	148.7	-98.54	-207.0	5,055.1	504.9	211.8	293.01	1.723	
15,800.0	10,714.5	15,761.4	10,789.8	151.7	151.6	-98.58	-207.0	5,155.1	504.9	206.2	298.71	1.690	
15,900.0	10,714.7	15,861.4	10,790.4	154.6	154.5	-98.62	-207.0	5,255.1	505.0	200.6	304.41	1.659	
16,000.0	10,714.9	15,961.4	10,790.9	157.5	157.4	-98.66	-207.0	5,355.1	505.0	194.9	310.11	1.629	
16,100.0	10,715.1	16,061.4	10,791.4	160.3	160.3	-98.70	-207.0	5,455.1	505.1	189.3	315.81	1.599	
16,200.0	10,715.2	16,161.4	10,791.9	163.2	163.2	-98.73	-207.0	5,555.1	505.1	183.6	321.51	1.571	
16,300.0	10,715.4	16,261.4	10,792.5	166.1	166.1	-98.77	-207.0	5,655.1	505.2	178.0	327.21	1.544	
16,400.0	10,715.6	16,361.4	10,793.0	169.0	168.9	-98.81	-207.0	5,755.1	505.2	172.3	332.92	1.518	
16,500.0	10,715.8	16,461.4	10,793.5	171.9	171.8	-98.85	-207.0	5,855.1	505.3	166.7	338.62	1.492 Level 3	
16,600.0	10,715.9	16,561.4	10,794.0	174.8	174.7	-98.89	-207.0	5,955.1	505.3	161.0	344.33	1.468 Level 3	
16,700.0	10,716.1	16,661.4	10,794.5	177.6	177.6	-98.93	-207.0	6,055.1	505.4	155.4	350.03	1.444 Level 3	
16,800.0	10,716.3	16,761.4	10,795.1	180.5	180.5	-98.97	-207.0	6,155.1	505.4	149.7	355.74	1.421 Level 3	
16,900.0	10,716.5	16,861.4	10,795.6	183.4	183.4	-99.01	-207.0	6,255.1	505.5	144.0	361.45	1.399 Level 3	
17,000.0	10,716.8	16,961.4	10,796.1	186.3	186.3	-99.05	-207.0	6,355.1	505.5	138.4	367.15	1.377 Level 3	
17,100.0	10,716.8	17,061.4	10,796.6	189.2	189.3	-99.09	-207.0	6,455.1	505.6	132.7	372.86	1.356 Level 3	
17,200.0	10,717.0	17,161.4	10,797.2	192.1	192.2	-99.13	-207.0	6,555.1	505.7	127.1	378.57	1.336 Level 3	
17,300.0	10,717.1	17,261.4	10,797.7	195.0	195.1	-99.16	-207.0	6,655.1	505.7	121.4	384.27	1.316 Level 3	
17,400.0	10,717.3	17,361.4	10,798.2	197.9	198.0	-99.20	-207.0	6,755.1	505.8	115.8	389.98	1.297 Level 3	
17,500.0	10,717.5	17,461.4	10,798.7	200.8	200.9	-99.24	-207.0	6,855.1	505.8	110.1	395.69	1.278 Level 3	
17,600.0	10,717.7	17,561.4	10,799.3	203.7	203.8	-99.28	-207.0	6,955.1	505.9	104.5	401.39	1.260 Level 3	
17,700.0	10,717.8	17,661.4	10,799.8	206.6	206.7	-99.32	-207.0	7,055.1	505.9	98.8	407.10	1.243 Level 2	
17,800.0	10,718.0	17,761.4	10,800.3	209.5	209.6	-99.36	-207.0	7,155.0	506.0	93.2	412.80	1.226 Level 2	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	Oasis	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	Indian Hills	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Reference Site:	153N-100W-17/18	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Well Error:	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Kline Federal 5300 31-18 6B	Database:	EDM_new
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

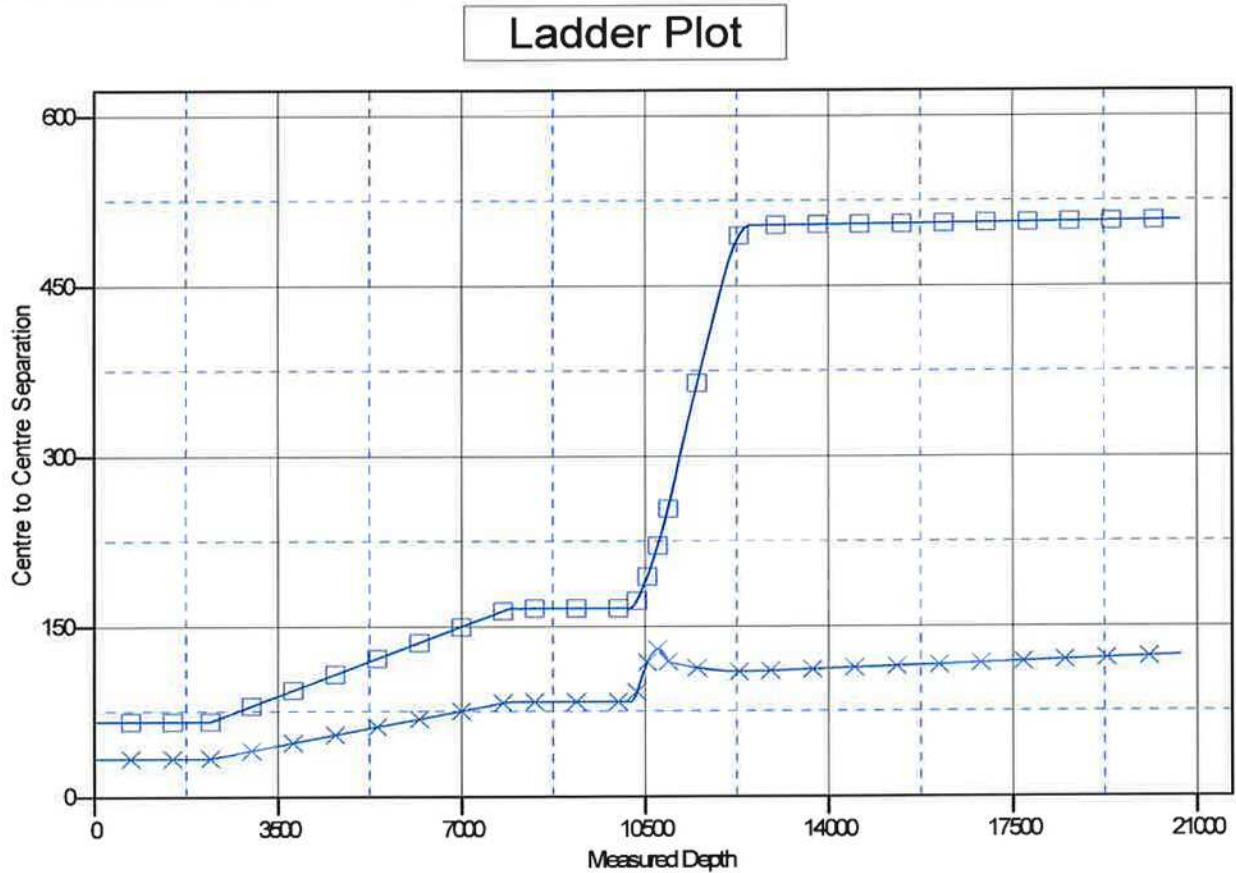
Offset Design 153N-100W-17/18 - Kline Federal 5300 31-18 8T - Kline Federal 5300 31-18 8T - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	2.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (*)	Offset Wellbore Centre +N/S (usft)	Distance				Separation Factor	Warning
				Reference	Offset			Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (*)	Offset Wellbore Centre +N/S (usft)	+E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
17,900.0	10,718.2	17,861.4	10,800.8	212.4	212.5	-99.40	-207.0	7,255.0	506.1	87.5	418.51	1.209	Level 2
18,000.0	10,718.4	17,981.4	10,801.4	215.3	215.4	-99.44	-207.0	7,355.0	506.1	81.9	424.22	1.193	Level 2
18,100.0	10,718.5	18,061.4	10,801.9	218.2	218.3	-99.48	-207.0	7,455.0	506.2	76.2	429.92	1.177	Level 2
18,200.0	10,718.7	18,161.4	10,802.4	221.1	221.2	-99.52	-207.0	7,555.0	506.2	70.6	435.63	1.162	Level 2
18,300.0	10,718.9	18,261.4	10,802.9	224.0	224.2	-99.55	-207.0	7,655.0	506.3	65.0	441.33	1.147	Level 2
18,400.0	10,719.1	18,361.4	10,803.4	226.9	227.1	-99.59	-207.0	7,755.0	506.3	59.3	447.03	1.133	Level 2
18,500.0	10,719.2	18,461.4	10,804.0	229.8	230.0	-99.63	-207.0	7,855.0	506.4	53.7	452.73	1.119	Level 2
18,600.0	10,719.4	18,561.4	10,804.5	232.7	232.9	-99.67	-207.0	7,955.0	506.5	48.0	458.44	1.105	Level 2
18,700.0	10,719.6	18,661.4	10,805.0	235.7	235.8	-99.71	-207.0	8,055.0	506.5	42.4	464.14	1.091	Level 2
18,800.0	10,719.8	18,761.4	10,805.5	238.6	238.7	-99.75	-207.0	8,155.0	506.6	36.7	469.84	1.078	Level 2
18,900.0	10,719.9	18,861.4	10,806.1	241.5	241.6	-99.79	-207.0	8,255.0	506.6	31.1	475.54	1.065	Level 2
19,000.0	10,720.1	18,961.4	10,806.6	244.4	244.5	-99.83	-207.0	8,355.0	506.7	25.5	481.24	1.053	Level 2
19,100.0	10,720.3	19,061.4	10,807.1	247.3	247.5	-99.87	-207.0	8,455.0	506.8	19.8	486.94	1.041	Level 2
19,200.0	10,720.5	19,161.4	10,807.6	250.2	250.4	-99.90	-207.0	8,555.0	506.8	14.2	492.63	1.029	Level 2
19,300.0	10,720.6	19,261.4	10,808.2	253.1	253.3	-99.94	-207.0	8,655.0	506.9	8.5	498.33	1.017	Level 2
19,400.0	10,720.8	19,361.4	10,808.7	256.0	256.2	-99.98	-207.0	8,755.0	506.9	2.9	504.02	1.006	Level 2
19,500.0	10,721.0	19,461.4	10,809.2	258.9	259.1	-100.02	-207.0	8,855.0	507.0	-2.7	509.72	0.995	Level 1
19,600.0	10,721.2	19,561.4	10,809.7	261.9	262.0	-100.06	-207.0	8,955.0	507.1	-8.4	515.41	0.984	Level 1
19,700.0	10,721.3	19,661.4	10,810.3	264.8	265.0	-100.10	-207.0	9,055.0	507.1	-14.0	521.11	0.973	Level 1
19,800.0	10,721.5	19,761.4	10,810.8	267.7	267.9	-100.14	-207.0	9,155.0	507.2	-19.6	526.80	0.963	Level 1
19,900.0	10,721.7	19,861.4	10,811.3	270.6	270.8	-100.18	-207.0	9,255.0	507.2	-25.2	532.49	0.953	Level 1
20,000.0	10,721.9	19,961.4	10,811.8	273.5	273.7	-100.22	-207.0	9,355.0	507.3	-30.9	538.18	0.943	Level 1
20,100.0	10,722.0	20,061.4	10,812.4	276.4	276.6	-100.25	-207.0	9,455.0	507.4	-36.5	543.87	0.933	Level 1
20,200.0	10,722.2	20,161.4	10,812.9	279.3	279.5	-100.29	-207.0	9,555.0	507.4	-42.1	549.55	0.923	Level 1
20,300.0	10,722.4	20,261.4	10,813.4	282.2	282.5	-100.33	-207.0	9,655.0	507.5	-47.8	555.24	0.914	Level 1
20,400.0	10,722.6	20,361.4	10,813.9	285.2	285.4	-100.37	-207.0	9,755.0	507.6	-53.4	560.92	0.905	Level 1
20,500.0	10,722.7	20,461.4	10,814.4	288.1	288.3	-100.41	-207.0	9,855.0	507.6	-59.0	566.61	0.896	Level 1
20,600.0	10,722.9	20,561.4	10,815.0	291.0	291.2	-100.45	-207.0	9,955.0	507.7	-64.6	572.29	0.887	Level 1
20,694.5	10,723.1	20,655.9	10,815.5	293.8	294.0	-100.48	-207.0	10,049.5	507.7	-69.9	577.86	0.879	Level 1, ES, SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	Oasis	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	Indian Hills	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Reference Site:	153N-100W-17/18	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Well Error:	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Kline Federal 5300 31-18 6B	Database:	EDM_new
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 2033.0usft (Original Well EleCoordinates are relative to: Kline Federal 5300 31-18 6B
 Offset Depths are relative to Offset Datum
 Central Meridian is 100° 30' 0.000 W
 Coordinate System is US State Plane 1983, North Dakota Northern Zone
 Grid Convergence at Surface is: -2.31°



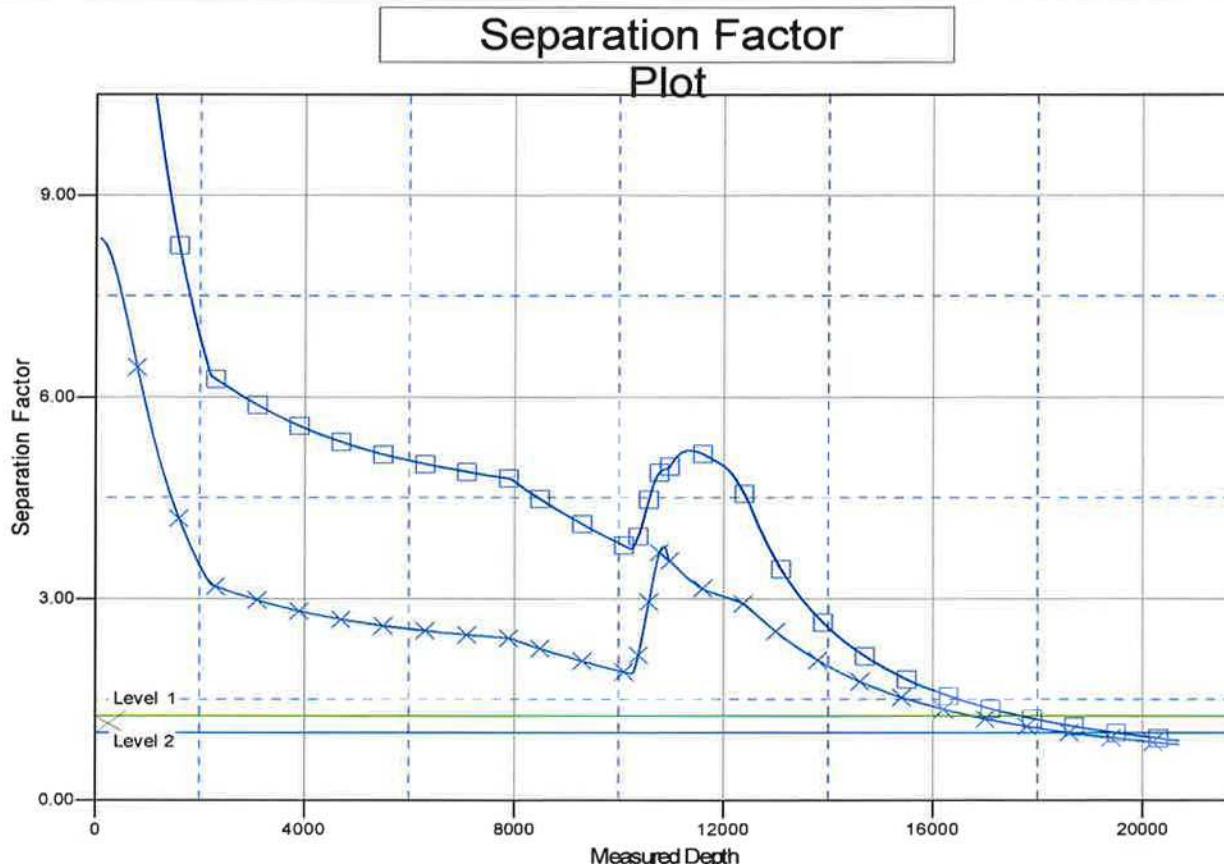
LEGEND

Federal 5300 31-18 8T, Design #1 V0 Kline Federal 5300 31-18 7T2, Kline Federal 5300 31-18 7T2, Design #1 V0

Anticollision Report

Company:	Oasis	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Project:	Indian Hills	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Reference Site:	153N-100W-17/18	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Well Error:	2.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Kline Federal 5300 31-18 6B	Database:	EDM_new
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 2033.0usft (Original Well EleCoordinates are relative to: Kline Federal 5300 31-18 6B
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, North Dakota Northern Zone
 Central Meridian is 100° 30' 0.000 W Grid Convergence at Surface is: -2.31°



LEGEND

Federal 5300 31-18 8T, Design #1 V0 Kline Federal 5300 31-18 7T2, Kline Federal 5300 31-18 7T2, Design #1 V0

Oasis

Indian Hills

153N-100W-17/18

Kline Federal 5300 31-18 6B

Kline Federal 5300 31-18 6B

Plan: Design #1

Standard Planning Report

21 July, 2014

Planning Report

Database:	EDM_new	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B							
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)							
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)							
Site:	153N-100W-17/18	North Reference:	True							
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature							
Wellbore:	Kline Federal 5300 31-18 6B									
Design:	Design #1									
Project	Indian Hills									
Map System:	US State Plane 1983	System Datum:	Mean Sea Level							
Geo Datum:	North American Datum 1983									
Map Zone:	North Dakota Northern Zone									
Site	153N-100W-17/18									
Site Position:		Northing:	48° 4' 45.380 N							
From:	Lat/Long	Easting:	103° 36' 10.380 W							
Position Uncertainty:	0.0 usft	Slot Radius:	-2.31 °							
Well	Kline Federal 5300 31-18 6B									
Well Position	+N-S +E/W	-1,810.7 usft -67.9 usft	Northing: 407,155.92 usft Easting: 1,210,088.38 usft	Latitude: 48° 4' 27.510 N Longitude: 103° 36' 11.380 W						
Position Uncertainty		2.0 usft	Wellhead Elevation:	Ground Level: 2,008.0 usft						
Wellbore	Kline Federal 5300 31-18 6B									
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)					
	IGRF2010	5/28/2014	8.27	72.99	56,438					
Design	Design #1									
Audit Notes:										
Version:		Phase:	PROTOTYPE	Tie On Depth:	0.0					
Vertical Section:		Depth From (TVD) (usft)	+N-S (usft)	+E/W (usft)	Direction (°)					
		0.0	0.0	0.0	90.00					
Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E/W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00
2,216.7	0.50	180.00	2,216.7	-0.1	0.0	3.00	3.00	0.00	0.00	180.00
7,926.7	0.50	180.00	7,926.4	-49.9	0.0	0.00	0.00	0.00	0.00	0.00
7,943.3	0.00	0.00	7,943.1	-50.0	0.0	3.00	-3.00	0.00	0.00	180.00
10,228.8	0.00	0.00	10,228.6	-50.0	0.0	0.00	0.00	0.00	0.00	0.00
10,978.0	89.90	121.05	10,706.0	-295.8	408.3	12.00	12.00	0.00	0.00	121.05
12,530.5	89.90	90.00	10,708.8	-706.3	1,886.0	2.00	0.00	-2.00	-90.03	
20,694.5	89.90	90.00	10,723.1	-706.3	10,050.0	0.00	0.00	0.00	0.00	Kline Federal 5300

Planning Report

Database:	EDM_new	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (/100usft)	Build Rate (/100usft)	Turn Rate (/100usft)
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
1,923.0	0.00	0.00	1,923.0	0.0	0.0	0.0	0.00	0.00	0.00
Pierre									
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,023.0	0.00	0.00	2,023.0	0.0	0.0	0.0	0.00	0.00	0.00
13 3/8" Surface									
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,216.7	0.50	180.00	2,216.7	-0.1	0.0	0.0	3.00	3.00	0.00
2,300.0	0.50	180.00	2,300.0	-0.8	0.0	0.0	0.00	0.00	0.00
2,400.0	0.50	180.00	2,400.0	-1.7	0.0	0.0	0.00	0.00	0.00
2,500.0	0.50	180.00	2,500.0	-2.5	0.0	0.0	0.00	0.00	0.00
2,600.0	0.50	180.00	2,600.0	-3.4	0.0	0.0	0.00	0.00	0.00
2,700.0	0.50	180.00	2,700.0	-4.3	0.0	0.0	0.00	0.00	0.00
2,800.0	0.50	180.00	2,800.0	-5.2	0.0	0.0	0.00	0.00	0.00
2,900.0	0.50	180.00	2,900.0	-6.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.50	180.00	3,000.0	-6.9	0.0	0.0	0.00	0.00	0.00
3,100.0	0.50	180.00	3,100.0	-7.8	0.0	0.0	0.00	0.00	0.00
3,200.0	0.50	180.00	3,200.0	-8.7	0.0	0.0	0.00	0.00	0.00
3,300.0	0.50	180.00	3,300.0	-9.5	0.0	0.0	0.00	0.00	0.00
3,400.0	0.50	180.00	3,400.0	-10.4	0.0	0.0	0.00	0.00	0.00
3,500.0	0.50	180.00	3,500.0	-11.3	0.0	0.0	0.00	0.00	0.00
3,600.0	0.50	180.00	3,599.9	-12.1	0.0	0.0	0.00	0.00	0.00
3,700.0	0.50	180.00	3,699.9	-13.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.50	180.00	3,799.9	-13.9	0.0	0.0	0.00	0.00	0.00
3,900.0	0.50	180.00	3,899.9	-14.8	0.0	0.0	0.00	0.00	0.00
4,000.0	0.50	180.00	3,999.9	-15.6	0.0	0.0	0.00	0.00	0.00
4,100.0	0.50	180.00	4,099.9	-16.5	0.0	0.0	0.00	0.00	0.00
4,200.0	0.50	180.00	4,199.9	-17.4	0.0	0.0	0.00	0.00	0.00
4,300.0	0.50	180.00	4,299.9	-18.3	0.0	0.0	0.00	0.00	0.00
4,400.0	0.50	180.00	4,399.9	-19.1	0.0	0.0	0.00	0.00	0.00
4,500.0	0.50	180.00	4,499.9	-20.0	0.0	0.0	0.00	0.00	0.00
4,597.1	0.50	180.00	4,597.0	-20.8	0.0	0.0	0.00	0.00	0.00
Greenhorn									

Planning Report

Database:	EDM_new	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.0	0.50	180.00	4,599.9	-20.9	0.0	0.0	0.00	0.00	0.00
4,700.0	0.50	180.00	4,699.9	-21.7	0.0	0.0	0.00	0.00	0.00
4,800.0	0.50	180.00	4,799.9	-22.6	0.0	0.0	0.00	0.00	0.00
4,900.0	0.50	180.00	4,899.9	-23.5	0.0	0.0	0.00	0.00	0.00
5,000.0	0.50	180.00	4,999.9	-24.4	0.0	0.0	0.00	0.00	0.00
5,008.1	0.50	180.00	5,008.0	-24.4	0.0	0.0	0.00	0.00	0.00
Mowry									
5,100.0	0.50	180.00	5,099.9	-25.2	0.0	0.0	0.00	0.00	0.00
5,200.0	0.50	180.00	5,199.9	-26.1	0.0	0.0	0.00	0.00	0.00
5,300.0	0.50	180.00	5,299.9	-27.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.50	180.00	5,399.9	-27.9	0.0	0.0	0.00	0.00	0.00
5,422.1	0.50	180.00	5,422.0	-28.0	0.0	0.0	0.00	0.00	0.00
Dakota									
5,500.0	0.50	180.00	5,499.9	-28.7	0.0	0.0	0.00	0.00	0.00
5,600.0	0.50	180.00	5,599.9	-29.6	0.0	0.0	0.00	0.00	0.00
5,700.0	0.50	180.00	5,699.9	-30.5	0.0	0.0	0.00	0.00	0.00
5,800.0	0.50	180.00	5,799.9	-31.3	0.0	0.0	0.00	0.00	0.00
5,900.0	0.50	180.00	5,899.9	-32.2	0.0	0.0	0.00	0.00	0.00
6,000.0	0.50	180.00	5,999.9	-33.1	0.0	0.0	0.00	0.00	0.00
6,100.0	0.50	180.00	6,099.9	-34.0	0.0	0.0	0.00	0.00	0.00
6,101.1	0.50	180.00	6,101.0	-34.0	0.0	0.0	0.00	0.00	0.00
9 5/8" Dakota String									
6,200.0	0.50	180.00	6,199.8	-34.8	0.0	0.0	0.00	0.00	0.00
6,300.0	0.50	180.00	6,299.8	-35.7	0.0	0.0	0.00	0.00	0.00
6,400.0	0.50	180.00	6,399.8	-36.6	0.0	0.0	0.00	0.00	0.00
6,437.2	0.50	180.00	6,437.0	-36.9	0.0	0.0	0.00	0.00	0.00
Rierdon									
6,500.0	0.50	180.00	6,499.8	-37.5	0.0	0.0	0.00	0.00	0.00
6,600.0	0.50	180.00	6,599.8	-38.3	0.0	0.0	0.00	0.00	0.00
6,700.0	0.50	180.00	6,699.8	-39.2	0.0	0.0	0.00	0.00	0.00
6,765.2	0.50	180.00	6,765.0	-39.8	0.0	0.0	0.00	0.00	0.00
Dunham Salt									
6,800.0	0.50	180.00	6,799.8	-40.1	0.0	0.0	0.00	0.00	0.00
6,880.2	0.50	180.00	6,880.0	-40.8	0.0	0.0	0.00	0.00	0.00
Dunham Salt Base									
6,900.0	0.50	180.00	6,899.8	-40.9	0.0	0.0	0.00	0.00	0.00
6,975.2	0.50	180.00	6,975.0	-41.6	0.0	0.0	0.00	0.00	0.00
Spearfish									
7,000.0	0.50	180.00	6,999.8	-41.8	0.0	0.0	0.00	0.00	0.00
7,100.0	0.50	180.00	7,099.8	-42.7	0.0	0.0	0.00	0.00	0.00
7,200.0	0.50	180.00	7,199.8	-43.6	0.0	0.0	0.00	0.00	0.00
7,234.2	0.50	180.00	7,234.0	-43.9	0.0	0.0	0.00	0.00	0.00
Pine Salt									
7,269.2	0.50	180.00	7,269.0	-44.2	0.0	0.0	0.00	0.00	0.00
Pine Salt Base									
7,300.0	0.50	180.00	7,299.8	-44.4	0.0	0.0	0.00	0.00	0.00
7,325.2	0.50	180.00	7,325.0	-44.7	0.0	0.0	0.00	0.00	0.00
Opeche Salt									
7,354.2	0.50	180.00	7,354.0	-44.9	0.0	0.0	0.00	0.00	0.00
Opeche Salt Base									
7,400.0	0.50	180.00	7,399.8	-45.3	0.0	0.0	0.00	0.00	0.00
7,500.0	0.50	180.00	7,499.8	-46.2	0.0	0.0	0.00	0.00	0.00
7,556.2	0.50	180.00	7,556.0	-46.7	0.0	0.0	0.00	0.00	0.00

Planning Report

Database:	EDM_new	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Broom Creek (Top of Minnelusa Gp.)									
7,600.0	0.50	180.00	7,599.8	-47.1	0.0	0.0	0.00	0.00	0.00
7,635.2	0.50	180.00	7,635.0	-47.4	0.0	0.0	0.00	0.00	0.00
Amsden									
7,700.0	0.50	180.00	7,699.8	-47.9	0.0	0.0	0.00	0.00	0.00
7,800.0	0.50	180.00	7,799.8	-48.8	0.0	0.0	0.00	0.00	0.00
7,804.2	0.50	180.00	7,804.0	-48.8	0.0	0.0	0.00	0.00	0.00
Tyler									
7,900.0	0.50	180.00	7,899.8	-49.7	0.0	0.0	0.00	0.00	0.00
7,926.7	0.50	180.00	7,926.4	-49.9	0.0	0.0	0.00	0.00	0.00
7,943.3	0.00	0.00	7,943.1	-50.0	0.0	0.0	3.00	-3.00	0.00
7,998.2	0.00	0.00	7,998.0	-50.0	0.0	0.0	0.00	0.00	0.00
Otter (Base of Minnelusa Gp.)									
8,000.0	0.00	0.00	7,999.8	-50.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,099.8	-50.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,199.8	-50.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,299.8	-50.0	0.0	0.0	0.00	0.00	0.00
8,341.2	0.00	0.00	8,341.0	-50.0	0.0	0.0	0.00	0.00	0.00
Kibbey Lime									
8,400.0	0.00	0.00	8,399.8	-50.0	0.0	0.0	0.00	0.00	0.00
8,493.2	0.00	0.00	8,493.0	-50.0	0.0	0.0	0.00	0.00	0.00
Charles Salt									
8,500.0	0.00	0.00	8,499.8	-50.0	0.0	0.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,599.8	-50.0	0.0	0.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,699.8	-50.0	0.0	0.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,799.8	-50.0	0.0	0.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,899.8	-50.0	0.0	0.0	0.00	0.00	0.00
9,000.0	0.00	0.00	8,999.8	-50.0	0.0	0.0	0.00	0.00	0.00
9,100.0	0.00	0.00	9,099.8	-50.0	0.0	0.0	0.00	0.00	0.00
9,110.2	0.00	0.00	9,110.0	-50.0	0.0	0.0	0.00	0.00	0.00
UB									
9,189.2	0.00	0.00	9,189.0	-50.0	0.0	0.0	0.00	0.00	0.00
Base Last Salt									
9,200.0	0.00	0.00	9,199.8	-50.0	0.0	0.0	0.00	0.00	0.00
9,252.2	0.00	0.00	9,252.0	-50.0	0.0	0.0	0.00	0.00	0.00
Ratcliffe									
9,300.0	0.00	0.00	9,299.8	-50.0	0.0	0.0	0.00	0.00	0.00
9,395.2	0.00	0.00	9,395.0	-50.0	0.0	0.0	0.00	0.00	0.00
Mission Canyon									
9,400.0	0.00	0.00	9,399.8	-50.0	0.0	0.0	0.00	0.00	0.00
9,500.0	0.00	0.00	9,499.8	-50.0	0.0	0.0	0.00	0.00	0.00
9,600.0	0.00	0.00	9,599.8	-50.0	0.0	0.0	0.00	0.00	0.00
9,700.0	0.00	0.00	9,699.8	-50.0	0.0	0.0	0.00	0.00	0.00
9,800.0	0.00	0.00	9,799.8	-50.0	0.0	0.0	0.00	0.00	0.00
9,900.0	0.00	0.00	9,899.8	-50.0	0.0	0.0	0.00	0.00	0.00
9,963.2	0.00	0.00	9,963.0	-50.0	0.0	0.0	0.00	0.00	0.00
Lodgepole									
10,000.0	0.00	0.00	9,999.8	-50.0	0.0	0.0	0.00	0.00	0.00
10,100.0	0.00	0.00	10,099.8	-50.0	0.0	0.0	0.00	0.00	0.00
10,150.2	0.00	0.00	10,150.0	-50.0	0.0	0.0	0.00	0.00	0.00
Lodgepole Fracture Zone									
10,200.0	0.00	0.00	10,199.8	-50.0	0.0	0.0	0.00	0.00	0.00

Planning Report

Database:	EDM_new	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,228.8	0.00	0.00	10,228.6	-50.0	0.0	0.0	0.00	0.00	0.00	
KOP Build 12°/100'										
10,300.0	8.54	121.05	10,299.5	-52.7	4.5	4.5	12.00	12.00	0.00	
10,400.0	20.54	121.05	10,396.1	-65.6	26.0	26.0	12.00	12.00	0.00	
10,500.0	32.54	121.05	10,485.4	-88.6	64.2	64.2	12.00	12.00	0.00	
10,600.0	44.54	121.05	10,563.5	-120.7	117.5	117.5	12.00	12.00	0.00	
10,700.0	56.54	121.05	10,626.9	-160.5	183.5	183.5	12.00	12.00	0.00	
10,784.4	66.67	121.05	10,667.0	-198.7	247.0	247.0	12.00	12.00	0.00	
False Bakken										
10,800.0	68.54	121.05	10,673.0	-206.2	259.4	259.4	12.00	12.00	0.00	
10,808.5	69.57	121.05	10,676.0	-210.3	266.2	266.2	12.00	12.00	0.00	
Upper Bakken										
10,862.7	76.07	121.05	10,692.0	-236.9	310.6	310.6	12.00	12.00	0.00	
Middle Bakken										
10,900.0	80.54	121.05	10,699.6	-255.8	341.8	341.8	12.00	12.00	0.00	
10,909.3	81.66	121.05	10,701.0	-260.5	349.7	349.7	12.00	12.00	0.00	
Middle Bakken Sand Target										
10,978.0	89.90	121.05	10,706.0	-295.8	408.4	408.4	11.99	11.99	0.00	
EOC - 7" Intermediate										
11,000.0	89.90	120.61	10,706.1	-307.1	427.3	427.3	2.00	0.00	-2.00	
11,100.0	89.90	118.61	10,706.3	-356.5	514.2	514.2	2.00	0.00	-2.00	
11,200.0	89.90	116.61	10,706.4	-402.9	602.8	602.8	2.00	0.00	-2.00	
11,300.0	89.90	114.61	10,706.6	-446.1	693.0	693.0	2.00	0.00	-2.00	
11,400.0	89.90	112.61	10,706.8	-486.1	784.6	784.6	2.00	0.00	-2.00	
11,500.0	89.90	110.61	10,707.0	-522.9	877.6	877.6	2.00	0.00	-2.00	
11,600.0	89.90	108.61	10,707.2	-556.5	971.8	971.8	2.00	0.00	-2.00	
11,700.0	89.90	106.61	10,707.3	-586.8	1,067.1	1,067.1	2.00	0.00	-2.00	
11,800.0	89.90	104.61	10,707.5	-613.7	1,163.4	1,163.4	2.00	0.00	-2.00	
11,900.0	89.90	102.61	10,707.7	-637.2	1,260.6	1,260.6	2.00	0.00	-2.00	
12,000.0	89.90	100.61	10,707.9	-657.3	1,358.5	1,358.5	2.00	0.00	-2.00	
12,100.0	89.90	98.61	10,708.1	-674.0	1,457.1	1,457.1	2.00	0.00	-2.00	
12,200.0	89.90	96.61	10,708.2	-687.2	1,556.2	1,556.2	2.00	0.00	-2.00	
12,300.0	89.90	94.61	10,708.4	-697.0	1,655.7	1,655.7	2.00	0.00	-2.00	
12,400.0	89.90	92.61	10,708.6	-703.3	1,755.5	1,755.5	2.00	0.00	-2.00	
12,500.0	89.90	90.61	10,708.8	-706.1	1,855.5	1,855.5	2.00	0.00	-2.00	
12,530.5	89.90	90.00	10,708.8	-706.3	1,886.0	1,886.0	2.00	0.00	-2.00	
12,600.0	89.90	90.00	10,708.9	-706.3	1,955.5	1,955.5	0.00	0.00	0.00	
12,700.0	89.90	90.00	10,709.1	-706.3	2,055.5	2,055.5	0.00	0.00	0.00	
12,800.0	89.90	90.00	10,709.3	-706.3	2,155.5	2,155.5	0.00	0.00	0.00	
12,900.0	89.90	90.00	10,709.5	-706.3	2,255.5	2,255.5	0.00	0.00	0.00	
13,000.0	89.90	90.00	10,709.6	-706.3	2,355.5	2,355.5	0.00	0.00	0.00	
13,100.0	89.90	90.00	10,709.8	-706.3	2,455.5	2,455.5	0.00	0.00	0.00	
13,200.0	89.90	90.00	10,710.0	-706.3	2,555.5	2,555.5	0.00	0.00	0.00	
13,300.0	89.90	90.00	10,710.2	-706.3	2,655.5	2,655.5	0.00	0.00	0.00	
13,400.0	89.90	90.00	10,710.3	-706.3	2,755.5	2,755.5	0.00	0.00	0.00	
13,500.0	89.90	90.00	10,710.5	-706.3	2,855.5	2,855.5	0.00	0.00	0.00	
13,600.0	89.90	90.00	10,710.7	-706.3	2,955.5	2,955.5	0.00	0.00	0.00	
13,700.0	89.90	90.00	10,710.9	-706.3	3,055.5	3,055.5	0.00	0.00	0.00	
13,777.1	89.90	90.00	10,711.0	-706.3	3,132.6	3,132.6	0.00	0.00	0.00	
Base Middle Bakken Sand Target										
13,800.0	89.90	90.00	10,711.0	-706.3	3,155.5	3,155.5	0.00	0.00	0.00	
13,900.0	89.90	90.00	10,711.2	-706.3	3,255.5	3,255.5	0.00	0.00	0.00	
14,000.0	89.90	90.00	10,711.4	-706.3	3,355.5	3,355.5	0.00	0.00	0.00	

Planning Report

Database:	EDM_new	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,100.0	89.90	90.00	10,711.6	-706.3	3,455.5	3,455.5	0.00	0.00	0.00
14,200.0	89.90	90.00	10,711.7	-706.3	3,555.5	3,555.5	0.00	0.00	0.00
14,300.0	89.90	90.00	10,711.9	-706.3	3,655.5	3,655.5	0.00	0.00	0.00
14,400.0	89.90	90.00	10,712.1	-706.3	3,755.5	3,755.5	0.00	0.00	0.00
14,500.0	89.90	90.00	10,712.3	-706.3	3,855.5	3,855.5	0.00	0.00	0.00
14,600.0	89.90	90.00	10,712.4	-706.3	3,955.5	3,955.5	0.00	0.00	0.00
14,700.0	89.90	90.00	10,712.6	-706.3	4,055.5	4,055.5	0.00	0.00	0.00
14,800.0	89.90	90.00	10,712.8	-706.3	4,155.5	4,155.5	0.00	0.00	0.00
14,900.0	89.90	90.00	10,713.0	-706.3	4,255.5	4,255.5	0.00	0.00	0.00
15,000.0	89.90	90.00	10,713.1	-706.3	4,355.5	4,355.5	0.00	0.00	0.00
15,100.0	89.90	90.00	10,713.3	-706.3	4,455.5	4,455.5	0.00	0.00	0.00
15,200.0	89.90	90.00	10,713.5	-706.3	4,555.5	4,555.5	0.00	0.00	0.00
15,300.0	89.90	90.00	10,713.7	-706.3	4,655.5	4,655.5	0.00	0.00	0.00
15,400.0	89.90	90.00	10,713.8	-706.3	4,755.5	4,755.5	0.00	0.00	0.00
15,500.0	89.90	90.00	10,714.0	-706.3	4,855.5	4,855.5	0.00	0.00	0.00
15,600.0	89.90	90.00	10,714.2	-706.3	4,955.5	4,955.5	0.00	0.00	0.00
15,700.0	89.90	90.00	10,714.4	-706.3	5,055.5	5,055.5	0.00	0.00	0.00
15,800.0	89.90	90.00	10,714.5	-706.3	5,155.5	5,155.5	0.00	0.00	0.00
15,900.0	89.90	90.00	10,714.7	-706.3	5,255.5	5,255.5	0.00	0.00	0.00
16,000.0	89.90	90.00	10,714.9	-706.3	5,355.5	5,355.5	0.00	0.00	0.00
16,100.0	89.90	90.00	10,715.1	-706.3	5,455.5	5,455.5	0.00	0.00	0.00
16,200.0	89.90	90.00	10,715.2	-706.3	5,555.5	5,555.5	0.00	0.00	0.00
16,300.0	89.90	90.00	10,715.4	-706.3	5,655.5	5,655.5	0.00	0.00	0.00
16,400.0	89.90	90.00	10,715.6	-706.3	5,755.5	5,755.5	0.00	0.00	0.00
16,500.0	89.90	90.00	10,715.8	-706.3	5,855.5	5,855.5	0.00	0.00	0.00
16,600.0	89.90	90.00	10,715.9	-706.3	5,955.5	5,955.5	0.00	0.00	0.00
16,700.0	89.90	90.00	10,716.1	-706.3	6,055.5	6,055.5	0.00	0.00	0.00
16,800.0	89.90	90.00	10,716.3	-706.3	6,155.5	6,155.5	0.00	0.00	0.00
16,900.0	89.90	90.00	10,716.5	-706.3	6,255.5	6,255.5	0.00	0.00	0.00
17,000.0	89.90	90.00	10,716.6	-706.3	6,355.5	6,355.5	0.00	0.00	0.00
17,100.0	89.90	90.00	10,716.8	-706.3	6,455.5	6,455.5	0.00	0.00	0.00
17,200.0	89.90	90.00	10,717.0	-706.3	6,555.5	6,555.5	0.00	0.00	0.00
17,300.0	89.90	90.00	10,717.1	-706.3	6,655.5	6,655.5	0.00	0.00	0.00
17,400.0	89.90	90.00	10,717.3	-706.3	6,755.5	6,755.5	0.00	0.00	0.00
17,500.0	89.90	90.00	10,717.5	-706.3	6,855.5	6,855.5	0.00	0.00	0.00
17,600.0	89.90	90.00	10,717.7	-706.3	6,955.5	6,955.5	0.00	0.00	0.00
17,700.0	89.90	90.00	10,717.8	-706.3	7,055.5	7,055.5	0.00	0.00	0.00
17,800.0	89.90	90.00	10,718.0	-706.3	7,155.5	7,155.5	0.00	0.00	0.00
17,900.0	89.90	90.00	10,718.2	-706.3	7,255.5	7,255.5	0.00	0.00	0.00
18,000.0	89.90	90.00	10,718.4	-706.3	7,355.5	7,355.5	0.00	0.00	0.00
18,100.0	89.90	90.00	10,718.5	-706.3	7,455.5	7,455.5	0.00	0.00	0.00
18,200.0	89.90	90.00	10,718.7	-706.3	7,555.5	7,555.5	0.00	0.00	0.00
18,300.0	89.90	90.00	10,718.9	-706.3	7,655.5	7,655.5	0.00	0.00	0.00
18,400.0	89.90	90.00	10,719.1	-706.3	7,755.5	7,755.5	0.00	0.00	0.00
18,500.0	89.90	90.00	10,719.2	-706.3	7,855.5	7,855.5	0.00	0.00	0.00
18,600.0	89.90	90.00	10,719.4	-706.3	7,955.5	7,955.5	0.00	0.00	0.00
18,700.0	89.90	90.00	10,719.6	-706.3	8,055.5	8,055.5	0.00	0.00	0.00
18,800.0	89.90	90.00	10,719.8	-706.3	8,155.5	8,155.5	0.00	0.00	0.00
18,900.0	89.90	90.00	10,719.9	-706.3	8,255.5	8,255.5	0.00	0.00	0.00
19,000.0	89.90	90.00	10,720.1	-706.3	8,355.5	8,355.5	0.00	0.00	0.00
19,100.0	89.90	90.00	10,720.3	-706.3	8,455.5	8,455.5	0.00	0.00	0.00
19,200.0	89.90	90.00	10,720.5	-706.3	8,555.5	8,555.5	0.00	0.00	0.00
19,300.0	89.90	90.00	10,720.6	-706.3	8,655.5	8,655.5	0.00	0.00	0.00
19,400.0	89.90	90.00	10,720.8	-706.3	8,755.5	8,755.5	0.00	0.00	0.00

Planning Report

Database:	EDM_new	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,500.0	89.90	90.00	10,721.0	-706.3	8,855.5	8,855.5	0.00	0.00	0.00
19,600.0	89.90	90.00	10,721.2	-706.3	8,955.5	8,955.5	0.00	0.00	0.00
19,700.0	89.90	90.00	10,721.3	-706.3	9,055.5	9,055.5	0.00	0.00	0.00
19,800.0	89.90	90.00	10,721.5	-706.3	9,155.5	9,155.5	0.00	0.00	0.00
19,900.0	89.90	90.00	10,721.7	-706.3	9,255.5	9,255.5	0.00	0.00	0.00
20,000.0	89.90	90.00	10,721.9	-706.3	9,355.5	9,355.5	0.00	0.00	0.00
20,100.0	89.90	90.00	10,722.0	-706.3	9,455.5	9,455.5	0.00	0.00	0.00
20,200.0	89.90	90.00	10,722.2	-706.3	9,555.5	9,555.5	0.00	0.00	0.00
20,300.0	89.90	90.00	10,722.4	-706.3	9,655.5	9,655.5	0.00	0.00	0.00
20,400.0	89.90	90.00	10,722.6	-706.3	9,755.5	9,755.5	0.00	0.00	0.00
20,500.0	89.90	90.00	10,722.7	-706.3	9,855.5	9,855.5	0.00	0.00	0.00
20,600.0	89.90	90.00	10,722.9	-706.3	9,955.5	9,955.5	0.00	0.00	0.00
20,694.5	89.90	90.00	10,723.1	-706.3	10,050.0	10,050.0	0.00	0.00	0.00

Kline Federal 5300 31-18 6B PBHL

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/S (usft)	+E/W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Kline Federal 5300 31	0.00	0.00	10,723.1	-707.0	10,050.0	406,044.57	1,220,101.73	48° 4' 20.506 N	103° 33' 43.389 W

- plan misses target center by 0.7usft at 20694.5usft MD (10723.1 TVD, -706.3 N, 10050.0 E)

- Point

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter ("")	Hole Diameter ("")
2,023.0	2,023.0	13 3/8" Surface	13-3/8	17-1/2
6,101.1	6,101.0	9 5/8" Dakota String	9-5/8	12-1/4
10,978.0	10,706.0	7" Intermediate	7	8-3/4

Planning Report

Database:	EDM_new	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,923.0	1,923.0	Pierre			
4,597.1	4,597.0	Greenhorn			
5,008.1	5,008.0	Mowry			
5,422.1	5,422.0	Dakota			
6,437.2	6,437.0	Rierdon			
6,765.2	6,765.0	Dunham Salt			
6,880.2	6,880.0	Dunham Salt Base			
6,975.2	6,975.0	Spearfish			
7,234.2	7,234.0	Pine Salt			
7,269.2	7,269.0	Pine Salt Base			
7,325.2	7,325.0	Opeche Salt			
7,354.2	7,354.0	Opeche Salt Base			
7,556.2	7,556.0	Broom Creek (Top of Minnelusa Gp.)			
7,635.2	7,635.0	Amsden			
7,804.2	7,804.0	Tyler			
7,998.2	7,998.0	Otter (Base of Minnelusa Gp.)			
8,341.2	8,341.0	Kibbey Lime			
8,493.2	8,493.0	Charles Salt			
9,110.2	9,110.0	UB			
9,189.2	9,189.0	Base Last Salt			
9,252.2	9,252.0	Ratcliffe			
9,395.2	9,395.0	Mission Canyon			
9,963.2	9,963.0	Lodgepole			
10,150.2	10,150.0	Lodgepole Fracture Zone			
10,784.4	10,667.0	False Bakken			
10,808.5	10,676.0	Upper Bakken			
10,862.7	10,692.0	Middle Bakken			
10,909.3	10,701.0	Middle Bakken Sand Target			
13,777.1	10,711.0	Base Middle Bakken Sand Target			

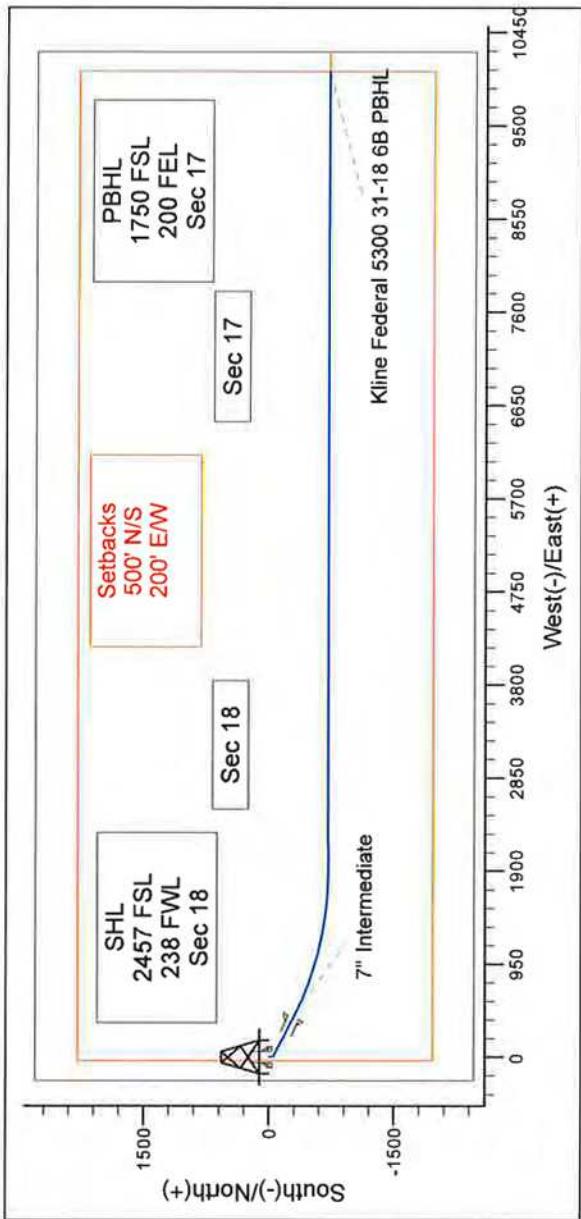
Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
10,228.8	10,228.6	-50.0	0.0	KOP Build 12°/100'
10,978.0	10,706.0	-295.8	408.4	EOC

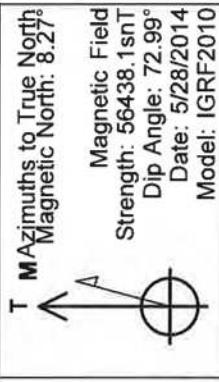
Project: Indian Hills
 Site: 153N-100W_17/18
 Well: Kline Federal 5300 31-18 6B
 Wellbore: Kline Federal 5300 31-18 6B
 Design: Design #1



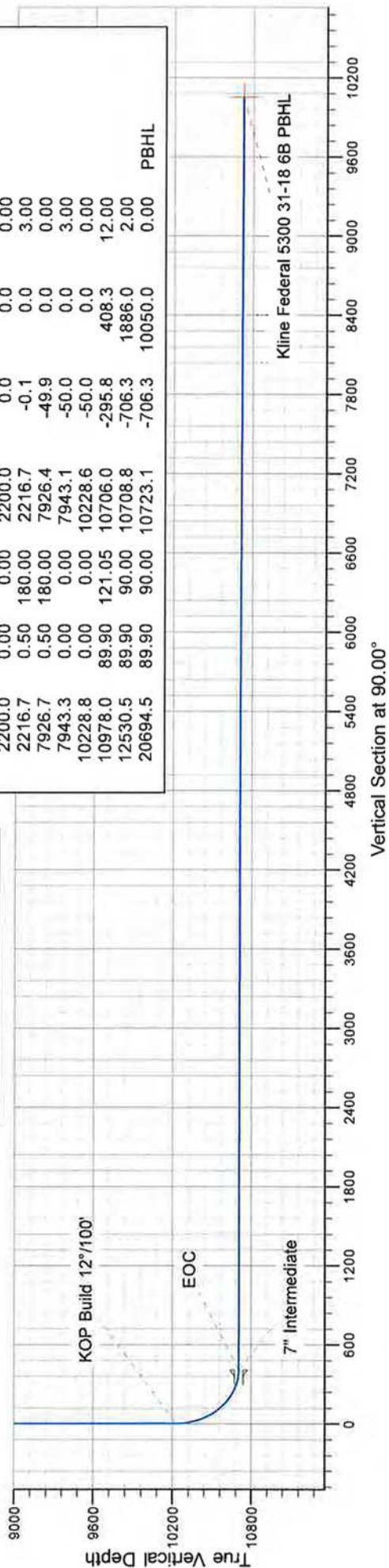
WELL DETAILS: Kline Federal 5300 31-18 6B
 Ground Level: 2008.0
 Northing Easting Latitude Longitude
 407155.92 1210088.38 48° 4' 27.510 N 103° 36' 11.380 W



TVD	MD	Name	Size
2023.0	2023.0	Surface	13-3/8
6101.0	6101.1	Dakota String	9-5/8
10706.0	10978.0	Intermediate	7



SECTION DETAILS					
MD	Inc	Azi	TVD	+N-S	+E-W
0.0	0.00	0.00	0.0	0.0	0.0
2200.0	0.00	0.00	2200.0	0.0	0.0
2216.7	0.50	180.00	2216.7	-0.1	0.0
7926.7	0.50	180.00	7926.4	-49.9	0.0
7943.3	0.00	0.00	7943.1	-50.0	0.0
10228.8	0.00	0.00	10228.6	-50.0	0.0
10978.0	89.90	121.05	10706.0	-295.8	408.3
12530.5	89.90	90.00	10708.8	-706.3	1886.0
20694.5	89.90	90.00	10723.1	-706.3	10050.0
				0.00	PBHL



DRILLING PLAN							
OPERATOR	Oasis Petroleum			COUNTY/STATE	McKenzie Co., ND		
WELL NAME	Kline Federal 5300 31-18 6B			RIG	0		
WELL TYPE	Horizontal Middle Bakken			LOCATION	NWSW 1B-153N 100W		
EST. T.D.	20,695'			Surface Location (survey plat)	2467' tal	238' fwl	
TOTAL LATERA	9,717'			GROUND ELEV:	2008	Finished Pad Elev	
PROGNOSIS:	Based on 2,033 KB(est)			KB ELEV:	2033	Sub Height: 25	
MARKER	DEPTH (Surf Loc)	DATUM (Surf Loc)	LOGS:	Type	Interval		
Pierre	NDIC MAP	1,923		OH Logs: Triple Combo KOP to Kirby (or min run of 1800' whichever is greater); GR/Res to BSC;			
Greenhorn		4,597	(2,564)	GR to surf; CND through the Dakota			
Mowry		5,008	(2,975)	CBL/GR: Above top of cement/GR to base of casing			
Dakota		5,422	(3,389)	MWD GR: KOP to lateral TD			
Rierdon		6,437	(4,404)				
Dunham Salt		6,765	(4,732)				
Dunham Salt Base		6,880	(4,847)				
Spearfish		6,975	(4,942)				
Pine Salt		7,234	(5,201)				
Pine Salt Base		7,269	(5,236)				
Opeche Salt		7,325	(5,292)				
Opeche Salt Base		7,354	(5,321)				
Broom Creek (Top of Minnelusa Gp)		7,556	(5,523)				
Amsden		7,635	(5,602)				
Tyler		7,804	(5,771)				
Otter (Base of Minnelusa Gp)		7,998	(5,965)				
Kibbey Lime		8,341	(6,308)				
Charles Salt		8,493	(6,460)				
UB		9,110	(7,077)				
Base Last Salt		9,189	(7,156)				
Ratcliffe		9,252	(7,219)				
Mission Canyon		9,395	(7,362)				
Lodgepole		9,963	(7,930)				
Lodgepole Fracture Zone		10,150	(8,117)				
False Bakken		10,667	(8,634)				
Upper Bakken		10,676	(8,643)				
Middle Bakken		10,692	(8,659)				
Middle Bakken Sand Target		10,701	(8,668)				
Base Middle Bakken Sand Target		10,711	(8,678)				
Lower Bakken		10,726	(8,693)				
Three Forks		10,754	(8,721)				
Dip Rate:	0.1						
Max. Anticipated BHP:	4648			Surface Formation: Glacial till			
MUD:	Interval	Type	WT	VIS	WL	Remarks	
Surface:	0' -	2,023' FW/Gel - Lime Sweeps	8 4-9.0	28-32	NC	Circ Mud Tanks	
Intermediate:	2,023' -	10,978' Invert	9 5-10 4	40-50	30+HHp	Circ Mud Tanks	
Lateral:	10,978' -	20,695' Salt Water	9 8-10 2	28-32	NC	Circ Mud Tanks	
CASING:	Size	Wt ppf	Hole	Depth	Cement	WOC	Remarks
Surface:	13-3/8"	54.5#	17-1/2"	2,023'	To Surface	12	100' into Pierre
Dakota Contingency:	9-5/8"	40#	12-1/4"	6,101'	To Surface	12	Below Dakota
Intermediate:	7"	29/32#	8-3/4"	10,978'	3922	24	1500' above Dakota
Production Liner:	4.5"	13.5#	6"	20,695'	TOL @ 10,179'		50' above KOP
PROBABLE PLUGS, IF REQ'D:							
OTHER:	MD	TVD	FNL/FSL	FEL/FWL	S-T-R	AZI	
Surface:	2,023	2,023	2457' FSL	238' FWL	SEC 18-T153N-R100W		
KOP:	10,229'	10,229'	2407' FSL	238' FWL	SEC 18-T153N-R100W		
EOC:	10,978'	10,706'	2161' FSL	646' FWL	SEC 18-T153N-R100W	121.05	Build Rate: 12 deg /100'
Casing Point:	10,978'	10,706'	2161' FSL	646' FWL	SEC 18-T153N-R100W	121.05	
Middle Bakken Lateral TD:	20,695'	10,723'	1750' FSL	200' FEL	SEC 17-T153N-R100W	90.00	
Comments:							
Request a Sundry for an Open Hole Log Waiver							
Exception well: Oasis Petroleum's Kline Federal 5300 31-18H (153N 100W 18 NW NW)							
Completion Notes: 35 packers, 35 sleeves, no frac string							
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)							
OASIS PETROLEUM							
Geology: M. Steed 5/12/2014			Engineering: hibader rpm 7/17/14				

**Oasis Petroleum
Well Summary**
Kline Federal 5300 31-18 6B
Section 18 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
13-3/8"	0' to 2,023'	54.5	J-55	STC	12.615"	12.459"	4,100	5,470	6,840

Interval	Description	Collapse	Burst	Tension
		(psi) a	(psi) b	(1000 lbs) c
0' to 2,023'	13-3/8", 54.5#, J-55, STC, 8rd	1130 / 1.19	2730 / 2.88	514 / 2.61

API Rating & Safety Factor

- a) Collapse pressure based on full casing evacuation with 9 ppg fluid on backside (2,023' setting depth).
- b) Burst pressure based on 9 ppg fluid with no fluid on backside (2,023' setting depth).
- c) Based on string weight in 9 ppg fluid at 2,023' TVD plus 100k# overpull. (Buoyed weight equals 95k 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: **635 sks** (328 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: **349 sks** (72 bbls) 1.16 yield conventional system with 94 lb/sk cement, .25% CaCl₂ and 0.25 lb/sk Lost Circulation Control Agent

**Oasis Petroleum
Well Summary**
Kline Federal 5300 31-18 6B
Section 18 T153N R100W
McKenzie County, ND

CONTINGENCY SURFACE CASING AND CEMENT DESIGN

Make-up Torque (ft-lbs)									
Size	Interval	Weight	Grade	Coupling	I.D.	Drift	Minimum	Optimum	Max
9-5/8"	0' to 6,101'	40	HCL-80	LTC	8.835"	8.75"	5,450	7,270	9,090

Interval	Description	Collapse	Burst	Tension
		(psi) a	(psi) b	(1000 lbs) c
0' to 6,101'	9-5/8", 40#, HCL-80, LTC, 8rd	4230 / 2.13	5750 / 3.72	837 / 2.78

API Rating & Safety Factor

- a) Collapse pressure based on 11.5 ppg fluid on the backside and 9 ppg fluid inside of casing.
- b) Burst pressure calculated from a gas kick coming from the production zone (Bakken Pool) at 9,000 psi and a subsequent breakdown at the 9-5/8" shoe, based on a 13.5#/ft fracture gradient. Backup of 9 ppg fluid.
- c) Yield based on string weight in 10 ppg fluid, (207k lbs buoyed weight) plus 100k lbs overpull.

Cement volumes are based on 9-5/8" casing set in 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: **598 sks** (309 bbls) Conventional system with 75 lb/sk cement, 0.5 lb/sk lost circulation, 10% expanding agent, 2% extender, 2% CaCl₂, 0.2% anti-foam and 0.4% fluid loss agent.

Tail Slurry: **349 sks** (72 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**
Kline Federal 5300 31-18 6B
Section 18 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' – 6,615'	29	P-110	LTC	6.184"	6.059"	5,980	7,970	9,960
7"	6,615' – 10,229'	32	HCP-110	LTC	6.094"	6.000***	6,730	8,970	11,210
7"	10,229' – 10,978'	29	P-110	LTC	6.184"	6.059"	5,980	7,970	9,960

***Special drift 7" 32# to 6.0"

Interval	Length	Description	Collapse	Burst	Tension
			(psi) a	(psi) b	(1000 lbs) c
0' – 6,615'	6,615 '	7", 29#, P-110, LTC, 8rd	8530 / 2.47*	11220 / 1.19	797 / 2.10
6,615' – 10,229'	3,614'	7", 32#, HCP-110, LTC, 8rd	11820 / 2.22*	12460 / 1.29	
6,615' – 10,229'	3,614'	7", 32#, HCP-110, LTC, 8rd	11820 / 1.08**	12460 / 1.29	
10,229' – 10,978'	749'	7", 29 lb, P-110, LTC, 8rd	8530 / 1.53*	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 10,706' TVD.
- c) Based on string weight in 10 ppg fluid, (279k lbs buoyed weight) plus 100k

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: **177 sks** (82 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, 0.5 lb/sk, D130 LCM.

Tail Slurry: **607 sks** (168 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 and 0.5 lb/sk LCM.

**Oasis Petroleum
Well Summary**
Kline Federal 5300 31-18 6B
Section 18 T153N R100W
McKenzie County, ND

PRODUCTION LINER

Size	Interval	Weight	Grade	Coupling	I.D.	Drift	Estimated Torque
4-1/2"	10,179' – 20,695'	13.5	P-110	BTC	3.92"	3.795"	4,500

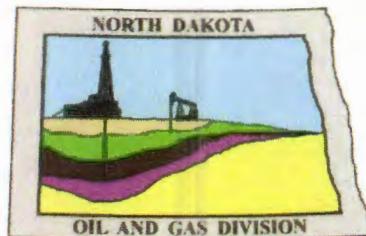
Interval	Description	Collapse	Burst	Tension
		(psi) a	(psi) b	(1000 lbs) c
10,179' – 20,695'	4-1/2", 13.5 lb, P-110, BTC, 8rd	10680 / 2.01	12410 / 1.28	443 / 2.0

API Rating & Safety Factor

- a) Based on full casing evacuation with 9.5 ppg fluid on backside @ 10,723' TVD.
- b) Burst pressure based on 9000 psi treating pressure with 10.2 ppg internal fluid gradient and 9 ppg external fluid gradient @ 10,723' TVD.
- c) Based on string weight in 9.5 ppg fluid (Buoyed weight: 121k 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)



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

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

Date: 7/7/2014

RE: CORES AND SAMPLES

Well Name: **KLINE FEDERAL 5300 31-18 6B** Well File No.: **28756**
Location: **LOT3 18-153-100** 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:
 - o 30' maximum intervals through all vertical and build sections.
 - o 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
SFN 5749 (09-2006)



Well File No.
28756

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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date June 15, 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	Variance to Rule 43-02-03-31

Well Name and Number
Kline Federal 5300 31-18 6B

Footages 2457 F S L	238 F W L	Qtr-Qtr Lot 3	Section 18	Township 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

Oasis Petroleum North America, LLC requests a variance to rule 43-02-03-31 requiring electrical, radioactive or other similar logs to be run to determine formation tops and zones of porosity. The surface location of this well will be very near our Kline Federal 5300 11-18H (API #33-053-03426 NDIC # 20275) in Lot 1, Section 18, T153N, R100W and the logs run on this well should be sufficient to determine formation tops in the vertical section of the well bore. As outlined in our application for permit to drill, Oasis Petroleum North America, LLC will run gamma ray logs from KOP to the total depth and cement bond log from the production casing total depth to surface. Two digital copies of all mud logs (one tif and one las) will be submitted to the NDIC.

Approved per #20275

Company Oasis Petroleum North America, LLC	Telephone Number (281) 404-9562	
Address 1001 Fannin, Suite 1500		
City Houston	State TX	Zip Code 77002
Signature <i>Lauri M. Stanfield</i>	Printed Name Lauri M. Stanfield	
Title Regulatory Specialist	Date May 30, 2014	
Email Address Istanfield@oasispetroleum.com		

FOR STATE USE ONLY

<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date 6-30-2014	
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.
28756

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

Notice of Intent

Approximate Start Date
June 15, 2014

Report of Work Done

Date Work Completed

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

Approximate Start Date

Drilling Prognosis

Spill Report

Redrilling or Repair

Shooting

Casing or Liner

Acidizing

Plug Well

Fracture Treatment

Supplemental History

Change Production Method

Temporarily Abandon

Reclamation

Other

NDAC 43-02-03-55 Waiver

Well Name and Number

Kline Federal 5300 31-18 6B

Footages	Qtr-Qtr	Section	Township	Range
2457 F S L	238 F W L	Lot 3	18	153 N 100 W
Field Baker	Pool Bakken		County McKenzie	

24-HOUR PRODUCTION RATE

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

Name of Contractor(s)

Advanced Energy Services

Address

City

State

Zip Code

DETAILS OF WORK

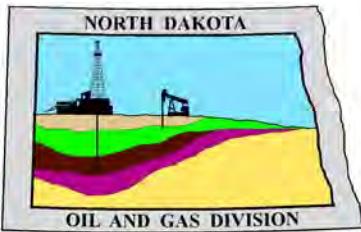
Oasis requests permission for suspension of drilling for up to 90 days for the referenced well under NDAC 43-02-03-55. Oasis intends to drill the surface hole with freshwater based drilling mud and set surface casing with a small drilling rig and move off within 3 to 5 days. The casing will be set at 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 understands NDAC 43-02-03-31 requirements regarding confidentiality pertaining to this permit. The lined reserve pit will be fenced immediately after construction if the well pad is located in a pasture (NDAC 43-02-03-19 & 19.1). Oasis 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) 404-9562	
Address 1001 Fannin, Suite 1500		
City Houston	State TX	Zip Code 77002
Signature 	Printed Name Lauri M. Stanfield	
Title Regulatory Specialist	Date May 30, 2014	
Email Address Istanfield@oasispetroleum.com		

FOR STATE USE ONLY

<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date 6/30/14	
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 30, 2014

Lauri M. Stanfield
Regulatory Specialist
OASIS PETROLEUM NORTH AMERICA LLC
1001 Fannin Street Suite 1500
Houston, TX 77002

**RE: HORIZONTAL WELL
KLINE FEDERAL 5300 31-18 6B
LOT3 Section 18-153N-100W
McKenzie County
Well File # 28756**

Dear Lauri:

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 Sections 17 & 18 T153N R100W.

PERMIT STIPULATIONS: 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. Due to the proximity of Lake Sakakawea to the well site, a dike is required surrounding the entire location. 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: 10051' 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 06 / 15 / 2014	Confidential Status No
Operator OASIS PETROLEUM NORTH AMERICA LLC		Telephone Number 281-404-9562	
Address 1001 Fannin Street 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 KLINE FEDERAL				Well Number 5300 31-18 6B			
Surface Footages 2457 F S L		Qtr-Qtr LOT3	Section 18	Township 153 N	Range 100 W	County McKenzie	
Longstring Casing Point Footages 2161 F S L		Qtr-Qtr LOT3	Section 18	Township 153 N	Range 100 W	County McKenzie	
Longstring Casing Point Coordinates From Well Head 296 S From WH 408 E From WH		Azimuth 90 °	Longstring Total Depth 10978 Feet MD 10706 Feet TVD				
Bottom Hole Footages From Nearest Section Line 1751 F S L		Qtr-Qtr NESE	Section 17	Township 153 N	Range 100 W	County McKenzie	
Bottom Hole Coordinates From Well Head 706 S From WH 10050 E From WH		KOP Lateral 1 10229 Feet MD		Azimuth Lateral 1 90 °		Estimated Total Depth Lateral 1 20695 Feet MD 10723 Feet TVD	
Latitude of Well Head 48 ° 04 ' 27.51 "		Longitude of Well Head -103 ° 36 ' 11.38 "		NAD Reference NAD83		Description of Spacing Unit: Sections 17 & 18 T153N R100W (Subject to NDIC Approval)	
Ground Elevation 2020 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 10545 Feet		South Line of Spacing/Drilling Unit 10489 Feet		East Line of Spacing/Drilling Unit 5244 Feet		West Line of Spacing/Drilling Unit 5257 Feet	
Objective Horizons Bakken Pierre Shale Top 1923							
Proposed Surface Casing	Size 9 - 5/8 "	Weight 36 Lb./Ft.	Depth 2023 Feet	Cement Volume 736 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 10978 Feet MD 10706 Feet TVD			Cement Volume 751 Sacks	Cement Top 3922 Feet Top Dakota Sand 5422 Feet
Base Last Charles Salt (If Applicable) 9189 Feet		NOTE: Intermediate or longstring casing string must be cemented above the top Dakota Group Sand.					
Proposed Logs Triple Combo: KOP to Kibbey 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

Lateral 2

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

Lateral 3

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

Lateral 4

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

Lateral 5

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

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

Date

05 / 30 / 2014

ePermit

Printed Name

Lauri M. Stanfield

Title

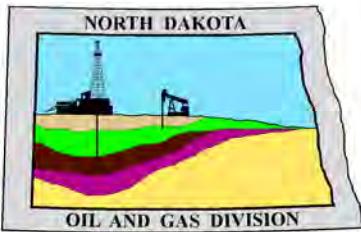
Regulatory Specialist

FOR STATE USE ONLY

Permit and File Number 28756	API Number 33 - 053 - 06057
Field BAKER	
Pool BAKKEN	Permit Type DEVELOPMENT

FOR STATE USE ONLY

Date Approved 6 / 30 / 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.

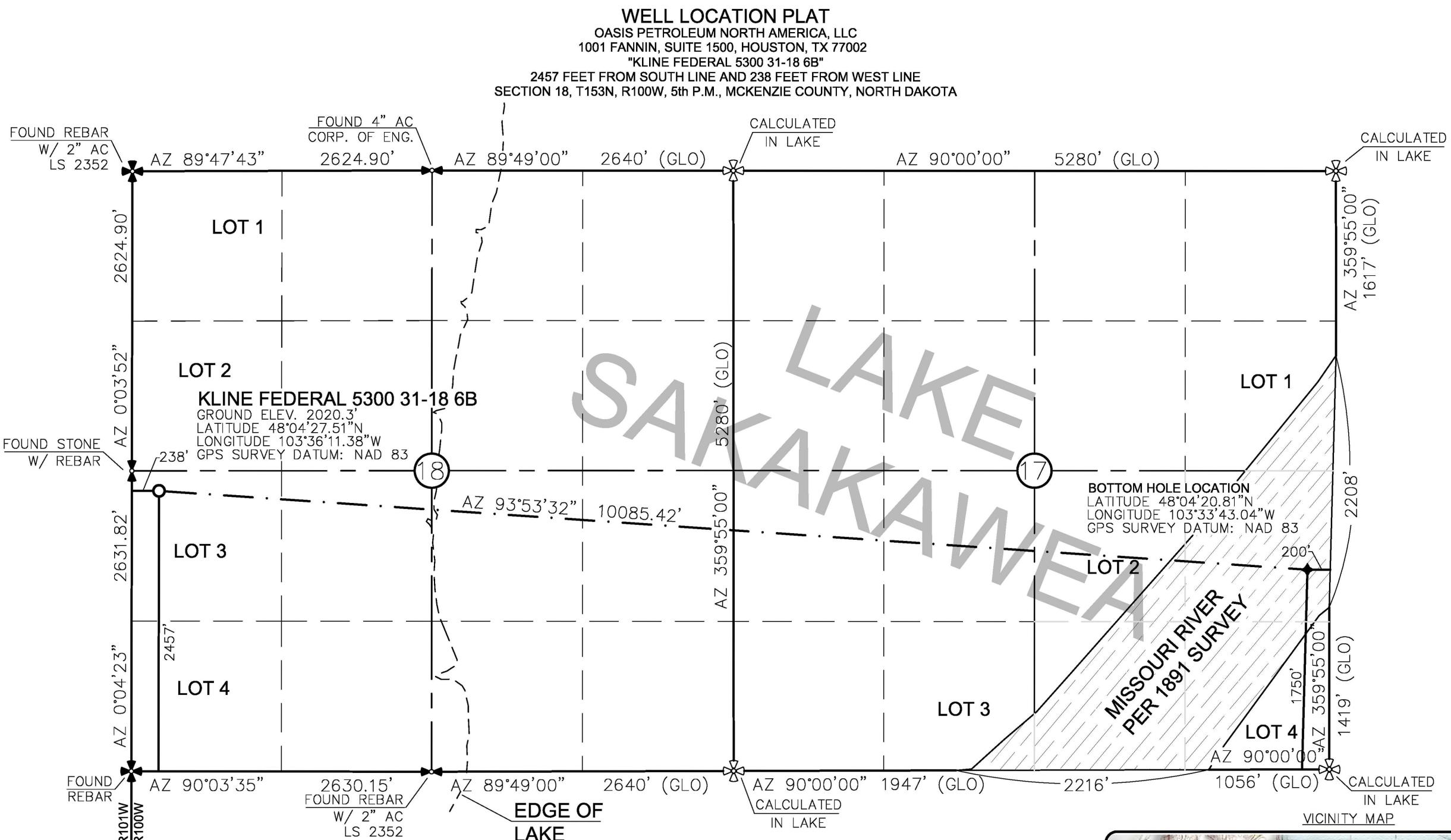
As previously stated in our March 13, 2014 letter, North Dakota Administrative Code Section 33-20-02.1-01 states in part that every person who transports solid waste (which includes oil and gas exploration and production wastes) is required to have a valid permit issued by the North Dakota Department 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

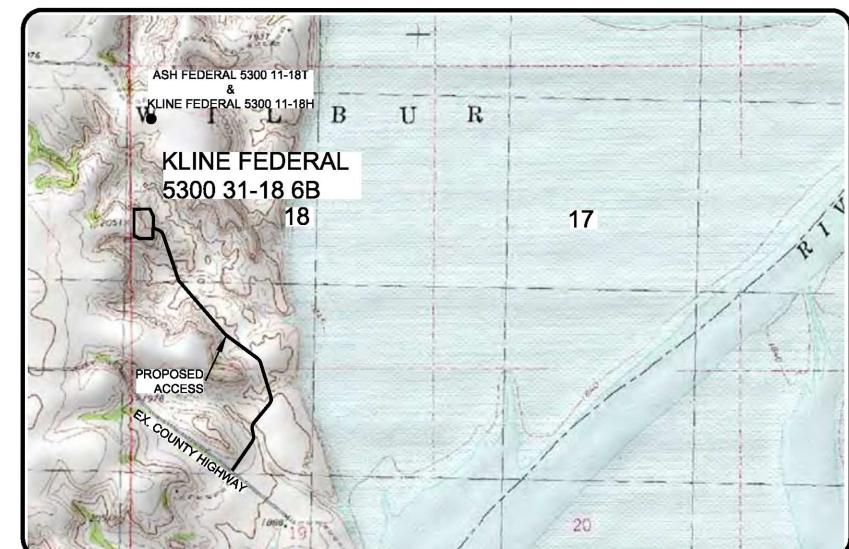
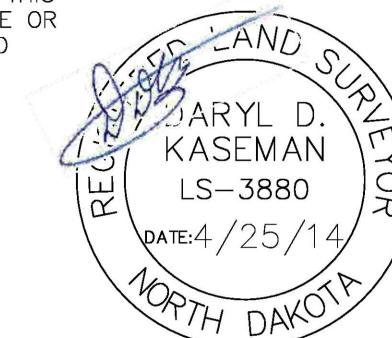
Assistant Director



THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY DARYL D. KASEMAN, PLS, REGISTRATION NUMBER 3880 ON 4/25/14 AND THE ORIGINAL DOCUMENTS ARE STORED AT THE OFFICES OF INTERSTATE ENGINEERING, INC.

- MONUMENT - RECOVERED
- MONUMENT - NOT RECOVERED

DARYL D. KASEMAN LS-3880



DRILLING PLAN								
OPERATOR	Oasis Petroleum	COUNTY/STATE	McKenzie Co., ND					
WELL NAME	Kline Federal 5300 31-18 6B	RIG	0					
WELL TYPE	Horizontal Middle Bakken	Surface Location (survey plat):	2457' fsl 238' fwl					
LOCATION	NWSW 18-153N-100W	GROUND ELEV:	2008	Finished Pad Elev.	Sub Height:	25		
EST. T.D.	20,695'	KB ELEV:	2033					
TOTAL LATERA	9,717'	LOGS:	Type	Interval				
PROGNOSIS:	Based on 2,033' KB(est)	OH Logs:	Triple Combo KOP to Kirby (or min run of 1800' whichever is greater); GR/Res to BSC; GR to surf; CND through the Dakota					
MARKER	DEPTH (Surf Loc)	DATUM (Surf Loc)	CBL/GR:	Above top of cement/GR to base of casing				
Pierre	NDIC MAP	1,923	110	MWD GR:	KOP to lateral TD			
Greenhorn		4,597	(2,564)					
Mowry		5,008	(2,975)					
Dakota		5,422	(3,389)					
Rierdon		6,437	(4,404)					
Dunham Salt		6,765	(4,732)					
Dunham Salt Base		6,880	(4,847)					
Spearfish		6,975	(4,942)					
Pine Salt		7,234	(5,201)					
Pine Salt Base		7,269	(5,236)					
Opeche Salt		7,325	(5,292)					
Opeche Salt Base		7,354	(5,321)					
Broom Creek (Top of Minnelusa Gp.)		7,556	(5,523)					
Amsden		7,635	(5,602)					
Tyler		7,804	(5,771)					
Otter (Base of Minnelusa Gp.)		7,998	(5,965)					
Kibbey Lime		8,341	(6,308)					
Charles Salt		8,493	(6,460)					
UB		9,110	(7,077)					
Base Last Salt		9,189	(7,156)					
Ratcliffe		9,252	(7,219)					
Mission Canyon		9,395	(7,362)					
Lodgepole		9,963	(7,930)					
Lodgepole Fracture Zone		10,150	(8,117)					
False Bakken		10,667	(8,634)					
Upper Bakken		10,676	(8,643)					
Middle Bakken		10,692	(8,659)					
Middle Bakken Sand Target		10,701	(8,668)					
Base Middle Bakken Sand Target		10,711	(8,678)					
Lower Bakken		10,726	(8,693)					
Three Forks		10,754	(8,721)					
Dip Rate:	-0.1							
Max. Anticipated BHP:	4648							
MUD:	Interval	Type	WT	Vis	WL	Remarks		
Surface:	0' -	2,023'	FW/Gel - Lime Sweeps	8.4-9.0	28-32	NC	Circ Mud Tanks	
Intermediate:	2,023' -	10,978'	Invert	9.5-10.4	40-50	30+HtHp	Circ Mud Tanks	
Lateral:	10,978' -	20,695'	Salt Water	9.8-10.2	28-32	NC	Circ Mud Tanks	
CASING:	Size	Wt ppf	Hole	Depth	Cement	WOC	Remarks	
Surface:	9-5/8"	36#	13-1/2"	2,023'	To Surface	12	100' into Pierre	
Intermediate:	7"	29/32#	8-3/4"	10,978'	3922	24	1500' above Dakota	
Production Liner:	4.5"	11.6#	6"	20,695'	TOL @ 10,179'		50' above KOP	
PROBABLE PLUGS, IF REQ'D:								
OTHER:	MD	TVD	FNL/FSL	FEL/FWL	S-T-R	AZI		
Surface:	2,023	2,023	2457' FSL	238' FWL	SEC 18-T153N-R100W	Survey Company:		
KOP:	10,229'	10,229'	2407' FSL	238' FWL	SEC 18-T153N-R100W	Build Rate:	12 deg /100'	
EOC:	10,978'	10,706'	2161' FSL	646' FWL	SEC 18-T153N-R100W			
Casing Point:	10,978'	10,706'	2161' FSL	646' FWL	SEC 18-T153N-R100W			
Middle Bakken Lateral TD:	20,695'	10,723'	1750' FSL	200' FEL	SEC 17-T153N-R100W			
Comments:								
Request a Sundry for an Open Hole Log Waiver								
Exception well: Oasis Petroleum's Kline Federal 5300 11-18H (153N 100W 18 NW NW)								
Completion Notes: 35 packers, 35 sleeves, no frac string								
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: M. Steed 5/12/2014				Engineering: hlbader rpm 5/30/14				

Oasis Petroleum
Well Summary
Kline Federal 5300 31-18 6B
Section 18 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' to 2,023'	36	J-55	LTC	8.921"	8.765"	3400	4530	5660

Interval	Description	Collapse	Burst	Tension	Cost per ft
		(psi) a	(psi) b	(1000 lbs) c	
0' to 2,023'	9-5/8", 36#, J-55, LTC, 8rd	2020 / 2.13	3520 / 3.72	453 / 2.78	

API Rating & Safety Factor

- a) Based on full casing evacuation with 9 ppg fluid on backside (2,023' setting depth).
- b) Burst pressure based on 9 ppg fluid with no fluid on backside (2,023' setting depth).
- c) Based on string weight in 9 ppg fluid at 2,023' TVD plus 100k# overpull. (Buoyed weight equals 63k 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: **436 sks** (225 bbls) Conventional system with 94 lb/sk cement, 4% extender, 2% expanding agent, 2% CaCl₂ and 0.25 lb/sk lost circulation control agent

Tail Slurry: **300 sks** (62 bbls) Conventional system with 94 lb/sk cement, 3% NaCl, and 0.25 lb/sk lost circulation control agent

Oasis Petroleum
Well Summary
Kline Federal 5300 31-18 6B
Section 18 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' – 6,565'	29	P-110	LTC	6.184"	6.059"	5,980	7,970	8,770
7"	6,565' – 10,229'	32	HCP-110	LTC	6.094"	6.000***	6,730	8,970	9,870
7"	10,229' – 10,978'	29	P-110	LTC	6.184"	6.059"	5,980	7,970	8,770

***Special drift

Interval	Length	Description	Collapse	Burst	Tension
			(psi) a	(psi) b	(1000 lbs) c
0' – 6,565'	6,565 '	7", 29#, P-110, LTC, 8rd	8530 / 2.50*	11220 / 1.19	797 / 2.10
6,565' – 10,229'	3,664'	7", 32#, HCP-110, LTC, 8rd	11820 / 2.22*	12460 / 1.29	
6,565' – 10,229'	3,664'	7", 32#, HCP-110, LTC, 8rd	11820 / 1.07**	12460 / 1.29	
10,229' – 10,978'	749'	7", 29 lb, P-110, LTC, 8rd	8530 / 1.53*	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. (Bottom of last salt 9,189' TVD)
- 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 10,706' TVD.
- c) Based on string weight in 10 ppg fluid, (279k lbs buoyed weight) plus 100k

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

Pre-flush (Spacer): **170 bbls** Saltwater
20 bbls CW8 System
10 bbls Fresh Water

Lead Slurry: **177 sks** (82 bbls) Conventional system with 47 lb/sk cement, 10% NaCl, 34 lb/sk extender, 10% D020 extender, 1% D079 extender, 1% anti-settling agent, 1% fluid loss agent, 0.2% anti-foam agent, 0.7% retarder, 0.125 lb/sk lost circulation control agent, and 0.3% dispersant

Tail Slurry: **574 sks** (168 bbls) Conventional system with 94 lb/sk cement, 10% NaCl, 35% Silica, 0.2% fluid loss agent, 0.8% dispersant, 0.125 lb/sk lost circulation control agent and 0.3% retarder

Oasis Petroleum
Well Summary
Kline Federal 5300 31-18 6B
Section 18 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"	10,179' – 20,695'	11.6	P-110	BTC	4.000"	3.875"			

Interval	Description	Collapse (psi) a	Burst (psi) b	Tension (1000 lbs) c	Cost per ft
10,179' – 20,695'	4-1/2", 11.6 lb, P-110, BTC, 8rd	7560 / 1.43	10690 / 1.11	385 / 1.89	

API Rating & Safety Factor

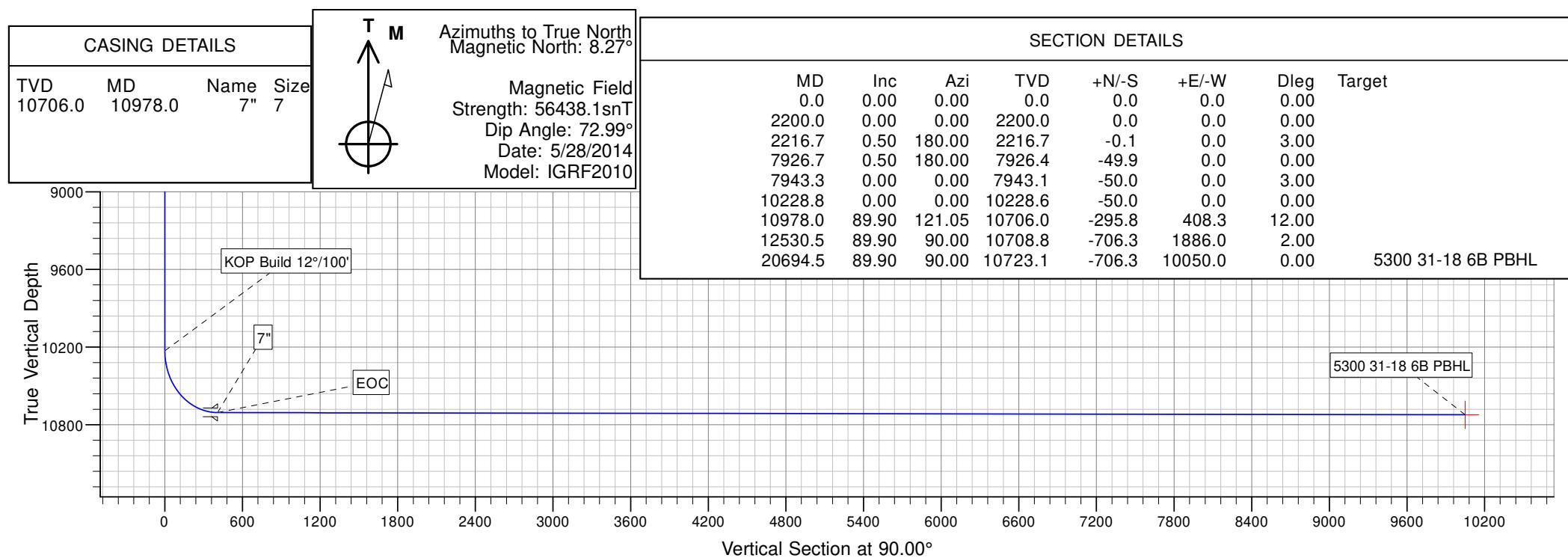
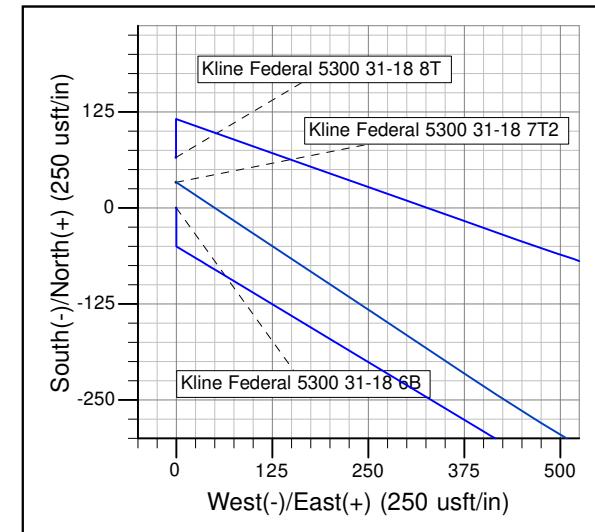
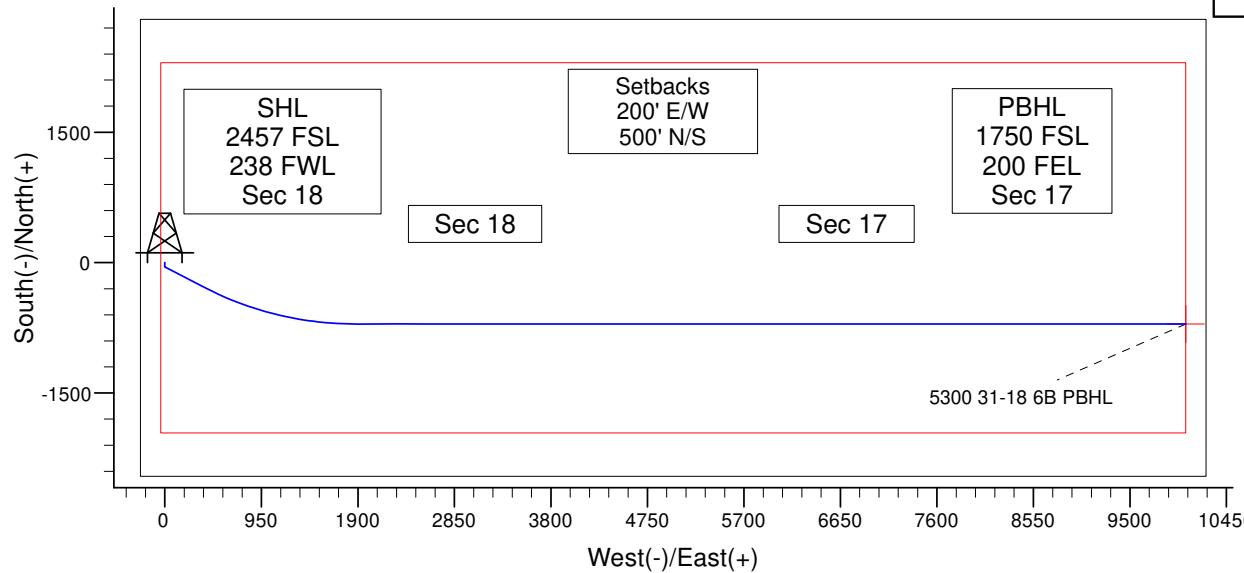
- a) Based on full casing evacuation with 9.5 ppg fluid on backside @ 10,706' TVD.
 Burst pressure based on 9000 psi treating pressure with 10.2 ppg internal fluid gradient and 9 ppg external
- b) fluid gradient @ 10,706' TVD.
- c) Based on string weight in 9.5 ppg fluid (Buoyed weight: 104k lbs.) plus 100k lbs overpull.

Project: Indian Hills
 Site: 153N-100W-17/18
 Well: Kline Federal 5300 31-18 6B
 Wellbore: Kline Federal 5300 31-18 6B
 Design: Design #1



WELL DETAILS: Kline Federal 5300 31-18 6B

Northing 407155.92	Easting 1210088.38	Latitude 48° 4' 27.510 N	Longitude 103° 36' 11.380 W
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Oasis

Indian Hills

153N-100W-17/18

Kline Federal 5300 31-18 6B

Kline Federal 5300 31-18 6B

Plan: Design #1

Standard Planning Report

30 May, 2014

Planning Report

Database: edm	Local Co-ordinate Reference: Well Kline Federal 5300 31-18 6B
Company: Oasis	TVD Reference: WELL @ 2033.0usft (Original Well Elev)
Project: Indian Hills	MD Reference: WELL @ 2033.0usft (Original Well Elev)
Site: 153N-100W-17/18	North Reference: True
Well: Kline Federal 5300 31-18 6B	Survey Calculation Method: Minimum Curvature
Wellbore: Kline Federal 5300 31-18 6B	
Design: Design #1	

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

Site	153N-100W-17/18
Site Position:	
From:	Lat/Long
Position Uncertainty:	0.0 usft

Northing: 408,962.44 usft **Latitude:** 48° 4' 45.380 N
Easting: 1,210,229.18 usft **Longitude:** 103° 36' 10.380 W
Slot Radius: 13-3/16 " **Grid Convergence:** -2.31 °

Well	Kline Federal 5300 31-18 6B
Well Position	+N/S -1,810.7 usft Northing: 407,155.92 usft Latitude: 48° 4' 27.510 N +E/W -67.9 usft Easting: 1,210,088.38 usft Longitude: 103° 36' 11.380 W
Position Uncertainty	2.0 usft Wellhead Elevation: Ground Level: 2,008.0 usft

Wellbore	Kline Federal 5300 31-18 6B
Magnetics	Model Name IGRF2010 Sample Date 5/28/2014 Declination (°) 8.27 Dip Angle (°) 72.99 Field Strength (nT) 56,438

Design	Design #1
Audit Notes:	
Version:	
Phase:	
PROTOTYPE	
Tie On Depth:	
0.0	
Vertical Section:	
Depth From (TVD) (usft)	
0.0	
+N/S (usft)	
0.0	
+E/W (usft)	
0.0	
Direction (°)	
90.00	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00
2,216.7	0.50	180.00	2,216.7	-0.1	0.0	3.00	3.00	0.00	180.00	
7,926.7	0.50	180.00	7,926.4	-49.9	0.0	0.00	0.00	0.00	0.00	
7,943.3	0.00	0.00	7,943.1	-50.0	0.0	3.00	-3.00	0.00	180.00	
10,228.8	0.00	0.00	10,228.6	-50.0	0.0	0.00	0.00	0.00	0.00	
10,978.0	89.90	121.05	10,706.0	-295.8	408.3	12.00	12.00	0.00	121.05	
12,530.5	89.90	90.00	10,708.8	-706.3	1,886.0	2.00	0.00	-2.00	-90.03	
20,694.5	89.90	90.00	10,723.1	-706.3	10,050.0	0.00	0.00	0.00	0.00	5300 31-18 6B PBI-

Planning Report

Database:	edm	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	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
1,000.0	0.00	0.00	1,000.0	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
1,923.0	0.00	0.00	1,923.0	0.0	0.0	0.0	0.00	0.00	0.00
Pierre									
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,216.7	0.50	180.00	2,216.7	-0.1	0.0	0.0	3.00	3.00	0.00
2,500.0	0.50	180.00	2,500.0	-2.5	0.0	0.0	0.00	0.00	0.00
3,000.0	0.50	180.00	3,000.0	-6.9	0.0	0.0	0.00	0.00	0.00
3,500.0	0.50	180.00	3,500.0	-11.3	0.0	0.0	0.00	0.00	0.00
4,000.0	0.50	180.00	3,999.9	-15.6	0.0	0.0	0.00	0.00	0.00
4,500.0	0.50	180.00	4,499.9	-20.0	0.0	0.0	0.00	0.00	0.00
4,597.1	0.50	180.00	4,597.0	-20.8	0.0	0.0	0.00	0.00	0.00
Greenhorn									
5,000.0	0.50	180.00	4,999.9	-24.4	0.0	0.0	0.00	0.00	0.00
5,008.1	0.50	180.00	5,008.0	-24.4	0.0	0.0	0.00	0.00	0.00
Mowry									
5,422.1	0.50	180.00	5,422.0	-28.0	0.0	0.0	0.00	0.00	0.00
Dakota									
5,500.0	0.50	180.00	5,499.9	-28.7	0.0	0.0	0.00	0.00	0.00
6,000.0	0.50	180.00	5,999.9	-33.1	0.0	0.0	0.00	0.00	0.00
6,437.2	0.50	180.00	6,437.0	-36.9	0.0	0.0	0.00	0.00	0.00
Rierdon									
6,500.0	0.50	180.00	6,499.8	-37.5	0.0	0.0	0.00	0.00	0.00
6,765.2	0.50	180.00	6,765.0	-39.8	0.0	0.0	0.00	0.00	0.00
Dunham Salt									
6,880.2	0.50	180.00	6,880.0	-40.8	0.0	0.0	0.00	0.00	0.00
Dunham Salt Base									
6,975.2	0.50	180.00	6,975.0	-41.6	0.0	0.0	0.00	0.00	0.00
Spearfish									
7,000.0	0.50	180.00	6,999.8	-41.8	0.0	0.0	0.00	0.00	0.00
7,234.2	0.50	180.00	7,234.0	-43.9	0.0	0.0	0.00	0.00	0.00
Pine Salt									
7,269.2	0.50	180.00	7,269.0	-44.2	0.0	0.0	0.00	0.00	0.00
Pine Salt Base									
7,325.2	0.50	180.00	7,325.0	-44.7	0.0	0.0	0.00	0.00	0.00
Opecche Salt									
7,354.2	0.50	180.00	7,354.0	-44.9	0.0	0.0	0.00	0.00	0.00
Opecche Salt Base									
7,500.0	0.50	180.00	7,499.8	-46.2	0.0	0.0	0.00	0.00	0.00
7,556.2	0.50	180.00	7,556.0	-46.7	0.0	0.0	0.00	0.00	0.00
Broom Creek (Top of Minnelusa Gp.)									
7,635.2	0.50	180.00	7,635.0	-47.4	0.0	0.0	0.00	0.00	0.00
Amsden									
7,804.2	0.50	180.00	7,804.0	-48.8	0.0	0.0	0.00	0.00	0.00
Tyler									
7,926.7	0.50	180.00	7,926.4	-49.9	0.0	0.0	0.00	0.00	0.00
7,943.3	0.00	0.00	7,943.1	-50.0	0.0	0.0	3.00	-3.00	0.00
7,998.2	0.00	0.00	7,998.0	-50.0	0.0	0.0	0.00	0.00	0.00
Otter (Base of Minnelusa Gp.)									

Planning Report

Database:	edm	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,000.0	0.00	0.00	7,999.8	-50.0	0.0	0.0	0.00	0.00	0.00	
8,341.2	0.00	0.00	8,341.0	-50.0	0.0	0.0	0.00	0.00	0.00	
Kibbey Lime										
8,493.2	0.00	0.00	8,493.0	-50.0	0.0	0.0	0.00	0.00	0.00	
Charles Salt										
8,500.0	0.00	0.00	8,499.8	-50.0	0.0	0.0	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,999.8	-50.0	0.0	0.0	0.00	0.00	0.00	
9,110.2	0.00	0.00	9,110.0	-50.0	0.0	0.0	0.00	0.00	0.00	
UB										
9,189.2	0.00	0.00	9,189.0	-50.0	0.0	0.0	0.00	0.00	0.00	
Base Last Salt										
9,252.2	0.00	0.00	9,252.0	-50.0	0.0	0.0	0.00	0.00	0.00	
Ratcliffe										
9,395.2	0.00	0.00	9,395.0	-50.0	0.0	0.0	0.00	0.00	0.00	
Mission Canyon										
9,500.0	0.00	0.00	9,499.8	-50.0	0.0	0.0	0.00	0.00	0.00	
9,963.2	0.00	0.00	9,963.0	-50.0	0.0	0.0	0.00	0.00	0.00	
Lodgepole										
10,000.0	0.00	0.00	9,999.8	-50.0	0.0	0.0	0.00	0.00	0.00	
10,150.2	0.00	0.00	10,150.0	-50.0	0.0	0.0	0.00	0.00	0.00	
Lodgepole Fracture Zone										
10,228.8	0.00	0.00	10,228.6	-50.0	0.0	0.0	0.00	0.00	0.00	
KOP Build 12°/100'										
10,500.0	32.54	121.05	10,485.4	-88.6	64.2	64.2	12.00	12.00	0.00	
10,784.4	66.67	121.05	10,667.0	-198.7	247.0	247.0	12.00	12.00	0.00	
False Bakken										
10,808.5	69.57	121.05	10,676.0	-210.3	266.2	266.2	12.00	12.00	0.00	
Upper Bakken										
10,862.7	76.07	121.05	10,692.0	-236.9	310.6	310.6	12.00	12.00	0.00	
Middle Bakken										
10,909.3	81.66	121.05	10,701.0	-260.5	349.7	349.7	12.00	12.00	0.00	
Middle Bakken Sand Target										
10,978.0	89.90	121.05	10,706.0	-295.8	408.4	408.4	11.99	11.99	0.00	
EOC - 7"										
11,000.0	89.90	120.61	10,706.1	-307.1	427.3	427.3	2.00	0.00	-2.00	
11,500.0	89.90	110.61	10,707.0	-522.9	877.6	877.6	2.00	0.00	-2.00	
12,000.0	89.90	100.61	10,707.9	-657.3	1,358.5	1,358.5	2.00	0.00	-2.00	
12,500.0	89.90	90.61	10,708.8	-706.1	1,855.5	1,855.5	2.00	0.00	-2.00	
12,530.5	89.90	90.00	10,708.8	-706.3	1,886.0	1,886.0	2.00	0.00	-2.00	
13,000.0	89.90	90.00	10,709.6	-706.3	2,355.5	2,355.5	0.00	0.00	0.00	
13,500.0	89.90	90.00	10,710.5	-706.3	2,855.5	2,855.5	0.00	0.00	0.00	
13,777.1	89.90	90.00	10,711.0	-706.3	3,132.6	3,132.6	0.00	0.00	0.00	
Base Middle Bakken Sand Target										
14,000.0	89.90	90.00	10,711.4	-706.3	3,355.5	3,355.5	0.00	0.00	0.00	
14,500.0	89.90	90.00	10,712.3	-706.3	3,855.5	3,855.5	0.00	0.00	0.00	
15,000.0	89.90	90.00	10,713.1	-706.3	4,355.5	4,355.5	0.00	0.00	0.00	
15,500.0	89.90	90.00	10,714.0	-706.3	4,855.5	4,855.5	0.00	0.00	0.00	
16,000.0	89.90	90.00	10,714.9	-706.3	5,355.5	5,355.5	0.00	0.00	0.00	
16,500.0	89.90	90.00	10,715.8	-706.3	5,855.5	5,855.5	0.00	0.00	0.00	
17,000.0	89.90	90.00	10,716.6	-706.3	6,355.5	6,355.5	0.00	0.00	0.00	
17,500.0	89.90	90.00	10,717.5	-706.3	6,855.5	6,855.5	0.00	0.00	0.00	
18,000.0	89.90	90.00	10,718.4	-706.3	7,355.5	7,355.5	0.00	0.00	0.00	

Planning Report

Database:	edm	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,500.0	89.90	90.00	10,719.2	-706.3	7,855.5	7,855.5	0.00	0.00	0.00
19,000.0	89.90	90.00	10,720.1	-706.3	8,355.5	8,355.5	0.00	0.00	0.00
19,500.0	89.90	90.00	10,721.0	-706.3	8,855.5	8,855.5	0.00	0.00	0.00
20,000.0	89.90	90.00	10,721.9	-706.3	9,355.5	9,355.5	0.00	0.00	0.00
20,694.5	89.90	90.00	10,723.1	-706.3	10,050.0	10,050.0	0.00	0.00	0.00

5300 31-18 6B PBHL

Design Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir.	TVD (usft)	+N/S (usft)	+E/W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- Shape									
5300 31-18 6B PBHL 0.00 0.00 10,723.1 -707.0 10,050.0 406,044.57 1,220,101.73 48° 4' 20.506 N 103° 33' 43.389 W									
- plan misses target center by 0.7usft at 20694.5usft MD (10723.1 TVD, -706.3 N, 10050.0 E)									
- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter ("")	Hole Diameter ("")
10,978.0	10,706.0	7"	7	8-3/4

Planning Report

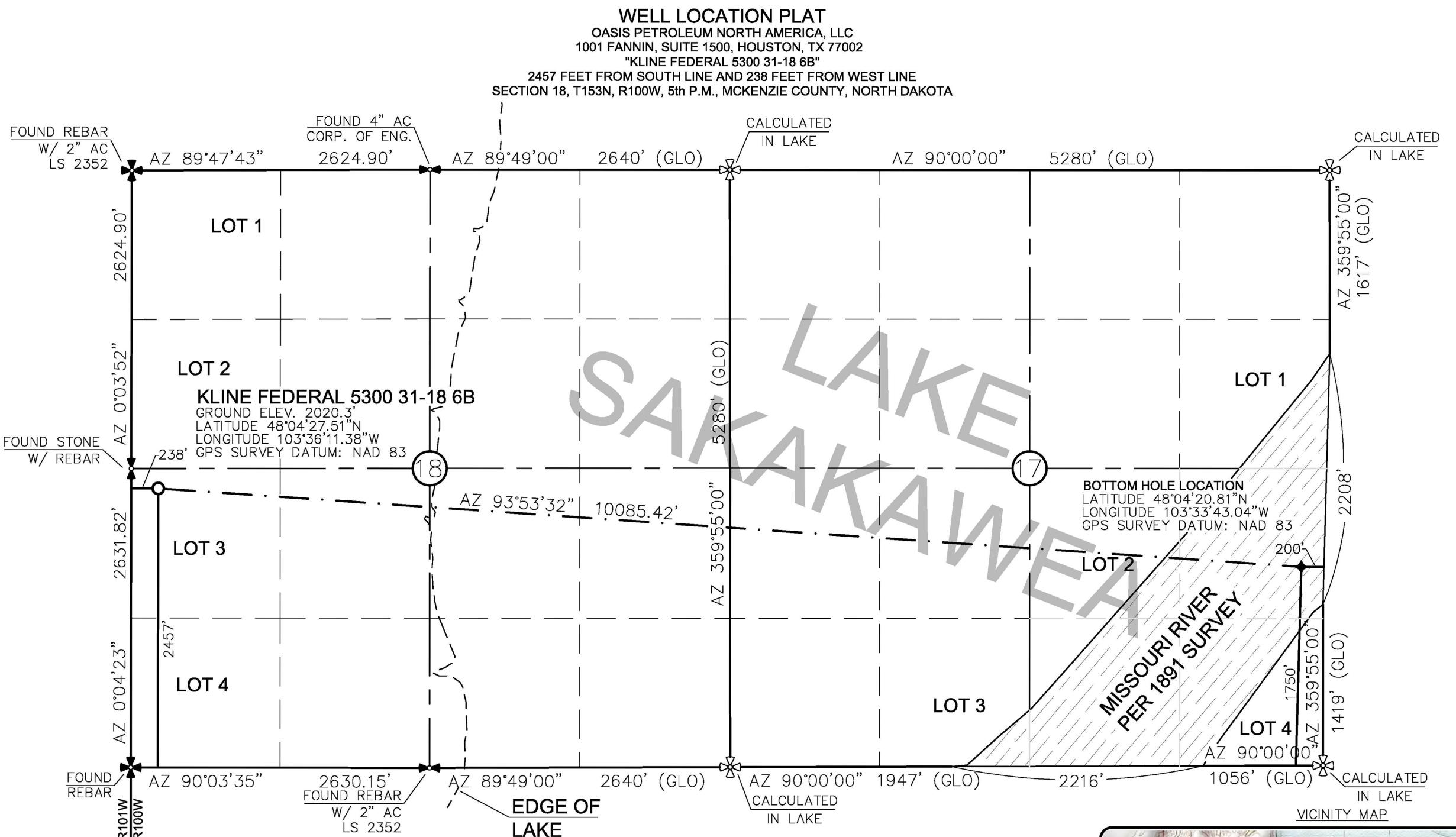
Database:	edm	Local Co-ordinate Reference:	Well Kline Federal 5300 31-18 6B
Company:	Oasis	TVD Reference:	WELL @ 2033.0usft (Original Well Elev)
Project:	Indian Hills	MD Reference:	WELL @ 2033.0usft (Original Well Elev)
Site:	153N-100W-17/18	North Reference:	True
Well:	Kline Federal 5300 31-18 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Kline Federal 5300 31-18 6B		
Design:	Design #1		

Formations

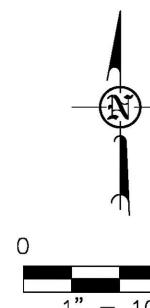
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,923.0	1,923.0	Pierre			
4,597.1	4,597.0	Greenhorn			
5,008.1	5,008.0	Mowry			
5,422.1	5,422.0	Dakota			
6,437.2	6,437.0	Rierdon			
6,765.2	6,765.0	Dunham Salt			
6,880.2	6,880.0	Dunham Salt Base			
6,975.2	6,975.0	Spearfish			
7,234.2	7,234.0	Pine Salt			
7,269.2	7,269.0	Pine Salt Base			
7,325.2	7,325.0	Opeche Salt			
7,354.2	7,354.0	Opeche Salt Base			
7,556.2	7,556.0	Broom Creek (Top of Minnelusa Gp.)			
7,635.2	7,635.0	Amsden			
7,804.2	7,804.0	Tyler			
7,998.2	7,998.0	Otter (Base of Minnelusa Gp.)			
8,341.2	8,341.0	Kibbey Lime			
8,493.2	8,493.0	Charles Salt			
9,110.2	9,110.0	UB			
9,189.2	9,189.0	Base Last Salt			
9,252.2	9,252.0	Ratcliffe			
9,395.2	9,395.0	Mission Canyon			
9,963.2	9,963.0	Lodgepole			
10,150.2	10,150.0	Lodgepole Fracture Zone			
10,784.4	10,667.0	False Bakken			
10,808.5	10,676.0	Upper Bakken			
10,862.7	10,692.0	Middle Bakken			
10,909.3	10,701.0	Middle Bakken Sand Target			
13,777.1	10,711.0	Base Middle Bakken Sand Target			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
10,228.8	10,228.6	-50.0	0.0	KOP Build 12°/100'
10,978.0	10,706.0	-295.8	408.4	EOC

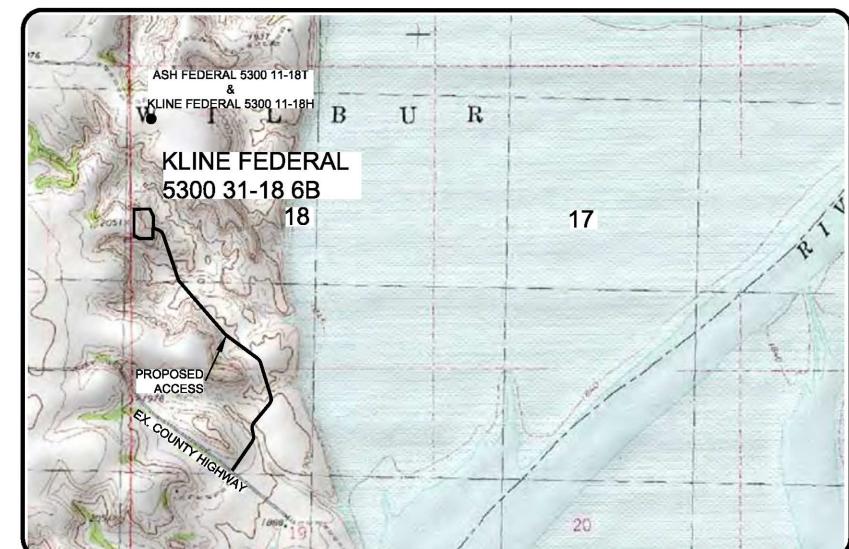
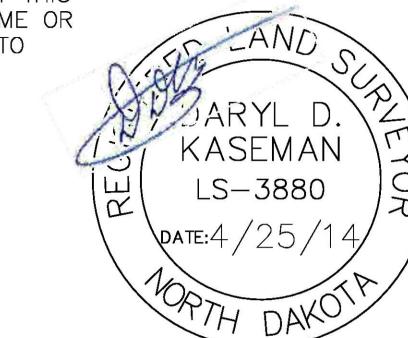


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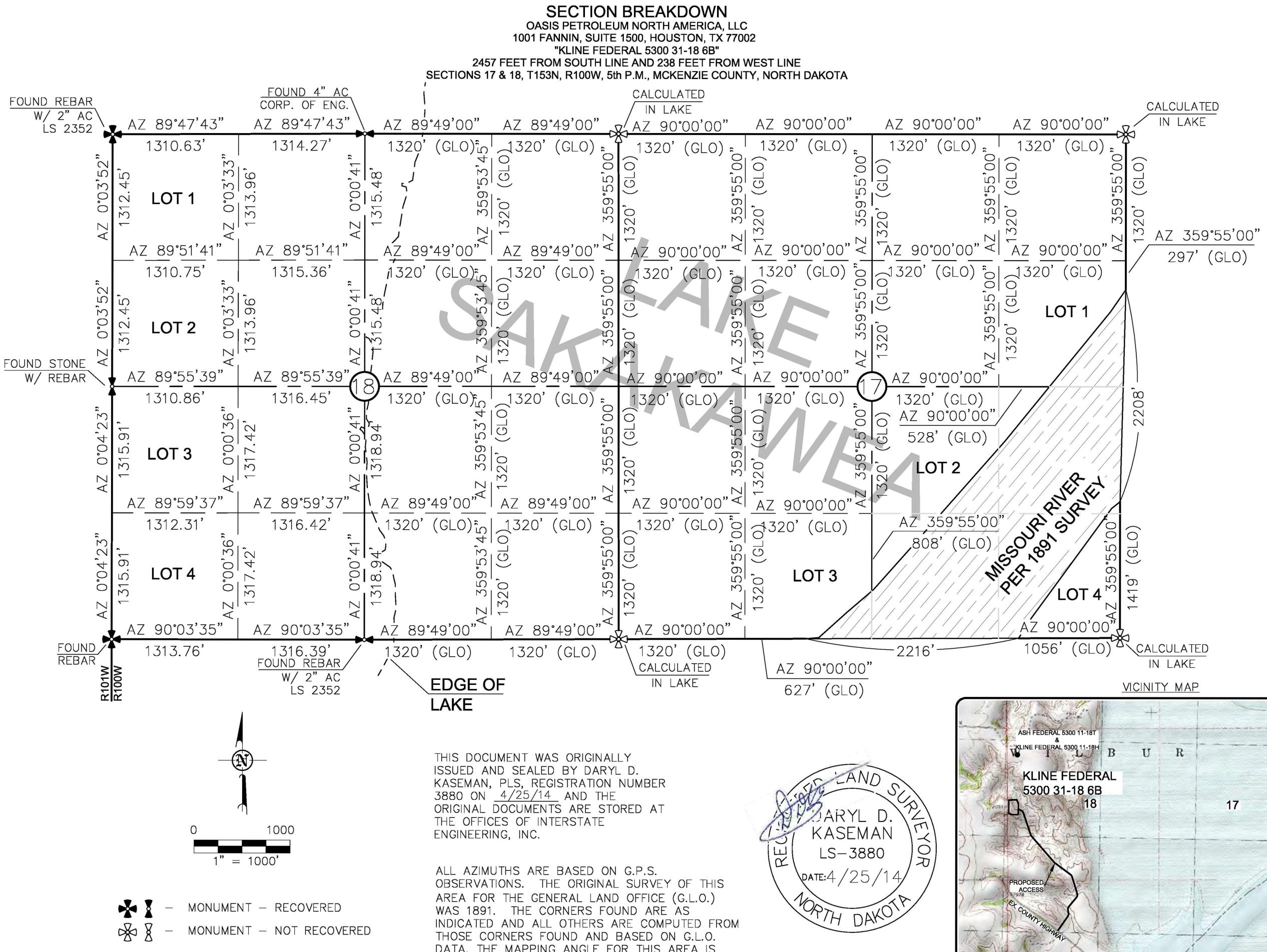


- MONUMENT - RECOVERED
- MONUMENT - NOT RECOVERED

DARYL D. KASEMAN LS-3880



OASIS PETROLEUM NORTH AMERICA, LLC	Revision No.	Date	By	Description
WELL LOCATION PLAT				
SECTION 18, T153N, R100W				
MCKENZIE COUNTY, NORTH DAKOTA				
Drawn By: B.H.H.	Project No.: S14-09-09			
Checked By: D.D.K.	Date: APRIL 2014			
Oasis Petroleum North America, LLC - Kline Federal 5300 31-18 6B on file Parcels Kline Federal 5300 31-18 6B - 4/25/2014 10:49 AM John Schmitz				



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2/8

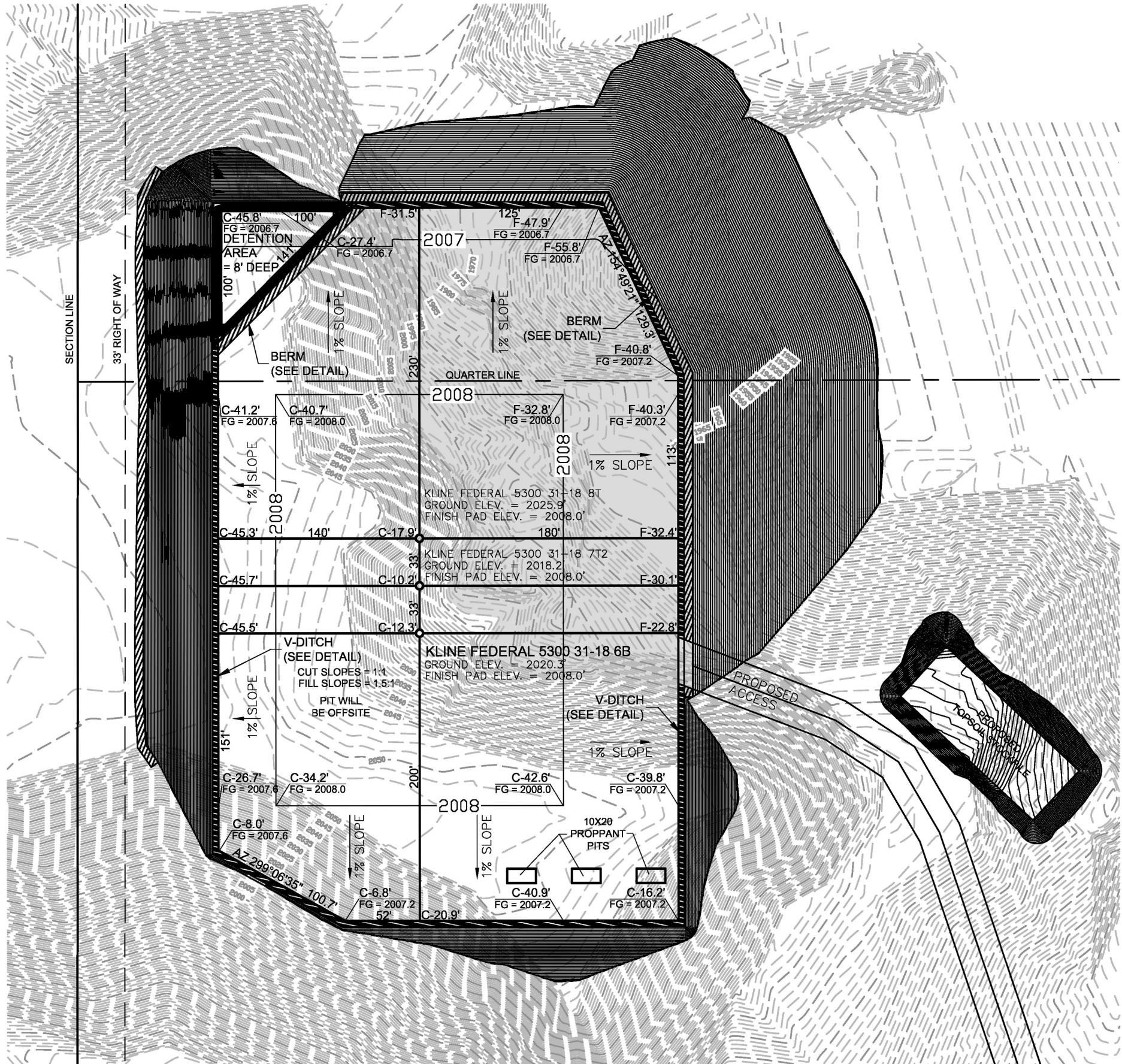
INTERSTATE ENGINEERING, INC.	P.O. Box 648
425 East Main Street	Sidney, Montana 59270
Ph (406) 433-5617	Fax (406) 433-5618
www.interstateeng.com	
Other offices in Minnesota, North Dakota and South Dakota	

SECTION BREAKDOWN
 SECTIONS 17 & 18, T153N, R100W
 MCKENZIE COUNTY, NORTH DAKOTA

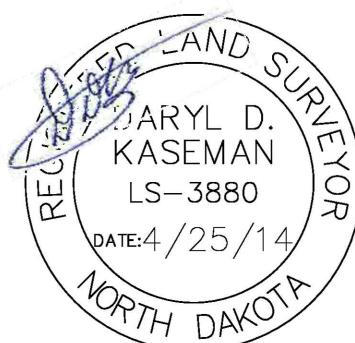
Drawn By: B.H.H. Project No.: S14-09-09
 Checked By: D.D.K. Date: APRIL 2014

2014 SURVEY
 KLINE Federal 5300 31-18 6B on file
 Petroleum - Kline Federal 5300 31-18 6B on file
 Petroleum - Kline Federal 5300 31-18 6B on file

PAD LAYOUT
 OASIS PETROLEUM NORTH AMERICA, LLC
 1001 FANNIN, SUITE 1500, HOUSTON, TX 77002
 "KLINE FEDERAL 5300 31-18 6B"
 2457 FEET FROM SOUTH LINE AND 238 FEET FROM WEST LINE
 SECTION 18, T153N, R100W, 5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

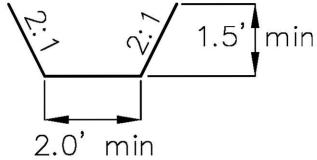


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 PLS, REGISTRATION NUMBER 3880 ON
4/25/14 AND THE ORIGINAL
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 INC.



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

V-DITCH DETAIL



Proposed Contours
 - - - - - Original Contours

BERM
 DITCH

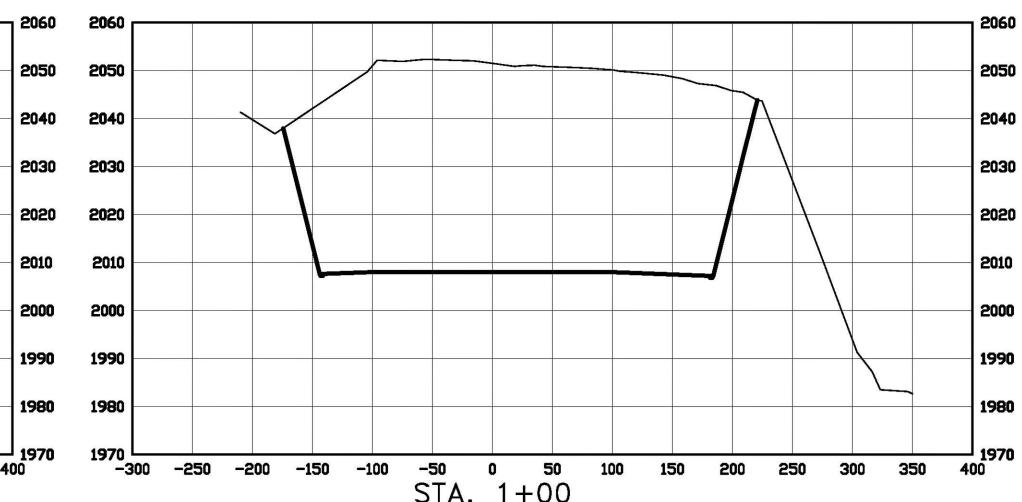
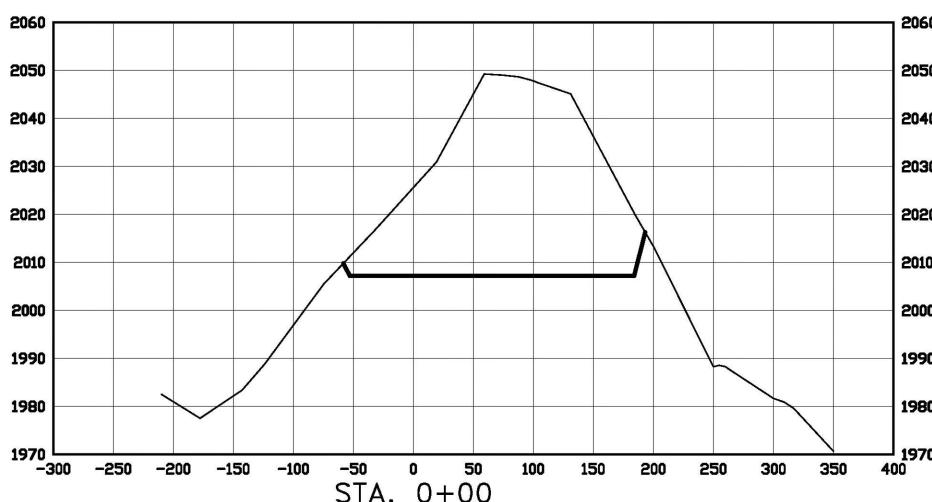
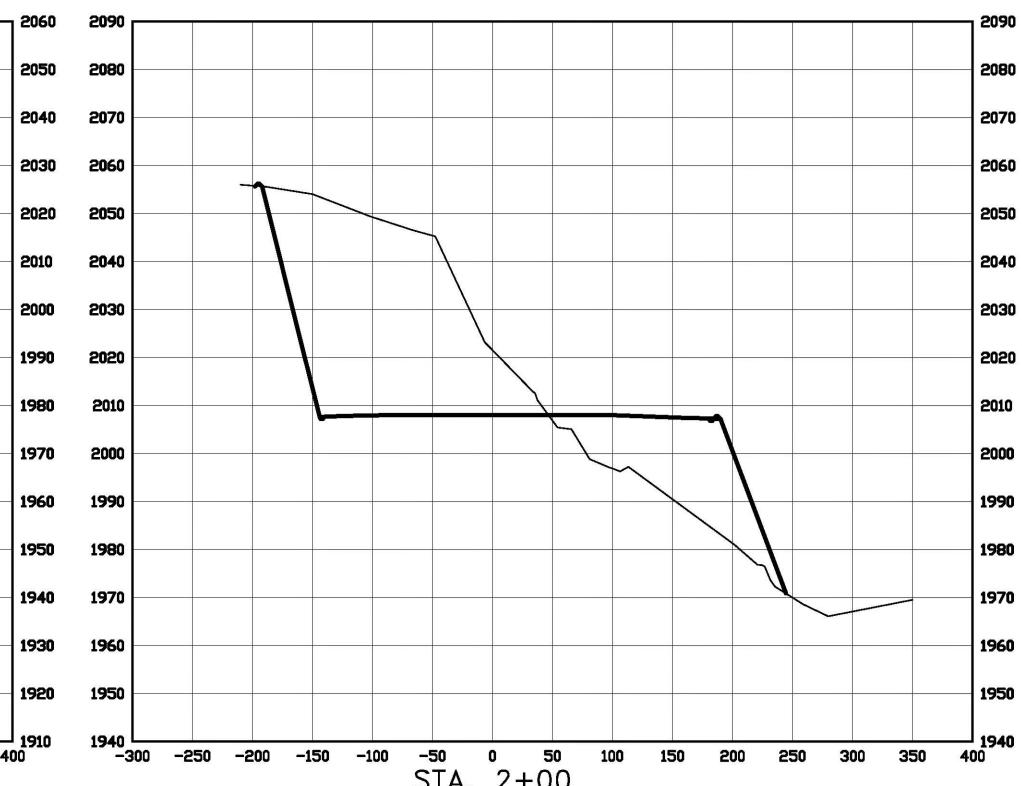
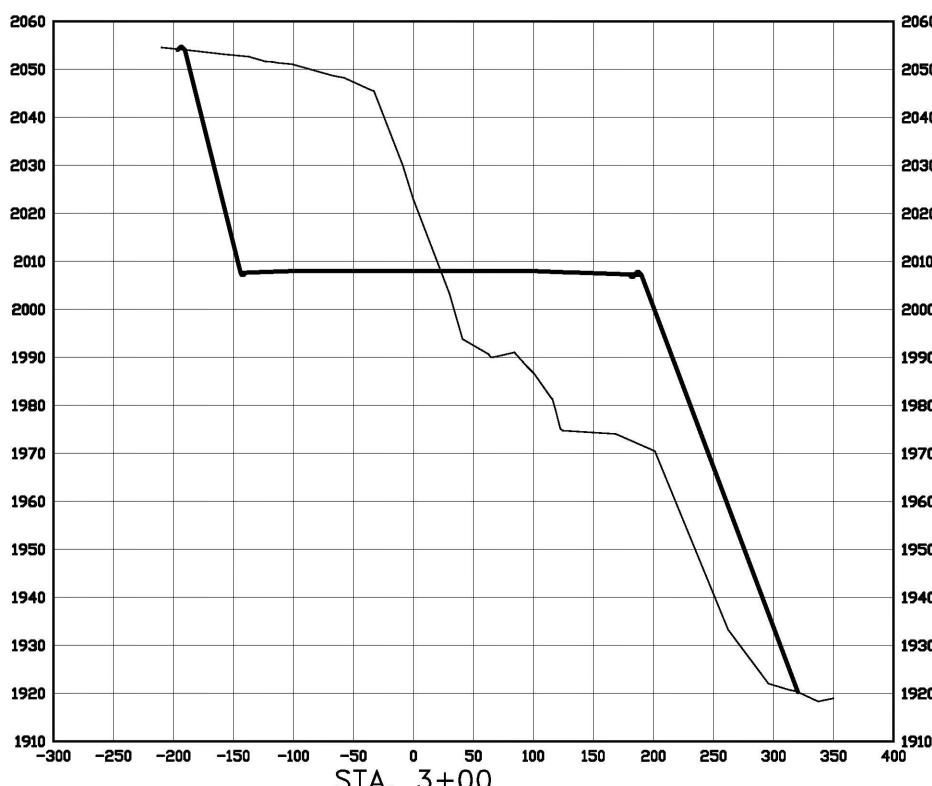
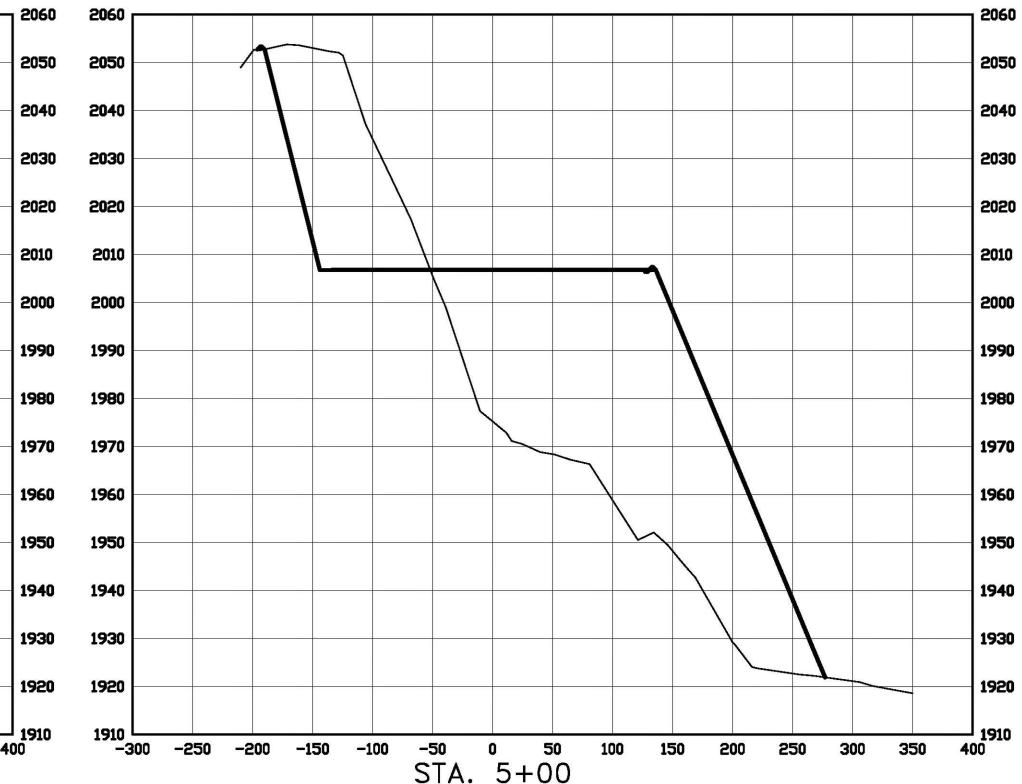
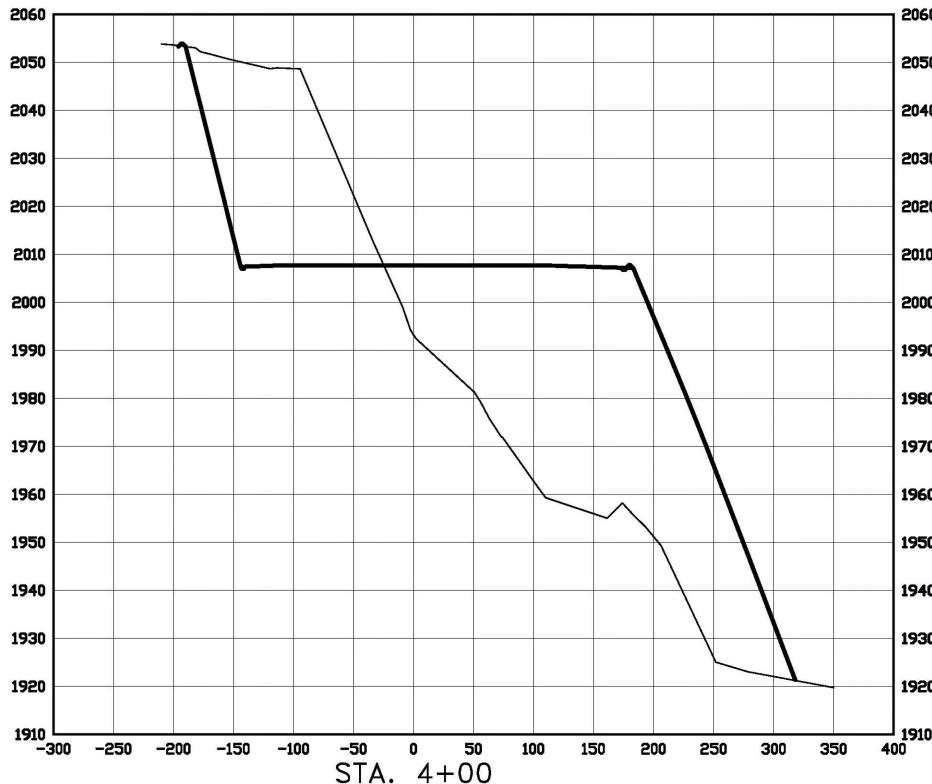
NOTE: All utilities shown are preliminary only, a complete
 utilities location is recommended before construction.

0 80
 1" = 80'



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CROSS SECTIONS
 OASIS PETROLEUM NORTH AMERICA, LLC
 1001 FANNIN, SUITE 1500, HOUSTON, TX 77002
 "KLINE FEDERAL 5300 31-18 6B"
 2457 FEET FROM SOUTH LINE AND 238 FEET FROM WEST LINE
 SECTION 18, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA



THIS DOCUMENT WAS
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SCALE
 HORIZ 1"=160'
 VERT 1"=40'

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Other offices in Minnesota, North Dakota and South Dakota

OASIS PETROLEUM NORTH AMERICA, LLC
 CROSS SECTIONS
 SECTION 18, T153N, R100W
 MCKENZIE COUNTY, NORTH DAKOTA

Drawn By: B.H.H. Project No.: S14-09-109
 Checked By: D.D.K. Date: APRIL 2014

Revision No.	Date	By	Description

© 2014 S14-09-109 Oasis Petroleum - Kline Federal 5300 31-18 6B on Triple
 Rev CAD\Kline Federal 5300 31-18 6B.dwg - 4/25/2014 10:51 AM joan schinnerer

WELL LOCATION SITE QUANTITIES

OASIS PETROLEUM NORTH AMERICA, LLC
1001 FANNIN, SUITE 1500, HOUSTON, TX 77002
"KLINE FEDERAL 5200-21-18 CR"

"KLINE FEDERAL 5300 31-18 6B"

2457 FEET FROM SOUTH LINE AND 238 FEET FROM WEST LINE
SECTION 18, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA

WELL SITE ELEVATION	2020.3
WELL PAD ELEVATION	2008.0
EXCAVATION	146,179
PLUS PIT	0
	<u>146,179</u>
EMBANKMENT	113,287
PLUS SHRINKAGE (25%)	28,322
	<u>141,609</u>
STOCKPILE PIT	0
STOCKPILE TOP SOIL (6")	4,701
BERMS	1,076 LF = 349 CY
DITCHES	1,350 LF = 207 CY
DETENTION AREA	1,238 CY
STOCKPILE MATERIAL	965
DISTURBED AREA FROM PAD	5.83 ACRES

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

CUT END SLOPES AT 1:1

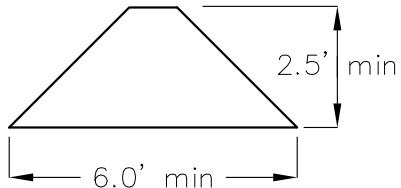
FILL END SLOPES AT 1:5:1

WELL SITE LOCATION

2457' FSL

238' FWL

BERM DETAIL



DITCH DETAIL



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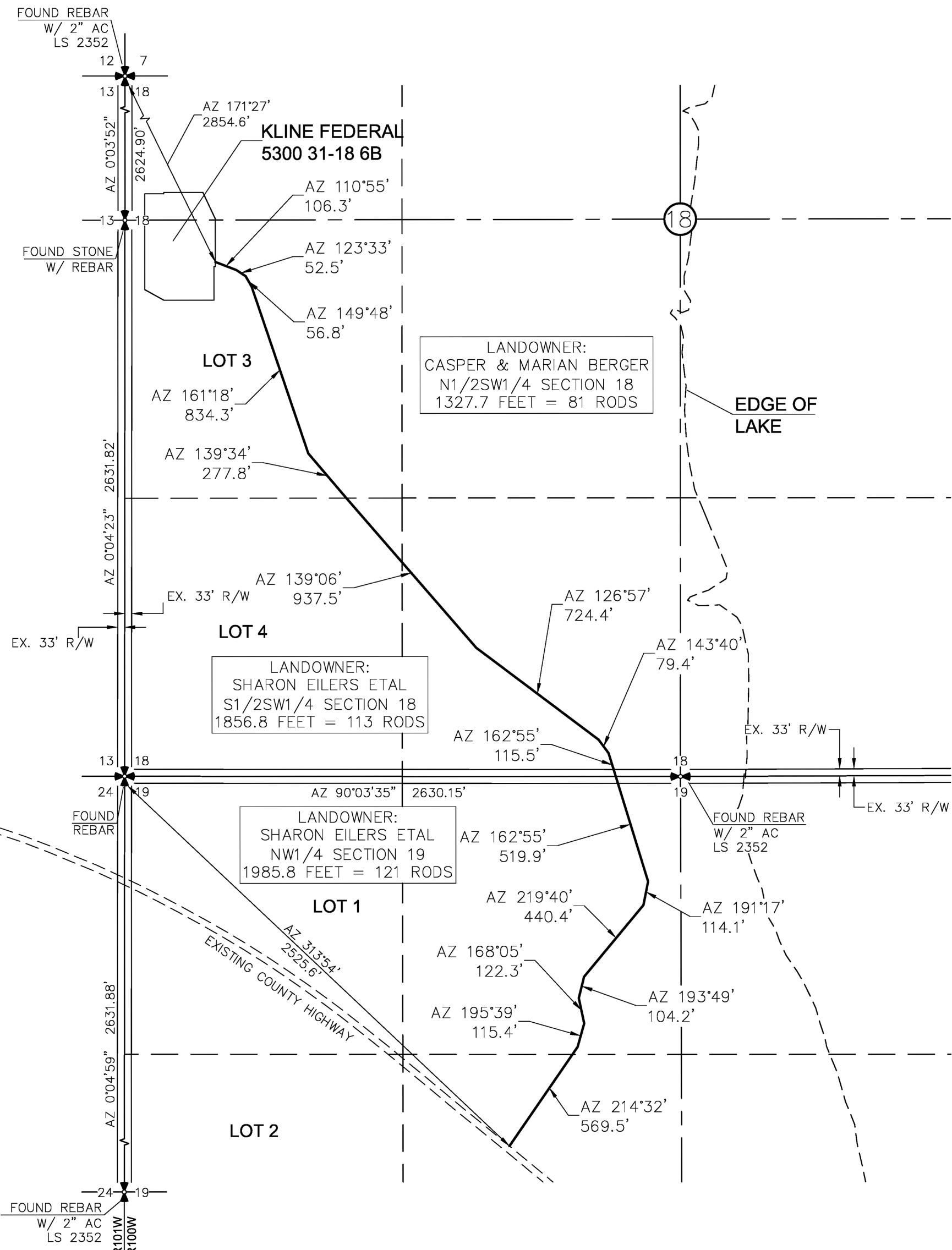
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offices in Minnesota, North Dakota and South

<p>Interstate Engineering, Inc. P.O. Box 648 425 East Main Street Sidney, Montana 59270 Ph (406) 433-5617 Fax (406) 433-5618 www.Interstateeng.com</p>	<p>OASIS PETROLEUM NORTH AMERICA, LLC QUANTITIES SECTION 18, T153N, R100W MCKENZIE COUNTY, NORTH DAKOTA Drawn By: <u>B.H.H.</u> Project No.: <u>S14-09-109</u> Checked By: <u>D.D.K.</u> Date: <u>APRIL 2014</u></p>
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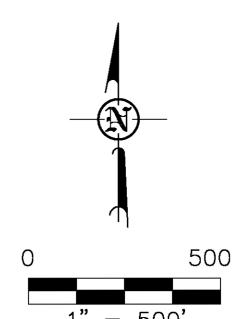
ACCESS APPROACH
 OASIS PETROLEUM NORTH AMERICA, LLC
 1001 FANNIN, SUITE 1500, HOUSTON, TX 77002
 "KLINE FEDERAL 5300 31-18 6B"
 2457 FEET FROM SOUTH LINE AND 238 FEET FROM WEST LINE
 SECTION 18, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA



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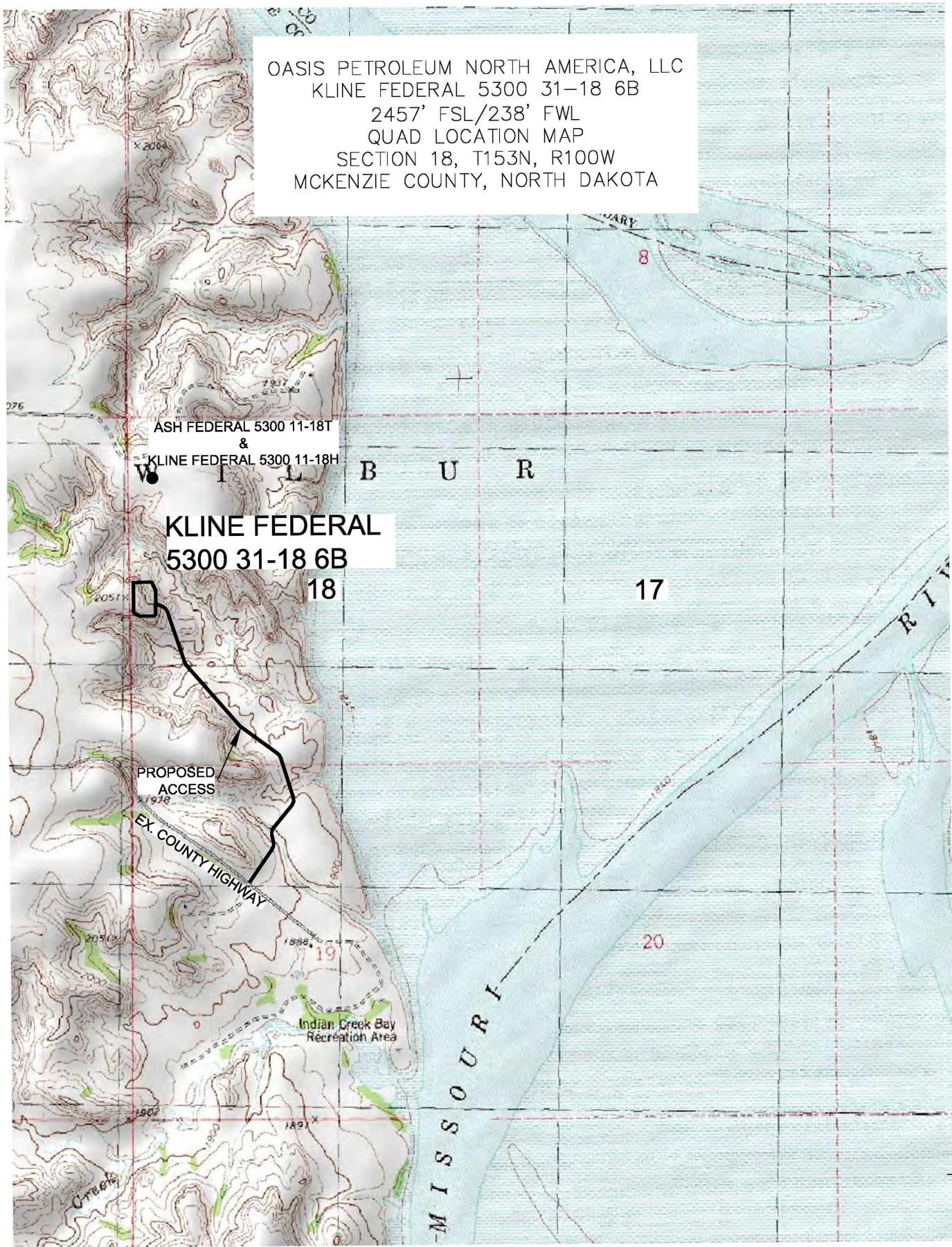
NOTE: All utilities shown are preliminary only, a complete utilities location is recommended before construction.

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Revision No.	Date	By	Description

OASIS PETROLEUM NORTH AMERICA, LLC
KLINE FEDERAL 5300 31-18 6B
2457' FSL/238' FWL
QUAD LOCATION MAP
SECTION 18, T153N, R100W
MCKENZIE COUNTY, NORTH DAKOTA



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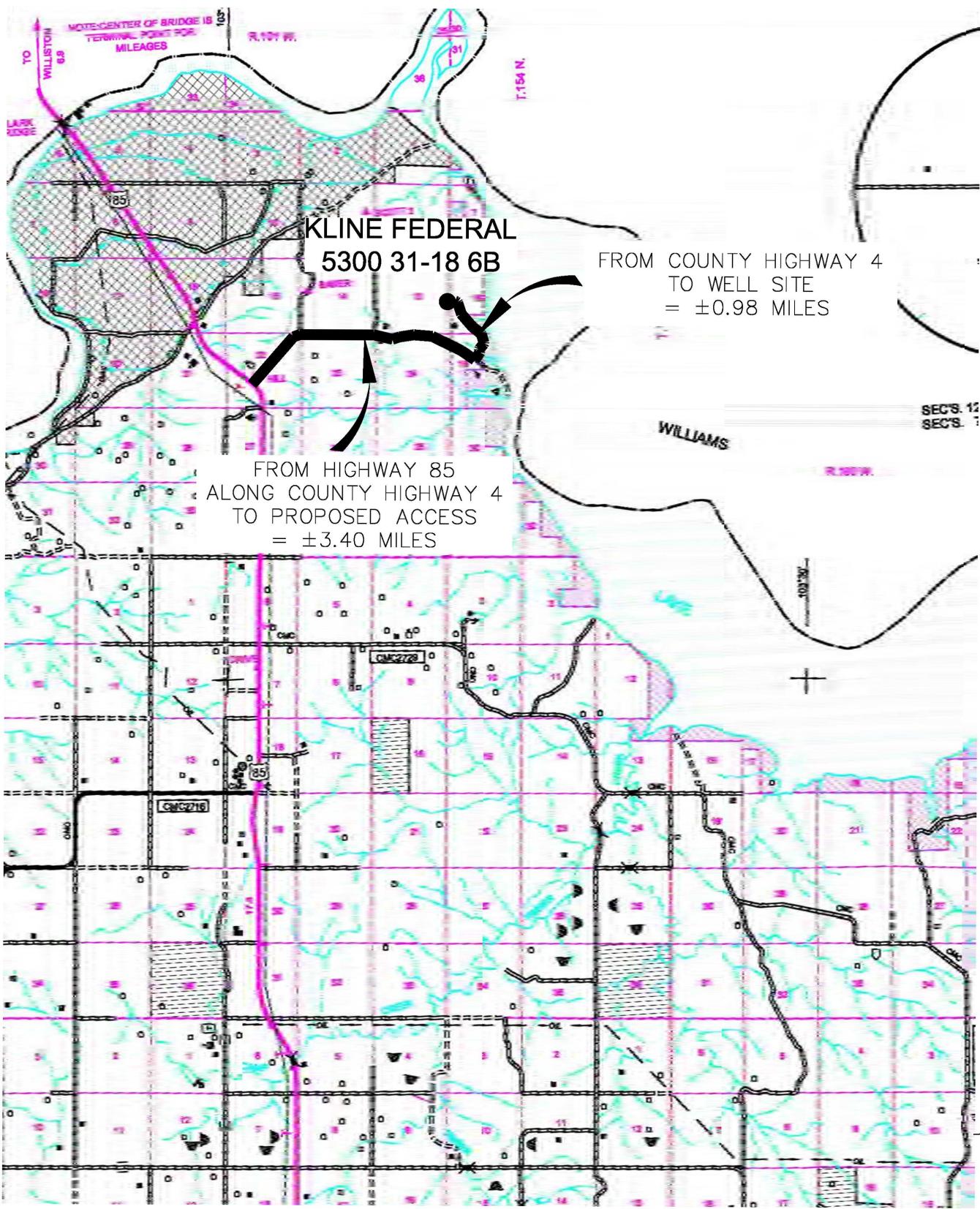
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<p>Interstate Engineering, Inc. P.O. Box 648 425 East Main Street Sidney, Montana 59270 Ph (406) 433-5617 Fax (406) 433-5618 www.interstateeng.com</p>	<p>OASIS PETROLEUM NORTH AMERICA, LLC QUAD LOCATION MAP SECTION 18, T153N, R100W</p> <p>MCKENZIE COUNTY, NORTH DAKOTA</p> <table border="0"> <tr> <td style="width: 33%;">Drawn By:</td> <td style="width: 33%;">B.H.H.</td> <td style="width: 33%;">Project No.:</td> </tr> <tr> <td>Checked By:</td> <td>D.D.K.</td> <td>Date:</td> </tr> </table> <p>S14-09-109</p> <p>APRIL 2014</p>	Drawn By:	B.H.H.	Project No.:	Checked By:	D.D.K.	Date:
Drawn By:	B.H.H.	Project No.:					
Checked By:	D.D.K.	Date:					

COUNTY ROAD MAP

OASIS PETROLEUM NORTH AMERICA, LLC
1001 FANNIN, SUITE 1500, HOUSTON, TX 77002
"KLINE FEDERAL 5300 31-18 6B"

2457 FEET FROM SOUTH LINE AND 238 FEET FROM WEST LINE
SECTION 18, 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 18, T153N, R100W
MCKENZIE COUNTY, NORTH DAKOTA
Drawn By: B.H.H. Project No.: S14-09-109
Checked By: D.D.K. Date: APRIL 2014

Revision No.	Date	By	Description



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.

McKenzie County

Aaron Chisholm – GIS Specialist for McKenzie County

Kline Federal 5300 31-18 6B – 153-100W-17/18 – 05/30/2014

Kline Federal 5300 31-18 7T2 – 153-100W-17/18 – 05/30/2014

Kline Federal 5300 31-18 8T – 153-100W-17/18 – 05/30/2014

A handwritten signature in black ink, appearing to read "Lauri M. Stanfield".

Lauri M. Stanfield

Regulatory Specialist

Oasis Petroleum North America, LLC