



### **RECOMMENDED SIDETRACK DRILLING PROGRAM**

Moffatt 22-11-1 ST1  
 1891' FNL & 1699' FWL  
 SENW Sec 11 – T6N – R91W  
 Graig Field (13500) Moffat, County  
 API #: 05-081-07669 01

Existing SHL:	Grid X = 1,423,032 Lat.: 40.494343 N	Grid Y = 429,682 Long.: 107.575264 W	NAD 1927 NAD 83 (1992)
Proposed BHL:	Grid X = 1,423,035 Lat.: TBD N	Grid Y = 429,732 Long.: TBD W	NAD 1927 NAD 83 (1992)
Proposed TD:	7891' MD / 7870' TVD		
Directional Plan:	See Great White Existing & Proposed Directional		
Elevations:	6243.5 ft		
Correlation Well(s):	Ellgen 11-10-1		
Geological Tops:	Lewis	Surface	
	Isles	1850'	
	Mancos	3116'	
	Niobrara	6540'	
	Lwr Niobrara Mkr	7391'	
	Frontier SS	8115'	
Gulfport Contacts:	Gary Kissell	Company Man	Mobile 970-380-3613
	Brian Osborn	Operations Manager	Office 337-237-7696 Mobile 405-919-8299
	Jeff Schneider	Schneider Energy	Mobile 970-381-9588
	Steve Bridges	Geologist	Office 405-848-8807 Mobile 405-204-0415
	DHS Energy	Drilling Superintendent	Mobile 307-760-4178

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<b>Regulatory:</b>	<b>All operations must comply with Colorado Oil &amp; Gas Conservation Commission (COGCC). The Northwest Colorado notification policy is in effect for this operation. Kris Neidel (<a href="mailto:Kris.Neidel@state.co.us">Kris.Neidel@state.co.us</a>) is the field inspector for this area.</b>
Move in / rig up:	Assure all pressures are 0 psi. N/D existing tree. N/U & test BOPs: Nipple up the rig's 11" 3M BOPs. Test the annular to 250 / 2000 psi, and the rams to 250 / 3000 psi. NU rotating head.
<b><u>BOP test:</u></b>	<b>All BOP tests must be performed and recorded on a chart. Note the test date and time on all charts. Have the wellsite supervisor, tool pusher, and test hand initial each chart. Keep a copy of each chart on the rig (send the originals to Marlene Landry at the Hackberry Field office). Note and report all BOP tests on the IADC and daily report.</b>
Cleanout Trip:	MU bit/ scraper/ BHA per whipstock vendor. TIH to 6200'. Circulate. POOH to run CIBP.
CIBP for Whipstock:	RU eline. MU 7" 23# CIBP. TIH and set same at 6134', 5' above a collar. (Coorelate with Halliburton CBL dated October 13, 2011.) POOH.
Test 7" casing:	Test the 7" casing to 1500 psi for 30 min.
<b><u>Casing test:</u></b>	<b>(1) the pressure cannot decline by more than 10 percent during the 30 min test.</b>  <b>Record all casing tests on a chart. Note the test date and time on all charts. Have the wellsite supervisor, tool pusher, and test hand initial each chart. Complete the Affidavit of Test of Casing form (all signatures must be hand-written). Keep a copy of each chart and the form on the rig (send originals to Marlene Landry at the Hackberry office). Note and report all casing tests on the IADC and daily report.</b>
Displacement:	MU bit/ BHA per whipstock vendor. TIH to 6134', CIBP. Tag CIBP. Apply weight on CIBP per whipstock vendor. Displace existing AmoDrill mud with Crude Oil per displacement procedure. POOH to run whipstock.
Whipstock:	PU whipstock and assembly. TIH. Orient whip per wireline gyro and set same. Cut and polish window per whipstock recommendation. Work thru window as required to get smooth. POOH to PU stiff assembly.
2 <sup>nd</sup> Trip:	MU bit/ stiff BHA per whipstock vendor to clean whipstock up and elongate window. TIH and mill window smooth and drill to BHA is through the window and directional MWD is far enough from the casing to work without the read out of the wireline gyro. CCM and POOH for directional assembly.
6½" bit program:	Bit #3: Smith Mi513LUSBPX (5-12s)
Mud:	Crude Oil

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- Wear Bushing: Install a wear bushing in the casing head.
- Drill 6 $\frac{1}{8}$ " hole: MU 6 1/8" bit/ directional BHA per Great White and drill a directional hole to a planned TD of 7891' MD / 7870' TVD. **Discuss mud weight schedule and all wiper trips/ bit trips with Brian Osborn.**
- Note: Make sure the ROP/Gas log is emailed to Brian Osborn and Steve Bridges each morning.**
- At TD, make a wiper trip (**discuss with Brian Osborn**), condition the mud for running slotted liner. (strap pipe to confirm depth).
- Slotted Liner: MU slotted liner per liner company procedure. Slotted liner depths/ make TBD. TIH and set same. Get off of liner and POOH LD drill pipe except 300'.
- Retrievable CIBP: TIH & set retrievable bridge plug at 300'. POOH. ND BOPs. Install Dry Hole tree. RD & release rig.