



DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES  
Minerals & Mining Program  
2050 West Main, Suite #1, Rapid City, SD 57702-2493  
Telephone: 605-773-4201, FAX: 605-394-5317

FORM 2  
RECEIVED

SEP 16 2016

DEPT OF ENVIRONMENT & NATURAL  
RESOURCES - RAPID CITY

State of South Dakota  
Department of Environment  
and Natural Resources

## APPLICATION FOR PERMIT TO DRILL

Type of work:	Type of well:
<input checked="" type="checkbox"/> Drill New Well <input type="checkbox"/> Reenter Well <input type="checkbox"/> Drill Directional Well	<input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Injection
<input type="checkbox"/> Other: _____	<input type="checkbox"/> Other: _____

Name and Address of Operator: Peter K. Roosevelt 621 17th Street Suite 710, Denver, CO 80293 Telephone: 303-825-8606

Name and Address of Surface Owner: Rory D. & Wanda L. Brown P.O. Box 15, Edgemont, SD 57735

Name and Address of Drilling Contractor and Rig Number: To Be Determined

Surface Location of well: Qtr-Qtr, Sec, Twp, Rge, County, feet from nearest lines of section, and latitude and longitude (if available): SENE Sec. 16, T9S, R2E, Fall River 2036'FNL, 200'FEL Lat: 43.269367\*; Lon: 103.878359\*

If Directional, top of pay and bottom hole location from nearest lines of section: N/A

Acres in Spacing (Drilling) Unit: 40 ac. Description of Spacing Unit: SENE Sec. 16

Well Name and Number:		Elevation:	Field and Pool, or Wildcat:	Proposed Depth and Formation:	
8-16-1x State		3653.9'	Edgemont Field	2900' Leo	
Size of Hole:	Size of Casing:	Weight per Foot:	Depth:	Cementing Program (amount, type, yield, additives)	Top of Cement:
1) 12 1/4"	8 5/8"	24#	235'	160sks class g sufficient to cover Inyan Kara @ 780'	surface 700'
2) 7 7/8"	5 1/2"	14#	2900'		
3)					
4)					

Describe Proposed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). Use additional page(s) if appropriate.

1. Drill 12 1/4" hole to 235', set 8 5/8" surface casing
2. Drill 7 7/8" to 2900'
3. Log & evaluate, run 5 1/2" production casing if warranted
4. Pis will be lined w/12ml liner
5. Date of proposed work to begin February 2017

Pit Liner Specifications:

I hereby certify that the foregoing as to any work or operation performed is a true and correct report of such work or operation.

	Peter K. Roosevelt	Operator	7/26/2016
Signature	Name (Print)	Title	Date

### FOR OFFICE USE ONLY

Approved By: Title: Administrator Minerals & Mining Reg.

Permit No.: 2070 API No.: 40 047 20342 Date Issued: 11/3/2016

Conditions, if any, on attached page.



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

JOE FOSS BUILDING  
523 EAST CAPITOL  
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

**PERMIT CONDITIONS**

PKR: 8-16-1x State  
09S-02E-16 SENE, Fall River County

Permit: # 2070  
API: 40 047 20342

Approval has been granted to drill this location as detailed on the attached Application for Permit to Drill (Form #2) with the following additional conditions:

1. This permit is conditioned on compliance with all applicable requirements of South Dakota Codified Laws 45-9 and Administrative Rules of South Dakota 74-12.
2. The operator shall provide the department with the name of the drilling contractor before drilling commences.
3. A 12-mil woven, reinforced high-density polyethylene liner must be used on all pits.
4. Surface runoff must be diverted around the drill site.
5. The surface hole must be drilled with fresh water.
6. Cement must be circulated to the ground surface on the surface casing.
7. If production casing (long string) is set:
  - A. Cement must be circulated on the long string from TD to the top of the Inyan Kara formation plus 50 feet (estimate 332 sacks).
  - B. A cement bond log must be run and filed with the department within 60 days of completion of the well.
8. Please notify this office at least 72 hours prior to plugging so a witness can be on location. If plugging will occur after regular business hours, call Jeff Klenner at 605-929-1414.
9. If abandoned: Either a plugging plan must be submitted at least 7 days prior to plugging for the department's review and approval or the following plan must be followed:
  - A. If the entire production casing is left in the wellbore:
    1. A mechanical integrity test must be conducted to verify the integrity of the casing as required by rule 74:12:03:02(4)(b)(ii).
      - a. If the test is unsuccessful, the well must be plugged as though no production casing is present or the leak must be located and isolated by squeeze cementing.
    2. All perforations must be isolated, either by squeeze cementing or placing a cast iron bridge plug, with a minimum of 20 feet of cement, above the perforations.
    3. A 100-foot plug, half in and half out of the base of the surface casing must be installed.
    4. A 25-foot cement plug at the top of the surface casing must be installed.
    5. Heavy, mud-laden fluid must be placed between all plugs.
  - B. If a portion of the production casing is removed:
    1. All perforations must be isolated, either by squeeze cementing or placing a cast iron bridge plug, with a minimum of 20 feet of cement, above the perforations.
    2. A 100-foot cement plug, half in and half out of the top of the casing stub must be installed after the retrievable part of the production casing has been removed.
    3. A 100-foot cement plug, half in and half out of the top of any fluid bearing formations or salt zone encountered between the top of the casing stub and the base of the surface casing must be installed. Fluid bearing formations at this site include: Minnelusa, Minnekahta, Canyon Springs, and Inyan Kara.
    4. A 100-foot plug, half in and half out of the base of the surface casing must be installed.
    5. A 25-foot cement plug at the top of the surface casing must be installed.
    6. Heavy, mud-laden fluid must be placed between all plugs.



- C. Without production casing:
    - 1. 100-foot cement plugs, half in and half out of the top of any salt zones encountered and the following formations must be installed: Minnelusa, Minnekahta, Canyon Springs, and Inyan Kara.
    - 2. A 100-foot cement plug, half in and half out of the base of the surface casing must be installed.
    - 3. A 25-foot cement plug at the top of the surface casing must be installed.
    - 4. Heavy, mud-laden fluid must be placed between all plugs.
  - D. The casing string must be cut off at least three feet below the final ground surface contour. A plate with the name of the operator, well name and number, and legal location by quarter-quarter section, township and range must be welded to the casing stub. The location of the abandoned well must be surveyed with high resolution global positioning system equipment or other appropriate survey methods sufficient to accurately locate the well. Survey coordinates must be included in the final abandonment report.
10. All special field rules included in Order 2-80 must be followed. Special field rules include:
- A. That the surface casing shall consist of new or reconditioned pipe that has been previously tested to at least one thousand (1,000) pounds per square inch. The casing shall be set and cemented at a point not higher than 225 feet below the ground surface but adequate to protect shallow ground water where present. Cementing shall be by the pump and plug method and sufficient cement shall be used to fill the annular space outside the pipe to the ground surface or the bottom of the cellar. Cement shall be allowed to stand a minimum of twelve (12) hours before drilling the plug or initiating tests.
  - B. That the producing string shall be set below the top of the Leo sand of the Minnelusa Formation. The string shall be tested by the application of at least fifteen hundred (1,500) pounds per square inch pump pressure. If at the end of the thirty (30) minutes this pressure drops one hundred fifty (150) pounds per square inch or more, the string shall be repaired and again tested in the same manner. Further work shall not proceed until a satisfactory test has been obtained. Cementing shall be by the pump and plug method and not less than two hundred (200) sacks of cement shall be used, and the cement shall be allowed to stand twelve (12) hours before drilling the plug or twenty-four (24) before initiating tests.
  - C. That all wells shall be equipped with tubing.
  - D. That all Christmas tree fittings and well head connections shall have a working pressure of at least one thousand five hundred (1,500) pounds per square inch or a test pressure rating of at least three thousand (3,000) pounds per square inch.
  - E. That the reservoir pressure of any field well will be determined upon the request of the Office of the State Geologist, but no oftener than semi-annually and then in the months of May and November. The results thereof shall be reported in writing to the Office of the State Geologist on or before the 25<sup>th</sup> of the succeeding month. All pressure determinations, if requested, shall be measured or adjusted to a datum of nine hundred thirteen (913) feet above sea level and after the well has been shut in for a period of approximately forty-eight (48) hours. All reservoir pressure measurements, if requested, shall be made by methods approved by the Office of the State Geologist.
11. Surface reclamation of the site must be completed within one year of plugging and abandoning the well.
12. Interim reclamation must be conducted on all areas disturbed by a well drilling operation and not needed for production operations within 12 months after the well is completed in accordance with Administrative Rules of South Dakota 74:12:03:07.
13. Please notify this office at least 72 hours prior to any mechanical integrity or pressure tests conducted on this well so a witness can be on location. If the test will occur after regular business hours, call Jeff Klenner at 605-929-1414.
14. A washed set of sample cuttings (and cores, if cut) must be shipped, free of charge, to:

Derric Iles  
 Geological Survey Program  
 Akeley-Lawrence Science Center  
 University of South Dakota  
 414 E. Clark Street  
 Vermillion, SD 57069-2390