DRILLING PLAN
WEXPRO COMPANY
BW MUSSER NO. 68
MOFFAT COUNTY, COLORADO
Revised March 26, 2013

1. SURFACE FORMATION, ESTIMATED TOPS AND WATER, OIL, GAS OR MINERAL BEARING FORMATIONS:

	MD	**TVD**
Wasatch	**Surface**	**Surface**
A-4-G SD	4,709'	4,673', gas - Secondary Objective
A-4-H SD	5,358'	5,313', gas - Secondary Objective
Fort Union	**5,495'**	**5,449'**
Allen 8 - A	6,440'	6,391'
Allen 8 - B	6,436'	6,436', gas, - Major Objective
Allen 8 - E	6,646'	6,596'
Allen 8 - F	6,744'	6,695', gas, - Major Objective
Allen 8 - G	6,798'	6,749'
Allen 8 - H	6,859'	6,810'
Allen 9 - A	7,058'	7,009', gas, - Secondary Objective
Allen 9 - B	7,119'	7,070', gas, - Secondary Objective
Allen 9 - C	7,209'	7,160'
Allen 11	7,313'	7,264'
L. F. U. 4600	8,016'	7,967'
Allen 10 - B	8,261'	8,212'
Allen 10 - C	8,306'	8,257'
Allen 6 – A	8,462'	8,413'
Allen 6 - G	8,933'	8,884', gas, - Major Objective
Allen 6 - H	9,020'	8,971', gas, - Major Objective
Allen 6 - K	9,176'	9,127', gas, - Major Objective
Total Depth	**9,526'**	**9,477'**

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected.

2. PRESSURE CONTROL EQUIPMENT: (see attached diagram) Operator's minimum specifications for pressure control equipment require an 11-inch 3000 psi double gate hydraulically operated blowout preventer and an 11-inch 3000 psi annular preventer. BOP equipment will be tested to its rated working pressure or 70-percent of the internal yield of the surface casing. The annular preventer will be tested at 50-percent of its rated working pressure. NOTE: The surface casing will be pressure tested to a minimum of 1500 psi. BOP's will be checked daily as to mechanical operating condition and will be

tested by rig equipment after each string of casing is run. All ram type preventers will have hand wheels which will be operative and accessible at the time the preventers are installed. Accumulator will include both electric and air power source (see attached diagram).

At this time Wexpro Company requests approval, if needed, to use "Flex Hose" between the BOP and Choke Manifold. The Flex Hose will have a minimum rating of 5,000 psi. Please see the attached specifications sheet for more details.

AUXILIARY EQUIPMENT:

a) Manually operated kelly cock
b) No floats at bit
c) Monitoring of mud system will be visual
d) Full opening floor valves in the full open position, capable of fitting all drill stem connections manually operated

3. CASING PROGRAM:

Size		Top	Bottom	Weight	Grade	Thread	Condition
Hole	Casing						
26"	20"	sfc	80'	Steel Pipe Conductor			New
12-3/4"	9-5/8"	sfc	1500'	36#	J55	LT&C	New
7-7/8"	4-1/2"	sfc	9,526' MD 9,477' TVD	13.5#	P-110	LT&C	New

Casing Strengths:				Collapse	Burst	Tensile (minimum)
9-5/8'	36 lb.	J55	LTC	2,020 psi	3,520 psi	453,000 lb.
4-1/2"	13.5 lb.	P110	LTC	10,670 psi	12,410 psi	338,000 lb.

Area Fracture Gradient: 0.750 psi/foot

CEMENTING PROGRAMS: (See Attached Details)

9-5/8" Surface Casing: **Lead Slurry**: 563 cubic feet Class "G" with 2% $CaCl_2$ and 1/4 % cello flake (only if lost circulation is encountered).
Tail Slurry: 395 cubic feet Class "G" with 2% $CaCl_2$ and 1/4 % cello flake (only if lost circulation is encountered).

4-1/2" Production Casing: **Lead Slurry:** 1422 cubic feet Light 50/50 Poz-G with retarder, reducer and fluid loss additive. Volume to be calculated from caliper logs to bring lead cement from 4,800' to surface, with 15% excess.
Tail Slurry: 1242 cubic feet 35/65 Poz-G with retarder, reducer and fluid loss additive. Volume to be calculated from caliper logs to bring tail cement from TD to 4,800', with 15% excess.

4. MUD PROGRAM:

Surface to 1500 feet

Surface hole mud drilled and cased with the Drilling rig.
Example Properties:

Mud Weight	9.0 ppg
Viscosity	35 – 38
Water Loss	10 – 14
LCM	10% Fine Mica if needed
Filter Cake	1/32
PH	> 10
PV / YP	18/10 minimum
Asphalt	6 lb/bbl

1500 to Total Depth

Drill out surface casing 10' and test formation 10.5 ppg mud equivalent.
Mud properties below will be maintained from Surface Casing to TD
Drill from 1500' to TD with 350 or less gpm
Mud weight of 9.5 - 10.0 ppg should be accomplished by 1,500 feet to total depth.

Mud weight	9.0 - 10.0 ppg
Viscosity	35 - 45
Water Loss	10 - 14
LCM	10% Fine Mica if needed
Filter Cake	1/32
PH	>10
PV/YP	18/10 Minimum
Asphalt	6 lb/bbl

Sufficient mud materials to maintain mud properties, control lost circulation and to contain blowout will be available at the wellsite.

No chrome constituent additives will be used in the mud system on Federal, State and Indian lands without prior BLM/State approval to ensure adequate protection of fresh water aquifers.

5. LOGGING:

DIL-SFL-GR:	Total depth to surface casing.
BHC-Sonic-GR:	Total depth to surface casing.
FDC-CNL-GR-PE-Cal:	Total depth to surface casing.

Cement/Bore Hole Profile Log

TESTING: None.

CORING: None.

6. ABNORMAL PRESSURE AND TEMPERATURE: A BHT of 190° F and a BHP of 3500 psi are possible.

7. ANTICIPATED STARTING DATE: January 15, 2014

DURATION OF OPERATION: 25 days

MUSSER WELL NO 68 - *CEMENT DESIGN*

SURFACE CASING:

CASING:	9.625 " 36#, K-55	0.4340 cu.ft./lin.ft	ID= 8.921
ANNULUS:	12.250 " x 9.625" Gauge Hole	0.3131 cu.ft./lin.ft	
EXCESS:		100%	
CEMENT YIELD:	LEAD	2.99 cu.ft/sack 11.4 PPG	
	TAIL	1.15 cu.ft/sack 15.8 PPG	
TOTAL DEPTH		1,500 Feet	
TOP OF TAIL		900 Feet	
TOP OF LEAD		0 Feet	(Surface)

LEAD SLURRY — CU.FT

ANN	900	TO	0	0.3131	281.82		
ANN EXCESS				100%	281.82		
					563.63	189 SACKS	563.6 CU.FT.

TAIL SLURRY — CU.FT

CSG	1,500	TO	1,455	0.4340	19.53		
ANN	1,500	TO	900	0.3131	187.88		
ANN EXCESS				100%	187.88		
					395.28	344 SACKS	395 CU.FT.
					DISPLACEMENT	112.5 BBLS	

PRODUCTION CASING:

CASING:	4.500 ", 13.5#, P-110	0.0838 cu.ft./lin.ft	ID= 3.92
ANNULUS:	7.875 "(For Gauge Hole)	0.2278 cu.ft./lin.ft	
	8.921 " ID x 4-1/2" CASING ANNULUS	0.3236 cu.ft./lin.ft	
EXCESS:		15%	
CEMENT YIELD:	LEAD	2.63 cu.ft/sack 11.5 PPG	
	TAIL	1.26 cu.ft/sack 14.2 PPG	
TOTAL DEPTH		9,526 Feet	
TOP OF TAIL		4,800 Feet	
TOP OF LEAD	OPEN HOLE TOP	1,500 Feet	
	CASED HOLE TOP	SURFACE Feet	

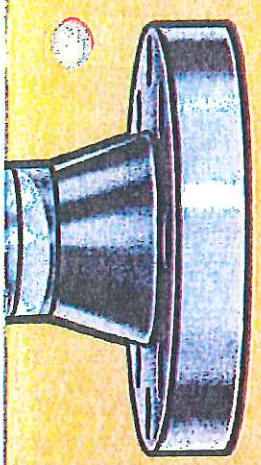
LEAD SLURRY — CU.FT

ANN	4,800	TO	1,500	0.2278	751.59		7-7/8" (For Gauge hole)
	1,500	TO	0	0.3236	485.34		9-5/8" X 4-1/2" Casing Annulus
ANN EXCESS				15%	185.54		
					1422.46	541 SACKS	1422 CU.FT.

TAIL SLURRY — CU.FT

CSG	9,526	TO	9,481	0.0838	3.77		
ANN	9,526	TO	4,800	0.2278	1076.36		
ANN EXCESS				15%	161.45		
					1241.59	985 SACKS	1242 CU.FT.
					DISPLACEMENT	141.5 BBLS	

Construction



Tube: Black, oil and abrasion resistant HNBR for H_2S service.

Reinforcement: Multiple plies of bias laid textile cord for extra strength and flexibility. Spirally wound, high tensile, multiple strand cables to provide unsurpassed ruggedness and reliability to withstand sudden high pressure.

Cover: Special flame resistant red Neoprene (CR) with optional stainless steel armor.

Fittings: Integral connection flanged or hubbed.

Temperature: -40°F to 212°F.

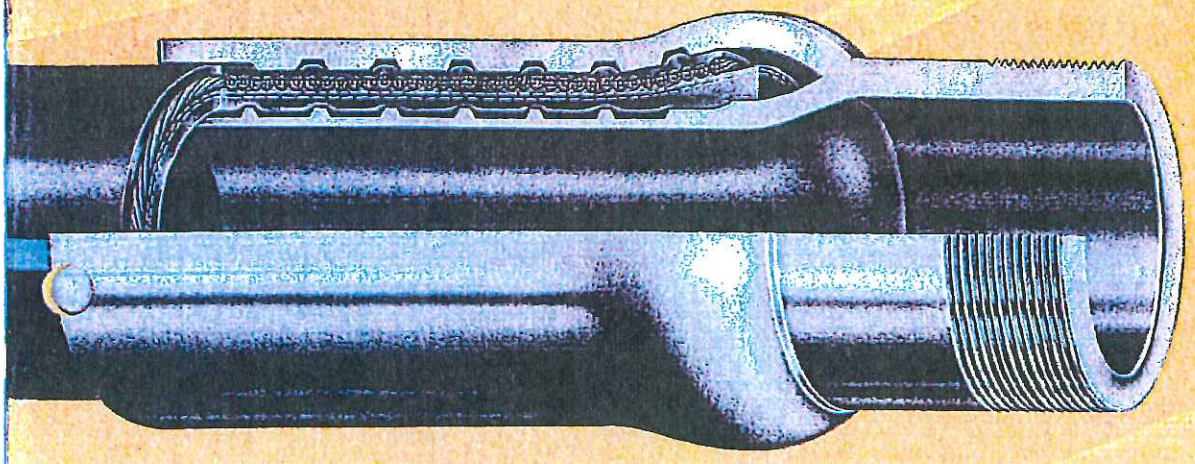
Branding: NRP Choke & Kill Hose. MADE IN USA.

Specifications

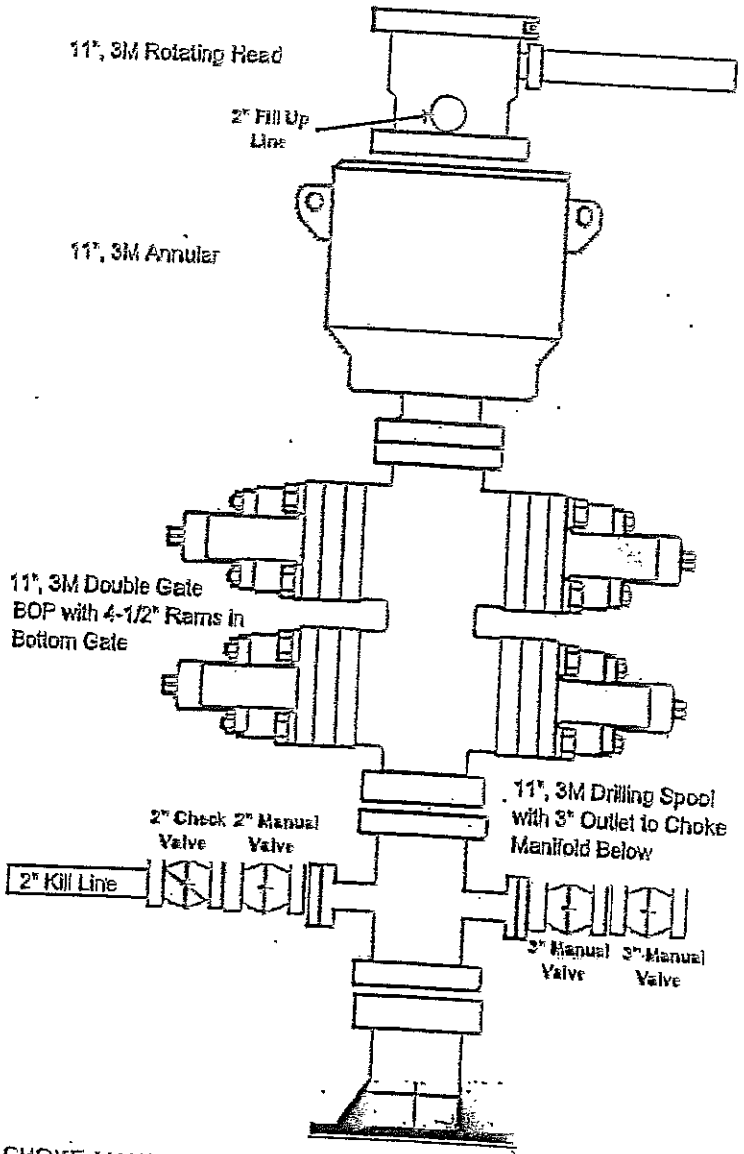
NRP Part Number	Hose ID (in)	Hose OD (in)	Rated WP (psi)	Test Pressure (psi)	Minimum Bend Radius	Weight per Foot (lbs)
5035-32	2.00	4.45	5,000	10,000	44	12.9
5035-40	2.50	4.60	5,000	10,000	48	13.9
5035-48	3.00	5.10	5,000	10,000	52	16.1
5040-32	2.00	4.68	10,000	15,000	48	22.4
5040-40	2.50	5.34	10,000	15,000	52	27.4
5040-48	3.00	5.84	10,000	15,000	56	28.8

Specifications

NRP Rotary Number	NRP Vibrator Number	Hose ID (in)	Hose OD (in)	Grade	Rated WP (psi)	Test Pressure (psi)	Minimum Bend Radius	Weight per Foot (lbs)	Weight of 2 - Cplg (lbs)	Cplg Thread API (in)
5501-40	5502-40	2.50	4.45	C	4,000	8,000	36	12.9	54	3
5501-48	5502-48	3.00	4.95	C	4,000	8,000	48	14.9	74	4
5501-56	5502-56	3.50	5.45	C	4,000	8,000	54	16.6	94	4
5603-40	5604-40	2.50	4.60	D	5,000	10,000	36	13.6	54	3
5603-48	5604-48	3.00	5.10	D	5,000	10,000	48	15.5	74	4
5603-56	5604-56	3.50	5.75	D	5,000	10,000	54	18.6	94	4



3,000 psi BOP
Minimum Requirements



3M CHOKE MANIFOLD EQUIPMENT – CONFIGURATION MAY VARY