

Form 3160-3
(August 2007)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**APPLICATION FOR PERMIT TO DRILL OR REENTER****Bold*** fields are required.

| Section 1 - Completed by Operator | |
|---|--|
| 1. BLM Office* Craig, CO | 2. Confidentiality <input type="checkbox"/> Confidential |
| 3. Work Type* <input checked="" type="radio"/> DRILL <input type="radio"/> REENTER | 4. Well Type* GAS |
| Operating Company Information | |
| 5. Company Name* WEXPRO COMPANY | |
| 6. Address* PO BOX 458 ROCK SPRINGS WY 82902 | 7. Phone Number* 307-352-7500 |
| Administrative Contact Information | |
| 8. Contact Name* DEE _ FINDLAY | 9. Title* PERMIT AGENT |
| 10. Address* PO BOX 458 ROCK SPRINGS WY 82902 | 11. Phone Number* 307-352-7554 12. Mobile Number 307-354-6346 |
| 13. E-mail* dee.findlay@questar.com | 14. Fax Number 307-352-7575 |
| Technical Contact Information | |
| <input type="checkbox"/> Check here if Technical Contact is the same as Administrative Contact. | |
| 15. Contact Name* G T NIMMO | 16. Title* OPERATIONS MANAGER |
| 17. Address* PO BOX 458 ROCK SPRINGS WY 82902 | 18. Phone Number* 307-352-7577 19. Mobile Number |
| 20. E-mail* terry.nimmo@questar.com | 21. Fax Number 307-352-7575 |
| Lease and Agreement | |
| 22. Lease Serial Number* | |

| | | | |
|--|------------------------------|---|------------------------------|
| COC081267 | | | |
| 24. If Unit or CA/Agreement, Name and/or Number POWDER WASH | | 25. Field and Pool, or Exploratory Area* POWDER WASH | |
| 26. Number of Acres in Lease* 760 | | 27. Spacing Unit dedicated to this well _____ | |
| Well | | | |
| 28. Well Name* CARL ALLEN | | 29. Well Number* 45 | 30. API Number _____ |
| 31. Proposed M.D. 9297 | 32. Proposed T.V.D. _____ | 33. Elevation 6590 Ground Level | |
| 34. BLM/BIA Bond Number 965010694 | | 35. Work Start Date 10/17/2011 | 36. Work Duration 35 DAYS |
| 37. Number of Completions — | | 38. Cable Tool <input type="radio"/> Cable <input checked="" type="radio"/> Rotary | |
| Surface Location | | | |
| 39. Specify location using one of the following methods: a) State, County, Section, Township, Range, Meridian, N/S Footage, E/W Footage, with Qtr/Qtr, Lot, or Tract b) State, County, Latitude, Longitude, Metes & Bounds description | | | |
| County or Parish, State* MOFFAT CO | | | |
| Section 28 | Township 12N | Range 97W | Meridian 6TH PRINCIPAL |
| Qtr/Qtr SESW | Lot # _____ | Tract # _____ | N/S Footage 565 FSL |
| | | | E/W Footage 1931 FWL |
| Latitude 40.965589 | Longitude 108.299233 | Metes and Bounds | |
| 40. Distance in miles and direction from nearest town or post office APPROXIMATELY 40 MILES SOUTHWEST OF BAGGS, WY | | | |
| 41. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1931 | | | |
| 42. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 780 | | | |
| Bottom Hole Location | | | |
| 43. Specify location or <input checked="" type="checkbox"/> Check here if the bottom hole location is the same as the surface location. | | | |
| County or Parish, State* _____ | | | |
| Section — | Township _____ | Range _____ | Meridian _____ |
| Qtr/Qtr _____ | Lot # _____ | Tract # _____ | N/S Footage _____ |
| | | | E/W Footage _____ |

| | | |
|----------|-----------|------------------|
| _____ | _____ | _____ FSL _____ |
| Latitude | Longitude | Metes and Bounds |
| _____ | _____ | _____ |

44. Additional Information

Please provide any additional pertinent information.

This location is covered by the Master Surface Use Plan for Powder Wash Wells, Date 01/01/2011.

Attached are the detailed well plat, drilling plan, cement design, and BOP design.

I hereby certify that the foregoing is true and correct.

45. Name*

G T NIMMO

46. Title

OPERATIONS MANAGER

47. Date* (MM/DD/YYYY)

Today

48. Signature*

You have the ability to sign this form only if a SmartCard or digital certificate has been issued to you.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**DRILLING PLAN
WEXPRO COMPANY
CARL ALLEN NO. 45
MOFFAT COUNTY, COLORADO**

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

| | |
|--------------------|------------------------------------|
| Wasatch | Surface |
| A-4-G SD | 4,347', gas - Secondary Objective |
| A-4-H SD | 4,923', gas - Secondary Objective |
| Fort Union | 5,119' |
| Allen 8 - A | 5,900' |
| Allen 8 - B | 5,950', gas, - Major Objective |
| Allen 8 - E | 6,085' |
| Allen 8 - F | 6,204', gas, - Major Objective |
| Allen 8 - G | 6,261' |
| Allen 8 - H | 6,328' |
| Allen 9 - A | 6,525', gas, - Secondary Objective |
| Allen 9 - B | 6,561', gas, - Secondary Objective |
| Allen 9 - C | 6,665' |
| Allen 11 | 6,783' |
| L. F. U. 4600 | 7,469' |
| Allen 10 - B | 7,782' |
| Allen 10 - C | 7,834' |
| Allen 6 - A | 7,963' |
| Allen 6 - G | 8,436', gas, - Major Objective |
| Allen 6 - H | 8,521', gas, - Major Objective |
| Allen 6 - K | 8,669', gas, - Major Objective |
| Lance | 8,862' |
| Fox Hills | 8,947' |
| Total Depth | 9,297' |

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 | | | | | | |
| 20" | 16" | sfc | 80' | Steel Pipe Conductor | | | New |
| 12-1/4" | 9-5/8" | sfc | 1500' | 36# | J55 | LT&C | New |
| 7-7/8" | 4-1/2" | sfc | 9,297' | 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

The variance to Onshore #2 is requested because surface casing depth for this well is 1500' and high pressure is not expected.

A properly lubricated and maintained rotating head: A diverter bowl will be utilized in place of a rotating head. The diverter bowl will force the air and cutting returns to the reserve pit as it is used to drill the surface casing.

Blooi line discharge will be 100 feet from the well bore and securely anchored: The blooi line discharge for this operation will be located 50 to 70 feet from the wellhead.

Automatic ignitor or continuous pilot light on the blooi line: A diffuser will be used rather than an automatic pilot/ignitor. Water is injected into the compressed air and eliminates the need for the pilot light and the need for dust suppression equipment.

Compressor located in the direction from the blooi line is a minimum of 100' from the well bore: Truck mounted air compressors will be located within 50 feet on the opposite side of the wellhead from the blooi line and equipped with a (1) emergency kill switch on the driller's console, (2) pressure relief valve on the compressor and (3) spark arrestors on the motors.

CEMENTING PROGRAMS: (See Attached Details)

9-5/8" Surface Casing: **Lead Slurry:** 585 cubic feet Light 50/50 Poz-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:** 1265 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 4,200' to surface, with 15% excess.
Tail Slurry: 1339 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 4,200', with 15% excess.

4. MUD PROGRAM:

- 1) Surface hole mud drilled and cased with the drilling rig using fresh water and polymer sweeps.
- 2) Surface casing will be drilled out 10 feet and formation tested to 10.0 ppg mud equivalent.
- 3) Fresh water with gel and polymer sweeps as necessary. Mud weight of 9.5 - 10.0 ppg to be accomplished by 1,500 feet to total depth, if needed.
 - A. Mud weight 9.0 - 10.0 ppg
 - B. Viscosity 35 - 45 cp
 - C. PH 108

| | | |
|----|------------|-------------------------------|
| D. | Water Loss | < 7 |
| E. | Type | Fresh water and dispersed mud |
| F. | Asphalt | 6 lb/sack |

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 189° F and a BHP of 3500 psi are possible.

7. ANTICIPATED STARTING DATE: March 13, 2012

DURATION OF OPERATION: 25 days

CARL ALLEN 45 : CEMENT CALCULATIONS

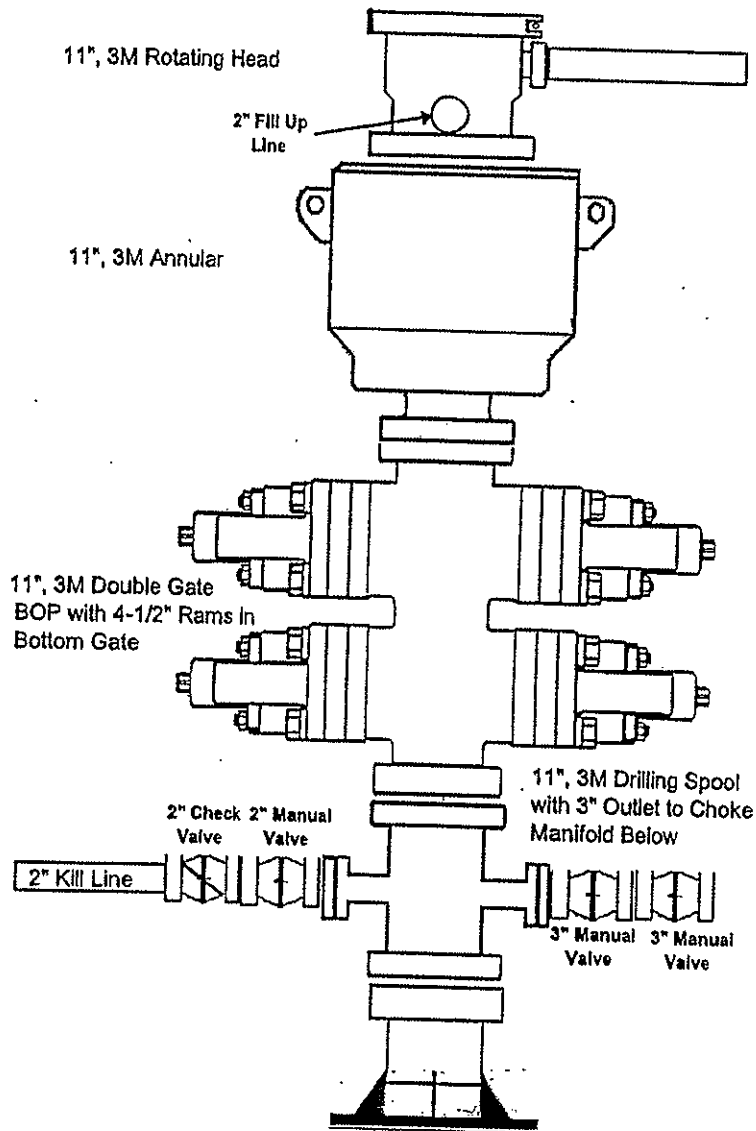
| SURFACE CASING: | | | | | | | | | |
|-----------------|----------|---------------------|-------|--------|----------------------|----------|--------------|-------|--------|
| CASING: | 9.625 " | 36#, K-55 | | | 0.4340 cu.ft./lin.ft | | | ID= | 8.921 |
| ANNULUS: | 12.250 " | x 9.625" Gauge Hole | | | 0.3131 cu.ft./lin.ft | | | | |
| CONDUCTOR | 16.000 " | STEEL PIPE | | | 0.8908 | | | | |
| EXCESS: | | | | | 100% | | | | |
| CEMENT YIELD: | LEAD | | | | 2.65 cu.ft/sack | 11.5 PPG | | | |
| | TAIL | | | | 1.26 cu.ft/sack | 15.2 PPG | | | |
| CONDUCTOR DEPTH | | | | | 80 | | | | |
| TOTAL DEPTH | | | | | 1,500 | Feet | | | |
| TOP OF TAIL | | | | | 900 | Feet | | | |
| TOP OF LEAD | | | | | 0 | Feet | (Surface) | | |
| LEAD SLURRY | | | | | CU.FT | | | | |
| COND/CSG ANN | 80 | TO | 0 | 0.8908 | 71.27 | | | | |
| ANN (OH) | 900 | TO | 80 | 0.3131 | 256.77 | | | | |
| ANN EXCESS | | | | 100% | 256.77 | | | | |
| | | | | | 584.80 | | 221 SACKS | 584.8 | CU.FT. |
| TAIL SLURRY | | | | | CU.FT | | | | |
| CSG SHOE (45') | 1,500 | TO | 1,455 | 0.4340 | 19.53 | | | | |
| COND/CSG ANN | - | TO | - | 0.8908 | 0.00 | | | | |
| ANN (OH) | 1,500 | TO | 900 | 0.3131 | 187.88 | | | | |
| ANN EXCESS | | | | 100% | 187.88 | | | | |
| | | | | | 395.28 | | 314 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 | | | | 1.49 cu.ft/sack | 14.2 PPG | | | |
| TOTAL DEPTH | | | | | 9,297 | Feet | | | |
| TOP OF TAIL | | | | | 4,200 | Feet | | | |
| TOP OF LEAD | | | | | 1,500 | Feet | | | |
| | | | | | | | OPEN HOLE TOP | | |
| | | | | | | | CASED HOLE TOP | | |
| | | | | | | | SURFACE | | |
| | | | | | | | Feet | | |
| LEAD SLURRY | | | | | CU.FT | | | | |
| ANN | 4,200 | TO | 1,500 | 0.2278 | 614.93 | | 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% | 165.04 | | | | |
| | | | | | 1265.31 | | 481 SACKS | 1265 | CU.FT. |
| TAIL SLURRY | | | | | CU.FT | | | | |
| CSG | 9,297 | TO | 9,252 | 0.0838 | 3.77 | | | | |
| ANN | 9,297 | TO | 4,200 | 0.2278 | 1160.86 | | | | |
| ANN EXCESS | | | | 15% | 174.13 | | | | |
| | | | | | 1338.76 | | 898 SACKS | 1339 | CU.FT. |
| | | | | | | | DISPLACEMENT | 138.1 | BBLs |

QUESTAR WEXP-PRO

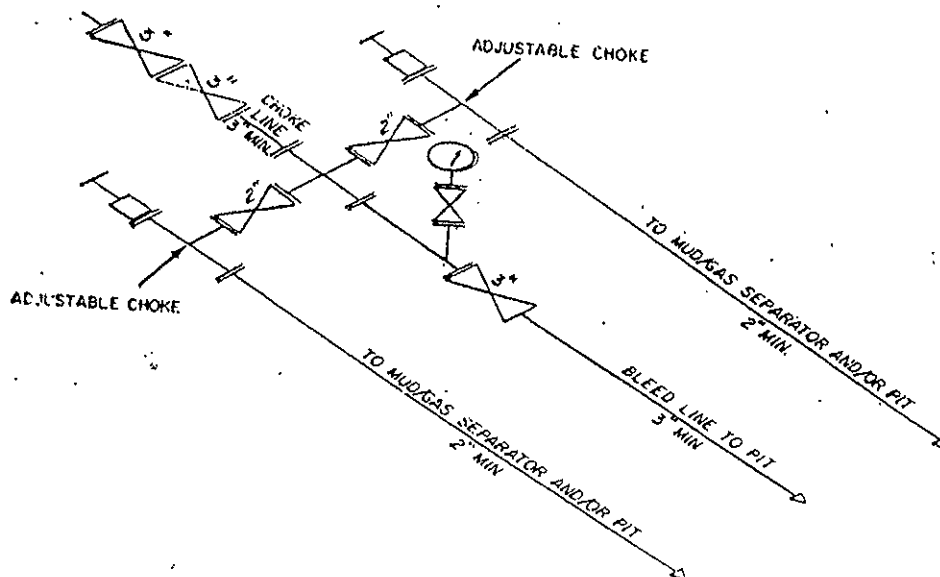
3,000 psi BOP

Minimum Requirements



3M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION MAY VARY

46812 Federal Register / Vol. 53, No. 223 / Friday, November 18, 1988 / Rules and Regulations



Construction

Tube: Black, oil and abrasion resistant HNBR for H₂S 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 Cplgs (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 |

