



DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
 Minerals & Mining Program
 2050 West Main, Suite #1, Rapid City, SD 57702-2493
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FORM 2
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 MAR 05 2013

DEPT OF ENVIRONMENT & NATURAL
 RESOURCES - RAPID CITY

APPLICATION FOR PERMIT TO DRILL
ORIGINAL

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: Telephone:
 Quartz Operations 522 South Seventh Street, Rapid City, SD 57701 (801) 310-1523

Name and Address of Surface Owner:
 Bill Gikling 4120 Penrose Place Rapid City, SD 57701

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):
 NENE, Section 12, T1N-R13E, Pennington, 545.9 FNL, 604.0 FEL, Lat N 44 03' 55.905, Long. W 102 29' 25.14

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

Acres in Spacing (Drilling) Unit: Description of Spacing Unit:
 40 Wildcat

Well Name and Number:	Elevation:	Field and Pool, or Wildcat:	Proposed Depth and Formation:
Northern Points 2	2658.99	Wildcat	9,700 Pre-Cambrian

Size of Hole:	Size of Casing:	Weight per Foot:	Depth:	Cementing Program (amount, type, yield, additives)	Depth:
1) See Attached Sheet					
2)					
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.

Wildcat well consisting of the above stated information with an estimated starting date of 02/15/2013 - 02/28/2013 A 4' cellar/ conductor pipe will be installed before rig arrives ; 12 ¼ hole will be drilled to ~1000 ft and 9 5/8 casing will be run and cemented back to surface. 7 5/8 hole will be drilled to TD ~9700 ft. Well will be logged and evaluated. Depending on evaluation For the 5 ½ production casing we will use a DV tool (2 Stage) The Madison formation will be covered by 1st stage, 2 stage will bring cement to surface or at a minimum of inside the 9 5/8 casing so all zones will be isolated. Final cement additives will be determined by logs.

Pit Liner Specifications: See Attached Sheet

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

NO Natali Ormiston Managing Member 03/05/2013
 Signature Name (Print) Title Date

FOR OFFICE USE ONLY

Approved By: Lee W. McLaughlin Title: Vice Chairman, Board of Minerals & Environment

Permit No.: 2027 API No.: 40 103 20020 Date Issued: 03/21/2013

Conditions, if any, on attached page.

PERMIT CONDITIONS

Quartz: Northern Points 2
01N-13E-12 NENE, Pennington County

Permit: # 2027
API: 40 103 20020

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. That the operator shall submit additional surety bonds for each well to be held in addition to the \$20,000 Statewide Plugging and Performance Bond already submitted. The additional bond required for the first well is \$110,000 and for the second well, \$130,000. The form of the surety bond may be in the form of a certificate of deposit in the name of the Board of Minerals and Environment or a surety bond. The additional bond for each well must be submitted and approved by the Department before site preparation and drilling may begin.
3. The operator shall provide the Department with the name of the drilling contractor before the drilling commences.
4. A 12-mil woven, reinforced high-density polyethylene liner must be used for pits or cuttings storage areas.
5. Surface runoff must be diverted around the drill site.
6. The surface hole must be drilled with fresh water.
7. Cement must be circulated to the ground surface on the surface casing.
8. Vertical deviation survey results must be submitted to the department within 30 days of completion of the well pursuant to rule 74:12:02:15.
9. If production casing is set:
 - A. The casing and cementing program submitted with the application, including cementing the production casing from total depth to surface, shall be followed.
 - B. A cement bond log must be run and filed with the department within 60 days of completion of the well as required by rule 74:12:02:12.
 - C. A completion report must be submitted to the department within 30 days of completion of the well as required by rule 74:12:02:17.
10. Technical reports and well logs must be submitted to the department as required by rule 74:12:02:17.
11. If abandoned:
 - A. If production casing is left in the wellbore, a mechanical integrity test (MIT) must be conducted to verify the integrity of the casing as required by rule 74:12:03:02(4)(b)(ii).
 - B. With production casing:
 1. A cast iron bridge plug and a 20-foot cement plug must be installed immediately above any perforations.
 2. If a portion of the production casing is retrieved, 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, must be installed.
 3. A 100-foot cement plug, half in and half out of the top of the following formations: Deadwood, Red River, Interlake, Minnelusa, Minnekahta, and Inyan Kara, must be installed.
 4. A 100-foot cement plug, half in and half out of the base of the surface casing, must be installed.
 5. A 25-foot cement plug must be installed at the top of the surface casing.
 - C. Without production casing:
 1. 100-foot cement plugs must be installed, half in and half out of the top of the following formations: Deadwood, Red River, Interlake, Madison, Minnelusa, Minnekahta, 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 must be installed at the top of the surface casing.
 4. Heavy, mud-laden fluid must be used between all open hole 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.

- E. A plugging report must be submitted to the department within 30 days after plugging and abandonment operations are complete as required by rule 74:12:03:01.
- 12. Surface reclamation of the site must be completed within one year of plugging and abandoning the well.
- 13. 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