

**DAILY DRILLING REPORT**  
**NIOBARRA DEVELOPMENT WELL**

WELL NAME <i>4-18 Northrop TR</i>		24 HR PROG <i>- 0 -</i>	TMD <i>- 0 -</i>	IVD <i>-</i>	REPT # <i>1</i>	DATE <i>3-13-01</i>
SUPERVISOR <i>Walt Smith</i>		RIG NAME & # <i>Stewart 51</i>	FIELD NAME <i>Cherry CR</i>	AUTH ID <i>1550</i>	DAILY TANG \$ <i>---</i>	CUM TANG \$ <i>---</i>
CURRENT STATUS <i>Mix Spud mud - Prep to Spud</i>		24 HR FORECAST <i>Drill Spud Run &amp; Cont Spud WOC</i>		DAILY INT \$ <i>---</i>	CUM INTANG \$ <i>---</i>	
LITHOLOGY		LAST CASING <i>IN @ <i>-</i> FT</i>	NEXT CASING <i>7 IN @ <i>300</i> FT</i>	DAILY TOTAL \$ <i>---</i>	CUM COST \$ <i>---</i>	
MUD DATA		ADDITIVES	QTY	BIT RUN DATA		CUM DATA
DENS (ppg)				BIT #		STROKE
VIS (sec/qt)				SIZE (in)	DEPTH IN	LINER
WL - API				MFR	DEPTH OUT	SPM
pH				TYPE	WOB min Vmax	OUTPUT (lbm)
				SERIAL #	RPM	PRESS (psi)
				NETS 1/2/3	min Vmax	
FROM	TO	HOURS	OPERATIONS SUMMARY			
<i>0900</i>	<i>1200</i>	<i>3</i>	<i>Finish Rig Up Notify Herb Dymess, KCC, 11:23, 3-8</i>			
	<i>1430</i>	<i>2 1/2</i>	<i>Haul Water - mix mud</i>			
<i>1430</i>	<i>0500</i>	<i>14 1/2</i>	<i>Cherokee County Sheriff shut down water truck due to muddy roads shut down rig - sent crews to Motel</i>			
<i>0500</i>	<i>0530</i>	<i>1/2</i>	<i>Start Equipment</i>			
<i>0530</i>	<i>0700</i>	<i>1 1/2</i>	<i>mix mud - Build Volume</i>			
24 HR SUMMARY <i>MIRV, haul water, mix mud, Sheriff shut down trucks,</i>						

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**NIOBARRA DEVELOPMENT WELL**

WELL NAME <b>1-B Northrup Tr</b>	24 HR PROG <b>395</b>	TMD <b>400</b>	IWD <b>—</b>	REPT # <b>2</b>	DATE <b>3-13-01</b>
SUPERVISOR <b>Walt Smith</b>	RIG NAME & # <b>Stewart 51</b>	FIELD NAME <b>Cherry Cr</b>	AUTH ID <b>1550</b>	DAILY TANG \$	CUM TANG \$
CURRENT STATUS <b>Drilling</b>	24 HR FORECAST <b>Drill to TD, Log, Run &amp; Cmt Prod Csg</b>			DAILY INT \$	CUM INTANG \$
LITHOLOGY <b>sd, shale, clay</b>	LAST CASING IN @ <b>313</b> FT	NEXT CASING IN @ <b>4 1/2</b> IN @ <b>1350</b> FT	AFE # <b>—</b>	DAILY TOTAL \$ <b>15598</b>	CUM COST \$ <b>15598</b>
MUD DATA	ADDITIVES	QTY	BIT RUN DATA	PUMP DATA	

DENS (PPG)		<b>GEL</b>	<b>21</b>	BIT #	<b>1</b>	BIT #	<b>1</b>	STROKE	<b>10</b>
VIS (sec/cf)		<b>Drill star</b>	<b>18</b>	SIZE (in)	<b>9 7/8</b>	DEPTH IN	<b>5</b>	LINER	<b>5</b>
WL - API		<b>KCL</b>	<b>22</b>	MFR	<b>NA</b>	DEPTH OUT	<b>320</b>	GPM	<b>72 x2</b>
pH		<b>Poly Pac</b>	<b>1</b>	TYPE	<b>NA</b>	WOB (lb)	<b>220</b>	OUTPUT (GPM)	<b>390</b>
				SERIAL #	<b>RR</b>	RPM (min)	<b>60</b>	PRESS (psi)	<b>250</b>
				NETS 1/2/3	<b>1 1 1</b>	RPM (max)	<b>100</b>		

FROM	TO	HOURS	OPERATIONS SUMMARY
0700	1430	7 1/2	Drilling 9 7/8 hole 0-320 shale @ 125' <span style="float:right">190 RPM</span>
	1445	1/4	circulate @ 320' KB
1445	1700	2 1/4	TOOTH
1700	1930	2 1/2	Run 8 Jts (308.13') used 7" 17# 8nd STC open-ended w/1 centralizer landed @ 313' KB. Pumped 7 Bbl water preflush, 90 5X Reg w/ 3% CC @ 15 <sup>3</sup> PPG, displace w/ 12.8 Bbl mud, circ 1 Bbl cement to surface cement in place @ 20:30
2030	0600	9 1/2	WOC Drill 5' Cmt
0600	0700	1	Drill 320 - 400'
			Kevin 100
			Reg Idby 2613
			Reg Surf 9450
			Reg 6 1/4 hole 1105'
			Sessions 125 Dig Rts
			Andrews 140 Road-level loc
			Sessions 250 handle casing
			Water 250
			PCI 565
			Reg Mob-Demob 1000
			<b>15,598</b>

24 HR SUMMARY  
 Drill Surf hole, Run & Cmt Surf Csg, WOC  
 Drill main hole PAGE 1 of 1

**DAILY DRILLING REPORT**  
**NIORARA DEVELOPMENT WELL**

WELL NAME #18 Northrup TR		24 HR PROG 945	TMD 1345	IWD -	REPT # 3	DATE 3-14-01	
SUPERVISOR Walt Smith		RIG NAME & # Stewart 51	FIELD NAME Cherry Cr	AUTH ID 1550	DAILY TANG \$	CUM TANG \$	
CURRENT STATUS Work stuck pipe @ 1245		24 HR FORECAST Free Pipe, Trip, 209, Run 8 cmt Csg.		DAILY INT \$	CUM INTANG \$		
LITHOLOGY Shale, Sand, Chk		LAST CASING 7	IN @ 313 FT	NEXT CASING 4 1/2 IN @ 1350 FT	DAILY TOTAL \$ 13165	CUM COST \$ 20,763	
MUD DATA		ADDITIVES	QTY	BIT RUN DATA		PUMP DATA	
DENS (ppg)	8.8	Starch	20	BIT #	2	STROKE	10
VIS (sec/qt)	38	Driopac	3	SIZE (in)	6 1/4	DEPTH IN	320
WL- API	8	KCL	18	MFR	-	DEPTH OUT	1345
PH	7	Polymer	3	TYPE	DIA9	WOB (lb)	10,200
				SERIAL #	-	RPM (min)	60,90
				JETS 1/2/3	TT 1 1	OUTPUT (bbl/hr)	195
						PRESS (psi)	450
FROM	TO	HOURS	OPERATIONS SUMMARY				
0700	2145	14 3/4	Drill 400 - 1345' KB				
	2215	1/2	Circ @ 1345				
2215	0700	8 3/4	stuck pipe - differentially stuck, bit @ 1245 cannot rotate, can circulate 30000 * overpull				
			Big fig 12,200				
			Kevin 100				
			PCI 565				
			Water Trk 4hr 300				
			13165				

24 HR SUMMARY  
 Drill to TD, Circ, Work stuck pipe

**DAILY DRILLING REPORT**  
**NIOBKARA DEVELOPMENT WELL**

WELL NAME <b>4-13 Northrup</b>	24 HR PROG	TMO	TVD	REPT # <b>4</b>	DATE <b>3-15-01</b>
SUPERVISOR <b>Walt Smith</b>	WIG NAME & # <b>STEWART 51</b>	FIELD NAME <b>Cherry 641600</b>	AUTH TO	DAILY TANG \$	CUM TANG \$
CURRENT STATUS				DAILY INT \$	CUM INTANG \$

24 HR FORECAST	DAILY TOTAL \$	CUM COST \$
LITHOLOGY	LAST CASING IN @ FT	NEXT CASING IN @ FT
		AFE #

MUD DATA		ADDITIVES		QTY	BIT RUN DATA				PUMP DATA											
DENS (ppg)	VIS (sec/qt)	WL- API	pH	BIT #	SIZE (in)	MFR	TYPE	SERIAL #	JETS 1/2/3	BIT #	DEPTH IN	DEPTH OUT	WOB (min/max)	RPM	STROKE	LINEAR	SPM	OUTPUT (GPM)	PRESS (psi)	

FROM	TO	HOURS	OPERATIONS SUMMARY
0200	0230	1/2	Hang casing w/ 12000#, flange up well head
0230	0700	4 1/2	Rig Released @ 02:30, Rigging down
			Ria 2 1/4 DW hrs 619
			Kavin 100
			Sessions 150
			Schlumberger 3950
			St Fran Redi-Mix 861
			Float Equip 775
			Casing 5145
			Wellhead 575
			12,175

24 HR SUMMARY

**DAILY DRILLING REPORT**  
**NIORRARA DEVELOPMENT WELL**

WELL NAME 4-18 Northrup Tr	24 HR PROG -0-	TMD 1345	TVD -	REPT # 4	DATE 3-15-01
SUPERVISOR Walt Smith	RIG NAME & # Stewart 51	FIELD NAME Cherry Cr	AUTH ID 1550	DAILY TANG \$	CUM TANG \$
CURRENT STATUS WOC - Rigging Down				DAILY INT. \$	CUM INTANG \$
24 HR FORECAST Move to Next Loc				DAILY TOTAL \$ 12175	CUM COST \$ 40938
LITHOLOGY -		LAST CASING 4 1/2 IN @ 1332	NEXT CASING IN @	AFE # -	AUTH COST \$

MUD DATA		ADDITIVES	QTY	BIT RUN DATA				PUMP DATA												
DENS (ppg)	VIS (sec/cf)	WL- API	pH	BIT #	SIZE (in)	MFR	TYPE	SERIAL #	NETS 1/2/3	BIT #	DEPTH IN	DEPTH OUT	WOB (lb)	RPM	min Wt/Stroke	STROKE	LINER	SPM	OUTPUT (gpm)	PRESS (psi)

FROM	TO	HOURS	OPERATIONS SUMMARY
0700	1130	4 1/2	Spot 1000 gal diesel around bottom drill string - came free after 90 min. Circ out. Recovered diesel w/ VOC Truck
1130	1245	1 1/4	Short Trip 1345-720
1245	1330	3/4	Circulate @ 1345
1330	1615	2 3/4	Lay down drill string
1615	1930	3 1/4	Run 2-Logs: DIL 1338-313, CNL-FDC 1313-400, Log TD 1346, Beacher Island. 1173-1213, Ave Res 5 1/2, Min 5, MAX 8, Ave XO 24% 1173-1198, 27% 1198-1213
1930	0200	6 1/2	Run & cmt 4 1/2 Prod Csg Ran 55 float shoe 1.42' on 33 Jts (1327.00') new 4 1/2 10 5/8 J-55 End 5TC Casing. Total 1328.42' set @ 1332' KB. - R-BTD 1290' KB. Circ 1/4 hr. Pumped 10 bbl fresh water preflush, 100 5x regular premixed @ 15 3/4 PPG, Wash out lines. Displace latch down plug w/ 20.5 bbls fresh water. Float held

24 HR SUMMARY  
 Free stuck pipe, Lay down, log, run & cmt csg hang csg, release rig.