



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  
 FEB 03 2014

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:  Drill New Well  Reenter Well  Drill Directional Well  Other: \_\_\_\_\_  
 Type of well:  Oil Well  Gas Well  Injection  Other: \_\_\_\_\_

Name and Address of Operator: Zenergy Operating Company, LLC Telephone: 918-488-6400

Name and Address of Surface Owner: Marcella M. Gunderson Trust - 525 Rio Drive Spearfish, SD 57783 / Two Reverse E, LLC - 11909 SD Hwy 20 Buffalo, SD 57720

Name and Address of Drilling Contractor and Rig Number: Cyclone Drilling - PO Box 908 Gillette, WY 82717 Rig TBD

Surface Location of well: Qtr-Qtr, Sec, Twp, Rge, County, feet from nearest lines of section, and latitude and longitude (if available): SESE, 660' FSL and 1320' FEL, Sec. 31 T23N-R3E Harding County, SD

If Directional, top of pay and bottom hole location from nearest lines of section: SESE, 1181' FSL and 1320' FEL, Sec 31 T23N-R3E. Bottom Hole - Lot 1, 660' FNL and 1320' FEL, Sec 19 T23N-R3E

Acres in Spacing (Drilling) Unit: 1700 acres Description of Spacing Unit: All of Sections 19, 30, and 31, T23N-R3E

Well Name and Number:	Elevation:	Field and Pool, or Wildcat:	Proposed Depth and Formation:
Gunderson #31P-30-19H	3105'	Border	8690' TVD/21,087' MD, Red River "B"

Size of Hole:	Size of Casing:	Weight per Foot:	Depth:	Cementing Program (amount, type, yield, additives)	Depth:
1) 20"	16"	65#	60	See Drilling Program Attached	60'
2) 13-1/2"	9-5/8"	36#	2000'	See Drilling Program Attached	2000'
3) 8-3/4"	7"	32#	8937'	See Drilling Program Attached	* 3500'
4) 6"	Openhole		21087	See Drilling Program Attached	

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.

Zenergy proposes to drill the subject well to a TD of 21,087' to test the Red River B formation. KOP set at 8119'. End of curve at 8937' MD/8640' TVD. See drilling program attached. Zenergy proposes to spud this well on February 25, 2014.

\* Revised 1/29/2014

Pit Liner Specifications: Zenergy agrees to use a 12 mil liner

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

*Lisa Smith* Signature      Lisa Smith Name (Print)      Authorized Agent Title      1/23/2014 Date

**FOR OFFICE USE ONLY**

Approved By: *Robert Tansal* Title: *Administrator Minerals & Mining Div.*  
 Permit No.: 2047 API No.: 40 063 20761 Date Issued: 2/14/2014  
 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**

Zenergy: Gunderson 31P-30-19H  
23N-3E-31 SESE, Harding County

Permit: #2047  
API: 40 063 20761

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 horizontally drilled:
  - A. The coordinates of the production casing shoe and the well terminus must be filed with the department.
  - B. The azimuth of the horizontal segment of the well must be filed with the department along with the results of periodic down hole surveys.
7. If production casing (long string) is set:
  - A. The cement program as submitted with the application shall be followed.
  - B. A cement bond log must be run and filed with the department within 60 days after completion of the well as required by Administrative Rules of South Dakota 74:12:02:12.
8. If abandoned, a plugging plan must be submitted to the department for review and approval. The plugging plan should address all requirements found in Administrative Rules of South Dakota 74:12:03.
  - A. If production casing is left in the wellbore, 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).
  - B. 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.
9. Surface reclamation of the site must be completed within one year of plugging and abandoning the well.
10. 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.

11. 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

12. Please notify this office prior to plugging or MIT so a witness can be on location. If plugging or MIT will occur after regular business hours, call Jeff Klenner at (605) 929-1414.