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	API No. 15 - 15-009-25615-00-00
Name: Kirby Krier Oil, Inc.	Spot Description:
Address 1: 1043 NE 80TH RD.	S2 NENE Sec. 23 Twp. 16 S. R. 12 East West
Address 2:	990 Feet from North Couth Line of Section
City: CLAFLIN State: KS Zip: 67525 + 9159	660
Contact Person: KIRBY KRIER	Feet from East 7 West Line of Section
Phone: (620) 562-7637	Footages Calculated from Nearest Outside Section Corner:
	☑NE ☐NW ☐SE ☐SW
CONTRACTOR: License # 33905	County: BARTON
Name: ROYAL DRILLING, INC.	Lease Name: MINNIE Well #: 9
Wellsite Geologist: JOSH AUSTIN	Field Name:
Purchaser:	Producing Formation:
Designate Type of Completion:	Elevation: Ground: 1913 Kelly Bushing: 1920
✓ New Well	Total Depth: 3421 Plug Back Total Depth:
✓ Oil	Amount of Surface Pipe Set and Cemented at: 395 Feet
Gas D&A ENHR SIGW	Multiple Stage Cementing Collar Used? ☐ Yes ☑ No
☐ OG ☐ GSW ☐ Temp. Abd.	If yes, show depth set: Feet
CM (Coal Bed Methane)	If Alternate II completion, cement circulated from:
Cathodic Other (Core, Expl., etc.):	feet depth to:w/sx cmt.
If Workover/Re-entry: Old Well Info as follows:	ox one.
Operator:	
Well Name:	Drilling Fluid Management Plan (Data must be collected from the Reserve Pit)
Original Comp. Date: Original Total Depth:	Chloride content: 68000 ppm Fluid volume: 400 bbls
Deepening Re-perl. Conv. to ENHR Conv. to SWD	
Conv. to GSW	Dewatering method used:
Plug Back: Plug Back Total Depth	Location of fluid disposal if hauled offsite:
Commingled Permit #:	Operator Name:
Dual Completion Permit #:	Lease Name: License #:
SWD Permit #:	Quarter Sec TwpS. R
ENHR Permit #:	
GSW Permit #:	County: Permit #:RECEIVED
09/27/2011 10/03/2011 10/14/2011 Spud Date or Date Reached TD Completion Date or	DEC 07 2011
Spud Date or Date Reached TD Completion Date or Recompletion Date	
Kansas 67202, within 120 days of the spud date, recompletion, workover or of side two of this form will be held confidential for a period of 12 months if re	the Kansas Corporation Commission, 130 S. Market Room 2018 Wichita, conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information quested in writing and submitted with the form (see rule 82-3-107 for confidenell report shall be attached with this form. ALL CEMENTING TICKETS MUST form with all temporarily abandoned wells.
	./
AFFIDAVIT	KCC Office Use ONLY
I am the affiant and I hereby certify that all requirements of the statutes, rules and lations promulgated to regulate the oil and gas industry have been fully complied	L'ottor of Confidentiality Descived
and the statements herein are complete and correct to the best of my knowled	ge. Date:
	Confidential Release Date:
Signature: Zirly Z. Wi	Geologist Report Received
Title: Dresident Date: 12/6/11	☐ UIC Distribution
Date: 100/11	ALT [] II] III Approved by: Dig Date: 121311

Operator Name: Kirb	<u>y Krier Oil, II</u>	nc	Lease Name	MINNIE		_ Well #: _9_	
Sec. 23 Twp.16	s. r. <u>12</u>	East West	County: BA				
INSTRUCTIONS: Sho time tool open and clos recovery, and flow rate line Logs surveyed. At	sed, flowing and sh s if gas to surface t	ut-in pressures, wheth test, along with final ch	ner shut-in pressure r	eached static leve	el, hydrostatic pres	sures, bottom	giving interval tested, hole temperature, fluid opy of all Electric Wire-
Drill Stem Tests Taken (Attach Additional St	heets)	✓ Yes) <u>v</u>	Log Formati	on (Top), Depth a	nd Datum	Sample
Samples Sent to Geolo	ogical Survey	Yes No		ame DIATION G	UARD	тор 350	Datum 3421
Cores Taken Electric Log Run Electric Log Submitted (If no, Submit Copy)	•	☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ✔ No	CE	MENT BON		2180	3391
List All E. Logs Run:							
			ING RECORD set-conductor, surface,	New Used intermediate, produc	ction, 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
		ADDITIO	NAL CEMENTING / S	QUEEZE RECORI)		
Purpose: —— Perforate —— Protect Casing —— Plug Back TD	Depth Top Bottom	Type of Cement	# Sacks Used			Percent Additive:	s
Plug Off Zone							
Shots Per Foot		ION RECORD - Bridge Footage of Each Interval			acture, Shot, Cemen		rd Depth
2 ;	3352-3360			none			
-						<u>a</u> =	CEIVED
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							2 0 7 2011
TUBING RECORD: 2	Size: 7/8	Set At: 3390	Packer At:	Liner Run:	Yes V No		WICHITA
Date of First, Resumed P	roduction, SWD or EN	NHR. Producing		Gas Lift	Other (Explain)		`
Estimated Production Per 24 Hours	0il 30	Bbls. Gas	Mcf W	ater E	Bbls. (Gas-Oil Ratio	Gravity 40
DISPOSITION	N OF GAS:		METHOD OF COMP	LETION:		PRODUCTI	ON INTERVAL:
✓ Vented Sold	Used on Lease	Open Hole			mmingled		·

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

No. 5172

O O O I Sec. Twp. R	ange C	County	State	On Location	Finish
Date 9-28-11 23 16 1	2 Ba	iton	<u>Ks</u>		7:00 AM
Lease Minnie Well No. #	Location	on Beave	r, Ks, -	<u> SE to St</u>	ob Zich
Contractor	101 #2	Owner 3/4	N - W/I	nto	·
Type Job Surface	<u> </u>	You are hereby	vell Cementing, Inc v requested to rent	cementing equipmer	at and furnish
Hole Size 12 1/4" T.D. 3	95'	cementer and	helper to assist ow	ner or contractor to d	o work as listed.
Csg. 8 3/8 h Depth 3	95'	Charge To	by Krie	1 Onto Co =	In
Tog. Size Depth		Street	· •		***
Tool Depth		City		State	
Gement Left in Csg. \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	13'	The above was	done to satisfaction a	and supervision of owne	r agent or contractor.
Meas Line Displace	24 BLS	Cement Amou	nt Ordered	SX Comm	ion 3% CC
EQUIPMENT		2% (zel	Salamandan (1984) - Salaman (1984) - Sal		
Pumptrk / No Cementer / 1 Co Helper		Common 20	190		
Bulktrk 10 No. Driver Brown S.		Poz. Mix			
Bulletik P. U, No. Driver Bock		Gel. 4			
JOB SERVICES & REMARKS	<u> </u>	Calcium 4	3		
Remarks: Coment did	Circulate,	Hulls			
Rat Hole		Salt			
Mouse Hole	·	Flowseal			
Centralizers		Kol-Seal		***	
Baskets		Mud CLR 48			
D/V or Port Collar		CFL-117 or CI	D110 CAF 38		
		Sand			
The state of the s		Handling 2	DD		
		Mileáge			
and the second s			FLOAT EQUIP	and the state of t	in the second
		Guide Shoe			
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1/2		_		Discour	ıt
X Signature Care Dept				Total Charge	e
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QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025 Cell 785-324-1041	"我有什么我们的人,我们有什么。""你是我们的老师我们的特殊的",这个数据 一个 "这是我的 会我们是我们	Box 32 Russell, KS 67665 stone Columbia	No. 5214
Sec.	Twp:Range	County State On Loc	ation Finish
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Lease Minnie	Vell No. Loc	ation RELIEUS ET MULTURA	TO THE STATE OF THE SECOND SEC
Contractor Poya 14 10 11	The control of the Landson Control of the Control o	Owner: 1 st. On the state of the control of the con	THE RESIDENCE OF THE PROPERTY
Type Job Taluchon Strong	A selection between the first and a second state of the second of the second se	To Quality Oilwell Cementing, Inc. 海 (自) (提供 You are hereby requested to rent cementing e	
Hole Size And Again to the Size Issue	IDS SMOVERS	cementer and helper to assist owner or contract	
Csg. 5/2" 15:50#	Depth 3418	Charge Frby Critic Ollic	TWELST ROBERT IN
Tbg. Size of the contract that	Depth	Streets of the same of the management	
Tool	Depth	City	
Cement Left in Csg: 1%: 3 5	Shoe Joint 3	The above was done to satisfaction and supervision	
Meas Line	Displace Z Mb/s	Cement Amount Ordered	10% Salt 5% Chi
EQUIPN No Cementer	IENT	Property of the second of the	Programme Constitution of the Constitution of
Pumptrk No Cementer Helper To			The State Control of Visite Control of the State Co
Bulktrk Driver		Poz. Mix	
Bulktrk Driver	$N_{1}N_{2}$	Gelt and the standing on the EET (Au	Organización de Marcola
JOB SERVICES		- Galcium	
Remarks:	See 201 to the control of the contro	Hullstein in American mentalist in American	CTABA CONSTRUCTO
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Eperocks Inc.
Hays, KS 67601

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Report no.		 <u>L</u>

	- a-a-				ar co	Date:	9/28/11		Depth:	<u>395</u>
OPERATOR:		KRIER, KIRE	BY OIL, INC.		CONTRACTOR	RO	YAL DRLG	RIG NO.	#2	
ADDRESS:		c	.o		ADDRESS:		Rig	SPUD DATE	September 7	27, 2011
REPORT FOR		JIM MUSG	ROVE(GEO)		REPORT FOR	DO	UG BUDIG	COUNTY	BARTO	N
WELL NAME		MINNIE #9		SEC	23	TOWNSHIP	16	RANGE	12	W
Drilli	ng Assem	bly	Cas	ing	Mud Volume	<u> </u>		Circulati	<u></u>	.l
Bit Size	77/8			face	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		Intern	ediate	Total Circ Vol.	475	BBL / Stroke	0.139	197	356
Туре	ХН				Mud up Dpth.	2600	Stroke / Min.	60	Circ PSI	800
Drill Collar	6 1/4		Produ	ıction	Mud Type	NATIVE	BBL / Min.	8	Bottoms U	o (min)
Bit RPM	60				Activity	** W.O.C.	Gal. / Min.	336	9	
Weight on Bit	1	30000			Pits used	3	Elevation		TTL (Min.)	59
Sample Tak			х	Pit	Flowing Temp.			MUD		· · · · · · · · · · · · · · · · · · ·
		JD PROPERTIES	<u> </u>		PRODUC	СТ	Daily Cost		Total	\$12.95
	ample Ta	ken	MA8				On Hand	add Del.	Used	cost
	epth (ft.)		395		Premium	Gel	249	249		<u> </u>
	eight (ppg				Hulls		71	71		ļ
	radient (p		0.000	1	Soda As		23	23		
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Gel Strength (lb.10			<u></u>	1	Drispac		4	4		-
	trip / Met				Desco		2	2	ļ	ļ <u></u>
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Alkalinity				}	Misc. co	St	Mand Describes Co	ifi Ai	<u> </u>	1
	rides (ppr						Mud Properties Sp	r	T	T .
Calc	ium (ppm)			Weight	< 9.4	Viscosity	27-32	Filtrate	N/C
Sand Cor	itent (% b	y Vol.)	TR	<u> </u>			Recommended Tou	r Treatment		
Solids Co	ntent (% k	y Vol.)			UNDER SURFACE U	ISE PLENTY C	F FRESH WATER AI	VD JET OFTEN	TO KEEP MUD W	EIGHT LOW
Oil Cont	ent (% by	Vol.)	XXX		AS POSSIBLE UNDE	R 9.4 #/GAL				
Water Co	ntent (% l	y Vol.)	100.0							
LC	M, #/bbl	- 1			DISPLACE AT GEOL	OGIST REQU	EST- RECOMMEND	2600 FT.:		
Methylen	e Blue Ca	pacity	XXX							
		REMARKS:		J	HAVE FRAC. AND F	PREMIX FULL	WHEN READY TO D	ISPLACE		
KEEP HOLE FULL	ON ALL	TRIPS- VERY	IMPORTAN		1					
				·	PREMIX TO 80-100	RRI FRESH L	NATER .			
						DDE				
HEE GEL AND H		OSING ELLIID			17/1-76 D_GEI		WATER		DECENA	-
USE GEL AND H	ULLS IF L	OSING FLUID			24-26 P-GEL		PATEN		RECEIVE	ΞD
					2 SODA ASH		WATER			
					2 SODA ASH 1 CAUSTIC		varen		RECEIVE DEC 07	
DRILL ALL SAND	S SLOWL	Y			2 SODA ASH 1 CAUSTIC 1 LIGNITE					
USE GEL AND H DRILL ALL SAND SWEEP HOLE AS	S SLOWL	Y	ONNECTION	ıs	2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC	(MDK SLOW)	LY 2 MIN. PER POUI	ND)	DEC 07	2011
DRILL ALL SAND SWEEP HOLE AS	S SLOWL	Y FOR TIGHT CO	ONNECTION	ıs	2 SODA ASH 1 CAUSTIC 1 LIGNITE	(WIX SLOVA		ND)		2011
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DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD	S SLOWL NEEDED A ASH, 4	Y FOR TIGHT CO HULLS		.	2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS RECOMMEND RUN	I 80 TO 100 B	LY 2 MIN. PER POUI BBL FRESH WATER A	NHEAD OF FRA	DEC 07	2011 HTA
DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD OR ADD PHPA A	S SLOWL NEEDEC A ASH, 4 T DRILLS	Y FOR TIGHT CO HULLS			2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS RECOMMEND RUN	I 80 TO 100 B	LY 2 MIN. PER POUI BBL FRESH WATER A	NHEAD OF FRA	DEC 07	2011 HTA
DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD OR ADD PHPA A	S SLOWL NEEDEC A ASH, 4 T DRILLS	Y FOR TIGHT CO HULLS			2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS RECOMMEND RUN	I 80 TO 100 B	LY 2 MIN. PER POUI BBL FRESH WATER A	NHEAD OF FRA	DEC 07	2011 HTA
DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD OR ADD PHPA A RESERVE Chlor CALCUIM	S SLOWL NEEDED A ASH, 4 T DRILLS	Y FOR TIGHT CO HULLS		,	2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS RECOMMEND RUN	I 80 TO 100 B	LY 2 MIN. PER POUI BBL FRESH WATER A	NHEAD OF FRA	DEC 07	2011 HTA
DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD OR ADD PHPA A RESERVE CHO CALCUIM= VOLUME	S SLOWL NEEDED A ASH, 4 T DRILLS	Y FOR TIGHT CO HULLS TRING (2-3 VI	s CUPS)		2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS RECOMMEND RUN ** IN LAST PREMIX	I 80 TO 100 B	LY 2 MIN. PER POUI BL FRESH WATER A MUD UP ADD 1 EXTI	NHEAD OF FRA	DEC 07	2011 HTA
DRILL ALL SAND SWEEP HOLE AS 18 P-GE1, 1 SOD OR ADD PHPA A RESERVE Chlor CALCUIM= VOLUME= The Recommendation	S SLOWL NEEDED A ASH, 4 T DRILLS rides= s made here	Y FOR TIGHT CO HULLS TRING (2-3 VIS	s CUPS)	orizing the inf	2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS RECOMMEND RUN ** IN LAST PREMIX	I 80 TO 100 B	LY 2 MIN. PER POUI BL FRESH WATER A MUD UP ADD 1 EXTI	NHEAD OF FRA	DEC 07	2011 HTA
DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD OR ADD PHPA A RESERVE CHO CALCUIM= VOLUME	S SLOWL NEEDED A ASH, 4 T DRILLS rides= s made here Mud & Cher	Y FOR TIGHT CO HULLS TRING (2-3 VIS	structed as auth	orizing the inf	2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS RECOMMEND RUN ** IN LAST PREMIX	I 80 TO 100 B	LY 2 MIN. PER POUI BL FRESH WATER A MUD UP ADD 1 EXTI	NHEAD OF FRA	DEC 07	2011 HITA



Report no.	l	1

005047	_									
	7	· · · · · · · · · · · · · · · · · · ·		Name of the last o	, 	Date:	9/28/11	***********	Depth:	<u>395</u>
OPERATOR:		KRIER, KIRI			CONTRACTOR	RO	YAL DRLG	RIG NO.	#2	
ADDRESS:			io novrteral		ADDRESS:	1	Rig	SPUD DATE	September 2	
REPORT FOR		JIM MUSG	ROVE(GEO)		REPORT FOR	DO	UG BUDIG	COUNTY	BARTO	אכ
WELL NAME		MINNIE #9		SEC	23	TOWNSHIP	16	RANGE	12	W
Drillin	ng Assemb	oly	Cas	ing	Mud Volume	e (BBL)	}	Circulat	ion Data	
Bit Size	77/8		Sur	face	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		Intern	ediate	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		Produ	ıction	Mud Type	NATIVE	BBL / Min.	8	Bottoms U	p (min)
Bit RPM	60				Activity	W.O.C.	Gal. / Min.	336	9	
Weight on Bit		30000			Pits used	3	Elevation		TTL (Min.)	59
Sample Tak	en From F	lowline	X	Pit .	Flowing Temp.			MUD	COSTS	
	ML	ID PROPERTIES	3		PRODU	CT	Daily Cost		Total	\$12.95
Time S	Sample Tal	cen	8AM				On Hand	add Del.	Used	cost
De	epth (ft.)		395		Premium	Gel	249	249		
We	eight (ppg)				Hulls		71	71		
Mud Gr	radient (ps	i/ft)	0.000		Soda As	h	23	23		
Funnel Vi	scosity (se	c/qt.)			Caustic Be	ads	13	13		
Plastic Vi	scosity cp	at /			Lignite		13	13		
Yield Poin	it (lb./100	sq. ft.)			Lime		4	5	1	
Gel Strength (lb.10	00 sq. ft.) 1	10 sec/ 10 min			Drispa	2	4	4		
pH S	trip / Mete	⊇ Γ	· · · · · · · · · · · · · · · · · · ·		Desco		2	2		
Filtrate A	PI (ml./30	min.)		1	PHPA		2	2		
API HP-HT Fi	ltrate (ml.,	/30 min.)	XXX		RH Vis		0	0		
Cake Thick	ness 32nd	l in. API			Barite		0	0		
Alkalin	ity, Mud (F	Pm)								
Alkalinity	, Filtrate (F	Pf/Mf)			Misc. co	st				
Chlo	rides (ppm	1)					Mud Properties Sp	ecifications		
Calc	ium (ppm)			Weight	< 9.4	Viscosity	27-32	Filtrate	N/C
	ntent (% by		TR	-	vveignt	1	Recommended Tou	L	rittate	1
	ntent (% b		11/	-	LINDED CHOCAGE	ICT DI CAITY C	OF FRESH WATER AN		LTO VEED MUD W	EICHT LOW
	ent (% by			 			P PRESH WATER AD	ID JET OFTEN	I TO KEEP WIOD W	EIGHI LUW
	•		XXX	ļ	AS POSSIBLE UNDE	K 9.4 #/GAL				
	ntent (% b	y voi.)	100.0				and the same of			pr .vs
LC	M , #/bbl			-	DISPLACE AT GEOL	OGIST REQU	EST- RECOMMEND	2600 FT.:	and the second	
Methylen	e Blue Car	pacity	XXX							
Methylen	ne Blue Car	REMARKS:	XXX	1	HAVE FRAC, AND F	PREMIX FULL	WHEN READY TO D	ISPLACE		
Methylen KEEP HOLE FULL		REMARKS:		r	HAVE FRAC, AND F	PREMIX FULL	WHEN READY TO D	ISPLACE		
		REMARKS:		7	HAVE FRAC, AND F			PISPLACE		
KEEP HOLE FULL	LON ALL	REMARKS: TRIPS- VERY		r	PREMIX TO 80-100			SPLACE		
	LON ALL	REMARKS: TRIPS- VERY		T	PREMIX TO 80-100 24-26 P-GEL			SISPLACE	RECEIVED	
KEEP HOLE FULL	LON ALL	REMARKS: TRIPS- VERY		r	PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH			SPLACE .	RECEIVED	
KEEP HOLE FULL	LON ALL	REMARKS: TRIPS- VERY		r	PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC			SPLACE .	·	
KEEP HOLE FULL USE GEL AND HE DRILL ALL SAND	L ON ALL	REMARKS: TRIPS- VERY DSING FLUID Y	IMPORTAN		PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE) BBL FRESH (NATER		RECEIVED DEC 0 7 20	
KEEP HOLE FULL USE GEL AND HI	L ON ALL	REMARKS: TRIPS- VERY DSING FLUID Y	IMPORTAN		PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC) BBL FRESH ((<i>D</i>)	DEC 07 20	11
KEEP HOLE FULL	L ON ALL ULLS IF LO	REMARKS: TRIPS- VERY DSING FLUID Y FOR TIGHT CO	IMPORTAN		PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE) BBL FRESH (NATER	(<i>D</i>)	DEC 07 20	11
KEEP HOLE FULL USE GEL AND HE DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD	LON ALL ULLS IF LO S SLOWL NEEDED A ASH, 4	REMARKS: TRIPS- VERY I DSING FLUID Y FOR TIGHT COHULLS	IMPORTAN ONNECTION		PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC) BBL FRESH (NATER	(<i>D</i>)	·	11
KEEP HOLE FULL USE GEL AND HE DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD	LON ALL ULLS IF LO S SLOWL NEEDED A ASH, 4	REMARKS: TRIPS- VERY I DSING FLUID Y FOR TIGHT COHULLS	IMPORTAN ONNECTION		PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS) BBL FRESH V	NATER	vo) K	DEC 07 20'	11
KEEP HOLE FULL USE GEL AND HE DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD	LON ALL ULLS IF LO S SLOWL NEEDED A ASH, 4	REMARKS: TRIPS- VERY I DSING FLUID Y FOR TIGHT COHULLS	IMPORTAN ONNECTION		PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS) BBL FRESH V	NATER LY 2 MIN. PER POUI	vo) K	DEC 07 20'	11
KEEP HOLE FULL USE GEL AND HE DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD	LON ALL ULLS IF LO S SLOWL NEEDED A ASH, 4	REMARKS: TRIPS- VERY I DSING FLUID Y FOR TIGHT COHULLS	IMPORTAN ONNECTION		PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS	O BBL FRESH V (ESIX SLOW) I 80 TO 100 B	NATER LY 2 MIN. PER POUI	ND) K HEAD OF FRA	DEC 07 201 CC WICHI	II TA
KEEP HOLE FULL USE GEL AND HE DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD	LON ALL ULLS IF LO S SLOWL NEEDED A ASH, 4	REMARKS: TRIPS- VERY I DSING FLUID Y FOR TIGHT COHULLS	IMPORTAN ONNECTION		PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS	O BBL FRESH V (ESIX SLOW) I 80 TO 100 B	NATER LY 2 MIN. PER POUI BBL FRESH WATER A	ND) K HEAD OF FRA	DEC 07 201 CC WICHI	II TA
KEEP HOLE FULL USE GEL AND HE DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD	LON ALL ULLS IF LO S SLOWL NEEDED A ASH, 4	REMARKS: TRIPS- VERY I DSING FLUID Y FOR TIGHT COHULLS	IMPORTAN ONNECTION		PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS	O BBL FRESH V (ESIX SLOW) I 80 TO 100 B	NATER LY 2 MIN. PER POUI BBL FRESH WATER A	ND) K HEAD OF FRA	DEC 07 201 CC WICHI	II TA
KEEP HOLE FULL USE GEL AND HE DRILL ALL SAND SWEEP HOLE AS	LON ALL ULLS IF LO S SLOWL NEEDED A ASH, 4	REMARKS: TRIPS- VERY I DSING FLUID Y FOR TIGHT COHULLS	IMPORTAN ONNECTION		PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS	O BBL FRESH V (ESIX SLOW) I 80 TO 100 B	NATER LY 2 MIN. PER POUI BBL FRESH WATER A	ND) K HEAD OF FRA	DEC 07 201 CC WICHI	II TA
KEEP HOLE FULL USE GEL AND HE DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD OR ADD PHPA A	LON ALL ULLS IF LO S SLOWL NEEDED A ASH, 4 AT DRILLS	REMARKS: TRIPS- VERY I DSING FLUID Y FOR TIGHT COHULLS	IMPORTAN ONNECTION		PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS	O BBL FRESH V (ESIX SLOW) I 80 TO 100 B	NATER LY 2 MIN. PER POUI BBL FRESH WATER A	ND) K HEAD OF FRA	DEC 07 201 CC WICHI	II TA
KEEP HOLE FULL USE GEL AND HE DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD OR ADD PHPA A	LON ALL ULLS IF LO S SLOWL S NEEDED A ASH, 4 AT DRILLS	REMARKS: TRIPS- VERY I DSING FLUID Y FOR TIGHT COHULLS	IMPORTAN ONNECTION		PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS	O BBL FRESH V (ESIX SLOW) I 80 TO 100 B	NATER LY 2 MIN. PER POUI BBL FRESH WATER A	ND) K HEAD OF FRA	DEC 07 201 CC WICHI	II TA
KEEP HOLE FULL USE GEL AND HI DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD OR ADD PHPA A RESERVE Chior CALCUIM=	ULLS IF LOS S SLOWL S NEEDED DA ASH, 4 AT DRILLS	REMARKS: TRIPS- VERY I DSING FLUID Y FOR TIGHT COHULLS	IMPORTAN ONNECTION		PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS	O BBL FRESH V (ESIX SLOW) I 80 TO 100 B	NATER LY 2 MIN. PER POUI BBL FRESH WATER A	ND) K HEAD OF FRA	DEC 07 201 CC WICHI	II TA
KEEP HOLE FULL USE GEL AND HI DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD OR ADD PHPA A RESERVE Chlor CALCUIM= VOLUME	ULLS IF LO S SLOWL S NEEDED DA ASH, 4 AT DRILLS	REMARKS: TRIPS- VERY DSING FLUID Y FOR TIGHT CO HULLS TRING (2-3 V)	IMPORTAN ONNECTION S CUPS)	vs	PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS RECOMMEND RUN ** IN LAST PREMIX	O BBL FRESH V	NATER LY 2 MIN. PER POUI BBL FRESH WATER A	ND) K HEAD OF FRA	DEC 07 201 CC WICHI	II TA
KEEP HOLE FULL USE GEL AND HO DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD OR ADD PHPA A RESERVE Chlor CALCUIME VOLUME The Recommendation	ULLS IF LO S SLOWL S NEEDED DA ASH, 4 AT DRILLS rides= s made hered	REMARKS: TRIPS- VERY I DSING FLUID Y FOR TIGHT CO HULLS TRING (2-3 VI)	IMPORTAN ONNECTION S CUPS)	VS	PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS RECOMMEND RUN ** IN LAST PRENIX	O BBL FRESH V	NATER LY 2 MIN. PER POUI BBL FRESH WATER A	ND) K HEAD OF FRA	DEC 07 201 CC WICHI	II TA
KEEP HOLE FULL USE GEL AND HI DRILL ALL SAND SWEEP HOLE AS 18 P-GEL, 1 SOD OR ADD PHPA A RESERVE Chlor CALCUIM= VOLUME=	ULLS IF LO S SLOWL S NEEDED DA ASH, 4 AT DRILLS rides= s made hered	REMARKS: TRIPS- VERY I DSING FLUID Y FOR TIGHT CO HULLS TRING (2-3 VI)	IMPORTAN ONNECTION S CUPS)	VS	PREMIX TO 80-100 24-26 P-GEL 2 SODA ASH 1 CAUSTIC 1 LIGNITE 1/3 SACK DRISPAC 4 HULLS RECOMMEND RUN ** IN LAST PRENIX	O BBL FRESH V	NATER LY 2 MIN. PER POUI BBL FRESH WATER A	ND) K HEAD OF FRA	DEC 07 201 CC WICHI	11 FA



Report no.	2

							9/30/11				
OPERATOR: KRIER, KIRBY OIL, INC.					CONTRACTOR	Date:	YAL DRLG	Depth: <u>2704</u> RIG NO #2			
OPERATOR:					CONTRACTOR	NO.	Rig	SPUD DATE	1110 110.		
ADDRESS:		co JIM MUSGROVE(GEO)		ADDRESS: REPORT FOR	na	UG BUDIG	COUNTY	BART	•		
REPORT FOR									<u> </u>		
/ELL NAME	<u> </u>	MINNIE #9		SEC		TOWNSHIP	16	RANGE	12	W	
	ng Assem	bly	Casi		Mud Volume			Circulati		1 (5) (5.4)	
it Size	7 7/8		Surfa		Hole	220	Pump Size	6 x 14	Annular Ve		
o. Bits	2		8 5/8 @	395	Pits	400	Pump Make / Mode	,	DP	DC	
rill Pipe	4 1/2		Interme	ediate	Total Circ Vol.	620	BBL / Stroke	0.139	197 Circ PSI	356 800	
ype	XH		Du t du	-4!	Mud up Dpth.	2600	Stroke / Min.	60 8	Bottoms U		
rill Collar	6 1/4		Produ	ction	Mud Type	NATIVE	BBL / Min.		28	<u> </u>	
it RPM	60	30000		i	Activity	DRLG	Gal. / Min. Elevation	336 1913	TTL (Min.)	78	
Weight on Bit Sample Tak	on From			Pit	Pits used Flowing Temp.	3	Elevation	MUD			
Jampie rak		UD PROPERTIES			PRODUC		Daily Cost	\$4,375.90	Total	\$4,388.85	
T				T	PRODUC	· 1			Used		
	Sample Ta	ken	2:30PM		December (Cal	On Hand	add Del. 249	135	cost	
	epth (ft.)	`	2704		Premium (361	114		20		
	eight (ppg		8.7		Hulls		51	71			
	radient (p		0.452		Soda Asl		11	23	12 5		
Funnel Vi	<u></u>		54		Caustic Bea	aus	8	13		+	
Plastic Vi	<u>-</u>		28		Lignite		8	13	5		
Yield Poin			14		Lime		4	5	0		
el Strength (lb.10			12/26		Drispac		2	4	0		
	trip / Met		10.5		Desco		2	2	<u> </u>	_	
Filtrate A	<u>.</u>		9.2		PHPA		2	2	0		
API HP-HT Fi			XXX		RH Vis		0	0	0	_	
Cake Thick			1/32		Barite		0	0	0		
	ity, Mud		2.2								
Alkalinity	·		1.0/		Misc. cos	ST	noud Durantine C	:6:	1		
	rides (ppi		1000				Mud Properties S	1	T	1	
Calc	ium (ppn	ነ)	NA		Weight	< 9.4	Viscosity	48-50	Filtrate	10-12cc	
Sand Con	ntent (% b	y Vol.)	TR				Recommended To	ur Treatment			
Solids Cor	ntent (% l	oy Vol.)	2.7		MAINTAIN 48-50 V	ISCOSITY WI	HILE DRLG OR TEST	ING			
Oil Cont	ent (% by	Vol.)	xxx								
Water Co	ntent (%	by Vol.)	97.3		RUN STREAM WAT	ER @ FLOW	LINE TO CONTROL	WT. 9-9.4#/G/	AL		
LC	M, #/bbl	. i <u>.</u>	2#		1						
Methylen		nacity	XXX		LCM AS NEEDED						
Wicaryier	ic blue ce	REMARKS:			1						
(EEP HOLE FULL ISE GEL AND HI	LONALL	INIFJ- VERT	HAILOUIVIL		ALWAYS KEED HOL	FFIII & DIG	PE MOVING SHOR	T TRIP PIPF PR	NOR TO TESTING.		
JSE GEE AND II	ULLS IF L	OSING FLUID			ALWAYS KEEP HOL						
SE GEL AND II	ULLS IF L	OSING FLUID			1	IAND TO USI	E LATER TO WORK	IN NO. 2 PIT T	O SYSTEM.	and and the fine fine from	
SE GEL AND II	ULLS IF L	OSING FLUID			KEEP PREMIX ON H	IAND TO USI ITY, USE PIT I I FRESH WAT	E LATER TO WORK	IN NO. 2 PIT T	O SYSTEM.	and all the first state of	
SE GLE AND II	ULLS IF L	OSING FLUID			IF NEEDED VISCOSI 1/2 PIT MUD & 1/2 GEL FOR VISCOSITY	IAND TO USI ITY, USE PIT I I FRESH WAT	E LATER TO WORK MUD IN PREMIX UI TER:	IN NO. 2 PIT T	O SYSTEM. MBS ABOVE 9.3,	THEN USE	
SE GEE AND II	ULLS IF L	OSING FLUID			IF NEEDED VISCOSI 1/2 PIT MUD & 1/2 GEL FOR VISCOSITY 2 SODA ASH	IAND TO USI ITY, USE PIT I I FRESH WAT	E LATER TO WORK MUD IN PREMIX UI TER: 1/3 DRISPAC SLOV	IN NO. 2 PIT T	O SYSTEM.	THEN USE	
SE GLE AND TH	ULLS IF L	OSING FLUID			IF NEEDED VISCOSI 1/2 PIT MUD & 1/2 GEL FOR VISCOSITY 2 SODA ASH 1 CAUSTIC SODA	IAND TO USI ITY, USE PIT I I FRESH WAT	E LATER TO WORK MUD IN PREMIX UI TER: 1/3 DRISPAC SLOV	IN NO. 2 PIT T	O SYSTEM. MBS ABOVE 9.3, RECEIV	THEN USE	
SE GEL AND I	ULLS IF L	OSING FLUID			KEEP PREMIX ON H IF NEEDED VISCOSI 1/2 PIT MUD & 1/2 GEL FOR VISCOSITY 2 SODA ASH 1 CAUSTIC SODA 1 LIGNITE	IAND TO US TY, USE PIT (FRESH WAT	E LATER TO WORK MUD IN PREMIX UI TER: 1/3 DRISPAC SLOV	IN NO. 2 PIT T	O SYSTEM. MBS ABOVE 9.3,	THEN USE	
SE GEL AND I	ULLS IF L	OSING FLUID			IF NEEDED VISCOSI 1/2 PIT MUD & 1/2 GEL FOR VISCOSITY 2 SODA ASH 1 CAUSTIC SODA	IAND TO US TY, USE PIT (FRESH WAT	E LATER TO WORK MUD IN PREMIX UI TER: 1/3 DRISPAC SLOV	IN NO. 2 PIT T	O SYSTEM. MBS ABOVE 9.3, RECEIV	THEN USE ED 2011	
RESERVE Chio	rides=	68000			KEEP PREMIX ON H IF NEEDED VISCOSI 1/2 PIT MUD & 1/2 GEL FOR VISCOSITY 2 SODA ASH 1 CAUSTIC SODA 1 LIGNITE GOOD DISPLACEMA	IAND TO US TY, USE PIT (FRESH WAT	E LATER TO WORK MUD IN PREMIX UI TER: 1/3 DRISPAC SLOV	IN NO. 2 PIT T	O SYSTEM. MBS ABOVE 9.3, RECEIV DEC 07	THEN USE ED 2011	
RESERVE Chlo CALCUIM:	rides=	68000 400			KEEP PREMIX ON H IF NEEDED VISCOSI 1/2 PIT MUD & 1/2 GEL FOR VISCOSITY 2 SODA ASH 1 CAUSTIC SODA 1 LIGNITE	IAND TO US TY, USE PIT (FRESH WAT	E LATER TO WORK MUD IN PREMIX UI TER: 1/3 DRISPAC SLOV	IN NO. 2 PIT T	O SYSTEM. MBS ABOVE 9.3, RECEIV DEC 07	THEN USE ED 2011	
RESERVE Chlo CALCUIM: VOLUME:	rides= = =	68000 400 600			IF NEEDED VISCOSI 1/2 PIT MUD & 1/2 GEL FOR VISCOSITY 2 SODA ASH 1 CAUSTIC SODA 1 LIGNITE GOOD DISPLACEMA	IAND TO USI TY, USE PIT I I FRESH WAT I	E LATER TO WORK MUD IN PREMIX UI TER: 1/3 DRISPAC SLOV 4-6 HULLS	IN NO. 2 PIT T	O SYSTEM. MBS ABOVE 9.3, RECEIV DEC 07	THEN USE ED 2011	
RESERVE Chio CALCUIM= VOLUME	rides= = =	68000 400 600	structed as autho		KEEP PREMIX ON H IF NEEDED VISCOSI 1/2 PIT MUD & 1/2 GEL FOR VISCOSITY 2 SODA ASH 1 CAUSTIC SODA 1 LIGNITE GOOD DISPLACEMA	IAND TO USI TY, USE PIT I I FRESH WAT I	E LATER TO WORK MUD IN PREMIX UI TER: 1/3 DRISPAC SLOV 4-6 HULLS	IN NO. 2 PIT T	O SYSTEM. MBS ABOVE 9.3, RECEIV DEC 07	THEN USE ED 2011	
RESERVE Chio CALCUIM= VOLUME=	<i>rides=</i> = = :s made her	68000 400 600 eon shall not be cor		orizing the inf	IF NEEDED VISCOSI 1/2 PIT MUD & 1/2 GEL FOR VISCOSITY 2 SODA ASH 1 CAUSTIC SODA 1 LIGNITE GOOD DISPLACEMA THANK YOU!	IAND TO USI TY, USE PIT I I FRESH WAT I	E LATER TO WORK MUD IN PREMIX UI TER: 1/3 DRISPAC SLOV 4-6 HULLS	IN NO. 2 PIT T	O SYSTEM. MBS ABOVE 9.3, RECEIV DEC 07	THEN USE ED 2011 CHITA	



any liability by Andy's Mud & Chemical Co. or it's agents, and are statements of opinion only.

DENNIS RECTOR

ENGINEER

Drilling Mud Report

Report no.	<u>2</u>

785-625-3531 (cell)785-656-3039

PHONE

					137 COST			1	5 .1	
	_				T	Date:	9/30/11	Depth: <u>2704</u>		
OPERATOR:			BY OIL, INC.		CONTRACTOR		YAL DRLG	RIG NO.	#2	27 2014
ADDRESS:			io novriccol		ADDRESS:		Rig	SPUD DATE	September	•
REPORT FOR	<u> </u>	JIM MUSG	ROVE(GEO)		REPORT FOR DOUG BUDIG		COUNTY	BART		
WELL NAME		MINNIE #9		SEC	23	TOWNSHIP	16	RANGE	12	W
Drillin	g Assem	nbly		ing	Mud Volume	(BBL)		Circulat	ion Data	
Bit Size	7 7/8			face	Hole	220	Pump Size	6 x 14	Annular Vel	````
No. Bits	2		8 5/8 @	395	Pits	400	Pump Make / Model		DP	DC
Drill Pipe	4 1/2		Intern	ediate	Total Circ Vol.	620	BBL / Stroke	0.139	197	356
Туре	XH				Mud up Dpth.	2600	Stroke / Min.	60	Circ PSI	800
Drill Collar	6 1/4		Produ	ıction	Mud Type	NATIVE	BBL / Min.	8	Bottoms U	
Bit RPM	60			,	Activity	.∛ DRLG 😭	Gal. / Min.	336	28	
Weight on Bit	- F	30000		D:A	Pits used	3	Elevation	1913	TTL (Min.)	78
Sample Take			X	Pit	Flowing Temp.	<u> </u>	D-21- C4			£4.200.05
<u></u>		UD PROPERTIES			PRODUC	- l	Daily Cost	\$4,375.90	Total	\$4,388.85
	ample T		2:30PM	<u> </u>		C.1	On Hand	add Del.	Used •	cost
	pth (ft.)		2704	ļ	Premium (Gel	114	249	135	
	ight (ppg		8.7		Hulls	L	51	71	20	
Mud Gra			0.452		Soda As		11	23	12	+
Funnel Vis			54		Caustic Be		8	13	5	1
Plastic Vis			28	1	Lignite	! 	8	13	5	
Yield Point			14	ļ	Lime		4	5	0	
Sel Strength (lb.10			12/26	 	Drispac		2	4	2	
	rip / Me		10.5	 	Desco		2	2	0	+
Filtrate Af		·-··	9.2		PHPA		2	2	0	-
API HP-HT Fil			XXX		RH Vis		0	0	0	1
Cake Thick			1/32		Barite		0	0	0	ļ
Alkalini		· · · · · · · · · · · · · · · · · · ·	2.2		Misc. co				<u> </u>	
Alkalinity,		· · · · · · · · · · · · · · · · · · ·	1.0/	-	iviisc. cost		Mud Properties Sp	asifications		<u> </u>
	ides (pp		1000				Wida Properties Sp	1	T	1
	um (ppr		NA		Weight	< 9.4	Viscosity	48-50	Filtrate	10-12cc
Sand Cont			TR				Recommended Tou			· · · · · · · · · · · · · · · · · · ·
Solids Con	tent (%	by Vol.)	2.7		MAINTAIN 48-50 V	ISCOSITY WI	HILE DRLG OR TESTI	NG		
Oil Conte	ent (% b	y Vol.)	xxx							
Water Con	ntent (%	by Vol.)	97.3		RUN STREAM WAT	TER @ FLOW	LINE TO CONTROL V	NT. 9-9.4#/G/	AL	
LCI	M , #/bb		2#							
Methylene	e Blue C	apacity	XXX		LCM AS NEEDED					,
		REMARKS:		1	1					
KEEP HOLE FULL	ON AL	···	IMPORTAN		ALWAYS KEEP HOL	E FULL & PID	PE MOVING. SHORT	TRIP PIPF PE	RIOR TO TESTING	
JSE GEL AND HU			an Uniri	•			E LATER TO WORK I			
					IF NEEDED VISCOSI 1/2 PIT MUD & 1/2 GEL FOR VISCOSITY	PRESH WAT	MUD IN PREMIX UNITER: 1/3 DRISPAC SLOW	 .	IMBS ABOVE 9.3,	THEN USE
					2 SODA ASH 1 CAUSTIC SODA	REC	EIVED			
					1 LIGNITE				DEC	07 2011
					GOOD DISPLACEN	ENT!			KCC	MICHIT
		68000								
RESERVE Chlore	RESERVE Chlorides= 68000									
RESERVE Chlori CALCUIM=		400			THANK YOU!					
		400 600			THANK YOU!					

WAREHOUSE

HAYS



Report no. <u>3</u>

	- c		رون الناس			Date:	10/1/11		Depth:	3117
OPERATOR:		KRIER, KIRI	BY OIL, INC.		CONTRACTOR	YAL DRLG	RIG NO.	#	2	
ADDRESS:		(00		ADDRESS:	Rig	SPUD DATE	Septembe	r 27, 2011	
REPORT FOR		JIM MU	SGROVE		REPORT FOR	DO	UG BUDIG	COUNTY	BAR	TON
VELL NAME		MINNIE #9	#9 SEC		23	TOWNSHIP	16	RANGE	12	W
Drillin	g Assem	bly	Casi	ng	Mud Volume	(BBL)		Circulati	on Data	
it Size	7 7/8		Surfa	ace	Hole	246	Pump Size	6 x 14	Annular V	el (Ft/Min)
lo. Bits	2		8 5/8 @	395	Pits	400	Pump Make / Model		DP	DC
rill Pipe	4 1/2		Interme	ediate	Total Circ Vol.	646	BBL / Stroke	0.139	197	356
ype	XH				Mud up Dpth.	2600	Stroke / Min.	60	Circ PSI	800
Orill Collar	6 1/4		Produ	ction	Mud Type	CHEMICAL	BBL / Min.	8	Bottoms	
Bit RPM	60	4			Activity	DRLG	Gal. / Min.	336		1
Weight on Bit	l	30000		D:1	Pits used	3	Elevation	1913 MUD	TTL (Min.)	81
Sample Tak			<u> </u>	Pit	Flowing Temp. PRODUC	<u></u>	Daily Cost	NA NA	Total	\$4,388.85
T: C		UD PROPERTIES		T	PRODUC	- 1	On Hand	add Del.	Used	cost
	ample Ta	ikeri	9:30AM		Premium	Gal	114	249	Oseu	1030
	epth (ft.) ight (ppg	1	3117 8.9		Hulls	Gei	51	71		
	adient (p		0.463		Soda As	h	11	23		
Funnel Vis			55		Caustic Be		8	13		1
Plastic Vis			28		Lignite		8	13		
Yield Point	<u>-</u>		12		Lime		4	5		
iel Strength (lb.10			14/25		Drispac	,	2	4		
	trip / Me		9.5		Desco	10 MA	2	2		
Filtrate A			8.8		PHPA		2	2		
API HP-HT Fil	ltrate (m	I./30 min.)	XXX		RH Vis		0	0		
Cake Thick	ness 32n	d in. API	1/32		Barite		0	0		
Alkalini	ity, Mud	(Pm)	1.6							
Alkalinity,	, Filtrate	(Pf/Mf)	.9/		Misc. co	st				
Chlor	rides (ppi	m)	2000				Mud Properties Sp	ecifications	·	
Calc	ium (ppn	n)	20		Weight	< 9.4	Viscosity	48-50	Filtrate	10-12cc
Sand Con	tent (% k	ov Vol.)	TR		1	L	Recommended Tou	ır Treatment		
Solids Cor			4.2		MAINTAIN 48-50 V	ISCOSITY WH	IILE DRLG OR TESTIN	NG.		
Oil Cont	ent (% by	/ Vol.)	XXX							
Water Cor	ntent (%	by Vol.)	95.8		RUN STREAM WAT	ER @ FLOWL	INE TO CONTROL W	/T.9-9.4#/GAI	_	
	M, #/bbl		2#		,	_				
Methylen			xxx		LCM AS NEEDED					
Wicaryica	- Dide of	REMARKS:		L	TECHT AS TREEDED	•				
KEEP HOLE FULL	ONALL		INADODTANI	-	ALWAYS NEED HOL	E EI II I <i>9</i> . DIDI	E MOVING. SHORT	TRID DIDE DRI	OR TO TESTING	
CEP HOLE FULL	. ON ALL	IKIPS- VERT	IIMPUNIANI		ALWATS REEF HOL	E FULL & FIF	E MOVING. SHORT		011 10 12311110.	
			,		VEED DREAMY ON H	IAND TO LICE	LATER TO WORK IN	I NICI 2 DIT TC	SVSTEM	
					KEEP PREIVITA ON FI	IAND TO USE	LATER TO WORK IN	110.271110) SI SI EIVI.	
					IE NEEDED VISCOSI	TV LICE DIT A	MUD IN PREMIX UNI	LECENAT CLIN	ARC AROVE Q 2	THEN LISE
		•			1			LESS WI. CEI	VIDS ABOVE 9.5,	THEN USE
					1/2 PIT MUD & 1/2				-	
					GEL FOR VISCOSITY		1/3 DRISPAC	SLOWLY		
					2 SODA ASH		4-6 HULLS			
					1 CAUSTIC SODA		1 LIGNITE		RECEIV	FD
									DEC 07	2011
									KCC WIC	HITA
RESERVE Chlor	rides=	68000			THANK YOU!					
CALCUIM=	=	400]							
VOLUME=		600								
			nstructed as author	orizing the inf	ringement of any valid pater	nt, and are made	without assumption of			
he Recommendation	s made ner									
he Recommendation ny liability by Andy's				ments of opin	nion only.			T		5-3531



Report no.	1 2
report no.	

	- 6.00	काक हा		LETTE	THE COLL	Date:	10/1/11	l	Depth:	3117
OPERATOR:		KRIER, KIRE	RY OIL INC		CONTRACTOR		YAL DRLG	RIG NO. #2		
ADDRESS:		•	•		ADDRESS:		Rig	SPUD DATE	September	
REPORT FOR	JIM MUSGROVE		REPORT FOR	UG BUDIG	COUNTY	BART				
							·	<u> </u>	<u> </u>	
VELL NAME	MINNIE #9 SEC		L	23	TOWNSHIP	16	RANGE	12	W	
	g Assem	bly	Casi		Mud Volume		D Cina	Circulati	Annular Ve	l (E+/Min)
Bit Size	7 7/8		Surf.		Hole	246	Pump Size Pump Make / Model	6 x 14	DP	DC
No. Bits	2		8 5/8 @ Interm	395	Pits	400 646	BBL / Stroke	0.139	197	356
Orill Pipe	4 1/2		interm	ediate	Total Circ Vol.	2600	Stroke / Min.	60	Circ PSI	800
Type Drill Collar	XH		Produ	ction	Mud up Dpth.	CHEMICAL	BBL / Min.	8	Bottoms l	
	6 1/4		Produ	cuon	Mud Type		Gal. / Min.	336	31	<u> </u>
Bit RPM	60	30000			Activity	DRLG *	Elevation	1913	TTL (Min.)	81
Weight on Bit Sample Take	on From		x	Pit ·	Pits used Flowing Temp.	3	Elevation	MUD (
Jampie raki		UD PROPERTIES		1110	PRODUC	<u> </u>	Daily Cost	NA NA	Total	\$4,388.85
Time - Ce					FRODO		On Hand	add Del.	Used	cost
	ample Ta	iken	9 :30 k M		Premium	Gol	114	249	U3eu	
	epth (ft.)	,	3117		Hulls	Gei	51	71	ļ	
	ight (ppg		8.9			L	·	ļ	 	<u> </u>
	adient (p		0.463		Soda As		11	23		
Funnel Vis			55	_	Caustic Be		8	13	<u> </u>	+
Plastic Vis			28		Lignite		8	13		
Yield Point			12		Lime		4	5		
iel Strength (lb.10			14/25		Drispac		2	4	<u></u>	
	rip / Me		9.5		Desco		2	2		
Filtrate Af	<u> </u>		8.8		PHPA		2	2		
API HP-HT Fil			XXX		RH Vis		0	0		
Cake Thick			1/32		Barite		0	0		
Alkalinity, Mud (Pm)		<u> </u>	1.6							
Alkalinity,			.9/		Misc. co	st	1		1	<u>l</u>
Chlor	rides (pp	m)	2000		ļ		Mud Properties Sp	·	T	
Calci	ium (ppn	n)	20		Weight	< 9.4	Viscosity	48-50	Filtrate	10-12cc
Sand Con	tent (% b	y Vol.)	TR				Recommended Tou	ir Treatment		
Solids Con	ntent (%	by Vol.)	4.2		MAINTAIN 48-50 V	ISCOSITY WH	IILE DRLG OR TESTIN	VG.		
Oil Conte	ent (% by	/ Vol.)	XXX		1					
Water Cor	ntent (%	by Vol.)	95.8		RUN STREAM WAT	ER @ FLOWI	INE TO CONTROL W	/T.9-9.4#/GAI	-	
	M , #/bbl		2#		1			,		
Methylen					LCM AS NEEDED					
wetnyien	e blue Ca		XXX	L	LCM AS MEEDED					
		REMARKS:			-		- 140V/ING CUODE	***********	OD TO TESTING	
KEEP HOLE FULL	ON ALL	TRIPS- VERY	IMPORTAN	ſ	ALWAYS KEEP HOL	E FULL & PIP	E MOVING. SHORT	TRIP PIPE PRI	OK TO TESTING.	
					·					
					KEEP PREMIX ON H	IAND TO USE	LATER TO WORK IN	I NO. 2 PIT TO	SYSTEM.	
									,	
					IF NEEDED VISCOS	ITY, USE PIT I	MUD IN PREMIX UN	LESS WT. CLIN	MBS ABOVE 9.3, T	HEN USE
					1/2 PIT MUD & 1/2	FRESH WAT	ER:			
					GEL FOR VISCOSITY		1/3 DRISPAC	SLOWLY		
					2 SODA ASH 4-6 HULLS					
					1 CAUSTIC SODA		1 LIGNITE			
					T CAUSTIC SODA		TUOMIL		מבסרי	/ /Pools
									RECEI	AEN
									DE0 0	3 0044
									DEC O	/ ZU11
									KCC WI	CHITA
			_		1				NOO AAI	UTHIM
RESERVE Chlor	rides=	68000			THANK YOU!					
CALCUIM=		400								
VOLUME=	•	600								
			structed as auth	orizing the inf	ringement of any valid pate	nt, and are made	without assumption of			
ny liability by Andy's I										
i		1		1	WAREHOUSE		HAYS	PHONE	785-625 (cell)785-6	
	ENGINEER DENNIS RECTOR									



Report no.		4	
Report no.	1	4	

Drilling Assembly Casing Mud Volume (BBL) Bit Size 7 7/8 Surface Hole 261 Pump Size No. Bits 2 8 5/8 @ 395 Pits 400 Pump Make / Model Drill Pipe 4 1/2 Intermediate Total Circ Vol. 661 BBL / Stroke Type XH Mud up Dpth. 2600 Stroke / Min. Drill Collar 6 1/4 Production Mud Type chemical BBL / Min.	6 x 14 0.139 60	Depth: #2 September BART 12 ion Data Annular Ve DP	27, 2011					
ADDRESS: REPORT FOR JIM MUSGROVE REPORT FOR DOUG BUDIG	SPUD DATE COUNTY RANGE Circulati 6 x 14 0.139 60	September BART 12 ion Data Annular Ve	27, 2011 ON					
REPORT FOR DOUG BUDIG WELL NAME MINNIE #9 SEC 23 TOWNSHIP 16 Drilling Assembly Casing Mud Volume (BBL) Sit Size 7 7/8 Surface Hole 261 Pump Size No. Bits 2 8 5/8 @ 395 Pits 400 Pump Make / Model Orill Pipe 4 1/2 Intermediate Total Circ Vol. 661 BBL / Stroke Type XH Mud up Dpth. 2600 Stroke / Min. Orill Collar 6 1/4 Production Mud Type chemical BBL / Min. Bit RPM 60 Activity DST#1 Gal. / Min. Weight on Bit 30000 Pits used 3 Elevation	Circulati 6 x 14 0.139 60	12 ion Data Annular Ve						
WELL NAME MINNIE #9 SEC 23 TOWNSHIP 16 Drilling Assembly Casing Mud Volume (BBL) 30 Mud Volume (BBL) 30 Sit Size 7 7/8 Surface Hole 261 Pump Size No. Bits 2 8 5/8 @ 395 Pits 400 Pump Make / Model Drill Pipe 4 1/2 Intermediate Total Circ Vol. 661 BBL / Stroke Type XH Mud up Dpth. 2600 Stroke / Min. Drill Collar 6 1/4 Production Mud Type chemical BBL / Min. Bit RPM 60 Activity DST#1 Gal. / Min. Weight on Bit 30000 Pits used 3 Elevation	Circulati 6 x 14 0.139 60	ion Data Annular Ve	W					
Drilling Assembly Casing Mud Volume (BBL) 3it Size 7 7/8 Surface Hole 261 Pump Size No. Bits 2 8 5/8 @ 395 Pits 400 Pump Make / Model Drill Pipe 4 1/2 Intermediate Total Circ Vol. 661 BBL / Stroke Type XH Mud up Dpth. 2600 Stroke / Min. Drill Collar 6 1/4 Production Mud Type chemical BBL / Min. Bit RPM 60 Activity DST#1 Gal. / Min. Weight on Bit 30000 Pits used 3 Elevation	Circulati 6 x 14 0.139 60	ion Data Annular Ve						
Bit Size 7 7/8 Surface Hole 261 Pump Size No. Bits 2 8 5/8 @ 395 Pits 400 Pump Make / Model Drill Pipe 4 1/2 Intermediate Total Circ Vol. 661 BBL / Stroke Type XH Mud up Dpth. 2600 Stroke / Min. Drill Collar 6 1/4 Production Mud Type chemical BBL / Min. Bit RPM 60 Activity DST#1 Gal. / Min. Weight on Bit 30000 Pits used 3 Elevation	6 x 14 0.139 60	Annular Ve						
No. Bits 2 8 5/8 @ 395 Pits 400 Pump Make / Model Drill Pipe 4 1/2 Intermediate Total Circ Vol. 661 BBL / Stroke Type XH Mud up Dpth. 2600 Stroke / Min. Drill Collar 6 1/4 Production Mud Type chemical BBL / Min. Bit RPM 60 Activity DST#1 Gal. / Min. Weight on Bit 30000 Pits used 3 Elevation	0.139 60		l (Et/Min)					
Drill Pipe 4 1/2 Intermediate Total Circ Vol. 661 BBL / Stroke Type XH Mud up Dpth. 2600 Stroke / Min. Drill Collar 6 1/4 Production Mud Type chemical BBL / Min. Bit RPM 60 Activity DST#1 Gal. / Min. Weight on Bit 30000 Pits used 3 Elevation	60		DC					
Type XH Mud up Dpth. 2600 Stroke / Min. Drill Collar 6 1/4 Production Mud Type chemical BBL / Min. Bit RPM 60 Activity DST#1 Gal. / Min. Weight on Bit 30000 Pits used 3 Elevation	60	197	356					
Drill Collar 6 1/4 Production Mud Type chemical BBL / Min. Bit RPM 60 Activity DST#1 Gal. / Min. Weight on Bit 30000 Pits used 3 Elevation		Circ PSI	800					
Bit RPM 60 Activity DST#1 Gal. / Min. Weight on Bit 30000 Pits used 3 Elevation	8	Bottoms U						
Weight on Bit 30000 Pits used 3 Elevation	336	33						
	1913	TTL (Min.)	83					
Sample taken from from the transfer of the frowing temp.	MUD							
MUD PROPERTIES PRODUCT Daily Cost	NA	Total	\$4,393.60					
Time Sample Taken 8AM On Hand	add Del.	Used	cost					
Depth (ft.) 3357 Premium Gel 114	249							
Weight (ppg) 9.4 Hulls 51	71							
Mud Gradient (psi/ft) 0.489 Soda Ash 11	23							
Funnel Viscosity (sec/qt.) 49 Caustic Beads 8	13							
Plastic Viscosity cp at / 22 Lignite 8	13							
Yield Point (lb./100 sq. ft.) 12 Lime 4	5							
Gel Strength (lb.100 sq. ft.) 10 sec/ 10 min 10/18 Drispac 2	4							
pH Strip / Meter 8.5 Desco 2	2							
Filtrate API (ml./30 min.) 9.6 PHPA 2	2							
APJ HP-HT Filtrate (ml./30 min.) xxx RH Vis 0	0							
Cake Thickness 32nd in. API 1/32 Barite 0	0							
Alkalinity, Mud (Pm) 0.9								
Alkalinity, Filtrate (Pf/Mf) .5/ Misc. cost								
Chlorides (ppm) 4000 Mud Properties Sp	ecifications	.,						
Calcium (ppm) 20 Weight <9.4 Viscosity	48-50	Filtrate	10-12cc					
Sand Content (% by Vol.) TR Recommended Tou	r Treatment							
Solids Content (% by Vol.) 7.5 MAINTAIN 48-50 VISCOSITY WHILE DRLG OR TESTIN	IG OR LOGGI	NG.						
Oil Content (% by Vol.) xxx								
Water Content (% by Vol.) 92.5 RUN STREAM WATER @ FLOWLINE TO CONTROL W	/T. 9-9.4#/GA	NL						
LCM, #/bbl 2#	,							
REMARKS:	בחוט טוטב טטו	IOD TO TESTING						
KEEP HOLE FULL ON ALL TRIPS ALWAYS KEEP HOLE FULL & PIPE MOVING. SHORT	I KIP PIPC PKI	ION TO TESTING.						
IF RUN CASING, RUN DESCO FLUSH KEEP PREMIX ON HAND TO USE LATER TO WORK IN	NO. 2 PIT TO	O SYSTEM.						
30 BBLS PIT MUD								
50 BBLS FRESH WATER IF NEEDED VISCOSITY, USE PIT MUD IN PREMIX UNL	IF NEEDED VISCOSITY, USE PIT MUD IN PREMIX UNLESS WT. CLIMBS ABOVE 9.3, THEN USE							
1 CAUSTIC SODA 1/2 PIT MUD & 1/2 FRESH WATER:	1/2 PIT MUD & 1/2 FRESH WATER:							
1 SODA ASH GEL FOR VISCOSITY	GEL FOR VISCOSITY							
2 DESCO 2 SODA ASH	2 SODA ASH							
ADD AHEAD OF CEMENT 1 CAUSTIC SODA								
	1 LIGNITE RECEIVED							
1/3 DRISPAC SLOWLY								
4-6 HULLS		DEC 07	2011					
4-0 110125		DLC 0 /	4011					
		KCC WIC	HITA					
RESERVE Chlorides= 68000 THANK YOU!								
CALCUIM= 400								
VOLUME= 600								
The Recommendations made hereon shall not be constructed as authorizing the infringement of any valid patent, and are made without assumption of	· · · · · · · · · · · · · · · · · · ·							
any liability by Andy's Mud & Chemical Co. or it's agents, and are statements of opinion only.								
ENGINEER DENNIS RECTOR WAREHOUSE HAYS	PHONE	785-62						
ENGINEER DENTILORE PRINCIPOSE		: <i>(Ceiii /85-</i> (656-3039					



Drilling Mud Report

Report no.

	- 60 cm	ara 53		ren ve s	ar co	Date:	10/2/11	1	Depth:	<u>3357</u>			
OPERATOR:	ERATOR: KRIER, KIRBY OIL, INC.				CONTRACTOR ROYAL DRLG			RIG NO.					
ADDRESS:	co			ADDRESS:		Rig	SPUD DATE	September :	27, 2011				
REPORT FOR			SGROVE	•	REPORT FOR DOUG BUDIG		COUNTY	BARTO	· ·				
WELL NAME	<u> </u>	MINNIE #9		SEC			RANGE	12	W				
	ig Assem		Cas		Mud Volume	4	10		ion Data	1 00			
Bit Size		Diy	Surf		Hole	261	Pump Size	6 x 14	Annular Vel	(Et/Min)			
	7 7/8	·	8 5/8 @	395	Pits	400	Pump Make / Mode		DP	DC			
No. Bits Drill Pipe	4 1/2		o 3/o @ Interm		Total Circ Vol.	661	BBL / Stroke	0.139	197	356			
	XH		interni	Culate	Mud up Dpth.	2600	Stroke / Min.	60	Circ PSI	800			
Type Drill Collar	6 1/4		Produ	ection	Mud Type	chemical	BBL / Min.	8	Bottoms U	1			
Bit RPM	60		rioud	CHOT	Activity	DST#1	Gal. / Min.	336	33	P (11111)			
Weight on Bit	80	30000		Τ	Pits used	3	Elevation	1913	TTL (Min.)	83			
Sample Take	en From		x	Pit	Flowing Temp.	 	Lievation		COSTS	1 00			
- Carripio ion		UD PROPERTIES			PRODUC	ĊТ	Daily Cost	NA ,	Total	\$4,393.60			
Time S	ample Ta		8AM	1			On Hand	add Del.	Used	cost			
	epth (ft.)	Kerr	3357	 	Premium	Gel	114	249	0300				
	ight (ppg	1	9.4	-	Hulls		51	71					
	adient (p		0.489	ļ	Soda As		11	23	 	1			
Funnel Vis			49	 	Caustic Be		8	13		+			
Plastic Vis			22	1	Lignite		8	13		1			
Yield Point			12	 	Lime	-	4	5		1			
Gel Strength (lb.10			10/18	 	Drispa	<u> </u>	2	4		1.			
	trip / Met		8.5	<u> </u>	Desco		2	2		1			
Filtrate Al			9.6		PHPA		2	2	 				
API HP-HT Fil			XXX		RH Vis		0 .	0		+			
Cake Thick	·····		1/32		Barite	··-··	0	0	1	1			
	ity, Mud		0.9		Darree		 	ļ	1	1			
Alkalinity,			.5/	 	Misc. co	net	· · · · · · · · · · · · · · · · · · ·			1			
	rides (ppi		4000		14130.00	,,,,,	Mud Properties S	necifications	1	.1			
				 		1	T	T	Т.	10-12cc			
	ium (ppn		20		Weight	<9.4	Viscosity	48-50	Filtrate	10-1200			
Sand Con			TR	<u> </u>			Recommended To						
Solids Con	ntent (% l	oy Vol.)	7.5	<u> </u>	MAINTAIN 48-50 V	ISCOSITY WE	HILE DRLG OR TESTII	NG OR LOGGI	NG.				
Oil Conte	ent (% by	Vol.)	XXX		1					-			
Water Cor	ntent (%	by Vol.)	92.5		RUN STREAM WAT	rer @ flowi	LINE TO CONTROL V	VT. 9-9.4#/GA	\L				
LC	M, #/bbl		2#										
Methylen	e Blue Ca	pacity	XXX		LCM AS NEEDED								
		REMARKS:		·									
KEEP HOLE FULL	ON ALL				VI WAYS KEED HOL	F FI II I & DID	E MOVING. SHORT	TRIP PIPE PRI	OR TO TESTING				
VEEL HOLE LOTE	ON ALL	IMF3	- * - *		ACVATS REET TIOL	LIOLL OCT	LINOVING. SHORT	1101 111 2 110	ON 10 1251110.				
	-				VEED DEED ANY ONLY	LAND TO LICE		U NO 2 DIT TO	N CVCTCNA				
IF RUN CASING, I		SCO FLUSH			KEEP PREMIX ON F	TAND TO USE	E LATER TO WORK I	V 190. 2 PH 10	J STSTEIVI.				
30 BBLS PIT MU	D '												
50 BBLS FRESH V	WATER				IF NEEDED VISCOSITY, USE PIT MUD IN PREMIX UNLESS WT. CLIMBS ABOVE 9.3, THEN USE								
1 CAUSTIC SODA	4		•		1/2 PIT MUD & 1/2 FRESH WATER:								
1 SODA ASH					GEL FOR VISCOSITY								
2 DESCO			•		2 SODA ASH								
ADD AHEAD OF	CEMENT	•			1 CAUSTIC SODA			RECEIVED					
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					1/3 DRISPAC SLOW	/I V		DEC 07 2011					
					4-6 HULLS	V C 1		DEC OF K) B				
					4-0 HULL3								
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			1										
		68000			THANK YOU!								
RESERVE Chlor					1								
RESERVE Chior CALCUIM=		400			1								
CALCUIM= VOLUME=	=	600								,			
CALCUIM= VOLUME=	=	600	structed as auth	orizing the inf	ringement of any valid pate	ent, and are made	without assumption of			,			
CALCUIM= VOLUME=	s made her	600 eon shall not be con				ent, and are made	without assumption of		785-625	2524			