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DEPT OF ENVIRONMENT & NATURAL  
 RESOURCES - RAPID CITY

## APPLICATION FOR PERMIT TO DRILL

Type of work:

Drill New Well  Re-enter Well  Drill Directional Well

Other \_\_\_\_\_

Type of well:

Oil Well  Gas Well  Injection

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:

Buffalo Gap National Grassland 1801 Hwy 18 Truck Bypass, Hot Springs, SD 57747

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):

NWNE Sec. 33, T11S, R1E, Fall River. 500FNL, 1979FEL, Lat-43.056948, Lon-103.002557

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

NA

Acres in Spacing (Drilling) Unit

40ac.

Description of Spacing Unit

NWNE

Well Name and Number		Elevation	Field and Pool, or Wildcat		Proposed Depth and Formation
2-33 Alkali Federal		3970.5	Alkali Creek Field		3750 Leo
Size of Hole	Size of Casing	Weight per Foot	Depth	Cementing Program (amount, type, additives)	Depth
1) 12 1/4	8 5/8	24#	200	175sks class g	220
2) 7 7/8	5 1/2	15#	3750	sufficient to cover Dakota +50'	
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 220, set 200 8 5/8 surface casing w/cement to circulate to surface
2. Drill 7 7/8 hole to 3750
3. Log and evaluate, run production casing or P&A according to the rules of South Dakota
4. Pit to be lined w/12ml liner
5. Date of proposed work to begin early 2013

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*  
 Signature

Peter K. Roosevelt

Name (Print)

Operator

Title

09/11/2012

Date

## FOR OFFICE USE ONLY

Approved By: *Bob Townsend*Title: *Administrative Minerals Mining Div.*

Permit No. 2019

API No. 40 047 20340

Date Issued: *11/27/2012*

Conditions, if any, on attached page.



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

PMB 2020  
JOE FOSS BUILDING  
523 EAST CAPITOL  
PIERRE, SOUTH DAKOTA 57501-3182  
[www.state.sd.us/denr](http://www.state.sd.us/denr)

**PERMIT CONDITIONS**

PKR: 2-33 Alkali Federal  
11S-1E-33 NWNE, Fall River County

Permit: # 2019  
API: 40 047 20340

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. A 12-mil woven, reinforced high-density polyethylene liner must be used on all pits.
3. Surface runoff must be diverted around the drill site.
4. The surface hole must be drilled with fresh water.
5. Cement must be circulated to the ground surface on the surface casing.
6. 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.
7. If abandoned: A plugging plan must be submitted at least 7 days prior to plugging for the department's review and approval; otherwise, the following plan must be followed:
  - A. With long string, sufficient cement must be circulated to install:
    1. A 100-foot cement plug immediately above the perforations.
    2. A 100-foot cement plug, half in and half out of the top of the casing stub 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 fresh water aquifer between the top of the casing stub and the base of the surface casing. Freshwater resources 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.
    5. A 25-foot cement plug at the top of the surface casing.
  - B. Without long string, sufficient cement must be circulated to set:
    1. 100-foot cement plugs, half in and half out of the top of the following formations with heavy mud-laden fluid used between all plugs:  
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.
    3. A 25-foot cement plug at the top of the surface casing.
  - C. 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.
8. Surface reclamation of the site must be completed within one year of plugging and abandoning the well.

9. A washed set of sample cuttings (or 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

10. Please notify this office 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.