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 2018 ND OIL & GAS DIVISION

Well File No.
11920

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

☑ Notice of Intent	Approximate Start Date **December 10, 2018**	☐ Drilling Prognosis	☐ Spill Report
☐ Report of Work Done	Date Work Completed	☐ Redrilling or Repair	☐ Shooting
☐ 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	☐ Casing or Liner	☐ Acidizing
		☐ Plug Well	☐ Fracture Treatment
		☐ Supplemental History	☐ Change Production Method
		☐ Temporarily Abandon	☐ Reclamation
		☑ Other **Return to Production**	

Well Name and Number				
Corps of Engineers 31-10				
Footages	Qtr-Qtr	Section	Township	Range
660 F N L 2305 F E L	NWNE	10	153 N	101 W
Field	Pool	County		
Baker	**Duperow**	**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

The Corps of Engineers 31-10 was shut in due to Missouri River flooding (well site is in flood plain). Facility repairs have been extensive, but expect repairs to be completed by next week and production resuming by 12/10/18.

Company **RIM Operating, Inc**		Telephone Number **303-799-9828**
Address **5 Inverness Drive East**		
City **Englewood**	State **CO**	Zip Code **80112**
Signature	Printed Name **Jason Rouse**	
Title **VP, Operations**	Date **November 29, 2018**	
Email Address **jrouse@rimop.com**		

FOR STATE USE ONLY

☒ Received	☐ Approved
Date 12-12-18	
By DAVE TABOR	
Title Field Supervisor	

AUTHORIZATION TO PURCHASE AND TRANSPORT OIL FROM LEASE - FORM 8

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

Received
MAR 7 2016
ND Oil & Gas Division

Well File No.
11920
NDIC CTB No. 111920

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

Well Name and Number	Qtr-Qtr	Section	Township	Range	County
Corps of Engineers 31-10	NWNE	10	153 N	101 W	McKenzie

Operator	Telephone Number	Field
RIM Operating, Inc	303-799-9828	Baker

Address	City	State	Zip Code
5 Inverness Drive East	Englewood	CO	80112

Name of First Purchaser	Telephone Number	% Purchased	Date Effective
Mercuria Energy Trading, Inc.	832-209-2400	100%	March 1, 2016

Principal Place of Business	City	State	Zip Code
20 Greenway Plaza, Suite 650	Houston	TX	77046
Field Address	City	State	Zip Code

Name of Transporter	Telephone Number	% Transported	Date Effective
Rocky Mountain Crude Oil LLC	877-651-9351	100	March 1, 2016

Address	City	State	Zip Code
490 North 31st Street #2010	Billings	MT	59101

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

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

Comments

I hereby swear or affirm that the information provided is true, complete and correct as determined from all available records. Date: March 3, 2016

Signature	Printed Name	Title
Liz Ortiz	Liz Ortiz	Engineering Technician

Above Signature Witnessed By

Witness Signature	Witness Printed Name	Witness Title
Kenneth J Kundrik	Ken Kundrik	A&D Manager

FOR STATE USE ONLY

Date Approved	MAR 17 2016
By	Evie Roberson
Title	Oil & Gas Production Analyst

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

Date/Time Reported : Dec 8 2014 / 14:08
State Agency person :
Responsible Party : RIM OPERATING, INC.
Well Operator : RIM OPERATING, INC.
Date/Time of Incident : 12/7/2014 12:00:00 AM
NDIC File Number : 11920
Facility Number :
Well or Facility Name : CORPS OF ENGINEERS 31-10
Type of Incident : Valve/Piping Connection Leak
Field Name : BAKER
County : MCKENZIE
Section : 10
Township : 153
Range : 101
Quarter-Quarter :
Quarter :
Distance to nearest residence :
Distance to nearest water well :
Release Oil : 25 Barrels
Release Brine : 50 Barrels
Release Other :
Recovered Oil : 24 Barrels
Recovered Brine : 45 Barrels
Recovered Other :
Has/Will the incident be reported to the NRC? : No
Was release contained : Yes - Within Dike
Description of other released substance :

Immediate risk evaluation : Not Applicable
Followup Report Requested Y/N : Y

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)

AUG 2015
RECEIVED
ND OIL & GAS DIVISION

Well File No.
11920
NDIC CTB No. 11920

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

Well Name and Number	Qtr-Qtr	Section	Township	Range	County
Corps of Engineers 31-10	NWNE	10	153 N	101 W	McKenzie

Operator	Telephone Number	Field
RIM Operating, Inc	303-799-9828	Baker

Address	City	State	Zip Code
5 Inverness Drive East	Englewood	CO	80112

Name of First Purchaser	Telephone Number	% Purchased	Date Effective
PetroChina International America, Inc.	832-325-5317	100	September 1, 2015

Principal Place of Business	City	State	Zip Code
2000 W Sam Houston Parkway South	Houston	TX	77042
Field Address	City	State	Zip Code

Name of Transporter	Telephone Number	% Transported	Date Effective
Badlands Tank Lines, LLC	402-281-0646	100	September 1, 2015

Address	City	State	Zip Code
2211 South 156th Circle #2B	Omaha	NE	68116

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

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

Comments

I hereby swear or affirm that the information provided is true, complete and correct as determined from all available records. Date: August 18, 2015

Signature	Printed Name	Title
Liz Ortiz	Liz Ortiz	Engineering Technician

Above Signature Witnessed By

Witness Signature	Witness Printed Name	Witness Title
Kenneth J. Kundrik	Ken Kundrik	A&D Manager

FOR STATE USE ONLY

Date Approved	AUG 24 2015
By	
Title	Evie Roberson Oil & Gas Production Analyst

NORTH DAKOTA
OIL AND GAS DIVISION

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/

11920

May 13, 2014

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

RE:

Basic Game And Fish 34-3 SW SW 2-153N-101W State File No. 11745*	Corps Of Engineers 31-10 NW NE 10-153N-101W State File No. 11920*	Lewis And Clark 2-4H SE NE 4-153N-101W State File No. 15358*
Pederson 5-24 NW SW 24-153N-102W State File No. 11137*	Skurdal 2-24HR NE NW 24-153N-102W State File No. 10681	Skurdal 6-24 SW SE 24-153N-102W State File No. 13428*
Coulter 1-19 SW NW 19-153N-101W State File No. 11238		

*location impacted by 2014 ice jam flooding

Dear Jason,

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

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

Greetings everyone

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

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

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

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

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

Of course, if you have any questions or just want to chat about this in greater detail, always feel free to give me a call.
Allen
p.s. And as always, feel free to disseminate as you feel is appropriate.

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

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

Sincerely,

Richard S. Dunn /SAP

Richard S. Dunn
Field Inspector

AUTHORIZATION TO PURCHASE AND TRANSPORT OIL FROM LEASE - FORM 8

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

MAY 2013 RECEIVED ND OIL & GAS DIVISION

Well File No.	
	11920
NDIC CTB No.	
	111920

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

Well Name and Number	Qtr-Qtr	Section	Township	Range	County
CORPS OF ENGINEERS 31-10	NWNE	10	153 N	101 W	MCKENZIE

Operator	Telephone Number	Field
RIM OPERATING, INC.	303-799-9828	BAKER

Address	City	State	Zip Code
5 INVERNESS DRIVE EAST	ENGLEWOOD	CO	80112

Name of First Purchaser	Telephone Number	% Purchased	Date Effective
PLAINS MARKETING LP	713-646-4100	100	May 16, 2013

Principal Place of Business	City	State	Zip Code
PO BOX 4648	HOUSTON	TX	77210
Field Address	**City**	**State**	**Zip Code**
303 6TH AVE NE	BELFIELD	ND	58622

Name of Transporter	Telephone Number	% Transported	Date Effective
PLAINS MARKETING LP	701-575-4349	100	May 16, 2013

Address	City	State	Zip Code
303 6TH AVE NE	BELFIELD	ND	58622

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

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

Comments

I hereby swear or affirm that the information provided is true, complete and correct as determined from all available records. Date: May 23, 2013

Signature	Printed Name	Title
Kenneth J. Kundrik	KEN KUNDRIK	OPERATIONS MANAGER

Above Signature Witnessed By

Witness Signature	Witness Printed Name	Witness Title
Kim Neabuhr	KIM NEABUHR	REVENUE ACCOUNTANT

FOR STATE USE ONLY

Date Approved	MAY 28 2013
By	Eric Roberson
Title	Oil & Gas Production Analyst

NORTH DAKOTA
OIL AND GAS DIVISION

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

11920

May 24, 2013

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

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

Dear Rene Morin:

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

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

Sincerely,

Jeanette Bean
Administrative Assistant

Enclosure

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

NOTICE OF TRANSFER OF OIL AND GAS WELLS FORM 15

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

MAY 2013 RECEIVED ND OIL & GAS DIVISION

FOR STATE USE ONLY
NDIC Bond Number R312

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

TRANSFERRING OPERATOR

Name of Operator Representative **Mark Mueller**			
Operator Transferring Oil and/or Gas Wells **SM Energy Company**			Telephone Number **406-245-6248**
Address **P.O. Box 7168**	City **Billings**	State **MT**	Zip Code **59103**
I, the above named representative, acknowledge the transfer of the oil and/or gas wells named below for the purpose of ownership and/or operation to the company named below.			
Signature	Title (Must be an officer or power of attorney must be attached) **Sr VP/Regional Manager**		Date 5/3/2013

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

RECEIVING OPERATOR

Name of Operator Representative **Rene Morin**			
Operator Receiving Oil and/or Gas Wells **Rim Operating, Inc.**			Telephone Number **303-799-9828**
Address **5 Inverness Drive East**	City **Englewood**	State **CO**	Zip Code **80112-5519**
I, the above named representative, have read the foregoing statement and accept such transfer, also the responsibility of ownership and/or operation of said well or wells, under the said company bond, said bond being tendered to or on file with the Industrial Commission of North Dakota.			
Signature	Title (Must be an officer or power of attorney must be attached) **Vice President**		Date 5-15-13

SURETY COMPANY

Surety RLI Insurance Company			Telephone Number 713-961-1300	Amount of Bond $ 100,000.00
Address 8 Greenway Plaza, Ste.400	City Houston	State TX	Zip Code 77046	Bond Number RLB0013610
The above named SURETY agrees that such bond shall extend to compliance with Chapter 38-08 of North Dakota Century Code and amendments and the rules and regulations of the Industrial Commission of North Dakota prescribed to govern the production of oil and gas on government and private lands within the State of North Dakota, in relation to the above stated transfer; it being further agreed and understood that the bond sum or amount is not to be considered increased because of such extension.				
Signature	Title (Must be an officer or power of attorney must be attached) Attorney-in-Fact			Date 05-22-13
Printed Name Robbie Duxbury				

FOR STATE USE ONLY

Date Approved	May 24, 2013
By	Bruce E. Hicks
Title	Assistant Director

Well File No.	Well Name	Gross Acres	Field	County	ST	Quarter	Section	Township	Range
14792	BOSS 12-17	160	STOCKYARD CREEK	WILLIAMS	ND	SWNW	17	154N	99W
14716	BOSS 41-17	160	STOCKYARD CREEK	WILLIAMS	ND	NENE	17	154N	99W
13556	CHURCH 1-2X ST	320	NAMELESS	MCKENZIE	ND	NENW	2	150N	102W
15358	LEWIS & CLARK 2-4H	604.3	BAKER	MCKENZIE	ND	SENE	4	153N	101W
1745	BASIC GAME & FISH 34-3H	320	BAKER	MCKENZIE	ND	SWSW	2	153N	101W
.920	CORPS OF ENGINEERS 31-10	320	BAKER	MCKENZIE	ND	NWNE	10	153N	101W
11137	PEDERSON 5-24 (DUP)	160	HARDSCRABBLE	WILLIAMS	ND	NWSW	24	153N	102W
11238	COULTER 1-19	156	INDIAN HILL	WILLIAMS	ND	SWNW	19	153N	101W
11490	CURRAN 1-1	160	DUBLIN	WILLIAMS	ND	NENW	1	157N	100W
9102	CHURCH 1-2S	160	NAMELESS	MCKENZIE	ND	NWNW	2	150N	102W
10681	SKURDAL 2-24HR	640	HARDSCRABBLE	WILLIAMS	ND	NENW	24	153N	102W
8322	LINK 34-1S	160	NAMELESS	MCKENZIE	ND	NESW	34	151N	102W
5856	YELLOWSTONE STATE 1-36	320	YELLOWSTONE	MCKENZIE	ND	NENW	36	150N	104W
13428	SKURDAL 6-24 RR	320	HARDSCRABBLE	WILLIAMS	ND	SWSE	24	153N	102W
9481	LINDECKER 1-35 SWD		UNKNOWN	MCKENZIE	ND	NWSW	35	151N	102W

SUNDRY 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 AUG 2012 ND OIL & GAS DIVISION

Well File No. 11920

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

- [ ] Notice of Intent — Approximate Start Date
- [x] Report of Work Done — Date Work Completed: July 20, 2012
- [ ] Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03. — Approximate Start Date

- [ ] Drilling Prognosis
- [ ] Redrilling or Repair
- [ ] Casing or Liner
- [ ] Plug Well
- [ ] Supplemental History
- [ ] Temporarily Abandon
- [ ] Spill Report
- [ ] Shooting
- [ ] Acidizing
- [ ] Fracture Treatment
- [ ] Change Production Method
- [ ] Reclamation
- [x] Other: Return to Production

Well Name and Number					
Corps of Engineers 31-10					
Footages		Qtr-Qtr	Section	Township	Range
660 F N L	2305 F E L	NWNE	10	153 N	101 W
Field	Pool	County			
Baker	Duperow	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

The Corps of Engineers 31-10 was returned to production on 7/20/12 after being SI due to flooding in Baker Field.

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

FOR STATE USE ONLY

- [x] Received
- [ ] Approved

Date: September 7, 2012

By: [signature]

Title: PETROLEUM ENGINEER

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

Date/Time Reported : Dec 3 2010 / 14:20
State Agency person :
Responsible Party :
Well Operator : SM ENERGY COMPANY
Date/Time of Incident : 12/1/2010 12:00:00 AM
NDIC File Number : 11920
Facility Number :
Well or Facility Name : CORPS OF ENGINEERS 31-10
Field Name : BAKER
County : MCKENZIE
Section : 10
Township : 153
Range : 101
Quarter-Quarter : NW
Quarter : NE
Distance to nearest residence : 1 Miles
Distance to nearest water well : 25 Feet
Release Oil : 60 barrels
Release Brine : 0 barrels
Release Other : 0 barrels
Recovered Oil : 50 barrels
Recovered Brine : 0 barrels
Recovered Other : 0 barrels
Has/Will the incident be reported to the NRC? : Unknown
Was release contained : Yes - Within Dike
Description of other released substance :

Immediate risk evaluation : None.
Followup Report Requested Y/N : N

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

Date/Time Reported : Aug 12 2009 / 11:52
State Agency person :
Responsible Party :
Well Operator : ST MARY LAND & EXPLORATION COMPANY
Date/Time of Incident : 8/11/2009 12:00:00 AM
NDIC File Number : 11920
Facility Number :
Well or Facility Name : CORPS OF ENGINEERS 31-10
Field Name : BAKER
County : MCKENZIE
Section : 10
Township : 153
Range : 101
Quarter-Quarter : NW
Quarter : NE
Distance to nearest residence : 1 Miles
Distance to nearest water well : 0.25 Miles
Release Oil : 8 barrels
Release Brine : 0 barrels
Release Other : 0 barrels
Recovered Oil : 5 barrels
Recovered Brine : 0 barrels
Recovered Other : 0 barrels
Has/Will the incident be reported to the NRC? : No
Was release contained : Yes - Within Dike
Description of other released substance :

Immediate risk evaluation : None.
Followup Report Requested Y/N : N

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

Date/Time Reported : Oct 16 2006 / 10:29
State Agency person :
Responsible Party :
Well Operator : NANCE PETROLEUM CORPORATION
Date/Time of Incident : 10/15/2006 12:00:00 AM
NDIC File Number : 11920
Facility Number :
Well or Facility Name : Corp. of Engineers 31-10
Field Name : BAKER
County : McKenzie
Section : 10
Township : 153
Range : 101
Quarter-Quarter : NW
Quarter : NE
Distance to nearest residence : 5 Miles
Distance to nearest water well : 0.25 Miles
Release Oil : 1 barrels
Release Brine : 0 barrels
Release Other : 0 barrels
Recovered Oil : 0 barrels
Recovered Brine : 0 barrels
Recovered Other : 0 barrels
Has/Will the incident be reported to the NRC? : No
Was release contained : Yes - Within Dike
Description of other released substance :

Immediate risk evaluation :

SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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

FEB 2012 RECEIVED ND OIL & GAS DIVISION

Well File No. **11920**

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.
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☑ Notice of Intent — Approximate Start Date

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

Well Name and Number					
Corp of Engineers 31-10					
Footages	Qtr-Qtr	Section	Township	Range	
660 F N L 2305 F E L	**NWNE**	**10**	**153 N**	**101 W**	
Field	Pool	County			
Baker	**Duperow**	**McKenzie**			

24-HOUR PRODUCTION RATE

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

Name of Contractor(s)			
Address	City	State	Zip Code

DETAILS OF WORK

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

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

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

FOR STATE USE ONLY

☑ Received ☐ Approved

Date February 22, 2012

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)

APR 2011 RECEIVED OIL AND GAS DIVISION

Well File No. **11920**

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

☑ Notice of Intent	Approximate Start Date	☐ Drilling Prognosis	☐ Spill Report
☐ Report of Work Done	Date Work Completed	☐ Redrilling or Repair	☐ Shooting
☐ 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	☐ Casing or Liner	☐ Acidizing
		☐ Plug Well	☐ Fracture Treatment
		☐ Supplemental History	☐ Change Production Method
		☐ Temporarily Abandon	☐ Reclamation
		☑ Other **Shut In Well**	

Well Name and Number					
Corp of Engineers 31-10					
Footages	Qtr-Qtr	Section	Township	Range	
660 F N L 2305 F E L	NWNE	10	153 N	101 W	
Field	Pool	County			
Baker	Duperow	McKenzie			

24-HOUR PRODUCTION RATE

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

Name of Contractor(s)			
Address	City	State	Zip Code

DETAILS OF WORK

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

Company **SM Energy**			Telephone Number
Address **P O Box 7168**			
City **Billings**		State **MT**	Zip Code **59103**
Signature	Printed Name **Luke Studer**		
Title **Regulatory and Safety Comp. Spec.**	Date **March 29, 2011**		
Email Address			

FOR STATE USE ONLY

☑ Received	☐ Approved
Date April 5, 2011	
By David J. McCusker	
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)

OCT 2010 RECEIVED NORTH DAKOTA OIL & GAS DIVISION

Well File No. 11920

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

☐ Notice of Intent	Approximate Start Date
☑ Report of Work Done	Date Work Completed **October 25, 2010**
☐ 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 **Wells Flaring Gas**	

Well Name and Number
See Attached List

Footages	Qtr-Qtr	Section	Township	Range
F L F L			N	W

Field	Pool	County

24-HOUR PRODUCTION RATE

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

Name of Contractor(s)

Address	City	State	Zip Code

DETAILS OF WORK

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

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

FOR STATE USE ONLY

☒ Received	☐ Approved
Date 10-29-10	
By Original Signed By GLENN L. WOLLAN	
Title Field Supervisor	

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

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)

JUL 2010 RECEIVED ND OIL & GAS DIVISION

Well File No. **11920**

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

- [x] Notice of Intent — Approximate Start Date
- [ ] 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
- [ ] Redrilling or Repair
- [ ] Casing or Liner
- [ ] Plug Well
- [ ] Supplemental History
- [ ] Temporarily Abandon
- [x] Other **Shut In Well**
- [ ] Spill Report
- [ ] Shooting
- [ ] Acidizing
- [ ] Fracture Treatment
- [ ] Change Production Method
- [ ] Reclamation

Well Name and Number				
Corp of Engineers 31-10				
Footages	Qtr-Qtr	Section	Township	Range
660 F N L 2305 F E L	**NWNE**	**10**	**153 N**	**101 W**
Field	Pool	County		
Baker	**Duperow**	**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

6/30/2010 Temporarily Shut In due to Missouri River Flooding.

Company		Telephone Number
SM Energy		
Address		
P O Box 7168		
City	State	Zip Code
Billings	**MT**	**59103**
Signature	Printed Name	
	Luke Studer	
Title	Date	
Regulatory and Safety Comp. Spec.	**July 19, 2010**	
Email Address		

FOR STATE USE ONLY

[x] Received	[ ] Approved
Date 7-28-10	
By	
Title GLENN L. WOLLAN Field Supervisor	

AUTHORIZATION TO PURCHASE AND TRANSPORT OIL FROM LEASE - FORM 8

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

Well File No.
11920
NDIC CTB No.
111920

JUN 2010 RECEIVED ND OIL & GAS DIVISION

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

Well Name and Number	Qtr-Qtr	Section	Township	Range	County
CORPS OF ENGINEERS 31-10	NWNE	10	153 N	101 W	McKENZIE

Operator	Telephone #	Field
SM ENERGY COMPANY	406-245-6248	BAKER

Address	City	State	Zip Code
P O BOX 7168	BILLINGS	MT	59103-7168

Name of First Purchaser	Telephone #	% Purchased	Date Effective
Nexen Marketing USA Inc	303-850-4284	100	June 1, 2010

Principal Place of Business	City	State	Zip Code
5660 Greenwood Plaza Blvd., #230	Greenwood Village	CO	80111

Field Address	City	State	Zip Code
PO Box 567	Plentywood	MT	59254

Name of Transporter	Telephone Numbe	% Transported	Date Effective
Diamond B Trucking Inc. (TR)	701-245-6423	100	June 1, 2010

Address	City	State	Zip Code
PO Box 445	Westhope	ND	58793

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

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

Comments
St. Mary Land & Exploration Company name change to SM Energy Company effective 6/1/2010

I hereby swear or affirm that the information herein provided is true, complete and correct as determined from all available records.	Date
	June 10, 2010

Signature	Printed Name	Title
Sherry Karst	Sherry Karst	Production Technician

Above Signature Witnessed By

Witness Signature	Witness Printed Name	Witness Title
Brenda Young	Brenda Young	Production Technician

FOR STATE USE ONLY

Date Approved	JUL 01 2010
By	Annette Jetzer
Title	Oil + Gas Prod. Analyst

Oil and Gas Division

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

Department of Mineral Resources

Lynn D. Helms - Director

North Dakota Industrial Commission

www.dmr.nd.gov/oilgas

June 28, 2010

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

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

Dear Mr. Ronald B. Santi:

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

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

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

Sincerely,

Evie Roberson
Administrative Assistant

600 E Boulevard Ave - Dept 405, Bismarck, North Dakota 58505-0840 Phone (701)328-8020 Fax (701)328-8022

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

11920

February 4, 2009

Ms. Maggie Vogl
St Mary Land & Exploration Company
550 North 31st Street
Billings, MT 59101

RE: Corps of Engineers #31-10
NWNE Sec. 10, T.153N., R.101W.
McKenzie County, North Dakota
Baker Field
Well File No. 11920
STRIPPER WELL DETERMINATION

Dear Ms. Vogl:

St Mary Land & Exploration Company (St Mary) filed with the North Dakota Industrial Commission – Oil and Gas Division (Commission) on February 2, 2009 an application for a Stripper Well Property Determination for the above captioned well.

Information contained in the application indicates that the above mentioned well is a property pursuant to statute and rule, and St Mary has elected to designate said well as a separate property for stripper well purposes. The well produced from a well depth greater than 10000 feet. During the qualifying period, October 1, 2007 through September 30, 2008 the well produced at a maximum efficient rate and the average daily production from the well was 28.4 barrels of oil per day during this period.

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

The Commission shall have continuing jurisdiction, and shall have the authority to review the matter, and to amend or rescind the determination if such action is supported by additional or newly discovered information. If you have any questions, do not hesitate to contact me.

Sincerely,

David J. McCusker
Petroleum Engineer

Cc: ND Tax Department

600 E Boulevard Ave - Dept 405, Bismarck, North Dakota 58505-0840 Phone (701)328-8020 Fax (701)328-8022

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.
11920
NDIC CTB No.
111920

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

Well Name and Number	Qtr-Qtr	Section	Township	Range	County
CORPS OF ENGINEERS 31-10	NWNE	10	153 N	101 W	McKENZIE

Operator	Telephone #	Field
ST MARY LAND & EXPLORATION COMPANY	406-245-6248	BAKER

Address	City	State	Zip Code
P O BOX 7168	BILLINGS	MT	59103-7168

Name of First Purchaser	Telephone #	% Purchased	Date Effective
Nexen Marketing USA Inc	303-850-4284	100	December 1, 2007

Principal Place of Business	City	State	Zip Code
5660 Greenwood Plaza Blvd., #230	Greenwood Village	CO	80111

Field Address	City	State	Zip Code
PO Box 567	Plentywood	MT	59254

Name of Transporter	Telephone Numbe	% Transported	Date Effective
Diamond B Trucking Inc. (TR)	701-245-6423	100	December 1, 2007

Address	City	State	Zip Code
PO Box 445	Westhope	ND	58793

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

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

Comments

0

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

Date: December 17, 2007

Signature	Printed Name	Title
Kari Wheeler	Kari Wheeler	Production Assistant

Above Signature Witnessed By

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

DEC 2007

FOR STATE USE ONLY

Date Approved: 12-26-07

By: Annette Fetzer

Title: Oil + Gas Production Analyst

Oil and Gas Division

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

Department of Mineral Resources

Lynn D. Helms - Director

North Dakota Industrial Commission

www.oilgas.nd.gov

December 26, 2007

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

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

Dear Ms. Writer:

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

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

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

Sincerely,

Marge Rixen
Legal Assistant

/mr

600 E Boulevard Ave - Dept 405, Bismarck, North Dakota 58505-0840 Phone (701)328-8020 Fax (701)328-8022

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.
11920
NDIC CTB No.
111920

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

Well Name and Number	Qtr-Qtr	Section	Township	Range	County
CORPS OF ENGINEERS 31-10	NWNE	10	153 N	101 W	McKENZIE

Operator	Telephone #	Field
NANCE PETROLEUM CORPORATION	406-245-6248	BAKER

Address	City	State	Zip Code
P O BOX 7168	BILLINGS	MT	59103-7168

Name of First Purchaser	Telephone #	% Purchased	Date Effective
Eighty-Eight Oil LLC	307-266-0264	100	April 1, 2005

Principal Place of Business	City	State	Zip Code
P O Drawer 2360	Casper	WY	82602

Field Address	City	State	Zip Code
P O Drawer 2360	Casper	WY	82602

Name of Transporter	Telephone Numbe	% Transported	Date Effective
Black Hills Trucking	307-266-0264	100	April 1, 2005

Address	City	State	Zip Code
P.O. Drawer 2360	Casper	WY	82602

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

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

Comments

0

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

Date: March 30, 2005

Signature	Printed Name	Title
Amanda Rambur	Amanda Rambur	Marketing Representative

Above Signature Witnessed By

Witness Signature	Witness Printed Name	Witness Title
Terry Holzwarth	Terry Holzwarth	VP - Business Development

FOR STATE USE ONLY

Date Approved	4-6-05
By	Annette Fabry
Title	Oil + Gas Production Analyst

AUTHORIZATION TO PURCHASE AND TRANSPORT OIL FROM LEASE - FORM 8

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

MAR 2004 RECEIVED ND OIL & GAS DIVISION

Well File No.
11920
NDIC CTB No.
111920

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

Well Name and Number	Qtr-Qtr	Section	Township	Range	County
CORPS OF ENGINEERS 31-10	NWNE	10	153 N	101 W	McKENZIE

Operator	Telephone #	Field
NANCE PETROLEUM CORPORATION	406-245-6248	BAKER

Address	City	State	Zip Code
P O BOX 7168	BILLINGS	MT	59103-7168

Name of First Purchaser	Telephone #	% Purchased	Date Effective
Tesoro Refining & Marketing Company	403-699-4059	100	April 1, 2004

Principal Place of Business	City	State	Zip Code
1225 17th St., Ste. 1800	Denver	CO	80202

Field Address	City	State	Zip Code
HC 56 Box 605 1A	Sidney	MT	59270

Name of Transporter	Telephone Numbe	% Transported	Date Effective
Tesoro Refining & Marketing Company (TR)	720-258-0611	100	April 1, 2004

Address	City	State	Zip Code
1225 17th St., Ste 1800	Denver	CO	80202

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

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

Comments

0

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

Date: March 24, 2004

Signature	Printed Name	Title
Amanda Rambur	Amanda Rambur	Marketing Representative

Above Signature Witnessed By

Witness Signature	Witness Printed Name	Witness Title
Terry Holzwarth	Terry Holzwarth	VP - Acquisitions

FOR STATE USE ONLY

Date Approved	3/31/04
By	Annette Fetzer
Title	Oil + Gas Prod. Analyst

AUTHORIZATION TO PURCHASE AND TRANSPORT OIL FROM LEASE - FORM 8

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

Well File No.
11920
NDIC CTB No.
111920

JUN 2002 RECEIVED ND OIL & GAS DIVISION

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

Well Name and Number	Qtr	Section	Township	Range	County
CORPS OF ENGINEERS 31-10	NWNE	10	153 N	101 W	McKENZIE

Operator	Telephone #	Field
NANCE PETROLEUM CORPORATION	406-245-6248	BAKER

Address	City	State	Zip Code
P O BOX 7168	BILLINGS	MT	59103-7168

Name of First Purchaser	Telephone #	% Purchased	Date Effective
Nexen Marketing USA Inc.	403-699-4059	100	July 1, 2002

Principal Place of Business	City	State	Zip Code
~~1700 801 7th Ave SW~~ 5660 Greenwood Plaza Blvd #200	~~Calgary AB~~ Greenwood Village	~~Canada~~ CO	~~T2P 3P7~~ 80111

Field Address	City	State	Zip Code
PO Box 567	Plentywood	MT	59254

Name of Transporter	Telephone Numbe	% Transported	Date Effective
Diamond B ~~Oilfield~~ Trucking Inc. (TR)	406-765-1376	100	July 1, 2002

Address	City	State	Zip Code
PO Box ~~567~~ 445	~~Plentywood~~ Westhope	~~MT~~ ND	58793 ~~59254~~

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

Other First Purchasers Purchasing From This Lease	% Purchased	Date Effective

Other First Purchasers Purchasing From This Lease	% Purchased	Date Effective

Other Transporters Transporting From This Lease	% Transported	Date Effective

Other Transporters Transporting From This Lease	% Transported	Date Effective

Comments

0

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

Date: June 14, 2002

Signature	Printed Name	Title
Gary L Evertz	Gary L. Evertz	VP Operations

Above Signature Witnessed By

Witness Signature	Witness Printed Name	Witness Title
Valeri Kaae	Valeri Kaae	Operations Assistant

FOR STATE USE ONLY

Date Approved	JUL 2 2002
By	Sheila Cheshmeny
Title	Oil Prod Analyst

AUTHORIZATION TO PURCHASE AND TRANSPORT OIL FROM LEASE - FORM 8

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

Well File No.	11920
NDIC CTB No.	11920

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

Well Name and Number	Qtr-Qtr	Section	Township	Range	County
CORPS OF ENGINEERS 31-10	NWNE	10	153 N	101 W	McKENZIE

Operator	Telephone #	Field
NANCE PETROLEUM CORPORATION	406-245-6248	BAKER

Address	City	State	Zip Code
P O BOX 7168	BILLINGS	MT	59103-7168

Name of First Purchaser	Telephone #	% Purchased	Date Effective
Tesoro Refining & Marketing Company	720-744-9315	100	February 1, 2002

Principal Place of Business	City	State	Zip Code
1225 17th St., Ste 1800	Denver	CO	80202

Field Address	City	State	Zip Code
HC 56 Box 605 1A	Sidney	MT	59270

Name of Transporter	Telephone Numbe	% Transported	Date Effective
Tesoro ~~Refining & Marketing Company (TR)~~ High Plains Pipeline Co	406-482-4841	100	February 1, 2002

Address	City	State	Zip Code
~~HC 56 Box 605 1A~~ 1225 17th St Ste 1800	~~Sidney~~ Denver	~~MT~~ Co	80202 ~~59270~~

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

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

Comments
BP AMOCO sold to Tesoro Refining & Marketing Company

I hereby swear or affirm that the information herein provided is true, complete and correct as determined from all available records. Date: February 1, 2002

Signature	Printed Name	Title
Gary L Evertz	Gary L. Evertz	VP Operations

Above Signature Witnessed By

Witness Signature	Witness Printed Name	Witness Title
Jeanette Magstadt	Jeanette Magstadt	Operations Assistant

FOR STATE USE ONLY

Date Approved	FEB 8 2002
By	Sheila O'Shaughnessy
Title	Oil Prod. Analyst

PRODUCERS CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL FROM LEASE - FORM 8

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5698 (2-92)

Well File Number: 11920

NDIC CTB Number: 111920

INSTRUCTIONS

The original and four copies of this form must be submitted to the OIL AND GAS DIVISION, 600 E. Boulevard Avenue, Bismarck, ND 58505

WELL: CORPS OF ENGINEERS 31-10 (Q/Q) NWNE (SEC.) 10 (TWP.) 153N (RGE.) 101W COUNTY MCKENZIE

PRODUCER: Nance Petroleum Corporation FIELD BAKER POOL ~~RED RIVER~~ DUPEROW

ADDRESS CORRESPONDENCE TO: GARY L. EVERTZ, Nance Petroleum Corporation
550 N. 31ST STREET, SUITE 500, P. O. BOX 7168, BILLINGS, MT 59103

		% Purchased	Date Effective
Name of First Purchaser	AMOCO PRODUCTION COMPANY	100	May 1, 2000
Principal Place of Business	~~1670 Broadway, Ste 1104, Denver, CO 80201~~ PO Box 21378 Tulsa OK 74121		
Field Address	1670 Broadway, Ste 1104, Denver, CO 80201		
Name of Transporter	BP ~~AMOCO PRODUCTION COMPANY~~ Pipeline trucking	% Transported 100	Date Effective May 1, 2000
Address	~~1670 Broadway, Ste 1104, Denver, CO 80201~~ 4502 E 41st St Ste 300 Tulsa OK 74135		

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.

	% Transported	Date Effective
Other Transporters Transporting From This Lease		

	% Purchased	Date Effective
Other First Purchasers Purchasing From This Lease		

Remarks

I certify that the above information is a true and correct report of the transporters and purchasers of oil produced from the above described property. This authorization will be valid until further notice to the transporters and purchasers named until cancelled by the OPERATOR.

Signature: Gary L Evertz Title: Engineer Date: April 24, 2000

State of Montana
County of Yellowstone

On April 24, 2000, Gary L. Evertz, known to me to be the person described in and who executed the foregoing instrument, personally appeared before me and acknowledged that (s)he executed the same as a free and [illegible].

Notary Public: Jeanette M. Magstadt My Commission Expires: AUGUST 21, 2000

JEANETTE M. MAGSTADT NOTARIAL SEAL STATE OF MONTANA

APR 2000 RECEIVED ND OIL & GAS DIVISION

APPROVED BY: Sheila O'Shaughnessy Oil Prod. Analyst Date: JUN 19 2000

WELL COMPLETION OR RECOMPLETION REPORT - FORM 6

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 2468 (2-92)

NOV 1999 RECEIVED ND OIL & GAS DIVISION

Industrial Commission of N.D.
Oil and Gas Division
600 East Boulevard
Bismarck, ND 58505

Designate Type of Completion
☒ Oil Well ☐ Gas Well ☐ Other
☐ Work Over ☐ Deepened ☒ Plug Back

Well File No. 11920
Well Name and No. Corp of Engineers 31-10
Spacing (Unit Description) Docketed for 12-16-99
Field Baker
Pool Discovery Duperow
Wildcat, Development, Extension

Operator	Phone Number
Nance Petroleum Corporation	(406)245-6248

Address		
P. O. Box 7168		
City	State	Zip Code
Billings	MT	59103

LOCATIONS (Show footages, quarter-quarter, section, township and range)

At Surface	County
NWNE Sec 10-T153N-R101W (660' FNL & 2304' FEL)	McKenzie

At Top Prod. Interval, Reported Below
NWNE Sec 10-T153N-R101W (844' FNL & 1909' FEL)

At Total Depth	Welder's Verification No.
NWNE Sec 10-T153N-R101W (841' FNL & 1926' FEL)	

Date Spudded	Date TD Reached	Drilling Contractor & Rig. No.	Elevation (KB)	Total Depth (MD & TVD)	Plug Back TD (MD & TVD) (see back)
6/20/86			1872'	13,480'	11,191'

Producing Interval(s), This Completion, Top, Bottom, Name (MD & TVD)	No. of DST's Run (see back)	Date Directional Survey Submitted
Duperow 10,965-11,115'		

Type of Electric and Other Logs Run (See Instructions)	Was Well Cored?
	☐ No ☐ Yes - List intervals:

CASING RECORD (Report all strings set in well)

Casing Size	Depth Set (MD)	Hole Size	Weight (Lbs./Ft.)	Sacks Cement	Top of Cement
9-5/8"	2954		36, 40#	1220	Surface
5-1/2, 5-5/8"	13480	8-3/4	17, 20,23,26	2932	5130'

LINER RECORD				TUBING RECORD			
Size	Top (MD)	Bottom (MD)	Sacks Cement	Size	Depth Set (MD)	Anchor Set (MD)	Packer Set (MD)
				2-7/8"	11,174	6581	

PERFORATION RECORD

Interval (MD)	Holes Per Ft.	Potential (O&W)	Purpose	Acid, Frac, Sqz, etc.	Amount & Kind of Material Used
10,965-969	4	0	Production	Acid	7000 gal. gelled 15% H
11,100-11,115	4	0	Production	Acid	
13,255-330	4		Production		Abandoned

PRODUCTION

Date of First Production Through Permanent Wellhead	Producing Method (Flowing, gas lift, pumping - size & type of pump)	Well Status (Prod. or shut-in)
10/7/99	Pumping	Producing

Date of Test	Hours Tested	Choke Size	Production for Test	Oil (Bbls.)	Gas (Mcf.)	Water (Bbls.)	Oil Gravity - API (Corr.)
	240	--		1040	873	2280	37.1

Flowing Tubing Pressure	Casing Pressure	Calculated 24 hour rate	Oil (Bbls.)	Gas (Mcf.)	Water (Bbls.)	Gas-Oil Ratio
--	--		104	87.3	228	839

Disposition of Oil & Gas (Purchaser & Transporter)	Test Witnessed By
Sold - Oil-EOTT, Gas-Bear Paw	Brian Boots

List of Attachments/Comments
Wellbore schematic

GEOLOGICAL MARKERS		
FORMATION	MD	TVD

PLUG BACK INFORMATION		
TYPE OF PLUG	INTERVAL/DEPTH	SACKS CEMENT
Cement	11,191'-11,498	25 SX
Cement Retainer	13,344	150 SX

DRILL STEM TEST DATA

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

Signature	Title	Date
	Operations Manager	11/3/99

STATE OF Montana)
)ss
COUNTY OF Yellowstone)

Notary Seal

On November 3, 19 99, Gary E Evertz, known to me to be the person described in and who executed the foregoing instrument, personally appeared before me and acknowledged that (he) executed the same as a free act and deed.

Notary Public Steven D. Hart

My Commission Expires 6-28-2000

INSTRUCTIONS

1. Within thirty (30) days after the completion of a well, or recompletion of a well in a different pool, the original and three copies of this report must be filed with the Industrial Commission of North Dakota, Oil and Gas Division.

2. Immediately after the completion of a well in a pool or reservoir not then covered by an order of the commission, the original and three copies of this report must be filed with the Industrial Commission of North Dakota, Oil and Gas Division.

3. The owner or operator shall file with the Oil and Gas Division two copies of all logs run and three copies of the following: drill stem test reports and charts, formation water analysis and noninterpretive lithologic logs or sample descriptions if compiled.

NANCE PETROLEUM CORPORATION

DIRECTIONAL WELL!!!!

2954'	9 5/8"
4354'	KOP
5130'	CMT TOP
5145'	MAX DEV 12.75 DEG
5777-783'	CASING PATCH
6581'	AC
	TIGHT CSG< 4 1/4"
6661'	BLAST JTS 6643-6704'
7455'	DEV BACK TO 1 DEG.
7980'	MSN
8933-37'	DV COLLAR
10965-969'	DUPEROW
11100-115'	PERFS
11174'	EOT
11191'	TOP OF CMT PLUG
11498'	MODEL D PKR
11600-612'	TIGHT CSG
	FISH-MILL
11840-842'	SQZ PERFS
13100'	
13120-122'	SQZ PERFS
	MODEL R-3 PKR
13243'	& 5 JTS TBG
13255-265'	RED RIVER B
13296-303'	
13308-312'	RED RIVER C
13322-330'	
13344'	CMT RET
13400-402'	SQZ
13440-442'	PERFS
13438'	FLOAT COLLAR
13480'	5 1/2"

WELL: **CORPS OF ENGINEERS 31-10** FIELD: BAKER

LOCATION: NWNE SEC 10 153N 101W, MCKENZIE CO, ND
SURF:660' FNL & 2304' FEL
BHL:841' FNL & 1926' FEL STATUS: PUMPING OIL WELL

ACCTG NO.: 60103

ELEVATION: GL - 1851' KB - 1872' ST FILE NO: 11920
API #:33-053-02148

SPUD DATE: 6/20/86 COMP DATE: 11/24/86

ROTARY TD: 13480' PBTD: 13344'

SURF CSG: 9 5/8" 36,40# K-55 SET @ 2954'. CMT W/ 1220 SX.

PROD CSG: 5 1/2" 17,20,26# L-80,SS95 SET @ 13344'.CMT W/ 1850 SX "G", 1082 SX LITE.

TUBING & BHA		RODS & PUMP
216 JTS 2 7/8" L-80 TBG		1" X 8',6', 4' & 2' PONY RODS
AC W/ 20M # - 6581'		96 - 1" NOR97 PLAIN (2400')
2 JTS 2 7/8" L-80 TBG		52 - 7/8" NOR97RODS (1300')
3 - 3 11/16" BLAST JTS 6643' - 6704'	116 7/8" (2950.)	*55-7/8" NOR97 4 STELTH/ROD (1375')*
42 JTS 2 7/8" L-80 TBG		11-7/8" NOR97 3 PAD/ROD (275')
MSN @ 7980'		70-3/4" NOR97 4 STEALTH/ROD (1750'
105JTS 2 7/8" L-80 TBG	86 3/4" (2150')	16-3/4" NOR97 DBLPLUS (400')
PINNED COLLAR @ 11174'		*18-1" CLASS D 4 PAD/ROD (450')*
		2 1/2" x 1 3/4" x 24.5' RHBM PAMPA

SALT	DEPTH
DUNHAM	6654-6710
PINE	7022-7070
CHARLES	8252-8950
PRAIRIE	11594-11790

	5 1/2"	SET @
	20# L-80	21
5 5/8"	26# SS95	57
	20# L-80	3855
	17# L-80	6439
	23# SS95	6944
	17# L-80	8046
	23# SS95	8877
	20# L-80	11389
5 5/8"	26# SS95	11703
	20# L-80	13344

SL - 144" SPM - 6

WELLHEAD: TBGHD CIW,F,1" 3000 PSI X 7 1/18"

PUMP UNIT: LUFKIN MII 640-365-144 W/ AJAX E-42 ENG,PU SH-33", ENG SH-14". GR=28.6:1.

PERFS: DUPEROW 10965' - 969', 11100' - 115', 4 SPF

ABANDONED BELOW CEMENT PLUG
RED RIVER "B" 13255-265', 4 SPF.
RED RIVER "C" 13296-303', 13308-312', 13322-330' 4 SPF.

PREPARED BY: GARY L EVERTZ DATE: 10/06/99
CORP3110.XLS

DIRICTIONAL WELL TMD - 13480', KOP @ 4354', MAX DEV. 12.75 DEG @ 5145'. BACK TO 1 DEG @ 7455'.

SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5749 (2-92)

Well File Number: 11920

PLEASE READ INSTRUCTIONS ON BACK OF FORM

☒ Notice of Intent
Approximate Start Date _____

☐ Report of Work Done
Date Work Completed _____

☐ Drilling Prognosis
☐ Redrilling or Repair
☐ Casing or Liner
☐ Plug Well
☐ Supplemental History
☐ Temporarily Abandon
☐ Spill Report
☐ Shooting
☐ Acidizing
☐ Fracture Treatment
☐ Change Producing Method
☐ Reclamation
☐ Other _____

Well Name and Number				
Corps of Engineers 31-10				
Footages: 660' FNL 2305' FEL	Qtr-Qtr: NWNE	Section: 10	Township: 153N	Range: 101W
Field: Baker	Pool: Red River	County: McKenzie		

24 HOUR PRODUCTION RATE	
BEFORE	AFTER
Oil	Oil
Water	Water
Gas	Gas

Name of Contractor			
Address	City	State	Zip Code

DETAILS OF WORK

Nance Petroleum request permission to permanently abandon the Red River and production test the Duperow. A previous workover in May and June 1999 attempted to stimulate the Red River, but failed due to collapsed casing in the *Prairie Salt and Dunham formations*. Communication was lost with the producing zone during the workover due to salt plugs in the various fish left in the well. See the attached wellbore schematic. Approximately $156,000 was spent trying to re-establish production from the Red River. The well has salted off again and is not productive. We propose to spot 30 sx Class 'G' cement on top of the Model 'D' packer to permanently abandon the Red River. Due to the tight casing in the Dunham, 6661', we can not get a retainer in the well, and with out communication with the perfs, we can not get a squeeze. We request a verbal approval as we intend to start this work this week due to lease expirations

Company		
NANCE PETROLEUM CORPORATION		
Address: P. O. Box 7168		
City: Billings	State: MT	Zip Code: 59103-7168
By: Gary Evans	Date: 9/21/99	
Title: Operations Manager	Telephone Number: 406-245-6248	

406-245-9106 Fax

FOR OFFICE USE ONLY

☐ Received ☒ Approved

Date: 9-24-99

By: Glenn L. Wollan

Title: ORIGINAL SIGNED BY GLENN L. WOLLAN RECLAMATION SUPERVISOR

NANCE PETROLEUM CORPORATION

CORP OF ENGINEERS 31-10
NWNE Sec 10 T153N R101W
Baker Field – McKenzie County, ND
GL - 1851' KB - 1872' (21' KB)
ACCOUNTING CODE # 60103

WORKOVER PROCEDURE TO RECOMPLETE TO DUPEROW
WELL BORE DIAGRAM ATTACHED
AFE # 87

Current Condition

Red River shut-in unable to produce due to salt from casing split at Prairie Salt.

Proposed Procedure

1. MI RU rig. Unseat pump and hot oil rods to remove paraffin. POOH with rods and pump. ND wellhead and NU BOPE. POOH with tubing. Pressure casing w/ 1000 psi to confirm perfs salted off.

2. TIH w/ tubing open ended. Hydrotest tubing to 7000 psi. Tag Model D packer and spot end of tubing right above packer. Spot balanced plug of 30 sx Class 'G' cement w/ silica flour. POOH to 11200' and reverse out. POOH. SION.

3. PT casing and cement plug to 1000 psi.

4. RU WL truck and **perforate Duperow** using a 3 3/8" expendable carrier gun loaded w/ the largest shot possible, phased 90°:

FDC/CNL depth, 8/18/86		CBL depth
10,965' – 10969'	4'	10965' – 10969'
11,100' – 11,115'	15'	11,100' – 11,115'

5. TIH w/ SN, 143 jts of tubing, full bore packer and rest of tubing. Set EOT @ 10925'±, and packer @ 6610'±. Swab test perfs.

6. RU pump truck. **Acidize Duperow perfs with 2000 gal. 15% HCl using 1.1 Sp. Gr. balls for diversion**. Flow and swab back immediately until well is cleaned up. POOH with tubing.

8. TIH w/ pinned collar, 3 jts 2 7/8" tbg, Mech SN, 148 jts 2 7/8" tbg, AC and rest of tbg. Set EOT @ 11206±, SN @ 11115'AC @ 6610'±. Run rods, laying down 225' or 9 – plain 7/8" rods. Pump size and rod string design to be determined from swab rates. Put well through production facility.

9. RD & release rig.

GLE
9/20/99
CORP3110WO87A.doc

NANCE PETROLEUM CORPORATION

DIRECTIONAL WELL!!!!

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LOCATION: NWNE SEC 10 153N 101W, MCKENZIE CO, ND
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2954'	9 5/8"
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5777-783'	CASING PATCH
6609'	AC
6661'	TIGHT CSG! < 4 1/4" ID
7455'	DEV BACK TO 1 DEG.
8933-37'	DV COLLAR
11358'	MECH SN-DIPTUBE
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11419'	BULL PLUG
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217 JTS 2 7/8" L-80 TBG
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156 JTS 2 7/8" L-80 TBG
MSN W/ 20' X 1 1/4"
DIP TUBE - 11358'
4' PERFED SUB
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1" X 8',6', 4' & 2' PONY RODS
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150 7/8" (3750') — 55-7/8" NOR97 4 STELTH/ROD (1375')
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NOTE: FISH OR PERFS ARE SALTED OFF, AND WELL WILL NOT PRODUCE. THERE IS NO COMMUNICATION WITH RED RIVER PERFS.

SL - 144" SPM - 6

WELLHEAD: TBGHD CIW,F,1" 3000 PSI X 7 1/16"

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PREPARED BY: GARY L EVERTZ DATE: 06/25/99
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Title: Operations Manager	Telephone Number: 406-245-6248	

FOR OFFICE USE ONLY

☐ Received ☒ Approved

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By: Glenn L. Wollan

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GLE
9/20/99
CORP3110WO87A.doc

NANCE PETROLEUM CORPORATION

DIRECTIONAL WELL!!!!

WELL: **CORPS OF ENGINEERS 31-10** FIELD: BAKER

LOCATION: NWNE SEC 10 153N 101W, MCKENZIE CO, ND
SURF:660' FNL & 2304' FEL
BHL:641' FNL & 1926' FEL STATUS: PUMPING OIL WELL

ACCTG NO.: 60103

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2 JTS 2 7/8" L-80 TBG	189 3/4" (4725') 119-3/4" NOR97 DBLPLUS (2975')
BULL PLUG - 11419'	18-1" CLASS D 4 PAD/ROD (450')
	2 1/2" x 1 1/4" x 24.5' RHBM PAMPA

SALT	DEPTH
DUNHAM	6654-6710
PINE	7022-7070
CHARLES	8252-8950
PRAIRIE	11594-11790

5 1/2"	SET @
20# L-80	21
5 5/8" 26# SS95	57
20# L-80	3855
17# L-80	6439
23# SS95	6944
17# L-80	8046
23# SS95	8877
20# L-80	11389
5 5/8" 26# SS95	11703
20# L-80	13344

NOTE: FISH OR PERFS ARE SALTED OFF, AND WELL WILL NOT PRODUCE. THERE IS NO COMMUNICATION WITH RED RIVER PERFS.

SQZ PERFS SL - 144" SPM - 5

WELLHEAD: TBGHD CIW,F,1" 3000 PSI X 7 1/16"

PUMP UNIT: LUFKIN MII 640-365-144 W/ AJAX E-42 ENG.PU SH-33", ENG SH-14". GR=28.6:1.

PERFS: RED RIVER "B" 13255-265', 4 SPF.
RED RIVER "C" 13296-303', 13308-312', 13322-330' 4 SPF.

PREPARED BY: GARY L EVERTZ DATE: 09/25/99
CORP3110.XLS

DIRICTIONAL WELL TMD - 13480', KOP @ 4364', MAX DEV. 12.75 DEG @ 5145'. BACK TO 1 DEG @ 7455'.

NORTH DA .OTA INDUSTRIAL CO. MISSION

OIL AND GAS DIVISION

11920

Lynn D. Helms
DIRECTOR

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

Bruce E. Hicks
ASSISTANT DIRECTOR

August 2, 1999

Jan Magstadt
Nance Petroleum Corp.
P.O. Box 7168
Billings, MT 59103-7168

RE: PRINCPAL NAME CHANGE FROM PANTERRA PETROLEUM TO NANCE PETROLEUM CORPORATION
$100,000 Bond; Bond No. B01936
Underwriters Indemnity Co.

Dear Jan:

This office is in receipt of your request to change the principal name of Panterra Petroleum to Nance Petroleum Corporation.

This office is also in receipt of the rider for the above-captioned bond accepting liability of the five (5) wells covered by bond no. B01314.

This letter will verify the principal name change from Panterra Petroleum to Nance Petroleum Corporation, the transfer of the five (5) wells from bond no. B01314 to bond no. B01936 and termination of Nance Petroleum Corp. $50,000 Bond; Bond No. B01314, Underwriters Indemnity Co. effective this date.

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

Sincerely,

Marge

Marge Rixen
Legal Assistant

/mr

cc: Underwriters Indemnity Co.
8 Greenway Plaza, Ste. 400
Houston, TX 77046

600 E Boulevard Ave Dept 405, Bismarck, North Dakota 58505-0840 Phone(701)328-8020 Fax(701)328-8022

PRODUCERS CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL FROM LEASE FORM 8

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5698 (2-92)

Well File Number 11920

NDIC CTB Number 111920

INSTRUCTIONS

The original and four copies of this form must be submitted to the OIL AND GAS DIVISION, 600 E. Boulevard Avenue, Bismarck, ND 58505

WELL	CORPS OF ENGINEERS 31-10	(Q/Q)	NWNE	(SEC.)	10 (TWP.) 153N	(RGE.)	101W	COUNTY	MCKENZIE
PRODUCER:	Nance Petroleum Corporation			FIELD	BAKER	POOL	RED RIVER		

ADDRESS CORRESPONDENCE TO: GARY L. EVERTZ, Nance Petroleum Corporation
550 N. 31ST STREET, SUITE 500, P. O. BOX 7168, BILLINGS, MT 59103

		% Purchased	Date Effective
Name of First Purchaser	EOTT ENERGY OPERATING LIMITED PARTNERSH	100	June 1, 1999
Principal Place of Business	P O BOX 4666, HOUSTON, TX 77210-4666		
Field Address	P O BOX 4666, HOUSTON, TX 77210-4666		
Name of Transporter Address	EOTT ENERGY OPERATING LIMITED PARTNERSH P O BOX 4666, HOUSTON, TX 77210-4666	% Transported 100	Date Effective June 1, 1999

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.

	% Transported	Date Effective
Other Transporters Transporting From This Lease		

	% Purchased	Date Effective
Other First Purchasers Purchasing From This Lease		

Remarks
Name change Panterra Petroleum to NANCE PETROLEUM CORPORATION

I certify that the above information is a true and correct report of the transporters and purchasers of oil produced from the above described property. This authorization will be valid until further notice to the transporters and purchasers named until *cancelled by the OPERATOR.*

Signature Gary L Evertz Title Engineer Date June 30, 1999

State of Montana
County of Yellowstone

On June 30, 1999 Gary L. Evertz, known to me to be the person described in and who executed the foregoing instrument, personally appeared before me and acknowledged that (s)he executed the same as a free act and deed.

Notary Public My Commission Expires AUGUST 21, 2000

APPROVED BY: Mark Bohm Date: AUG 2 1999

SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5749 (2-92)

Well File Number: 11920

RECEIVED JUN 1999 ND OIL & GAS DIVISION

PLEASE READ INSTRUCTIONS ON BACK OF FORM

☐ Notice of Intent
Approximate Start Date _____

☒ Report of Work Done
Date Work Completed 5/28/99

☐ Drilling Prognosis
☐ Redrilling or Repair
☐ Casing or Liner
☐ Plug Well
☐ *Supplemental History*
☐ Temporarily Abandon
☐ Spill Report
☐ Shooting
☐ Acidizing
☐ Fracture Treatment
☐ Change Producing Method
☐ Reclamation
☐ Other _____

Well Name and Number				
Corps of Engineers 31-10				
Footages: 660' FNL 2305' FEL	Qtr-Qtr: NW NE	Section: 10	Township: 153N	Range: 101W
Field: Baker	Pool: Red River	County: McKenzie		

24 HOUR PRODUCTION RATE	
BEFORE	AFTER
Oil: 24	Oil:
Water: 6	Water:
Gas: 332	Gas:

Name of Contractor			
Address	City	State	Zip Code

DETAILS OF WORK

5/4/99 PULL RODS & PUMP. SEAL ASSEMBLY WOULD NOT RELEASE. CHEM CUT TBG @ 10000'. SWEDGE CSG W/ 3.875", 4" & 4 ¼". RUN O/S & GOT HOLD OF FISH @ 10000' & POOH. TIH W/ REDRESSED SEAL ASSY & COULD NOT LATCH PKR. POOH. MULE SHOE WAS SCARRED UP. RUN 161 JTS TP, PKR & TBG.SET PKR @ 6570' ABOVE TIGHT CSG. **ACDZ RED RIVER W/ 5000 GAL 15 % GELLED HCL** 6 BPM & 3934 PSI. VAC IN 1 MIN. SWAB TO SN W/ NO ENTRY AFTER GETTING A LOT OF SCALE SOLIDS.FILL HOLE W/ FW BUT COULDN'T PUMP @ 7000 PSI. POOH & PU 5 JTS 2" TP & STING THRU PKR & SET ON MILL. **SPOT 1000 GAL 15 % HCL & PUMP** @ 4.4 BPM & 45OO PSI. ISIP 2400 W/ LITTLE BLEED OFF. SWAB MORE SOLIDS & SOME FREE SALT. SWAB DOWN. **ACDZ W/ 2500 GAL 28% HCL W/ N2 FOAM** 4 BPM & 6888 PSI. FLOW & SWAB BACK. PULL TBG & RUN PROD BHA W/ EOT @ 11419',SN @ 11358'. AC @ 6609'. RUN 1 1/2" PUMP. RD RIG 5/29/99.

Company		
Pantrerra Petroleum		
Address: P. O. Box 7168		
City: Billings	State: MT	Zip Code: 59103-7168
By: Gary E Entz	Date: 6/18/99	
Title: Operationa Manager	Telephone Number: 406-245-6248	

406-245-9106 Fax

FOR OFFICE USE ONLY

☒ Received ☐ Approved

Date: JUN 21 1999

By: R E Williams

Title: Assistant Director

SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5749 (2-92)

Well File Number: 11920

PLEASE READ INSTRUCTIONS ON BACK OF FORM

☒ Notice of Intent
Approximate Start Date 5/4/99

☐ Report of Work Done
Date Work Completed ~~[illegible]~~

☐ Drilling Prognosis
☐ Redrilling or Repair
☐ Casing or Liner
☐ Plug Well
☐ Supplemental History
☐ Temporarily Abandon
☐ Spill Report
☐ Shooting
☒ Acidizing
☐ Fracture Treatment
☐ Change Producing Method
☐ Reclamation
☐ Other _____

Well Name and Number				
Corps of Engineers 31-10				
Footages: 660' FNL 2305' FEL	Qtr-Qtr: NWNE	Section: 10	Township: 153N	Range: 101W
Field: Baker	Pool: Red River	County: McKenzie		

24 HOUR PRODUCTION RATE	
BEFORE	AFTER
Oil	Oil
Water	Water
Gas	Gas

Name of Contractor			
Address	City	State	Zip Code

DETAILS OF WORK

Panterra Petroleum requests permission to acid stimulate the Red River perfs. See the attached procedure and wellbore schematic.

Company		
Pantrerra Petroleum		
Address: P. O. Box 7168		
City: Billings	State: MT	Zip Code: 59103-7168
By: Gary L Evers	Date	
Title: Operations Manager	Telephone Number: 406-245-6248	

406-245-9106 Fax

FOR OFFICE USE ONLY

☐ Received ☒ Approved

Date: MAY 6 1999

By: F E Williams

Title: Assistant Director

PANTERRA PETROLEUM

CORP OF ENGINEERS 31-10
NWNE Sec 10 T153N R101W
Baker Field – McKenzie County, Nd
GL - 1851' KB - 1872' (21' KB)
ACCOUNTING CODE # 60103

WORKOVER PROCEDURE TO DO FOAM ACID JOB OF RED RIVER
WELL BORE DIAGRAM ATTACHED
AFE # 31

Current Condition

Pumping 24 BOPD, 332 MCFD and 6 BWPD.

Proposed Procedure

1. MI RU rig. Unseat pump and hot oil rods to remove paraffin. POOH with rods and pump. ND wellhead and NU BOPE. Unsting from Baker Model D packer. POOH with tubing. LD both perfed subs and bull plug.

2. Redress seal assembly and TIH w/ tubing. Hydrotest tubing to 7000 psi. Sting into Model D packer and PT csg to 500 psi.

3. RU pump truck. Run And stake down steel flowline to test tank. **Acidize Red River "B" and "C" perfs with 600 gal. foamed FW , 2500 gal. gelled 28% HCl foamed w/ Nitrogen then 600 gal. foamed FW overdisplacement**. Flow and swab back immediately until well is cleaned up. POOH with tubing.

4. Run same production BHA. Run rods and pump. Put well through production facility.

5. RD & release rig.

GLE
4/29/99
CORP3110WO31.doc

PANTERRA PETROLEUM

WELL: **CORPS OF ENGINEERS 31-10** FIELD: BAKER

LOCATION: NWNE SEC 10 153N 101W, MCKENZIE CO, ND
SURF:660' FNL & 2304' FEL
BHL:841' FNL & 1926' FEL STATUS: FLOWING OIL WELL

ACCTG NO.: 618

ELEVATION: GL - 1851' KB - 1872' ST FILE NO: 11920
API #:33-053-02148

SPUD DATE: 6/20/86 COMP DATE: 11/24/86

ROTARY TD: 13480' PBTD: 13344'

SURF CSG: *9 5/8" 36,40# K-55 SET @ 2954'. CMT W/ 1220 SX.*

PROD CSG: 5 1/2" 17,20,26# L-80,SS95 SET @ 13344'.CMT W/ 1850 SX "G", 1082 SX LITE.

DIRICTIONAL WELL TMD - 13480'

TUBING & BHA	RODS & PUMP
328 JTS 2 7/8" L-80 TBG	1" X 8',6', & 4' PONY RODS
MECH SN W/ 12' X 1 1/4" DIP TUBE-10015'	96 - 1" NOR97 PLAIN (2400')
4' PERFED SUB	56 - 7/8" NOR97RODS (1400')
48 JTS 2 7/8" L-80 TBG	28-7/8" NOR97 6 PAD/ROD (700')
BULL PLUG	15-7/8" NOR97 3 PAD/ROD (375')
4' PERFED SUB	*63-3/4" NOR97 3 PAD/ROD (1575')*
BAKER 40-26 MOD E-22 SEAL ASSY	68-3/4" NOR97 PLAIN (1700')
BAKER MOD D PERM. PKR. - 11498'	56-3/4" NOR97 4 PAD/ROD (1400')
	16-1" CLASS D 4 PAD/ROD (400')
	2 1/2" x 1 1/4" x 24' RHBM 2 STAGE

SALT	DEPTH
DUNHAM	6654-6710
PINE	7022-7070
CHARLES	8252-8950
PRAIRIE	*11594-11790*

5 1/2"	SET @
20# L-80	21
26# SS95	57
20# L-80	3855
17# L-80	6439
23# SS95	6944
17# L-80	8046
23# SS95	8877
20# L-80	11389
26# SS95	11703
20# L-80	13344

SL - 144" SPM - 5.5

WELLHEAD: *TBGHD CIW,F,1" 3000 PSI X 7 1/16"*

PUMP UNIT: LUFKIN MII 640-365-144 W/ AJAX E-42 ENG,PU SH-33", ENG SH-14". *GR=28.6:1.*

PERFS: RED RIVER "B" 13255-265', 4 SPF.

RED RIVER "C" 13296-303', 13308-312', 13322-330' 4 SPF.

PREPARED BY: GARY L EVERTZ DATE: 04/13/99
CORP3110.XLS

SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5749 (2-92)

Well File Number: 11920

PLEASE READ INSTRUCTIONS ON BACK OF FORM

☒ Notice of Intent
Approximate Start Date 5/4/99

☐ Report of Work Done
Date Work Completed ~~[illegible]~~

☐ Drilling Prognosis
☐ Redrilling or Repair
☐ Casing or Liner
☐ Plug Well
☐ Supplemental History
☐ Temporarily Abandon
☐ Spill Report
☐ Shooting
☒ Acidizing
☐ Fracture Treatment
☐ Change Producing Method
☐ Reclamation
☐ Other _____

24 HOUR PRODUCTION RATE	
BEFORE	AFTER
Oil	Oil
Water	Water
Gas	Gas

Well Name and Number				
Corps of Engineers 31-10				
Footages: 660' FNL 2305' FEL	Qtr-Qtr: NWNE	Section: 10	Township: 153N	Range: 101W
Field: Baker	Pool: Red River	County: McKenzie		

Name of Contractor			
Address	City	State	Zip Code

DETAILS OF WORK

Panterra Petroleum requests permission to acid stimulate the Red River perfs. See the attached procedure and wellbore schematic.

Company		
Pantrerra Petroleum		
Address: P. O. Box 7168		
City: Billings	State: MT	Zip Code: 59103-7168
By: Gary L Evers	Date	
Title: Operations Manager	Telephone Number: 406-245-6248	

406-245-9106 Fax

FOR OFFICE USE ONLY

☐ Received ☒ Approved

Date: 4 May 99

By: F E Williams

Title: Assistant Director

PANTERRA PETROLEUM

CORP OF ENGINEERS 31-10
NWNE Sec 10 T153N R101W
Baker Field – McKenzie County, Nd
GL - 1851' KB - 1872' (21' KB)
ACCOUNTING CODE # 60103

WORKOVER PROCEDURE TO DO FOAM ACID JOB OF RED RIVER
WELL BORE DIAGRAM ATTACHED
AFE # 31

Current Condition

Pumping 24 BOPD, 332 MCFD and 6 BWPD.

Proposed Procedure

1. MI RU rig. Unseat pump and hot oil rods to remove paraffin. POOH with rods and pump. ND wellhead and NU BOPE. Unsting from Baker Model D packer. POOH with tubing. LD both perfed subs and bull plug.

2. Redress seal assembly and TIH w/ tubing. Hydrotest tubing to 7000 psi. Sting into Model D packer and PT csg to 500 psi.

3. RU pump truck. Run And stake down steel flowline to test tank. **Acidize Red River "B" and "C" perfs with 600 gal. foamed FW , 2500 gal. gelled 28% HCl foamed w/ Nitrogen then 600 gal. foamed FW overdisplacement**. Flow and swab back immediately until well is cleaned up. POOH with tubing.

4. Run same production BHA. Run rods and pump. Put well through production facility.

5. RD & release rig.

GLE
4/28/99
CORP3110WO31.doc

PANTERRA PETROLEUM

WELL: **CORPS OF ENGINEERS 31-10** FIELD: BAKER

LOCATION: NWNE SEC 10 153N 101W, MCKENZIE CO, ND
SURF:660' FNL & 2304' FEL
BHL:841' FNL & 1926' FEL STATUS: *FLOWING OIL WELL*

ACCTG NO.: 618

ELEVATION: GL - 1851' KB - 1872' ST FILE NO: 11920
API #:33-053-02148

SPUD DATE: 6/20/86 COMP DATE: 11/24/86

ROTARY TD: 13480' PBTD: 13344'

SURF CSG: 9 5/8" 36,40# K-55 SET @ 2954'. CMT W/ 1220 SX.

PROD CSG: 5 1/2" 17,20,26# L-80,SS95 SET @ 13344'.CMT W/ 1850 SX "G", 1082 SX LITE.

DIRICTIONAL WELL TMD - 13480'

TUBING & BHA

328 JTS 2 7/8" L-80 TBG
MECH SN W/ 12' X 1 1/4" DIP TUBE-10015'
4' PERFED SUB
48 JTS 2 7/8" L-80 TBG
BULL PLUG
4' PERFED SUB
BAKER 40-26 MOD E-22 SEAL ASSY
BAKER MOD D PERM. PKR. - 11498'

RODS & PUMP

1" X 8',6', & 4' PONY RODS
96 - 1" NOR97 PLAIN (2400')
56 - 7/8" NOR97RODS (1400')
28-7/8" NOR97 6 PAD/ROD (700')
15-7/8" NOR97 3 PAD/ROD (375')
63-3/4" NOR97 3 PAD/ROD (1575')
68-3/4" NOR97 PLAIN (1700')
56-3/4" NOR97 4 PAD/ROD (1400')
16-1" CLASS D 4 PAD/ROD (400')
2 1/2" x 1 1/4" x 24' RHBM 2 STAGE

SALT	DEPTH
DUNHAM	6654-6710
PINE	7022-7070
CHARLES	8252-8950
PRAIRIE	11594-11790

5 1/2"	SET @
20# L-80	21
26# SS95	57
20# L-80	3855
17# L-80	6439
23# SS95	6944
17# L-80	8046
23# SS95	8977
20# L-80	11389
26# SS95	11703
20# L-80	13344

SL - 144" SPM - 5.5

WELLHEAD: TBGHD CIW,F,1" 3000 PSI X 7 1/16"

PUMP UNIT: LUFKIN MII 640-365-144 W/ AJAX E-42 ENG,PU SH-33", ENG SH-14". GR=28.6:1.

PERFS: RED RIVER "B" 13255-265', 4 SPF.

RED RIVER "C" 13296-303', 13308-312', 13322-330' 4 SPF.

PREPARED BY: GARY L EVERTZ DATE: 04/13/99
CORP3110.XLS

PRODUCERS C TIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL FROM LEASE FORM 8
INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5698 (7-92)

DEC 1998 RECEIVED ND OIL & GAS DIVISION

Well File Number	11920
NDIC CTB Number	111920

INSTRUCTIONS

The original and four copies of this form must be submitted to the OIL AND GAS DIVISION, 600 E. Boulevard Avenue, Bismarck, ND 58505.

Well Name and Number	Qtr-Qtr	Section	Township	Range	County
CORP OF ENGINEERS 31-10					MC KENZIE

Company Name	Field		
PANTERRA PETROLEUM	BAKER		
Address	**City**	**State**	**Zip Code**
P.O. BOX 7168	BILLINGS	MT	59103

Name of First Purchaser	% Purchased	Date Effective
EOTT ENERGY OPERATING LIMITED PARTNERSHIP	100%	12/1/98

Principal Place of Business	City	State	Zip Code
P O Box 4666	Houston	TX	7720 -4666
Field Address	**City**	**State**	**Zip Code**

Name of Transporter	% Transported	Date Effective
EOTT ENERGY OPERATING LIMITED PARTNERSHIP	100.00	12/01/98

Address	City	State	Zip Code
P O BOX 4666	HOUSTON	TX	77210-4666

The above named producer authorizes the above named purchaser to 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 Transporters Transporting From This Lease	% Transported	Date Effective
Other Transporters Transporting From This Lease	% Transported	Date Effective
Other First Purchasers Purchasing From This Lease	% Purchased	Date Effective
Other First Purchasers Purchasing From This Lease	% Purchased	Date Effective

Remarks

Sale of certain oil marketing, transportation and pipeline gathering assets: Koch Oil Company to EOTT Energy Operating Limited Partnership.

I certify that the above information is a true and correct report of the transporters and purchasers of oil produced from the above described property. This authorization will be valid until further notice to the transporters and purchasers named until cancelled by the _____.

Signature	Title	Date
Terry Holzwarth	Engineer	DEC

STATE OF Montana)
) SS
COUNTY OF Yellowstone)

Notary Seal

On 12/11, 19 98, Terry S. Holzwarth, known to me to be the person described in and who executed the foregoing instrument, personally appeared before me and acknowledged that (s)he executed the same as a free act and deed.

Notary Public Billings, MT

My commission expires 8/21/00

FOR OFFICE USE ONLY

Approved By	Title	Date
Charles A. Koch	Eng Supv.	12/21/98

Form 3160-5
(November 1983)
(Formerly 9-331)

Form approved. 11920
Budget Bureau No. 1004-0135
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

5. LEASE DESIGNATION AND SERIAL NO.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

1. OIL WELL [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME: NDM82191

2. NAME OF OPERATOR: PANTERRA PETROLEUM

8. FARM OR LEASE NAME: Corp of Engineers

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

9. WELL NO.: 31-10

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 660 FNL, 2305 FEL NWNE 10-153-101

10. FIELD AND POOL, OR WILDCAT: Baker - Red River

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 10-153N-101W

14. PERMIT NO.: 11920

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

12. COUNTY OR PARISH: McKenzie

13. STATE: ND

SEP 1997 ND OIL & GAS DIVISION

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other) Spill			[X]
(Other)			[ ]	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

See Attached Spill History Report.

18. I hereby certify that the foregoing is true and correct

SIGNED [signature] TITLE Operations Manager DATE 9/5/97

(This space for Federal or State office use)

Recd ~~APPROVED~~ BY Mark Bohrer TITLE PETROLEUM ENGINEER DATE September 8, 1997

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

SPCC PLAN, ATTACHMENT #1
SPILL HISTORY

Complete this form for any reportable spill (s).

Well Name: Corps of Engineers 31-10 Location: NWNE Sec 10, T153N, R101W
Operator: Panterra Petroleum McKenzie County, ND

1. Date of Occurence: 09/05/97 Reported by: Kevin Grindeland
Surface Ownership: Corps of Engineers
Agencies & Dates Notified: NDIC 9/5/97, BLM 9/5/97, Corps of Engineers 9/5/97

Volume & Type of Fluid Spilled: 30 BSW, all in dike

Volume Recovered: 28 bbls
Cause of Event: SW line leak.

Corrective Action Taken, Damage Description: Isolate line.

Plans for Preventing Recurrence: Replace line.

Signature: [signature]

2. Date of Occurence: _____ Reported by: _____
Surface Ownership: _____
Agencies & Dates Notified: _____

Volume & Type of Fluid Spilled: _____

Volume Recovered: _____
Cause of Event: _____

Corrective Action Taken, Damage Description: _____

Plans for Preventing Recurrence: _____

Signature: _____

(Attachment #1, SPCC Plan)

PRODUCERS CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL FROM LEASE - FORM 8

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5698 (2-92)

JUL 1997 RECEIVED OIL & GAS DIVISION

Well File Number: 11920

NDIC CTB Number: 111920

INSTRUCTIONS

The original and four copies of this form must be submitted to the OIL AND GAS DIVISION, 600 E. Boulevard Avenue, Bismarck, ND 58505

WELL 31-10 CORPS OF ENGINEERS (Q/Q) NWNE (SEC.) 10 (TWP.)153N (RGE.) 101W COUNTY MCKENZIE

PRODUCER: PANTERRA PETROLEUM FIELD BAKER POOL RED RIVER

ADDRESS CORRESPONDENCE TO: GARY L. EVERTZ, PANTERRA PETROLEUM
550 N. 31ST STREET, SUITE 500, P. O. BOX 7168, BILLINGS, MT 59103

		% Purchased	Date Effective
Name of First Purchaser	KOCH OIL COMPANY	100	08/01/97
Principal Place of Business	1625 Broadway, Ste 1570, Denver, CO 80202		
Field Address	Box 92B, Williston, ND 58801		

		% Transported	Date Effective
Name of Transporter	KOCH ~~OIL COMPANY~~ P/L	100	08/01/97
Address	Box 92B, Williston, ND 58801		

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.

	% Transported	Date Effective
Other Transporters Transporting From This Lease		

	% Purchased	Date Effective
Other First Purchasers Purchasing From This Lease		

Remarks

I certify that the above information is a true and correct report of the transporters and purchasers of oil produced from the above described property. This authorization will be valid until further notice to the transporters and purchasers named until cancelled by the OPERATOR.

Signature Terry Holzwarth Title Engineer Date 07/11/97

State of Montana
County of Yellowstone

On 07/11/97 Terry S. Holzwarth, known to me to be the person described in and who executed the foregoing instrument personally appeared before me and acknowledged that (s)he executed the same as a free act and deed.

Notary Public

My Commission Expires AUGUST 21, 2000

APPROVED BY: Charles A. Koch Date: 7/14/97

PRODUCERS CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL FROM LEASE - FORM 8

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5698 (2-92)

RECEIVED JUN 2 1997 OIL & GAS DIVISION

Well File Number: 11920

NDIC CTB Number: 111920

INSTRUCTIONS

The original and four copies of this form must be submitted to the OIL AND GAS DIVISION, 600 E. Boulevard Avenue, Bismarck, ND 58505

WELL 31-10 CORPS OF ENGINEERS (Q/Q) NWNE (SEC.) 10 (TWP.)153N (RGE.) 101W COUNTY MCKENZIE

PRODUCER: PANTERRA PETROLEUM FIELD BAKER POOL RED RIVER

ADDRESS CORRESPONDENCE TO: GARY L. EVERTZ, PANTERRA PETROLEUM
550 N. 31ST STREET, SUITE 500, P. O. BOX 7168, BILLINGS, MT 59103

		% Purchased	Date Effective
Name of First Purchaser	AMOCO PRODUCTION COMPANY	100	06/01/97
Principal Place of Business	1670 Broadway, Ste 715, Denver CO 80201		
Field Address	1670 Broadway, Ste 715, Denver CO 80201		

		% Transported	Date Effective
Name of Transporter Address	AMOCO PRODUCTION COMPANY 1670 Broadway, Ste 715 Denver, CO 80201 — Truck	100	06/01/97

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 Transporters Transporting From This Lease	% Transported	Date Effective

Other First Purchasers Purchasing From This Lease	% Purchased	Date Effective

Remarks

I certify that the above information is a true and correct report of the transporters and purchasers of oil produced from the above described property. This authorization will be valid until further notice to the transporters and purchasers named until cancelled by the OPERATOR.

Signature Gary L Evertz Title Engineer Date 05/28/97

State of Montana
County of Yellowstone

On 05/28/97, Gary L. Evertz, known to me to be the person described in and who executed the foregoing instrument personally appeared before me and acknowledged that (s)he executed the same as a free act and deed.

Marilyn Maybolt
Notary Public

My Commission Expires AUGUST 21, 2000

APPROVED BY: Charles A. Fork Date: 6/3/97

SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5749 (2-92)

Well File Number: 11920

PLEASE READ INSTRUCTIONS ON BACK OF FORM

☐ Notice of Intent
Approximate Start Date _____

☒ Report of Work Done
Date Work Completed 03/15/96

☐ Drilling Prognosis
☐ Redrilling or Repair
☐ Casing or Liner
☐ Plug Well
☐ Supplemental History
☐ Temporarily Abandon
☐ Spill Report
☐ Shooting
☒ Acidizing
☐ Fracture Treatment
☐ Change Producing Method
☐ Reclamation
☒ Other Put on Pump

Well Name and Number				
Corps of Engineers 31-10				
Footages	Qtr-Qtr	Section	Township	Range
660' FNL 2305' FEL	NW NE	10	153N	101W
Field	Pool	County		
Baker	Red River	McKenzie		

24 HOUR PRODUCTION RATE	
BEFORE	AFTER
Oil 34	Oil 105
Water 10	Water 24
Gas 190	Gas 587 est.

Name of Contractor			
Address	City	State	Zip Code

DETAILS OF WORK

1/23/96 MI RIG FL-6300'. SWAB TO 9500' W/ NO ENTRY.PUMP 140 BFW.SD DUE, TO COLD WEATHER.,

2/5/96 COULD NOT REL F/ PKR.CUT TBG ABOVE SEAL ASSY.POOH.FOUND TBG HOLE, @ 9472'.RUN O/S SEVERAL TIMES & GOT SEAL ASSY RELEASED.RIH &, STING INTO PKR.SWB 2 DAYS FINAL ENTRY 4 BOPH,2.5 BWPH.RD MO RIG, DUE TO FLOODING.,

3/4/96 MI RIG & SWB.ACDZ RED RIVER W/ 1500 GAL FOAMED 28 HCL SWIC.4.6, BPM, 5579 PSI.FLOW BACK.GOT VERY!!! DIRTY FLUID FOR 3 DAYS SWBG, AND FLOWING.LAST RATE 6.7 BPH.DROP SV & PERF TBG ABOVE SV &, PICKLE TBG & CSG IN TWO JOBS OF 2000 GAL 15% HCL.PULL TBG & RIH, W/ PROD BHA.RUN NEW NOR97 RODS & 1 1/4 2 STAGE PUMP.START PUMPING 3/15/96.

Company		
Pantrerra Petroleum		
Address		
P. O. Box 7168		
City	State	Zip Code
Billings	MT	59103-7168
By	Date	
Gary L Espitz	April 9, 1996	
Title	Telephone Number	
Engineer	406-245-6248	

406-245-9106 Fax

FOR OFFICE USE ONLY

☒ Received ☐ Approved

Date APR 12 1996

By F E Williams

Title Assistant Director

NORTH D. :OTA INDUSTRIAL CON 1ISSION

OIL AND GAS DIVISION

11920

Wesley D. Norton
DIRECTOR

F. E. Wilborn
ASSISTANT DIRECTOR

March 8, 1996

Ms. Jan Magstadt
Panterra Petroleum
P. O. Box 7168
Billings, MT 59103-7168

Dear Ms. Magstadt:

Panterra Petroleum filed with the Industrial Commission on March 7, 1996 an application for a Stripper Well Property Determination for its Corps of Engineers #31-10 well (Well File #11920, API #33-053-02148) located in the NW NE 10-153N-101W, McKenzie County, North Dakota.

Information contained in the application indicates that the above mentioned well is a property pursuant to statute and rule, and Panterra Petroleum has elected to designate said well as a separate property for stripper well purposes. Also, the well produces from a well depth of more than 10,000 feet. During the twelve consecutive months qualifying period January 1995 thru December 1995, the well produced at a maximum efficient rate, and the average daily production from the well was 27.9 barrels of oil per day.

It is therefore determined that the above mentioned well qualifies as a "Stripper Well Property" pursuant to Section 57-51.1-01 NDCC.

This determination is applicable only to the Red River Pool in and under said property.

The Commission shall have continuing jurisdiction, and shall have the authority to review the matter. The determination may be amended or rescinded by the Commission for good cause.

Sincerely,

James R. Legerski
Senior Petroleum Engineer

cc: Tax Dept.

600 EAST BOULEVARD, BISMARCK, NORTH DAKOTA 58505 PHONE (701) 328-9900 FAX (701) 328-9898

SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5749 (2-92)

JAN 1996 RECEIVED ND OIL & GAS DIVISION

Well File Number
11920

PLEASE READ INSTRUCTIONS ON BACK OF FORM

☒ Notice of Intent
Approximate Start Date 1/22/96

☐ Report of Work Done
Date Work Completed _____

☐ Drilling Prognosis
☐ Redrilling or Repair
☐ Casing or Liner
☐ Plug Well
☐ Supplemental History
☐ Temporarily Abandon
X Place on Rod Pump X

☐ Spill Report
☐ Shooting
☐ Acidizing
☐ Fracture Treatment
☐ Change Producing Method
☐ Reclamation
☒ Other WO Exemption -Tax

Well Name and Number				
Corps of Engineers 31-10				
Footages	Qtr-Qtr	Section	Township	Range
660' FNL 2305' FEL	NWNE	10	153N	101W
Field	Pool	County		
Baker	Red River	McKenzie		

24 HOUR PRODUCTION RATE	
BEFORE	AFTER
Oil 34	Oil
Water 10	Water
Gas 204	Gas

Name of Contractor			
Address	City	State	Zip Code

DETAILS OF WORK

PANTERRA PETROLEUM plans to place well on rod pump. Currently it will only flow intermittently .

PANTERRA PETROLEUM hereby applies for workover exemption - notice of intention to begin a workover project, which may be exempt from taxation pursuant to subsection (4) of North Dakota century Code section 57-51.1-03, for work outlined above. Approximate cost: $99,500.00.

Company		
Pantrerra Petroleum		
Address		
P. O. Box 7168		
City	State	Zip Code
Billings	MT	59103-7168
By	Date	
[signature]	1/18/96	
Title	Telephone Number	
Manager Operations	406-245-6248	

406-245-9106 Fax

FOR OFFICE USE ONLY

☐ Received ☒ Approved

Date	1-22-96
By	[signature]
Title	Petroleum Engineer

PANTERRA PETROLEUM

PROPOSED WELL BORE SCHEMATIC!!

```
                                                  WELL:      CORPS OF ENGINEERS 31-10      FIELD:   BAKER

                                                  LOCATION:  NWNE SEC 10 153N 101W, MCKENZIE CO, ND
                                                             SURF:660' FNL & 2304' FEL
     2954'                  9 5/8'                            BHL:841' FNL & 1926' FEL      STATUS:  FLOWING OIL WELL

                                                  ELEVATION: GL - 1851'   KB - 1872'       ST FILE NO: 11920
     4643'                  KICKKK OFF PT                                                   API #:33-053-02148
     5130'                  CMT TOP              SPUD DATE: 6/20/86                         COMP DATE: 11/24/86

                                                  ROTARY TD: 13480'                          PBTD: 13344'

  5777-783'                 CASING PATCH         SURF CSG:  9 5/8' 36,40# K-55 SET @ 2954'. CMT W/ 1220 SX.

                            TIGHT CSG!           PROD CSG:  5 1/2' 17,20,26# L-80,SS95 SET @ 13344'.CMT W/ 1850 SX 'G',
     6661'                  < 4 3/8' ID                       1082 SX LITE.

                                                  PROPOSED TUBING & BHA                      PROPOSED RODS & PUMP
  8933-37'                  DV COLLAR                ---------------                            ----------------
                                                  2 7/8' L-80 TBG                            98 - 1' 2450' NOR97 PLAIN
    10000'                  SN W/ DIPTUBE        MECH SN W/ 20' DIPTUBE - 10000'            56 - 7/8' 1400' NOR97 PLAIN
                            4' PERFED SUB        4' PERFED SUB                              28 - 7/8' 700' NOR97 6 CENT./ROD
                                                 47 JTS 2 7/8' L-80 TBG                     15 - 7/8' 375' NOR97 3 CENT./ROD
                                                 PLUGGED OFF TBG COLLAR                     63 - 3/4' 1575' NOR97 3 CENT./ROD
                                                 4' PERFED SUB                              68 - 3/4' 1700' NOR97 PLAIN
                                                 BAKER 40-26 MOD G-22 SEAL ASSY             56 - 3/4' 1400' NOR97 4 CENT./ROD
                            TBG COLLAR PLUG      BAKER MOD D PERM. PKR. - 11498'            16 - 1' 400' D INSP. 4 CENT./ROD
                            4' PERFED SUB                                                   2 1/2' X 1 1/4' PUMP
                            SEAL DIVIDER
    11498'                  MODEL D PKR          SALT          DEPTH                        5 1/2',5 5/8' LTC    SET @
                                                 ----------------------                     ------------------------
                                                 DUNHAM    6654-6710                        20# L-80              21
  11600-612'                TIGHT CSG            PINE      7022-7070                        26# SS95              57
                            FISH-MILL            CHARLES   8252-8950                        20# L-80            3855
                                                 PRAIRIE   11594-11790                       17# L-80            6439
  11840-842'                SQZ PERFS                                                        23# SS95             6944
                                                                                             17# L-80            8046
    13100'                  TOP OF FISH          SL-144   SPM-5                             23# SS95             8877
  13120-122'                SQZ PERFS                                                        20# L-80            11389
                            MODEL R-3 PKR        WELLHEAD:  TBGHD CIW,F,1' 3000  PSI X 7 1/16'  26# SS95          11703
    13243'                  & 5 JTS TBG                                                      20# L-80            13344
  13255-265'                RED RIVER B          PUMP UNIT: LUFKIN MII 640-365-144 W/ AJAX E-42 ENG.
  13296-303'                                                 AJAX SHEAVE-11', PU SHEAVE-33', GR-28.6:1
  13308-312'                RED RIVER C
  13322-330'                                       PERFS:     RED RIVER 'B' 13255-265', 4 SPF.
                                                             RED RIVER 'C' 13296-303', 13308-312', 13322-330' 4 SPF.
    13344'                  CMT RET
  13400-402'                SQZ                    PRODUCTION:
  13440-442'                PERFS
    13438'                  FLOAT COLLAR         PREPARED BY: GARY L EVERTZ                 DATE:      01/15/96
    13480'                  5 1/2'                                                          CORPPMP.WK3
DIRICTIONAL WELL TMD - 13490' MAX ANGLE12 3/4 @ 5145'
```

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved. 11920
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

5. LEASE DESIGNATION AND SERIAL NO.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

1. OIL WELL [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME: NDM82191

2. NAME OF OPERATOR: PANTERRA PETROLEUM

8. FARM OR LEASE NAME: Corp of Engineers

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

9. WELL NO.: 31-10

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface

10. FIELD AND POOL, OR WILDCAT: Baker

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 10-153N-101W

14. PERMIT NO.: 11920

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

12. COUNTY OR PARISH: McKenzie

13. STATE: ND

SEP 1995 RECEIVED ND OIL & GAS DIVISION

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			[ ]
(Other)			[ ]	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Well was returned to production September 8, 1995, after flood waters receded from Lake Sakakowea

18. I hereby certify that the foregoing is true and correct

SIGNED Jeanette Mangold TITLE Operations Asst. DATE 9-11-95

(This space for Federal or State office use)

APPROVED BY FEW TITLE Assistant Director DATE 9-14-95

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form approved. 11920
Budget Bureau No. 1004-0135
Expires August 31, 1985

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

5. LEASE DESIGNATION AND SERIAL NO.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

AUG 1995 DIVISION

1. OIL WELL [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME: NDM82191

2. NAME OF OPERATOR: PANTERRA PETROLEUM

8. FARM OR LEASE NAME: Corp of Engineers

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

9. WELL NO.: 31-10

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface

10. FIELD AND POOL, OR WILDCAT: Baker

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 10-153N-101W

14. PERMIT NO.: 11920

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

12. COUNTY OR PARISH: McKenzie

13. STATE: ND

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]
(Other)			[ ]

SUBSEQUENT REPORT OF:

WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
(Other)			

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Well was temporally shut-in July 15, 1995, due to flood waters in Lake Sakakowea.

18. I hereby certify that the foregoing is true and correct

SIGNED Gary Evers TITLE ~~Operations Manager~~ DATE ~~8/24/95~~

(This space for Federal or State office use)

APPROVED BY Sheila Shaughnessy TITLE Oil Prod. Auditor DATE 8-28-95

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

PRODUCERS CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL FROM LEASE - FORM

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5698 (2-92)

JUL 1995
RECEIVED
ND OIL & GAS
DIVISION

Well File Number: 11920
NDIC CTB Number: 111920

INSTRUCTIONS

The original and four copies of this form must be submitted to the OIL AND GAS DIVISION, 600 E. Boulevard Avenue, Bismarck, ND 58505

WELL 31-10 CORPS OF ENGINEERS (Q/Q) NWNE (SEC.) 10 (TWP.)153N (RGE.) 101W COUNTY MCKENZIE

PRODUCER: PANTERRA PETROLEUM FIELD BAKER POOL RED RIVER

ADDRESS CORRESPONDENCE TO: GARY L. EVERTZ, PANTERRA PETROLEUM
550 N. 31ST STREET, SUITE 500, P. O. BOX 7168, BILLINGS, MT 59103

		% Purchased	Date Effective
Name of First Purchaser	AMOCO PRODUCTION COMPANY	100	08/01/95
Principal Place of Business	1670 Broadway, Ste 715, Denver CO 80201		
Field Address	1670 Broadway, Ste 715, Denver CO 80201		
Name of Transporter	SCURLOCK PERMIAN CORP. - TRUCK	% Transported	Date Effective
Address	P. O. BOX 2358, WILLISTON, ND 58801	100	08/01/95

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 Transporters Transporting From This Lease	% Transported	Date Effective

Other First Purchasers Purchasing From This Lease	% Purchased	Date Effective

Remarks

I certify that the above information is a true and correct report of the transporters and purchasers of oil produced from the above described property. This authorization will be valid until further notice to the transporters and purchasers named until cancelled by the OPERATOR.

Signature Gary L Evertz Title Engineer Date 07/14/95

State of Montana
County of Yellowstone

On 07/14/95, Gary L. Evertz, known to me to be the person described in and who executed the foregoing instrument personally appeared before me and acknowledged that (s)he executed the same as a free act and deed.

Jeanette M Magstadt
Notary Public

My Commission Expires AUGUST 21, 1996

APPROVED BY: Charles A. Hoch Date: 7/17/95

PRODUCERS CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL FROM LEASE - FORM 8

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5698 (2-92)

Well File Number: 11920

NDIC CTB Number: 111920

INSTRUCTIONS

The original and four copies of this form must be submitted to the OIL AND GAS DIVISION, 600 E. Boulevard Avenue, Bismarck, ND 58505

WELL 31-10 CORPS OF ENGINEERS (Q/Q) NWNE (SEC.) 10 (TWP.)153N (RGE.) 101W COUNTY MCKENZIE

PRODUCER: PANTERRA PETROLEUM FIELD BAKER POOL RED RIVER

ADDRESS CORRESPONDENCE TO: GARY L. EVERTZ, PANTERRA PETROLEUM
550 N. 31ST STREET, SUITE 500, P. O. BOX 7168, BILLINGS, MT 59103

		% Purchased	Date Effective
Name of First Purchaser	SCURLOCK PERMIAN CORP	100	1/1/95
Principal Place of Business	P. O. BOX 4648, HOUSTON, TX 77210-4648		
Field Address	P. O. BOX 2358, WILLISTON, ND 58801		

		% Transported	Date Effective
Name of Transporter Address	SCURLOCK PERMIAN CORP. - TRUCK P. O. BOX 2358, WILLISTON, ND 58801	100	1/1/95

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 Transporters Transporting From This Lease	% Transported	Date Effective

Other First Purchasers Purchasing From This Lease	% Purchased	Date Effective

Remarks

I certify that the above information is a true and correct report of the transporters and purchasers of oil produced from the above described property. This authorization will be valid until further notice to the transporters and purchasers named until cancelled by the OPERATOR.

Signature Gary L Evertz Title Engineer Date 12/9/94

State of Montana
County of Yellowstone

On 12/9/94, Gary L. Evertz, known to me to be the person described in and who executed the foregoing instrument personally appeared before me and acknowledged that (s)he executed the same as a free act and deed.

Jeanette M Magstadt
Notary Public

My Commission Expires AUGUST 21, 1996

APPROVED BY: Charles A. Bork Date: 12/13/94

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

11920

Wesley D. Norton
DIRECTOR

F. E. Wilborn
ASSISTANT DIRECTOR

Clarence G. Carlson
GEOLOGIST

Charles Koch
ENGINEERING DEPT

Doren Dannewitz
FIELD SUPERVISOR

Glenn Wollan
RECLAMATION SUP.

September 10, 1994

Mr. Gary Evertz
Operations Manager
Panterra Petroleum
P.O. Box 7168
Billings, MT 59103-7168

Workover Project Determination
Corps of Engineers #31-10
NWNE 10-153N-101W
McKenzie County, ND
Well File No. 11920

Dear Mr. Evertz:

On June 13, 1994, Panterra Petroleum filed a notice of intent to begin a workover project on the above listed well with the North Dakota Industrial Commission. The workover project was completed on June 20, 1994 and meets the requirements set forth in North Dakota Century Code Section 57-51.1-03.

The workover project was performed from June 13, 1994 to June 20, 1994. The total cost of the project was $39,239. The average daily production from the well prior to commencement of the workover project from December 1993 through May 1994 was 24.53 barrels of oil per day. The average daily production from the well during the first sixty days after completion of the project was 72.37 barrels of oil per day.

Therefore, it is determined the above listed well qualifies as a workover project for tax exemption purposes.

The Commission shall have continuing jurisdiction, and shall have the authority to review the matter. The determination may be amended or rescinded by the Commission for good cause.

Sincerely,

Kent Fetzer
Petroleum Engineer

cc: Tax Dept

600 EAST BOULEVARD, BISMARCK, NORTH DAKOTA 58505 PHONE (701) 224-2969 FAX (701) 224-3682

SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4
INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5749 (2-92)

Well File Number: 11920

PLEASE READ INSTRUCTIONS ON BACK OF FORM

☐ Notice of Intent
Approximate Start Date _____

☒ Report of Work Done
Date Work Completed _____

☐ Drilling Prognosis
☐ Redrilling or Repair
☐ Casing or Liner
☐ Plug Well
☐ Supplemental History
☐ Temporarily Abandon
☐ Spill Report
☐ Shooting
☐ Acidizing
☐ Fracture Treatment
☐ Change Producing Method
☐ Reclamation
☒ Other Workover Exemption

Well Name and Number					
Corps of Engineers 31-10					
Footages		Qtr-Qtr	Section	Township	Range
660' FNL 2305' FEL		NW NE	10	153N	101W
Field	Pool	County			
Baker	Red River	McKenzie			

24 HOUR PRODUCTION RATE	
BEFORE	AFTER
Oil 22.92	Oil 72.37
Water	Water
Gas	Gas

Name of Contractor			
Address	City	State	Zip Code

DETAILS OF WORK

APPLICATION FOR WORKOVER PROJECT DETERMINATION (43-02-09-04)

1. Enclosed: $100.00
2. PANTERRA PETROLEUM, P. O. Box 7168, Billings, MT 59103-7168
3. Well name and legal - as above.
4. Dates workover project performed: June 7, 1994 to June 20, 1994.
5. AFE cost detail attached. Final cost: $70,015.63.
6. Detail of all work done: see attached Sundry Notice - Form 4.
7. Average daily oil production first 60 days: 72.37 BOPD Before 22.92 BOPD
   See average before and after attached.
8. Gauge tickets of oil produced during the first two months after completion of the workover and volume of oil stored on the well premises prior to workover (attached).

Company		
Pantrerra Petroleum		
Address		
P. O. Box 7168		
City	State	Zip Code
Billings	MT	59103-7168
By	Date	
Jeanette Mayfield	Sept 1, 1994	
Title	Telephone Number	
Operations Assistant	406-245-6248	

406-245-9106 Fax

FOR OFFICE USE ONLY

☐ Received ☒ Approved

Date 9-6-94

By Kent Rf

Title Pet Eng

5.)

DATE: 8/31/94 060263 AFE SPECIAL REPORT PAGE 1
TIME: 14:51:36

TERRA ENERGY CORPORATION CORP # 2
PANTERRA PETROLEUM A/C # 1
REPL TBG,LOWER LARGER AFE # 46
PUMP,ACID/STIM RED RIVER ENTITY # W 00618 CORP OF ENGINEERS 31-10
FROM 00/00 THRU 00/00 8/8THS REPORT

MAJOR MINOR DESCRIPTION	ORIGINAL BUDGET	SUPPLEMENTAL BUDGET	TOTAL BUDGET	ACTUAL	VARIANCE (OVER)/UNDER	% VARIANCE (OVER)/UNDER
INTANG. DRILLING COSTS						
TOTAL INT. DRILLING COSTS	$.00	$.00	$.00	$.00	$.00	.00%
INTANG. REMEDIAL/CONST.-COMPL.						
1660 0100 LOCATION, ROADS, PERMITS	$.00 *	$.00 *	$.00 *	$4807.30 *	$4807.30-*	100.00%-
1660 0200 COMPLETION UNIT	$14500.00 *	$.00 *	$14500.00 *	$3729.95 *	$10770.05 *	74.27%
1660 0300 WATER SOURCE, HAULING	$3000.00 *	$.00 *	$3000.00 *	$2532.62 *	$467.38 *	15.57%
1660 0440 PERF,LOG,WIRELINE SERVICE	$2200.00 *	$.00 *	$2200.00 *	$3638.60 *	$1438.60-*	65.39%-
1660 0450 STIMULATION FRAC/ACID	$15000.00 *	$.00 *	$15000.00 *	$18821.82 *	$3821.82-*	25.47%-
1660 0500 RENTAL EQUIPMENT	$2000.00 *	$.00 *	$2000.00 *	$5849.03 *	$3849.03-*	100.00%-
1660 0510 TRUCKING	$.00 *	$.00 *	$.00 *	$1517.00 *	$1517.00-*	100.00%-
1660 0610 LABOR - CONTRACT	$500.00 *	$.00 *	$500.00 *	$4479.24 *	$3979.24-*	100.00%-
1660 0650 SUPERVISION - CONTRACT	$3500.00 *	$.00 *	$3500.00 *	$6125.50 *	$2625.50-*	75.01%-
1660 0700 OTHER COSTS	$4000.00 *	$.00 *	$4000.00 *	$7556.06 *	$3556.06-*	88.90%-
1660 0800 ADMINISTRATIVE OVERHEAD	$2000.00 *	$.00 *	$2000.00 *	$2235.15 *	$235.15-*	11.75%-
TOTAL INT. REM./CONSTR.-COMPL	$46700.00	$.00	$46700.00	$61292.27	$14592.27CR	31.24%-
TANGIBLE WELL & LEASE EQUIPMENT						
1700 0905 TUBING	$2000.00 *	$.00 *	$2000.00 *	$.00 *	$2000.00 *	100.00%
1700 0910 RODS	$3000.00 *	$.00 *	$3000.00 *	$1028.58 *	$1971.42 *	65.71%
1700 0915 WELL HEAD EQUIPMENT	$.00 *	$.00 *	$.00 *	$1212.38 *	$1212.38-*	100.00%-
1700 0920 PUMPING UNIT	$35000.00 *	$.00 *	$35000.00 *	$4407.82 *	$30592.18 *	87.40%
1700 0925 PRIME MOVER	$7000.00 *	$.00 *	$7000.00 *	$2074.58 *	$4925.42 *	70.36%
TOTAL TANG. WELL/LEASE EQUIP.	$47000.00	$.00	$47000.00	$8723.36	$38276.64	81.43%

AFE SPECIAL REPORT
TERRA ENERGY CORPORATION
PANTERRA PETROLEUM
REPL TBG,LOWER LARGER
PUMP,ACID/STIM RED RIVER
FROM 00/00 THRU 00/00

CORP # 2
A/C # 1
AFE # 46
ENTITY # W 00618 CORP OF ENGINEERS 31-10
8/8THS REPORT

MAJOR MINOR DESCRIPTION	ORIGINAL BUDGET	SUPPLEMENTAL BUDGET	TOTAL BUDGET	ACTUAL	VARIANCE (OVER)/UNDER	% VARIANCE (OVER)/UNDER
TOTAL WELL COST ESTIMATE	$93700.00	$.00	$93700.00	$70015.63	$23684.37	25.27%
** AFE TOTALS **	$93700.00	$.00	$93700.00	$70015.63	$23684.37	25.27%

6.)

SUNDRY NOTICE AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5749 (2-92)

Well File Number: 11920

PLEASE READ INSTRUCTIONS ON BACK OF FORM

☐ Notice of Intent
Approximate Start Date _____

☐ Report of Work Done
Date Work Completed 6/20/94

☐ Drilling Prognosis
☐ Redrilling or Repair
☐ Casing or Liner
☐ Plug Well
☐ Supplemental History
☐ Temporarily Abandon
☐ Spill Report
☐ Shooting
☐ Acidizing
☐ Fracture Treatment
☐ Change Producing Method
☐ Reclamation
☐ Other _____

Well Name and Number				
Corps of Engineers 31-10				
Footages: 660' FNL 2305' FEL	Qtr-Qtr: NW NE	Section: 10	Township: 153N	Range: 101W
Field: Baker	Pool: Red River	County: McKenzie		

24 HOUR PRODUCTION RATE	
BEFORE	AFTER
Oil 20	Oil 82
Water 20	Water 13
Gas 70	Gas 350

Name of Contractor			
Address	City	State	Zip Code

DETAILS OF WORK

06-09-94 Pull rods and tbg. Run tbg in hole. Ran tbg caliper and LD 19 jts rod cut tbg. Pickle tbg w/1100 gal 15%. Attempt to acidize Red River and had down hole leak. Pull tbg and hydrotest in hole. LD 1 jt. Acidize w/ 2000 gal foamed 15% HCl. Flow back load and well continued flowing w/ 350 psi FTP on a 14/48" choke.

See attached daily reports and wellbore schematic.

Company		
Pantrerra Petroleum		
Address: P. O. Box 7168		
City: Billings	State: MT	Zip Code: 59103-7168
By: Gary L Evertz	Date: 7/1/94	
Title	Telephone Number: 406-245-6248	

406-245-9106 Fax

FOR OFFICE USE ONLY

☒ Received ☐ Approved

Date: 7-6-94

By: ORIGINAL SIGNED BY

Title: F.E. WILBORN, Assistant Director

PANTERRA PETROLEUM

```
                                                                                
        ¦   ¦   I   I   ¦   ¦                WELL:      CORPS OF ENGINEERS 31-10      FIELD:   BAKER
        ¦   ¦   I   I   ¦   ¦
        ¦   ¦   I   I   ¦   ¦                LOCATION:  NWNE SEC 10 153N 101W, MCKENZIE CO, ND
        ¦   ¦   I   I   ¦   ¦                           SURF:660' FNL & 2304' FEL
    2954'   ¦   I   I   ¦    9 5/8"                     BHL:841' FNL & 1926' FEL      STATUS:  FLOWING OIL WELL
            ¦   I   I   ¦
            ¦   I   I   ¦                    ELEVATION: GL - 1851'   KB - 1872'       ST FILE NO: 11920
            ¦   I   I   ¦                                                             API #:33-053-02148
    5130'   ¦   I   I   ¦    CMT TOP         SPUD DATE: 6/20/86                       COMP DATE: 11/24/86
            ¦   I   I   ¦
            ¦   I   I   ¦                    ROTARY TD: 13480'                        PBTD: 13344'
            ¦   I   I   ¦
 5777-783'  H   I   I   H    CASING PATCH    SURF CSG:  9 5/8" 36,40# K-55 SET @ 2954', CMT W/ 1220 SX.
            ¦   I   I   ¦
             \  I   I  /    TIGHT CSG!      PROD CSG:  5 1/2" 17,20,26# L-80,SS95 SET @ 13344'.CMT W/ 1850 SX "G",
    6661'    /  I   I  \    < 4 3/8" ID                 1082 SX LITE.
            ¦   I   I   ¦
            ¦   I   I   ¦                         TUBING & BHA                          RODS & PUMP
  8933-37'  ]   I   I   [    DV COLLAR              --------------                       ---------------
            ¦   I   I   ¦                    1 JT 2 7/8" L-80 TBG
   10200'   ¦   I   I   ¦    CUP SN          1 - 2 7/8" X 4' TBG SUB
            ¦   I   I   ¦    PERF SUB        377 JTS 2 7/8" L-80 TBG
            ¦   I   I   ¦                    CUP SN - 11497'
   11497'   ¦   I> <I   ¦    CUP SN          BAKER 40-26 MOD G-22 SEAL ASSY
            ¦   I   I   ¦                    BAKER MOD D PERM. PKR. - 11498'
            ¦___\ /___¦
   11498'   ¦>>>I¦ ¦I>>>¦    MODEL D PKR
            ¦           ¦
            ¦  _/I I\_  ¦
11600-612'   \¦  I I  ¦/    TIGHT CSG       SALT          DEPTH                          5 1/2" LTC     SET @
             /¦_I I_¦\      FISH-MILL       ---------------------                        ------------------------
            ¦           ¦                    DUNHAM    6654-6710                          20# L-80            21
11840-842'  =           =    SQZ PERFS       PINE      7022-7070                          26# SS95            57
            ¦           ¦                    CHARLES   8252-8950                          20# L-80          3855
   13100'   ¦   I   I   ¦                    PRAIRIE   11594-11790                        17# L-80          6439
13120-122'  =   I   I   =    SQZ PERFS                                                   23# SS95          6944
            ¦__I   I__¦    MODEL R-3 PKR                                                17# L-80          8046
   13243'   ¦<<<I   I>>>¦  & 5 JTS TBG      SL-      SPM-                                23# SS95          8877
13255-265'  =           =    RED RIVER B                                                 20# L-80         11389
            ¦           ¦                    WELLHEAD:  TBGHD CIW,F,1" 3000  PSI X 7 1/16"  26# SS95      11703
13296-303'  =           =                                                                20# L-80         13344
13308-312'  =           =    RED RIVER C     PUMP UNIT: LUFKIN MII 640-365-144 W/ AJAX E-42 ENG.
13322-330'  =           =
            ¦___________¦                    PERFS:     RED RIVER "B" 13255-265', 4 SPF.
   13344'   ¦<<<I***I>>>¦    CMT RET
13400-402'  =***********=    SQZ                        RED RIVER "C" 13296-303', 13308-312', 13322-330' 4 SPF.
13440-442'  =***********=    PERFS
            ¦           ¦                    PRODUCTION: 82 BO, 350 MCF, 13 BWPD
   13438'   ¦***********¦    FLOAT COLLAR
   13480'   ¦***********¦    5 1/2"          PREPARED BY: GARY L EVERTZ            DATE:     07/01/94

DIRICTIONAL WELL TMD - 13480'
```

Corps Of Engineers 31-10
PANTERRA PETROLEUM
NWNE 10 - T153N, R101W
Baker Field
McKenzie County, ND

AFE #46

06-16-94 FL @ 8500' (3000' of fluid entry - 16 hrs). Swabbed well to SN @ 11,496' in 3 runs. Rec 100' of oil on 1st run. TF - 15 BLW rec. 180 BLWTR. RU HES to do foamed acid job. Fill csg w/ 38 BSW & test to 2000# - held OK. Had hot oil truck maintain csg psi during job. Installed 5000# master valve on tbg. Pumped 200 gal 28% HCl acid ahead of 50,000 SCF of N_2, 400 gal foamed FW & additives, 1800 gal 28% SGA-HT foamed acid. Flushed to perfs w/ N_2. Max press - 6590#, Avg press - 5950#, Avg inj rate - 2.7 BPM. ISIP - 5822#. LWTR - 60 bbls tbg, 38 bbls csg, 180 bbls before job = 278 BLWTR. RD HES. Install choke @ tbg & hook flowline to test tank. Flow back 72 BLW in 4 1/2 hrs & well died. RU swab. Made 2 swab runs f/ SN, very gassy from N_2 & acid gas. Rec 16 BLW. Had 5% oil on last run. Rec 88 BLW, 190 BLWTR. SDFN. DC $12072 CC $53033

06-17-94 SITP - 1475#, SICP - 100#. Bled gas off well thru 16/64" choke & treater. 2 hr FTP @ 135#. Well started flowing oil. Well flowed 8.4 bbls of 98% oil on 16/64" choke in 2 hrs & started gassing only. Opened on 1" choke. Well unloaded 3 BO, 7 BLW in 1 hr & died. Made 1 swab run f/ 3500'. Well started flowing. Made 1 swab run/hr, next 2 hrs, one f/ 3500' & one f/ 6000'. Well continued flowing. In 10 1/2 hrs swabbed & flowed 46.7 BO (53%), 41.1 BLW, TF 87.8 bbls. Volumes are calculated on avg wellhead cuts. Had choke settings f/ 16/64" - 1". TP varied f/ 40# - 300#. Had to repair SW dump valve & float on treater. Turned well thru treater @ 9:00 p.m., CDT & left flowing on 20/64" choke w/ 280# FTP. DC $2657 CC $55690

06-18-94 Flowed 33 BO, 17 BLW, TP - 50-280#, 20/64" choke in 10 hrs.

06-19-94 Flowed 92 BO, 52 BLW, TP - 50-350#, 24/64" choke in 24 hrs, 36% wtr.

06-20-94 Flowed 85 BO, 20 BLW, TP - 50-350#, 24/64" choke in 24 hrs, 24% wtr.

Well has made 257 bbls oil and 130 bbls LW = 387 BTF since acid job. 60 BLW TR (prob. in csg annulus) put well on 18/64 choke. Laid all rods from derrick on ground in triples. SK&S roustabouts moved out American 456-256-120 PU w/ cement port-a-base to yard. They moved in and set Lufkin Mark II - M640 D-365-144 PU Serial #21835. Mounted 8-1/2" x 10" Ajax engine to PU. Engine sheave = 14"; PU sheave = 33" gear box ratio = 28.6:1; new D grove 482 belts.

From 7 a.m. to 4:30 p.m. (9 hr - well SI 1/2 hr). Well flowed 40.6 bbls oil, 6.9 bbls SW, 475 BTF, 85% oil. 4.5 bbls oil / hr on 18/64" choke. Making ±400 mcf/day of gas to sales. Put Wellpro BOP and hand slips on 1/2 cost rental of $70/day. ERC choke and master valve - $20/day. RD and Release Rig. DC $2414 CC 58104

Corps Of Engineers 31-10
PANTERRA PETROLEUM
NWNE 10 - T153N, R101W
Baker Field
McKenzie County, ND

AFE #46

06-11-94 Fished 2" SV w/ sandline. RU HES for foamed acid job. Install 2 7/8" EUE, 5000# master valve on tbg. Test csg to 1540# - OK. Test lines to 5460#. Pump 50,000 SCF N_2 down tbg, followed by 400 gal foamed FW w/ 10 GPM Pen-88HT, 20 GPM Sperse-All & 50,000 SCF N_2. TP - 5500#, CP - 1006#. AIR @ .35 BPM. Pumped 500 gal 28% SGA w/ Inhibitor, Pen-88HT, SWIC & Sperse-All w/ 75,000 SCF N_2 down tbg @ 5900 psi. CP immed came up to 3008#. SD. Bled csg down to 2000#. RU choke & hardline to test tank. Bled well off to tank. Rec acid in tank. Flushed csg w/ 24 BFW. Drop 2" SV in tbg, wait 30 min. Pump 66 BSW down tbg. Had circulation out csg. Shut csg & PT to 1500#, pkr - OK, csg - OK. Possible leak in tbg or circ valve. RD HES. Rotate out of Model "D" w/ latch. POOH w/ 378 jts 2 7/8" tbg & top connection of circ valve was broken @ base of threads on top pin of valve. Left circ valve, SN & seal assy in hole. SDFN. DC $13272 CC $27410

06-12-94 TIH w/ Bowen 4 3/8" OD Overshot w/ cut lip guide, dressed w/ 3 1/2" basket grapple, Bowen oil jars, & 218 jts 2 7/8" tbg. Hit tight spot in csg @ 6661' K.B. Set down 30,000# SW. Had to set jars off 3 times to pull out. Set down 10,000# - would not go. Had to pull 10,000# over string weight to get free. POOH w/ tbg & BHA. Cut lip guide was egg shaped (4 1/4" x 4 1/2"). TIH w/ 4" OD x 2.25' long undressed shoe f/ guide to go over fish & 378 jts. Took 5000# SW to go past 6661' K.B. Set down @ 11,498' K.B. RIH w/ sandline & OS to fish SV. POOH - did not have it. Made 2nd attempt & successfully fished SV out of circ valve. SDFN. DC $3366 CC $30776

06-13-94 POOH w/ tbg & guide. TIH w/ max OD 3 3/4" taper tap, Bowen oil jars, & 378 jts 2 7/8" tbg. Tagged fish @ 11,494' K.B. Engaged fish. Torqued tbg 5 rounds. Pull 15,000# over string weight & set down 15,000#, worked string. Attempted to release latch-in seal assy. POOH. No recovery of fish. Could see marks on taper tap where it had been inside 2" mandrel on circ valve. SDFN. DC $3078 CC $33854

06-14-94 TIH w/ 3 3/4" max O.D. taper tap, bumper sub, Bowen oil jars & 378 jts 2 7/8" tbg. Engage fish @ 11,494' K.B. Release latch-in seal assy. POOH w/ 378 jts tbg & BHA. Rec all of fish (circ valve, SN & latch-in assy). RU Basin Tubing Testers. TIH w/ Baker 40-26 model G-22 latch-in type seal assy w/ 2 seal units, 2 7/8" cup type SN, 378 jts 2 7/8" tbg & 1 - 2 7/8" x 4' tbg sub. Hydrotested tbg to 7000#. Found thread leak @ 3 jts above SN @ 1000#. Replaced bad jt. Stung into model "D" pkr @ 11,498' w/ 22,000# compression. SDFN. DC $5133 CC $38987

06-15-94 RU to swab. FL @ 2800'. Swabbed 5 BO, 60 BSW. Total of 65 BF in 12 runs in 8 hrs. All oil was on 1st run. Then swabbed 60 BLW. 195 BLWTR. Swab f/ pkr after 7th run. Made 1 run/hr last 4 hrs. FL @ 10,900' (600' above pkr) last 4 runs. Rec 1.7 BLW/hr last 2 hrs. SDFN. DC $1974 CC $40961

Corps Of Engineers 31-10
PANTERRA PETROLEUM
NWNE 10 - T153N, R101W
Baker Field
McKenzie County, ND

03-06-94 Shut-in @ 4:00 p.m. due to flooding.

03-22-94 Well put back on production around 2:00 p.m.

AFE #46

06-07-94 MI H&L Well Service rig. Too windy to rig up.

06-08-94 RU H&L rig. Pump 70 BSW down tbg - on vacuum. Jar on pump, would not unseat. Backed off rods. POOH w/ 1 - 1"x 2' & 1 - 1"x 6' pony rods, 94 - 1" plain rods & 53 - 7/8" plain rods. RU f/ tbg. Install BOP. Tbg was set w/ 40,000# compression. Pull out of Model "D" pkr. Strap OOH w/ 122 jts 2 7/8" tbg to rods. Continue stripping rods & tbg OOH. Found rod cut split jt 219 f/ top (6650'±). RU swab. Swab fluid f/ tbg to tank battery. Pull tbg to fluid, well started flowing oil f/ tbg. Hooked tbg & csg to flowline & left open to T.B. overnight. Have 265 jts tbg (7880'±) & 330 rods (8250'±). DC $3145

06-09-94 Well flowed 1/2" (.84 BO) into tank overnight, was dead in a.m. Finished stripping rods & tbg to pump. Had to swab tbg down after pulling rods. Pump was stuck in btm jt above SN. Cut tbg to recover pump & found pump was stuck in salt. Sent pump in for repairs. Recovered rods: 94 - 1" plain, 60 - 7/8" plain, 38 - 7/8" w/ scrapers, 189 - 3/4" w/ scrapers, & 16 - 1" w/ scrapers (these scrapers were very worn). 329 jts of tbg above SN. POOH w/ 49 jts 2 7/8" tailpipe, 2 cup type SN, 2 - 2 7/8" x 4' perf subs, & locator seal assy w/ 4 seal units f/ Baker Model "D" pkr. TIH open-ended w/ 377 jts 2 7/8" tbg to 11,453' K.B. RU Dialog. Ran Tubing Profile Caliper Log. Tool would not go down past 2200' due to paraffin. Hot oil tbg w/ 35 bbls prod oil. Ran Profile Log f/ EOT to surface. Found 19 jts over 35% wear (to be replaced). Most bad jts were in the 1500' of tbg above SN. Left well open to T.B. overnight. DC $4671 CC $7816

06-10-94 POOH w/ 377 jts 2 7/8" L-80 tbg. LD 19 jts that were over 35% wall thickness worn off. TIH w/ Baker 40-26 mod. G-22 Latch-in type Seal Assy w/ 2 seal units & 40,000# shear ring, 2 3/8" cup type SN, Basin circ valve, 378 jts 2 7/8" L-80 tbg, & 1 - 2 7/8" x 6' tbg sub. Replaced worn tbg w/ 21 jts of inspected tbg. Latch into Model "D" pkr @ 11,498'. Open circ valve. Set tbg in compression. RU HES & pump 20 BSW cushion in tbg. Drop 2" SV, wait for it to drop. Pickle tbg w/ 1200 gal 15% HCl acid w/ inhibitor & Sperse-All @ 1 BPM. Displaced into csg annulus thru circ valve. Let set 15 min. Reverse acid out of tbg to test tank, cycle tbg & close circ valve. PT csg & valve to 500# - OK. SDFN. DC $6322 CC $14138

1.)

Corp of Engineers - Well File Number 11920
Average Oil Production - First Sixty (60) days after Workover.

OIL PRODUCTION

JUNE 1994		
20	88.53	
21	21.72	
22	86.83	
23	80.99	
24	83.52	
25	76.00	
26	75.16	
27	76.84	
28	86.44	
29	81.82	
30	70.58	
JULY, 1994		
1	79.76	
2	70.15	
3	77.73	
4	78.48	
5	74.75	
6	-21.79	
7	237.28	
8	8.45	
9	60.10	
10	89.37	
11	81.85	
12	86.86	
13	75.16	
14	90.18	
15	81.01	
16	85.19	
17	75.99	
18	78.48	
19	78.50	
20	80.18	
21	-64.19	
22	0.00	
23	0.00	
24	202.52	
25	90.21	
26	83.63	
27	85.19	
28	77.65	
29	77.27	
30	78.49	
31	77.25	
AUGUST, 1994		
1	76.49	
2	76.84	
3	77.65	
4	77.69	
5	73.47	
6	71.83	
7	76.95	
8	68.49	
9	70.98	
10	68.95	
11	63.45	
12	50.11	
13	55.12	
14	80.30	
15	78.51	
16	65.14	
17	68.95	
18	63.45	
19	63.47	
20	55.26	total days
TOTAL	4487.23	62
average	72.37	

7.)

CORP OF ENGINEERS - WELL FILE NUMBER 11920
OIL PRODUCTION HISTORY - LATEST SIX MONTHS

	1993 BOPM	# DAYS
12	856	31
1994		
1	740	31
2	654	28
3	250	9
4	500	26
5	529	29
TOTAL BBLS/DAYS	3529	154
AVERAGE	~~22.92 BOPD~~	

9-93 TO 2-94

4476 30 / 182.4 DAYS

= 24.53 B/D

8.)

Gauge and Production Report
Pasterra Petroleum Inc.

Pipeline Connection: SCURLOCK PERMIAN
County: MCKENZIE
State: NORTH DAKOTA
Lease: COOPS EDC 31-10
Field: BAKER
From: 8/18/94
To: 8/25/94

Producing Well Nos. & Status	Tank Number	Tank Size	Date: 8/18/94 Ft	Inch	Barrels	Date: 8/19/94 Ft	Inch	Barrels	Date: 8/20/94 Ft	Inch	Barrels	Date: 8/21/94 Ft	Inch	Barrels	Date: 8/22/94 Ft	Inch	Barrels	Date: 8/23/94 Ft	Inch	Barrels	Date: 8/24/94 Ft	Inch	Barrels	Date: 8/25/94 Ft	Inch	Barrels
	50412	400	8	8.00	175.57	11	11.00	239.04	11	11.00	239.04															
	50413	400	12	6.00	250.78	1	3.00	25.15	4	0.00	80.41															
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00															
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00															
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00															

Saltwater	0	0	7
Freshwater	0	0	0
Tubing	230	300	300
Casing			
Choke Size	20/ 48	20/ 48	20/ 48

Stock Today	426.35	264.19	319.45
Runs Yesterday	0.00	225.53	0.00
Total	426.35	489.72	319.45
Stock Yesterday	362.78	429.25	264.20
Prod. Yesterday	63.57	60.47	55.25

Date	Ticket #	Tank #	Ft	Inch	Ft	Inch	Barrels	Grty	Temp	Run Date	BS&W	Temp
8/18/94	9060489	50413	12	6.00	1	3.00	225.63	51.00	96	8/19/94	0.0500000	100
8/21/94	9060500	50412	11	11.00	3	1.00	212.22	51.00	94	8/22/94	0.0000000	96
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0

Stock at end of report	337.84
Pipeline runs this report	437.85
Previous runs this month	1,466.53
TOTAL	1,942.28
Less Beginning Stock	485.06
Production Month to date	1,537.22

Stroke Length:
SPM : 0.00
Time Clock : Flowing

8/18/94 Spec. Gravity- 1.115 PPM- 170.585
8/21/94 Spec. Gravity- 1.125 PPM- 300.040
8/23/94 Spec. Gravity- 1.035 PPM- 48.173
8/25/94 Spec. Gravity- 1.080 PPM- 114.026

Computer Version by: Travis Bauer
Ben's Production Service
Williston, ND

189
0

Gauge and Production Report
Pasterra Petroleum Inc.

Pipeline Connection: SCURLOCK PERMIAN
County: MCKENZIE
State: NORTH DAKOTA
Lease: CORPS ENG 31-10
Field: BAKER
From: 8/10/94
To: 8/17/94

Producing Well Res. & States	Tank Number	Tank Size	Date: 8/10/94 Ft	Inch	Barrels	Date: 8/11/94 Ft	Inch	Barrels	Date: 8/12/94 Ft	Inch	Barrels	Date: 8/13/94 Ft	Inch	Barrels	Date: 8/14/94 Ft	Inch	Barrels	Date: 8/15/94 Ft	Inch	Barrels	Date: 8/16/94 Ft	Inch	Barrels	Date: 8/17/94 Ft	Inch	Barrels
	50412	400	5	7.00	112.12	8	0.00	175.57	11	2.00	225.68	14	0.00	280.80	14	0.00	280.80	2	1.75	43.17	2	1.75	43.17	5	7.00	112.12
	50413	400	12	2.50	244.93	12	2.50	244.93	12	2.50	244.93	1	4.00	24.83	5	4.00	107.12	9	3.00	185.64	12	6.00	250.78	12	6.00	250.78
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00

										Comp	WTD
Saltwater	12	13	0	5	15	10	8	12		75	153
Freshwater	0	0	0	0	0	0	0	0		0	0
Tubing	340	300	220	220	300	340	340	350			
Casing											
Choke Size	20/ 48	20/ 48	20/ 48	20/ 48	20/ 48	20/ 48	20/ 48	20/ 48			
Stock Today	357.85	420.50	470.61	307.63	387.83	228.81	281.85	362.90			
Runs Yesterday	0.00	0.00	0.00	218.18	0.00	237.83	0.00	0.00			
Total	357.85	420.50	470.61	525.79	387.83	466.44	281.85	362.90			
Stock Yesterday	288.90	357.85	420.50	470.61	307.63	387.83	228.81	281.85			
Prod. Yesterday	68.95	63.45	50.11	55.12	80.20	78.61	65.14	68.85			

Date	Ticket #	Tank #	Ft	Inch	Ft	Inch	Barrels	Grty	Temp	Run Date	BS&W	Temp
8/12/94	8320476	50413	12	2.50	1	4.00	218.10	52.00	92	8/13/94	0.1000000	96
8/14/94	9000565	50412	14	0.00	2	1.75	257.60	52.20	104	8/15/94	0.1000000	102
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0

Stock at end of report	362.90
Pipeline runs this report	456.75
Previous runs this month	710.86
TOTAL	1,528.49
Less Beginning Stock	405.06
Production Month to date	1,124.43

Stroke Length:
SPM : 0.00
Time Clock : Flowing

Computer version by: Travis Baker
Dan's Production Service
Williston, ND

8/11/94 Spec. Gravity- 1.125 PPM- 190,846
8/12/94 Spec. Gravity- 1.125 PPM- 190,846
8/16/94 Spec. Gravity- 1.130 PPM- 197,857
8/17/94 Cut paraffin: 0-300'- hard. 300'-1100'- soft, ran to 3000'.

Gauge and Production Report
Panterra Petroleum Inc.

Pipeline Connection: SCURLOCK PERMIAN

County: MCKENZIE
State: NORTH DAKOTA

Lease: CORPS ENG 31-10
Field: BAKER

From: 8/02/94
To: 8/09/94

Producing Well Nos. & Status	Tank Number	Tank Size	Date: 8/02/94 Ft	Inch	Barrels	Date: 8/03/94 Ft	Inch	Barrels	Date: 8/04/94 Ft	Inch	Barrels	Date: 8/05/94 Ft	Inch	Barrels	Date: 8/06/94 Ft	Inch	Barrels	Date: 8/07/94 Ft	Inch	Barrels	Date: 8/08/94 Ft	Inch	Barrels	Date: 8/09/94 Ft	Inch	Barrels
	50412	400	2	7.50	52.80	2	7.50	52.80	6	6.00	130.49	10	2.00	203.96	13	9.00	275.78	2	1.75	43.17	2	1.75	43.17	2	1.75	43.17
	50413	400	9	9.00	195.67	13	7.50	273.32	13	7.50	273.32	13	7.50	273.32	1	5.00	29.51	5	3.00	105.48	8	8.00	172.85	12	2.50	244.83
			0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
			0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
			0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
Saltwater			6			13			9			10			12			12			5			10		
Freshwater			0			0			0			0			0			0			0			0		
Tubing			340			340			380			365			320			350			315			315		
Casing																										
Choke Size			20/ 48			20/ 48			20/ 48			20/ 48			20/ 48			20/ 48			20/ 48			20/ 48		
Stock Today			248.47			326.12			403.81			477.28			304.30			148.53			217.32			288.10		
Bbls Yesterday			233.43			0.00			0.00			0.00			244.81			232.62			0.00			0.00		
Total			481.90			326.12			403.81			477.28			549.11			381.15			217.32			288.10		
Stock Yesterday			405.06			248.47			326.12			403.81			477.28			304.30			148.53			217.32		
Prod. Yesterday			76.84			77.65			77.69			73.47			71.83			76.85			68.79			70.78		

Date	Ticket #	Tank #	Ft	Inch	Ft	Inch	Barrels	Grty	Temp	Run Date	BS&W	Temp
8/01/94	8320446	50412	14	3.25	2	7.50	232.43	52.00	98	8/02/94	0.0500000	100
8/05/94	9060414	50413	13	7.50	4	6.00	244.81	50.50	94	8/06/94	0.0500000	100
8/07/94	9050489	50412	13	9.00	2	1.75	232.62	52.00	104	8/07/94	0.0500000	110
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0

Stock at end of report	288.10
Pipeline runs this report	770.85
Previous runs this month	0.00
TOTAL	998.95
Less Beginning Stock	405.06
Production month to date	593.90

Stroke Length:
SPM : 0.00
Time Clock : Flowing

8/02/94 Cut paraffin: 0-380'- hard, 380'-1200'- soft, ran to 8000'.
8/04/94 Spec. Gravity- 1.115 PPM- 170,595
8/06/94 Spec. Gravity- 1.110 PPM- 164,069
8/08/94 Spec. Gravity- 1.125 PPM- 190,045

Computer version by: Travis Baker
Ben's Production Service
Williston, ND

Gauge and Production Report
Panterra Petroleum Inc.

Pipeline Connection: SCHLOCK PERMIAN
County: MCKENZIE
State: NORTH DAKOTA
Lease: CORPS ENG 31-10
Field: BAKER
From: 7/26/94
To: 8/01/94

Producing Well Nos. & Status	Tank Number	Tank Size	Date: Ft	Inch	Barrels	Date: 7/26/94 Ft	Inch	Barrels	Date: 7/27/94 Ft	Inch	Barrels	Date: 7/28/94 Ft	Inch	Barrels	Date: 7/29/94 Ft	Inch	Barrels	Date: 7/30/94 Ft	Inch	Barrels	Date: 7/31/94 Ft	Inch	Barrels	Date: 8/01/94 Ft	Inch	Barrels
	50412	400				2	7.75	53.22	2	7.75	53.22	2	7.75	53.22	6	6.00	130.49	10	5.00	208.90	14	3.25	286.23	14	3.25	286.23
	50413	400				5	9.00	115.49	10	0.00	200.68	13	10.50	278.33	13	10.50	278.33	2	1.25	42.34	2	1.25	42.34	5	11.00	118.23
		0				0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
		0				0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
		0				0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00

																										Cuba	NTO
	Saltwater							15			13			3			17			5			13			13	79	419
	Freshwater							0			0			0			0			0			0			0	0	25
	Tubing							350			340			340			340			340			330			340		
	Casing																										
	Choke Size							20/ 48			20/ 48			20/ 48			20/ 48			20/ 48			20/ 48			20/ 48		

Stock Today	168.71	253.90	331.55	408.82	251.32	328.57	405.06
Runs Yesterday	239.28	0.00	0.00	0.00	215.95	0.00	0.00
Total	407.99	253.90	331.55	408.82	467.31	328.57	405.06
Stock Yesterday	324.36	168.71	253.90	331.55	408.82	251.32	328.57
Prod. Yesterday	83.63	85.19	77.65	77.27	78.49	77.25	76.49

Date	Ticket #	Tank #	Ft	Inch	Ft	Inch	Barrels	Grvty	Temp	Run Date	BS&W	Temp
7/25/94	9050441	50412	14	3.00	2	7.75	238.28	51.00	96	7/26/94	0.0500000	108
7/29/94	9040484	50413	13	10.50	2	1.25	236.54	51.00	98	7/30/94	0.0600000	108
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0

Stock at end of report	405.06
Pipeline runs this report	476.27
Previous runs this month	1,845.50
TOTAL	2,725.83
Less Beginning Stock	453.59
Production Month to date	2,272.43

Stroke Length:
SPM : 0.00
Time Clock : Flowing

Computer Version by: Travis Bauer
Bau's Production Service
Williston, ND

FORM 1405 1/2 00

Gauge and Production Report
Pasterra Petroleum Inc.

Pipeline Connection: SCURLOCK PERMIAN
County: MCKENZIE
State: NORTH DAKOTA
Lease: CORPS ENG 31-18
Field: BAKER
From: 7/18/94
To: 7/25/94

Producing Well Nos. & Status	Tank Number	Tank Size	Date: 7/18/94 Ft	Inch	Barrels	Date: 7/19/94 Ft	Inch	Barrels	Date: 7/20/94 Ft	Inch	Barrels	Date: 7/21/94 Ft	Inch	Barrels	Date: 7/22/94 Ft	Inch	Barrels	Date: 7/23/94 Ft	Inch	Barrels	Date: 7/24/94 Ft	Inch	Barrels	Date: 7/25/94 Ft	Inch	Barrels
	50412	400	7	1.00	142.17	11	0.00	220.67	15	0.00	300.85	10	1.00	202.29	10	1.00	202.29	10	1.00	202.29	10	1.00	202.29	14	7.00	292.59
	50413	400	1	3.50	25.99	1	3.50	25.99	1	3.50	25.99	3	0.00	60.36	3	0.00	60.36	3	0.00	60.36	13	1.25	262.88	1	7.00	31.86
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00

																									Comp	NTD
Saltwater					12			12			15			5			0			0			18			13		75	340
Freshwater					0			0			0			25			0			0			0			0		25	25
Tubing					510			320			360												340			350			
Casing																													
Choke Size					20/ 48			20/ 48			20/ 48			/			/			/			20/ 48			20/ 48			
Stock Today					168.16			246.66			326.84			262.65			262.65			262.65			465.17			324.36			
Runs Yesterday					0.00			0.00			0.00			0.00			0.00			0.00			0.00			231.02			
Total					168.16			246.66			326.84			262.65			262.65			262.65			465.17			555.38			
Stock Yesterday					89.68			168.16			246.66			326.84			262.65			262.65			262.65			465.17			
Prod. Yesterday					78.48			78.50			80.18			-64.19			0.00			0.00			202.52			90.21			

Date	Ticket #	Tank #	Ft	Inch	Ft	Inch	Barrels	Grty	Temp	Run Date	BS&W	Temp
7/24/94	9850456	50413	13	1.25	1	7.00	231.02	51.40	94	7/25/94	0.0500000	96
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0

Stock at end of report	324.36
Pipeline runs this report	231.02
Previous runs this month	1,614.58
TOTAL	2,169.96
Less Beginning Stock	453.50
Production Month to date	1,716.46

Stroke Length:
SPM : 0.00
Time Clock : Flowing

Computer Version by: Travis Baker
Ban's Production Service
Williston, ND

7/20/94 Cut paraffin: 0-300'- hard, 300'-1100'- soft, ran to 3000'.
7/21/94 Flowed 10 hrs. Shut well in at 6:00 pm on 7-20 after putting 25.05 bbls hot FW and 98.56 bbls hot oil downtubing, reason for mess production shown.
7/22/94 Down 24 hrs. Well shut in to build tubing pressure.
7/23/94 Down 24 hrs. Well shut in. H&L going to swab this am.
7/24/94 Flowed 20 hrs. H&L swabbed well in on 7-23.

FORM 1406 1/2 GG

Gauge and Production Report
Pasterra Petroleum Inc.

Pipeline Connection: SCURLOCK PERMIAN
County: MCKENZIE
State: NORTH DAKOTA
Lease: CORPS ENG 31-10
Field: BAKER
From: 7/10/94
To: 7/17/94

Producing Well Nos. & Status	Tank Number	Tank Size	Date: 7/10/94 Ft	Inch	Barrels	Date: 7/11/94 Ft	Inch	Barrels	Date: 7/12/94 Ft	Inch	Barrels	Date: 7/13/94 Ft	Inch	Barrels	Date: 7/14/94 Ft	Inch	Barrels	Date: 7/15/94 Ft	Inch	Barrels	Date: 7/16/94 Ft	Inch	Barrels	Date: 7/17/94 Ft	Inch	Barrels
	50412	400	15	10.50	318.39	15	10.50	318.39	15	10.50	318.39	6	6.00	130.49	11	0.00	220.67	15	0.50	301.68	15	0.50	301.68	3	2.00	63.09
	50413	400	7	3.00	145.55	11	4.00	227.40	15	8.00	314.26	17	0.25	341.40	4	11.00	98.78	4	11.00	98.78	9	2.00	183.97	1	3.50	25.99
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00

								Cums	MTD
Saltwater	13	13	15	10	5	10	17	8	91	265
Freshwater	0	0	0	0	0	0	0	0	0	0
Tubing	320	320	320	400	320	310	320	290		
Casing										
Choke Size	20/ 48	20/ 48	20/ 48	20/ 48	20/ 48	20/ 48	20/ 48	20/ 48		
Stock Today	483.94	545.79	632.65	471.89	319.45	400.46	485.65	89.68		
Runs Yesterday	0.00	0.00	0.00	235.92	242.62	0.00	0.00	471.96		
Total	483.94	545.79	632.65	707.81	562.07	400.46	485.65	561.64		
Stock Yesterday	374.57	483.94	545.79	632.65	471.89	319.45	400.46	485.65		
Prod. Yesterday	89.37	61.85	86.86	75.16	90.18	81.01	85.19	75.99		

Date	Ticket #	Tank #	Ft	Inch	Ft	Inch	Barrels	Grty.	Temp	Run Date	BS&W	Temp
7/12/94	0280425	50412	15	10.50	4	1.25	235.92	51.00	94	7/13/94	0.3000000	90
7/13/94	9050433	50413	17	0.25	4	11.00	242.62	49.60	90	7/14/94	0.2000000	96
7/16/94	9050437	50412	15	0.50	3	1.75	238.41	52.00	104	7/17/94	0.0500000	108
7/17/94	9040456	50413	12	11.25	1	3.50	233.55	50.20	80	7/17/94	0.1000000	98
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0

Stock at end of report	89.68
Pipeline runs this report	950.50
Previous runs this month	544.08
TOTAL	1,784.26
Less Beginning Stock	453.30
Production Month to date	1,250.76

Computer Version by: Travis Bauer
Ben's Production Service
Williston, ND

Stroke Length:
SPM : 0.00
Time Clock : Flowing

7/13/94 Cut paraffin: 0-200'- hard, 200'-1100'- soft, ran to 3000'.

FORM 1406 1/2 GB

Gauge and Production Report | Pipeline Connection: SCURLOCK PEORTAN | County: MCKENZIE | Lease: CORPS ENG 31-10 | From: 7/02/94
Pantarra Petroleum Inc. | State: NORTH DAKOTA | Field: BAKER | To: 7/09/94

Producing Well Nos. & Status	Tank Number	Tank Size	Date: 7/02/94 Ft	Inch	Barrels	Date: 7/03/94 Ft	Inch	Barrels	Date: 7/04/94 Ft	Inch	Barrels	Date: 7/05/94 Ft	Inch	Barrels	Date: 7/06/94 Ft	Inch	Barrels	Date: 7/07/94 Ft	Inch	Barrels	Date: 7/08/94 Ft	Inch	Barrels	Date: 7/09/94 Ft	Inch	Barrels
	50412	400	13	8.25	274.54	4	10.00	87.09	8	9.00	175.57	12	5.75	250.32	12	5.75	250.32	1	10.00	36.88	5	2.00	103.77	11	5.00	229.02
	50413	400	12	5.00	249.11	13	5.25	288.56	13	5.25	269.56	2	8.00	53.65	1	7.00	31.86	13	5.00	268.14	10	6.00	210.70	7	3.00	145.55
			0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
			0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
			0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00

												Gross	NTU
Saltwater	10	12	10	13	2	8	82	45	174	174
Freshwater	0	0	0	0	0	0	0	0	0	0
Tubing	470	440	350	340			280	350		
Casing										
Choke Size	18/ 64	18/ 64	18/ 64	18/ 64	/	/	24/ 48	20/ 48		
Stock Today	523.65	384.64	445.13	303.97	282.18	306.02	314.47	374.57		
Runs Yesterday	0.00	234.72	0.00	215.91	0.00	213.44	0.00	0.00		
Total	523.65	601.36	445.13	519.88	282.18	519.46	314.47	374.57		
Stock Yesterday	453.50	523.65	366.65	445.13	303.97	282.18	306.02	314.47		
Prod. Yesterday	70.15	77.73	78.48	74.75	-21.79	237.28	8.45	60.10		

Date	Ticket #	Tank #	Ft	Inch	Ft	Inch	Barrels	Gvty	Temp	Run Date	BS&W	Temp
7/02/94	9080488	50412	13	8.50	2	0.00	234.73	50.40	98	7/03/94	0.1000000	98
7/05/94	9080390	50413	13	5.25	2	0.00	215.91	49.60	84	7/05/94	0.3000000	80
7/07/94	9080497	50412	12	5.75	1	10.00	213.44	51.00	110	7/07/94	0.1000000	110
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0

Stock at end of report	374.57
Pipeline runs this report	664.88
Previous runs this month	0.00
TOTAL	1,038.65
Less Beginning Stock	453.50
Production Month to date	585.15

Stroke Length:
SPM : 0.00
Time Clock : Flowing

Computer Version by: Travis Bauer
Dan's Production Service
Williston, ND

7/06/94 Flowed 3 hrs. Shut well down at 11:00 am on I-5 to work on well. Minus production shown was used to hot oiltubing.
7/07/94 Down 24 hrs. Production shown was made while working on well. Put on Tree
7/08/94 Flowed 11 hrs. Opened well up at 2:00 pm on I-1. Pulled approx 50 bbls SW off Tank 12, reason for low oil and high SW production shown. Changed choke to a 20/48.
7/09/94 Recycled on Tank 13 from 10'3 to 2'3 into Tank 12. Pulled approx 25 bbls SW off bottom.

FORM 1486 1/2 GB

Gauge and Production Report
Pantorra Petroleum Inc.

Pipeline Connection: SCURLOCK PERMIAN
County: MCKENZIE
State: NORTH DAKOTA
Lease: CORPS ENG 31-10
Field: BAKER
From: 6/26/94
To: 7/01/94

Producing Well Acc. & Status	Tank Number	Tank Size	Date: Ft	Date: Inch	Date: Barrels	Date: Ft	Date: Inch	Date: Barrels	Date: 6/25/94 Ft	Inch	Barrels	Date: 6/27/94 Ft	Inch	Barrels	Date: 6/28/94 Ft	Inch	Barrels	Date: 6/29/94 Ft	Inch	Barrels	Date: 6/30/94 Ft	Inch	Barrels	Date: 7/01/94 Ft	Inch	Barrels
	50412	400							16	8.50	335.09	6	1.00	122.14	6	1.00	122.14	10	2.00	203.96	13	8.25	274.54	13	8.25	274.54
	50413	400							7	4.00	147.22	11	2.00	224.06	15	5.75	310.50	4	11.25	98.20	4	11.25	99.20	8	11.00	178.96
		0							0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
		0							0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
		0							0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
	Saltwater										13			13			18			13			13			8
	Freshwater										0			0			0			0			0			0
	Tubing										300			420			420			375			380			420
	Casing																									
	Choke Size										18/ 64			18/ 64			18/ 64			18/ 64			18/ 64			18/ 64
	Stock Today										482.31			346.20			432.64			383.16			373.74			453.50
	Runs Yesterday										0.00			212.95			0.00			211.30			0.00			0.00
	Total										482.31			559.15			432.64			594.46			373.74			453.50
	Stock Yesterday										407.15			482.31			346.20			432.64			383.16			373.74
	Prod. Yesterday										75.16			76.84			86.44			81.82			70.58			79.76

Comm NTU
78 311
0 0

Date	Ticket #	Tank #	Ft	Inch	Ft	Inch	Barrels	Grvty	Temp	Run Date	BS&W	Temp
6/26/94	8320369	50412	16	8.50	6	1.00	212.95	51.00	94	6/27/94	0.0500000	96
6/28/94	8280380	50413	15	5.75	4	11.25	211.30	46.00	84	6/28/94	0.1000000	86
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0

Stock at end of report	453.50
Pipeline runs this report	424.25
Previous runs this month	431.74
TOTAL	1,309.49
Less Beginning Stock	206.09
Production Month to date	1,103.40

Stroke Length:
SPM : 0.00
Time Clock : Flowing

Computer Version By: Travis Bauer
Dan's Production Service
Williston, ND

6/29/94 Cut paraffin: 0-600' - hard, 600'-1300' - soft, ran to 3000'.

FORM 1408 1/8 GB

Gauge and Production Report
Pantarra Petroleum Inc.

Pipeline Connection: SCURLOCK PERMIAN
County: MCKENZIE
State: NORTH DAKOTA
Lease: CORPS ENG 31-10
Field: BAKER
From: 6/18/94
To: 6/25/94

Producing Well Ans. & Status	Tank Number	Tank Size	Date: 6/18/94 Ft	Inch	Barrels	Date: 6/19/94 Ft	Inch	Barrels	Date: 6/20/94 Ft	Inch	Barrels	Date: 6/21/94 Ft	Inch	Barrels	Date: 6/22/94 Ft	Inch	Barrels	Date: 6/23/94 Ft	Inch	Barrels	Date: 6/24/94 Ft	Inch	Barrels	Date: 6/25/94 Ft	Inch	Barrels
	50412	400							15	9.00	315.88	15	9.00	315.88	4	8.50	94.58	8	9.00	175.37	12	11.00	259.09	16	0.50	335.09
	50413	400							8	8.00	173.95	9	9.00	195.67	14	1.00	282.50	14	1.00	282.50	3	7.00	72.06	3	7.00	72.06
		0							0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
		0							0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
		0							0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
	Saltwater										20			78			22			18			13			13
	Freshwater										0			0			0			0			0			0
	Tubing										270			440			390			330			480			360
	Casing																									
	Choke Size										24/ 64			18/ 64			20/ 64			20/ 64			18/ 64			18/ 64
	Stock Today										489.83			511.55			377.00			458.07			331.15			407.15
	Runs Yesterday										0.00			0.00			221.30			0.00			210.44			0.00
	Total										489.83			511.55			598.30			458.07			541.59			407.15
	Stock Yesterday										401.30			489.83			511.55			377.00			458.07			331.15
	Prod. Yesterday										88.53			21.72			86.83			80.99			83.52			76.00

Date	Ticket #	Tank #	Ft	Inch	Ft	Inch	Barrels	Grty	Temp	Run Date	BS&W	Temp
6/21/94	9040385	50412	15	9.00	4	8.50	221.30	51.00	160	6/22/94	0.2000000	94
6/23/94	8320356	50413	14	1.00	3	7.00	210.44	51.00	94	6/24/94	0.2000000	90
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0

Stock at end of report	407.15
Pipeline runs this report	431.74
Previous runs this month	0.00
TOTAL	838.89
Less Beginning Stock	209.01
Production month to date	629.88

Stroke Length:
SPM : 0.00
Time Clock Flowing

Computer Version by: Travis Bauer
Ben's Production Service
Division of

6/18/94 Flowed 10-1/2 hrs. Opened well up at 1:00 pm on 6-17. Changed choke to a 24/64.
6/20/94 Changed choke to a 18/64.
6/21/94 Pulled approx 40 bbls oil off bottom of tank 13 that got in there during workover. Changed choke to a 20/64.
6/23/94 Changed choke to a 18/64.

FORM 1406 1/2 GB

8.)

Gauge and Production Report
Pasterra Petroleum Inc.

Pipeline Connection: SCURLOCK PERMIAN
County: MCKENZIE
State: NORTH DAKOTA
Lease: CORPS ENG 31-10
Field: BAKER
From: 6/02/94
To: 6/09/94

Producing Well Res. & Status	Tank Number	Size	Date: 6/02/94 Ft	Inch	Barrels	Date: 6/03/94 Ft	Inch	Barrels	Date: 6/04/94 Ft	Inch	Barrels	Date: 6/05/94 Ft	Inch	Barrels	Date: 6/06/94 Ft	Inch	Barrels	Date: 6/07/94 Ft	Inch	Barrels	Date: 6/08/94 Ft	Inch	Barrels	Date: 6/09/94 Ft	Inch	Barrels
	50412	400	8	11.00	178.91	8	11.00	178.91	8	11.00	178.91	8	11.00	178.91	8	11.00	178.91	8	11.00	178.91	8	11.00	178.91	12	5.00	244.97
	50413	400	1	6.00	30.18	1	6.00	30.18	1	6.00	30.18	1	6.00	30.18	1	6.00	30.18	1	6.00	30.18	1	6.00	30.18	1	6.00	30.18
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
		0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
	Saltwater				0			0			0			0			0			0			0			0	
	Freshwater				0			0			0			0			0			0			0			0	
	Tubing																									
	Casing																									
	Choke Size				/			/			/			/			/			/			/			/
	Stock Today				209.09			209.09			209.09			209.09			209.09			209.09			209.09			209.09
	Runs Yesterday				0.00			0.00			0.00			0.00			0.00			0.00			0.00			0.00
	Total				209.09			209.09			209.09			209.09			209.09			209.09			209.09			209.09
	Stock Yesterday				209.09			209.09			209.09			209.09			209.09			209.09			209.09			209.09
	Prod. Yesterday				0.00			0.00			0.00			0.00			0.00			0.00			0.00			0.00

Date	Ticket #	Tank #	Ft	Inch	Ft	Inch	Barrels	Gvty	Temp	Run Date	BS&W	Time
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0
/ /			0	0.00	0	0.00	0.00	0.00	0	/ /	0.0000000	0

209.09
Stock on Hand.
6-7-94
Volume Oil Stored

Computer Version By: Travis Bauer
Dan's Production Service
Williston, ND

Stroke Length:
SPM : 0.00
Time Clock : Ryan

6/02/94 Down 24 hrs. Well shut in. Waiting for rig.
6/03/94 Down 24 hrs. Waiting for rig.
6/04/94 Down 24 hrs. Waiting for rig.
6/05/94 Down 24 hrs. Waiting for rig.
6/06/94 Down 24 hrs. Waiting for rig.
6/07/94 Down 24 hrs. Waiting for rig.
6/08/94 Down 24 hrs. Rigged up on well today.
6/09/94 Down 24 hrs. Working on well. Stripping pump out of hole. Production shown was oil pulled from SK tank thrutreater into Tank 12.

SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5749 (2-92)

Well File Number: 11920

PLEASE READ INSTRUCTIONS ON BACK OF FORM

☐ Notice of Intent
Approximate Start Date _____

☐ Report of Work Done
Date Work Completed 6/20/94

☐ Drilling Prognosis
☐ Redrilling or Repair
☐ Casing or Liner
☐ Plug Well
☐ Supplemental History
☐ Temporarily Abandon
☐ Spill Report
☐ Shooting
☐ Acidizing
☐ Fracture Treatment
☐ Change Producing Method
☐ Reclamation
☐ Other _____

Well Name and Number				
Corps of Engineers 31-10				
Footages	Qtr-Qtr	Section	Township	Range
660' FNL 2305' FEL	NWNE	10	153N	101W
Field	Pool	County		
Baker	Red River	McKenzie		

24 HOUR PRODUCTION RATE	
BEFORE	AFTER
Oil 20	Oil 82
Water 20	Water 13
Gas 70	Gas 350

Name of Contractor			
Address	City	State	Zip Code

DETAILS OF WORK

06-09-94 Pull rods and tbg. Run tbg in hole. Ran tbg caliper and LD 19 jts rod cut tbg. Pickle tbg w/1100 gal 15%. Attempt to acidize Red River and had down hole leak. Pull tbg and hydrotest in hole. LD 1 jt. Acidize w/ 2000 gal foamed 15% HCl. Flow back load and well continued flowing w/ 350 psi FTP on a 14/48" choke.

See attached daily reports and wellbore schematic.

Company		
Pantrerra Petroleum		
Address		
P. O. Box 7168		
City	State	Zip Code
Billings	MT	59103-7168
By	Date	
Gary S Evertz	7/1/94	
Title	Telephone Number	
	406-245-6248	

406-245-9106 Fax

FOR OFFICE USE ONLY

☒ Received ☐ Approved

Date 7-6-94

By F E Williams

Title Assistant Director

PANTERRA PETROLEUM

```
        ¦   ¦   I   I   ¦   ¦
        ¦   ¦   I   I   ¦   ¦
        ¦   ¦   I   I   ¦   ¦
        ¦   ¦   I   I   ¦   ¦
    2954'   ¦   I   I   ¦   9 5/8"
            ¦   I   I   ¦
            ¦   I   I   ¦
            ¦   I   I   ¦
    5130'   ¦   I   I   ¦   CMT TOP
            ¦   I   I   ¦
            ¦   I   I   ¦
            ¦   I   I   ¦
 5777-783'  H   I   I   H   CASING PATCH
            ¦   I   I   ¦
             \  I   I  /    TIGHT CSG¦
    6661'     /  I   I  \    < 4 3/8" ID
            ¦   I   I   ¦
            ¦   I   I   ¦
  8933-37'  ]   I   I   [   DV COLLAR
            ¦   I   I   ¦
   10200'   ¦   I   I   ¦   CUP SN
            ¦   I   I   ¦   PERF SUB
            ¦   I   I   ¦
   11497'   ¦   I> <I   ¦   CUP SN
            ¦   I   I   ¦
            ¦___\ /___¦
   11498'   ¦>>>I¦ ¦I>>>¦   MODEL D PKR
            ¦           ¦
            ¦  _/I I\_  ¦
 11600-612'  \¦  I I  ¦/    TIGHT CSG
             /¦_I I_¦\     FISH-MILL
            ¦           ¦
 11840-842' =           =   SQZ PERFS
            ¦           ¦
   13100'   ¦   I   I   ¦
 13120-122' =   I   I   =   SQZ PERFS
            ¦__I   I__¦   MODEL R-3 PKR
   13243'   ¦<<<I   I>>>¦   & 5 JTS TBG
 13255-265' =           =   RED RIVER B
            ¦           ¦
 13296-303' =           =
 13308-312' =           =   RED RIVER C
 13322-330' =           =
            ¦___________¦
   13344'   ¦<<<I***I>>>¦   CMT RET
 13400-402' =***********=   SQZ
 13440-442' =***********=   PERFS
            ¦           ¦
   13438'   ¦***********¦   FLOAT COLLAR
   13480'   ¦***********¦   5 1/2"
```

WELL: CORPS OF ENGINEERS 31-10 FIELD: BAKER

LOCATION: NWNE SEC 10 153N 101W, MCKENZIE CO, ND
SURF:660' FNL & 2304' FEL
BHL:841' FNL & 1926' FEL STATUS: FLOWING OIL WELL

ELEVATION: GL - 1851' KB - 1872' ST FILE NO: 11920
API #:33-053-02148

SPUD DATE: 6/20/86 COMP DATE: 11/24/86

ROTARY TD: 13480' PBTD: 13344'

SURF CSG: 9 5/8" 36,40# K-55 SET @ 2954'. CMT W/ 1220 SX.

PROD CSG: 5 1/2" 17,20,26# L-80,SS95 SET @ 13344',CMT W/ 1850 SX "G", 1082 SX LITE.

TUBING & BHA	RODS & PUMP
1 JT 2 7/8" L-80 TBG	
1 - 2 7/8" X 4' TBG SUB	
377 JTS 2 7/8" L-80 TBG	
CUP SN - 11497'	
BAKER 40-26 MOD G-22 SEAL ASSY	
BAKER MOD D PERM. PKR. - 11498'	

SALT	DEPTH	5 1/2" LTC	SET @
DUNHAM	6654-6710	20# L-80	21
PINE	7022-7070	26# SS95	57
CHARLES	8252-8950	20# L-80	3855
PRAIRIE	11594-11790	17# L-80	6439
		23# SS95	6944
		17# L-80	8046
SL-	SPM-	23# SS95	8877
		20# L-80	11389
WELLHEAD: TBGHD CIW,F,1" 3000 PSI X 7 1/16"		26# SS95	11703
		20# L-80	13344

PUMP UNIT: LUFKIN MII 640-365-144 W/ AJAX E-42 ENG.

PERFS: RED RIVER "B" 13255-265', 4 SPF.

RED RIVER "C" 13296-303', 13308-312', 13322-330' 4 SPF.

PRODUCTION: 82 BO, 350 MCF, 13 BWPD

PREPARED BY: GARY L EVERTZ DATE: 07/01/94

DIRICTIONAL WELL TMD - 13480'

Corps Of Engineers 31-10
PANTERRA PETROLEUM
NWNE 10 - T153N, R101W
Baker Field
McKenzie County, ND

AFE #46

06-16-94 FL @ 8500' (3000' of fluid entry - 16 hrs). Swabbed well to SN @ 11,496' in 3 runs. Rec 100' of oil on 1st run. TF - 15 BLW rec. 180 BLWTR. RU HES to do foamed acid job. Fill csg w/ 38 BSW & test to 2000# - held OK. Had hot oil truck maintain csg psi during job. Installed 5000# master valve on tbg. Pumped 200 gal 28% HCl acid ahead of 50,000 SCF of N_2, 400 gal foamed FW & additives, 1800 gal 28% SGA-HT foamed acid. Flushed to perfs w/ N_2. Max press - 6590#, Avg press - 5950#, Avg inj rate - 2.7 BPM. ISIP - 5822#. LWTR - 60 bbls tbg, 38 bbls csg, 180 bbls before job = 278 BLWTR. RD HES. Install choke @ tbg & hook flowline to test tank. Flow back 72 BLW in 4 1/2 hrs & well died. RU swab. Made 2 swab runs f/ SN, very gassy from N_2 & acid gas. Rec 16 BLW. Had 5% oil on last run. Rec 88 BLW, 190 BLWTR. SDFN. DC $12072 CC $53033

06-17-94 SITP - 1475#, SICP - 100#. Bled gas off well thru 16/64" choke & treater. 2 hr FTP @ 135#. Well started flowing oil. Well flowed 8.4 bbls of 98% oil on 16/64" choke in 2 hrs & started gassing only. Opened on 1" choke. Well unloaded 3 BO, 7 BLW in 1 hr & died. Made 1 swab run f/ 3500'. Well started flowing. Made 1 swab run/hr, next 2 hrs, one f/ 3500' & one f/ 6000'. Well continued flowing. In 10 1/2 hrs swabbed & flowed 46.7 BO (53%), 41.1 BLW, TF 87.8 bbls. Volumes are calculated on avg wellhead cuts. Had choke settings f/ 16/64" - 1". TP varied f/ 40# - 300#. Had to repair SW dump valve & float on treater. Turned well thru treater @ 9:00 p.m., CDT & left flowing on 20/64" choke w/ 280# FTP. DC $2657 CC $55690

06-18-94 Flowed 33 BO, 17 BLW, TP - 50-280#, 20/64" choke in 10 hrs.

06-19-94 Flowed 92 BO, 52 BLW, TP - 50-350#, 24/64" choke in 24 hrs, 36% wtr.

06-20-94 Flowed 85 BO, 20 BLW, TP - 50-350#, 24/64" choke in 24 hrs, 24% wtr.

Well has made 257 bbls oil and 130 bbls LW = 387 BTF since acid job. 60 BLW TR (prob. in csg annulus) put well on 18/64 choke. Laid all rods from derrick on ground in triples. SK&S roustabouts moved out American 456-256-120 PU w/ cement port-a-base to yard. They moved in and set Lufkin Mark II - M640 D-365-144 PU Serial #21835. Mounted 8-1/2" x 10" Ajax engine to PU. Engine sheave = 14"; PU sheave = 33" gear box ratio = 28.6:1; new D grove 482 belts.

From 7 a.m. to 4:30 p.m. (9 hr - well SI 1/2 hr). Well flowed 40.6 bbls oil, 6.9 bbls SW, 475 BTF, 85% oil. 4.5 bbls oil / hr on 18/64" choke. Making ±400 mcf/day of gas to sales. Put Wellpro BOP and hand slips on 1/2 cost rental of $70/day. ERC choke and master valve - $20/day. RD and Release Rig. DC $2414 CC 58104

Corps Of Engineers 31-10
PANTERRA PETROLEUM
NWNE 10 - T153N, R101W
Baker Field
McKenzie County, ND

AFE #46

06-11-94 Fished 2" SV w/ sandline. RU HES for foamed acid job. Install 2 7/8" EUE, 5000# master valve on tbg. Test csg to 1540# - OK. Test lines to 5460#. Pump 50,000 SCF N. down tbg, followed by 400 gal foamed FW w/ 10 GPM Pen-88HT, 20 GPM Sperse-All & 50,000 SCF N_2. TP - 5500#, CP - 1006#. AIR @ .35 BPM. Pumped 500 gal 28% SGA w/ Inhibitor, Pen-88HT, SWIC & Sperse-All w/ 75,000 SCF N. down tbg @ 5900 psi. CP immed came up to 3008#. SD. Bled csg down to 2000#. RU choke & hardline to test tank. Bled well off to tank. Rec acid in tank. Flushed csg w/ 24 BFW. Drop 2" SV in tbg, wait 30 min. Pump 66 BSW down tbg. Had circulation out csg. Shut csg & PT to 1500#, pkr - OK, csg - OK. Possible leak in tbg or circ valve. RD HES. Rotate out of Model "D" w/ latch. POOH w/ 378 jts 2 7/8" tbg & top connection of circ valve was broken @ base of threads on top pin of valve. Left circ valve, SN & seal assy in hole. SDFN. DC $13272 CC $27410

06-12-94 TIH w/ Bowen 4 3/8" OD Overshot w/ cut lip guide, dressed w/ 3 1/2" basket grapple, Bowen oil jars, & 218 jts 2 7/8" tbg. Hit tight spot in csg @ 6661' K.B. Set down 30,000# SW. Had to set jars off 3 times to pull out. Set down 10,000# - would not go. Had to pull 10,000# over string weight to get free. POOH w/ tbg & BHA. Cut lip guide was egg shaped (4 1/4" x 4 1/2"). TIH w/ 4" OD x 2.25' long undressed shoe f/ guide to go over fish & 378 jts. Took 5000# SW to go past 6661' K.B. Set down @ 11,498' K.B. RIH w/ sandline & OS to fish SV. POOH - did not have it. Made 2nd attempt & successfully fished SV out of circ valve. SDFN. DC $3366 CC $30776

06-13-94 POOH w/ tbg & guide. TIH w/ max OD 3 3/4" taper tap, Bowen oil jars, & 378 jts 2 7/8" tbg. Tagged fish @ 11,494' K.B. Engaged fish. Torqued tbg 5 rounds. Pull 15,000# over string weight & set down 15,000#, worked string. Attempted to release latch-in seal assy. POOH. No recovery of fish. Could see marks on taper tap where it had been inside 2" mandrel on circ valve. SDFN. DC $3078 CC $33854

06-14-94 TIH w/ 3 3/4" max O.D. taper tap, bumper sub, Bowen oil jars & 378 jts 2 7/8" tbg. Engage fish @ 11,494' K.B. Release latch-in seal assy. POOH w/ 378 jts tbg & BHA. Rec all of fish (circ valve, SN & latch-in assy). RU Basin Tubing Testers. TIH w/ Baker 40-26 model G-22 latch-in type seal assy w/ 2 seal units, 2 7/8" cup type SN, 378 jts 2 7/8" tbg & 1 - 2 7/8" x 4' tbg sub. Hydrotested tbg to 7000#. Found thread leak @ 3 jts above SN @ 1000#. Replaced bad jt. Stung into model "D" pkr @ 11,498' w/ 22,000# compression. SDFN. DC $5133 CC $38987

06-15-94 RU to swab. FL @ 2800'. Swabbed 5 BO, 60 BSW. Total of 65 BF in 12 runs in 8 hrs. All oil was on 1st run. Then swabbed 60 BLW. 195 BLWTR. Swab f/ pkr after 7th run. Made 1 run/hr last 4 hrs. FL @ 10,900' (600' above pkr) last 4 runs. Rec 1.7 BLW/hr last 2 hrs. SDFN. DC $1974 CC $40961

Corps Of Engineers 31-10
PANTERRA PETROLEUM
NWNE 10 - T153N, R101W
Baker Field
McKenzie County, ND

03-06-94 Shut-in @ 4:00 p.m. due to flooding.

03-22-94 Well put back on production around 2:00 p.m.

AFE #46

06-07-94 MI H&L Well Service rig. Too windy to rig up.

06-08-94 RU H&L rig. Pump 70 BSW down tbg - on vacuum. Jar on pump, would not unseat. Backed off rods. POOH w/ 1 - 1"x 2' & 1 - 1"x 6' pony rods, 94 - 1" plain rods & 53 - 7/8" plain rods. RU f/ tbg. Install BOP. Tbg was set w/ 40,000# compression. Pull out of Model "D" pkr. Strap OOH w/ 122 jts 2 7/8" tbg to rods. Continue stripping rods & tbg OOH. Found rod cut split jt 219 f/ top (6650'±). RU swab. Swab fluid f/ tbg to tank battery. Pull tbg to fluid, well started flowing oil f/ tbg. Hooked tbg & csg to flowline & left open to T.B. overnight. Have 265 jts tbg (7880'±) & 330 rods (8250'±). DC $3145

06-09-94 Well flowed 1/2" (.84 BO) into tank overnight, was dead in a.m. Finished stripping rods & tbg to pump. Had to swab tbg down after pulling rods. Pump was stuck in btm jt above SN. Cut tbg to recover pump & found pump was stuck in salt. Sent pump in for repairs. Recovered rods: 94 - 1" plain, 60 - 7/8" plain, 38 - 7/8" w/ scrapers, 189 - 3/4" w/ scrapers, & 16 - 1" w/ scrapers (these scrapers were very worn). 329 jts of tbg above SN. POOH w/ 49 jts 2 7/8" tailpipe, 2 cup type SN, 2 - 2 7/8" x 4' perf subs, & locator seal assy w/ 4 seal units f/ Baker Model "D" pkr. TIH open-ended w/ 377 jts 2 7/8" tbg to 11,453' K.B. RU Dialog. Ran Tubing Profile Caliper Log. Tool would not go down past 2200' due to paraffin. Hot oil tbg w/ 35 bbls prod oil. Ran Profile Log f/ EOT to surface. Found 19 jts over 35% wear (to be replaced). Most bad jts were in the 1500' of tbg above SN. Left well open to T.B. overnight. DC $4671 CC $7816

06-10-94 POOH w/ 377 jts 2 7/8" L-80 tbg. LD 19 jts that were over 35% wall thickness worn off. TIH w/ Baker 40-26 mod. G-22 Latch-in type Seal Assy w/ 2 seal units & 40,000# shear ring, 2 3/8" cup type SN, Basin circ valve, 378 jts 2 7/8" L-80 tbg, & 1 - 2 7/8" x 6' tbg sub. Replaced worn tbg w/ 21 jts of inspected tbg. Latch into Model "D" pkr @ 11,498'. Open circ valve. Set tbg in compression. RU HES & pump 20 BSW cushion in tbg. Drop 2" SV, wait for it to drop. Pickle tbg w/ 1200 gal 15% HCl acid w/ inhibitor & Sperse-All @ 1 BPM. Displaced into csg annulus thru circ valve. Let set 15 min. Reverse acid out of tbg to test tank, cycle tbg & close circ valve. PT csg & valve to 500# - OK. SDFN. DC $6322 CC $14138

SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5749 (2-92)

RECEIVED
ND OIL & GAS DIVISION
1994

Well File Number: 11920

PLEASE READ INSTRUCTIONS ON BACK OF FORM

☒ Notice of Intent
Approximate Start Date 6/8/94

☐ Report of Work Done
Date Work Completed

☐ Drilling Prognosis
☐ Redrilling or Repair
☐ Casing or Liner
☐ Plug Well
☐ Supplemental History
☐ Temporarily Abandon
☐ Spill Report
☐ Shooting
☒ Acidizing
☐ Fracture Treatment
☐ Change Producing Method
☐ Reclamation
☐ Other Workover Tax Exemption

Well Name and Number				
Corps of Engineers 31-10				
Footages: 660' FNL 2305' FEL	Qtr-Qtr: NW NE	Section: 10	Township: 153N	Range: 101W
Field: Baker	Pool: Red River	County: McKenzie		

24 HOUR PRODUCTION RATE	
BEFORE	AFTER
Oil: 20	Oil
Water	Water
Gas	Gas

Name of Contractor			
Address	City	State	Zip Code

DETAILS OF WORK

On June 2, 1994, the well developed a tubing leak and a rig was moved on June 8, 1994. While pulling the rods and pump, scale was noted and it was decided that work in addition to repair of tubing leak should be done. Panterra proposes to replace rod cut tbg, lower pump, and acid stimulate the Red River. Replaceing the 456 pumping unit with a larger unit will be required when the pump is lowered.

PANTERRA PETROLEUM hereby applies for workover exemption - notice of intention to begin a workover project, which may be exempt from taxation pursuant to subsection (4) of North Dakota century Code section 57-51.1-03, for work outlined above. Approximate cost: $93,700.00. Cost through June 10, 1994 is $14,138.00.

Company		
Pantrerra Petroleum		
Address: P. O. Box 7168		
City: Billings	State: MT	Zip Code: 59103-7168
By: Terry Holzwarth	Date: 6/13/94	
Title: Petroleum Engineer	Telephone Number: 406-245-6248	

406-245-9106 Fax

FOR OFFICE USE ONLY

☐ Received ☒ Approved

Date: 6-15-94

By: [illegible]

Title: Pet Eng

CORPS OF ENGINEERS 31-10
NWNE Sec. 10, T153N-R101W
Baker Field
McKenzie County, North Dakota
WORKOVER PROCEDURE

Proposed Red River Acid Job AFE #46

Current Status:

Production: 20 BOPD, 60 MCFPD, 20 BWPD. Well currently being worked on due to tubing leak. Pump @ 10,200'.

Proposed Procedure

1. Rig on location. Rods and tbg were stripped out due to pump stuck in bottom jt of tbg. Found rod cut split at 7450'.

2. 10 perfed subs. TIH w/ tbg. RU Dialog. Run tbg Caliper inspecting tbg for rod cut problems. LD all tbg with wall loss over 35%.

3. TIH w/ seal divider with latch down assembly added, SN, and circulating valve and rest of tbg. Sting into Model D pkr at 11,498'.

4. RU pump truck. Drop SV. Pickle tbg w/ 1200 gal 15% HCl. Acidize Red River perfs w/ 2000 gal 28% foamed acid. Pump nitrogen pad ahead of acid and displace acid w/ nitrogen. Flow back as soon as possible.

5. Flow and swab back well until cleaned up. POOH w/ tbg.

6. Run prod BHA: Seal divider w/ latch down assemble, 1 jt 2-/38" tbg w/ 30' x 1-1/4" dip tube, Mech SN, rest of tbg. Latch into Model D pkr and land tbg in tension.

7. Run 2-1/2" x 1-1/4" pump.
   Rod design: 111 - 1" (2775')
   112 - 7/8" (2800')
   220 - 3/4" (5500')
   16 - 1" (400')

8. Move American 456 PU to SK&S yard. Move Lufkin M640-365-144 to well. Retro fit Ajax motor for 640 unit or tie in 3-phase power to well.

GLE-6/10/94

PRODUCERS CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL FROM LEASE

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5698 (2-92)

FORM 8

JUN 1994 RECEIVED ND OIL & GAS DIVISION

Well File Number: 11920

NDIC CTB Number: 111920

INSTRUCTIONS

The original and four copies of this form must be submitted to the OIL AND GAS DIVISION, 600 E. Boulevard Avenue, Bismarck, ND 58505

WELL CORPS OF ENGINEERS (Q/Q) NWNE 31-10 (SEC.) 10 (TWP.)153N (RGE.) 101W COUNTY MCKENZIE

PRODUCER: PANTERRA PETROLEUM FIELD BAKER POOL RED RIVER

ADDRESS CORRESPONDENCE TO: GARY L. EVERTZ, PANTERRA PETROLEUM
550 N. 31ST STREET, SUITE 500, P. O. BOX 7168, BILLINGS, MT 59103

		% Purchased	Date Effective
Name of First Purchaser	AMOCO PRODUCTION COMPANY	100	6/1/94
Principal Place of Business	1670 BROADWAY, STE 715, DENVER, CO 80201		
Field Address	1670 BROADWAY, STE 715, DENVER, CO 80201		

		% Transported	Date Effective
Name of Transporter	SCURLOCK PERMIAN CORP. - TRUCK	100	6/1/94
Address	650 S. CHERRY ST., STE 210, DENVER, CO		

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 Transporters Transporting From This Lease	*% Transported*	*Date Effective*

Other First Purchasers Purchasing From This Lease	% Purchased	Date Effective

Remarks

I certify that the above information is a true and correct report of the transporters and purchasers of oil produced from the above described property. This authorization will be valid until further notice to the transporters and purchasers named until cancelled by the OPERATOR.

Signature Gary L Evertz *Title* Engineer *Date* 6/8/94

State of Montana
County of Yellowstone

On 6/8/94, Gary L. Evertz, known to me to be the person described in and who executed the foregoing instrument personally appeared before me and acknowledged that (s)he executed the same as a free act and deed.

Jeanette M Geyhalt
Notary Public

My Commission Expires AUGUST 21, 1996

APPROVED BY: Charles A. Koch Date: 6/13/94

PRODUCERS CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL FROM LEASE - FORM 8

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5698 (2-92)

Well File Number: 11920

NDIC CTB Number: 111920

INSTRUCTIONS

The original and four copies of this form must be submitted to the OIL AND GAS DIVISION, 600 E. Boulevard Avenue, Bismarck, ND 58505

WELL CORPS OF ENGINEERS (Q/Q) NWNE 31-10 (SEC.) 10 (TWP.)153N (RGE.) 101W COUNTY MCKENZIE

PRODUCER: PANTERRA PETROLEUM FIELD BAKER POOL RED RIVER

ADDRESS CORRESPONDENCE TO: GARY L. EVERTZ, PANTERRA PETROLEUM
550 W. 31ST STREET, SUITE 500, P. O. BOX 7168, BILLINGS, MT 59103

		% Purchased	Date Effective
Name of First Purchaser	SCURLOCK PERMIAN CORP.	100	2/1/94
Principal Place of Business	650 S. CHERRY ST., STE 210, DENVER, CO 80222-1804		
Field Address	650 S. CHERRY ST., STE 210, DENVER, CO 80222-1804		
Name of Transporter Address	SCURLOCK PERMIAN CORP. - TRUCK 650 S. CHERRY ST., STE 210, DENVER, CO	% Transported 100	Date Effective 2/1/94

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.

	% Transported	Date Effective
Other Transporters Transporting From This Lease		

	% Purchased	Date Effective
Other First Purchasers Purchasing From This Lease		

Remarks
WELLS PURCHASED FROM JOHN L. COX. OPERATORSHIP EFFECTIVE 2-1-94

I certify that the above information is a true and correct report of the transporters and purchasers of oil produced from the above described property. This authorization will be valid until further notice to the transporters and purchasers named until cancelled by the OPERATOR.

Signature Gary L Evertz Title Engineer Date 2/1/94

State of Montana
County of Yellowstone

On 2/1/94, Gary L. Evertz, known to me to be the person described in and who executed the foregoing instrument personally appeared before me and acknowledged that (s)he executed the same as a free act and deed.

Jeanette Mayfeldt
Notary Public

My Commission Expires AUGUST 21, 1996

APPROVED BY: Charles A. Koch Date: 2/22/94

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

11920

Wesley D. Norton
DIRECTOR

F. E. Wilborn
ASSISTANT DIRECTOR

Clarence G. Carlson
GEOLOGIST

Charles Koch
ENGINEERING DEPT.

Doren Dannewitz
FIELD SUPERVISOR

Glenn Wollan
RECLAMATION SUP.

February 8, 1994

Jan Magstadt
Panterra Petroleum
P.O. Box 7168
Billings, MT 59103-7168

RE: CHANGE OF OPERATOR FROM JOHN L. COX TO PANTERRA PETROLEUM 7 WELLS

Dear Ms. Magstadt:

Please find enclosed a copy of the approved Form 15, Notice of Transfer of Oil and Gas Wells, in regard to the above-referenced matter. These transfers have now been approved and subject wells are now covered by Panterra Petroleum Bond No. B01936 , Underwriters Indemnity Co. , as Surety.

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

Sincerely,

F. E. Wilborn/mr

F. E. Wilborn
Assistant Director

FEW/mr

Enclosure

cc: John L. Cox
PO Box 2217
Midland, TX 79702

600 EAST BOULEVARD, BISMARCK, NORTH DAKOTA 58505 PHONE (701) 224-2969 FAX (701) 224-3682

NOTICE OF TRANSFER OF OIL AND GAS WELLS - FORM 15

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
SFN 5762 (3-92)

BOND NO. B01936

The original and one copy of this form must be submitted to the Industrial Commission of North Dakota, Oil and Gas Division, 600 E. Boulevard Avenue, Bismarck, North Dakota 58505-0840.

TRANSFERRING COMPANY

Name and Address of Representative
JOHN L. COX BOX 2217 MIDLAND, TX 79702

Name of Company Transferring Oil and/or Gas Wells
JOHN L. COX

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

Signature: [signature] Date: January 31, 1994 Title: Operator
(Must be an officer or power of attorney must be attached)

File Number	Requested Official Well Name and Number	Location (Qtr-Qtr, Sec, Twp, Rge)
	Please see attached.	

RECEIVING COMPANY

Name and Address of Representative
Robert L. Nance Panterra Petroleum P. O. Box 7168, Billings, MT 59103-7168

Name of Company Transferring Oil and/or Gas Wells

I, the above named representative, have read the foregoing statement and accept such transfer, also the responsibility of ownership and/or operation of said well or wells, under the said company bond, said bond being tendered to or on file with the Industrial Commission.
Panterra Petroleum, a Montana General Partnership, Nance Petroleum Corporation, Managing Partner

Signature: [signature] Date: January 31, 1994 Title: President
(Must be an officer or power of attorney must be attached)
Robert L. Nance

Principal

Amount of Bond: $ 100,000.00

Name and Address of Surety
Underwriters Indemnity Company 8 Greenway Plaza, Suite 400, Houston, TX 77046

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

Signature: [signature] Date: February 3, 1994 Title: Roy C. Die, Attorney-in-Fact
(Must be an officer or power of attorney must be attached)

FOR OFFICE USE ONLY

Approved By	Title	Date
		FEB 0 1994

ASSISTANT DIRECTOR

ATTACHED TO AND MADE A PART OF THAT CERTAIN FORM 15
RECEIVING COMPANY: PANTERRA PETROLEUM, A MONTANA GENERAL PARTNERSHIP
NANCE PETROLEUM CORPORATION, MANAGING PARTNER

LEASE/WELL	DESCRIPTION	FIELD NAME	COUNTY	STATE	FILE #
Basic Game & Fish 34-3	SWSW 3-153-101W	BAKER	McKENZIE	ND	11745
CORPS OF ENGINEERS 31-10	NWNE 10-153N-101W	BAKER	McKENZIE	ND	11920
FRENCH PINNEY 24-3	SESW 3-153N-101W	BAKER	McKENZIE	ND	12129
ROSEBUD 22-11	SENW 11-153N-101W	BAKER	McKENZIE	ND	11549
M & G 14-2	SWSW 2-153N-101W	BAKER	McKENZIE	ND	11751
USA 2-12	SWSE 12-141N-101W	TR	BILLINGS	ND	9262
USA 3-12	NWNE 12-141N-101W	TR	BILLINGS	ND	7014

FILE# 11920 CURRENT OPERATOR: JOHN L. COX

LEASE: BASIC CORPS OF ENGINEERS #31-10 X

SURFACE LOC: NW NE 10-153-101 FOOTAGE: 0660'FNL 2305'FEL BHL: BHL

POOL 1: NEAREST N-S LINE: 0.00 NEAREST E-W LINE: 0.00

MD:	12570	N+ S-	-176.67	E+ W-	383.13							
	12980		-180.59		378.28		843	F	N	L	1930	F E L
	13225		-182.93		375.38	*						

POOL 2:

MD:	0	N+ S-	0.00	E+ W-	0.00							
	0		0.00		0.00		0	F		L	0	F L
	0		0.00		0.00							

POOL 3:

MD:	0	N+ S-	0.00	E+ W-	0.00							
	0		0.00		0.00		0	F		L	0	F L
	0		0.00		0.00							

POOL 4:

MD:	0	N+ S-	0.00	E+ W-	0.00							
	0		0.00		0.00		0	F		L	0	F L
	0		0.00		0.00							

TOTAL DEPTH:

MD:	12570	N+ S-	-176.67	E+ W-	383.13							
	12980		-180.59		378.28		845	F	N	L	1933	F E L
	13480		-185.37		372.37	*						

FILE# 11920 CURRENT OPERATOR: JOHN L. COX
LEASE: BASIC CORPS OF ENGINEERS #31-10
SURFACE LOC: NW NE 10-153-101 FOOTAGE: 0660'FNL 2305'FEL BHL: BHL

							NEAREST N-S LINE		NEAREST E-W LINE
POOL 1:									
MD:	12570	N+ S-	-176.67 S	E+ W-	383.13 E				
	~~13225~~ 12980		-180.59 S		378.28 E				
	13225					+		+	
POOL 2:						+		+	
MD:		N+ S-		E+ W-		+		+	
						=		=	
POOL 3:									
MD:		N+ S-		E+ W-					
POOL 4:									
MD:		N+ S-		E+ W-					
TOTAL DEPTH:									
MD:	12570	N+ S-	-176.67 S	E+ W-	383.13 E				
	12980		-180.59 S		378.28 E				
	13480								

FORM 4

Well File No. 11920

North Dakota State Industrial Commission
Oil and Gas Division
900 EAST BOULEVARD - BISMARCK, NORTH DAKOTA - 58505

RECEIVED JAN 1990 OIL & GAS DIVISION

SUNDRY NOTICES AND REPORTS ON WELLS

1. Notice of Intention to Drill or Redrill
2. Notice of Intention to Change Plans
3. Notice of Intention to Pull Casing
4. Notice of Intention to Abandon Well
5. Report of Water Shut-Off
6. Report of Shooting or Acidizing
7. Report of Casing
8. Report of Redrilling or Repair
9. Supplementary History X
10. Well Potential Test
11. Drilling Prognosis
12.

NAME OF LEASE Corp. of Engineers Date January 22, 19 90

WELL NO. 31-10 is located 840.59 ft. from (N) (S) line and 1926.72 ft. from the (E) (W) line

of Section 10 Township 153-N Range 101-W in McKenzie

County, Baker Field Red River Pool. The elevation of the Ground

is 1851 feet above sea level.

Name and Address of Contractor, or Company which will do work is:

Sun Well Service, Inc., P. O. Box 2356, Williston, North Dakota 58801

(DETAILS OF WORK)

(State names of, and expected depth of objective sand; show sizes, weight, and lengths of proposed casing, indicate mud weights, cementing points, and all other details of work)

11/27/89- (RU to pull well. Pkr stuck. Look for freepoint. Work Tbg. WIH cut 2-7/8"tbg.@13,100',
11-28-89 (Left 5 jts. 2-7/8" tbg and Model R Pkr @13,243'& 2 jts tail pipe.

11/29/89- (Run in hole with flat mill to tight spot in csg, started milling. Tbg parted, lost
12/1/89 (4-1/2" flat bottom mill. Could not fish. WIH with Overshot, jar on tbg., rig up
(Wireline, free tbg. Lay down tbg.

12/2/89- (PU Mill/Overshot combination; mill on fish.
12/6/89- (Start jarring. Could not fish 4-1/2" flat bottom mill, washover. Washover jars.
(Total 12.22 feet. Top @11,600', Mill @11,612'.

12/9/89- (Ran Model "D" Pkr (Baker 42-26) - set @11,498' (Permanent Packer), 378 jts 2-7/8"
(L-80 tbg., 1-10' sub, 1-6' sub, 1-4' sub.

12/10/89- (Swab well.
12/12/89- (Swab well.

Continue to Shut In 2-3 days, then swab. Well is not on normal production as of 1-19-90.

Company JOHN L. COX

Address Box 2217, Midland, TX 79702

By Martha Wittenbach

Title Martha Wittenbach, Prodn. Mgr.

Do not write in this space

Rec'd ~~Approved~~ JAN 25 1990 19

By F E Wilhoum

Title Deputy Enforcement Officer

(Instructions Over)

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

11920

Wesley D. Norton
CHIEF ENFORCEMENT OFFICER

F. E. Wilborn
DEPUTY ENFORCEMENT OFFICER

Clarence G. Carlson
GEOLOGIST

Charles Koch
ENGINEERING DEPT.

Doren Dannewitz
FIELD SUPERVISOR

Glenn Wollan
RECLAMATION SUP.

January 9, 1990

Ms. Martha Wittenbach
John L. Cox
P.O. Box 2217
Midland, TX 79702

RE: Basic Corps #31-10
NW NE Sec. 10-153N-101W
Well File No. 11920

Dear Ms. Wittenbach:

Please submit a Sundry Notice (Form 4) detailing work done on the above captioned well in November/December 1989, during changeover to permanent packer.

If you have any questions, feel free to contact our office.

Sincerely,

Thomas K. Delling/KL

Thomas K. Delling
Field Inspector

TKD/kl

600 EAST BOULEVARD, BISMARCK, NORTH DAKOTA 58505 701-224-2969

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

11920

WESLEY D. NORTON
Chief Enforcement Officer

F. E. WILBORN
Deputy Enforcement Officer

CLARENCE G. CARLSON
Geologist

CHARLES KOCH
Engineering Dept.

DOREN DANNEWITZ
Field Supervisor

KEN KALLESTAD
Reclamation Sup.

February 12, 1987

Ms. Martha Wittenbach
Production Accounting Manager
John L. Cox
P. O. Box 2217
Midland, TX 79702

RE: Change of Operators
#11549 - Rosebud 22-11
#11745 - Basic Game & Fish 34-3
#11920 - Basic Corps of Eng. 31-10

Dear Ms. Wittenbach:

Enclosed are approved copies of the Form 2, 8, and 15 for the Change of Operator, for the above captioned wells, located in McKenzie County, North Dakota.

The former operator of the wells was Basic Earth Science Systems, Inc.

If you have any questions, please do not hesitate to contact this office.

Sincerely yours,

Donna R. Bauer

Donna R. Bauer
Permit/Bond Secretary

/drb

Enclosures

cc: Basic Earth Science Systems, Inc.
P. O. Box 3088
Englewood, CO 80155

FORM 15

North Dakota State Industrial Commission
Oil and Gas Division
900 EAST BOULEVARD - BISMARCK, NORTH DAKOTA - 58505

FEB 1987 RECEIVED ND OIL & GAS DIVISION

NOTICE OF TRANSFER OF OIL & GAS WELLS

I, Jeffery E. Jones, of Basic Earth Science Systems, Inc. (Company) do hereby acknowledge the transfer for the purpose of ownership and/or operation of the following oil and/or gas wells to John L. Cox (Company)

OFFICIAL WELL NAME	LOCATION
BASIC CORPS OF ENGINEERS #31-10 11920	Surface: 660'FNL & 2305' FEL BHL: 840.59'FNL & 1926.72'FEL Section 10, T153N, R101W McKenzie County, North Dakota

By Jeffery E. Jones
Its Vice President

I, Martha Wittenbach, of John L. Cox (Company) have read the foregoing statement and accept such transfer, also, the responsibility of ownership and/or operation of said well or wells.

By Martha Wittenbach
Martha Wittenbach,
Its Production Acctg. Mgr.

John L. Cox, as Principal, and National Surety Corporation as Surety, on a drilling bond in the penalty of $50,000.00----------, (amount of bond) executed on November 4, 19 85 in favor of the State of North Dakota, hereby agree that such bond shall extend to compliance with Chapter 38-08 of N.D. Century Code and amendments thereto and the rules and regulation of the Industrial Commission of the State of North Dakota prescribed to govern the Production of oil and gas on state and private lands within the State of North Dakota, in relation to the above stated transfer; it being further agreed and understood that the bond sum or amount is not to be considered increased because of such extension.

John L. Cox

Bond No. SAA8 6720886

By: Martha Wittenbach (Principal)
Martha Wittenbach, Prodn. Acctg. Mgr.
National Surety Corporation (Surety)
By: Linda F. Hughes
Linda F. Hughes, Attorney-in-Fact
2-10-87

Do not write in this space.

Approved FEB 12 1987 19

By

Title F E Williams
Deputy Enforcement Officer

FORM 8

Well File No. 11930

North Dakota State Industrial Commission
Oil and Gas Division
900 EAST BOULEVARD - BISMARCK, NORTH DAKOTA 58505

RECEIVED FEB 1987 ND OIL & GAS DIVISION

PRODUCERS CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL FROM LEASE

BASIC CORP. OF ENGINEERS

WELL 31-10 (SEC.) 10 (TWP.) 153N (RGE.) 101W COUNTY McKenzie

PRODUCER JOHN L. COX FIELD Baker POOL Red River

ADDRESS CORRESPONDENCE TO JOHN L. COX, Attn: Martha Wittenbach

STREET 400 West Wall Box 2217 CITY Midland STATE Texas 79702

THE ABOVE NAMED PRODUCER HEREBY AUTHORIZES THE PERMIAN CORPORATION
(Name of Purchaser)

WHOSE PRINCIPAL PLACE OF BUSINESS IS Box 1183, Houston, Texas 77251-1183
(Street) (City) (State)

AND WHOSE FIELD ADDRESS IS Williston, North Dakota

TO TRANSPORT 100 % OF THE OIL PRODUCED FROM THE LEASE DESIGNATED ABOVE UNTIL FURTHER NOTICE

THE OIL WILL BE TRANSPORTED BY THE PERMIAN CORPORATION - Trucks
(Name of Transporter)

OTHER PURCHASERS TRANSPORTING OIL FROM THIS LEASE ARE:

N/A % N/A %
(Name of Purchasers) (Name of Purchasers)

REMARKS: JOHN L. COX ASSUMED OPERATION OF THIS PROPERTY FEBRUARY 1, 1987.

The undersigned certifies that the rules and regulations of the State Industrial Commission have been complied with except as noted above and that the purchaser is authorized to transport the above percentage of oil produced from the above described property and that this authorization will be valid until further notice to the purchaser named herein until canceled by the Operator.

Executed this 5th day of February, 19 87. JOHN L. COX
(Company or Operator)

STATE OF Texas)
) ss
COUNTY OF Midland)

Martha Wittenbach Prodn/Acctng/Mgr.
(Signature) Martha Wittenbach (Title)

Before me the undersigned authority, on this day personally appeared MARTHA WITTENBACH known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is authorized to make this report and has knowledge of the facts stated herein and that said report is true and correct.

Subscribed and sworn to before me this the 5th day of February, 19 87.

Lucy Brittain

My Commission expires 7-16-88 Notary Public in and for Midland County, Texas

Approved by: F E Wilson FEB 12 1987
(Deputy Enforcement Officer) (Date)

(Instructions Over)

FORM 4

Well File No. 11920

North Dakota State Industrial Commission
Oil and Gas Division
900 EAST BOULEVARD - BISMARCK, NORTH DAKOTA - 58505

SUNDRY NOTICES AND REPORTS ON WELLS

1. Notice of Intention to Drill or Redrill
2. Notice of Intention to Change Plans
3. Notice of Intention to Pull Casing
4. Notice of Intention to Abandon Well
5. Report of Water Shut-Off
6. Report of Shooting or Acidizing
7. Report of Casing
8. Report of Redrilling or Repair
9. Supplementary History
10. Well Potential Test
11. Drilling Prognosis
12. Report of API gravity.

NAME OF LEASE Basic Corps of Engineers Date January 30, 19 87

WELL NO. 31-10 Bottom-hole is located 840.59 ft. from (N) (S) line and 1926.72 ft. from the (E) (W) line

of Section 10 Township 153N Range 101W in McKenzie

County, Baker Field Red River Pool. The elevation of the ground

is 1851 feet above sea level.

Name and Address of Contractor, or Company which will do work is:

(DETAILS OF WORK)
(State names of, and expected depth of objective sand; show sizes, weight, and lengths of proposed casing, indicate mud weights, cementing points, and all other details of work)

"TIGHT HOLE"

In response to your request for the Oil Gravity API which was inadvertently omitted from the Completion Report (Form 6).

Oil Gravity 51.0

Company Basic Earth Science Systems, Inc.

Address P.O. Box 3088, Englewood CO 80155

By Jeffery E. Jones

Title Vice President

Do not write in this space

Approved FEB 06 1987 19

By F E Williams

Title Deputy Enforcement Officer

(Instructions Over)

11920

basic Earth Science Systems, Inc.

P.O. Box 3088
Englewood, Colorado 80155
(303) 792-5230

February 4, 1987

FEB 1987 RECEIVED

North Dakota Industrial Commission
Oil and Gas Division
900 East Boulevard
Bismarck, ND 58505

Attn: Ms. Lyn S. Entzi

Re: Basic Corps of Engineers #31-10
NWNE Sec. 10, T153N, R101W
McKenzie County, ND
Well File #11920

Dear Ms. Entzi:

Enclosed please find the following, as requested in your letter of January 21st, for the above referenced well:

- Sundry Notice (Form 4) reporting the Oil Gravity
- Copy of previously submitted Form 8
- 3 copies each of DST numbers 1, 2 and 3
- 3 copies each of the Cyberlook, CNL and CBL logs

Please do not hesitate to contact me if you need anything further.

Sincerely,

Basic Earth Science Systems, Inc.

April Kreis
Production Technician

ak

Enclosures

BAKER PRODUCTION TECHNOLOGY
A Baker Oil Tools Company

11970

TECHNICAL SERVICES, Security Life Bldg. • Suite 1350 • 1616 Glenarm • Denver, Colorado 80202 • Phone. (303) 573-8027

FEB 1987 RECEIVED

Contractor	Shelby Drilling	Top Choke	¼"	Flow No. 1	15 Min.
Rig No.	52	Bottom Choke	3/4"	Shut-in No. 1	60 Min.
Spot	NW/NE	Size Hole	8 3/4"	Flow No. 2	90 Min.
Sec.	10	Size Rat Hole	8 3/4"	Shut-in No. 2	120 Min.
Twp.	153N	Size & Wt. D. P.	4½" XH 16.60#	Flow No. 3	-- Min.
Rng.	101W	Size Wt. Pipe	--	Shut-in No. 3	-- Min.
Field	Skunk Hollow	I. D. of D. C.	2 3/4"		
County	McKenzie	Length of D. C.	655 ft.	Bottom Hole Temp.	230°F
State	North Dakota	Total Depth	11132 ft.	Mud Weight	10.5#
Elevation	1872 ft.	Interval Tested	11087-11132 ft.	Gravity	--
Formation	Lower Duperow	Type of Test	Bottom Hole Conventional	Viscosity	42
				Tool opened @	5:45 a.m.

Operator Basic Earth Science Systems Inc.
Address P.O. Box 3088 Englewood, CO 80155
Well Name and No. Corps #31-10
Ticket No. 04034
Date 7-30-86
DST No. 3
No. Final Copies 5

Outside Recorder

PRD Make Kuster K-3
No 22462 Cap. 9475 @ 11127'

Press		Corrected
Initial Hydrostatic	A	6143
Final Hydrostatic	K	6107
Initial Flow	B	232
Final Initial Flow	C	409
Initial Shut-in	D	5412
Second Initial Flow	E	487
Second Final Flow	F	1199
Second Shut-in	G	5324
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Lynes Dist. Williston, ND
Our Tester: Keith Hammer
Witnessed By: Tom Hopkin

Did Well Flow – Gas Yes Oil No Water No

Test was reverse-circulated.

RECOVERY IN PIPE:

2415 ft.	Total Recovery	= 29.77 Bbls
1050 ft.	Highly gas, slightly oil-cut mud	= 14.91 Bbls
450 ft.	Slightly oil & gas-cut muddy salt water	= 6.39 Bbls
915 ft.	Salt water with trace of oil	= 8.47 Bbls

Blow Description:

1st Flow: Tool opened with a ½" blow, increasing to an 8½" blow at the end of the flow.

2nd Flow: Tool opened with a 1" blow and increased to a 3 psi blow in 80 minutes, decreasing slightly to a 2 psi reading at the end of the flow. Gas to surface during final shut-in.

Comments: The test results indicate a mechanically successful test. The flow and shut-in curves suggest relatively low permeability within the zone tested.

BASIC EARTH SCIENCE SYSTEMS INC.
DST#: 3
CORPS #31-10
11087 - 11132ft.

Location: SEC. 10 T153N R101W
Test Type: BOTTOM HOLE CONVENTIONAL
Formation: LOWER DUPEROW

Recorder Number: 22462
Recorder Depth: 11127 ft.

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P psi	PRESSURE psi	(T+dt)/dt ABSCISSA	PRESSURE SQUARED psi^2/10^6
A	INITIAL HYDROSTATIC	0.00		6143.0		
B	START OF 1st FLOW	0.00		232.0		
C	END OF 1st FLOW	15.00		409.0		
	1st SHUTIN PERIOD	0.00	0.0	409.0	0.0000	
		5.00	4051.0	4460.0	4.0000	
		10.00	4519.0	4928.0	2.5000	
		15.00	4679.0	5088.0	2.0000	
		20.00	4779.0	5188.0	1.7500	
		25.00	4851.0	5260.0	1.6000	
		30.00	4887.0	5296.0	1.5000	
		35.00	4919.0	5328.0	1.4286	
		40.00	4943.0	5352.0	1.3750	
		45.00	4963.0	5372.0	1.3333	
		50.00	4979.0	5388.0	1.3000	
		55.00	4995.0	5404.0	1.2727	
D	END OF 1st SHUTIN	60.00	5003.0	5412.0	1.2500	
E	START OF 2nd FLOW	0.00		487.0		
F	END OF 2nd FLOW	90.00		1199.0		
	2nd SHUTIN PERIOD	0.00	0.0	1199.0	0.0000	
		5.00	3039.0	4238.0	22.0000	
		10.00	3433.0	4632.0	11.5000	
		15.00	3589.0	4788.0	8.0000	
		20.00	3689.0	4888.0	6.2500	
		25.00	3765.0	4964.0	5.2000	
		30.00	3821.0	5020.0	4.5000	
		35.00	3861.0	5060.0	4.0000	
		40.00	3897.0	5096.0	3.6250	
		45.00	3925.0	5124.0	3.3333	
		50.00	3953.0	5152.0	3.1000	
		55.00	3973.0	5172.0	2.9091	
		60.00	3993.0	5192.0	2.7500	
		65.00	4013.0	5212.0	2.6154	
		70.00	4029.0	5228.0	2.5000	
		75.00	4045.0	5244.0	2.4000	
		80.00	4057.0	5256.0	2.3125	
		85.00	4065.0	5264.0	2.2353	
		90.00	4073.0	5272.0	2.1667	

DST#: 3
CORPS #31-10
11087 - 11132ft.

Location: SEC. 10 T153N R101W
Test Type: BOTTOM HOLE CONVENTIONAL
Formation: LOWER DUPEROW

Recorder Number: 22462
Recorder Depth: 11127 ft.

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P psi	PRESSURE psi	(T+dt)/dt ABSCISSA	PRESSURE SQUARED psi^2/10^6
		95.00	4085.0	5284.0	2.1053	
		100.00	4093.0	5292.0	2.0500	
		105.00	4105.0	5304.0	2.0000*	
		110.00	4113.0	5312.0	1.9545*	
		115.00	4121.0	5320.0	1.9130*	
G	END OF 2nd SHUTIN	120.00	4125.0	5324.0	1.8750*	
Q	FINAL HYDROSTATIC	0.00		6107.0		

* VALUES USED FOR EXTRAPOLATIONS

2nd SHUT-IN
HORNER EXTRAPOLATION 5527.63 PSI
HORNER SLOPE 741.61 psi/cycle

OPERATOR: BASIC EARTH SCIENCE SYSTEMS INC.
LOCATION: SEC. 10 T153N R101W
RECORDER: 22462

WELL NAME: CORPS #31-10
DST #: 3
DEPTH: 11127 ft.

FIRST SHUT-IN

OPERATOR: BASIC EARTH SCIENCE SYSTEMS INC.
WELL NAME: CORPS #31-1D
LOCATION: SEC. 10 T153N R101W DST #: 3
FIRST SHUT-IN
RECORDER: 22462 DEPTH: 11127 ft.

OPERATOR: BASIC EARTH SCIENCE SYSTEMS INC.
LOCATION: SEC. 10 T153N R101W
RECORDER: 22482

WELL NAME: CORPS #31-10
DST #: 3
DEPTH: 11127 ft.

SECOND SHUT-IN

OPERATOR: BASIC EARTH SCIENCE SYSTEMS INC.
WELL NAME: CORPS #31-10
LOCATION: SEC. 10 T153N R101W DST #: 3
SECOND SHUT-IN
RECORDER: 22462 DEPTH: 11127 ft.
EXTRAPOLATED PRESSURE: 5527.627 P.S.I. SLOPE: 741.608 P.S.I./CYCLE

DST#: 3
CORPS #31-10
11087 - 11132ft.

Location: SEC. 10 T153N R101W
Test Type: BOTTOM HOLE CONVENTIONAL
Formation: LOWER DUPEROW

Recorder Number: 22462
Recorder Depth: 11127 ft.

SAMPLE DATA
****

SAMPLE CHAMBER:
****

Capacity of sample chamber	3300	cc
Volume of sample.....	3300	cc
Pressure in sampler.....	1450	psig
Where sampler was drained...	on location	

Sampler contained:

Oil	1700	cc	38 @ 60 Degrees F
Water	1600	cc	
Gas	9.7	cu-ft	
GOR	913		

RESISTIVITY DATA:
****

Top.....:	195 000 PPM NACL
Middle.....:	OIL-CUT MUD
Bottom.....:	175 000 PPM NACL
Sampler.....:	200 000+ PPM NACL
Mud pit.....:	195 000 PPM NACL
Make-up Water..:	

DST#: 3
CORPS #31-10
11087 - 11132ft.

PRESSURE RECORDER NUMBER : 13878

DEPTH : 11061.00ft. LOCATION : INSIDE
TYPE : K-3 CAPACITY : 7100.00psi

	PRESSURE psi
A)Initial Hydro :	6143.0
B)1st Flow Start:	269.0
C)1st Flow End :	383.0
D)END 1st Shutin:	5434.0
E)2nd Flow Start:	482.0
F)2nd Flow End :	1196.0
G)END 2nd Shutin:	5342.0
Q)Final Hydro. :	6116.0

TEST TIMES(MIN)
1st FLOW : 15
SHUTIN: 60
2nd FLOW : 90
SHUTIN: 120

PRESSURE RECORDER NUMBER : 3087

DEPTH : 11097.00ft. LOCATION : OUTSIDE
TYPE : K-3 CAPACITY : 8400.00psi

	PRESSURE psi
A)Initial Hydro :	6161.0
B)1st Flow Start:	240.0
C)1st Flow End :	355.0
D)END 1st Shutin:	5436.0
E)2nd Flow Start:	484.0
F)2nd Flow End :	1196.0
G)END 2nd Shutin:	5353.0
Q)Final Hydro. :	6114.0

BAKER PRODUCTION TECHNOLOGY
A Baker Oil Tools Company

1190

TECHNICAL SERVICES, Security Life Bldg. • Suite 1350 • 1616 Glenarm • Denver, Colorado 80202 • Phone. (303) 573-8021

FEB 1987 RECEIVED

Contractor	Shelby Drilling	Top Choke	¼"	Flow No. 1	15 Min.
Rig No.	52	Bottom Choke	3/4"	Shut-in No. 1	60 Min.
Spot	NW/NE	Size Hole	8 3/4"	Flow No. 2	120 Min.
Sec.	10	Size Rat Hole	--	Shut-in No. 2	180 Min.
Twp.	153N	Size & Wt. D. P.	4½" XH 16.60#	Flow No. 3	-- Min.
Rng.	101W	Size Wt. Pipe	--	Shut-in No. 3	-- Min.
Field	Skunk Hollow	I. D. of D. C.	2 3/4"		
County	McKenzie	Length of D. C.	684 ft.		
State	North Dakota	Total Depth	10984 ft.	Bottom Hole Temp.	236°F
Elevation	1872 ft.	Interval Tested	10920-10984 ft	Mud Weight	10.5#
Formation	Duperow	Type of Test	Bottom Hole Conventional	Gravity	--
				Viscosity	40

Tool opened @ 6:00 a.m.

Operator Basic Earth Science Systems Inc.
Address P.O. Box 3088 Englewood, CO 80150

Well Name and No. Corps #31-10
Ticket No. 04033
Date 7-28-86
DST No. 2
No. Final Copies 5

Outside Recorder

PRD Make Kuster K-3
No 3087 Cap. 8400 @ 10930'

Press		Corrected
Initial Hydrostatic	A	6092
Final Hydrostatic	K	6055
Initial Flow	B	94
Final Initial Flow	C	129
Initial Shut-in	D	5036
Second Initial Flow	E	240
Second Final Flow	F	358
Second Shut-in	G	5047
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Lynes Dist. Williston, ND
Our Tester: Keith Hammer
Witnessed By: Tom Hopkin

Did Well Flow – Gas No Oil No Water No

RECOVERY IN PIPE:

622 ft. Total Recovery	= 4.53 Bbls
250 ft. Drilling mud	= 1.82 Bbls
372 ft. Mud-cut salt water	= 2.71 Bbls

Blow Description:

1st Flow: Tool opened with a weak surface blow, increasing to a ¼" blow in 5 minutes for the remainder of the flow.

2nd Flow: Tool opened with a weak surface blow, increasing to a ¼" blow in 5 minutes, and continuing to increase to a 5" blow in 105 minutes, then decreasing to a 4" blow at the end of the flow.

Comments: The test results indicate a mechanically successful test. The flow and shut-in curves suggest low permeability within the zone tested. The initial and final shut-in curves were incremented and plotted, but no extrapolations could be performed due to insufficient curve development.

BASIC EARTH SCIENCE SYSTEMS INC.
I #: 2
CORPS #31-10
10920 - 10984ft.

Location: SEC. 10 T153N R101W
Test Type: BOTTOM HOLE CONVENTIONAL
Formation: DUPEROW

Recorder Number: 3087
Recorder Depth: 10930 ft.

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P psi	PRESSURE psi	(T+dt)/dt ABSCISSA	PRESSURE SQUARED psi^2/10^6
A	INITIAL HYDROSTATIC	0.00		6092.0		
B	START OF 1st FLOW	0.00		94.0		
C	END OF 1st FLOW	15.00		129.0		
	1st SHUTIN PERIOD	0.00	0.0	129.0	0.0000	
		5.00	160.0	289.0	4.0000	
		10.00	714.0	843.0	2.5000	
		15.00	2835.0	2964.0	2.0000	
		20.00	3821.0	3950.0	1.7500	
		25.00	4192.0	4321.0	1.6000	
		30.00	4415.0	4544.0	1.5000	
		35.00	4570.0	4699.0	1.4286	
		40.00	4671.0	4800.0	1.3750	
		45.00	4755.0	4884.0	1.3333	
		50.00	4816.0	4945.0	1.3000	
		55.00	4871.0	5000.0	1.2727	
D	END OF 1st SHUTIN	60.00	4907.0	5036.0	1.2500	
E	START OF 2nd FLOW	0.00		240.0		
F	END OF 2nd FLOW	120.00		358.0		
	2nd SHUTIN PERIOD	0.00	0.0	358.0	0.0000	
		5.00	112.0	470.0	28.0000	
		10.00	272.0	630.0	14.5000	
		15.00	525.0	883.0	10.0000	
		20.00	1094.0	1452.0	7.7500	
		25.00	2128.0	2486.0	6.4000	
		30.00	2960.0	3318.0	5.5000	
		35.00	3371.0	3729.0	4.8571	
		40.00	3624.0	3982.0	4.3750	
		45.00	3790.0	4148.0	4.0000	
		50.00	3909.0	4267.0	3.7000	
		55.00	4010.0	4368.0	3.4545	
		60.00	4089.0	4447.0	3.2500	
		70.00	4211.0	4569.0	2.9286	
		80.00	4301.0	4659.0	2.6075	
		90.00	4374.0	4732.0	2.5000	
		100.00	4431.0	4789.0	2.3500	
		110.00	4482.0	4840.0	2.2273	
		120.00	4526.0	4884.0	2.1250	

. GIC EARTH SCIENCE SYSTEMS . .
DST#: 2
CORPS #31-10
10920 - 10984ft.

Location: SEC. 10 T153N R101W
Test Type: BOTTOM HOLE CONVENTIONAL
Formation: DUPEROW

Recorder Number: 3087
Recorder Depth: 10930 ft.

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P psi	PRESSURE psi	(T+dt)/dt ABSCISSA	PRESSURE SQUARED psi^2/10^6
		130.00	4566.0	4924.0	2.0385	
		140.00	4595.0	4953.0	1.9643	
		150.00	4624.0	4982.0	1.9000	
		160.00	4649.0	5007.0	1.8438	
		170.00	4671.0	5029.0	1.7941	
G	END OF 2nd SHUTIN	180.00	4689.0	5047.0	1.7500	
Q	FINAL HYDROSTATIC	0.00		6055.0		

* VALUES USED FOR EXTRAPOLATIONS

OPERATOR: BASIC EARTH SCIENCE SYSTEMS INC.
LOCATION: SEC. 10 T153N R101W
RECORDER: 3087

WELL NAME: CORPS #31-10
DST #: 2
DEPTH: 10930 ft.

FIRST SHUT-IN

OPERATOR: BASIC EARTH SCIENCE SYSTEMS INC.
WELL NAME: CORPS #31-10
LOCATION: SEC. 10 T153N R101W DST #: 2
FIRST SHUT-IN
RECORDER: 3087 DEPTH: 10930 ft.

OPERATOR: BASIC EARTH SCIENCE SYSTEMS INC.
LOCATION: SEC. 10 T153N R101W
RECORDER: 3087

WELL NAME: CORPS #31-10
DST #: 2
DEPTH: 10930 ft.

SECOND SHUT-IN

OPERATOR: BASIC EARTH SCIENCE SYSTEMS INC.
WELL NAME: CORPS #31-10
LOCATION: SEC. 10 T153N R101W DST #: 2
SECOND SHUT-IN
RECORDER: 3087 DEPTH: 10930 ft.

GIC EARTH SCIENCE SYSTEMS
DST#: 2
CORPS #31-10
10920 - 10984ft.

Location: SEC. 10 T153N R101W
Test Type: BOTTOM HOLE CONVENTIONAL
Formation: DUPEROW

Recorder Number: 3087
Recorder Depth: 10930 ft.

SAMPLE DATA

SAMPLE CHAMBER:

Capacity of sample chamber	2300	cc
Volume of sample.....	2150	cc
Pressure in sampler.....	900	psig
Where sampler was drained...	on location	

Sampler contained:

Oil	550	cc	39 @ 60 Degrees F
Water	1600	cc	
Gas	5.5	cu-ft	
GOR	1600		

RESISTIVITY DATA:

Top.....:	185 000 PPM NACL
Middle.....:	185 000 PPM NACL
Bottom.....:	155 000 PPM NACL
Sampler.....:	155 000 PPM NACL
Mud pit.....:	200 000 PPM NACL
Make-up Water..:	

T SIC EARTH SCIENCE SYSTEMS
Log#: 2
CORPS #31-10
10920 - 10984ft.

PRESSURE RECORDER NUMBER : 13878

DEPTH : 10903.00ft. LOCATION : INSIDE
TYPE : K-3 CAPACITY : 7100.00psi

	PRESSURE psi
A)Initial Hydro :	6069.0
B)1st Flow Start:	93.0
C)1st Flow End :	132.0
D)END 1st Shutin:	5030.0
E)2nd Flow Start:	221.0
F)2nd Flow End :	332.0
G)END 2nd Shutin:	5019.0
Q)Final Hydro. :	6027.0

TEST TIMES(MIN)
1st FLOW : 15
SHUTIN: 60
2nd FLOW : 120
SHUTIN: 180

PRESSURE RECORDER NUMBER : 22462

DEPTH : 10979.00ft. LOCATION : OUTSIDE
TYPE : K-3 CAPACITY : 9475.00psi

	PRESSURE psi
A)Initial Hydro :	6103.0
B)1st Flow Start:	138.0
C)1st Flow End :	181.0
D)END 1st Shutin:	5020.0
E)2nd Flow Start:	244.0
F)2nd Flow End :	397.0
G)END 2nd Shutin:	5016.0
Q)Final Hydro. :	6059.0

BAKER PRODUCTION TECHNOLOGY
A Baker Oil Tools Company

11C20

TECHNICAL SERVICES, Security Life Bldg. • Suite 1350 • 1616 Glenarm • Denver, Colorado 80202 • Phone. (303) 573-8027

Contractor	Shelby Drilling	Top Choke	¼"	Flow No. 1	15 Min.
Rig No.	52	Bottom Choke	3/4"	Shut-in No. 1	60 Min.
Spot	NW/NE	Size Hole	8 3/4"	Flow No. 2	90 Min.
Sec.	10	Size Rat Hole	--	Shut-in No. 2	120 Min.
Twp.	153N	Size & Wt. D. P.	4½" XH 16.60#	Flow No. 3	-- Min.
Rng.	101W	Size Wt. Pipe	--	Shut-in No. 3	-- Min.
Field	Skunk Hollow	I. D. of D. C.	2 3/4"		
County	McKenzie	Length of D. C.	728 ft.	Bottom Hole Temp.	192°F
State	North Dakota	Total Depth	9200 ft.	Mud Weight	10.6#
Elevation	1872 ft.	Interval Tested	9156-9200 ft.	Gravity	--
Formation	Nesson	Type of Test	Bottom Hole Conventional	Viscosity	40

Tool opened @ 5:00 a.m.

Outside Recorder

PRD Make Kuster K-3
No 16797 Cap. 6600 @ 9166'

Press		Corrected
Initial Hydrostatic	A	5134
Final Hydrostatic	K	5099
Initial Flow	B	161
Final Initial Flow	C	150
Initial Shut-in	D	3468
Second Initial Flow	E	195
Second Final Flow	F	195
Second Shut-in	G	1084
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Lynes Dist.: Williston, ND
Our Tester: Rick Green
Witnessed By: Tom Hopkin

Operator: Basic Earth Science Systems, Inc.
Address: P.O. Box 3088 Englewood, CO 80150
Well Name and No. Corps #31-10
Ticket No. 22960
Date 7-15-86
DST No. 1
No. Final Copies 5

Did Well Flow – Gas No Oil No Water No

Ran 15 gallons ammonia inhibitor.

RECOVERY IN PIPE:

270 ft.	Total Recovery	= 1.96 Bbls
1 ft.	Oil & gas emulsion	= --
60 ft.	Mud and oil-cut ammonia water	= .44 Bbls
60 ft.	Mud-cut ammonia water	= .44 Bbls
149 ft.	Gas and ammonia-cut mud	= 1.08 Bbls

Blow Description:

1st Flow: Tool opened with a ¼" blow, decreasing to a weak surface blow in 5 minutes, and dying to nil in 7 minutes.

2nd Flow: Tool opened with a ½" blow, increasing slightly to a 1½" blow in 5 minutes, decreasing to a ½" blow in 30 minutes, then steadily increasing to a 2½" blow at the end of the flow.

Comments: The test results indicate a mechanically successful test. The flow and shut-in curves suggest very low permeability within the zone tested.

F 'IC EARTH SCIENCE SYSTEMS I ,
Daf#: 1
CORPS #31-10
9156 - 9200ft.

Location: SEC. 10 T153N R101W
Test Type: BOTTOM HOLE CONVENTIONAL
Formation: NESSON

Recorder Number: 16797
Recorder Depth: 9166 ft.

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P psi	PRESSURE psi	(T+dt)/dt ABSCISSA	PRESSURE SQUARED psi^2/10^6
A	INITIAL HYDROSTATIC	0.00		5134.0		
B	START OF 1st FLOW	0.00		161.0		
C	END OF 1st FLOW	15.00		150.0		
	1st SHUTIN PERIOD	0.00	0.0	150.0	0.0000	
		5.00	45.0	195.0	4.0000	
		10.00	113.0	263.0	2.5000	
		15.00	232.0	382.0	2.0000	
		20.00	345.0	495.0	1.7500	
		25.00	566.0	716.0	1.6000	
		30.00	877.0	1027.0	1.5000	
		35.00	1218.0	1368.0	1.4286	
		40.00	1581.0	1731.0	1.3750	
		45.00	2077.0	2227.0	1.3333	
		50.00	2598.0	2748.0	1.3000	
		55.00	3021.0	3171.0	1.2727	
D	END OF 1st SHUTIN	60.00	3318.0	3468.0	1.2500	
E	START OF 2nd FLOW	0.00		195.0		
F	END OF 2nd FLOW	90.00		195.0		
	2nd SHUTIN PERIOD	0.00	0.0	195.0	0.0000	
		5.00	3.0	198.0	22.0000	
		10.00	26.0	221.0	11.5000	
		15.00	51.0	246.0	8.0000	
		20.00	80.0	275.0	6.2500	
		25.00	111.0	306.0	5.2000	
		30.00	139.0	334.0	4.5000	
		35.00	170.0	365.0	4.0000	
		40.00	198.0	393.0	3.6250	
		45.00	230.0	425.0	3.3333	
		50.00	258.0	453.0	3.1000	
		55.00	286.0	481.0	2.9091	
		60.00	320.0	515.0	2.7500	
		65.00	357.0	552.0	2.6154	
		70.00	397.0	592.0	2.5000	
		75.00	435.0	630.0	2.4000	
		80.00	474.0	669.0	2.3125	
		85.00	515.0	710.0	2.2353	
		90.00	562.0	757.0	2.1667	

DST#: 1
CORPS #31-10
9156 - 9200ft.

Location: SEC. 10 T153N R101W
Test Type: BOTTOM HOLE CONVENTIONAL
Formation: NESSON

Recorder Number: 16797
Recorder Depth: 9166 ft.

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P psi	PRESSURE psi	(T+dt)/dt ABSCISSA	PRESSURE SQUARED psi^2/10^6
		95.00	609.0	804.0	2.1053	
		100.00	658.0	853.0	2.0500	
		105.00	713.0	908.0	2.0000	
		110.00	766.0	961.0	1.9545	
		115.00	823.0	1018.0	1.9130	
G	END OF 2nd SHUTIN	120.00	889.0	1084.0	1.8750	
Q	FINAL HYDROSTATIC	0.00		5099.0		

* VALUES USED FOR EXTRAPOLATIONS

OPERATOR: BASIC EARTH SCIENCE SYSTEMS INC.
LOCATION: SEC. 10 T153N R101W
RECORDER: 16797

WELL NAME: CORPS #31-10
DST #: 1
DEPTH: 9188 ft.

FIRST SHUT-IN

OPERATOR: BASIC EARTH SCIENCE SYSTEMS INC.
WELL NAME: CORPS #31-10
LOCATION: SEC. 10 T153N R101W DST #: 1
FIRST SHUT-IN
RECORDER: 16797 DEPTH: 9166 ft.

OPERATOR: BASIC EARTH SCIENCE SYSTEMS INC.
LOCATION: SEC. 10 T153N R101W
RECORDER: 16797

WELL NAME: CORPS #31-10
DST #: 1
DEPTH: 9168 ft.

SECOND SHUT-IN

OPERATOR: BASIC EARTH SCIENCE SYSTEMS INC.
WELL NAME: CORPS #31-10
LOCATION: SEC. 10 T153N R101W DST #: 1
SECOND SHUT-IN
RECORDER: 16797 DEPTH: 9166 ft.

DST#: 1
CORPS #31-10
9156 - 9200ft.

Location: SEC. 10 T153N R101W
Test Type: BOTTOM HOLE CONVENTIONAL
Formation: NESSON

Recorder Number: 16797
Recorder Depth: 9166 ft.

SAMPLE DATA

SAMPLE CHAMBER:

Capacity of sample chamber	2300	cc
Volume of sample.....	1000	cc
Pressure in sampler.....	60	psig
Where sampler was drained...	on location	

Sampler contained:

Oil	400	cc	38 @ 60 Degrees F
Water	600	cc	
Mud		cc	
Gas	.78	cu-ft	
GOR	312		

RESISTIVITY DATA:

Top.....:	115 000 PPM NACL
Middle.....:	115 000 PPM NACL
Bottom.....:	190 000 PPM NACL
Sampler.....:	145 000 PPM NACL
Mud pit.....:	200 000+ PPM NACL
Make-up Water..:	

DST#: 1
CORPS #31-10
9156 - 9200ft.

PRESSURE RECORDER NUMBER : 20161

DEPTH : 9125.00ft. LOCATION : INSIDE
TYPE : K-3 CAPACITY : 5950.00psi

	PRESSURE psi
A)Initial Hydro :	5083.0
B)1st Flow Start:	105.0
C)1st Flow End :	105.0
D)END 1st Shutin:	3462.0
E)2nd Flow Start:	145.0
F)2nd Flow End :	153.0
G)END 2nd Shutin:	1055.0
Q)Final Hydro. :	5063.0

TEST TIMES(MIN)
1st FLOW : 15
SHUTIN: 60
2nd FLOW : 90
SHUTIN: 120

PRESSURE RECORDER NUMBER : 21804

DEPTH : 9199.00ft. LOCATION : OUTSIDE
TYPE : K-3 CAPACITY : 7900.00psi

	PRESSURE psi
A)Initial Hydro :	5089.0
B)1st Flow Start:	137.0
C)1st Flow End :	143.0
D)END 1st Shutin:	3457.0
E)2nd Flow Start:	178.0
F)2nd Flow End :	191.0
G)END 2nd Shutin:	1096.0
Q)Final Hydro. :	5089.0

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

11920

WESLEY D. NORTON
Chief Enforcement Officer

F. E. WILBORN
Deputy Enforcement Officer

CLARENCE G. CARLSON
Geologist

CHARLES KOCH
Engineering Dept.

DOREN DANNEWITZ
Field Supervisor

KEN KALLESTAD
Reclamation Sup.

January 21, 1987

Basic Earth Science Systems, Inc.
P.O. Box 3088
Englewood, CO 80155

ATTN: Mr. Jeff Jones

RE: Basic Corps of Eng's #31-10
NW NE Sec.10-153-101
Well File #11920
McKenzie County

Dear Mr. Jones:

Please submit to this office in triplicate a Producer's Certificate to Transport Oil (Form 8) for approval. Thank you.

Sincerely,

Lyn S. Entzi
Clerk II

/lse

Enclosures

900 EAST BOULEVARD, BISMARCK, NORTH DAKOTA 58505 701-224-2969

basic Earth Science Systems, Inc.

P.O. Box 3088
Englewood, Colorado 80155
(303) 792-5230

December 19, 1986

11920

DEC 1986
RECEIVED
OIL & GAS
DIVISION

North Dakota Industrial Commission
Oil and Gas Division
900 East Boulevard
Bismarck, ND 58505

Re: Basic Corps of Engineers #31-10
Sec. 10, T153N, R101W
McKenzie County, ND

Gentlemen:

Enclosed please find the Completion Report, submitted in triplicate, for the above referenced well along with the Geologist Report and Directional Survey.

Please do not hesitate to contact me if you have any questions or need further information.

Sincerely,

Basic Earth Science Systems, Inc.

Jeffery E. Jones
Vice President

JEJ:ak

Enclosures

cc: Project Manager, Garrison Project Office
Chief, Operations Div., Corps of Engineers
Well Distribution w/o encl.

Form 6

NORTH DAKOTA STATE INDUSTRIAL COMMISSION

Oil and Gas Division
900 East Boulevard, Bismarck, ND 58505

RECEIVED DEC 1986 ND OIL & GAS DIVISION

WELL COMPLETION OR RECOMPLETION REPORT

(Submit in Triplicate)

Designate type of completion: OIL WELL [X] GAS WELL [ ] OTHER _____ SAME RESVR [ ] DIFF. RESVR [ ]

NEW WELL [X] WORK OVER [ ] DEEPEN [ ] PLUG BACK [ ] OTHER _____

Well File No.: 11920

Date Issued: 1/6/86

Well Name & No.: Basic Corps of Engineers #31-10

Spacing (Unit Description): N½, Section 10

TIGHT HOLE

Field: Baker

Pool: Red River

Wildcat, Development: Development

County: McKenzie

OPERATOR: Basic Earth Sicence Systems, Inc. (303) 792-5230

ADDRESS: P. O. Box 3088, Englewood, CO 80155

LOCATIONS (Show quarter-quarter, footages, and section, township and range.)

At surface: NW¼NE¼, 660'FNL & 2305'FEL, Sec. 10-T153N-R101W

At top prod. interval, reported below:

At total depth: NW¼NE¼, 840.59'FNL & 1926.72' FEL, Sec. 10-T153N-R101W

Date Spudded	Date TD Reached	Date Comp. (ready to prod)	Elevation (KB,DF,GR)	Total Depth (MD & TVD)	Plug Back (TD,MD,TVD)
6/20/86	8/20/86	11/17/86	1872' KB 1851' GL	13,480'MD	13,344'

PRODUCING INTERVAL(S), THIS COMPLETION, TOP, BOTTOM, NAME (MD & TVD): Red River B & C zones 13,255' - 13,330'

No. of DST's Run (see back): 7

Date Directional Survey Submitted: Attached

TYPE ELECTRIC AND OTHER LOGS RUN (See instructions): CNL, DLL-SFL, FDC, BHC, Cyberlook, PDC Perf, CCL

Was Well Cored: No.

CASING RECORD (Report all strings set in well)

Casing Size	Depth Set (MD)	Hole Size	Weight Lbs./Ft.	Sacks Cement	Amount Pulled
9-5/8"	2,954'	12½"	36# & 40#	1340	None
5½"	13,480'	8-3/4"	17#, 20# & 26#	(1) 1082	None
				(2) 1856	None

LINER RECORD

Size	Top (MD)	Bottom (MD)	Sacks Cement	Screen (MD)
None				

TUBING RECORD

Size	Depth Set (MD)	Packer Set (MD)
2-7/8"		13,243.54

**

PERFORATION RECORD

Depth Interval (MD)	Holes per ft.	Size and Type	Purpose
11,80'	4 JSPF	.43	Cmt. Sqze.
13,120-13,122	4JSPF	.43	Cmt. Sqze.
13,225-13,265	4JSPF	.43	Test Red River
13,296-13,303	4JSPF	.43	Test Red River

ACID, SHOT, FRAC., CEMENT SQUEEZE, Etc.

Amt. & Kind of Material Used	Depth Interval (MD)
175Sx. Howco lite,742 "G"	
5 bbl. G	
42 bbl. 15% HCl	13,225-13,265
7 bbl. 15% HCl	13,296-13,303

PRODUCTION

Date First Production: 11/17/86

Producing Method (Flowing, gas, lift, pumping - size & type of pump): Flowing

Well Status (Prod. or shut-in): Producing

Date of Test	Hours Tested	Choke Size	Production For Test	Oil, Bbls.	Gas, Mcf.	Water, Bbls.	Oil Gravity - API (Corr.)
11/24/86	24 hrs	16/64"		245	425	290 LW	

Flow, Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil, Bbls.	Gas, Mcf.	Water, Bbls.	Gas-Oil Ratio
750psi	--		245	425	-0-	1,735:1

DISPOSITION OF OIL & GAS (Purchaser and Transporter)

Oil - The Permian Corporation, purchaser & transporter

Gas - Ecological Engineering, pipeline

Test Witnessed By:

LIST OF ATTACHMENTS

Drill Stem Test details, Geologist Report, Directional Survey

Over to Complete Form

** See reverse for additional perforations & treatments.

GEOLOGIC MARKERS

Name	Measured Depth of Formation	True Vertical Depth
Greenhorn	4,344'	4,343'
Morrison	5,622'	4,497'
Minnekahata	7,022'	6,990'
Minnelusa	7,343'	7,311'
Kibbey L.S.	8,098'	8,065'
Three Forks	10,507'	10,474'
Interlake	12,095'	12,062'
Red River "C"	13,286'	13,252'

DRILL STEM TEST DATA

Please see attached.

Additional Perforations & Treatments

13,308-13,312	4 JSPF	.43	Test Red River;	3 bbls. 15% HCl 13,308-13,312
13,322-13,330	4 JSPF	.43	Test Red River;	2 bbls. 14% HCl 13,322-13,330
				1500 gal. 15% HCl 13,286-13,344
13,400-13,402			Cmt. Squeeze;	41 bbls. cmt. slurry
13,440-13442				1500 gal. 15% HCl

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

Signature: Jeffery E. Jones — Title: Vice President — Date: 12/19/86

State of Colorado)
)ss
County of Arapahoe)

On this 19th day of December, 19 86, before me personally appeared Jeffery E. Jones to me known as the person described in and who executed the foregoing instrument and acknowledged that (s)he executed the same as his/her free act and deed.

Notary Seal

Notary Public April M. P. Kreis
State of Colorado County of Arapahoe
My Commission expires 3-21-90

INSTRUCTIONS

1. Within thirty (30) days after the completion of a well, or recompletion of a well in a different pool, the original and three copies of this report must be filed with the North Dakota Industrial Commission, Oil and Gas Division.

2. Immediately after the completion or recompletion of a well in a pool or reservoir not then covered by an order of the commission, the original and three copies of this report must be filed with the North Dakota Industrial Commission, Oil and Gas Division.

3. The owner or operator shall file with the Oil and Gas Division three copies of the following: all logs run, drill stem test reports and charts, formation water analysis and noninterpretive lithologic logs or sample descriptions if compiled.

DST # 1- Nesson, tested 9156 to 9200
Times 15,60,90, 120
Tool opened with 1/4 inch blow, decreased to surface at 5 min. Dead after 7 min, and stayed dead for rest of initial open and all of first shut in. Reopened with 1/2" blow, 1 1/2 " in 5 min, 3/4 " in 15 min, 1/2" in 30 min, 1" in 45 min, 2" in 60 min, 1 1/2" in 60 min, and 2 " in 90 min. Final shut in 2 1/2 " died in 18 minutes.

Pressures	Inside (9,125)	Outside (9166)
IH	5070 psig	5101 psig
FH	5045 psig	5087 psig
IF	100-100 psig	113-113 psig
ISIP	3467 psig	3343 psig
FFP	125-137 psig	156-156 psig
FSIP	1107 psig	1048 psig
		BHT 192 deg

Comments: Good mechanical test, charts show no breakover during the shutins.

Recovery: Total of 270 ft of fluid: 1ft of O&G emulsion, 60 ft of M&OC water (Rw .07 @ 70 deg 100,000 chlorides no nitrates or chromates), 60 ft MC water (Rw .07 @ 70 deg no nitrates or chromates), 149 ft of GC mud (Rw .05 @ 70 deg 20 ppm nitates 90 ppm chromates) Note: all fluids had some ammonia inhibiter which was in the string prior to opening the tool.

DST #2 Duperow 10,920 to 10,984
Times 15-60-120-180

Pressures	Inside (10,903)	Outside (10,930)
IH	6025 psig	6055 psig
FH	5985 psig	6028 psig
IF	105-135 psig	104-139 psig
ISIP	5007 psig	5065 psig
FFP	219-329 psig	278-383 psig
FSIP	5007 psig	5065 psig
		BHT 236°

Recovery: Two hundred feet of gas in pipe 622 ft of total fluid, 250 ft of drilling mud, and 372 ft of mud cut salt water. Chlorides for the pipe recovery were 185,000 for top, 185,000 for middle, and 170,000 for bottom. Drilling mud had 195,000 chlorides.

Sampler: Total volume 2300 cc. AT 900 psig sampler contained 550 cc of 39 deg API oil, and 1600 cc of 170,000 chloride (.05 ohms at 80 deg) salt water, along with 5.5 cubic ft of gas.

DST #3 Duperow from 11,087 to 11,132
Times: 15-60-90-120
Had gas to surface in 60 minutes of the final shutin, there was still a six inch blow in the bucket when we started to pull pipe.

Pressures	Inside (11,097)	Outside (11,061)
IH	6125 psig	6104 psig
FH	6088 psig	6074 psig
IF	244-348 psig	239-329 psig
ISIP	5429 psig	5422 psig
FFP	452-1160 psig	449-1169 psig
FSIP	5320 psig	5303 psig
		BHT 230 deg

RECOVERY: Pipe 2415 ft of total fluid, 1050 ft of HGC&SOC mud, 450 ft of SO$GC muddy saltwater, and 915 ft of Saltwater with a trace of oil.

Sampler; 3300 cc total volume at 1450 psig. 1500 cc of saltwater, 100 cc of free salt, and 1700 cc of 38 deg API oil at 60 deg. Note: water in the sampler was free of nitrates.

DST #4 Interlake from 12,088 to 12,138
Times: 15-60-210-240
No fluid to surface.

Pressures	Inside (12,103)	Outside (12,110)
IH	7125 psig	7135 psig
FH	7125 psig	7135 psig
IF	500-518 psig	502-521 psig
ISIP	6020 psig	6026 psig
FFP	518-594 psig	524-596 psig
FSIP	5925 psig	5932 psig
		BHT 254 deg

RECOVERY: Pipe 1403 ft of total fluid, 577 ft of SM&GCM, 826 ft HGC&SOCM estimated 15 % oil.

SAMPLER: Total volume 2200 CC, recovered 1.57 ft cubic of gas at 270 psi, 320 cc of oil and 1280 cc of mud. Rw .04 at 60 deg and 197,000 clorides which is a match with the pit mud. None of the samples had any nitrates measured on site which is difficult to believe will send in for analysis.

DST #5 Interlake from 12,866 to 12,940
Times: 15-60-90-120
No fluid to surface.

Tool opened withe a 1" blow, 2" in 1 min, 2" in 5 min, 2 1/4" in 10 min, and 4 1/2 at the end of the 15 min preflow. Blow built to 9" 20 minutes into shut in and died to 1" at end of 60 min shut. Reopened with 2" blow, 2 1/2 in 15 min, 5" in 20 min, 7" in 25 min, still 7 " after 40 min, 6" in 45 min, 6" in 70 min, 6 1/2" in 75 min, 6" in 80 min, and 5 1/2 " in 85 min.

Pressures	Inside (12,891)	Outside (12,898)
IH	7250 psig	7259 psig
FH	7250 psig	7259 psig
IF	365-388 psig	371-389 psig
ISIP	4770 psig	4772 psig
FFP	385-474 psig	389-479 psig
FSIP	5340 psig	5345 psig
		BHT deg

RECOVERY: Pipe 1114 ft of total fluid, 319 ft of gcwcush, and 695 ft of SG&WCM

SAMPLER: Total volume 2500 CC, recovered 5.56 ft cubic of gas at 2100 psi, 1700 cc of SMCSW. Rw .05 @ 60 deg.

DST #6 from 13,252-13,480
Red River B and C

Tool opened with a 7" blow, 2 min bottom of bucket, 5 min 33 ", and 10 minutes 50" and packers failed.

Day 61, picking up to run DST # 7 from 13,232 to 13,480, Red River B and C. When DST # 6 was pulled after 6the packers failed we recovered 1598 ft HGCWCush and 3694 ft of HGCM. The charts indicated that the packers started leaking right away. Tripped back in hole to recondition for DST. Tripped out and picked up test tool, and tripped in. Opened tool with a 2" blow, 5 min 6", 10 min 20", and 15 min 28". S.T. $7,108 Cum $525,814

8/23/86
Day 62, circulating and conditioning mud to run pipe at 13,480. Recovered 6412 ft of total fluid, 1781 of HGCWCush, and 4631 ft of HGCM with no sign of oil. Charts from DST #7 show that the inital shutin pressure built to 6275# before the packers started to leak. Sampler had .03 cubic ft of gas at 10 psi and 2400 cc of mud. S.T. $6,880 Cum $532,694

11920

Eastman Whipstock

REPORT of SUB-SURFACE DIRECTIONAL SURVEY

OIL & GAS RECEIVED DIVISION

SHELBY DRILLING INC (BASIC EARTH SCIENCES)
COMPANY

CORPS OF ENGINEERS 31-10
WELL NAME

MCKENZIE COUNTY, NORTH DAKOTA
LOCATION

JOB NUMBER	TYPE OF SURVEY	DATE
410-516	SINGLE SHOT	11-SEP-86

SURVEY BY
S. J. COCHRAN AND RIG CREWS

OFFICE
CASPER, WYOMING

FORM D-102 R2

JS/JL

EASTMAN WHIPSTOCK, INC.

RECORD OF SURVEY

FOR

```
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                                                                   *
* OPERATOR    : SHELBY DRILLING INC                                 *
*                                                                   *
* STRUCTURE   : BASIC EARTH SCIENCES                                *
*                                                                   *
* WELL        : C OF E 31-10          SLOT :                        *
*                                                                   *
* LOCATION    : CORPS OF ENGENEERS 31-10                            *
*                                                                   *
* JOB NUMBER  :                                                     *
*                                                                   *
* RIG         : SHELBY 52                                           *
*                                                                   *
* DECLINATION :    11.00 E                                          *
*                                                                   *
*                  PLANE OF VERTICAL SECTION                        *
*                                                                   *
*                    DIRECTION : S 70  0 E                          *
*                                                                   *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

EW DISTRICT : ROCKY MOUNTAIN DIST.

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	VERTICAL SECTION	RECTANGULAR COORDINATES		DOGLEG SEVERITY
510.00	0 30	S 25 0 W	0.00	510.00	0.00	0.00 N	0.00 E	0.00
1094.00	0 15	S 43 0 W	584.00	1093.99	-0.92	3.16 S	2.13 W	0.05
1620.00	0 15	N 68 0 E	526.00	1619.98	0.43	4.53 S	1.19 W	0.09
2125.00	0 15	N 26 0 E	505.00	2124.98	1.40	3.06 S	0.38 E	0.04
2472.00	0 0	N 26 0 E	347.00	2471.98	1.48	2.38 S	0.71 E	0.07
2935.00	0 30	S 79 0 E	463.00	2934.97	3.48	2.77 S	2.70 E	0.11
3510.00	0 45	S 77 0 E	575.00	3509.94	9.70	4.07 S	8.84 E	0.07
3980.00	0 0	S 77 0 E	470.00	3979.92	12.76	4.76 S	11.84 E	0.16
4030.00	0 45	S 79 0 E	50.00	4029.92	13.08	4.83 S	12.16 E	1.50
4063.00	1 15	N 88 0 E	33.00	4062.92	13.64	4.87 S	12.74 E	1.65
4094.00	2 0	N 88 0 E	31.00	4093.90	14.45	4.84 S	13.62 E	2.42
4126.00	2 45	S 88 0 E	32.00	4125.88	15.70	4.84 S	14.94 E	2.40
4158.00	3 15	S 84 0 E	32.00	4157.83	17.31	4.96 S	16.61 E	1.69
4190.00	3 45	S 74 0 E	32.00	4189.77	19.23	5.33 S	18.53 E	2.46
4221.00	4 30	S 74 0 E	31.00	4220.69	21.46	5.95 S	20.67 E	2.42
4253.00	5 0	S 67 0 E	32.00	4252.58	24.11	6.83 S	23.17 E	2.39
4285.00	5 45	S 71 0 E	32.00	4284.44	27.10	7.90 S	25.96 E	2.62
4317.00	6 15	S 67 0 E	32.00	4316.27	30.45	9.10 S	29.09 E	2.04
4348.00	6 45	S 67 0 E	31.00	4347.07	33.95	10.47 S	32.32 E	1.61
4380.00	7 30	S 63 0 E	32.00	4378.82	37.90	12.15 S	35.91 E	2.81
4411.00	8 0	S 62 0 E	31.00	4409.54	42.05	14.08 S	39.62 E	1.67
4443.00	8 30	S 62 0 E	32.00	4441.20	46.59	16.24 S	43.68 E	1.56
4540.00	9 45	S 64 0 E	97.00	4536.97	61.86	23.22 S	57.38 E	1.33
4635.00	10 15	S 64 0 E	95.00	4630.53	78.27	30.45 S	72.21 E	0.53
4794.00	11 0	S 65 0 E	159.00	4786.80	107.45	43.07 S	98.67 E	0.49
4889.00	11 30	S 63 0 E	95.00	4879.98	125.88	51.20 S	115.32 E	0.67
4985.00	11 45	S 66 0 E	96.00	4974.01	145.13	59.52 S	132.78 E	0.68
5050.00	12 15	S 65 0 E	65.00	5037.59	158.61	65.13 S	145.08 E	0.83
5145.00	12 45	S 65 0 E	95.00	5130.34	179.09	73.82 S	163.72 E	0.53
5177.00	12 30	S 66 0 E	32.00	5161.56	186.06	76.72 S	170.08 E	1.04

CONTINUED ON NEXT PAGE ...

CAPTAIN DRILLING INC
BASIC EARTH SCIENCES
CORPS OF ENGENEERS 31-10

SLOT :
WELL : C OF E 31-10
FSAL : S 70 0 E

DATE PRINTED : 11-SEP-86
OUR REF. NO. : S02708.052
JOB NUMBER :

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	VERTICAL SECTION	RECTANGULAR COORDINATES		DOGLEG SEVERITY
5225.00	12 30	S 66 0 E	48.00	5208.42	196.43	80.94 S	179.57 E	0.00
5241.00	12 0	S 65 0 E	16.00	5224.06	199.81	82.35 S	182.66 E	3.39
5336.00	11 30	S 64 0 E	95.00	5317.07	219.07	90.68 S	200.12 E	0.57
5430.00	11 45	S 64 0 E	94.00	5409.14	237.91	98.98 S	217.15 E	0.27
5559.00	10 45	S 64 0 E	129.00	5535.66	262.94	110.02 S	239.77 E	0.78
5650.00	10 0	S 65 0 E	91.00	5625.17	279.25	117.07 S	254.56 E	0.65
5712.00	10 0	S 65 0 E	62.00	5686.23	289.97	121.62 S	264.32 E	0.00
5785.00	9 30	S 64 0 E	73.00	5758.18	302.28	126.94 S	275.47 E	0.72
5848.00	9 0	S 67 0 E	63.00	5820.36	312.37	131.14 S	284.69 E	1.10
5912.00	8 30	S 68 0 E	64.00	5883.61	322.10	134.87 S	293.68 E	0.82
6004.00	7 0	S 70 0 E	92.00	5974.77	334.50	139.31 S	305.26 E	1.66
6036.00	7 15	S 69 0 E	32.00	6006.52	338.47	140.70 S	308.98 E	0.87
6099.00	7 0	S 66 0 E	63.00	6069.04	346.28	143.69 S	316.20 E	0.71
6163.00	6 15	S 66 0 E	64.00	6132.61	353.64	146.70 S	322.94 E	1.17
6226.00	5 30	S 64 0 E	63.00	6195.28	360.07	149.42 S	328.79 E	1.23
6281.00	5 0	S 67 0 E	55.00	6250.05	365.08	151.51 S	333.37 E	1.04
6383.00	4 15	S 71 0 E	102.00	6351.71	373.30	154.46 S	341.04 E	0.80
6479.00	4 0	S 66 0 E	96.00	6447.46	380.21	156.99 S	347.47 E	0.46
6542.00	3 45	S 67 0 E	63.00	6510.32	384.46	158.68 S	351.37 E	0.41
6700.00	3 0	S 57 0 E	158.00	6668.04	393.65	163.05 S	359.58 E	0.60
6828.00	2 30	S 67 0 E	128.00	6795.90	399.73	165.92 S	364.99 E	0.54
6955.00	2 0	S 57 0 E	127.00	6922.80	404.66	168.26 S	369.39 E	0.50
7455.00	1 0	S 57 0 E	500.00	7422.62	417.41	175.39 S	380.36 E	0.20
7958.00	1 0	S 42 0 E	503.00	7925.54	425.61	181.08 S	387.02 E	0.05
8242.00	0 30	S 55 0 E	284.00	8209.52	429.06	183.53 S	389.80 E	0.18
9170.00	0 30	S 57 0 E	928.00	9137.48	436.92	188.06 S	396.51 E	0.00
9477.00	0 15	N 1 0 E	307.00	9444.48	438.03	187.29 S	397.97 E	0.22
10290.00	0 0	N 1 0 E	813.00	10257.47	437.45	185.52 S	398.00 E	0.03
10968.00	0 15	S 64 0 W	678.00	10935.47	436.43	186.17 S	396.68 E	0.04
11450.00	0 30	N 18 0 E	482.00	11417.46	434.11	184.53 S	394.80 E	0.14

CONTINUED ON NEXT PAGE ...

Eastman Whipstock
A PETROLANE COMPANY

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	VERTICAL SECTION	RECTANGULAR COORDINATES		DOGLEG SEVERITY
12003.00	1 15	N 43 0 W	553.00	11970.39	429.78	176.67 S	393.06 E	0.20
12570.00	1 0	S 43 0 W	567.00	12537.28	420.45	176.67 S	383.13 E	0.29
12980.00	0 45	S 39 0 W	410.00	12947.24	417.24	180.59 S	378.28 E	0.08

CLOSURE - DISTANCE : 419.18
DIRECTION : S 64 29 E

REPORT UNITS : Feet
SURVEY CALCULATION METHOD : Radius of curvature

SURVEY RUN INFORMATION

CDD JOB WITH S J COCHRAN
SINGLE SHOT - 8242 THRU 12980 ADDED ON 11-SEP-86

Eastman Whipstock
A PETROLANE COMPANY

SCALE 1"=100FT.

NOTE: COORDINATES RELATIVE TO SLOT

SURVEY: S0270B.OSZ

EASTMAN CHRISTENSEN

SHELBY DRILLING INC
BASIC EARTH SCIENCES
CORPS OF ENGINEERS 31-10

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

11920

WESLEY D. NORTON
Chief Enforcement Officer

F. E. WILBORN
Deputy Enforcement Officer

CLARENCE G. CARLSON
Geologist

CHARLES KOCH
Engineering Dept.

DOREN DANNEWITZ
Field Supervisor

KEN KALLESTAD
Reclamation Sup.

December 18, 1986

Mr. Jeffery E. Jones
Basic Earth Science Systems
P.O. Box 3088
Englewood, Colorado 80155

RE: Basic Corps of Eng. #31-10
NW NE Section 10-T153N-R101W
Well File No. 11920

Dear Mr. Jones:

According to our records, our office has not received a Completion Report (Form 6) for the above captioned well.

The Form 6 is due thirty days after the completion of a well. At this time, please submit this report, in triplicate, as soon as possible. Thank you.

Sincerely,

Tom Delling rlz

Tom Delling
Field Inspector

TD/rls

900 EAST BOULEVARD, BISMARCK, NORTH DAKOTA 58505 701-224-2969

CONFIDENTIAL

FORM 8

Well File No. 11920

North Dakota State Industrial Commission
Oil and Gas Division

900 EAST BOULEVARD - BISMARCK, NORTH DAKOTA - 58505

PRODUCERS CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL FROM LEASE

WELL Basic Corps of Engineers (SEC.) 10 (TWP.) 153N (RGE.) 101W COUNTY McKenzie

PRODUCER Basic Earth Science Systems, Inc. FIELD Baker POOL Red River

ADDRESS CORRESPONDENCE TO Jeffery E. Jones, Basic Earth Science Systems, Inc.

STREET P.O. Box 3088 CITY Englewood STATE Colorado 80155

THE ABOVE NAMED PRODUCER HEREBY AUTHORIZES The Permian Corporation
(Name of Purchaser)

WHOSE PRINCIPAL PLACE OF BUSINESS IS P.O. Box 3119, Midland, TX 79702
(Street) (City) (State)

AND WHOSE FIELD ADDRESS IS P.O. Box 2358, Williston, NE 58801

TO TRANSPORT 100 % OF THE OIL PRODUCED FROM THE LEASE DESIGNATED ABOVE UNTIL FURTHER NOTICE

THE OIL WILL BE TRANSPORTED BY The Permian Corporation
(Name of Transporter)

OTHER PURCHASERS TRANSPORTING OIL FROM THIS LEASE ARE: None

_____ % _____ %
(Name of Purchasers) (Name of Purchasers)

REMARKS: Effective Date: November 22, 1986

The undersigned certifies that the rules and regulations of the State Industrial Commission have been complied with except as noted above and that the purchaser is authorized to transport the above percentage of oil produced from the above described property and that this authorization will be valid until further notice to the purchaser named herein until canceled by the producer.

Executed this 22th *day of* November, 19 86. Basic Earth Science Systems, Inc.
(Company or Operator)

STATE OF COLORADO)
) ss
COUNTY OF ARAPAHOE)

(Signature) Jeffery E. Jones (Title) Vice President

Before me the undersigned authority, on this day personally appeared Jeffery E. Jones *known* to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is authorized to make this report and has knowledge of the facts stated herein and that said report is true and correct.

Subscribed and sworn to before me this the 22th day of November, 19 86.

My Commission expires 3-21-90 Notary Public in and for Arapahoe County, Colorado.

Approved by: _____ (Deputy Enforcement Officer) DEC 2 1986 (Date)

(Instructions Over)

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

11920

WESLEY D. NORTON
Chief Enforcement Officer

F. E. WILBORN
Deputy Enforcement Officer

CLARENCE G. CARLSON
Geologist

CHARLES KOCH
Engineering Dept.

DOREN DANNEWITZ
Field Supervisor

KEN KALLESTAD
Reclamation Sup.

November 21, 1986

Mr. Jeffrey Jones
Vice President
Basic Earth Science Systems, Inc.
P.O. Box 3088
Englewood, CO 80155

RE: Basic Corps of Engineers #31-10
NW NE Section 10-T153N-R101W
McKenzie County, ND
Well File No. 11920

Dear Mr. Jones:

I have recently spoken with State Field Inspector Tom Delling about the reserve pit at the Basic Corps of Engineers #31-10. We feel all the material from the pit should be removed to a legal waste disposal system. I understand most has been removed already. This is a sensitive area as far as the high water table, and the possible flooding of the Missouri River. We felt this should have been a lined pit. A sample of the water in the pit showed 70,000 PPM. There is a possibility this could contaminate the area.

We will require the pit to be reclaimed this fall. If you have any question, please feel free to contact me.

Sincerely,

Kenneth Kallestad

Kenneth Kallestad
Reclamation Supervisor

KK/tp
cc: Tom Delling

FORM 4

Well File No. 11920

North Dakota State Industrial Commission
Oil and Gas Division
900 EAST BOULEVARD - BISMARCK, NORTH DAKOTA - 58505

RECEIVED NOV 18 1986 OIL & GAS DIVISION

SUNDRY NOTICES AND REPORTS ON WELLS

1. Notice of Intention to Drill or Redrill
2. Notice of Intention to Change Plans
3. Notice of Intention to Pull Casing
4. Notice of Intention to Abandon Well
5. Report of Water Shut-Off
6. Report of Shooting or Acidizing
7. Report of Casing
8. Report of ~~Redrilling or~~ Repair X
9. Supplementary History
10. Well Potential Test
11. Drilling Prognosis
12.

NAME OF LEASE Basic Corps of Engineers Date November 17, 1986

WELL NO. 31-10 Bottom-hole is located 840.59 ft. from (N) (S) line and 1926.72 ft. from the (E) (W) line

of Section 10 Township 153N Range 101W in McKenzie

County, Baker Field Red River Pool. The elevation of the ground

is 1851 feet above sea level.

Name and Address of Contractor, or Company which will do work is: Shelby Drilling

(DETAILS OF WORK)

(State names of, and expected depth of objective sand; show sizes, weight, and lengths of proposed casing, indicate mud weights, cementing points, and all other details of work)

On August 23, 1986, while running casing, pipe became stuck in hole, worked pipe and casing prematurely parted. Came out with 32 jts. TIH and found top of fish @ 5812', total pipe in hole 7682'. Unable to pull casing. Tied into casing with casing patch and cleaned out to TD. Unable to get casing to circulate from TD back up. Pressure tested casing to verify integrity of string. Perforated 11,840', set retainer at 11,791' and cemented from 11,840' back to DV @ 8940' with 175 sx of lite and 742 sx of class G. Then cemented second stage with 706 sx of lite followed by 1150 sx of class G. Drilled out to TD of 13,450', ran cement bond log. Cement top @ 5130'. Also bond log showed packed off section of the hole @ 12,450' - 12,680' that was packed off looking like cement. Perforated 13,120 - 13,122' and 13,400 - 13,402'. Set retainer @ 13,355' and performed circulating squeeze to cement off Red River. Drilled out cement, pressure tested and began production testing.

Company Basic Earth Science Systems, Inc.

Address P.O. Box 3088, Englewood CO 80155

By Jeffery E. Jones

Title Vice President

Do not write in this space

Approved Nov. 20 1986

By Sherry Hammerich

Title field supervisor

(Instructions Over)

basic Earth Science Systems, Inc

P.O. Box 3088
Englewood, Colorado 80155
(303) 792-5230

November 17, 1986

Mr. F. E. Wilborn
Deputy Enforcement Officer
North Dakota Industrial Commission
Oil and Gas Division
900 East Boulevard
Bismarck, ND 58505

Re: Basic Corps of Engineers #31-10
Township 153 North-Range 101 West
Section 10: NW¼NE¼
McKenzie County, ND
Well File No. 11920

Dear Mr. Wilborn:

Enclosed you will find a Sundry Notice (Form 4) for the Basic Corps of Engineers #31-10 detailing a parted casing problem and the work involved in correcting it.

If you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

Basic Earth Science Systems, Inc.

Jeffery E. Jones
Vice President

JEJ:jb

encl.

Well file

FORM 4

Well File No. 11920

North Dakot a State Industrial Commission
Oil and Gas Division
900 EAST BOULEVARD - BISMARCK, NORTH DAKOTA - 58505

SUNDRY NOTICES AND REPORTS ON WELLS

1. Notice of Intention to Drill or Redrill
2. Notice of Intention to Change Plans
3. Notice of Intention to Pull Casing
4. Notice of Intention to Abandon Well
5. Report of Water Shut-Off
6. Report of Shooting or Acidizing
7. Report of Casing
8. Report of Redrilling or Repair
9. Supplementary History
10. Well Potential Test
11. Drilling Prognosis
12. Rehabilitation Notice

NAME OF LEASE Basic Corps of Engineers Date October 30, 1986

WELL NO. 31-10 Bottom-hole is located 840.59 ft. from (N) (S) line and 1926.72 ft. from the (E) (W) line

of Section 10 Township 153N Range 101W in McKenzie

County, Baker Field Red River Pool. The elevation of the ground

is 1851 feet above sea level.

Name and Address of Contractor, or Company which will do work is:

(DETAILS OF WORK)

(State names of, and expected depth of objective sand; show sizes, weight, and lengths of proposed casing, indicate mud weights, cementing points, and all other details of work)

"TIGHT HOLE"

A. Dirt contractor is Hexom Earth Construction, Rt. 3, Box 238, Williston, ND 58801

B. Surface Owner: Corps of Engineers, Real Estate Div., 6014 US Post Office & Courthouse, Omaha, NE 68102-4978.

C. Surface restoration will begin approx. 11/10/86 and be completed by 12/10/86.

D. Water hauled to Great Plains Disposal well State #16-11.

E. Drilling mud hauled to Great Plains Helling State disposal well, drill cuttings will be hauled to Prairie Disposal Dishon well. Pit is empty except for solids and rainwater.

F. Drill site will be leveled and contoured, redistribution of the topsoil will be delayed one year to allow for settling of the location.

G. Basic Earth Science Systems, Inc. will reseed the location with approved mixture.

Company Basic Earth Science Systems, Inc.

Address P.O. Box 3088, Englewood CO 80155

By Jeffery E. Jones

Title Vice President

Do not write in this space

Approved 11-3 1986

By Kenneth Kallstad

Title Reclamation Supervisor

(Instructions Over)

11920

basic Earth Science Systems, Inc.

P.O. Box 3088
Englewood, Colorado 80155
(303) 792-5230

October 27, 1986

Mr. Tom Delling
Field Inspector
North Dakota Industrial Commission
Oil and Gas Division
900 East Boulevard
Bismarck, ND 58505

Re: Rosebud #22-11
Township 153 North-Range 101 West
Section 11: SE¼NW¼
McKenzie County, ND
Well File No. 11549

Basic Corps of Engineers #31-10
Township 153 North-Range 101 West
Section 10: NW¼NE¼
McKenzie County, ND
Well File No. 11920

Dear Mr. Delling:

We are in receipt of your letter of October 20, 1986, regarding the above-referenced wells. We have reviewed our production operation both in-house and with our field personnel and are unaware of any recurring problem with gas venting off the top of the Rosebud #22-11 tanks. Since this well is hooked into a gas sales line, we would be anxious to correct this problem. Please contact me at your earliest convenience so we can discuss this perceived problem and seek a reasonable solution. Any solution to a problem must be matched with the scope of the problem it is intended to solve, for this reason I am in need of further input from you to solve this problem.

We are still in the process of repairing the casing problems in the Corps of Engineers #31-10 well and as soon as that work is completed, we will submit a form 4 detailing exactly what has been done to date. At this point in time, we have run a string of casing to the bottom of the hole and are attempting to verify how well cemented it is.

Please contact me at your convenience so we can resolve any problem we may have.

Sincerely,

Basic Earth Science Systems, Inc.

Jeffery E. Jones
Vice President

JEJ:jb

NORTH DAKOTA INDUSTRIAL COMMISSION

11920

OIL AND GAS DIVISION

WESLEY D. NORTON
Chief Enforcement Officer

F. E. WILBORN
Deputy Enforcement Officer

CLARENCE G. CARLSON
Geologist

CHARLES KOCH
Engineering Dept.

DOREN DANNEWITZ
Field Supervisor

KEN KALLESTAD
Reclamation Sup.

October 20, 1986

Mr. Jeffery E. Jones
Basic Earth Science System
P.O. Box 3088
Englewood, Colorado 80155

RE: Rosebud #22-11
SE NW Section 11-T153N-R101W
Well File No. 11549

Basic Corps of Engineers #31-10
NW NE Section 10-T153N-R101W
Well File No. 11920

Dear Mr. Jones:

Please be advised that we are requiring that a closed system be installed on the Rosebud #22-11. You may either tie in the tank vent lines to the flare pit or install a vapor recovery system. This is due to the close proximity of the rifle range and previous problems with gas coming off the top of the tanks. Please take care of this immediately.

Also, it is our understanding that you encountered problems with your casing program on the Basic Corps of Eng #31-10 well. Please submit a Form 4 detailing the problems and what was done to rectify the problems. Thank you.

Sincerely,

Tom Delling /rls

Tom Delling
Field Inspector

TD/rls

900 EAST BOULEVARD, BISMARCK, NORTH DAKOTA 58505 701-224-2969

FORM 4

Well File No. 11920

North Dakota State Industrial Commission
Oil and Gas Division
900 EAST BOULEVARD - BISMARCK, NORTH DAKOTA - 58505

OCT 1986 RECEIVED OIL & GAS DIVISION

SUNDRY NOTICES AND REPORTS ON WELLS

1. Notice of Intention to Drill or Redrill _____
2. Notice of Intention to Change Plans _____
3. Notice of Intention to Pull Casing _____
4. Notice of Intention to Abandon Well _____
5. Report of Water Shut-Off _____
6. Report of Shooting or Acidizing _____
7. Report of Casing X
8. Report of Redrilling or Repair _____
9. Supplementary History _____
10. Well Potential Test _____
11. Drilling Prognosis _____
12. _____

NAME OF LEASE Basic Corps of Engineers Date September 30, 19 86

WELL NO. 31-10 is located 660 ft. from (N) (S) line and 2305 ft. from the (E) (W) line

of Section 10 Township 153N Range 101W in McKenzie

County, Baker Field Red River Pool. The elevation of the ground

is 1851 feet above sea level.

Name and Address of Contractor, or Company which will do work is:

(DETAILS OF WORK)

(State names of, and expected depth of objective sand; show sizes, weight, and lengths of proposed casing, indicate mud weights, cementing points, and all other details of work)

"TIGHT HOLE"

Production Casing: Ran 335 jts. 17 & 20# L-80 and 26# SS-95 casing. Landed at 13,434'.

Cementing: 1st stage: 340 sx. Halliburton lite followed by 742 sx. class "G".
2nd stage: Lead w/176 sx lite, followed by 530 sx lite tailed w/1150 sx class "G". Dropped plug and displaced w/186 bbls. salt water.

Company Basic Earth Science Systems, Inc.

Address P.O. Box 3088, Englewood CO 80155

By Jeffery E. Jones

Title Vice President

Do not write in this space

Approved OCT 03 1986 19

By F E Williams

Title Deputy Enforcement Officer

(Instructions Over)

basic Earth Science Systems, Inc.

P.O. Box 3088
Englewood, Colorado 80155
(303) 792-5230

September 30, 1986

OCT 1986
RECEIVED
ND OIL & GAS
DIVISION

North Dakota Industrial Commission
Oil and Gas Division
900 East Boulevard
Bismarck, ND 58505

Re: Corps of Engineers #31-10
Sec. 10, T153N, R101W
McKenzie County, ND

Gentlemen:

Enclosed please find four copies of a Sundry Notice detailing the setting and cementing of the production casing in the above referenced well.

Please do not hesitate to contact me if you have any questions.

Sincerely,

Basic Earth Science Systems, Inc.

Jeffery E. Jones
Vice President

JEJ:ak

Enclosures

basic Earth Science Systems, Inc.

P.O. Box 3088
Englewood, Colorado 80155
(303) 792-5230

11920

September 22, 1986

DISTRIBUTION

Re: Corps of Engineers #31-10
Sec. 10, T153N, R101W
McKenzie County, ND

Gentlemen:

Enclosed please find your required number of copies of the Geologist's Well Report for the above referenced well.

Please do not hesitate to contact me if you have any questions or need further information.

Sincerely,

Basic Earth Science Systems, Inc.

Charles L. Mitchell

Charles L. Mitchell
Geologist

CLM:ak

Enclosure/s

1920

SEP 1983
RECEIVED
ND OIL & GAS
DIVISION

WELL REPORT

BASIC EARTH SCIENCE SYSTEMS, INC.

BASIC CORPS OF ENGINEERS NO. 31-10
Sec. 10-T153N-R101W
McKenzie County, North Dakota

Charles L. Mitchell
Senior Geologist
Basic Earth Science Systems, Inc.

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DRILLING TIME LOG..... In Pocket

DATA SHEET

OPERATOR:	Basic Earth Science Systems, Inc. 44 Inverness Drive East, Building E Englewood, CO 80112 (P.O. Box 3088, Englewood, CO 80155)
WELL:	Basic Corps of Engineers #31-10
LOCATION:	NWNE Sec. 10-T153N, R101W McKenzie Co., North Dakota Surface: 660 FNL' and 2305' FEL Bottom Hole: 841' FNL and 1918' FEL
ELEVATION:	1851' Ground 1872' K.B.
SPUD:	June 20, 1986, 11:00 PM
FINISH DRILLING:	August 18, 1986
COMPLETED:	Completion pending
TOTAL DEPTH:	13,480' Driller, 13,475' Schlumberger
CASING:	9 5/8" @ 2996' w/1100 sacks, 5-1/2 @ 13,480'.
TESTS:	DST #1: 9156 - 9200 (Nesson); DST #2: 10,920 - 10,984 (Duperow); DST #3: 11,087 - 11,132 (Duperow); DST #4: 12,088 - 12,138 (Interlake); DST #5: 12,866 - 12,940 (Interlake); DST #6: 13,252 - 13,480 (Red River); DST #7: 13,239 - 13,480 (Red River).
CORES:	None
RIG:	Shelby Drilling Inc. Rig #52
TOOL PUSHER:	Ray Gentry
MUD:	Davis Mud Co., Greg Sjaastad
MUDLOG:	Red River Exploration, Marvin Heupel, one man unit
WELLSITE GEOLOGIST:	Charles L. Mitchell-Basic Earth Science Systems, Inc.
WELLSITE ENGINEER:	Tom Hopkin, Dickinson, North Dakota

FORMATION TOPS AND MARKERS

	Log Depth	TVD Correction	Subsea K.B. 1872'	Structurally High to Rosebud #22-11
Cretaceous				
Greenhorn	4,344 ft.	1 ft.	-2,471 ft.	
Muddy	4,746	7	-2,867	
Dakota	5,156	15.5	-3,269	
Jurassic				
Morrison	5,622	25	-3,725	
Piper	6,267	31	-4,364	
Dunham Salt	6,653	32	-4,749	
Permian				
Minnekahta	7,022	32	-5,118	
Opeche	7,078	32	-5,174	
Pennsylvanian				
Minnelusa	7,343	32	-5,439	
Amsden	7,636	32	-5,732	
Mississippian				
Kibbey L.S.	8,098	33	-6,193	
Charles	8,252	33	-6,347	
Base Last Salt	8,950	33	-7,045	. . . . . .11 ft.
Midale	9,077	33	-7,172	
Nesson	9,174	33	-7,269	15
Lodgepole	9,739	33	-7,834	
Bakken	10,430	33	-8,525	30
Devonian				
Three Forks	10,507	33	-8,602	
Nisku	10,695	33	-8,790	
Duperow	10,782	33	-8,877	34
Souris River	11,242	33	-9,337	
Dawson Bay	11,478	33	-9,573	
Prairie	11,596	33	-9,691	35
Winnepegosis	11,790	33	-9,885	
Ashern	11,981	33	-10,076	49
Silurian				
Interlake	12,095	33	-10,190	51
Stonewall	12,938	33	-11,033	
Ordocovician				
Gunton	13,012	33	-11,107	
Stoney Mtn. Shale	13,119	33	-11,214	38
Red River	13,176	33	-11,271	35
"B" Anhydrite	13,239	33	-11,334	
"C" Anhydrite	13,286	33	-11,381	
Total Depth	13,480	33	-11,575	

DRILL STEM TEST DATA

DST No. 1: 9,156' - 9,200' (Nesson)
Test Type: Conventional, Open Hole.
DST Times: 15"-60"-90"-120".
BHT: 192 Degrees
Company: Lynes Inc., Rick Green-Tester

BLOW: IF: 1/4" Initial Blow, dead in 7 minutes.
ISI: No Blow-remained dead.
FF: 1/2" Initial Blow, 1 1/2" in 5 min., 3/4" in 15 min., 1/2" in 30 min., 1" in 45 min., 2" in 60 min., 1 1/4" in 75 min., 2 1/2" at end of test.
FSI: Shut in with 2 1/2" blow, dead in 18 min.

CUSHION: 15 gal. amonia

Recovery: 1' oil & gas emulsion
60' mud and oil cut amonia water
60' mud cut amonia water
149' gas and amonia cut mud
270' Total Fluid Recovery

RESISTIVITIES: Top Sample R.W.=.07 @ 70 degrees (100,000 PPM)-no nitrates
Middle Sample R.W.=.07 @ 70 degrees (100,000 PPM)-no nitrates
Bottom Sample R.W.=.05 @ 70 degrees (170,000 PPM)- 30 PPM nitrates

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SAMPLE CHAMBER: 2300 cc total capacity
Pressure: 60 psi
Recovery: 400 cc oil, 600 cc water
RW: .06 @ 70 degrees (125,000 PPM)-no nitrates
Gravity: 30.7 API @ 60 degrees F
Mud Pit Rw: .04 @ 70 degrees (200,000 PPM)

LABORATORY ANALYSIS OF SAMPLER
RW = .46 ohms @ 77 degrees F
Sodium Chloride = 310,100 PPM - no H_2S
API Gravity = 30.7 @ 60 degrees F
Pour Point = 49 degrees F
Paraffin = 11.1%

DST #1 Continued

PRESSURES:	9125'(INSIDE)	9166'(OUTSIDE)
IHP:	5070	5101
IFP:	100-100	113-113
ISIP:	3467	3443
FFP:	125-137	156-156
FSIP:	1107	1048
FHP:	5045	5087

REMARKS: The charts indicate that the test was successful. All pressures are uncorrected field pressures.

DST No. 2: 10,920 - 10,984 (Duperow)
Test Type: Conventional, open hole
DST Times: 15"-60"-120"-180"
BHT: 236 degrees F
Company: Lynes Inc., Keith Hammer, Tester

BLOW:
- IF: Open with a weak surface blow, 1/4" blow in 5 min., 1/4" in 15 min.
- ISI: Shut in with 1/4" blow, dead in 17 min.
- FF: Opened with a weak surface blow, 1/4" in 5 min., 1 1/2" in 15 min., 3" in 30 min., 5" in 45 min., 3 1/2" in 60 min.., 4" in 120 min.
- FSI: Closed tool with a 4" blow, dead in 25 min.

CUSHION: None

Recovery: 250' Drilling mud
372' Mud cut salt water
622' Total Fluid Recovery

RESISTIVITIES:
Top Sample Rw. = .045 @ 82 degrees F (185,000 PPM)
Middle Sample Rw. = .045 @ 82 degrees F (185,000 PPM)
Bottom Sample Rw. = .05 @ 80 degrees F (170,000 PPM)

LABORATORY ANALYSIS:

	Oil	Nitrates(PPM)	Clorides(PPM)
Top Sample:	16%	355	193,448
Middle Sample:	4%	52	209,219
Bottom Sample:	50%	None	207,116

ANALYSIS OF SAMPLER:
Rw.= .044 ohms @ 77 degrees F
Sodium Chloride = 342,200 PPM
API Gravity = 36.4 at 60 degrees F
Pour Point = 73 degrees F
Paraffin = 13.72%

SAMPLE CHAMBER: 2300 cc Total Capacity
Pressure: 900 psi
Recovery: 550 cc oil, 1600 cc water
Rw: 0.05 @ 80 degrees F, (170,000 PPM)
Gravity: 39 degrees API @ 60 degrees F
Mud Pit Rw: 0.04 @ 76 degrees (200,000 PPM)

DST #2 Continued

PRESSURES:	10,903(INSIDE)	10,930(OUTSIDE)
IHP:	6015	6055
IFP:	105-135	104-139
ISIP:	5007	5065
FFP:	219-329	278-383
FSIP:	5007	5065
FHP:	5985	6028

REMARKS: The charts indicate that the test was successful. All pressures are uncorrected field pressures.

DST No. 3: 11,087 - 11,132 (Duperow)
Test Type: Conventional, Open hole
DST Times: 15"-60"-90"-120"
BHT: 230 degrees
Company: Lynes, Inc., Keith Hammer, Tester

BLOW:
- IF: Tool opened with a 1/2" blow, 3 1/2" in 5 min., 6" in 10 min., 8 1/2" in 15 min.
- ISI: Shut-in with an 8 1/2" blow, dead in 22 min.
- FF: Opened with a 1" blow, 16" in 30 min., 1 psi in 45 min., 3 psi in 80 min., 2 1/2 psi in 90 min.
- FSI: Closed tool with 2 psi blow, opened blow to flare pit, GTS in 60 min., decreased to 6" blow in 120 min.

CUSHION: None

Recovery:
- 1050' Highly gas cut, slightly oil cut mud (20% oil)
- 450' Slighty oil and gas cut muddy saltwater
- 915' Salt water w/trace of oil
- 2415' Total Fluid Recovery

RESISTIVITIES:
- Top Sample Rw = .04 @ 79 degrees F (195,000 PPM-CL)
- Middle Sample Rw = Oil cut mud
- Botton Sample Rw = .045 @ 83 degrees F (175,000 PPM)

LABORATORY ANAYSIS:

	NaCl	Nitrates	Oil	Rw
Top:	318,992 PPM	355 PPM	16%	.044 Ohm-Meters
Middle:	344,998 PPM	52 PPM	4%	.046 Ohm-Meters
Bottom:	351,530 PPM	None	1%	.046 Ohm-Meters

SAMPLER ANALYSIS:
- RW. = 0.46 ohms @ 77 degrees F
- Sodium Chloride = 351,530 PPM
- API Gravity = 34.4 @ 60 degrees F
- Pour Point = 84 degrees F
- Paraffin = 21.75%

SAMPLE CHAMBER: 3300 cc Total Capacity
- Pressure: 1450 psi
- Recovery: 1700 cc Oil, 1600 cc Water, 9.7 cu. ft. gas
- Rw: .03 @ 84 degrees F (200,000 PPM)
- Gravity: 38 degrees API @ 60 degrees F
- Mud Pit Rw: 0.04 @ 79 degrees F (195,000 PPM) - no nitrates

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DST #3 Continued

PRESSURES:	11,061(INSIDE)	11,097(OUTSIDE)
IHP:	6104	6125
IFP:	239-329	244-348
ISIP:	5422	5429
FFP:	449-1169	452-1160
FSIP:	5303	5320
FHP:	6074	6088

REMARKS: The charts indicate that the test was successful. All pressures are uncorrected field pressures.

DST No. 4: 12,088 - 12,138 (Interlake)
Test Type: Conventional, Open hole
DST Times: 15"-60"-210"-270"
BHT: 254 Degrees F
Company: Johnson Testers, Bob Osborne, Tester

BLOW: IF: Opened with a 1/2" blow, 1" in 15 min.
ISI: Blow dead in 30 min.
FF: Opened with a surface blow, 1/8" in 20 min., 1 1/2" in 40 min., 4" in 50 min., 14" in 80 min., 26" in 100 min., 37" in 120 min., 63" in 180 min. and 72" in 210 min.
FSI: Opened to flow line, no GTS

CUSHION: 1000 ft. (8.2 Bbls.) fresh water

Recovery: 577' Slightly mud and gas cut water cushion
826' Highly gas and oil cut mud
1403' Total Fluid Recovery

LABORATORY ANALYSIS:

	Oil	Nitrates(PPM)	Chlorides(PPM)
Top Sample:	0%	None	16,700
Middle Sample	38%	347	166,900
Sampler:	20%	164	199,000

ANALYSIS OF SAMPLER:
Rw.= None calculated - foamy mud.
API Gravity: = 41.6 @ 60 degrees F
Pour Point = 43 degrees F
Paraffin = 15.17%

SAMPLE CHAMBER: 2500 cc Total Volume
Pressure: 279 psi
Recovery: 320 cc of oil, 1280 cc of mud, 1.57 C.F. gas
Rw: 0.04 @ 60 degrees F (197,000 PPM)
Mud Pit Rw: .04 @ 60 degrees F (197,000 PPM)
Gravity: 41.6 @ 60 degrees F

PRESSURES	12,103(INSIDE)	12,110(OUTSIDE)
IHP:	7125	7135
IFP:	500-518	502-521
ISIP:	6020	6026
FFP:	518-594	521-596
FSIP:	5925	5932
FHP:	7125	7135

REMARKS: The charts indicates that the test was successful. All pressures are uncorrected field pressures.

DST No. 5: 12,866 - 12,940 (Interlake)
Test Type: Conventional, Open hole
DST Times: 15"-60"-90"-120"
BHT: 258 degrees F
Company: Flopetrol Johnson, Bob Osborn, Tester

BLOW: IF: Tool opened with a surface blow, 2" in 7 min., 4 1/2" in 15 min.
ISI: Shut in with a 6" blow, 9" in 20 min., 4" in 40 min. and 1" 60 min.
FF: Opened with a 2" blow, 2" in 10 min., 5" in 20 min., 7" in 30 min., 6" in 60 min. and 5 1/2" in 90 min.

CUSHION: 720' Fresh water (4.5 bbls)

Recovery: 319' (4.5 bbls) Fresh water
695' (4.17 bbls) Slighty gas and water cut mud
1014' Total Fluid Recovery

LABORATORY ANALYSIS OF SAMPLER:
Rw: .046 ohms at 77 degrees F
Sodium Chloride: 336,600 PPM

SAMPLE CHAMBER: 2500 cc Total Volume
Pressure: 2100 psi
Recovery: 1720 cc Slighty mud cut salt water
Rw: .05 ohms @ 60 degrees F (196,000 PPM)
Pit Mud Rw: .04 ohms @ 60 degrees F (187,000 PPM)

PRESSURES:	12,891(INSIDE)	12,898(OUTSIDE)
IHP:	7250	7259
IFP:	365-385	371-389
ISIP:	4770	4772
FFP:	385-474	389-479
FSIP:	5340	5345
FHP:	7250	7259

REMARKS: The charts indicate that the test was successful. All pressures are uncorrected field pressures.

DST No. 6: 13,252 - 13,480 (Red River)
Test Type: Conventional, Open hole
DST Times: Open 9", Packers Failed
BHT: 255 degrees F
Company: Flopetrol Johnson, Bob Osborn, Tester

BLOW: IF: Tool opened with a 7" blow, 33" in 5 min., 50" in 10 min., lost packer seat - misrun

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CUSHION: 1758' Fresh Water (22.7 bbls)

Recovery: 1598' Highly gas cut water cushion (22.7 bbls)
3694' Highly gas cut mud (foam)
5292' Total Recovery

SAMPLE CHAMBER: 2500 cc Total Volume
Pressure: 810 psi
Recovery: 1100 cc mud, 4.1 cf gas

PRESSURES: None

REMARKS: The packers failed 9" into the first flow. The test was a misrun.

DST No. 7: 13,239 - 13,480 (Red River)
Test Type: Conventional, Open hole
DST Times: 15"-90"
BHT: 255 Degrees F
Company: Flopetrol Johnson, Bob Osborne, Tester

BLOW: IF: Opened with a 2" blow, 8" in 5 min., 20" in 10 min., 28" in 15 min.
ISI: Shut in with a 28" blow, 31" blow in 60 min., 45" in 90 min.
FF: Lost packer seat.

CUSHION: 1944' Fresh water (25.3 bbls)

Recovery: 1781' Water cushion (25.3 bbls)
4631' Gas cut mud (63.3 bbls)
6412' Total Recovery

SAMPLE CHAMBER: 2500 cc Total Volume
Pressure: 10 psi
Recovery: 2400 cc mud, .03 CF Gas

PRESSURES:	13,294(INSIDE)	13,300(OUTSIDE)
IHP:	7430	7438
IFP:	1000-1170	1015-1176
ISIP:	6270	6275
FFP:	Packers Failed	
FHP:	7430	7438

REMARKS: The initial flow and initial shut-in pressures appear valid. The packers failed at the beginning of the second flow period resulting in a misrun. All pressures are uncorrected field pressures.

DEVIATION

DEPTH	ANGLE	DIRECTION
510	1/2	S25W
1094	1/4	S43W
1620	1/4	N68E
2125	1/4	N26E
2572	0	N26E
2935	1/2	S79E
3510	3/4	S77E
3980	0	S77E
4030	3/4	S79E
4063	1-1/4	N88E
4094	2	N88E
4126	2-3/4	S88E
4158	3-1/4	S84E
4190	3-3/4	S74E
4221	4-1/2	S74E
4253	5	S67E
4285	5-3/4	S71E
4317	6-1/4	S67E
4348	6-3/4	S67E
4380	7-1/2	S63E
4411	8	S62E
4443	8-1/2	S62E
4540	9-3/4	S64E
4635	10-1/4	S64E
4794	11	S65E
4839	11-1/2	S63E
4985	11-3/4	S66E
5050	12-1/4	S65E
5145	12-3/4	S65E
5177	12-1/2	S66E
5225	12-1/2	S66E
5241	12	S65E
5336	11-1/2	S64E
5430	11-3/4	S64E
5559	10-3/4	S64E
5650	10	S65E
5712	10	S65E
5785	9-1/2	S64E
5848	9	S67E
5912	8-1/2	S68E
6004	7	S70E
6036	7-1/4	S69E
6099	7	S66E
6163	6-1/4	S66E
6226	5-1/2	S64E
6281	5	S67E
6383	4-1/4	S71E
6479	4	S66E
6542	3-3/4	S67E
6700	3	S57E
6828	2-1/2	S67E
6955	2	S57E
7455	1	S57E
7958	1	S42E-
TVD 7925.54		
8242	1/2	S55E
9170	1/2	S57E
9477	1/4	N1E
10270	0	
10968	1/4	N64W
12003	1-1/4	N43W
12570	1	S43W
12980	3/4	S59W
13450	3/4	N76W

The Corps. of Engineers #31-10 was drilled as a deviated hole. At 7958' the True Vertical Depth is 32.5' less than the drillers depth, the bottom hole location is 181 feet South and 387 feet East of the Surface Location or about 841 feet FNL and 1918 feet FEL.

basic Earth Science Systems, Inc.

P.O. Box 3088
Englewood, Colorado 80155

BIT RECORD

WELL NAME: Basic Corps of Engineers #31-10 LOCATION: Sec. 10-T153N-R101W COUNTY McKenzie STATE ND

Bit No.	Make	Type	Jet Size	Interval	Feet	Hours	Wt. 1000#	RPM	PP	Dullness Cond T	Dullness Cond B
1	HTC	J-1	14-14-13	90-2518	2,428	21-1/2	35	200	1800	8	4
1A	HTC	J-1	14-14-13	2518-3000	482	4	35	200	1800	1	1
1	HTC	J-1	10-10-10	3000-4000	1,000	17	45	120	1400	6	4
2	HTC	J-1	16-16-16	4000-4354	354	7 1/2	45	120	1000	1	1
3	HTC	J-2	16-16-16	4354-4521	167	7 3/4	45	80	1000	1	1
4	HTC	J-22	11-11-11	4521-5744	1,223	41 1/2	40	80	1800	4	4
5	HTC	J-22	11-11-11	5744-6880	1,136	72 1/4	40	90	2000	3	5
6	HTC	J-33	10-11-11	6880-7832	952	59 1/2	55	80	2000	5	8
7	HTC	J-33H	10-11-11	7832-8690	858	53	55	80	1600	5	8
8	HTC	J-33H	10-11-11	8690-9200	464	39 3/4	50	80	1700	2	2
9	HTC	J-33H	10-11-11	9200-9517	317	30 1/4	50	80	1700	8	5
10	HTC	J-33C	10-10-10	9517-9637	120	14 3/4	55	70	1800	8	2
11	HTC	J-33C	10-10-10	9637-9780	144	16	52	70	2000	6	2
12	HTC	J-33C	10-10-10	9780-10320	540	59	55	72	2000	8	8
13	HTC	J-33C	10-10-10	10320-10922	602	63	55	55	1900	4	6
14	HTC	J-33C	10-10-10	10922-11336	414	40 3/4	55	60	1800	4	2
15	HTC	J-33C	10-10-10	11336-12024	688	70 1/4	50	60	2000	2	2
16	STC	F-37RR	10-10-10	12024-12138	144	20 1/4	50	60	1950	3	8
17	HTC	J-55	10-10-10	12138-12692	554	46	50	60	2050	8	8
18	HTC	J-55	10-10-10	12692-12940	248	31	55	60	2050	8	8
19	HTC	J-33RR	10-10-11	12940-13015	75	8 3/4	50	60	1950	6	8
20	STC	F-3	10-10-11	13015-13393	378	39 1/2	55	60	1950	8	2
21	HTC	J-33RR	10-10-11	13393-13480	87	12 1/4	55	60	2075	2	8

MUD

DATE	DEPTH	WT	VIS	PV	YP	WL	CHLORIDES	SALT	NITRATES
6/21	202	8.6	35	7	4	18	120	-	-
6/22	1,925	9.3	46	10	13	16	1320	800	-
6/23	3,000	9.3	34	10	8	22	1452	880	-
6/24	3,000	9.9	105	26	32	14	1815	1100	-
6/25	-	-	-	-	-	-	-	-	-
6/26	3,000	8.6	27	2	1	-	7425	4500	-
6/27	4,000	9.0	31	3	4	12	1200	1980	-
6/28	4,354	9.1	34	5	5	11.6	1350	2227	-
6/29	4,521	8.8	36	7	7	16	2300	3795	-
6/30	5,093	9.2	34	7	8	14	1800	2970	-
7/1	5,470	9.3	38	10	7	15	2100	3465	-
7/2	5,744	9.2	38	6	9	13	2000	3300	-
7/3	6,077	9.3	40	9	13	16	2600	4290	-
7/4	6,390	10.0	26	-	-	22	200,000	330,000	-
7/5	6,729	10.1	32	6	5	26	202,000	333,300	-
7/6	6,928	10.3	36	10	8	36	198,000	326,700	-
7/7	7,292	10.3	34	10	7	28	194,000	320,100	-
7/8	7,578	10.4	35	10	8	24.2	199,000	328,350	-
7/9	7,844	10.5	36	11	9	16	197,000	325,050	-
7/10	8,116	10.5	38	14	11	11	194,000	320,100	-
7/11	8,572	10.5	38	13	11	14	194,000	320,100	-
7/12	8,830	10.5	37	13	11	14	193,000	310,450	-
7/13	9,056	10.5	38	10	10	14	194,000	320,100	120
7/14	9,154	10.5	38	12	10	15.6	193,000	318,450	100
7/15	9,200	10.6	40	13	10	9.8	195,000	321,750	100
7/16	9,313	10.6	40	13	10	12.4	193,000	318,450	75
7/17	9,517	10.7	37	14	9	14.6	191,000	315,100	60
7/18	9,637	10.8	38	14	8	15.4	192,000	316.800	50
7/19	9,780	10.7	38	13	9	16.8	195,000	321,750	35
7/20	9,923	10.7	39	14	12	16.4	195,000	321,750	25
7/21	10,068	10.6	40	12	10	15.2	196,000	323,400	85
7/22	10,278	10.5	39	12	11	15.0	196,000	323,400	75
7/23	10,414	10.4	39	12	10	15.8	197,000	325,000	80
7/24	10,471	10.5	39	13	10	16.8	196,000	323,400	80
7/25	10,572	10.6	39	13	9	15.2	197,000	325,050	95
7/26	10,777	10.5	40	12	11	14.6	197,000	325,050	90
7/27	10,922	10.6	38	11	10	11.0	191,000	315,100	95
7/28	10,984	10.5	40	13	10	11.2	196,000	323,400	100
7/29	11,057	10.5	39	12	10	14.0	196,000	323,400	85
7/30	11,132	10.5	40	10	12	13.0	198,000	326,700	85
7/31	11,186	10.5	42	12	10	15.0	198,000	326,700	60
8/1	11,336	10.5	42	12	11	16.0	194,000	320,100	50
8/2	11,369	10.5	42	12	13	16.0	196,000	323,400	85
8/3	11,569	10.6	42	13	12	17.0	196,000	323,400	100
8/4	11,642	10.7	40	14	10	15.6	197,000	325,050	75
8/5	11,930	10.6	42	14	13	14.6	197,000	325,050	60
8/6	12,024	10.7	43	15	12	14.0	194,000	320,100	80

Mud cont.

DATE	DEPTH	WT	VIS	PV	YP	WL	CHLORIDES	SALT	NITRATES
8/7	12,138	10.7	41	13	12	11.8	191,000	315,150	85
8/8	12,138	10.6	41	13	12	10.0	191,000	315,150	85
8/9	12,230	10.6	44	14	12	12.0	192,000	316,800	80
8/10	12,504	10.7	45	17	13	16.0	195,000	321,750	80
8/11	12,692	10.6	43	14	11	11.6	194,000	320,100	80
8/12	12,825	10.7	44	17	13	9.0	194,000	320,100	75
8/13	12,940	10.7	44	16	12	8.0	187,000	308,550	70
8/14	12,956	10.7	45	19	14	14.0	193,000	318,450	70
8/15	13,110	10.6	45	17	14	8.0	189,000	311,850	80
8/16	13,278	10.8	44	16	11	9.2	194,000	320,100	85
8/17	13,393	10.7	44	15	12	14.0	194,000	320,100	95
8/18	13,480	10.8	48	18	13	8.2	195,000	321,750	85
8/19	13,480	10.8	48	18	13	8.0	195,000	321,750	85
8/20	13,480	10.8	48	17	14	9.0	192,000	316,800	85

ELECTRIC LOGS

After reaching total depth, the following Schlumberger logs were run:

Dual Laterolog - Micro SFL: 0 - 13,474
Compenstated Neutron-Density: 8,750 - 13,442
Borehole Compensated Sonic-Gamma Ray: 2,968 - 13,460

SAMPLE DESCRIPTIONS

Descriptions begin at 8400 feet, in the Charles Formation. Unlagged 30 foot samples were caught by drilling crews from the base of surface casing to 8400 feet. Lagged 10 foot samples were caught by drilling crew personnel from 8400 feet to TD. Sample quality is poor to 8400 feet and fairly good below 9000 feet.

8,400 - 8,460	Salt
8,460 - 8,490	Limestone, brown, finely crystalline, 70% shale cavings: black, orange and gray-green.
8,490 - 8,505	Limestone, brown, microcrystalline, 70% shale cavings.
8,505 - 8,545	Salt, cavings.
8,545 - 8,575	Predominately cavings.
8,575 - 8,640	Salt.
8,640 - 8,660	Limestone, brown, microcrystalline, 50% shale cavings.
8,660 - 8,680	Limestone, as above, trace limestone, gray, pelletoidal, tight.
8,680 - 8,690	No sample, tripped for Bit #8.
8,690 - 8,700	Limestone, brown, microcrystalline.
8,700 - 8,720	Limestone, brown, crystalline, no visible porosity, trace limestone, gray, pelletoidal, tight.
8,720 - 8,760	Salt, about 80% cavings.
8,760 - 8,800	Limestone, brown, crystalline, mottled, trace anhydrite, gray, 40% cavings.
8,800 - 8,840	Limestone, brown, microcrystalline, 20% shale cavings.
8,840 - 8,860	Anhydrite, gray, 20% shale cavings.
8,860 - 8,884	Limestone, gray, microcrystalline.
8,884 - 8,934	Salt.

8,934 Base Last Charles Salt

8,934 - 9,042	Anhydrite, gray, interbedded with dolomite, brown-gray, finely crystalline.

Sample Descriptions cont.

Drilling break at 9,042 - 9,049 = 9 unit gas increase.

9,042 - 9,049	Limestone, light brown, finely crystalline, no visible porosity, some gold mineral fluorescence, no cut, no visible show.
9,049 - 9,062	Anhydrite, gray-white.

9,062 Midale

9,062 - 9,068	Limestone, brown, microsucrosic, no visible porosity, no cut or fluorescence, trace anhydrite, gray.

Drilling break at 9,068 - 9,096: 5 unit gas increase.

9,068 - 9,096	Limestone, brown, pelletoidal, tight, 40% limestone, brown, finely crystalline, tight, no shows.
9,096 - 9,150	Limestone, brown, microcrystalline, tight.
9,150 - 9,159	No sample - tripped for hole in drill pipe.
9,159 - 9,168	Limestone, brown, finely crystalline, trace limestone, gray, microsucrosic, tight, no shows.

9,168 Nesson

Drilling break at 9,168 - 9,176 - No gas increase.

9,168 - 9,170	Limestone, brown, finely crystalline, tight, trace limestone, gray, pelletoidal, tight, no shows, 15% cavings
9,170 - 9,175	Limestone, brown to gray, mottled, argillaceous, tight, no shows, limestone, gray, microsucrosic, tight, no shows (*cluster of 200 grains equals 0.25mm diameter*), *asphaltic* contamination - pipe dope?, gives poor yellow streaming cut to pinch cut samples.
9,175 - 9,180	Limestone, brown to gray, mottled, argillaceous, tight, trace limestone, sucrosic with brown oil stain, fair porosity, weak fluorescence when wet, good yellow-white streaming cut with a slight greenish tint, contamination?
9,180 - 9,185	Limestone, brown, finely crystalline tight.
9,185 - 9,200	Limestone, brown-gray, microcrystalline, no visible porosity.
9,200 - 9,230	Cavings after DST #1: 9,156 - 9,200.
9,230 - 9,260	Limestone, light brown, finely crystalline, firm, tight, no shows.

Sample Descriptions cont.

9,260 - 9,320	Limestone, light gray, microcrystalline, occasionally subsucrosic, slighty argillaceous, tight.
9,320 - 9,360	Limestone, light brownish gray, microcrystalline, slighty argillaceous tight.
9,360 - 9,410	Limestone, light brown to tan, cryptocrystalline, slighty fossiliferous-fragmental, tight.
9,410 - 9,430	Limestone, light brownish gray, microcrystalline, tight.
9,430 - 9,470	Limestone, as above, predominately tan-brown.
9,470 - 9,500	Limestone, gray to dark gray, microcrystalline, slighty mottled, no visible porosity.
9,500 - 9,517	No samples - tripped for Bit #10.
9,517 - 9,550	Limestone, as above, becoming light-medium gray.
9,550 - 9,590	Limestone, as above, some dark gray.
9,590 - 9,620	Limestone, light gray, microcrystalline, micritic, subchalky, tight.
9,620 - 9,637	No samples - tripped for hole in drill collars.
9,637 - 9,670	Limestone, light brownish gray, microcrystalline, slighty argillaceous, tight.
9,670 - 9,730	Limestone, as above, brown-gray, some light gray.
9,730 - 9,770	Limestone, light gray, microcrystalline, no visible porosity.
9,770 - 9,780	No samples - tripped for Bit #12.
9,780 - 9,870	Limestone, light gray-gray, microcrystalline, subchalky, slightly argillaceous, tight.
9,870 - 9,943	Limestone, brownish gray to gray, cryptocrystalline, slightly fragmental, tight.

<u>Drilling break at 9,943 - 9,944</u> - 42 unit gas increase.

9,943 - 9,944	Limestone, medium gray, microcrystalline, trace pinpoint porosity with dead oil stain, no fluorescence or cut.
9,944 - 9,980	Limestone, brownish gray, microcrystalline, slighty argillaceous, no visible porosity, trace limestone, dark gray, pyritic.

Sample Description cont.

9,980 - 10,000	Limestone, as above, light gray, tight.
10,000 - 10,017	No sample - tripped for hole in drill collars.
10,017 - 10,040	Limestone, dark gray, carbonaceous, abundant plant fragments, also limestone, grayish brown, microcrystalline tight.

Drilling break at 10,040 - 10,042: 54 unit gas increase.

10,040 - 10,042	Limestone, dark gray, microcrystalline, firm, slighty argillaceous, tight, no fluorescence or cut.
10,042 - 10,080	Limestone, light grayish brown, microcrystalline.
10,080 - 10,100	Limestone, as above, gray, carbonaceous, earthy texture.
10,100 - 10,120	Limestone, as above, trace vuggy porosity.
10,120 - 10,150	Limestone, light grayish brown, microcrystalline, no visible porosity.
10,150 - 10,200	Limestone, grayish brown, cryptocrystalline, tight.
10,200 - 10,210	Limestone, light brown, microcrystalline, slighty argillaceous.
10,210 - 10,240	No samples - shale shaker repairs.
10,240 - 10,290	Limestone, as above, light brown-gray, no visible porosity.
10,290 - 10,310	Limestone, light brownish gray, microcrystalline, no visible porosity.
10,310 - 10,320	No sample - tripped for Bit #13.
10,320 - 10,400	Limestone, light grayish brown, finely crystalline, no visible porosity.
10,400 - 10,418	Limestone, light gray to gray, finely crystalline, tight.

10,424 Bakken

10,418 - 10,441	Tripped for hole in drill collars at 10,441 feet. Samples not circulated out.
10,441 - 10,474	Shale, black, soft, slightly gritty, earthy.

10,474 - 10,480 Exshaw Shale: 240 unit gas increase.

10,474 - 10,480	Shale, black, moderately firm, carbonaceous.

Sample Descriptions cont.

10,480 - 10,500	Shale, black, carbonaceous.

10,500 Three Forks

10,500 - 10,510	Tripped for hole in drill collars at 10,510 feet, samples not circulated out.
10,510 - 10,550	Limestone, brownish gray, microcrystalline, tight, 80% black shale cavings.
10,550 - 10,570	Limestone, brown to tan with an orange cast., microcrystalline, no visible porosity.
10,570 - 10,600	Limestone, orange-white, microcrystalline to crystalline, no visible porosity, interbedded with shale, orange-brown, lavender.
10,600 - 10,630	Limestone, orange-white, microcrystalline, tight.
10,630 - 10,650	Limestone as above, some shale, purple and orange.
10,650 - 10,682	Limestone and shale, as above.

10,682 Nisku

10,682 - 10,706	Limestone, brownish gray, microcrystalline, no visible porosity, no shows.

Drilling break at 10,706 - 10,708: No gas increase.

10,706 - 10,708	Limestone, brownish gray, microcrystalline, tight.
10,708 - 10,734	Limestone, as above.

Drilling break at 10,734 - 10,738: 16 Unit gas increase.

10,734 - 10,740	Limestone, brownish gray, slightly mottled, microcrystalline, trace limestone, gray, microsucrosic, no visible porosity, no cut or fluorescence.
10,740 - 10,760	Limestone, light brownish gray, microcrystalline, no visible porosity, no shows.
10,760 - 10,776	Limestone, brownish gray, pelletoidal, tight, no shows.

10,776 Duperow

10,776 - 10,804	Limestone, light gray-brown, mottled, microcrystalline, no visible porosity, no cut or fluorescence. Ireton shale not discernible.

Sample description cont.

Drilling break at 10,804 - 10,834: No gas increase.

10,804 - 10,815	Limestone, light brown-gray, microcrystalline, no visible porostity, no shows.
10,815 - 10,830	Limestone, light brown, pelletoidal, cemented, no shows.
10,830 - 10,860	Limestone, light brown-gray, microcrystalline, no visible porosity, no shows.

Drilling break at 10,860 - 10,862: 20 unit gas increase.

10,860 - 10,862	Limestone, light brown-gray, microcrystalline, some mottled, no visible porosity, no shows.
10,862 - 10,875	Limestone, as above.
10,875 - 10,885	Limestone, light brown, microcrystalline, slightly mottled, no visisble porosity, no shows.
10,885 - 10,890	Limestone, as above, trace limestone, gray, pelletoidal, tight.
10,890 - 10,910	Limestone, light brown-gray, mottled, microcrystalline, tight, no shows, 20% cavings.
10,910 - 10,922	No sample-tripped for hole in drill collars.

Drilling break at 10,926 - 10,932: No gas increase.

10,926 - 10,932	Limestone, brown-gray, mottled, microcrystalline, no visible porosity, no cut or fluorescence.
10,932 - 10,958	Limestone, brown-gray, microcrystalline, tight.

Drilling break at 10,958 - 10,960: 28 unit gas increase.

10,958 - 10,965	Limestone, light brown, microsucrosic, slight stain, poor to fair porosity, 1% had blue-white fluorescence and a weak streaming cut. Poor sample show.
10,965 - 10,970	Limestone, light brown, microcrystalline, tight.
10,970 - 10,975	Limestone, light brown-gray, microcrystalline, trace dolomite, gray-white, sucrosic, poor porosity, no cut or fluorescence, no gas increase.
10,975 - 10,984	Limestone, as above.
10,984 - 11,000	Cavings from DST #2.
11,000 - 11,025	Limestone, brown, microcrystalline, tight.

Sample description cont.

11,025 - 11,040	Limestone, light brown-gray, microcrystalline, no visible porosity.

Drilling break at 11,040 - 11,046: 12 unit gas increase.

11,040 - 11,046	Limestone, light brown-gray, mottled, microcrystalline, some Dolomite, white, sucrosic, no cut or fluorescence.
11,046 - 11,060	Limestone, brown, finely crystalline, tight, no shows.
11,060 - 11,080	Limestone, as above.
11,080 - 11,090	Limestone, as above, trace Dolomite, brown, sucrosic, trace light brown stain, slight dull yellow fluorescence, no cut.

Drilling break at 11,090 - 11,104: 80 unit gas increase.

11,090 - 11,104	Dolomite Limestone, light brown, 15% sucrosic, fair porosity, no cut or fluorescence, trace Dolomite, sucrosic, yellow-green fluorescence, slow blue-white streaming cut.
11,104 - 11,116	Limestone, light gray-brown, finely crystalline, tight.

Drilling break at 11,116 - 11,126: 18 unit gas increase:

11,116 - 11,126	Dolomitic Limestone, light gray-brown, sucrosic, fair porosity, no cut or fluorescence. Pinch cuts have a trace of weak streaming cut - wet.
11,126 - 11,132	Limestone, light gray, finely crystalline, tight.
11,132 - 11,140	Cavings from DST #3.
11,140 - 11,150	Limestone, light gray-brown, finely crystalline, mottled, tight, no shows.
11,150 - 11,178	Limestone, as above, trace limestone, sucrosic, poor porosity, no shows.

Drilling break at 11,178 - 11,184: No gas increase.

11,178 - 11,184	Dolomitic limestone, light brown, sucrosic, trace dark oil stain, few pieces with a slow blue white cut and yellow green fluorescence.
11,184 - 11,200	Dolomitic limestone, as above, no shows.
11,200 - 11,222	Limestone, light brown-gray, finely crystalline, tight, no shows.

Sample description cont.

11,222 - 11,235	13' downward strap correction.
11,235 - 11,246	Limestone, as above.

11,246 Souris River

11,246 - 11,270	Limestone, light brownish gray, microcrystalline, dense, argillaceous.
11,270 - 11,300	Limestone, as above.
11,300 - 11,314	Limestone, as above, medium gray.
11,314 - 11,336	No samples - trip for hole in drill collars.
11,336 - 11,350	Poor samples - 85% cavings, shale, dark gray, silty.
11,350 - 11,400	Poor samples - 65% cavings, shale, dark gray, silty, some limestone, light gray, microcrystalline, tight.
11,400 - 11,448	Limestone, brown, microcrystalline, tight, trace limestone light brown, pelletoidal.
11,448 - 11,454	Limestone, light brown, microcrystalline, tight, possible 14 unit gas increase, no sample shows.
11,454 - 11,470	Limestone, light gray-brown, finely crystalline, tight.

11,476 Dawson Bay

11,470 - 11,488	Limestone, as above.

Drilling break at 11,488 - 11,498: 48 unit gas increase.

11,488 - 11,498	Dolomitic limestone, white to buff, finely crystalline, subchalky, no visible porosity, no cut or fluorescence in pinch cuts - no sample shows.
11,498 - 11,505	Limestone, white to buff, very finely crystalline, subchalky, tight.
11,505 - 11,550	Limestone, brown-buff, microcrystalline, tight.
11,550 - 11,569	No samples - tripped for hole in drill collars.
11,569 - 11,585	Limestone, light brown, microcrystalline, poor samples - 80% black shale cavings.

11,592 Prairie Salt

11,585 - 11,644	No samples - tripped for hole in drill collars.

Sample description cont.

11,644 - 11,790	Salt, samples are 80% Bakken shale cavings.

11,790 Winnepegosis

11,790 - 11,800	Salt, 50%, and shale cavings 50%.
11,800 - 11,824	Limestone, brown, microcrystalline, tight, and 60% shale cavings.
11,824 - 11,832	Poor samples - 60% cavings - 23 unit gas increase - limestone brown, microcrystalline, tight, no drilling break.
11,832 - 11,862	Limestone, as above. Poor samples, 50% cavings.
11,862 - 11,880	Limestone, as above, 29 unit gas increase, poor samples - 50% shale cavings - no drilling break.
11,880 - 11,900	Limestone, light brown-gray, finely crystalline, tight. 30% shale cavings.
11,900 - 11,920	Limestone, light brown, finely crystalline, mottled, slightly pelletoidal.
11,920 - 11,950	Limestone, as above.
11,950 - 11,979	Limestone, light brown, microcrystalline, tight.
11,979 - 11,981	Limestone, as above, 28 unit gas increase, no sample show.

11,982 Ashern

11,982 - 12,000	Limestone, dark brown, microcrystalline, tight, 20% cavings.
12,000 - 12,010	Shale, orange, and limestone, brown, tight.
12,010 - 12,024	No samples - tripped for a new bit.
12,024 - 12,050	Limestone, light brown-gray, microcrystalline, tight, interbedded with orange shale.
12,050 - 12,094	Limestone, brown, microcrystalline.

12,094 Interlake

Drilling break at 12,094 - 12,112: 40 unit gas increase.

12,094 - 12,112	Dolomitic limestone, light gray, some vuggy porosity, trace dolomite, white, sucrosic, very friable, no apparent stain, trace with good blue-white cut.

Sample decription cont.

12,112 - 12,126	Dolomitic limestone, light gray-white finely crystalline, tight.

Drilling break at 12,126 - 12,128: 16 unit gas increase.

12,126 - 12,128	Dolomite, light gray, finely crystalline, no visible porosity, dolomite fluorescence, no cut, trace dolomite, white, sucrosic, good porosity, friable, no shows.
12,128 - 12,138	Dolomite, as above.
12,138 - 12,146	Strap correction - 8' downward.
12,146 - 12,170	80% cavings from DST #4.
12,170 - 12,190	Dolomite, white, finely crystalline, some forams, no visible porosity, subchalky, tight.
12,190 - 12,200	Dolomite, as above.
12,200 - 12,210	Dolomite, as above, 80% shale cavings.
12,210 - 12,230	Dolomite, white, microcrystalline, trace forams, subchalky no visible porosity. 10% cavings.
12,230 - 12,250	Dolomite, as above, 50% cavings.
12,250 - 12,290	Dolomite, as above, 10% cavings, good samples.
12,290 - 12,320	Dolomite, as above.
12,320 - 12,350	Dolomite, buff - light brown, finely crystalline, subchalky, tight.
12,350 - 12,360	Dolomite, light brown, as above, trace dolomite, brown, sucrosic, no shows.
12,360 - 12,400	Dolomite, light brown, microcrystalline, medium soft, subchalky, tight.
12,400 - 12,440	Dolomite, as above.
12,440 - 12,470	Dolomite, white-buff, microcrystalline, subchalky, tight.
12,470 - 12,480	Dolomite, as above.
12,480 - 12,500	Dolomite, white - light brown, microcrystalline, no visible porosity, some dolomite, brown, sucrosic, tight.
12,500 - 12,550	Dolomite, as above, 5% cavings.
12,550 - 12,600	Dolomite, light brown, microsucrosic, no visible porosity.

Sample description cont

12,600 - 12,630	Dolomite, light brown, finely sucrosic, no visible porosity.
12,630 - 12,650	Dolomite, as above, becoming tan, microcrystalline, tight.
12,650 - 12,670	Dolomite, light brown-tan, finely crystalline to sucrosic, no visible porosity.
12,670 - 12,692	No samples - tripped for bit.
12,692 - 12,740	Dolomite, light brown, finely crystalline, granular, cemented, no visible porosity.
12,740 - 12,760	Dolomite, buff, finely crystalline, tight.
12,760 - 12,800	Dolomite, buff-brown, finely crystalline, tight.
12,800 - 12,850	Dolomite, dark brown, finely crystalline, slighty mottled, tight.
12,850 - 12,870	Dolomite, dark brown, finely crystalline, tight, some dolomite, dark brown, pelletoidal, trace dolomite, brown, sucrosic, tight.

Drilling break at 12,870 - 12,908: 59 unit gas increase.

12,870 - 12,890	Dolomite, dark brown, finely crystalline, no visible porosity, 5% dolomite, dark brown, sucrosic,, tight, no fluorescence or cut.
12,890 - 12,908	Dolomite, as above, trace dolomite, pelletoidal, tight, no shows.
12,908 - 12,940	Dolomite, brown, microcrystalline to granular, no visible porosity, no cut or fluorescence.

12,944 Stonewall

12,940 - 12,960	Dolomite, brown-dark brown, finely crystalline, tight, trace dolomite, brown, sucrosic, no shows.
12,960 - 12,970	Dolomite, as above, possible 26 unit gas increase-possible recycle gas.
12,970 - 13,000	Dolomite, brown, finely crystalline, tight, trace dolomite, dark brown-brown, mottled, tight.
13,000 - 13,015	No samples - tripped for a new bit.
13,015 - 13,050	Limestone, brown, microcrystalline, tight.
13,050 - 13,100	Limestone, as above.

Sample description cont.

13,100 - 13,128	Limestone, brown-gray, microcrystalline, argillaceous, tight.

13,128 Stoney Mountain

13,128 - 13,150	Shale, light gray, calcareous.
13,150 - 13,184	Shale, as above.

13,184 Red River

13,184 - 13,200	Dolomite, brown, microcrystalline, no visible porosity, tight.
13,200 - 13,220	Dolomite, as above.
13,220 - 13,230	Anhydrite, gray-white.

Drilling break at 13,230 - 13,244: 5 unit gas increase.

13,230 - 13,248	Dolomite, brown-gray, microcrystalline, tight; about 5% - dolomite, brown, microsucrosic, no visible porosity, no cut or fluorescence.

13,248 "B" Anhydrite

13,248 - 13,258	Dolomite, brownish gray, microcrystalline, slightly mottled, tight, trace anhydrite, gray-white.

Drilling break at 13,258 - 13,260: 29 unit gas increase.

13,258 - 13,266	Dolomite, brown, microcrystalline, no visible porosity, no shows. Circulate samples at 13,264.

Drilling break at 13,266 - 13,274: 47 unit gas increase.

13,266 - 13,274	Dolomite, brown, microcrystalline, subchalky, no visible porosity, no cut or fluorescence.
13,274 - 13,283	Dolomite, as above, circulated samples 120 min @ 13,283'.
13,183 - 13,306	Dolomite, brown, finely crystalline, tight, trace anhydrite, gray-white.

13,296 "C" Anhydrite

Drilling break at 13,306 - 13,310: 24 unit gas increase.

13,306 - 13,310	Dolomite, brown, finely crystalline, tight, trace dolomitic limestone, brown, mottled, pelletoidal, no cut or fluorescence.

Sample description cont.

13,310 - 13,318	Dolomite, as above.

Drilling break at 13,318 - 13,324: 19 unit gas increase.

13,318 - 13,324	Dolomite, brown-gray, microcrystalline, slightly mottled, tight, trace dolomite, microsucrosic, no visible porosity, no cut or fluorescence.
13,324 - 13,332	Dolomite, brown, microcrystalline, tight, no shows, circulated samples @ 13,332.
13,332 - 13,340	Dolomite, brown, microcrystalline, tight.
13,340 - 13,360	Dolomite, brown-gray, finely crystalline, mottled, tight, no cut or fluorescence.
13,360 - 13,384	Dolomite, brown-light brown, finely crystalline, trace pelletoidal micrite, tight.
13,384 - 13,393	No samples - tripped for a new bit.
13,393 - 13,420	Dolomite, light brown-gray, microcrystalline, tight; trace dolomite, gray, granular.
13,420 - 13,450	Limestone, light gray, dolomitic, tight.
13,450 - 13,480	Dolomite, light brown-gray, microcrystalline, tight.
13,480 -	Driller's Total Depth.
13,475 -	Schlumberger Total Depth.

WELL HISTORY

DATE	6 AM DEPTH & OPERATION	DRILLING PROGRESS: PREVIOUS 24 HOURS ACTIVITIES
6/21	202' Drilling	Drilled 112' in 2 1/2 hours. Finished rigging up, spudded at 11:00 PM 6-20-86, drilled with Bit #1, HTC 12-1/4" J-1 from 90' to 202'. (*Previously set 16" csg @ 90')
6/22	1925' Drilling	Drilled 1723' in 14-1/2 hrs., hit water flow at 1600'. Drilling with fresh water, built mud to 9.3 and vis. to 46. Flow stopped.
6/23	3000' Rng Csg	Drilled 1075' in 10-3/4 hrs. Lost circulation at 2125 feet.
6/24	3000' Rng Csg	Ran 14 jts. of Csg., could no go any further. TOH with CSG. TIH with drill pipe to condition hole.
6/25	3000' W.O.C.	Ran 75 jts of 9-5/8" casing. Set @ 2954' with 850 sacks of Howco Lite and 250 sacks of Class A cement.
6/26	3000' Drlg Cement	Nippled up and tested BOP. Picked up 14 drill collars.
6/27	4000' Rng Survey	Drilled 1000' in 11-1/2 hrs. Circulated hole for Dynadrill.
6/28	4354' Tripping	Drilled 354' in 7-1/2 hrs. Picked up Dynadrill.
6/29	4521' Tripping	Drilled 167' in 7-3/4 hrs. Layed down mud motor, bent sub, bit sub., 2 jts DP, picked up NBIBS, bit sub, tripped to 4400', W & R to 4500'.
6/30	5093' Wash & Ream	Drilled 572' in 14-1/2 hrs. Tripped to change out BHA.
7/1	5470' Drilling	Drilled 377' in 16-1/2 hrs.
7/2	5744' Tripping	Drilled 274' in 12 hrs. Rig repair, pump drive chain.
7/3	6077' Drilling	Drilled 333' in 16 hrs.

Well History cont.

7/4	6390' Drilling	Drilled 313' in 20-3/4 hrs. Changed to salt water mud system.
7/5	6729' Drilling	Drilled 339' in 21 hrs.
7/6	6928' Drilling	Drilled 199' in 18-1/4 hrs. Worked BOP Rams.
7/7	7292' Drilling	Drilled 364' in 22-3/4 hrs.
7/8	7578' Drilling	Drilled 286' in 16 hrs. Tripped for leak in drill collar.
7/9	7844' Drilling	Drilled 266' in 18-1/2 hrs. Tripped for bit #7, changed out key seat wipers.
7/10	8116' Drilling	Drilled 272' in 23-1/4 hrs.
7/11	8572' Drilling	Drilled 456' in 23 hrs.
7/12	8830' Drilling	Drilled 254' in 16-3/4 hrs. Changed out 10 cracked collars.
7/13	9056' Drilling	Drilled 226' in 20 hrs.
7/14	9154' Inspecting Drill Collars	Drilled 98' in 8-3/4 hrs. Layed down 13 cracked collars.
7/15	9200' Rng DST #1	Drilled 46' in 3-1/2 hrs. Running DST #1 - interval 9156' to 9200'.
7/16	9313' Drilling	Drilled 113' in 8-1/2 hrs.
7/17	9517' Tripping	Drilled 204 feet in 21-3/4 hrs. Tripped for bit #10.
7/18	9637' Tripping	Drilled 120 feet in 14-3/4 hrs. Tripped for bit #11.
7/19	9780' Tripping	Drilled 143' in 15-3/4 hrs. Tripped for hole in drill collars.
7/20	9923' Drilling	Drilled 144' in 15-1/2 hrs. Changed out and picked up 4 - 7" drill collars.
7/21	10,068' Drilling	Drilled 145' in 15-3/4 hrs. Tripped for cracked collars.
7/22	10,278' Drilling	Drilled 210' in 23-1/4 hrs.

Well History cont.

7/23	10,414' Drilling	Drilled 136' in 15 hrs. Tripped for hole in drill collars.
7/24	10,471' Tripping	Drilled 57' in 5-1/2 hrs. Tripped for hole in drill collars.
7/25	10,577' Drilling	Drilled 101' in 10-1/2 hrs. Tripped for hole in drill collar.
7/26	10,777' Drilling	Drilled 205' in 22-1/2 hrs.
7/27	10,922' Tripping	Drilled 145' in 17.5 hrs., tripped for hole in drill pipe.
7/28	10,984' Rng. DST #2	Drilled 62' in 6 hrs. Running DST #2: 10,920 - 10,984.
7/29	11,057' Drilling	Drilled 73' in 6-1/2 hrs. Finished Running DST #2.
7/30	11,132' Rng. DST #3	Drilled 75' in 6-3/4 hrs. Running DST #3: 11,087 - 11,132.
7/31	11,186' Drilling	Drilled 54' in 5-1/2 hrs.
8/1	11,336' Tripping	Drilled 150' in 16 hrs. Tripped for hole in drill collars. Worked stuck drill pipe.
8/2	11,369' Drilling	Drilled 33' in 5 hrs. Tripped out hole for 2 cracked drill collars.
8/3	11,569' Tripping	Drilled 200' in 23-1/2 hrs. Tripping for cracked drill collar.
8/4	11,642' Tripping	Drilled 73' in 5-1/2 hrs. Tripped out and layed down 6 drill collars.
8/5	11,922' Drilling	Drilled 280' in 21 hrs.
8/6	12,024' Tripping	Drilled 102' in 15-1/2 hrs. Tripped for bit #7 @ 12,024.
8/7	12,138' Circ. Samples	Drilled 114' in 20-1/4 hrs. Prep to run DST #4.
8/8	12,138' Rng. DST #4	Running DST #4: 12,088' - 12,138'. 8' downward strap correction.
8/9	12,202' Drilling	Drilled 56' in 4-1/2 hrs. Finished running DST #4.

Well History cont.

8/10	12,474'	Drilling	Drilled 272' in 23-1/2 hrs.
8/11	12,692'	Tripping	Drilled 218' in 18 hrs. Bit locked up.
8/12	12,820'	Drilling	Drilled 128' in 15-1/4 hrs.
8/13	12,940'	Rng DST #5	Drilled 120' in 15-3/4 hrs. Running DST #5.
8/14	12,945'	Drilling	Drilled 5' in 1/2 hour. Running DST #5.
8/15	13,076'	Drilling	Drilled 131' in 14-1/4 hrs. Rerun bit locked up.
8/16	13,278'	Circ. Samples	Drilled 182' in 21 hrs. Circulated samples @ 13,264'.
8/17	13,393'	Tripping	Drilled 115' in 12-1/2 hrs. Tripped for for Bit #21.
8/18	13,480'	Tripping	Drilled 87' in 12 hrs. Prepared to run Schlumberger logs.
8/19	13,480'	Conditioning Hole	Preparing to run DST #6: 13,252 - 13,480.
8/20	13,480'	Conditioning Hole	Preparing to run DST #7: 13,239 - 13,480.
8/21	13,480'	Conditioning Hole	Preparing to run 5-1/2" casing.

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

11920

WESLEY D. NORTON
Chief Enforcement Officer

F. E. WILBORN
Deputy Enforcement Officer

CLARENCE G. CARLSON
Geologist

CHARLES KOCH
Engineering Dept.

DOREN DANNEWITZ
Field Supervisor

KEN KALLESTAD
Reclamation Sup.

September 15, 1986

Mr. Jeffery E. Jones
Basic Earth Science Systems
P.O. Box 3088
Englewood, Colorado 80155

RE: Basic Game & Fish #34-3
SW SE Section 3-T153N-R101W
Well File No. 11745

Basic Corps of Engineers #31-10
NW NE Section 10-T153N-R101W
Well File No. 11920

Rosebud #22-11
SE NW Section 11-T153N-R101W
Well File No. 11549

Dear Mr. Jones:

Upon a recent inspection of the above captioned wells, I noted the following problems:

Basic Game & Fish #34-3 - reclamation of the drilling pit must be completed immediately. The ignitor is not working and must be repaired as soon as possible. Additionally, there is an area around the production equipment that is very weedy and is a potential fire hazard.

Rosebud #22-11 - ignitor was not working. Also weeds on the location that need to be removed.

Basic Corps of Engineers #31-10 - the drilling pit mud cuttings must be hauled out to an approved disposal pit and the drilling pit on location reclaimed immediately.

Please take care of these problems as soon as possible. If you have any questions, feel free to contact our office.

Sincerely,

Tom Delling rcb

Tom Delling
Field Inspector

TD/rls

11920

REPORT NO. 13712F
PAGE NO. 1

TEST DATE: 8-20-86

WELL PERFORMANCE TESTING™ REPORT

A Production System Analysis (NODAL™) Based On Model Verified™ Interpretation

SEP 1986 RECEIVED BD OIL & GAS DIVISION

FLOPETROL JOHNSTON Schlumberger

Company: BASIC EARTH SCIENCE

Well: CORPS. 31-10

TEST IDENTIFICATION

Test Type ..... MFE OH DST
Test No. 7
Formation ..... RED RIVER
Test Interval (ft) ..... 13239 - 13480
Reference Depth .....

WELL LOCATION

Field .....
County ..... MC KENZIE
State ..... NORTH DAKOTA
Sec/Twn/Rng 10T153NR101
Elevation (ft) .....

HOLE CONDITIONS

Total Depth (MD/TVD) (ft) 13480/13480
Hole Size (in) 8 3/4
Casing/Liner I.D. (in) .....
Perf'd Interval/Net Pay (ft).. --/7
Shot Density/Diameter (in) ...

MUD PROPERTIES

Mud Type ..... SALT STARCH
Mud Weight (lb/gal) 10.8
Mud Resistivity (ohm.m) ..... 0.04 @ 60 DEG.F
Filtrate Resistivity (ohm.m).. 0.05 @ 60 DEG.F
Filtrate Chlorides (ppm) 192000

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi) 7463
Gas Cushion Type ..... NONE
Surface Pressure (psi) ..... --
Liquid Cushion Type ..... FRESH WATER
Cushion Length (ft) 1944

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D. (in) ... 12931/3.83
Collar Length (ft)/I.D. (in).. 270/2.50
Packer Depths (ft) 13239
Bottomhole Choke Size (in) ... 15/16
Gauge Depth (ft)/Type ..... 13300/MECH.

NET PIPE RECOVERY

Volume	Fluid Type	Properties
*5.98 BBLS.	**OIL	ASSUMED 45 DEG. API
ACTUAL RECOV		
4631 FT.	GAS CUT MUD	
1781 FT.	GC WTR.CUSH	

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
0.229 SCF	GAS	CORRECTED TO PWF
2400 CC	MUD	0.04 @ 60 DEG. F
		190000 PPM CL.
Pressure: 10	GOR: ***2601	GLR: ***2601

INTERPRETATION RESULTS

Model of Behavior ..... HOMOGENEOUS
Fluid Type Used for Analysis . *OIL
Reservoir Pressure (psi) 6469
Transmissibility (md.ft/cp) .. 244.92
Effective Permeability (md) .. 4.83
Skin Factor/Damage Ratio ..... 1.46 / 1.33
Storativity Ratio .....
Interporosity Flow Coeff. ....
Distance to an Anomaly (ft) ..
Radius of Investigation (ft)..
Potentiometric Surface (ft) ..

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) ..... ASSUMED 45
Basic Solids (%) .....
Gas Gravity ..... 0.65 ASSUMED
Water Cut (%) ..... ASSUMED 0.0
Viscosity (cp) 0.138
Total Compressibility (1/psi). 5.39E-05
Porosity (%) 16
Reservoir Temperature (F) 255
Form.Vol.Factor (bbl/STB) .... GIVEN 2.467

PRODUCTION RATE DURING TEST: 624 BOPD 0-AVG.

COMMENTS:

THE PACKER SEAT FAILED DURING THE FINAL FLOW PERIOD. THE INITIAL SHUT-IN PERIOD DATA WAS ANALYZED USING HORNER METHOD TO DETERMINE RESERVOIR PARAMETERS OF KH/U, P*, AND SKIN - ASSUMING PRODUCTION OF 45 DEG. API OIL, AND GAS-LIQUID RATIO OF 2601 SCF/BBL. THE RESERVOIR PARAMETERS CALCULATED AND GIVEN ABOVE SHOULD BE USED WITH EXTREME CAUTION. AS THERE WAS ACTUALLY NO HYDROCARBON RECOVERY DURING THIS TEST. FOR THIS REASON, NO COMPLETION DESIGN SENSITIVITY PLOTS HAVE BEEN GENERATED FOR THIS TEST DATA.

REPORT NO. 13712F
PAGE NO. 2

SEQUENCE OF EVENTS

FLOPETROL JOHNSTON
Schlumberger

EVENT NO.	DATE	TIME (HR:MIN)	DESCRIPTION	ELAPSED TIME (MINS)	BHP (PSIA)	BLOW (IN.-H2O)
1	8-20-86	1013	SET PACKER	-3.16	7463	—
2		1015	OPENED TOOL-1/8"BUBBLHOSE	0.00	1078	2" BLOW
		1020				8" BLOW
		1025				20" BLOW
3		1030	CLOSED FOR INITIAL SHUTIN	13.79	1224	28" BLOW
4		1054	PACKERS APPARENTLY		6266	—
			BEGINNING TO FAIL. (ONLY			
			SHUT-IN DATA UP TO THIS			
			POINT HAS BEEN ANALYZED.)			
		1200	FINISHED SHUT-IN			
		1200	RE-OPENED TOOL			
		1201	PACKER SEAT FAILED - MADE			
			AN ATTEMPT TO RE-SET, AND			
			TRIPPED OUT OF HOLE.			
5		1218	FINAL HYDROSTATIC PRESSR.		7482	--
		1430	STARTED REVERSING REC'VY			
		1630	FINISHED REVERSING REC'VY			

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 13712F
INSTRUMENT NO. J-2130
DEPTH : 13300 FT
CAPACITY : 9000 PSI
PORT OPENING :

COMPANY : BASIC EARTH SCIENCE
WELL : CORPS 31-10

FLOPETROL JOHNSTON

****
* WELL TEST DATA PRINTOUT *
****

FIELD REPORT # : 13712F

COMPANY : BASIC EARTH SCIENCE
WELL : CORPS 31-10

INSTRUMENT # : J-2130
CAPACITY [PSI] : 9000.
DEPTH [FT] : 13300.0
PORT OPENING :
TEMPERATURE [DEG F] : 255.0

LABEL POINT INFORMATION
****

#	TIME OF DAY HH:MM:SS	DATE DO-MM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA
1	10:11:50	20-AU	HYOROSTATIC MUO	-3.16	7463
2	10:15: 0	20-AU	START FLOW	0.00	1078
3	10:28:47	20-AU	END FLOW & START SHUT-IN	13.79	1224
4	10:54:46	20-AU	END SHUT-IN	39.77	6266
5	12:18:40	20-AU	HYDROSTATIC MUD	123.67	7482

SUMMARY OF FLOW PERIODS
****

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	0.00	13.79	13.79	1078	1224

SUMMARY OF SHUTIN PERIODS
****

PERIOD	START ELAPSED TIME,MIN	END ELAPSEO TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	13.79	39.77	25.98	1224	6266	1224	13.79

TEST PHASE : FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
10:15: 0	20-AU	0.00	0.00	1078
10:20: 0	20-AU	5.00	5.00	1108
10:25: 0	20-AU	10.00	10.00	1173
10:28:47	20-AU	13.79	13.79	1224

TEST PHASE : SHUTIN PERIOD # 1
FINAL FLOW PRESSURE [PSIA] = 1224
PRODUCING TIME [MIN] = 13.79

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
10:28:47	20-AU	13.79	0.00	1224	0	
10:29:47	20-AU	14.79	1.00	1994	770	1.170
10:30:47	20-AU	15.79	2.00	2811	1587	0.897
10:31:47	20-AU	16.79	3.00	3709	2485	0.748
10:32:47	20-AU	17.79	4.00	4764	3540	0.648
10:33:47	20-AU	18.79	5.00	5380	4156	0.575
10:34:47	20-AU	19.79	6.00	5674	4450	0.518
10:35:47	20-AU	20.79	7.00	5828	4604	0.473
10:36:47	20-AU	21.79	8.00	5936	4712	0.435
10:37:47	20-AU	22.79	9.00	5995	4771	0.404
10:38:47	20-AU	23.79	10.00	6042	4818	0.376
10:40:47	20-AU	25.79	12.00	6101	4877	0.332
10:42:47	20-AU	27.79	14.00	6144	4920	0.298
10:44:47	20-AU	29.79	16.00	6177	4953	0.270
10:46:47	20-AU	31.79	18.00	6203	4979	0.247
10:48:47	20-AU	33.79	20.00	6222	4998	0.228
10:50:47	20-AU	35.79	22.00	6240	5016	0.211
10:52:47	20-AU	37.79	24.00	6255	5031	0.197
10:54:46	20-AU	39.77	25.98	6266	5042	0.185

HORNER PLOT
FIELD REPORT NO. 1371ZF
INSTRUMENT NO. J-2130
COMPANY : BASIC EARTH SCIENCE
WELL : CORPS 31-10
SHUTIN #1 : FINAL FLOW PRESSURE: 1223.9 PSIA
PLOT ELAPSED TIME RANGE: 13.9 TO 39.8 MIN
PLOT ΔT TIME RANGE: 0.2 TO 26.0 MIN
PRODUCING TIME (Tp): 13.8 MIN
ΔT (MIN)
0.14
0.22
0.36
0.57
0.93
1.5
2.6
4.6
9.1
23
∞
SHUTIN PRESSURE [PSIA]
7500
6800
6000
5200
4400
3600
2800
2000
1200
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
LOG [Tp+ΔT / ΔT]
1
M = -1022
P* = 6455 PSIA
FLOPETROL JOHNSTON
Schlumberger

LOG LOG PLOT

COMPANY : BASIC EARTH SCIENCE
WELL : CORPS 31-10
FIELD REPORT NO. 13712F
INSTRUMENT NO. J-2130

SHUTIN #1 :
FINAL FLOW PRESSURE (PWF): 1223.9 PSIA
PLOT ELAPSED TIME RANGE: 13.9 TO 39.8 MIN
PLOT ΔT TIME RANGE: 0.2 TO 26.0 MIN

FLOPETROL JOHNSTON
Schlumberger

11920

REPORT NO. 13711F
PAGE NO. 1

TEST DATE:
19-AUG-86

WELL PERFORMANCE TESTING™ REPORT

A Production System Analysis (NODAL™)
Based On Model Verified™ Interpretation

SEP 1986 RECEIVED ND OIL & GAS DIVISION

FLOPETROL JOHNSTON
Schlumberger

Company: BASIC EARTH SCIENCE

Well: CORPS. 31-10

TEST IDENTIFICATION

Test Type ..... MFE OH DST
Test No. 5
Formation ..... RED RIVER
Test Interval (ft) ..... 13252 - 13480
Reference Depth .....

WELL LOCATION

Field .....
County ..... MC KENZIE
State ..... NORTH DAKOTA
Sec/Twn/Rng 10T153NR101
Elevation (ft) .....

HOLE CONDITIONS

Total Depth (MD/TVD) (ft) ....
Hole Size (in) 8 3/4
Casing/Liner I.D. (in) .....
Perf'd Interval/Net Pay (ft).. --/--
Shot Density/Diameter (in) ...

MUD PROPERTIES

Mud Type ..... SALT STARCH
Mud Weight (lb/gal) 10.8
Mud Resistivity (ohm.m) ..... 0.04 @ 60 DEG.F
Filtrate Resistivity (ohm.m).. 0.05 @ 60 DEG.F
Filtrate Chlorides (ppm) 200000

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi) 7474
Gas Cushion Type ..... NONE
Surface Pressure (psi) ..... --
Liquid Cushion Type ..... FRESH WATER
Cushion Length (ft) 1758

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D. (in) ... 12942 / 3.83
Collar Length (ft)/I.D. (in).. 270 / 2.50
Packer Depths (ft) 13252
Bottomhole Choke Size (in) ... 15/16
Gauge Depth (ft)/Type ..... 13284/MECH.

NET PIPE RECOVERY

Volume	Fluid Type	Properties
1598 FT.	HGC WTRCUSH	
3694 FT.	HGASCUT MUD	

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
4.1 SCF	GAS	
1100 CC	MUD	0.04 @ 60 DEG. F
		194000 PPM CL.
Pressure: 810	GOR: --	GLR: --

INTERPRETATION RESULTS

Model of Behavior .....
Fluid Type Used for Analysis .
Reservoir Pressure (psi) .....
Transmissibility (md.ft/cp) ..
Effective Permeability (md) ..
Skin Factor/Damage Ratio .....
Storativity Ratio .....
Interporosity Flow Coeff. ....
Distance to an Anomaly (ft) ..
Radius of Investigation (ft)..
Potentiometric Surface (ft) ..

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) .....
Basic Solids (%) .....
Gas Gravity .....
Water Cut (%) .....
Viscosity (cp) .....
Total Compressibility (1/psi).
Porosity (%) .....
Reservoir Temperature (F) 255
Form.Vol.Factor (bbl/STB) ....

PRODUCTION RATE DURING TEST: --

COMMENTS:

UNSUCCESSFUL TEST; PACKER SEAT FAILURE.

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REPORT NO. 13711F
PAGE NO. 2

SEQUENCE OF EVENTS

FLOPETROL JOHNSTON
Schlumberger

EVENT NO.	DATE	TIME (HR:MIN)	DESCRIPTION	ELAPSED TIME (MINS)	BHP (PSIA)	BLOW (IN.-H2O)
1	8-19-86	0628	SET PACKER	-2.00	7474	--
2		0630	OPENED TOOL-1/8"BUBBLHOSE	0.00	1015	7" BLOW
3		0635	LOST PACKER SEAT	5.00	1641	30" BLOW
4		0645	FINAL HYDROSTATIC MUD		7474	--
			UNSUCCESSFUL TEST; PACKER			
			SEAT FAILURE.			

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BOTTOM HOLE PRESSURE AND TIME DAT

INSTRUMENT NUMBER	CAPACITY (P.S.I.)	DEPTH
J-2130	9000#	13284 FT.
PORT OPENING	**BOTTOM HOLE TEMPERATURE**	**FIELD REPORT NUMBER**
OUTSIDE	255°F	13711 F

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	7474		
INITIAL FLOW (1)	2	1015		
INITIAL FLOW (2)				
INITIAL SHUT-IN				
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)				
FINAL FLOW (2)				
FINAL SHUT-IN				
FINAL HYDROSTATIC MUD	4	7474		
REMARKS: LOST PACKER SEAT	3	1641		

UNSUCCESSFUL TEST; PACKER SEAT FAILURE

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

11920

WESLEY D. NORTON
Chief Enforcement Officer

F. E. WILBORN
Deputy Enforcement Officer

CLARENCE G. CARLSON
Geologist

CHARLES KOCH
Engineering Dept.

DOREN DANNEWITZ
Field Supervisor

KEN KALLESTAD
Reclamation Sup.

August 29, 1986

Ms. Judy Burke
Basic Earth Science Systems, Inc.
P.O. Box 3088
Englewood, CO 80155-3088

RE: Confidential Well Status
Basic Corps of Engineers #31-10
NW¼NE¼ Sec.10-153N-101W, McKenzie
Permit No. 11920

Dear Ms. Burke:

Your request for confidential status of all information furnished to the Enforcement Officer, or his representatives, is hereby granted. Such information shall remain confidential for six months commencing on the date such information, except production data, is required by statute and rule to be filed.

If information obtained during the drilling of the well is to be confidential, the six months period begins on the date the well is spudded.

Confidential status notwithstanding, the Enforcement Officer and his representatives shall have access to all well records wherever located. Your company personnel, or any person performing work for your company, shall permit the Enforcement Officer and his representatives to come upon any lease, property, well, or drilling rig operated or controlled by them, complying with all safety rules, and to inspect the records and operation of such wells, and to have access at all times to any and all records of wells.

The Commission's field personnel periodically inspect producing and drilling wells. Any information regarding such wells shall be made available to them at any time upon request. The information so obtained by the field personnel shall be maintained in strict confidence and shall be available only to the Commission and its staff.

Sincerely yours,

F. E. Wilborn

F. E. Wilborn
Deputy Enforcement Officer

FEW:cah

11930

basic Earth Science Systems, Inc.

P.O. Box 3088
Englewood, Colorado
80155-3088
(303) 792-5230

August 26, 1986

North Dakota State Industrial Commission
Oil and Gas Division
900 East Boulevard
Bismarck, ND 58505

Re: Basic Corps of Engineers #31-10
Township 153 North-Range 101 West
Section 10: NW¼NE¼
McKenzie County, ND
Permit No. 11920

Gentlemen:

Basic Earth Science Systems, Inc. is in the process of drilling the above-referenced well. We are drilling this well as a tight hole and will appreciate your assistance in keeping any information you receive as confidential.

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

Sincerely,

Basic Earth Science Systems, Inc.

Judy Burke

Judy Burke
Lease Analyst/Permit Coordinator

encl.

11920

REPORT NO. 13710F
PAGE NO. 1

TEST DATE: 13-AUG-86

WELL PERFORMANCE TESTING™ REPORT

A Production System Analysis (NODAL™)
Based On Model Verified™ Interpretation

RECEIVED

FLOPETROL JOHNSTON
Schlumberger

Company: BASIC EARTH SCIENCE

Well: BASIC CORPS. OF ENGINEERS #31-10

TEST IDENTIFICATION

Test Type ..... MFE OH DST
Test No. 5
Formation ..... INT'LK./STNWALL
Test Interval (ft) ..... 12866 - 12940
Reference Depth ..... KELLY BUSHING

WELL LOCATION

Field .....
County ..... MC KENZIE
State ..... NORTH DAKOTA
Sec/Twn/Rng 10T153NR101
Elevation (ft) .....

HOLE CONDITIONS

Total Depth (MD/TVD) (ft) .... 12940 / 12940
Hole Size (in) 8 3/4
Casing/Liner I.D. (in) .....
Perf'd Interval/Net Pay (ft).. --/38
Shot Density/Diameter (in) ...

MUD PROPERTIES

Mud Type ..... GEL STARCH
Mud Weight (lb/gal) 10.7
Mud Resistivity (ohm.m) ..... 0.05 @ 60 DEG.F
Filtrate Resistivity (ohm.m).. 0.04 @ 60 DEG.F
Filtrate Chlorides (ppm) 187000

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi) 7255
Gas Cushion Type ..... NONE
Surface Pressure (psi) ..... --
Liquid Cushion Type ..... FRESH WATER
Cushion Length (ft) 720

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D. (in) ... 12139 / 3.83
Collar Length (ft)/I.D. (in).. 687 / 2.50
Packer Depths (ft) 12866
Bottomhole Choke Size (in) ... 15/16
Gauge Depth (ft)/Type ..... 12898/MECH.

NET PIPE RECOVERY

Volume	Fluid Type	Properties
319 FT.	GC WTR.CUSH	
695 FT.	SGCWC MUD	0.04 @ 60 DEG. F
		196000 PPM CL.

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
5.56 SCF	GAS	
1720 CC	WATER	0.05 @ 60 DEG. F.
		196000 PPM CL.
Pressure: 2100	GOR: --	GLR: 514

INTERPRETATION RESULTS

Model of Behavior .....
Fluid Type Used for Analysis .
Reservoir Pressure (psi) .....
Transmissibility (md.ft/cp) ..
Effective Permeability (md) ..
Skin Factor/Damage Ratio .....
Storativity Ratio .....
Interporosity Flow Coeff. ....
Distance to an Anomaly (ft) ..
Radius of Investigation (ft)..
Potentiometric Surface (ft) ..

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) .....
Basic Solids (%) .....
Gas Gravity .....
Water Cut (%) .....
Viscosity (cp) .....
Total Compressibility (1/psi).
Porosity (%) 10
Reservoir Temperature (F) 258
Form.Vol.Factor (bbl/STB) ....

PRODUCTION RATE DURING TEST: --

COMMENTS:

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REPORT NO. 13710F
PAGE NO. 2

SEQUENCE OF EVENTS

FLOPETROL JOHNSTON
Schlumberger

EVENT NO.	DATE	TIME (HR:MIN)	DESCRIPTION	ELAPSED TIME (MINS)	BHP (PSIA)	BLOW (IN.-H2O)
1	8-13-86	1228	SET PACKER	-2.00	7255	--
2		1230	OPENED TOOL-1/8"BUBBLHOSE	0.00	429	1" BLOW
		1235				2" BLOW
		1240				2.25"BLOW
3		1245	CLOSED FOR INITIAL SHUTIN	14.27	429	4.5" BLOW
4		1345	FINISHED SHUT-IN	78.30	4789	1" BLOW
5		1345	RE-OPENED TOOL	78.30	465	2" BLOW
		1355				5" BLOW
		1405				6" BLOW
		1415				6" BLOW
		1425				7" BLOW
		1435				6" BLOW
		1445				6" BLOW
		1505				6" BLOW
		1515				5.5" BLOW
6		1515	CLOSED FOR FINAL SHUT-IN	169.74	492	5.5" BLOW
		1615				BLOW DIED
7		1715	FINISHED SHUT-IN	297.81	5347	--
8		1716	PULLED PACKER LOOSE	303.82	7301	--

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BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 13710F
INSTRUMENT NO. J-2130
DEPTH : 12898 FT
CAPACITY : 0 PSI
PORT OPENING : OUTSIDE

COMPANY : BASIC EARTH SCIENCE
WELL : BASIC CORPS.OF ENGINEERS #31-10

FLOPETROL JOHNSTON

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***************************
* WELL TEST DATA PRINTOUT *
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FIELD REPORT # : 13710F

COMPANY : BASIC EARTH SCIENCE
WELL : BASIC CORPS.OF ENGINEERS #31-10

INSTRUMENT # : J-2130
CAPACITY [PSI] : 0.
DEPTH [FT] : 12898.0
PORT OPENING : OUTSIDE
TEMPERATURE [DEG F] : 258.0

LABEL POINT INFORMATION

#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA
1	12:28: 0	13-AU	HYDROSTATIC MUD	-2.00	7255
2	12:30: 0	13-AU	START FLOW	0.00	429
3	12:44:16	13-AU	END FLOW & START SHUT-IN	14.27	429
4	13:48:18	13-AU	END SHUT-IN	78.30	4789
5	13:48:18	13-AU	START FLOW	78.30	465
6	15:19:44	13-AU	END FLOW & START SHUT-IN	169.74	492
7	17:27:49	13-AU	END SHUT-IN	297.81	5347
8	17:33:49	13-AU	HYDROSTATIC MUD	303.82	7301

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	0.00	14.27	14.27	429	429
2	78.30	169.74	91.44	465	492

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	14.27	78.30	64.03	429	4789	429	14.27
2	169.74	297.81	128.07	492	5347	492	105.71

TEST PHASE : FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
12:30: 0	13-AU	0.00	0.00	429
12:35: 0	13-AU	5.00	5.00	429
12:40: 0	13-AU	10.00	10.00	429
12:44:16	13-AU	14.27	14.27	429

TEST PHASE : SHUTIN PERIOD # 1
FINAL FLOW PRESSURE [PSIA] = 429
PRODUCING TIME [MIN] = 14.27

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
12:44:16	13-AU	14.27	0.00	429	0	
12:45:16	13-AU	15.27	1.00	468	39	1.184
12:46:16	13-AU	16.27	2.00	502	73	0.910
12:47:16	13-AU	17.27	3.00	535	106	0.760
12:48:16	13-AU	18.27	4.00	564	135	0.660
12:49:16	13-AU	19.27	5.00	593	164	0.586
12:50:16	13-AU	20.27	6.00	619	190	0.529
12:51:16	13-AU	21.27	7.00	647	218	0.483
12:52:16	13-AU	22.27	8.00	684	255	0.445
12:53:16	13-AU	23.27	9.00	722	293	0.413
12:54:16	13-AU	24.27	10.00	760	331	0.385
12:56:16	13-AU	26.27	12.00	841	412	0.340
12:58:16	13-AU	28.27	14.00	944	514	0.305
13: 0:16	13-AU	30.27	16.00	1045	616	0.277
13: 2:16	13-AU	32.27	18.00	1154	724	0.254
13: 4:16	13-AU	34.27	20.00	1282	853	0.234
13: 6:16	13-AU	36.27	22.00	1412	983	0.217
13: 8:16	13-AU	38.27	24.00	1565	1136	0.203
13:10:16	13-AU	40.27	26.00	1726	1297	0.190
13:12:16	13-AU	42.27	28.00	1898	1468	0.179
13:14:16	13-AU	44.27	30.00	2082	1653	0.169
13:19:16	13-AU	49.27	35.00	2584	2155	0.149
13:24:16	13-AU	54.27	40.00	3030	2600	0.132
13:29:16	13-AU	59.27	45.00	3489	3060	0.120
13:34:16	13-AU	64.27	50.00	3868	3439	0.109
13:39:16	13-AU	69.27	55.00	4225	3795	0.100
13:44:16	13-AU	74.27	60.00	4553	4124	0.093
13:48:18	13-AU	78.30	64.03	4789	4359	0.087

TEST PHASE : FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
13:48:18	13-AU	78.30	0.00	465
13:53:18	13-AU	83.30	5.00	466
13:58:18	13-AU	88.30	10.00	466
14: 3:18	13-AU	93.30	15.00	466
14: 8:18	13-AU	98.30	20.00	466
14:13:18	13-AU	103.30	25.00	466
14:18:18	13-AU	108.30	30.00	467
14:23:18	13-AU	113.30	35.00	470
14:28:18	13-AU	118.30	40.00	472
14:33:18	13-AU	123.30	45.00	474
14:38:18	13-AU	128.30	50.00	476
14:43:18	13-AU	133.30	55.00	479
14:48:18	13-AU	138.30	60.00	482
14:53:18	13-AU	143.30	65.00	484
14:58:18	13-AU	148.30	70.00	486
15: 3:18	13-AU	153.30	75.00	489
15: 8:18	13-AU	158.30	80.00	490
15:13:18	13-AU	163.30	85.00	491
15:18:18	13-AU	168.30	90.00	492
15:19:44	13-AU	169.74	91.44	492

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 492
PRODUCING TIME [MIN] = 105.71

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
15:19:44	13-AU	169.74	0.00	492	0	
15:20:44	13-AU	170.74	1.00	521	30	2.028
15:21:44	13-AU	171.74	2.00	550	58	1.731
15:22:44	13-AU	172.74	3.00	577	86	1.559
15:23:44	13-AU	173.74	4.00	604	112	1.438
15:24:44	13-AU	174.74	5.00	631	139	1.345
15:25:44	13-AU	175.74	6.00	659	167	1.270
15:26:44	13-AU	176.74	7.00	688	196	1.207
15:27:44	13-AU	177.74	8.00	724	232	1.153
15:28:44	13-AU	178.74	9.00	734	242	1.105
15:29:44	13-AU	179.74	10.00	778	286	1.063
15:31:44	13-AU	181.74	12.00	841	349	0.992
15:33:44	13-AU	183.74	14.00	906	414	0.932
15:35:44	13-AU	185.74	16.00	973	481	0.881
15:37:44	13-AU	187.74	18.00	1045	553	0.837
15:39:44	13-AU	189.74	20.00	1126	634	0.798
15:41:44	13-AU	191.74	22.00	1212	720	0.764
15:43:44	13-AU	193.74	24.00	1300	808	0.733

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 492
PRODUCING TIME [MIN] = 105.71

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
15:45:44	13-AU	195.74	26.00	1392	900	0.705
15:47:44	13-AU	197.74	28.00	1491	999	0.679
15:49:44	13-AU	199.74	30.00	1596	1104	0.655
15:54:44	13-AU	204.74	35.00	1876	1385	0.604
15:59:44	13-AU	209.74	40.00	2189	1697	0.561
16: 4:44	13-AU	214.74	45.00	2513	2021	0.525
16: 9:44	13-AU	219.74	50.00	2839	2348	0.493
16:14:44	13-AU	224.74	55.00	3156	2664	0.466
16:19:44	13-AU	229.74	60.00	3461	2969	0.441
16:24:44	13-AU	234.74	65.00	3738	3246	0.419
16:29:44	13-AU	239.74	70.00	3991	3499	0.400
16:34:44	13-AU	244.74	75.00	4221	3729	0.382
16:39:44	13-AU	249.74	80.00	4427	3935	0.366
16:44:44	13-AU	254.74	85.00	4607	4115	0.351
16:49:44	13-AU	259.74	90.00	4769	4277	0.337
16:54:44	13-AU	264.74	95.00	4909	4417	0.325
16:59:44	13-AU	269.74	100.00	5038	4546	0.313
17: 4:44	13-AU	274.74	105.00	5150	4659	0.302
17: 9:44	13-AU	279.74	110.00	5249	4757	0.292
17:14:44	13-AU	284.74	115.00	5343	4851	0.283
17:19:44	13-AU	289.74	120.00	5347	4855	0.274
17:24:44	13-AU	294.74	125.00	5347	4855	0.266
17:27:49	13-AU	297.81	128.07	5347	4855	0.261

11920

REPORT NO. 13708F
PAGE NO. 1

TEST DATE: 08-AUG-86

WELL PERFORMANCE TESTING™ REPORT

A Production System Analysis (NODAL™)
Based On Model Verified™ Interpretation

FLOPETROL JOHNSTON
Schlumberger

AUG 1986 RECEIVED DIVISION

Company: BASIC EARTH SCIENCE

Well: BASIC CORP. OF ENGINEERS #31-10

TEST IDENTIFICATION

Test Type ..... MFE OH DST
Test No. 4
Formation ..... INTERLAKE
Test Interval (ft) ..... 12088 - 12138
Reference Depth ..... KELLY BUSHING

WELL LOCATION

Field .....
County ..... MC KENZIE
State ..... NORTH DAKOTA
Sec/Twn/Rng 10T153NR101
Elevation (ft) 2305

HOLE CONDITIONS

Total Depth (MD/TVD) (ft) .... 12138 / 12138
Hole Size (in) 8 3/4
Casing/Liner I.D. (in) .....
Perf'd Interval/Net Pay (ft).. --/24
Shot Density/Diameter (in) ...

MUD PROPERTIES

Mud Type ..... SALT GEL STARCH
Mud Weight (lb/gal) 10.7
Mud Resistivity (ohm.m) ..... 0.04 @ 60 DEG.F
Filtrate Resistivity (ohm.m).. 0.05 @ 60 DEG.F
Filtrate Chlorides (ppm) 191000

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi) 6820
Gas Cushion Type ..... NONE
Surface Pressure (psi) ..... --
Liquid Cushion Type ..... FRESH WATER
Cushion Length (ft) 1000

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D. (in) ... 11388 / 3.83
Collar Length (ft)/I.D. (in).. 660 / 2.50
Packer Depths (ft) 12088
Bottomhole Choke Size (in) ... 15/16
Gauge Depth (ft)/Type ..... 12110/MECH.

NET PIPE RECOVERY

Volume	Fluid Type	Properties
0.638 BBLS.	OIL	ASSUMED 40 DEG. API
3.615 BBLS.	MUD	0.04 @ 60 DEG. F
		195000 PPM CL.

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
1.57 SCF	GAS	
320 CC	OIL	ASSUMED 40 DEG.API
1280 CC	MUD	0.04 @ 60 DEG. F
		197000 PPM CL.
Pressure: 270	GOR: 780	GLR: 156

INTERPRETATION RESULTS

Model of Behavior ..... HOMOGENEOUS
Fluid Type Used for Analysis . OIL
Reservoir Pressure (psi) 6004
Transmissibility (md.ft/cp) .. 3.90
Effective Permeability (md) .. 0.155
Skin Factor/Damage Ratio ..... 0.99 / 1.25
Storativity Ratio .....
Interporosity Flow Coeff. ....
Distance to an Anomaly (ft) ..
Radius of Investigation (ft).. 25
Potentiometric Surface (ft) ..

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) ..... ASSUMED 40
Basic Solids (%) .....
Gas Gravity 0.650
Water Cut (%) 0
Viscosity (cp) 0.954
Total Compressibility (1/psi). 1.016E-5
Porosity (%) 10
Reservoir Temperature (F) 254
Form.Vol.Factor (bbl/STB) 1.12

PRODUCTION RATE DURING TEST: 27.2 BOPD AVG.

COMMENTS:

AS NOT ENOUGH OIL WAS RECOVERED TO OBTAIN A RELIABLE VALUE FOR API GRAVITY, IT WAS ASSUMED THAT THE API GRAVITY OF THE OIL IS 40 DEG. THE FINAL SHUT-IN PRESSURE BUILD-UP DATA WAS ANALYZED USING HORNER ANALYSIS FOR DETERMINATION OF P*, KH/U, AND SKIN. COMPLETION DESIGN SENSITIVITY PLOTS WERE GENERATED FOR VARIOUS FRACTURE HALF-LENGTHS, TO PREDICT FUTURE PRODUCTION POTENTIAL OF THE ZONE WITH A HYDRAULIC FRACTURE TREATMENT. SEE SENSITIVITY PLOTS FOLLOWING ON THE NEXT PAGE.

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SENSITIVITY ANALYSIS
Rate vs. Xf (vs. Time)
ACRE SPACING ASSUMED = 40 AC

FLOPETROL JOHNSTON
Schlumberger

Reservoir Pressure: 6004 psi
Permeability: 0.155 md
Net Thickness: 24.0 ft
Gas/Liquid Ratio: 156.0 SCF/STB
Tubing Size: 2.441 in (id)
Wellhead Pressure: 50.0 psi

Fracture Conductivity, kf*w: 600.0 md.ft

Production Rate vs. Frac. Half-Length, Transient Conditions
7 to 130 days : ACRE SPACING ASSUMED = 40 AC

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REPORT NO. 13708F
PAGE NO. 3

SENSITIVITY ANALYSIS
Rate vs. Time (vs. Xf)
ACRE SPACING ASSUMED = 40 AC

FLOPETROL JOHNSTON
Schlumberger

Reservoir Pressure: 6004 psi
Permeability: 0.155 md
Net Thickness: 24.0 ft

Gas/Liquid Ratio: 156.0 SCF/STB
Tubing Size: 2.441 in (id)
Wellhead Pressure: 50.0 psi

Fracture Conductivity, kf*w: 600.0 md.ft

Effect of Time on Production Rate, for Fracture Half-Lengths from 50 to 660 ft : ACRE SPACING ASSUMED = 40 AC

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SENSITIVITY ANALYSIS
Recovery vs. Time (vs. Xf)
ACRE SPACING ASSUMED = 40 AC

FLOPETROL JOHNSTON
Schlumberger

Reservoir Pressure: 6004 psi
Permeability: 0.155 md
Net Thickness: 24.0 ft
Gas/Liquid Ratio: 156.0 SCF/STB
Tubing Size: 2.441 in (id)
Wellhead Pressure: 50.0 psi

Fracture Conductivity, kf*w: 600.0 md.ft

Effect of Time on Cumulative Recovery, for Fracture Half-Lengths from 50 to 660 ft : ACRE SPACING ASSUMED = 40 AC

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SENSITIVITY ANALYSIS
Input Data Summary
ACRE SPACING ASSUMED = 40 AC

Production Time [days]

7.0	14.0	21.0	28.0	45.0
60.0	90.0	130.0		

Fracture Half-Length, Xf [ft]

50.0	100.0	200.0	300.0	400.0
500.0	660.0			

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SEQUENCE OF EVENTS

FLOPETROL JOHNSTON
Schlumberger

EVENT NO.	DATE	TIME (HR:MIN)	DESCRIPTION	ELAPSED TIME (MINS)	BHP (PSIA)	BLOW (IN.-H2O)
1	8-8-86	0443	SET PACKER	-2.00	6820	--
2		0445	OPENED TOOL-1/8"BUBBLHOSE	0.00	507	1/2" BLOW
		0450				1" BLOW
3		0500	CLOSED FOR INITIAL SHUTIN	15.00	516	1" BLOW
		0530				BLOW DIED
4		0600	FINISHED SHUT-IN	74.00	5752	--
5		0600	RE-OPENED TOOL	75.00	541	SURF.BLOW
		0630				SURF.BLOW
		0640				1.5" BLOW
		0650				4" BLOW
		0700				6" BLOW
		0710				10" BLOW
		0720				14" BLOW
		0730				20" BLOW
		0740				26" BLOW
		0750				32" BLOW
		0810				41" BLOW
		0830				51" BLOW
		0900				63" BLOW
6		0930	CLOSED FOR FINAL SHUT-IN	285.00	591	72" BLOW
7		1400	FINISHED SHUT-IN	555.00	5666	--
8		1400	PULLED PACKER LOOSE	556.00	6820	--

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BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 13708F
INSTRUMENT NO. J-2130
DEPTH : 12110 FT
CAPACITY : 0 PSI
PORT OPENING : OUTSIDE

COMPANY : BASIC EARTH SCIENCE
WELL : BASIC CORP. OF ENGINEERS 31-10

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*************************
* WELL TEST DATA PRINTOUT *
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FIELD REPORT # : 13708F

INSTRUMENT # : J-2130
CAPACITY [PSI] : 0.
DEPTH [FT] : 12110.0
PORT OPENING : OUTSIDE
TEMPERATURE [DEG F] : 254.0

COMPANY : BASIC EARTH SCIENCE
WELL : BASIC CORP. OF ENGINEERS 31-10

LABEL POINT INFORMATION

#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA
1	4:43: 0	8-AU	HYDROSTATIC MUD	-2.00	6820
2	4:45: 0	8-AU	START FLOW	0.00	507
3	5: 0: 0	8-AU	END FLOW & START SHUT-IN	15.00	516
4	5:59: 0	8-AU	END SHUT-IN	74.00	5752
5	6: 0: 0	8-AU	START FLOW	75.00	541
6	9:30: 0	8-AU	END FLOW & START SHUT-IN	285.00	591
7	14: 0: 0	8-AU	END SHUT-IN	555.00	5666
8	14: 1: 0	8-AU	HYOROSTATIC MUD	556.00	6820

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	0.00	15.00	15.00	507	516
2	75.00	285.00	210.00	541	591

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	15.00	74.00	59.00	516	5752	516	15.00
2	285.00	555.00	270.00	591	5666	591	225.00

TEST PHASE : FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
4:45: 0	8-AU	0.00	0.00	507
4:50: 0	8-AU	5.00	5.00	510
4:55: 0	8-AU	10.00	10.00	513
5: 0: 0	8-AU	15.00	15.00	516

TEST PHASE : SHUTIN PERIOD # 1
FINAL FLOW PRESSURE [PSIA] = 516
PRODUCING TIME [MIN] = 15.00

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
5: 0: 0	8-AU	15.00	0.00	516	0	
5: 1: 0	8-AU	16.00	1.00	964	448	1.204
5: 2: 0	8-AU	17.00	2.00	1413	897	0.929
5: 3: 0	8-AU	18.00	3.00	1861	1345	0.778
5: 4: 0	8-AU	19.00	4.00	2310	1794	0.677
5: 5: 0	8-AU	20.00	5.00	2758	2242	0.602
5: 6: 0	8-AU	21.00	6.00	3072	2556	0.544
5: 7: 0	8-AU	22.00	7.00	3387	2871	0.497
5: 8: 0	8-AU	23.00	8.00	3701	3185	0.459
5: 9: 0	8-AU	24.00	9.00	4016	3500	0.426
5:10: 0	8-AU	25.00	10.00	4330	3814	0.398
5:12: 0	8-AU	27.00	12.00	4575	4059	0.352
5:14: 0	8-AU	29.00	14.00	4820	4304	0.316
5:16: 0	8-AU	31.00	16.00	4999	4483	0.287
5:18: 0	8-AU	33.00	18.00	5114	4598	0.263
5:20: 0	8-AU	35.00	20.00	5228	4712	0.243
5:22: 0	8-AU	37.00	22.00	5300	4784	0.226
5:24: 0	8-AU	39.00	24.00	5371	4855	0.211
5:26: 0	8-AU	41.00	26.00	5427	4911	0.198
5:28: 0	8-AU	43.00	28.00	5468	4952	0.186
5:30: 0	8-AU	45.00	30.00	5509	4993	0.176
5:35: 0	8-AU	50.00	35.00	5584	5068	0.155
5:40: 0	8-AU	55.00	40.00	5643	5127	0.138
5:45: 0	8-AU	60.00	45.00	5679	5163	0.125
5:50: 0	8-AU	65.00	50.00	5711	5195	0.114
5:55: 0	8-AU	70.00	55.00	5738	5222	0.105
5:59: 0	8-AU	74.00	59.00	5752	5236	0.098

TEST PHASE : FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
6: 0: 0	8-AU	75.00	0.00	541
6: 5: 0	8-AU	80.00	5.00	542
6:10: 0	8-AU	85.00	10.00	543
6:15: 0	8-AU	90.00	15.00	545
6:20: 0	8-AU	95.00	20.00	546
6:25: 0	8-AU	100.00	25.00	547
6:30: 0	8-AU	105.00	30.00	548
6:35: 0	8-AU	110.00	35.00	549
6:40: 0	8-AU	115.00	40.00	551
6:45: 0	8-AU	120.00	45.00	552
6:50: 0	8-AU	125.00	50.00	553
6:55: 0	8-AU	130.00	55.00	554
7: 0: 0	8-AU	135.00	60.00	555
7: 5: 0	8-AU	140.00	65.00	556
7:10: 0	8-AU	145.00	70.00	558
7:15: 0	8-AU	150.00	75.00	559
7:20: 0	8-AU	155.00	80.00	560
7:25: 0	8-AU	160.00	85.00	561
7:30: 0	8-AU	165.00	90.00	562
7:35: 0	8-AU	170.00	95.00	564
7:40: 0	8-AU	175.00	100.00	565
7:45: 0	8-AU	180.00	105.00	566
7:50: 0	8-AU	185.00	110.00	567
7:55: 0	8-AU	190.00	115.00	568
8: 0: 0	8-AU	195.00	120.00	570
8: 5: 0	8-AU	200.00	125.00	571
8:10: 0	8-AU	205.00	130.00	572
8:15: 0	8-AU	210.00	135.00	573
8:20: 0	8-AU	215.00	140.00	574
8:25: 0	8-AU	220.00	145.00	576
8:30: 0	8-AU	225.00	150.00	577
8:35: 0	8-AU	230.00	155.00	578
8:40: 0	8-AU	235.00	160.00	579
8:45: 0	8-AU	240.00	165.00	580
8:50: 0	8-AU	245.00	170.00	581
8:55: 0	8-AU	250.00	175.00	583
9: 0: 0	8-AU	255.00	180.00	584
9: 5: 0	8-AU	260.00	185.00	585
9:10: 0	8-AU	265.00	190.00	586
9:15: 0	8-AU	270.00	195.00	587
9:20: 0	8-AU	275.00	200.00	589
9:25: 0	8-AU	280.00	205.00	590
9:30: 0	8-AU	285.00	210.00	591

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 591
PRODUCING TIME [MIN] = 225.00

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
9:30: 0	8-AU	285.00	0.00	591	0	
9:31: 0	8-AU	286.00	1.00	682	91	2.354
9:32: 0	8-AU	287.00	2.00	753	162	2.055
9:33: 0	8-AU	288.00	3.00	837	246	1.881
9:34: 0	8-AU	289.00	4.00	927	336	1.758
9:35: 0	8-AU	290.00	5.00	1034	443	1.663
9:36: 0	8-AU	291.00	6.00	1149	558	1.585
9:37: 0	8-AU	292.00	7.00	1279	688	1.520
9:38: 0	8-AU	293.00	8.00	1433	842	1.464
9:39: 0	8-AU	294.00	9.00	1617	1026	1.415
9:40: 0	8-AU	295.00	10.00	1794	1203	1.371
9:42: 0	8-AU	297.00	12.00	2232	1641	1.296
9:44: 0	8-AU	299.00	14.00	2690	2099	1.232
9:46: 0	8-AU	301.00	16.00	3127	2536	1.178
9:48: 0	8-AU	303.00	18.00	3500	2909	1.130
9:50: 0	8-AU	305.00	20.00	3679	3088	1.088
9:52: 0	8-AU	307.00	22.00	3896	3305	1.050
9:54: 0	8-AU	309.00	24.00	4128	3537	1.016
9:56: 0	8-AU	311.00	26.00	4268	3677	0.985
9:58: 0	8-AU	313.00	28.00	4377	3786	0.956
10: 0: 0	8-AU	315.00	30.00	4457	3866	0.929
10: 5: 0	8-AU	320.00	35.00	4613	4022	0.871
10:10: 0	8-AU	325.00	40.00	4768	4177	0.821
10:15: 0	8-AU	330.00	45.00	4857	4266	0.778
10:20: 0	8-AU	335.00	50.00	4945	4354	0.740
10:25: 0	8-AU	340.00	55.00	5006	4415	0.707
10:30: 0	8-AU	345.00	60.00	5067	4476	0.677
10:35: 0	8-AU	350.00	65.00	5112	4521	0.649
10:40: 0	8-AU	355.00	70.00	5156	4565	0.625
10:45: 0	8-AU	360.00	75.00	5192	4601	0.602
10:50: 0	8-AU	365.00	80.00	5228	4637	0.581
10:55: 0	8-AU	370.00	85.00	5258	4667	0.562
11: 0: 0	8-AU	375.00	90.00	5287	4696	0.544
11: 5: 0	8-AU	380.00	95.00	5310	4719	0.527
11:10: 0	8-AU	385.00	100.00	5332	4741	0.512
11:15: 0	8-AU	390.00	105.00	5351	4760	0.497
11:20: 0	8-AU	395.00	110.00	5369	4778	0.484
11:25: 0	8-AU	400.00	115.00	5385	4794	0.471
11:30: 0	8-AU	405.00	120.00	5401	4810	0.459
11:35: 0	8-AU	410.00	125.00	5418	4827	0.447
11:40: 0	8-AU	415.00	130.00	5434	4843	0.436
11:45: 0	8-AU	420.00	135.00	5459	4868	0.426
11:50: 0	8-AU	425.00	140.00	5484	4893	0.416
11:55: 0	8-AU	430.00	145.00	5496	4905	0.407
12: 0: 0	8-AU	435.00	150.00	5507	4916	0.398
12: 5: 0	8-AU	440.00	155.00	5516	4925	0.389
12:10: 0	8-AU	445.00	160.00	5525	4934	0.381
12:15: 0	8-AU	450.00	165.00	5534	4943	0.374

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 591
PRODUCING TIME [MIN] = 225.00

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
12:20: 0	8-AU	455.00	170.00	5543	4952	0.366
12:25: 0	8-AU	460.00	175.00	5552	4961	0.359
12:30: 0	8-AU	465.00	180.00	5561	4970	0.352
12:35: 0	8-AU	470.00	185.00	5569	4978	0.346
12:40: 0	8-AU	475.00	190.00	5577	4986	0.339
12:45: 0	8-AU	480.00	195.00	5584	4993	0.333
12:50: 0	8-AU	485.00	200.00	5591	5000	0.327
12:55: 0	8-AU	490.00	205.00	5597	5006	0.322
13: 0: 0	8-AU	495.00	210.00	5602	5011	0.316
13: 5: 0	8-AU	500.00	215.00	5609	5018	0.311
13:10: 0	8-AU	505.00	220.00	5616	5025	0.306
13:15: 0	8-AU	510.00	225.00	5622	5031	0.301
13:20: 0	8-AU	515.00	230.00	5627	5036	0.296
13:25: 0	8-AU	520.00	235.00	5633	5042	0.292
13:30: 0	8-AU	525.00	240.00	5639	5048	0.287
13:35: 0	8-AU	530.00	245.00	5647	5056	0.283
13:40: 0	8-AU	535.00	250.00	5654	5063	0.279
13:45: 0	8-AU	540.00	255.00	5660	5069	0.275
13:50: 0	8-AU	545.00	260.00	5666	5075	0.271
13:55: 0	8-AU	550.00	265.00	5666	5075	0.267
14: 0: 0	8-AU	555.00	270.00	5666	5075	0.263

ΔT (MIN)
1.7
2.2
2.8
3.7
5.0
6.9
9.9
15
25
57
∞
HORNER PLOT
FIELD REPORT NO. 13708F
INSTRUMENT NO. J-2130
COMPANY : BASIC EARTH SCIENCE
WELL : BASIC CORP. OF ENGINEERS 31-10
SHUTIN #1 : FINAL FLOW PRESSURE: 516 PSIA
PLOT ELAPSED TIME RANGE: 20.0 TO >4.0 MIN
PLOT ΔT TIME RANGE: 5.0 TO 59.0 MIN
PRODUCING TIME (Tp): 15.0 MIN
SHUTIN PRESSURE [PSIA]
5900
5500
5100
4700
4300
3900
3500
3100
2700
1 M = -2783
P* = 6027 PSIA
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
LOG [Tp+ΔT / ΔT]
FLOPETROL JOHNSTON
Schlumberger

LOG LOG PLOT

COMPANY : BASIC EARTH SCIENCE

WELL : BASIC CORP. OF ENGINEERS 31-10

FIELD REPORT NO. 13708F

INSTRUMENT NO. J-2130

SHUTIN #1 :

FINAL FLOW PRESSURE (PWF): 516 PSIA

PLOT ELAPSED TIME RANGE: 20.0 TO 74.0 MIN

PLOT ΔT TIME RANGE: 5.0 TO 59.0 MIN

FLOPETROL JOHNSTON

ΔT (MIN)
0.71
1.3
2.3
4.1
7.3
13
25
48
104
289
∞
HORNER PLOT
FIELD REPORT NO. 13708F
INSTRUMENT NO. J-2130
COMPANY : BASIC EARTH SCIENCE
WELL : BASIC CORP. OF ENGINEERS 31-10
SHUTIN #2 : FINAL FLOW PRESSURE: 591 PSIA
PLOT ELAPSED TIME RANGE: 286.0 TO 555.0 MIN
PLOT ΔT TIME RANGE: 1.0 TO 270.0 MIN
PRODUCING TIME (Tp): 225.0 MIN
SHUTIN PRESSURE [PSIA]
7000
6200
5400
4600
3800
3000
2200
1400
600
1
M = -1266
P* = 6004 PSIA
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
LOG [Tp+ΔT / ΔT]
FLOPETROL JOHNSTON
Schlumberger

LOG LOG PLOT

COMPANY : BASIC EARTH SCIENCE
WELL : BASIC CORP. OF ENGINEERS 31-10
FIELD REPORT NO. 13708F
INSTRUMENT NO. J-2130

SHUTIN #2 :
FINAL FLOW PRESSURE (PWF): 591 PSIA
PLOT ELAPSED TIME RANGE: 286.0 TO 555.0 MIN
PLOT ΔT TIME RANGE: 1.0 TO 270.0 MIN

FLOPETROL JOHNSTON

WPT Sensitivity Analysis Summary
File : 13708F Case ID : ACRE SPACING ASSUMED = 40 AC

ISS Report Pages & Data Records

Production Rate vs. Xf (vs. Time)	... ISS Report Page 2	; Data Record	12
Production Rate vs. Time (vs. Xf)	... ISS Report Page 3	; Data Record	13
Cumulative Recovery vs. Xf (vs. Time)	... ISS Report Page --	; Data Record	14
Cumulative Recovery vs. Time (vs. Xf)	... ISS Report Page 4	; Data Record	15
Summary Printout	... ISS Report Page 5		

Input Data for (Xf) Sensitivity

Produced Fluid & In-Place Fluid Information

Produced Fluid is primarily	Liquid
Producing Gas/Liquid Ratio [SCF/STB]	156.00
Producing Water/Total Liquid Ratio [Water Cut]	0.00000E+00
Reservoir Oil Saturation [So, fraction]	0.7000
Reservoir Water Saturation [Sw, fraction]	0.3000
Reservoir Gas Saturation [Sg, fraction]	0.0000

Fluid Property Data

Water Specific Gravity	1.0700
Water Salinity [ppm]	1000.0
Oil (or Condensate) API Gravity	40.000
Oil Solution GOR & Bub.Pt.Pres. Correlation	Standing
Oil Formation Volume Factor Correlation	Standing
Gas Gravity at Standard Conditions [Air=1.0]	0.6500
Mole % CO2	0.000
Mole % H2S	0.000
Mole % N2	0.000

Flowline, Wellhead, Tubing, and Casing Data

Start at	Wellhead (no Flowline)
Wellhead Temperature [deg F]	60.00
Wellhead Pressure [psig]	50.000
Tubing Inside Diameter [inch]	2.4410
Tubing Absolute Roughness [ft]	5.00000E-05
Tubing Length [ft]	12088.
Tubing Vertical Multiphase Flow Correlation	Hagedorn-Brown
Casing Inside Diameter [inch]	6.3360
Casing-Tubing Packer Depth [measured depth, ft]	12088.
Total Depth [measured depth to mid-formation, ft]	12113.
True Vertical Depth [to mid-formation, ft]	12113.

Input Data for (Xf) Sensitivity

Reservoir and Near-Wellbore Data

Initial Reservoir Pressure [Pi, psia]	6004.0
Reservoir Temperature [deg F]	254.00
(Total) Permeability [k, md]	0.15500
(Net Productive) Thickness [h, ft]	24.000
Rock Type	Sandstone
Porosity [fraction]	0.10000
Fracture Conductivity [kf*w, md.ft]	500.00

Reservoir Total (Equivalent Single-Phase) Properties

Total Liquid Viscosity [cp]	0.95444
Total Liquid Form.Vol.Factor [bbl/STB]	1.1157
(Vogel) Bub.Pt.Pres. [psia, 0.0=single-phase IPR] ...	915.51
Total Compressibility [1/psi]	1.01588E-05
Wellbore Storage Factor [bbl/psi]	0.00000E+00

Sensitivity Parameter Values

Production Time [days]

7.000	14.00	21.00	28.00	45.00
60.00	90.00	130.0		

Fracture Half-Length, Xf [ft]

50.00	100.0	200.0	300.0	400.0
500.0	600.0			

INTAKE Flowrate Range	20 Uneven-Spaced Rates
INTAKE Minimum Liquid Rate [STB/D]	1.0000
INTAKE Maximum Liquid Rate [STB/D]	5000.0

Time and Date

Option Execution began	10:02:56 on 12-AUG-86
Data Input required	1 min 25 sec
Data Generation required	2 min 19 sec
Option Execution completed	10:06:39 on 12-AUG-86
Input & Output Page(s) completed	10:10:27 on 12-AUG-86

FORM 4

Well File No. 11920

North Dakota State Industrial Commission
Oil and Gas Division
900 EAST BOULEVARD - BISMARCK, NORTH DAKOTA 58505

RECEIVED JUL 8 1986 OIL AND GAS DIVISION

SUNDRY NOTICES AND REPORTS ON WELLS

1. Notice of Intention to Drill or Redrill
2. Notice of Intention to Change Plans
3. Notice of Intention to Pull Casing
4. Notice of Intention to Abandon Well
5. Report of Water Shut-Off
6. Report of Shooting or Acidizing
7. Report of Casing Surface Csg & Cementing
8. Report of Redrilling or Repair
9. Supplementary History
10. Well Potential Test
11. Drilling Prognosis
12. Notice of Spud

NAME OF LEASE Basic Corps of Engineers Date July 3, 19 86

WELL NO. 31-10 is located 660 ft. from (N) (S) line and 2305 ft. from the (E) (W) line

of Section 10 Township 153N Range 101W in McKenzie

County, Baker Field Red River Pool. The elevation of the ground

is 1851 feet above sea level.

Name and Address of Contractor, or Company which will do work is: Shelby Drilling Inc.
5350 S. Roslyn, Suite 300
Englewood, CO 80111

(DETAILS OF WORK)
(State names of, and expected depth of objective sand; show sizes, weight, and lengths of proposed casing, indicate mud weights, cementing points, and all other details of work)

Spud well 6/20/86 @ 11:00 pm, drilling contractor is Shelby Drilling Inc. Rig #52.

Surface Casing: 75 jts 36# and 40# 9-5/8" K55, set at 2954'. Cemented with 850 sx Howco Lite and 250 sx Class "A", both mixed with ¼#/sx celloflake and 2% CaCl. Good returns, no cement to surface. Bumped plug w/2200 psi, held ok. Pumped top job of 120 sx Class "A" w/3% CaCl & ¼#/sx celloflake, good returns w/cement to surface.

Company Basic Earth Science Systems, Inc.

Address P.O. Box 3088, Englewood CO 80155

By Jeffery E. Jones

Title Vice President

Do not write in this space

Approved JUL 7 1986 19

By F E Williams

Title

(Instructions Over)

basic Earth Science Systems, Inc.

P.O. Box 3088
Englewood, Colorado 80155
(303) 792-5230

July 3, 1986

RECEIVED

North Dakota Industrial Commission
Oil and Gas Division
900 East Boulevard
Bismarck, ND 58505

Project Manager, Garrison Project Office
Administration Building
Riverdale, ND 58565

Chief, Operations Division
Corps of Engineers
6014 U.S. Post Office and Courthouse
Omaha, NE 68102

Re: Basic Corps of Engineers #31-30
Sec. 10-T153N-R101W
McKenzie County, ND

Gentlemen:

Enclosed please find your required number of copies of a Sundry Notice detailing the spudding and setting of surface casing for the above referenced well.

Please do not hesitate to contact me if you have any questions or need further information.

Sincerely,

Basic Earth Science Systems, Inc.

Jeffery E. Jones
Vice President

JEJ:ak

Enclosures

cc: Distribution

#11520

RECEIVED
DIVISION

DAILY DRILLING REPORT

TIGHT HOLE

BASIC CORP OF ENGINEERS 31-10, section 10 T153N, R101W

6/19/86 Finish building location and moving in Shelby rig 52.

6/20/86 Rigging up Shelby rig 52.

6/21/86 Rigging up Shelby rig 52.

6/22/86 Rigging up Shelby rig 52.

6/23/86 Day 1, Drilling at 202 ft with fresh water, wt 8.6, visc 35, tight hole at 200 feet had to shut in to condition mud. Bit # 1 12 1/4 J-1. Spud 11pm CST 6/20/86 S.T. $6,582 Cum $6,582.

6/24/8
Day 2, drilling at 1,723 ft, made 1,521 ft in 14 3/4 hrs. Surveys, 1 1/4 deg @300 ft, 1 1/4 deg 750 ft, 1/4 deg S43W @ 1,094 ft, and 1/4 deg S68E 1620 ft. Had water flow at 1600 ft at a rate of 40-60 gal per minute, let mud wt build to 9.3 lb/gal and built visc to 46 flow stopped. S.T. $33,025, CUM. $ 39,607

6/25/86
Day 3, running casing at 3,000 ft. Made 1,075 ft in 10.75 hrs. Lost circulation at 2,125 ft. Surveys, at 2,121 ft 1/4 deg N26E; at 2477 ft 0 deg; at 2,935 ft 1/2 deg S66E; and resurvey at 500 ft, 1/2 deg S25 W. Bit 2A 12 1/4 J1 in at 2518 ft.
S.T. $20,965 Cum. $60,572.

6/26/86
Day 4, running casing at 3000 ft. Ran 14 jts of casing could not go any further, TOH with casing, TIH with drill pipe and washed and reamed from 430 ft to 1200 ft. Bit plugged TOH to unplug bit, TIH to 430 washed and reamed from 430 to 1200 ft. Circulated and conditioned hole. Raised weight to 9.9 and visc to 105, chained out of hole and rigged up to run casing.
S.T. $34,124 CUM. $94,696

6/27/86
Day 5, WOC at 2954 ft. Ran guide shoe and 75 jts of 36# and 40 # 9 5/8 casing. Had to wash the casing from 400 ft to T.D. unable to get past 2954. Circulated bottoms up and pumped 20 bbls of water followed by 850 sks of Howco Lite, and 250 sks of Class A both mixed with 1/4#/sk celloflake, and 2% CaCl. Good returns throughout job, but no cement to surface. Bumped plug with 2200 psi held ok. Ran 120 ft of one inch and pumped top job of 10 BBls of water followed by 120 sks of Class A with 3% CaCl, and 1/4# per sk celloflake. Good returns with cemment to surface; held ok. Cut off casing and welded on wellhead.
S.T. $6,221, Cum. $100,917

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

11920

WESLEY D. NORTON
Chief Enforcement Officer

F. E. WILBORN
Deputy Enforcement Officer

CLARENCE G. CARLSON
Geologist

CHARLES KOCH
Engineering Dept.

DOREN DANNEWITZ
Field Supervisor

KEN KALLESTAD
Reclamation Sup.

June 19, 1986

Mr. Jeffery E. Jones
Basic Earth Science Systems
P.O. Box 3088
Englewood, Colorado 80155

RE: Basic Corps of Engineers #31-10
NW NE Section 10-T153N-R101W
Well File No. 11920

Dear Mr. Jones:

As per our conversation on June 16, 1986, neither Ken Kallestad nor Ellis Haake with the Oil and Gas Division, could confirm the fact that they had a conversation with you and approved the use of the drilling pit without a liner on the above captioned location.

The fluids in the pit shall not exceed 3000 ppm TDS. I will be checking the fresh water pit regularly and if at any time it exceeds 3000 ppm TDS, we will require that the fluids be removed and a liner installed. Upon completion of drilling status, you will be required to remove the fluids and reclaim the pit. Also, any contaminates noted must be removed immediately.

If you have any questions, feel free to contact our office.

Sincerely,

Tom Delling /rls

Tom Delling
Field Inspector

TD/rls

11930

basic Earth Science Systems, Inc

P.O. Box 3088
Englewood, Colorado 80155
(303) 792-5230

April 17, 1986

North Dakota Industrial Commission
Oil and Gas Division
900 East Blvd.
Bismarck, ND 58505

Project Manager, Garrison Project Office
Administration Building
Riverdale, ND 58565

North Dakota Game & Fish Dept.
214 Rose Lane
Williston, ND 58801

Re: Basic Corps of Engineers #31-10
NWNE Sec. 10, T153N, R101W
McKenzie County, ND

Gentlemen:

Enclosed please find a copy of the Archeological Report which is to be included in our Multi-Point Surface Use and Operations Plan as Exhibit 8. This report was not available at the time we submitted our Multi-Point plan.

Please do not hesitate to contact me if you have any questions or need anything further.

Sincerely,

Basic Earth Science Systems, Inc.

Jeffery E. Jones
Vice President

JEJ:ak

Enclosure

John & Mavis Greer

Archeological Consultants

2599 So. Paradise Dr. Casper, Wyoming 82604 (307) 472-4016

AN INTENSIVE CULTURAL RESOURCE SURVEY
OF THE
BASIC EARTH SCIENCE SYSTEMS, INC.
BASIC CORP OF ENGINEERS 31-10
WELL PAD AND ACCESS ROAD,
MCKENZIE COUNTY, NORTH DAKOTA

by

John and Mavis Greer

Mavis Greer (P.I.)

Project No. ND-1946
March 1986

ABSTRACT: An intensive cultural resource survey was conducted on the area surrounding a proposed well pad and access road. No cultural resources were found, and cultural clearance is recommended with no special stipulations.

PROJECT LOCATION:

Agency:	Corp of Engineers, Riverdale
USGS Quad:	Williston SW (7.5')
Well Location:	NW/NE (660 fnl, 2305 fel) Sec.10-T153N-R101W Public Surface (5 acres surveyed)
Access Route:	NW/NE Section 10 (0.11 miles surveyed, public surface)

PROJECT DESCRIPTION: Construction is planned on a well pad (est. 300 x 350') and an access road (about 600 feet long). The access road leaves the bladed county road just to the north and runs south on the west side of an irrigation canal to the well location. The well pad and access road are staked in a plowed field which is currently in stubble. This flat area has been diked and is a controlled farming portion of the wide Missouri River floodplain.

PROJECT SETTING: The proposed well location is situated on the recent Missouri River floodplain, in a silty area currently in cultivation. A large major meander (now a large recreational lake) is just to the southeast, while the main Missouri River channel is to the north. Elevation of the well pad area is about 1850 feet.

FILES SEARCH: The files of the North Dakota State Historical Society indicate that no previous surveys or cultural resources are known for the project area. Previous surveys in adjacent and nearby areas include well pad and access road surveys by Greer, a pipeline survey by Powers Elevation, and seismograph line studies by the Corps of Engineers; all previous studies have provided negative results. No subsurface monitoring of construction to provide subsurface information has been reported in any surrounding or nearby areas.

FIELD WORK: During the intensive cultural resource survey on 3/30/86 by John and Mavis Greer, the 5 acres surrounding the well pad were surveyed with multiple transects with an average spacing of 70 feet. Ground visibility was fair to poor, due to mostly dense stubble and grass cover. The well location was staked.

CULTURAL RESOURCES: No cultural resources have been reported from the area, and none were found during the present inspection. There were no surface indications of buried cultural deposits within the project area. Two small shovel tests dug to 1.5 feet deep within the well pad planned construction area also yielded negative results.

RECOMMENDATIONS: It appears that no cultural resources will be affected by the proposed project, and no further work is recommended. If subsurface cultural materials are found during construction, the head of the federal permitting agency should be notified immediately. These recommendations are subject to the approval of the permitting agency.

ATTACHMENTS: Project map (USGS quad).

COLLECTIONS: None.

Figure 1. Portion of the Williston SW Quad (USGS 7.5'), McKenzie County, North Dakota, showing the proposed Basic Corp of Engineers 31-10 well pad, access road, and 5-acre survey area. No cultural resources were found.

11920

basic Earth Science Systems, Inc.

P.O. Box 3088
Englewood, Colorado 80155
(303) 792-5230

March 6, 1986

Department of the Army
Omaha District, Corps of Engineers
6014 U.S. Post Office and Courthouse
Omaha, Nebraska 68102-4978

Attention: Mr. Rick Noel, Real Estate Division

Re: Basic Corps of Engineers #31-10
Township 153 North-Range 202 West
Section 10: NW¼NE¼
McKenzie County, ND

Letter Grant No. DACW45-9-86-6112
ND Permit No. 11920

Gentlemen:

The permitted Basic Corps of Engineers #31-10 location is under two feet of water due to the Missouri River flooding. We estimate a minimum delay of one month before construction of the drill pad can begin. Since the frost should no longer be a factor by that time, we believe a conventional drill pad would be acceptable, therefore, permission is requested to deviate from the requirement to cover the pad with plastic and build the location up with dirt acquired from a private source.

The Multi-Point Surface Use and Operation Plan should be amended as follows:

4. Location of Existing and/or Proposed Facilities
   B. Exhibits 3 and 4 show the surveyed location and the anticipated cut and fill. These show that after removing six to eight inches of top soil, the entire cut will be above 1850 feet. There should be sufficient dirt available from the drill pit and fill to level the location. All top soil and dirt removed during construction of the reserve pits will be placed in separate piles. Both piles will be kept as free as possible from contamination.
   C. Construction will be to strip the top soil and level the drilling pad. The battery .....

6. Source of Construction Materials
   A. .....the brush covering location will be scraped into a pile on the southeast corner of the location. The top soil will be scraped into a separate pile at the southwest corner of the location. The site will then be leveled .....

Thank you for your consideration of this request and please do not hesitate to contact me if you have any questions or require additional information.

Sincerely,

Basic Earth Science Systems, Inc.

Jeffery E. Jones
Vice President

JEJ:jb

cc: Project Manager, Garrison Project Office
Administration Building, Riverdale, North Dakota 58565
North Dakota Game & Fish Department
214 Rose Lane, Williston, North Dakota 58801
North Dakota Industrial Commission
Oil and Gas Division, 900 E. Blvd., Bismarck, North Dakota 58505

basic Earth Science Systems, Inc.

Amend APD & Surf Loc

Directional hole letter

Must comply w/all spacing requirements in Baker Field Connie - Andre Who do already?

Project Manager
Garrison Project Office
Administration Building
Riverdale, North Dakota 58565

Chief, Operations Division
Corps of Engineers
6014 U.S. Post Office & Courthouse
Omaha, Nebraska 68102

Attn: MROOP-R

North Dakota Industrial Commission
Oil and Gas Division
900 East Boulevard
Bismarck, North Dakota 58505

Re: Application to Drill
Basic Game & Fish #31-10
Section 10, T153N, R101W
McKenzie County, ND

Gentlemen:

Enclosed please find Basic Earth Science Systems, Inc.'s Multi-point Surface Use and Operations Plan submitted to obtain permission to drill a 13,500 foot Red River test. An on-site inspection was held on January 9, 1986, with Mr. Alan Steinle of the Corps of Engineers, Mr. Bruce Renhowe of the Game and Fish Department, Mr. Tom Hopkin representing Basic Earth Science Systems, Inc., and several dirt contractors. Recommendations from that meeting have been incorporated into the enclosed application.

A spud date of February 1, 1986 has been requested due to lease constraints and, therefore, we would appreciate your expeditious handling of this application. If you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

Basic Earth Science Systems, Inc.

Judy Burke

Judy Burke
Lease Analyst/Permit Coordinator

JB
encl.

44E Inverness Drive East

JAN 1981
RECEIVED
ND OIL & GAS
DIVISION

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

BASIC EARTH SCIENCE SYSTEMS,INC.
Basic Corps of Engineers #31-10
NW¼NE¼ Section 10, Township 153 North, Range 101 West
660' FNL - 2305' FEL (Surface Location)
660' FNL - 2140' FEL (Bottom Hole Location)
McKenzie County, North Dakota

Prepared By:
Basic Earth Science Systems, Inc.
P. O. Box 3088
Englewood, Colorado 80155

Copies:
1 - Project Manager, Garrison Project Office
Administration Building, Riverdale, North Dakota 58565
1 - Chief, Operations Division, Corps of Engineers
6014 U.S. Post Office & Courthouse, Omaha, Nebraska 68102
Attn: MROOP-R
1 - North Dakota Game & Fish Department
214 Rose Lane, Williston, North Dakota 58801
1 - North Dakota Industrial Commission
Oil and Gas Division, 900 E. Blvd., Bismarck, North Dakota 58505

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

BASIC EARTH SCIENCE SYSTEMS, INC.
Basic Corps of Engineers #31-10
NW¼NE¼ Section 10, Township 153 North, Range 101 West
660' FNL - 2305' FEL (Surface Location)
660' FNL - 2140' FEL (Bottom Hole Location)
McKenzie County, North Dakota

SUMMARY OF PROJECT

Basic Earth Science Systems, Inc. is submitting the following application to obtain permission from the Corps of Engineers to drill a 13,600 foot Red River test with the above-referenced name and surface location. The location has been carefully chosen to balance the concerns of Basic Earth Science Systems, Inc., the Corps of Engineers, and surface lessee (North Dakota Game and Fish). From this surface location Basic Earth Science Systems, Inc. will directionally drill to a legal bottom hole location of 660' FNL and 2140' FEL of Section 10, T153N, R101W. All of the oil and gas minerals in this area are privately owned. Basic Earth Science Systems, Inc. understands that this location is within the 100-year flood plain. Any facilities and equipment which can be damaged by floodwater and which cannot be readily moved if a flood is imminent will be placed at a location above, or adequately protected by diking to 1858', the 100-year flood water surface elevation at this location plus a minimum of three feet of freeboard to protect against wind-wave runup. Due to lease constraints this well must be drilling by February 1, 1986, and, therefore, your expeditious processing of this application is requested.

LIST OF EXHIBITS

Number		Page
1.1	Regional Map	10
1.2	Topographical Map - Access Roads	11
2	Existing Well Plat	12
3	Survey Plat	13
4	Cut & Fill Cross Section	14
5	Pit & Pad Layout	15
6	Production & Equipment Layout	16
7	Rig Layout	17
8	Archeological Report	18
9	BOP Diagram	19
10	Well Control Equipment	20
11	ND Application for Permit to Drill	21
12	ND Game & Fish Surface Damage Agreement	22
13	Drilling Prognosis	23

1. Existing Roads

A. Directions to the location from Williston, North Dakota are as follows: Go south on Highway 85 8-1/4 miles, turn east on first existing gravel road with stop sign controlling access, proceed east 2 miles, turn south on gravel road 460' to wellsite access.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

B. For access roads in relation to county roads, see Exhibit 1.1 with the access of U.S. 85 highlighted in pink. This map shows all county roads within a three mile radius.

C. Exhibit 1.2 shows a detailed map of the existing roads. The first two miles of access off U.S. 85, marked in green, is a high quality gravel road. The following 460', marked in pink, is an existing gravel road with access onto the location.

D. Roads within a one-mile radius are shown on Exhibit 1.1.

E. Existing roads will be maintained as necessary to allow access during drilling and completion operations.

2. Planned Access Roads

Referencing Exhibit 1.2 and the through segments of road:

A. Prior to drilling, the existing roads will be upgraded as follows:

(1) Gravel Road (Exhibit 1.2, green) This segment of road is in good condition. Basic Earth Science Systems, Inc. has recently upgraded this road in conjunction with other activity in this area and will continue to keep this road maintained.

(2) Gravel Road (Exhibit 1.2, pink) This existing gravel road will require no improvement and will only require that the accesses to the location be built.

If the well is completed as a dry hole, the access will be reclaimed along with the rest of the location.

If the well is completed as a producer, the lease road will be upgraded as required and gravel added as needed.

B. The maximum grade will be less than six percent, however, this may vary as topographical conditions vary.

C. No turnouts are planned.

D. No culverts are planned.

E. Native surfacing material from construction of access road will be sufficient for drilling. No outside construction materials are anticipated, if additional material is needed, then it will be acquired from a private source and it will be free of noxious weeds.

F. No gates, cattleguards or fence cuts will be necessary.

G. No road will be built. The location will be accessed from the existing gravel road.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

3. Location of Existing Wells Within One Mile Radius (see Exhibit 2)

   A. Water wells - 0
   B. Abandoned wells - 2
   C. Temporarily abandoned wells - 0
   D. Disposal wells - 0
   E. Drilling wells - 0
   F. Producing wells - 2
   G. Shut-in wells - 0
   H. Injection wells - 0
   I. Monitoring observation wells - 0
   J. Other proposed locations - 1 (#14-2, SW¼SW¼ 2-153N-101W)

4. Location of Existing and/or Proposed Facilities

   A. Basic Earth Science Systems, Inc. has production facilities on their Rosebud #22-11 location approximately 4050 ft. to the southwest. These consist of standard producing equipment for a Red River well. The Basic Game & Fish #34-3 is being completed in the SW¼SW¼ Section 2, Township 153 North, Range 101 West, and equipment will be installed for Mission Canyon production. Basic Earth Science Systems, Inc. has no other facilities in the area.

   B. Exhibits 3 and 4 show the surveyed location and the anticipated cut and fill. Complying with the Corps of Engineers' requirement because of the frozen condition of the land, the wellsite will have the snow and vegetation bladed off down to the ground surface, a plastic liner laid on top and dirt added to level the location. The dirt will be taken from the construction of the pit.

   C. New facilities contemplated in the event of production are shown on Exhibit 6.

      (1) Proposed tank battery and production equipment are as shown on Exhibit 6 and are to be located adjacent to the existing road as shown on Exhibit 6. Said equipment will be bermed as per the Army Corps of Engineers' requirement.

      (2) Dimension of the facilities are shown on Exhibit 6.

      (3) Construction will be to strip the topsoil, level drilling pad. The battery site and treater pits will be constructed with soil materials native to the site. The additional material needed on site will be acquired from a private source and will contain no noxious weeds. Construction methods will be employed to assume that no drainage flows are impounded to prevent the loss of any hydrocarbon from the site. This is to be done in a manner to facilitate rapid recovery and clean up. (See Exhibit 6).

(4) Protective measures to protect wildlife and livestock will be taken as follows: the weights on the pumping unit will be enclosed and the production pit will be fenced.

D. Upon completion of well, areas required for continued use will be graded to provide drainage and minimize erosion. Those areas unnecessary for use will be graded to blend with the surrounding topography. Top-soil will be replaced on those areas and seeded with Brome grass or other mixture as required by the Corps of Engineers and the North Dakota Game and Fish Department.

5. Location and Type of Water Supply

A. Fresh water for spudding and drilling the first 6500 feet will be trucked to location over the roads shown on Exhibit 1.2. Salt water for the salt-saturated mud system will be trucked from Williston.

B. Salt and fresh water will be trucked to location over the roads marked on Exhibit 1.2.

C. No water well is to be drilled on this lease.

6. Source of Construction Materials

A. Exhibit 5 shows the layout of the planned pad for drilling purposes. This layout represents the maximum area to be disturbed. If a smaller drilling rig is available, the actual size of the location will be reduced to minimize the area disturbed. Prior to leveling off the drillsite pad, the brush covering location will be scraped into a pile on the southeast corner of the location. A sheet of plastic will be laid over the wellsite. Dirt removed from the pit will be distributed on the plastic. The site will then be leveled and laid out as shown on Exhibit 5. If the well is productive, the drillsite will be reclaimed and an area sufficient for the wellhead and a completion rig will be left at the proposed drillsite. The production equipment will then be installed as shown in Exhibit 6 . Said production equipment and wellhead will be diked as required by the Corps of Engineers. Gravel will then be placed on the production pad. Construction materials will consist of soil encountered within the boundaries of the proposed site. Gravel will be used, as needed. The entire producing facility will be fenced with a two strand barbless wire fence.

B. The planned site and access roads are outleased to the North Dakota Game and Fish Department.

C. All gravel (containing no noxious weeds) will be obtained from private land in quantities necessary for the access surfacing and tank base material on the battery site.

7. Methods for Handling Waste Disposal

This well is being drilled to a depth of 6500 feet with fresh water. From that depth on salt water will be used. All cuttings and salt saturated material generated will be hauled off location during and after completion of the well. Upon the completion of drilling operations, all waste materials including, but not limited to drill cuttings, drilling fluids, and burned and unburned trash, shall be completely removed from Government land as directed by the Project Manager, Garrison Project. No waste material shall be buried on site.

A. All drill cuttings will be stored on site in a 20 mil plastic lined pit during drilling and hauled off site prior to reclamation.

B. All fresh water drilling fluids will be removed from site or allowed to evaporate from the reserve pit.

C. At 6500 feet we will be switching over to a brine system. All liquid and solid waste that is produced will be hauled from the site, either during or immediately after drilling is completed. All waste stored on location during drilling activities will be stored in steel containers or in an earthern dike lined with 20 mil plastic liner.

D. No substantial amount of produced water is expected while drilling. The amount of hydrocarbon that may be produced while testing will be stored in a tank. The small amount of loss will be retained in the reserve pit. Previous to clean-up operations the hydrocarbon materials will be skimmed or removed as the situation would dictate.

E. Sanitary facilities will consist of chemical toilets. Waste will be contained and hauled from the site immediately following the drilling operations.

F. Garbage and nonflammable waste are to be contained in the trash pit. Flammable waste is to be contained in the burn pit. The flammable trash is to be burned periodically. The trash and/or burn pit will be totally enclosed with small mesh wire to prevent wind scattering and wildlife entry. The pit will be fenced and flagged to prevent entry of livestock. All non-flammable trash will be hauled from site prior to reclamation.

G. All trash, garbage, etc. is to be gathered and burned or hauled from the site at the end of drilling operations. Reserve and mud pits will be trenched as needed and allowed to dry after drilling is completed and then adequately filled and leveled. All garbage and pits will be filled as soon as the rig leaves the location.

8. Ancillary Facilities

There are no airstrips, camps or other facilities planned during the drilling of the proposed well.

9. Well Site Layout

A. See Exhibit 5 for a cross section of the drill pad with cut and fills. Exhibit 5 shows that the location is relatively flat and there will be approximately a three foot cut and one foot of fill on the drill pad.

B. Rig layout is shown on Exhibit 7. No permanent living facilities are planned. However, during drilling operations, three trailers will be on location.

C. Location of mud tanks; reserve, burn and trash pits; pipe racks; and soil material stockpiles are shown on Exhibits 6 and 7.

10. Plans for Restoration of Surface

A. If well is completed as dry hole.

(1) The reserve pit will be fenced until dry and all drill cuttings and salt saturated water material from the pits will be hauled, pits backfilled, leveled, and contoured. The brush pile will be burned and reincorporated with the top soil. The top soil will be redistributed and seeded.

(2) If access road is not needed, it will be leveled, top soiled, and reseeded.

(3) If there is oil in the pit, it will be removed immediately after drilling.

(4) Rehabilitation operations will begin immediately after the drilling rig is removed. The trash and/or burn pits will be covered. Produced fluids will be removed or flagged overhead and fenced immediately. Reseeding and revegetation operations shall be accomplished in accordance with the instructions, and to the satisfaction, of the Project Manager, Garrison Project. The entire reclamation process will be completed after the spring thaw of 1986.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

B. If the well is completed as a producer.

(1) The pit will be trenched and backfilled as soon as possible and all excess liquids will be hauled off site.

(2) The road will be upgraded as discussed in Section 2 and the production pad will be reduced in areal extent as discussed in Section 6.A. The area to be returned to the Game and Fish will be reclaimed as soon as feasible after the well is completed. The reclamation will consist of returning the ground to original contours and redistributing the top soil and seeding with Brome grass or other seed mixtures as required by the Game and Fish. The excess top soil pile will be seeded to prevent erosion.

11. Other Information

A. Topography: The location borders the Missouri River floodplain.

B. The surface at the drillsite and on the access road is outleased to the North Dakota Game and Fish Department. The surface settlement with the Game and Fish is attached as Exhibit 12.

C. The nearest occupied dwelling is greater than a mile south of the site.

D. The nearest source for water is approximately 1/4 mile east of the location.

E. An archeological survey is being conducted and will be submitted under separate cover for inclusion in this application as Exhibit 8.

F. Drilling is planned for February 1, 1986. It is anticipated that casing point will be reached within 55 days after commencement of drilling.

12. Lessee's or Operator's Representative

Basic Earth Science Systems, Inc.
Jeffery E. Jones, Vice President
P. O. Box 3088
Englewood, Colorado 80155
(303)771-5230 (office)
(303)790-0317 (home)

Tom Hopkin, Field Consultant
RR 4, P. O. Box 41A
Dickinson, North Dakota 58601
(701)677-5621

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

13. Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Basic Earth Science Systems, Inc. and its contractors and subcontractors in conformity with the plan and the terms and conditions under which it is approved.

1-10-86
Date

Jeffery E. Jones, Vice President
Basic Earth Science Systems, Inc.

S
INTERIOR
VEY

EXHIBIT 1.1

WILLISTON
NO
7.5 MINUTE

EXHIBIT .2
NORTH
Basic Earth Science Systems Inc.
Basic Corp. of Engineers Alternate
660'fn & 2305'fe
Sec. 10 T-153N R-101W
McKenzie Co. North Dakota
Existing gravel road
Proposed Location
Existing Hi-Way
5
8
9
10
15
16
17
20
21
22
11
ELEVATED
W I L B U R
BM 1860

EXHIBIT 2

EXISTING WELL PLAT

Basic Earth Science Systems, Inc.

CORPS OF ENGINEERS #31-10
660' FNL & 2305' FWL
NW¼ NE¼ Section 10-T153N-R101W
McKenzie County, North Dakota

Proposed Location
Abandoned Well
Producing Well
Surface Location
Directional well

Form PS-102

EXHIBIT 3

Scale: 1"=1000'

Powers Elevation of Denver, Colorado has in accordance with a request from Judy Burke for Basic Earth Science Systems inc. determined the location of Basic Corp. of Engineers Alternate to be 660'fn & 2305'fe Section 10, Township 153 North Range 101 West of the fifth principal Meridian, McKenzie County, North Dakota

LEO J. HORGAN
REGISTERED LAND SURVEYOR 2883
NORTH DAKOTA

I hereby certify that this plat is an accurate representation of a correct survey showing the location of Basic Corp. of Engineers

Date: 12-21-85

Leo J. Horgan

Licensed Land Surveyor No. 2883
State of North Dakota

EXHIBIT 4

Scale: Horizontal 1"=50'
Verticale 1"=10'

Dirt Quantities (not including pit)
CUT: 1,200 CU.YDS.
Fill: 1,100 CU.YDS.

Basic Earth Science Systems Inc.
Basic Corp. of Engineers #31-10
2305'fe & 660'fn
Sec. 10 T-153N R-101W
McKenzie Co. North Dakota

EXHIBIT 5

Basic Earth Science Systems Inc.
Basic Corp. of Engineers #31-10
2305'fe & 660'fn
Sec. 10 T-153N R-101W
McKenzie Co. North Dakota

EXHIBIT 6

RATLIFF RIG #15 LAYOUT.

DATE: 11-1-83

DRAWN BY: M. POLLOCK

Exhibit 7

Archeological Report

The Archeological Report will be submitted under separate cover.

5000 p.s.i. W.P.

Exhibit 9

Exhibit 10

WELL CONTROL EQUIPMENT
TEST PROCEDURE FOR BOP'S

1. Flush BOP's and all lines to be tested with water.

2. Run test plug on test joint and seat in casinghead (leave valve below test plug open to check for leak).

3. Test the following to rated pressure:

   A. Inside blow out preventer.

   B. Lower kelly cock.

   C. Upper kelly cock.

   D. Stand pipe valve.

   E. Lines to mud pump.

   F. Kill line to BOP's.

4. Close and test lower pipe rams to rated pressure.

5. Close and test hydril to rated pressure.

6. Close and test upper pipe rams to rated pressure.

7. Back off and leave test plug in place. Close and test blind rams to rated pressure.

8. Test all choke manifold valves to rated pressure.

9. Test kill line valves to rated pressure.

EXHIBIT 11

FORM 1

North Dakota State Industrial Commission
Oil and Gas Division
900 EAST BOULEVARD · BISMARCK, NORTH DAKOTA · 58505

APPLICATION FOR PERMIT TO DRILL

(File original and 3 copies with the Oil & Gas Division, 900 East Boulevard, Bismarck, North Dakota 58505)

Type of work: Drill new well _____, Reenter old well _____, Drill directional well X .

Type of well: Oil X, gas _____, disposal _____, injection _____, others _____.

NAME OF OPERATOR: Basic Earth Science Systems, Inc.

ADDRESS: P.O. Box 3088, Englewood, CO 80155

NAME AND ADDRESS OF SURFACE OWNER OR TENNANT: North Dakota Game & Fish

WELL NAME AND NO.: Basic Corps of Engineers #31-10

LOCATION OF WELL: Qtr.-Qtr., NW¼NE¼ Sec., 10 Twp., 153N Rge., 101W COUNTY: McKenzie

Surface location is 660 feet from (N)-(S)-section line and 2305 feet and from (E) (W) section line. 10, 153N, 101W

If directional, top of pay is 660 feet from (N) (S) section line and 2140 feet and from (E) (W) section line.

Distance from proposed location to nearest spacing (drilling) unit line 500 ft.

Distance from proposed location to nearest permitted or completed well in the same pool is 1920 ft.

Acres in spacing (drilling) unit 320 Description of spacing unit is North ½ Section 10

ELEVATION: 1851 (GROUND) 1850.6 (GRADED) ESTIMATED TOTAL DEPTH: 13,600'

PROJECTED HORIZON (Pool Name): Red River APPROXIMATE DATE WORK WILL START: 2/1/85

REMARKS: _____

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

Signature	Title	Date
Jeffery E. Jones	Vice President	January 2, 1986

STATE OF Colorado)
) SS
COUNTY OF Arapahoe)

On this 2 day of January, 19 86, before me personally appeared _____ Jeffery E. Jones _____ to me known as the person described in and who executed the foregoing instrument and acknowledged that (s)he executed the same as his/her free act and deed.

Notary Public

My Commission expires 10-21-88

FOR STATE USE ONLY

API NO. 33-053-00144

PERMIT NO. & WELL FILE NO. 11000

APPROVAL DATE: JAN 6 1993

BY: _____

Deputy

Notary Seal

(SEE INSTRUCTIONS ON REVERSE SIDE)

EXHIBIT 12

basic Earth Science Systems, Inc.

P.O. Box 3088
Englewood, Colorado 80155
(303) 792-5230

January 10, 1986

Mr. Bruce Renhowe
Wildlife Resource Management Biologist
North Dakota Game and Fish Department
214 Rose Lane
Williston, North Dakota 58801

Re: Surface Damage Agreement
Basic Corps of Engineers #31-10
SW¼SW¼ Sec. 10, T153N, R101W
McKenzie County, ND

Dear Mr. Renhowe:

Referencing our telephone conversation of this date, Basic Earth Science Systems, Inc. hereby agrees to a surface damage amount equivalent to $1,250.00 per acre to be contributed in the form of work for North Dakota Game and Fish projects. Once the actual location is built, our representative will meet with you at your convenience to measure the actual size of the damaged area.

It is also understood that the access roads will be upgraded and maintained in accordance with the multi-point and surface use and operations plan which we are forwarding to you at this time. It is further understood that should we obtain a productive well, that we will be responsible for maintaining the access roads with whatever assistance we can obtain from the township.

If you have any questions regarding the above settlement, please contact me immediately.

Sincerely,

Basic Earth Science Systems, Inc.

Jeffery E. Jones
Vice President

JEJ:jb
encl.

DRILLING PLAN FOR ONSHORE OIL & GAS ORDER NO. 1
DRILLING PROGNOSIS

BASIC EARTH SCIENCE SYSTEMS,INC.
Basic Corps of Engineers #31-10
NW¼NE¼ *Section 10, Township 153 North, Range 101 West*
660' FNL - 2305' FEL (Surface Location)
660' FNL - 2140' FEL (Bottom Hole Location)
McKenzie County, North Dakota

1. Estimated Tops of Geological Markers

Formation	True Vertical Depth	Subsea Depth
Pierre Shale	1,580	+ 291
Niobrara	4,107	-2,236
Greenhorn	4,563	-2,692
Belle Fourche	4,607	-2,736
Mowry	4,777	-2,906
Muddy	4,954	-3,083
Dakota	5,357	-3,486
Morrison	5,832	-3,961
Swift	6,100	-4,229
Reardon	6,305	-4,434
Piper	6,487	-4,616
Spearfish	6,787	-4,916
Pine Salt	6,822	-4,951
Minnekahta	7,202	-5,331
Opeche	7,257	-5,386
Minnelusa	7,542	-5,671
Amsden	7,834	-5,963
Tyler	8,020	-6,149
T/Miss. Otter	8,142	-6,271
Kibbey	8,303	-6,432
Charles	8,452	-6,581
BLS	8,933	-7,061
Lodgepole	9,649	-7,777
Bakken	10,423	-8,551
Three Forks	10,496	-8,624
Nisku	10,685	-8,813
Duperow	10,784	-8,912
Souris River	11,243	-9,371
Dawson Bay	11,480	-9,608
Prairie Evap.	11,593	-9,721
Winnepegosis	11,788	-9,916
Ashern	11,987	-10,115
Interlake	12,102	-10,230
Stonewall	12,950	-11,078
Gunton	13,029	-11,157
Stoney Mt.	13,134	-11,262
Red River	13,190	-11,318
TD	13,502	-11,630

DRILLING PLAN FOR ONSHORE OIL & GAS ORDER NO. 1
DRILLING PROGNOSIS

2. Estimated Depths of Anticipated Water, Oil, Gas or Minerals

Substances	Formation	Anticipated Depths
Brine Water	Dakota	5,357'
Brine Water	Piper	6,487'
Brine Water	Minnelusa	7,542'
Brine Water	Kibbey	8,303'
Oil and Gas	Nesson	9,367'
Oil and Gas	Nisku	10,685'
Oil and Gas	Duperow	10,784'
Oil and Gas	Stonewall	12,950'
Oil and Gas	Red River	13,190'

The 3000' of surface casing will protect any near-surface water zones. *Any water zones encountered will be adequately protected.*

3. Operator's Minimum Specifications for Pressure Control Equipment

Exhibit 9, is a schematic diagram of the blow out preventer equipment. The BOP's will be hydraulically tested to full working pressure after nippling up and after any use under pressure. Blind rams and annular preventer will be operationally checked at least every two weeks, as per stated specifications in Exhibit 10.

4. Drilling Equipment

A. A kelly cock will be kept in the string at all times.
B. A stabbing valve will be kept on the derrick floor to be stabbed into the drill pipe whenever the kelly is not in the string.
C. A float will be used above the bit.
D. H_2S monitoring devices and safety equipment will be installed on the rig by 9000'.

Proposed Casing Program (All new)

Size	Grade	Weight/Ft	Thread	Setting Depth
9-5/8"	K-55	36#	ST&C	0-3000'
5-1/2"	L-80	23#	LT&C	0-2550'
5-1/2"	L-80	20#	LT&C	2550-6550'
5-1/2"	RS-90	23#	LT&C	6550-6750'
5-1/2"	L-80	20#	LT&C	6750-8200'
5-1/2"	RS-90	23#	LT&C	8200-8985'
5-1/2"	L-80	20#	LT&C	8985-11550'
5-1/2"	RS-90	26.4#	LT&C	11550-11850'
5-1/2"	L-80	23#	LT&C	11850-13600'

DRILLING PLAN FOR ONSHORE OIL & GAS ORDER NO. 1
DRILLING PROGNOSIS

5. Proposed Circulating Medium

The type and characteristics of the proposed circulating mud system will be gel chemical/inverted with adequate stocks of sorptive agents and other materials on-site to handle any anticipated down hole problem, as well as possible spills of fuel and oil on surface.

Depth	Weight	Viscosity	Fluid Loss	Salinity
0-2000	8.5-9.0	Sweeps	N/C	Fresh
2000-4950	8.7-9.5	Sweeps	N/C	Fresh
4950-5600	9.0-10.0	25-32	1/4 15	Fresh
5600-6600	9.5-10.2	25-35	1/4 30	Brine
6600-8450	9.5-10.6	32-50	1/4 30	Saturated
8450-9100	9.5-10.6	28-35	1/4 30	
9100-TD	9.5-10.6	28-50	1/4 12 for DST's	

The surface hole and first 3000' will be drilled with fresh water, using gel pills as needed to keep hole clean. The saturation of the mud will then be allowed to increase to saturated before drilling the Pine Salt at 6822'. The system will be kept salt saturated to TD.

6. Testing, Logging and Coring Programs (Proposed, depending shows)

A. Drill Stem Tests will be made in any formation indicating commercial production.
B. Logs run will be an Integrated Sonic Log from 2000' to total depth; a Dual Induction Log from surface to total depth; and a FDC/CNL Log from approximately 6000' to total depth.
C. A two man mud logging unit will be on location from 8500' to TD.
D. No cores are anticipated.
E. We do not anticipate using fracture treatment.
F. Directional surveys will be taken every 500' from surface to TD and the connection above any anticipated salts and the connection below the Pine and Charles salts.

7. Anticipated Abnormal Pressures or Temperatures Expected

No abnormal pressures or temperatures have been noted or reported in wells drilled in the area at the depths anticipated in the well. Bottom hole temperature should be approximately 280°F at TD, but not extreme.

Traces of hydrogen sulfide may be encountered from 9000' to TD. Adequate precautions will be taken and equipment installed. An H_2S safety supervisor will be used to train the crews in proper use of the safety equipment and in H_2S awareness. He will also be on location during testing of potential H_2S bearing formations.

11920

January 6, 1986

Mr. Jeffery E. Jones
Basic Earth Science Systems, Inc.
P.OO. Box 3088
Englewood, Colorado 80155

Dear Mr. Jones:

Check No. 4543 in the amount of $100.00 was received.

Enclosed is Permit No. 11920 to drill the Basic Corps of Engineers #31-10 well, located in the NW NE of Section 10, T.153N., R.101W., McKenzie County, North Dakota.

It is requested that notification be given, immediately upon the spudding of the well. This information shall be relayed to the Oil and Gas Division, in Bismarck, via telephone. The following information should be included: well name, legal location, Permit Number, drilling contractor, company representative, and date and time of spudding. Office hours are 8:00 a.m. to 12:00 noon, and 1:00 p.m. to 5:00 p.m. Central Time. Our telephone number is Area Code 701, 224-2969.

Thank you for your cooperation.

Sincerely yours,

F. E. Wilborn
Deputy Enforcement Officer

lb
enc.

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

WESLEY D. NORTON
Chief Enforcement Officer

F. E. WILBORN
Deputy Enforcement Officer

CLARENCE G. CARLSON
Geologist

CHARLES KOCH
Engineering Dept.

DOREN DANNEWITZ
Field Supervisor

KEN KALLESTAD
Reclamation Sup.

January 6, 1986

Mr. Jeffery E. Jones
Basic Earth Science Systems, Inc.
P.O. Box 3088
Englewood, Colorado 80155

Re: Deviate Wellbore
Basic Corps of Engineers #31-10
NW NE Sec.10-153N-101W, McKenzie
Permit No. 11920

Dear Mr. Jones:

Pursuant to Section 43-02-03-25 NDAC (as amended May 1, 1980), permission to deviate the wellbore of the Basic Corps of Engineers #31-10 well, Permit No. 11920, is hereby given.

The permission is granted on the condition that the wellbore of the well, having a surface location 660' from north line and 2305' from east line of Section 10, T.153N., R.101W., McKenzie County, North Dakota, intersect all pay zones at a point that complies with the spacing requirements in the Baker Field. Also, a directional survey of the well showing the location of the wellbore shall be filed with the Industrial Commission within 30 days after completion of the well.

Sincerely yours,

F. E. Wilborn
Deputy Enforcement Officer

FEW:lb
enc.

basic Earth Science Systems, Inc.

P.O. Box 3088
Englewood, Colorado 80155
(303) 792-5230

January 2, 1986

Mr. F. E. Wilborn
Deputy Enforcement Officer
North Dakota Industrial Commission
Oil and Gas Division
900 East Boulevard
Bismarck, ND 58505

Re: Basic Corps of Engineers #31-10
NW¼NE¼ Section 10, T153N, R101W
McKenzie County, ND

Dear Mr. Wilborn:

Enclosed please find an original and three copies of an Application to Drill for the above referenced well. A check in the amount of $100.00 is enclosed for the permitting fee, as well as three copies of the Drilling Prognosis and the Surveyor's Plat.

Please do not hesitate to contact me if you have any questions or need additional information.

Sincerely,

BASIC EARTH SCIENCE SYSTEMS, INC.

Jeffery E. Jones
Vice President

JEJ/ib

enc. Application to Drill (4)
check
Drilling Prog. & Survyr. Plat (3)

FORM 1

North Dakota State Industrial Commission
Oil and Gas Division
900 EAST BOULEVARD - BISMARCK, NORTH DAKOTA - 58505

APPLICATION FOR PERMIT TO DRILL

(File original and 3 copies with the Oil & Gas Division, 900 East Boulevard, Bismarck, North Dakota 58505)

Type of work: Drill new well _____, Reenter old well _____, Drill directional well X .

Type of well: Oil X, gas _____, disposal _____, injection _____, others _____.

NAME OF OPERATOR: Basic Earth Science Systems, Inc.

ADDRESS: P.O. Box 3088, Englewood, CO 80155

NAME AND ADDRESS OF SURFACE OWNER OR TENNANT: North Dakota Game & Fish

WELL NAME AND NO.: Basic Corps of Engineers #31-10

LOCATION OF WELL: Qtr.-Qtr., NW¼NE¼ Sec., 10 Twp., 153N Rge., 101W COUNTY: McKenzie

Surface location is 660 feet from (N)-(S)-section line and 2305 feet and from (E) (W) section line. 10, 153N, 101W

If directional, top of pay is 660 feet from (N) (S) section line and 2140 feet and from (E) (W) section line.

Distance from proposed location to nearest spacing (drilling) unit line 500 ft.

Distance from proposed location to nearest permitted or completed well in the same pool is 1920 ft.

Acres in spacing (drilling) unit 320 Description of spacing unit is North ½ Section 10

ELEVATION: 1851 (GROUND) 1850.6 (GRADED) ESTIMATED TOTAL DEPTH: 13,600'

PROJECTED HORIZON (Pool Name): Red River APPROXIMATE DATE WORK WILL START: 2/1/85

REMARKS:

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

Signature	Title	Date
Jeffery E. Jones	Vice President	January 2, 1986

STATE OF Colorado)
) SS
COUNTY OF Arapahoe)

On this 2 day of January, 19 86, before me personally appeared Jeffery E. Jones to me known as the person described in and who executed the foregoing instrument and acknowledged that (s)he executed the same as his/her free act and deed.

Notary Public

My Commission expires 10-21-88

FOR STATE USE ONLY

API NO. 33-053-02148

PERMIT NO. & WELL FILE NO. 11920

APPROVAL DATE: JAN 6 1986

BY:

Notary Seal

(SEE INSTRUCTIONS ON REVERSE SIDE)

Form PS-102

R. 101W

Scale: 1"=1000'

Powers Elevation of Denver, Colorado has in accordance with o request from Judy Burke for Basic Earth Science Systems inc. determined the location of Basic Corp. of Engineers Alternate to be 660'fn & 2305'fe Section 10, Township 153 North Range 101 West of the fifth principal Meridion, McKenzie County, North Dakota

LEO J. HORGAN
REGISTERED LAND SURVEYOR 2883
NORTH DAKOTA

I hereby certify that this plat is on accurate representation of a correct survey showing the location of Basic Corp. of Engineers

Date: 12-21-85

Leo J. Horgan

Licensed Land Surveyor No. 2883
State of North Dakota

DRILLING PROGNOSIS
Basic Corps of Engineers #31-10
Directional Well
NW¼NE¼ Section 10, T153N, R101W
McKenzie County, ND

1. Estimated Tops of Geological Markers

Formation	True Vertical Depth	Subsea Depth
Pierre Shale	1,580	+ 291
Niobrara	4,107	-2,236
Greenhorn	4,563	-2,692
Belle Fourche	4,607	-2,736
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Kibbey	8,303	-6,432
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Lodgepole	9,649	-7,777
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Prairie Evap.	11,593	-9,721
Winnepegosis	11,788	-9,916
Ashern	11,987	-10,115
Interlake	12,102	-10,230
Stonewall	12,950	-11,078
Gunton	13,029	-11,157
Stoney Mt.	13,134	-11,262
Red River	13,190	-11,318
TD	13,502	-11,630

DRILLING PROGNOSIS

Basic Corps of Engineers #31-10

Proposed Casing Program (All new)

Size	Grade	Weight/Ft	Thread	Setting Depth	Hole Size
9-5/8"	K-55	36#	ST&C	0-3000'	12-1/2"
5-1/2"	L-80	23#	LT&C	0-2550'	8-3/4"
5-1/2"	L-80	20#	LT&C	2550-6550'	8-3/4"
5-1/2"	RS-90	23#	LT&C	6550-6750'	8-3/4"
5-1/2"	L-80	20#	LT&C	6750-8200'	8-3/4"
5-1/2"	RS-90	23#	LT&C	8200-8985	8-3/4"
5-1/2"	L-80	20#	LT&C	8985-11550'	8-3/4"
5-1/2"	RS-90	26.4#	LT&C	11550-11850'	8-3/4"
5-1/2"	L-80	23#	LT&C	11850-13600'	8-3/4"

Basic Earth Science Systems, Inc. plans to drill a 13,600' (13,610' measured depth) Red River test directionally from a surface location 660' FNL and 2305' FEL of Section 10, T153N, R101W to a point 660' FNL and 2140' FEL of Section 10, T153N, R101W. Surface casing will consist of 3000' and will protect any near-surface water zones. We will drill approximately 6000' and then begin directional drilling.

Basic Earth Science Systems Inc.
Basic Corp. of Engineers Alternate
2305'fe & 660'fn
Sec. 10 T-153N R-101W
McKenzie Co. North Dakota

Scale: Horizontal 1"=50'
Verticale 1"=10'

Dirt Quantities (not including pit)
CUT: 1,200 CU.YDS.
Fill: 1,100 CU.YDS.

Basic Earth Science Systems Inc.
Basic Corp. of Engineers Alternate
660'fn & 2305'fe
Sec. 10 T-153N R-101W
McKenzie Co. North Dakota
NORTH
Existing gravel road
Proposed road
Proposed Location
Existing Hi-Way
ELEVATED
W I L B U R
5
8
9
10
15
16
17
20
21
22
Baker
Rosebud Ch

NORTH DAKOTA GEOLOGICAL SURVEY

UNIVERSITY STATION·GRAND FORKS, N. DAK. 58202
(701) 777-2231

DON L. HALVORSON
State Geologist

RECEIVED
OIL & GAS DIVISION

NOTICE

RE: Cores and samples from the Basic Earth Science Systems, Inc.,
NAME OF OPERATOR

Basic Corps of Engineers #31-10, 11920.
WELL NAME AND NUMBER PERMIT NUMBER

Section 38-08-04 of the North Dakota Century Code and Section 43-02-03-38 of the North Dakota Administrative Code provide for the preservation of cores and samples and the shipment of same to the State Geologist free of charge when requested.

Samples from the subject well (are) (~~are not~~) to be washed, dried, and properly labeled and forwarded to the State Geologist prepaid. Include all samples from Base of Last Charles Salt to total depth.

Cores from the subject well (are) (~~are not~~) to be forwarded to the State Geologist prepaid. PLEASE INCLUDE ALL CORES.

Target Formation Ord. Red River

Designation:

- [ ] Wildcat
- [ ] Replacement
- [x] Development
- [ ] Extension
- [ ] Outpost

Copies of all logs must be submitted to the State Geologist as provided for by Section 38-08-04 of the North Dakota Century Code and Section 43-02-03-31 of the North Dakota Administrative Code.

Signed Sidney B. Anderson

SFN 5737

CHECK SHEET

DATE: January 6, 1986 FILE NO. 11920

COMPANY: Basic Earth Science Systems, Inc.

WELL NAME: Basic Corps of Engineers #31-10

LOCATION: NW NE Sec.10-153N-101W, McKenzie Co.

Permit Fee	X
Application to Drill	X
Organization Report	X
$100,000 Bond	
$50,000 Bond	X
$15,000 Bond	
Certified Plat	X
Notice of Intention to Drill	X
Sundry Notice	XXXX
Completion Report	X
Plugging Report	
Authorization to Transport Oil	X
DST Reports	4,5,6,7 enc. 1,2,3 enc.
Geological Reports	enc.
Core Analysis Reports	None
Logs	mud 9-2-86 DLL, BHC, FDL 9-15-86. CBL, perf. record - 12-15-86

Well File 2-6-87 RC

OK 2-6-87 LE

7 logs OK

Missing DST's #1, 2, 3

Cyberlook log

CLL & CN

Rec'd 2-6-87 req. same 1-20 (also form 8 and P.I.)

Rept. of Sub-Surface directional Survey Enc.

CYB, CBL, FDL 2-6-87

Diff time 9-25-86

PERMIT NO. 11920 ISSUED: ~~Jan. 6, 1986~~

Status of Well: _____ Inspection Date: _____ Inspector: _____

Terrain: Tillable, Prairie, Badlands Type, other (circle one)

If Producer: Return check sheet promptly when reclamation is first noticed

If Plugged and Abandoned: Is drill site acceptable for bond release? Yes ____ No ____
If no, please explain below.

SFN 5737

CHECK SHEET

DATE: January 6, 1986 FILE NO. 11920

COMPANY: Basic Earth Science Systems, Inc.

WELL NAME: Basic Corps of Engineers #31-10

LOCATION: NW NE Sec.10-153N-101W, McKenzie Co.

Permit Fee	X
Application to Drill	X
Organization Report	X
$100,000 Bond	
$50,000 Bond	X
$15,000 Bond	
Certified Plat	X
Notice of Intention to Drill	X
Sundry Notice	
Completion Report	
Plugging Report	
Authorization to Transport Oil	
DST Reports	
Geological Reports	
Core Analysis Reports	
Logs	

PERMIT NO. 11920 ISSUED: Jan. 6, 1986

Status of Well: _____ Inspection Date: _____ Inspector: _____

Terrain: Tillable, Prairie, Badlands Type, other (circle one)

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If no, please explain below.