



**DEPARTMENT of AGRICULTURE  
and NATURAL RESOURCES**

JOE FOSS BUILDING  
523 E CAPITOL AVE  
PIERRE SD 57501-3182  
danr.sd.gov

September 15, 2023

Michael Schlumpberger  
SDO Services, LLC  
18 E Main St  
Suite 103  
Rapid City, SD 57701-2949

**Re: EXNI 448 for SDO Services, LLC Exploration Drilling in Section 31, Township 1S, Range 5E,  
BHM, Pennington County, South Dakota**

Dear Mr. Schlumpberger:

The department is in receipt of the Exploration Notice of Intent (EXNI) that you filed with our office on August 4, 2023, and supplemental information received on August 16 and 24, 2023. The department has determined the Notice of Intent to be procedurally complete. Based on our review of your Notice, we determined the following restrictions are required:

1. This project shall be conducted and reclaimed in such a manner as to prevent any violation of the beneficial uses of specified water quality criteria of any water resources in the area. In accordance with Chapter 74:51, all surface waters of the state have been assigned the following beneficial uses:
  - 9) Wildlife propagation, recreation, and stock watering waters; and
  - 10) Irrigation waters.
2. Any discharge from the site shall be directed to a settling pond or flat vegetated area to allow suspended solids to settle out. For any discharge into a dry draw, gulch or surface water resource, a South Dakota Surface Water Discharge Permit may be required prior to discharge.
3. To ensure optimal soil erosion protection, all affected lands shall have adequate sedimentation and erosion control measures applied pursuant to SDCL 45-6C-32 and according to Best Mineral Management Practices. These measures shall be in the form of waterbar construction on access roads where appropriate; revegetation of roads; road embankment slopes; and the installation of straw bale or silt fence type sediment filters wherever necessary. SDO Services shall inspect, clean out, repair, or upgrade the sediment controls as necessary to prevent degradation of surface waters of the state.
4. All topsoil shall be salvaged and stockpiled whenever possible for use in reclamation.
5. When drilling fluids are used and/or when ground water is encountered during drilling, the fluids shall be sufficiently contained to prevent overland flow or discharge to any waters of the state. If water tanks are used in lieu of mud pits, they shall also be sufficiently contained.

6. When mud pits are utilized in drilling a hole, these pits shall be constructed on the uphill side of the drill pad or away from highwalls, where possible.
7. SDO Services shall spray weeds up to 50 feet from all disturbed and surrounding areas, including along access roads within the exploration permit boundary. Weed control on all disturbed or reclaimed areas is required until this EXNI is released of reclamation liability by the Board of Minerals and Environment.
8. During periods of active exploration drilling, SDO Services shall provide, via email, a weekly schedule outlining when and where holes will be drilled so the department can plan inspections and witness plugging activities.
9. All test holes shall be capped, sealed and plugged according to ARSD 74:11:08 (Plugging Standards) immediately following drilling and probing. SDO Services shall not use bentonite chips as an alternative to cement grout in the top eight feet of the test hole if bentonite grout or bentonite chips are used to plug the test hole, as this does not meet the minimum plugging requirement outlined in ARSD 74:11:08:04.
10. If surface casing is used in exploration holes, the following requirement shall be met:
  - a) Prior to removal of surface casing, the hole shall be plugged in accordance with ARSD 74:11:08 to a level just below the bottom of the surface casing.
  - b) Following step a), the casing will be removed (when possible) or cut off at least one foot below the ground surface.
  - c) The remainder of the hole will be plugged in accordance with ARSD 74:11:08.
11. SDO Services shall notify the department, in writing, when exploration drilling penetrates an aquifer. Notification shall be provided as soon as possible, but not more than 90 days after penetration of the aquifer and shall include the location of the test hole penetrating the aquifer.
12. Where affected roads and drill pad areas are no longer necessary for further exploration purposes, reclamation must be completed on these disturbed areas within 12 months. If SDO Services plans to continue exploration in disturbed areas but must temporarily cease exploration activities, reclamation must be completed within 24 months. SDO Services may submit a request to extend these deadlines as necessary to the department.
13. Reclamation must be completed on all affected acreages within 12 months following completion of all exploration activities allowed under this Notice.
14. The following seed mix shall be used for reclamation of the affected areas:

Western wheatgrass	7.29 PLS/acre
Big bluestem	1.67 PLS/acre
Sideoats grama	1.09 PLS/acre
Slender wheatgrass	1.16 PLS/acre
Green needlegrass	0.22 PLS/acre
Little bluestem	0.34 PLS/acre
Canada Wildrye	1.25 PLS/acre
Purple prairie clover	0.06 PLS/acre

15. Wherever possible, the Department of Game, Fish and Parks (GF&P) recommends that tree clearing be completed outside the migratory bird nesting season to avoid and minimize impacts to migratory birds. The time period associated with the maximum migratory bird nesting season is approximately December to August annually. The time period associated with the minimum migratory bird nesting season is April 1 to July 15 annually (timeframe when the majority of annual bird nesting occurs). Should tree clearance be required during the maximum birdnesting season, a bird survey must be conducted by a qualified wildlife biologist to identify any nesting birds in or adjacent to the proposed activity area. If nesting birds are discovered during the survey, contact GFP to determine an optimal buffer area to protect nesting in the area.
16. SDO Services shall contact the GF&P Minerals and Energy Coordinator if tree clearing must take place during the minimum migratory bird nesting season.
17. When mud pits are utilized in drilling a hole, mud pit design will preclude wildlife access, and where possible be constructed on the uphill side of the drill pad or away from highwalls.
18. SDO Services shall conduct the necessary archaeological studies as outlined in the August 22, 2023, letter from the Archaeological Research Center prior to disturbance of any areas identified as requiring additional study.
19. During the conduct of its exploration activities, SDO Services shall avoid bones, artifacts, foundation remains, or other evidence of previously unrecorded past human use. For specific direction regarding avoidance of these sites, please contact the SD Archaeological Research Center.
20. If any artifacts or other archaeological or cultural resources are discovered during exploration activities, the activities shall be halted, and the State Archaeologist notified at once.

Please note that we have assigned your Notice of Intent the following number: **EXNI-448**. This Notice allows you to conduct only the type and amount of work which is hereby being approved. Any additional work must be covered by the submission of a new Notice to our office.

Thank you for your interest in and consideration for the natural resources of South Dakota.

Sincerely,

\s/

Roberta Hudson  
Engineering Manager I  
Minerals, Mining, and Superfund Program  
Telephone: (605) 773-4201  
E-mail: roberta.hudson@state.sd.us

cc: Stan Michals, Department of Game, Fish and Parks  
Dustin Lloyd, Archaeological Research Center  
Mark Keenihan, Rapid City Office