ORIGINAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 9951
Name: Kirby Krier Oil, Inc.
Address 1: 1043 NE 80TH RD.
Address 2:
City: CLAFLIN State: KS Zip: 67525 + 9159
Contact Person: KIRBY KRIER
Phone: (620) 562-7637
CONTRACTOR: License # 33905
Name: ROYAL DRILLING, INC.
Wellsite Geologist: JOSH AUSTIN
Purchaser:

Designate Type of Completion:

- [x] New Well [ ] Re-Entry [ ] Workover
- [x] Oil [ ] WSW [ ] SWD [ ] SIOW
- [ ] Gas [ ] D&A [ ] ENHR [ ] SIGW
- [ ] OG [ ] GSW [ ] Temp. Abd.
- [ ] CM *(Coal Bed Methane)*
- [ ] Cathodic [ ] Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:

Operator:
Well Name:
Original Comp. Date: Original Total Depth:

- [ ] Deepening [ ] Re-perf. [ ] Conv. to ENHR [ ] Conv. to SWD
- [ ] Conv. to GSW
- [ ] Plug Back: Plug Back Total Depth
- [ ] Commingled Permit #:
- [ ] Dual Completion Permit #:
- [ ] SWD Permit #:
- [ ] ENHR Permit #:
- [ ] GSW Permit #:

09/27/2011	10/03/2011	10/14/2011
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-009-25615-00-00
Spot Description:
S2 NENE Sec. 23 Twp. 16 S. R. 12 [ ] East [x] West
990 Feet from [x] North / [ ] South Line of Section
660 Feet from [x] East / [ ] West Line of Section
Footages Calculated from Nearest Outside Section Corner:
[x] NE [ ] NW [ ] SE [ ] SW
County: BARTON
Lease Name: MINNIE Well #: 9
Field Name:
Producing Formation:
Elevation: Ground: 1913 Kelly Bushing: 1920
Total Depth: 3421 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 395 Feet
Multiple Stage Cementing Collar Used? [ ] Yes [x] No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 68000 ppm Fluid volume: 400 bbls
Dewatering method used:
Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. [ ] East [ ] West
County: Permit #:

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INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature: Kirby Krier
Title: president Date: 12/6/11

KCC Office Use ONLY

- [ ] Letter of Confidentiality Received
  Date:
- [ ] Confidential Release Date:
- [x] Wireline Log Received
- [x] Geologist Report Received
- [ ] UIC Distribution

ALT [x] I [ ] II [ ] III Approved by: DLG Date: 12/13/11

Side Two

Operator Name: Kirby Krier Oil, Inc. Lease Name: MINNIE Well #: 9

Sec. 23 Twp. 16 S. R. 12 ☐ East ☑ West County: BARTON

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☐ No

Cores Taken ☐ Yes ☐ No

Electric Log Run ☐ Yes ☐ No

Electric Log Submitted Electronically ☐ Yes ☑ No
(If no, Submit Copy)

List All E. Logs Run:

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
RADIATION GUARD	350	3421
CEMENT BOND	2180	3391

CASING RECORD ☐ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
surface	12.25	8.626	20	395	common	200	3%cc, 2%gel
production	7.875	5.5	15.5	3418	common	180	10% salt, 5%g

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose: ___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth
2	3352-3360	none	

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TUBING RECORD: Size: 2 7/8 Set At: 3390 Packer At: Liner Run: ☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR. Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	30		0		40

DISPOSITION OF GAS: ☑ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION: ☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)* ☐ Other *(Specify)*

PRODUCTION INTERVAL:

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Phone 785-483-2025
Cell 785-324-1041
Home Office P.O. Box 32 Russell, KS 67665

No. 5172

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-28-11	23	16	12	Barton	Ks		7:00 AM

Lease Minnie | Well No. #9 | Location Beaver, Ks - 3E to Stop Sign, 3/4N - W/Into

Contractor [redacted] Royal #2 | Owner

Type Job Surface | To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size	12 1/4"	T.D.	395'
Csg.	8 5/8"	Depth	395'
Tbg. Size		Depth	
Tool		Depth	
Cement Left in Csg.	15'	Shoe Joint	15'
Meas Line		Displace	24 BLS

Charge To Kirby Krier Oil Co Inc

Street

City State

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered ~~200~~ 190 sx Common 3% CC 2% Gel

EQUIPMENT

Pumptrk 1	No.	Cementer	Cisco
		Helper	
Bulktrk 10	No.	Driver	Brian S.
		Driver	
~~Bulktrk~~ P.U.	No.	Driver	Rick
		Driver	

JOB SERVICES & REMARKS

Remarks: Cement did Circulate.

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

Common	~~200~~ 190
Poz. Mix	
Gel.	4
Calcium	
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	200
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

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Pumptrk Charge	Surface
Mileage	31
Tax	
Discount	
Total Charge	

X Signature Curtis Kaff

QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025 · Home Office P.O. Box 32 Russell, KS 67665 · No. 5214
Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
10/31/11	23	16	12	Barton	KS		2:00 PM

Lease	Well No.	Location
Minnie	G	Ellinwood, 13 E, 3/4N, W into

Contractor	Royal Drilling Rig #2	Owner
Type Job	Production String	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Hole Size	7 7/8 T.D. 3421'	
Csg.	5 1/2" 15.50# Depth 3418'	Charge To Kirby Krier Oil, Inc
Tbg. Size	Depth	Street
Tool	Depth	City State
Cement Left in Csg.	23' Shoe Joint 23'	The above was done to satisfaction and supervision of owner agent or contractor.
Meas Line	Displace 81 Bbls	Cement Amount Ordered 180 sx Com 10% Salt 5% Gyp

EQUIPMENT

Pumptrk 9	No.	Cementer	
		Helper	Paul
Bulktrk 14	No.	Driver	
		Driver	Matt
Bulktrk 10	No.	Driver	
		Driver	Brain

JOB SERVICES & REMARKS

Remarks:

Rat Hole 30 sx

Mouse Hole 20 sx

Centralizers 1,2,3,4,5,6,7,8,9

Baskets 3,4

D/V or Port Collar

Est Circ 1/2 hour

Pump 500 gal Mud Clear-48

Plug Rat & Mouse

Mix 130 sx down 5 3/4"

Displace

Land Plug

Float Held

Thank You

Common	
Poz. Mix	
Gel	
Calcium	
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	500 gal
CFL-117 or CD110 CAF 38	
Sand	
Handling	
Mileage	5/8

FLOAT EQUIPMENT

Guide Shoe	1
Centralizer	9 - Twisters
Baskets	2
AFU Inserts	1
Float Shoe	
Latch Down	
	Rubber Plug
	Rotating Head
Pumptrk Charge	
Mileage	
Tax	
Discount	
Total Charge	

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X Signature Roy Burn

Midwestern Pipeworks, Inc.
Hays, KS 67601
785-625-4670

PIPE TALLY

Visit our website www.midwesternpipeworks.com

Date 9/26/11

Company Kirby Krier Oil

Lease Minnie #9

Size	New	Used	Limited Service	Weight	Grade	Type	Range
8 5/8	✓		✓	24			R3

	Column 1		Column 2		Column 3		Column 4		Column 5		Column 6		Column 7		Column 8		Column 9		Column 10	
	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.
1	38	45																		
2	38	0																		
3	39	40																		
4	40	40																		
5	40	85																		
6	35	00																		
7	40	95																		
8	41	05																		
9	35	10																		
10	38	10																		
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
Total	388	00																		

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_____ Subtotal this page

10 Jts Total Number of Joints

Tallied By

388.00 GRAND TOTAL

Received In Good Order By

☐ Casing Head & Accessories

per Doug ☐ Other

Limited Service and/or Used Materials are sold "as is, without warranty either expressed or implied."

Midwestern Pipeworks, Inc
Hays, KS 67601
785-625-4670

PIPE TALLY

Visit our website www.midwesternpipeworks.com

Date Oct-2-11

Company Kirby Krier Oil Inc

Lease Minnie #9

Bauer 3E 3/4N West into

API TUBE Ferrous processed by MWPW

Size	New	Used	Limited Service	Weight	Grade	Type	Range
5 1/2	X			15.5	J-55	LTC	2.3

	Column 1		Column 2		Column 3		Column 4		Column 5		Column 6		Column 7		Column 8		Column 9		Column 10	
	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.
1	42	45	~~42~~ 45		42	45	42	45	42	45										
2									31	65										
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18							40	45												
19							40	45												
20							40	45												
Total	849	–	849	–	849	–	843	–	74	10										

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82 Total Number of Joints

Subtotal this page

Tallied By

3466.10 GRAND TOTAL

Received In Good Order By

☒ Casing Head & Accessories ☐ Other

"One Tuff Muddier"

ANDY'S "Mud Doctor"

MUD & CHEMICAL CO.

Drilling Mud Report

Report no. 1

Date: 9/28/11

Depth: 395

OPERATOR:	KRIER, KIRBY OIL, INC.	CONTRACTOR	ROYAL DRLG	RIG NO.	#2
ADDRESS:	CO	ADDRESS:	Rig	SPUD DATE	September 27, 2011
REPORT FOR	JIM MUSGROVE(GEO)	REPORT FOR	DOUG BUDIG	COUNTY	BARTON

WELL NAME	MINNIE #9	SEC	23	TOWNSHIP	16	RANGE	12	W

Drilling Assembly			Casing		Mud Volume (BBL)		Circulation Data			
Bit Size	7 7/8		Surface		Hole	75	Pump Size	6 x 14	Annular Vel (Ft/Min)	
No. Bits	2		8 5/8 @	395	Pits	400	Pump Make / Model		DP	DC
Drill Pipe	4 1/2		Intermediate		Total Circ Vol.	475	BBL / Stroke	0.139	197	356
Type	XH				Mud up Dpth.	2600	Stroke / Min.	60	Circ PSI	800
Drill Collar	6 1/4		Production		Mud Type	NATIVE	BBL / Min.	8	Bottoms Up (min)	
Bit RPM	60				Activity	W.O.C.	Gal. / Min.	336	9	
Weight on Bit	30000				Pits used	3	Elevation		TTL (Min.)	59
Sample Taken From Flowline			x	Pit	Flowing Temp.		MUD COSTS			

MUD PROPERTIES			PRODUCT	Daily Cost		Total	$12.95
Time Sample Taken	8AM			On Hand	add Del.	Used	cost
Depth (ft.)	395		Premium Gel	249	249		
Weight (ppg)			Hulls	71	71		
Mud Gradient (psi/ft)	0.000		Soda Ash	23	23		
Funnel Viscosity (sec/qt.)			Caustic Beads	13	13		
Plastic Viscosity cp at /			Lignite	13	13		
Yield Point (lb./100 sq. ft.)			Lime	4	5	1	
Gel Strength (lb.100 sq. ft.) 10 sec/ 10 min			Drispac	4	4		
pH Strip / Meter			Desco	2	2		
Filtrate API (ml./30 min.)			PHPA	2	2		
API HP-HT Filtrate (ml./30 min.)	xxx		RH Vis	0	0		
Cake Thickness 32nd in. API			Barite	0	0		
Alkalinity, Mud (Pm)							
Alkalinity, Filtrate (Pf/Mf)			Misc. cost				
Chlorides (ppm)			Mud Properties Specifications				
Calcium (ppm)			Weight	< 9.4	Viscosity	27-32	Filtrate	N/C
Sand Content (% by Vol.)	TR		Recommended Tour Treatment				
Solids Content (% by Vol.)							
Oil Content (% by Vol.)	xxx						
Water Content (% by Vol.)	100.0						
LCM, #/bbl							
Methylene Blue Capacity	xxx						

REMARKS:

KEEP HOLE FULL ON ALL TRIPS- VERY IMPORTANT

USE GEL AND HULLS IF LOSING FLUID

DRILL ALL SANDS SLOWLY

SWEEP HOLE AS NEEDED FOR TIGHT CONNECTIONS
18 P-GEL, 1 SODA ASH, 4 HULLS
OR ADD PHPA AT DRILLSTRING (2-3 VIS CUPS)

Recommended Tour Treatment

UNDER SURFACE USE PLENTY OF FRESH WATER AND JET OFTEN TO KEEP MUD WEIGHT LOW AS POSSIBLE UNDER 9.4 #/GAL

DISPLACE AT GEOLOGIST REQUEST- RECOMMEND 2600 FT.:

HAVE FRAC, AND PREMIX FULL WHEN READY TO DISPLACE

PREMIX TO 80-100 BBL FRESH WATER
24-26 P-GEL
2 SODA ASH
1 CAUSTIC
1 LIGNITE
1/3 SACK DRISPAC (MIX SLOWLY 2 MIN. PER POUND)
4 HULLS

RECOMMEND RUN 80 TO 100 BBL FRESH WATER AHEAD OF FRAC MUD

***** IN LAST PREMIX TANK FOR MUD UP ADD 1 EXTRA CAUSTIC, 1 EXTRA LIGNITE*****

RESERVE Chlorides=	
CALCUIM=	
VOLUME=	

ENGINEER	DENNIS RECTOR	WAREHOUSE	HAYS	PHONE	785-625-3531 (cell)785-656-3039

"One Tuff Muddder"
ANDY'S "Mud Doctor"
MUD & CHEMICAL CO.

Drilling Mud Report

Report no. 1

Date: 9/28/11

Depth: 395

OPERATOR:	KRIER, KIRBY OIL, INC.	CONTRACTOR	ROYAL DRLG	RIG NO.	#2		
ADDRESS:	co	ADDRESS:	Rig	SPUD DATE	September 27, 2011		
REPORT FOR	JIM MUSGROVE(GEO)	REPORT FOR	DOUG BUDIG	COUNTY	BARTON		
WELL NAME	MINNIE #9	SEC	23	TOWNSHIP	16	RANGE	12 W

Drilling Assembly			Casing		Mud Volume (BBL)		Circulation Data			
Bit Size	7 7/8		Surface		Hole	75	Pump Size	6 x 14	Annular Vel (Ft/Min)	
No. Bits	2		8 5/8 @	395	Pits	400	Pump Make / Model		DP	DC
Drill Pipe	4 1/2		Intermediate		Total Circ Vol.	475	BBL / Stroke	0.139	197	356
Type	XH				Mud up Dpth.	2600	Stroke / Min.	60	Circ PSI	800
Drill Collar	6 1/4		Production		Mud Type	NATIVE	BBL / Min.	8	Bottoms Up (min)	
Bit RPM	60				Activity	W.O.C.	Gal. / Min.	336	9	
Weight on Bit	30000				Pits used	3	Elevation		TTL (Min.)	59
Sample Taken From Flowline		x	Pit		Flowing Temp.		MUD COSTS			

MUD PROPERTIES		
Time Sample Taken	8AM	
Depth (ft.)	395	
Weight (ppg)		
Mud Gradient (psi/ft)	0.000	
Funnel Viscosity (sec/qt.)		
Plastic Viscosity cp at /		
Yield Point (lb./100 sq. ft.)		
Gel Strength (lb.100 sq. ft.) 10 sec/ 10 min		
pH Strip / Meter		
Filtrate API (ml./30 min.)		
API HP-HT Filtrate (ml./30 min.)	xxx	
Cake Thickness 32nd in. API		
Alkalinity, Mud (Pm)		
Alkalinity, Filtrate (Pf/Mf)		
Chlorides (ppm)		
Calcium (ppm)		
Sand Content (% by Vol.)	TR	
Solids Content (% by Vol.)		
Oil Content (% by Vol.)	xxx	
Water Content (% by Vol.)	100.0	
LCM, #/bbl		
Methylene Blue Capacity	xxx	

PRODUCT	Daily Cost		Total	$12.95
	On Hand	add Del.	Used	cost
Premium Gel	249	249		
Hulls	71	71		
Soda Ash	23	23		
Caustic Beads	13	13		
Lignite	13	13		
Lime	4	5	1	
Drispac	4	4		
Desco	2	2		
PHPA	2	2		
RH Vis	0	0		
Barite	0	0		
Misc. cost				

Mud Properties Specifications

Weight	< 9.4	Viscosity	27-32	Filtrate	N/C

Recommended Tour Treatment

UNDER SURFACE USE PLENTY OF FRESH WATER AND JET OFTEN TO KEEP MUD WEIGHT LOW AS POSSIBLE UNDER 9.4 #/GAL

DISPLACE AT GEOLOGIST REQUEST- RECOMMEND 2600 FT.:

HAVE FRAC, AND PREMIX FULL WHEN READY TO DISPLACE

PREMIX TO 80-100 BBL FRESH WATER
24-26 P-GEL
2 SODA ASH
1 CAUSTIC
1 LIGNITE
1/3 SACK DRISPAC (MIX SLOWLY 2 MIN. PER POUND)
4 HULLS

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RECOMMEND RUN 80 TO 100 BBL FRESH WATER AHEAD OF FRAC MUD

***** IN LAST PREMIX TANK FOR MUD UP ADD 1 EXTRA CAUSTIC, 1 EXTRA LIGNITE*****

REMARKS:

KEEP HOLE FULL ON ALL TRIPS- VERY IMPORTANT

USE GEL AND HULLS IF LOSING FLUID

DRILL ALL SANDS SLOWLY

SWEEP HOLE AS NEEDED FOR TIGHT CONNECTIONS
18 P-GEL, 1 SODA ASH, 4 HULLS
OR ADD PHPA AT DRILLSTRING (2-3 VIS CUPS)

RESERVE Chlorides=	
CALCUIM=	
VOLUME=	

ENGINEER	DENNIS RECTOR	WAREHOUSE	HAYS	PHONE	785-625-3531 (cell)785-656-3039

"GO WITH THE EXPERIENCE"

"One Tuff Muddier"

ANDY'S "Mud Doctor" MUD & CHEMICAL CO.

Drilling Mud Report

Report no.	2

Date:	9/30/11	Depth:	2704

OPERATOR:	KRIER, KIRBY OIL, INC.	CONTRACTOR	ROYAL DRLG	RIG NO.	#2
ADDRESS:	co	ADDRESS:	Rig	SPUD DATE	September 27, 2011
REPORT FOR	JIM MUSGROVE(GEO)	REPORT FOR	DOUG BUDIG	COUNTY	BARTON

WELL NAME	MINNIE #9	SEC	23	TOWNSHIP	16	RANGE	12	W

Drilling Assembly			Casing	Mud Volume (BBL)		Circulation Data			
Bit Size	7 7/8		Surface	Hole	220	Pump Size	6 x 14	Annular Vel (Ft/Min)	
No. Bits	2		8 5/8 @ 395	Pits	400	Pump Make / Model		DP	DC
Drill Pipe	4 1/2		Intermediate	Total Circ Vol.	620	BBL / Stroke	0.139	197	356
Type	XH			Mud up Dpth.	2600	Stroke / Min.	60	Circ PSI	800
Drill Collar	6 1/4		Production	Mud Type	NATIVE	BBL / Min.	8	Bottoms Up (min)	
Bit RPM	60			Activity	DRLG	Gal. / Min.	336	28	
Weight on Bit	30000			Pits used	3	Elevation	1913	TTL (Min.)	78
Sample Taken From Flowline		x	Pit	Flowing Temp.					

MUD PROPERTIES		
Time Sample Taken	2:30PM	
Depth (ft.)	2704	
Weight (ppg)	**8.7**	
Mud Gradient (psi/ft)	0.452	
Funnel Viscosity (sec/qt.)	**54**	
Plastic Viscosity cp at /	28	
Yield Point (lb./100 sq. ft.)	14	
Gel Strength (lb.100 sq. ft.) 10 sec/ 10 min	12/26	
pH Strip / Meter	10.5	
Filtrate API (ml./30 min.)	**9.2**	
API HP-HT Filtrate (ml./30 min.)	xxx	
Cake Thickness 32nd in. API	1/32	
Alkalinity, Mud (Pm)	2.2	
Alkalinity, Filtrate (Pf/Mf)	1.0/---	
Chlorides (ppm)	**1000**	
Calcium (ppm)	NA	
Sand Content (% by Vol.)	TR	
Solids Content (% by Vol.)	2.7	
Oil Content (% by Vol.)	xxx	
Water Content (% by Vol.)	97.3	
LCM, #/bbl	**2#**	
Methylene Blue Capacity	xxx	

PRODUCT	Daily Cost	$4,375.90	Total	$4,388.85
	On Hand	add Del.	Used	cost
Premium Gel	114	249	135	
Hulls	51	71	20	
Soda Ash	11	23	12	
Caustic Beads	8	13	5	
Lignite	8	13	5	
Lime	4	5	0	
Drispac	2	4	2	
Desco	2	2	0	
PHPA	2	2	0	
RH Vis	0	0	0	
Barite	0	0	0	
Misc. cost				

Mud Properties Specifications

Weight	< 9.4	Viscosity	48-50	Filtrate	10-12cc

REMARKS:

KEEP HOLE FULL ON ALL TRIPS- VERY IMPORTANT

USE GEL AND HULLS IF LOSING FLUID

RESERVE Chlorides=	**68000**
CALCUIM=	**400**
VOLUME=	**600**

Recommended Tour Treatment

MAINTAIN 48-50 VISCOSITY WHILE DRLG OR TESTING

RUN STREAM WATER @ FLOWLINE TO CONTROL WT. 9-9.4#/GAL

LCM AS NEEDED

ALWAYS KEEP HOLE FULL & PIPE MOVING. SHORT TRIP PIPE PRIOR TO TESTING.

KEEP PREMIX ON HAND TO USE LATER TO WORK IN NO. 2 PIT TO SYSTEM.

IF NEEDED VISCOSITY, USE PIT MUD IN PREMIX UNLESS WT. CLIMBS ABOVE 9.3, THEN USE 1/2 PIT MUD & 1/2 FRESH WATER:

GEL FOR VISCOSITY ***1/3 DRISPAC SLOWLY***

2 SODA ASH ***4-6 HULLS***

1 CAUSTIC SODA

1 LIGNITE

GOOD DISPLACEMENT!

RECEIVED
DEC 07 2011
KCC WICHITA

THANK YOU!

ENGINEER	DENNIS RECTOR	WAREHOUSE	HAYS	PHONE	785-625-3531 (cell)785-656-3039

"One Tuff Muddier"

ANDY'S "Mud Doctor" MUD & CHEMICAL CO.

Drilling Mud Report

Report no. 2

Date: 9/30/11

Depth: 2704

OPERATOR:	KRIER, KIRBY OIL, INC.	CONTRACTOR	ROYAL DRLG	RIG NO.	#2
ADDRESS:	co	ADDRESS:	Rig	SPUD DATE	September 27, 2011
REPORT FOR	JIM MUSGROVE(GEO)	REPORT FOR	DOUG BUDIG	COUNTY	BARTON

WELL NAME	MINNIE #9		SEC	23	TOWNSHIP	16	RANGE	12	W
Drilling Assembly			**Casing**	**Mud Volume (BBL)**			**Circulation Data**		
Bit Size	7 7/8		Surface	Hole	220	Pump Size	6 x 14	Annular Vel (Ft/Min)	
No. Bits	2		8 5/8 @ 395	Pits	400	Pump Make / Model		DP	DC
Drill Pipe	4 1/2		Intermediate	Total Circ Vol.	620	BBL / Stroke	0.139	197	356
Type	XH			Mud up Dpth.	2600	Stroke / Min.	60	Circ PSI	800
Drill Collar	6 1/4		Production	Mud Type	NATIVE	BBL / Min.	8	Bottoms Up (min)	
Bit RPM	60			Activity	DRLG	Gal. / Min.	336	28	
Weight on Bit	30000			Pits used	3	Elevation	1913	TTL (Min.)	78
Sample Taken From Flowline		x	Pit	Flowing Temp.					

MUD PROPERTIES		
Time Sample Taken	2:30PM	
Depth (ft.)	2704	
Weight (ppg)	**8.7**	
Mud Gradient (psi/ft)	0.452	
Funnel Viscosity (sec/qt.)	**54**	
Plastic Viscosity cp at /	28	
Yield Point (lb./100 sq. ft.)	14	
Gel Strength (lb.100 sq. ft.) 10 sec/ 10 min.	12/26	
pH Strip / Meter	10.5	
Filtrate API (ml./30 min.)	**9.2**	
API HP-HT Filtrate (ml./30 min.)	xxx	
Cake Thickness 32nd in. API	1/32	
Alkalinity, Mud (Pm)	2.2	
Alkalinity, Filtrate (Pf/Mf)	1.0/---	
Chlorides (ppm)	**1000**	
Calcium (ppm)	NA	
Sand Content (% by Vol.)	TR	
Solids Content (% by Vol.)	2.7	
Oil Content (% by Vol.)	xxx	
Water Content (% by Vol.)	97.3	
LCM, #/bbl	**2#**	
Methylene Blue Capacity	xxx	

PRODUCT	Daily Cost	$4,375.90	Total	$4,388.85
	On Hand	add Del.	Used	cost
Premium Gel	114	249	135	
Hulls	51	71	20	
Soda Ash	11	23	12	
Caustic Beads	8	13	5	
Lignite	8	13	5	
Lime	4	5	0	
Drispac	2	4	2	
Desco	2	2	0	
PHPA	2	2	0	
RH Vis	0	0	0	
Barite	0	0	0	
Misc. cost				

Mud Properties Specifications

Weight	< 9.4	Viscosity	48-50	Filtrate	10-12cc

REMARKS:

KEEP HOLE FULL ON ALL TRIPS- VERY IMPORTANT

USE GEL AND HULLS IF LOSING FLUID

RESERVE Chlorides=	**68000**
CALCUIM=	**400**
VOLUME=	**600**

Recommended Tour Treatment

MAINTAIN 48-50 VISCOSITY WHILE DRLG OR TESTING

RUN STREAM WATER @ FLOWLINE TO CONTROL WT. 9-9.4#/GAL

LCM AS NEEDED

ALWAYS KEEP HOLE FULL & PIPE MOVING. SHORT TRIP PIPE PRIOR TO TESTING.

KEEP PREMIX ON HAND TO USE LATER TO WORK IN NO. 2 PIT TO SYSTEM.

IF NEEDED VISCOSITY, USE PIT MUD IN PREMIX UNLESS WT. CLIMBS ABOVE 9.3, THEN USE 1/2 PIT MUD & 1/2 FRESH WATER:

GEL FOR VISCOSITY ***1/3 DRISPAC SLOWLY***

2 SODA ASH ***4-6 HULLS***

1 CAUSTIC SODA

1 LIGNITE

GOOD DISPLACEMENT!

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THANK YOU!

ENGINEER	DENNIS RECTOR	WAREHOUSE	HAYS	PHONE	785-625-3531 (cell)785-656-3039

"GO WITH THE EXPERIENCE"

"One Tuff Mudder"

ANDY'S "Mud Doctor"

MUD & CHEMICAL CO.

Drilling Mud Report

Report no.	3

Date: 10/1/11

Depth: 3117

OPERATOR:	KRIER, KIRBY OIL, INC.	CONTRACTOR	ROYAL DRLG	RIG NO.	#2
ADDRESS:	co	ADDRESS:	Rig	SPUD DATE	September 27, 2011
REPORT FOR	JIM MUSGROVE	REPORT FOR	DOUG BUDIG	COUNTY	BARTON

WELL NAME	MINNIE #9	SEC	23	TOWNSHIP	16	RANGE	12	W

Drilling Assembly			Casing
Bit Size	7 7/8		Surface
No. Bits	2		8 5/8 @ 395
Drill Pipe	4 1/2		Intermediate
Type	XH		
Drill Collar	6 1/4		Production
Bit RPM	60		
Weight on Bit	30000		
Sample Taken From Flowline		x	Pit

Mud Volume (BBL)		Circulation Data			
Hole	246	Pump Size	6 x 14	Annular Vel (Ft/Min)	
Pits	400	Pump Make / Model		DP	DC
Total Circ Vol.	646	BBL / Stroke	0.139	197	356
Mud up Dpth.	2600	Stroke / Min.	60	Circ PSI	800
Mud Type	CHEMICAL	BBL / Min.	8	Bottoms Up (min)	
Activity	DRLG	Gal. / Min.	336	31	
Pits used	3	Elevation	1913	TTL (Min.)	81
Flowing Temp.					

MUD PROPERTIES		
Time Sample Taken	9:30AM	
Depth (ft.)	3117	
Weight (ppg)	8.9	
Mud Gradient (psi/ft)	0.463	
Funnel Viscosity (sec/qt.)	55	
Plastic Viscosity cp at /	28	
Yield Point (lb./100 sq. ft.)	12	
Gel Strength (lb.100 sq. ft.) 10 sec/ 10 min	14/25	
pH Strip / Meter	9.5	
Filtrate API (ml./30 min.)	8.8	
API HP-HT Filtrate (ml./30 min.)	xxx	
Cake Thickness 32nd in. API	1/32	
Alkalinity, Mud (Pm)	1.6	
Alkalinity, Filtrate (Pf/Mf)	.9/---	
Chlorides (ppm)	2000	
Calcium (ppm)	20	
Sand Content (% by Vol.)	TR	
Solids Content (% by Vol.)	4.2	
Oil Content (% by Vol.)	xxx	
Water Content (% by Vol.)	95.8	
LCM, #/bbl	2#	
Methylene Blue Capacity	xxx	

MUD COSTS				
PRODUCT	Daily Cost	NA	Total	$4,388.85
	On Hand	add Del.	Used	cost
Premium Gel	114	249		
Hulls	51	71		
Soda Ash	11	23		
Caustic Beads	8	13		
Lignite	8	13		
Lime	4	5		
Drispac	2	4		
Desco	2	2		
PHPA	2	2		
RH Vis	0	0		
Barite	0	0		
Misc. cost				

Mud Properties Specifications

Weight	< 9.4	Viscosity	48-50	Filtrate	10-12cc

Recommended Tour Treatment

MAINTAIN 48-50 VISCOSITY WHILE DRLG OR TESTING.

RUN STREAM WATER @ FLOWLINE TO CONTROL WT.9-9.4#/GAL

LCM AS NEEDED

ALWAYS KEEP HOLE FULL & PIPE MOVING. SHORT TRIP PIPE PRIOR TO TESTING.

KEEP PREMIX ON HAND TO USE LATER TO WORK IN NO. 2 PIT TO SYSTEM.

IF NEEDED VISCOSITY, USE PIT MUD IN PREMIX UNLESS WT. CLIMBS ABOVE 9.3, THEN USE 1/2 PIT MUD & 1/2 FRESH WATER:

GEL FOR VISCOSITY
2 SODA ASH
1 CAUSTIC SODA
1/3 DRISPAC SLOWLY
4-6 HULLS
1 LIGNITE

RECEIVED
DEC 07 2011
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THANK YOU!

REMARKS:

KEEP HOLE FULL ON ALL TRIPS- VERY IMPORTANT

RESERVE Chlorides=	**68000**
CALCUIM=	**400**
VOLUME=	**600**

ENGINEER	DENNIS RECTOR	WAREHOUSE	HAYS	PHONE	785-625-3531 (cell)785-656-3039

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"One Tuff Mudder"

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Drilling Mud Report

Report no.	3

Date:	10/1/11	Depth:	3117

OPERATOR:	KRIER, KIRBY OIL, INC.	CONTRACTOR	ROYAL DRLG	RIG NO.	#2
ADDRESS:	co	ADDRESS:	Rig	SPUD DATE	September 27, 2011
REPORT FOR	JIM MUSGROVE	REPORT FOR	DOUG BUDIG	COUNTY	BARTON

WELL NAME	MINNIE #9	SEC	23	TOWNSHIP	16	RANGE	12	W

Drilling Assembly			Casing	Mud Volume (BBL)		Circulation Data			
Bit Size	7 7/8		Surface	Hole	246	Pump Size	6 x 14	Annular Vel (Ft/Min)	
No. Bits	2		8 5/8 @ 395	Pits	400	Pump Make / Model		DP	DC
Drill Pipe	4 1/2		Intermediate	Total Circ Vol.	646	BBL / Stroke	0.139	197	356
Type	XH			Mud up Dpth.	2600	Stroke / Min.	60	Circ PSI	800
Drill Collar	6 1/4		Production	Mud Type	CHEMICAL	BBL / Min.	8	Bottoms Up (min)	
Bit RPM	60			Activity	DRLG	Gal. / Min.	336	31	
Weight on Bit	30000			Pits used	3	Elevation	1913	TTL (Min.)	81
Sample Taken From Flowline		x	Pit	Flowing Temp.				MUD COSTS	

MUD PROPERTIES		
Time Sample Taken	9:30AM	
Depth (ft.)	3117	
Weight (ppg)	8.9	
Mud Gradient (psi/ft)	0.463	
Funnel Viscosity (sec/qt.)	55	
Plastic Viscosity cp at /	28	
Yield Point (lb./100 sq. ft.)	12	
Gel Strength (lb.100 sq. ft.) 10 sec/ 10 min	14/25	
pH Strip / Meter	9.5	
Filtrate API (ml./30 min.)	8.8	
API HP-HT Filtrate (ml./30 min.)	xxx	
Cake Thickness 32nd in. API	1/32	
Alkalinity, Mud (Pm)	1.6	
Alkalinity, Filtrate (Pf/Mf)	.9/---	
Chlorides (ppm)	2000	
Calcium (ppm)	20	
Sand Content (% by Vol.)	TR	
Solids Content (% by Vol.)	4.2	
Oil Content (% by Vol.)	xxx	
Water Content (% by Vol.)	95.8	
LCM, #/bbl	2#	
Methylene Blue Capacity	xxx	

PRODUCT	Daily Cost	NA	Total	$4,388.85
	On Hand	add Del.	Used	cost
Premium Gel	114	249		
Hulls	51	71		
Soda Ash	11	23		
Caustic Beads	8	13		
Lignite	8	13		
Lime	4	5		
Drispac	2	4		
Desco	2	2		
PHPA	2	2		
RH Vis	0	0		
Barite	0	0		
Misc. cost				

Mud Properties Specifications					
Weight	< 9.4	Viscosity	48-50	Filtrate	10-12cc

REMARKS:

KEEP HOLE FULL ON ALL TRIPS- VERY IMPORTANT

RESERVE Chlorides=	68000
CALCUIM=	400
VOLUME=	600

Recommended Tour Treatment

MAINTAIN 48-50 VISCOSITY WHILE DRLG OR TESTING.

RUN STREAM WATER @ FLOWLINE TO CONTROL WT.9-9.4#/GAL

LCM AS NEEDED

ALWAYS KEEP HOLE FULL & PIPE MOVING. SHORT TRIP PIPE PRIOR TO TESTING.

KEEP PREMIX ON HAND TO USE LATER TO WORK IN NO. 2 PIT TO SYSTEM.

IF NEEDED VISCOSITY, USE PIT MUD IN PREMIX UNLESS WT. CLIMBS ABOVE 9.3, THEN USE 1/2 PIT MUD & 1/2 FRESH WATER:

GEL FOR VISCOSITY — 1/3 DRISPAC SLOWLY
2 SODA ASH — 4-6 HULLS
1 CAUSTIC SODA — 1 LIGNITE

THANK YOU!

ENGINEER	DENNIS RECTOR	WAREHOUSE	HAYS	PHONE	785-625-3531 (cell)785-656-3039

"One Tuff Muddier"

ANDY'S "Mud Doctor"

MUD & CHEMICAL CO.

Drilling Mud Report

Report no. 4

Date: 10/2/11

Depth: 3357

OPERATOR:	KRIER, KIRBY OIL, INC.	CONTRACTOR	ROYAL DRLG	RIG NO.	#2
ADDRESS:	co	ADDRESS:	Rig	SPUD DATE	September 27, 2011
REPORT FOR	JIM MUSGROVE	REPORT FOR	DOUG BUDIG	COUNTY	BARTON

WELL NAME	MINNIE #9	SEC	23	TOWNSHIP	16	RANGE	12	W

Drilling Assembly			Casing
Bit Size	7 7/8		Surface
No. Bits	2		8 5/8 @ 395
Drill Pipe	4 1/2		Intermediate
Type	XH		
Drill Collar	6 1/4		Production
Bit RPM	60		
Weight on Bit	30000		
Sample Taken From Flowline		x	Pit

Mud Volume (BBL)		Circulation Data			
Hole	261	Pump Size	6 x 14	Annular Vel (Ft/Min)	
Pits	400	Pump Make / Model		DP	DC
Total Circ Vol.	661	BBL / Stroke	0.139	197	356
Mud up Dpth.	2600	Stroke / Min.	60	Circ PSI	800
Mud Type	chemical	BBL / Min.	8	Bottoms Up (min)	
Activity	DST#1	Gal. / Min.	336	33	
Pits used	3	Elevation	1913	TTL (Min.)	83
Flowing Temp.					

MUD PROPERTIES		
Time Sample Taken	8AM	
Depth (ft.)	3357	
Weight (ppg)	9.4	
Mud Gradient (psi/ft)	0.489	
Funnel Viscosity (sec/qt.)	49	
Plastic Viscosity cp at /	22	
Yield Point (lb./100 sq. ft.)	12	
Gel Strength (lb.100 sq. ft.) 10 sec/ 10 min	10/18	
pH Strip / Meter	8.5	
Filtrate API (ml./30 min.)	9.6	
API HP-HT Filtrate (ml./30 min.)	xxx	
Cake Thickness 32nd in. API	1/32	
Alkalinity, Mud (Pm)	0.9	
Alkalinity, Filtrate (Pf/Mf)	.5/---	
Chlorides (ppm)	4000	
Calcium (ppm)	20	
Sand Content (% by Vol.)	TR	
Solids Content (% by Vol.)	7.5	
Oil Content (% by Vol.)	xxx	
Water Content (% by Vol.)	92.5	
LCM, #/bbl	2#	
Methylene Blue Capacity	xxx	

MUD COSTS			
PRODUCT	Daily Cost	NA	Total $4,393.60
	On Hand	add Del.	Used cost
Premium Gel	114	249	
Hulls	51	71	
Soda Ash	11	23	
Caustic Beads	8	13	
Lignite	8	13	
Lime	4	5	
Drispac	2	4	
Desco	2	2	
PHPA	2	2	
RH Vis	0	0	
Barite	0	0	
Misc. cost			

Mud Properties Specifications					
Weight	<9.4	Viscosity	48-50	Filtrate	10-12cc

REMARKS:

KEEP HOLE FULL ON ALL TRIPS

IF RUN CASING, RUN DESCO FLUSH
30 BBLS PIT MUD
50 BBLS FRESH WATER
1 CAUSTIC SODA
1 SODA ASH
2 DESCO
ADD AHEAD OF CEMENT

RESERVE Chlorides=	68000
CALCUIM=	400
VOLUME=	600

Recommended Tour Treatment

MAINTAIN 48-50 VISCOSITY WHILE DRLG OR TESTING OR LOGGING.

RUN STREAM WATER @ FLOWLINE TO CONTROL WT. 9-9.4#/GAL

LCM AS NEEDED

ALWAYS KEEP HOLE FULL & PIPE MOVING. SHORT TRIP PIPE PRIOR TO TESTING.

KEEP PREMIX ON HAND TO USE LATER TO WORK IN NO. 2 PIT TO SYSTEM.

IF NEEDED VISCOSITY, USE PIT MUD IN PREMIX UNLESS WT. CLIMBS ABOVE 9.3, THEN USE 1/2 PIT MUD & 1/2 FRESH WATER:
GEL FOR VISCOSITY
2 SODA ASH
1 CAUSTIC SODA
1 LIGNITE
1/3 DRISPAC SLOWLY
4-6 HULLS

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THANK YOU!

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Drilling Mud Report

Report no.	4

Date: 10/2/11

Depth: 3357

OPERATOR:	KRIER, KIRBY OIL, INC.	CONTRACTOR	ROYAL DRLG	RIG NO.	#2
ADDRESS:	co	ADDRESS:	Rig	SPUD DATE	September 27, 2011
REPORT FOR	JIM MUSGROVE	REPORT FOR	DOUG BUDIG	COUNTY	BARTON

WELL NAME	MINNIE #9	SEC	23	TOWNSHIP	16	RANGE	12	W

Drilling Assembly			Casing	Mud Volume (BBL)		Circulation Data			
Bit Size	7 7/8		Surface	Hole	261	Pump Size	6 x 14	Annular Vel (Ft/Min)	
No. Bits	2		8 5/8 @ 395	Pits	400	Pump Make / Model		DP	DC
Drill Pipe	4 1/2		Intermediate	Total Circ Vol.	661	BBL / Stroke	0.139	197	356
Type	XH			Mud up Dpth.	2600	Stroke / Min.	60	Circ PSI	800
Drill Collar	6 1/4		Production	Mud Type	chemical	BBL / Min.	8	Bottoms Up (min)	
Bit RPM	60			Activity	DST#1	Gal. / Min.	336	33	
Weight on Bit	30000			Pits used	3	Elevation	1913	TTL (Min.)	83
Sample Taken From Flowline		x	Pit	Flowing Temp.					

MUD PROPERTIES		
Time Sample Taken	8AM	
Depth (ft.)	3357	
Weight (ppg)	9.4	
Mud Gradient (psi/ft)	0.489	
Funnel Viscosity (sec/qt.)	49	
Plastic Viscosity cp at /	22	
Yield Point (lb./100 sq. ft.)	12	
Gel Strength (lb.100 sq. ft.) 10 sec/ 10 min	10/18	
pH Strip / Meter	8.5	
Filtrate API (ml./30 min.)	9.6	
API HP-HT Filtrate (ml./30 min.)	xxx	
Cake Thickness 32nd in. API	1/32	
Alkalinity, Mud (Pm)	0.9	
Alkalinity, Filtrate (Pf/Mf)	.5/---	
Chlorides (ppm)	4000	
Calcium (ppm)	20	
Sand Content (% by Vol.)	TR	
Solids Content (% by Vol.)	7.5	
Oil Content (% by Vol.)	xxx	
Water Content (% by Vol.)	92.5	
LCM, #/bbl	2#	
Methylene Blue Capacity	xxx	

PRODUCT	Daily Cost	NA	Total	$4,393.60
	On Hand	add Del.	Used	cost
Premium Gel	114	249		
Hulls	51	71		
Soda Ash	11	23		
Caustic Beads	8	13		
Lignite	8	13		
Lime	4	5		
Drispac	2	4		
Desco	2	2		
PHPA	2	2		
RH Vis	0	0		
Barite	0	0		
Misc. cost				

MUD COSTS

Mud Properties Specifications

Weight	<9.4	Viscosity	48-50	Filtrate	10-12cc

REMARKS:

KEEP HOLE FULL ON ALL TRIPS

IF RUN CASING, RUN DESCO FLUSH
30 BBLS PIT MUD
50 BBLS FRESH WATER
1 CAUSTIC SODA
1 SODA ASH
2 DESCO
ADD AHEAD OF CEMENT

RESERVE Chlorides=	68000
CALCUIM=	400
VOLUME=	600

Recommended Tour Treatment

MAINTAIN 48-50 VISCOSITY WHILE DRLG OR TESTING OR LOGGING.

RUN STREAM WATER @ FLOWLINE TO CONTROL WT. 9-9.4#/GAL

LCM AS NEEDED

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GEL FOR VISCOSITY
2 SODA ASH
1 CAUSTIC SODA
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1/3 DRISPAC SLOWLY
4-6 HULLS

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