

STATE OF NEVADA
COMMISSION ON MINERAL RESOURCES
DIVISION OF MINERALS
400 W. King Street, Suite 106
Carson City, Nevada 89703
(775) 684-7040 ! Fax (775) 684-7052

RECEIVED
APR 10 2013
Division of Minerals

APPLICATION FOR PERMIT TO DRILL AN OIL OR GAS WELL

(Application must be accompanied by \$200 permit fee. Submit proposed drilling program with this application.)

Company/Operator Noble Energy, Inc.

Send permit to:

Street/ PO Box 1625 Broadway, Suite 2200

City Denver

State COLORADO

Zip 80202

Telephone 303-228-4265

Lease name Humboldt

Split Estate? Yes No

WELL LOCATION

	X				

Section 2

Locate well correctly.

Well No. M2C-M2-11B within the NE 1/4³ NW 1/4³
Sec 2 (Lot 3), T. 34N, R. 58E M.D.B.M.
UTM Northing 4524836 N; UTM Easting 634263 E (NAD83 Datum)

Field Wildcat

County Elko

The well is 1351 feet from (N) (~~S~~) line and
and 1450 feet from (~~E~~) (W) line of the section.

(Give location from section line, cross out wrong directions.)

Distance and direction from nearest town 26 miles southeast of Elko

If patented land, Fee Owner is

Dorsey Land LLC

Fee Owner Address

P.O. Box 1133 Elko, NV 89803

If government land, lease serial No. is N/A

Land Type: Federal (BLM, USFS, etc.) Private State

Lessee is Noble Energy, Inc.

Address 1625 Broadway, Suite 2200 Denver, CO 80202

It is proposed to drill the well to a depth of 12,489 feet using a rotary rig.

The elevation is 5352' feet above sea level.

The KB will be 5376'

If this is a wildcat well, attach plat by licensed surveyor showing location.

The status of a bond for this well is conformance with NRS 522.230 of the Nevada Revised Statutes is:

\$50,000 bond on file with Division of Minerals (Liberty Mutual Insurance Company)

If bond posted with U.S. Government, what is name of surety company?

Not Applicable

Bond number? 022044879

Please be advised: NAC 522.540 Confidentiality of well records. 1. Records concerning a well will not be kept confidential by the division unless the owner of the well requests confidentiality in writing or marks "confidential" on the logs of an exploratory well. Upon receiving such a request or log, the division will keep the records confidential for 6 months after their receipt unless the owner provides a written authorization for an earlier release.

I certify that I have personal knowledge of the facts above stated and that they are true, correct, and complete.

Signed Sheri Robbins
Name Sheri Robbins
Position Permitting Supervisor
Date April 8, 20 13

Permit No. 941
API No. 27-007-05271
Approval Date 4/18/13
By Alan R. Ryan

CONDITIONS OF PERMIT

1. Please send daily drilling reports to : Lowell Price.....lprice@govmail.state.nv.us
and
Lindalwells@govmail.state.nv.us

2. Additional Conditions/Comments

A.	SEE ATTACHED CONDITIONS OF APPROVAL
B.	
C.	



BRIAN SANDOVAL
Governor

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<http://minerals.state.nv.us/>

Las Vegas Branch:
2030 E. Flamingo Rd.
Suite #220
Las Vegas, Nevada 89119
(702) 486-4343
Fax (702) 486-4345

ALAN R. COYNER
Administrator

CONDITIONS OF APPROVAL

Operator: Noble Energy, Inc.
Lease Name: Humboldt
Well: M2C-M2-11B

**A COPY OF THESE CONDITIONS OF APPROVAL MUST BE FURNISHED
TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

Submit forms and correspondence to: Nevada Division of Minerals
400 W. King Street
Suite 106
Carson City, NV 89703

Communications with the Division shall be directed to:

Lowell Price, Oil, Gas and Geothermal Program Manager
Office 775-684-7045 Email lprice@govmail.state.nv.us
Cell 775-721-1774
Fax 775-684-7052

Alan Coyner, Division Administrator
Office 775-684-7045 Email acoyner@govmail.state.nv.us
Cell 775-721-0282
Fax 775-684-7052

Voicemail is available on all cell phones and office phones. Please leave a message if you are unable to speak to someone and we will return your call as quickly as possible.

By provision of the current Memorandum of Understanding between NDOM and BLM, you may contact the following individuals for information or approvals if necessary. Approvals under the MOU apply to Fee and Federal lease locations.

John Menghini, Fluid Minerals Team, Petroleum Engineer, BLM Reno
Office 775-861-6573 Email john_menghini@blm.gov
Cell 775- 223-1359
Fax 775-861-6711

YOUR APPLICATION TO DRILL THE HUMBOLDT M2C-M2-11B IS APPROVED
SUBJECT TO THE FOLLOWING PERMIT CONDITIONS

1. Approval of this APD does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. In addition, approval of this APD does not imply that the operator has legal access to the drilling location. When crossing private surface and when crossing public surface off-lease the operator must have an approved right-of-way.
2. All operations shall conform to the Nevada Division of Minerals Oil and Gas chapter 522 – Oil and Gas General Provisions.
3. A complete copy of the approved drilling permit must be at the drill site during the construction of the roads and drill pad, the drilling of the well, and the completion of the well.
4. The Oil, Gas, and Geothermal Program Manager with the Nevada Division of Minerals will be notified 24 hours prior to spudding well by either telephone or email.
5. Verbal notification shall be given to the Nevada Division of Minerals Oil, Gas, and Geothermal Program Manager at least 24 hours in advance of running and cementing casing (other than conductor casing), BOPE tests, and formation tests. BOPE pressure curves, or test charts, are to be submitted to the Nevada Division of Minerals Oil, Gas, and Geothermal Program Manager by email at the completion of testing.
6. The Nevada Division of Minerals will be included on the daily morning operational report distribution list during the drilling/completion of all wells, starting on spud date and through date of drill rig release, or date of completion rig and/or completion equipment release, whichever occurs last. The operational morning report is to be emailed to Lowell Price (lprice@govmail.state.nv.us) and Linda Wells-Carrion (lwells@govmail.state.nv.us) email. The operational morning reports will include the spud date, casing information such as size, grade, weight, hole size, setting depth, and as needed, the amount and type of cement used, top of cement, depth of cementing tools, casing test method, as well as intervals tested, perforated, acidized, fractured and results obtained and the dates all work was performed.
7. Any changes in the drilling and/or completion program require verbal or written approval by the Nevada Division of Minerals prior to any work being performed related to the change in operation. A sundry notice and the proposed change of procedure will be submitted to the Nevada Division of Minerals for approval. The submission of the sundry notice and the proposed change of procedure can be submitted by email.
8. Directional surveys (inclination and azimuth) are to be run at a minimum of every 500 feet. If the inclination of the wellbore exceeds 10°, or the projected bottom hole location is within 200 feet of the spacing unit or lease or unit boundary, directional surveys (inclination and azimuth) are to be run at a minimum of every 100 feet.
9. A Hydrogen Sulfide (H₂S) Contingency Plan will be submitted when required by the Nevada Division of Minerals. However, minimum safety precautions must be taken at all times. Personal safety equipment, including a portable hydrogen sulfide detector situated in a position to detect gas from the well must be on location. If company policy requires a higher standard, supply the Nevada Division of Minerals with a copy of the company plan or requirement, if not already submitted.

10. A Well Completion Report will be filed with the Nevada Division of Minerals within thirty (30) days of the completion of drilling operations/release date of drill rig. If the well is to be completed prior to the drill rig being released, the Well Completion Report is due within thirty (30) days after completion operations are completed and drill rig is released. If a completion rig and/or completion equipment is brought onto location at a later date to complete the well, an amended Well Completion Report is to be filed with the Nevada Division of Minerals within thirty (30) days after completion rig and/or completion equipment is released. A complete set of daily operational reports are to be submitted with each Completion Report for the time period covered.
11. Two copies of all logs run on the well and where possible, one copy of the computed logs in electronic format such as LAS or PDF, are to be submitted to the Nevada Division of Minerals within 30 days of the date of being run. Any data the company wants to remain confidential for a period of six months after drilling rig is released must be marked as "Confidential", or a separate request for all of the well's down hole data to remain confidential for the six month period can be made to the Nevada Division of Minerals.
12. **The State of Nevada (NAC 522A.215) - Cuttings – requirements for permit. Samples of cuttings shall be collected and submitted to the Nevada Bureau of Mines and Geology (NBMG). The Nevada Division of Minerals conditions of approval further require a minimum of 30-foot intervals from surface to the surface casing point and 10-foot intervals from surface casing shoe to total depth.**

TWO separate sets of cuttings are to be sent prepaid to the Great Basin Science Sample and Records Library, Nevada Bureau of Mines and Geology, 2175 Raggio Parkway, Reno, Nevada 89512. For more information call 775-682-8766 or e-mail nbmg@unr.edu.

EACH SET is to consist of at least 15 milliliters of cuttings per sampling interval that must be cleaned, dried, and placed into 3"x5" sample envelopes. The envelopes are to be placed in order by interval into common drill boxes with the approximate dimensions of 3"x5"x20". The envelopes are to be identified by the Nevada Division of Minerals permit number, well name/number as noted on the Application for Permit to Drill an Oil or Gas Well (Kettleman number alone will suffice if given), and depth interval.

The sets are to be PROPERLY IDENTIFIED as follows: Each box is to have legibly written on one end the name of the operator and well as noted on the Application for Permit to Drill an Oil or Gas Well, Division permit number, total interval (missing intervals noted), and set number.

NOTE: the cuttings are not to be sent to the Nevada Division of Minerals. The cuttings are due within 15 days of completion of the well. The operator will be responsible for the cost of any further handling of the samples by NBMG required to meet standards set out in this permit condition.

13. A list of all chemicals to be used in a hydraulic fracturing operation will be provided to the Nevada Division of Minerals for approval prior to any hydraulic fracturing operation. The listing shall include the following: trade name, supplier, purpose, ingredients, Chemical Abstract Service Number [CAS#], maximum ingredient concentration in additive [% by mass], and maximum ingredient concentration in hydraulic fracturing fluid [% by mass].

14. The source and estimated volume of fresh water required for each well completion process will be identified and provided to the Nevada Division of Minerals.
15. The Nevada Division of Minerals is to be informed as to how fresh water for the hydraulic fracturing completion operation will be stored at well site. If fresh water is to be stored in lined surface pit rather than Baker tanks, or similar storage vessel, additional approvals from the Nevada Division of Environmental Protection may be required.
16. A Cement Bond Log (CBL), or an ultrasonic equivalent, will be run over the intermediate casing, from intermediate casing shoe into the surface casing shoe. This CBL log/ultrasonic equivalent, may be acquired at the same time a CBL/ultrasonic equivalent is run over the production casing interval. A digital copy of the log will be provided to the Nevada Division of Minerals as soon as digital version is available.
17. The production casing will be cemented in place to a minimum of 500 feet above the top of the shallowest identified potentially producible zone.
18. A Cement Bond Log (CBL), or an ultrasonic equivalent, will be run over the production casing to a point where the top of the cement can be identified. A digital copy of the log will be provided to the Nevada Division of Minerals as soon as digital version is available.
19. **No fracture stimulation process shall be initiated without review by NDOM of the Cement Bond Logs and subsequent approval of a sundry notice with specific details of the fracture stimulation process.**
20. Prior to the hydraulic fracturing completion process, Noble will provide the Nevada Division of Minerals the following: (1) the number of stages to be utilized, (2) measured depth/ true vertical depth to each stage, (3) the length of each stage, (4) all intervals to be perforated in measured depth/true vertical depth, and (5) number of shots per foot, diameter of perforations.
21. All pressures applied during the hydraulic fracturing process will be monitored and recorded. Maximum hydraulic pressure approved by the Nevada Division of Minerals is not to be exceeded. Recorded hydraulic fracturing pressures will be provided to the Nevada Division of Minerals if requested.
22. Hydraulic fracturing fluids that are backwashed from the wellbore at the conclusion of the hydraulic fracturing process are to be placed and stored in Baker tanks, or similar storage vessel. Approval by the Nevada Division of Environmental Protection will be obtained if an alternative storage of the wastewater is to be utilized. The method and location for final disposal of the backwashed fluids must be approved by the Nevada Division of Minerals and the Nevada Division of Environmental Protection.
23. The amount and type of chemicals used in the hydraulic fracturing operation shall be reported to www.fracfocus.org within 60 days of hydraulic fracturing completion for public disclosure.
24. Any production of oil and/or gas will be reported on the Nevada Division of Minerals Oil and Gas Operator's Monthly Report, starting with the month in which production operations commence and continuing each month until the well is physically plugged and abandoned. The Oil and Gas Operator's Monthly report is to be filed with the Nevada Division of Minerals, along with the Administrative fee, by the last day of the month following the month for which production occurred.

25. All wells, whether drilling, producing, suspended or abandoned shall be identified by a sign or marker with the name of the operator, the well number, and the surveyed description of the well. The sign or marker will also have the BLM lease serial number if the well is located on or enters a Federal lease at depth.
26. No well abandonment operations will be commenced without the prior approval of the Nevada Division of Minerals. A sundry notice along with the plugging and abandonment procedure will be submitted to the Nevada Division of Minerals for approval.
27. Upon completion of approved plugging, a well identification marker will be erected at the wellsite location. The following information will be permanently placed on the marker: operator name, well name and number, location by quarter/quarter section, township, range, and federal lease number (if location is on a federal lease, or enters a federal lease at depth).
28. A Well Plugging Report (Form 12) will be submitted within thirty (30) days following the actual plugging of the wellbore.
29. Any venting or flaring of gas during drilling or initial well evaluation tests will be conducted in accordance with Nevada Division of Minerals regulations.
30. Lessees and operators have the responsibility to see that their exploration, development, production, and construction operations are conducted in such a manner which conforms to applicable State of Nevada laws and regulations, as well as Federal laws and regulations if exploration, development, production, and construction operations are being conducted on a Federal lease.
31. All undesirable events (fires, accidents, blowouts, spills, and discharges) will be orally reported to the Oil, Gas, and Geothermal Program Manager, or the Administrator of the Nevada Division of Minerals immediately. These events will be followed with a written report within fifteen (15) days. The Nevada Division of Environmental Protection will also be notified of blowouts and abnormal surface spills and discharges through their 24 hour telephone notification hotline (in-state 1-888-331-6337, out of state 1-775-687-9485).
32. The enclosed Abandoned Mine brochures shall be posted in common personnel areas at the well site. The operator shall inform all drilling personnel and contractors associated with the drilling of the well of potential dangers, including bodily injury and death, associated with the exploration of abandoned mine workings, as well as the disturbance of possible bat habitats.

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RECEIVED

OCT 17 2014

Division of Minerals

**OIL, GAS, AND GEOTHERMAL
 SUNDRY NOTICE AND REPORT ON WELLS**

- | | |
|--|--|
| <input checked="" type="checkbox"/> Notice of Intention of Change in Drilling Plans
<input type="checkbox"/> Notice of Intention to Reopen or Repair Well
<input type="checkbox"/> Notice of Intention to Stimulate Well
<input type="checkbox"/> Notice of Intention to Pull or Alter Casing
<input type="checkbox"/> Notice of Intention to Abandon Well
<input type="checkbox"/> Notice of Exception to Sample Water | <input type="checkbox"/> Subsequent Report of Fracture Treatment
<input type="checkbox"/> Subsequent Report of Reopening or Repair
<input type="checkbox"/> Subsequent Report of Stimulation
<input type="checkbox"/> Subsequent Report of Altering Casing
<input type="checkbox"/> Supplementary Well History
<input type="checkbox"/> Notice of Intention to Fracture Treat Formation(s)
<input checked="" type="checkbox"/> Other (state) Name, drilling, directional, and completions change |
|--|--|

(Indicate above by check mark, nature of report, notice or other data.)

Permit Number	941, API # 27-007-05271
Well No.	M2C-M2-11B
County	ELKO
Company Name	NOBLE ENERGY, INC.
Field or Area	WILDCAT
Farm or Lease	HUMBOLDT
Date	10/17/2014

SUMMARY OF WORK

(State names of and expected depths to objective zones or formations: show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and ALL other pertinent data.) Attachments permitted if necessary.

This sundry is being submitted to change the well name, directional plan, drilling plan and completion plan. Please see attached sheet for additional information.

Attached: Drilling plan, directional plan, completion plan, survey package, area of review

I understand that this plan of work must receive approval in writing of the Division of Minerals before operations may be commenced.

Company NOBLE ENERGY, INC.
 Address 1625 BROADWAY, SUITE 2200, DENVER CO 80202
 Name JULIE WEBB
 Position REGULATORY ANALYST
 Signature _____

REMARKS: CONDITIONS OF APPROVAL ARE ATTACHED

DO NOT WRITE IN THE SPACE BELOW
Approved by <u>[Signature]</u>
Position <u>Deputy Administrator</u>
Date <u>10/27/2014</u>

Lease name HUMBOLDT Split Estate? Yes No

WELL LOCATION

	X				

Section _____
Locate well correctly.

Well No. M2C-H within the NE Q NW Q
Sec 2 (Lot 3), T. 34N, R. 58E M.D.B.M.

UTM Northing 1484523 N; UTM Easting 208091 E (NAD83 Datum)

Field Wildcat

County Elko

The well is 1351 feet from (N) (~~S~~) line and
and 1450 feet from (~~E~~) (W) line of the section.

(Give location from section line, cross out wrong directions.)

Distance and direction from nearest town 26 miles southeast of Elko

If patented land, Fee Owner is

Doresy Land LLC

Fee Owner Address

P.O. Box 1133 Elko, NV 89803

If government land, lease serial No. is N/A

Land Type: Federal (BLM, USFS, etc.) Private State

Lessee is Noble Energy, Inc

Address 1625 Broadway, Suite 2200 Denver, CO 80202

Is the proposed well being considered for unconventional well stimulation? No Yes

It is proposed to drill the well to a depth of 12460 feet using a rotary rig.

The elevation is 5352' feet above sea level.

The KB will be 5376'.

If this is a wildcat well, attach plat by licensed surveyor showing location.

The status of a bond for this well is conformance with NRS 522.230 of the Nevada Revised Statutes is:

\$50,000 bond on file with the Division of Minerals (Liberty Mutual Insurance Company)

If bond posted with U.S. Government, what is name of surety company?

N/A

Bond number? 022044879



BRIAN SANDOVAL
Governor

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Las Vegas Branch:
2030 E. Flamingo Rd.
Suite #220
Las Vegas, Nevada 89119
(702) 486-4343
Fax (702) 486-4345

RICHARD PERRY
Administrator

CONDITIONS OF APPROVAL

Operator: Noble Energy Inc.
Lease Name: Humboldt
BLM Lease: NVN-090950
Well: M2C-M2-11B
Permit #: 941
API #: 27-007-05271

**A COPY OF THESE CONDITIONS OF APPROVAL MUST BE FURNISHED
TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

Submit forms and correspondence to: Nevada Division of Minerals
400 W. King Street
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Communications with the Division shall be directed to:

Lowell Price, Oil, Gas and Geothermal Program Manager
Office 775-684-7045 Email lprice@minerals.nv.gov
Cell 775-721-1774
Fax 775-684-7052

Rich Perry, Division Administrator
Office 775-684-7045 Email rmperry@minerals.nv.gov
Cell 775-721-0282
Fax 775-684-7052

Voicemail is available on all cell phones and office phones. Please leave a message if you are unable to speak to someone and we will return your call as quickly as possible.

By provision of the current Memorandum of Understanding between NDOM and BLM, you may contact the following individuals for information or approvals if necessary. Approvals under the MOU apply to Fee and Federal lease locations.

John Menghini, Fluid Minerals Team, Petroleum Engineer, BLM Reno
Office 775-861-6573 Email john_menghini@blm.gov
Cell 775- 223-1359
Fax 775-861-6711

THE SUNDRY NOTICE FOR HUMBOLDT M2C-M2-11B IS APPROVED SUBJECT TO THE FOLLOWING PERMIT CONDITIONS

1. Approval of this APD does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. In addition, approval of this APD does not imply that the operator has legal access to the drilling location. When crossing private surface and when crossing public surface off-lease the operator must have an approved right-of-way.
2. All operations shall conform to the Nevada Division of Minerals Oil and Gas chapter 522 – Oil and Gas General Provisions.
3. Noble Energy Inc. will provide the Nevada Division of Minerals a map showing land ownership within a one mile radius of the drill location prior to spudding the well.
4. A complete copy of the approved drilling permit must be at the drill site during the construction of the roads and drill pad, the drilling of the well, and all stages of the completion of the well.
5. The Oil, Gas, and Geothermal Program Manager with the Nevada Division of Minerals will be notified 24 hours prior to spudding well by either telephone or email.
6. Verbal notification shall be given to the Nevada Division of Minerals Oil, Gas, and Geothermal Program Manager at least 24 hours in advance of running and cementing casing (other than conductor casing), BOPE tests, and formation tests. BOPE pressure curves, or test charts, are to be submitted to the Nevada Division of Minerals Oil, Gas, and Geothermal Program Manager by email at the completion of testing.
7. The Nevada Division of Minerals will be included on the daily morning operational report distribution list during the drilling/completion of all wells, starting on spud date and through date of drill rig release, or date of completion rig and/or completion equipment release, whichever occurs last. The operational morning report is to be emailed to Lowell Price (lprice@minerals.nv.gov) and Linda Wells (lwells@minerals.nv.gov) email. The operational morning reports will include the spud date, casing information such as size, grade, weight, hole size, setting depth, and as needed, the amount and type of cement used, top of cement, depth of cementing tools, casing test method, as well as intervals tested, perforated, acidized, fractured and results obtained and the dates all work was performed.
8. Any changes in the drilling and/or completion program require verbal or written approval by the Nevada Division of Minerals prior to any work being performed related to the change in operation. A sundry notice and the proposed change of procedure will be submitted to the Nevada Division of Minerals for approval. The submission of the sundry notice and the proposed change of procedure can be submitted by email.
9. Directional surveys (inclination and azimuth) are to be run at a minimum of every 500 feet. If the inclination of the wellbore exceeds 10°, or the projected bottom hole location is within 200 feet of the spacing unit or lease or unit boundary, directional surveys (inclination and azimuth) are to be run at a minimum of every 100 feet.
10. A Formation Integrity Test (FIT) is to be performed within 5 feet below the surface and intermediate casing shoes. If the FIT fails, a cement squeeze job is required to be performed at the failed casing shoe. Another FIT is required after the cement squeeze job. A successful FIT is required before drilling any deeper.
11. A Hydrogen Sulfide (H₂S) Contingency Plan will be submitted when required by the Nevada Division of Minerals. However, minimum safety precautions must be taken at all times. Personal safety equipment, including a portable hydrogen sulfide detector situated in a position to detect gas from the well must be on location. If company policy requires a higher standard, supply the Nevada Division of Minerals with a copy of the company plan or requirement, if not already submitted.

12. A Well Completion Report will be filed with the Nevada Division of Minerals within thirty (30) days of the completion of drilling operations/release date of drill rig. If the well is to be completed prior to the drill rig being released, the Well Completion Report is due within thirty (30) days after completion operations are completed and drill rig is released. If a completion rig and/or completion equipment is brought onto location at a later date to complete the well, an amended Well Completion Report is to be filed with the Nevada Division of Minerals within thirty (30) days after completion rig and/or completion equipment is released. A complete set of daily operational reports are to be submitted with each Completion Report for the time period covered.
13. Two copies of all logs run on the well and where possible, one copy of the computed logs in electronic format such as LAS or PDF, are to be submitted to the Nevada Division of Minerals within 30 days of the date of being run. Any data the company wants to remain confidential for a period of six months after drilling rig is released must be marked as "Confidential", or a separate request for all of the well's down hole data to remain confidential for the six month period can be made to the Nevada Division of Minerals.
14. **The State of Nevada (NAC 522.215) - Cuttings – requirements for permit. Samples of cuttings shall be collected and submitted to the Nevada Bureau of Mines and Geology (NBMG). The Nevada Division of Minerals conditions of approval further require a maximum of 60 foot sampling intervals from spud depth to the top of the Elko Formation and 30 foot sampling intervals from the top of the Elko Formation to the total depth of the well.**

TWO separate sets of cuttings are to be sent prepaid to the Great Basin Science Sample and Records Library, Nevada Bureau of Mines and Geology, 2175 Raggio Parkway, Reno, Nevada 89512. For more information call 775-682-8766 or e-mail [nbmg@unr.edu](mailto:nbmng@unr.edu).

EACH SET is to consist of at least 15 milliliters of cuttings per sampling interval that must be cleaned, dried, and placed into 3"x5" sample envelopes. The envelopes are to be placed in order by interval into common drill boxes with the approximate dimensions of 3"x5"x20". The envelopes are to be identified by the Nevada Division of Minerals permit number, well name/number as noted on the Application for Permit to Drill an Oil or Gas Well (Kettleman number alone will suffice if given), and depth interval.

The sets are to be PROPERLY IDENTIFIED as follows: Each box is to have legibly written on one end the name of the operator and well as noted on the Application for Permit to Drill an Oil or Gas Well, Division permit number, total interval (missing intervals noted), and set number.

NOTE: the cuttings are not to be sent to the Nevada Division of Minerals. The cuttings are due within 30 days of completion of the well. The operator will be responsible for the cost of any further handling of the samples by NBMG required to meet standards set out in this permit condition.

15. A list of all chemicals which may be used in a hydraulic fracturing operation will be provided to the Nevada Division of Minerals for approval prior to any hydraulic fracturing operation. The listing shall include the following: trade name, supplier, purpose, ingredients, Chemical Abstract Service Number [CAS#], maximum ingredient concentration in additive [% by mass], and maximum ingredient concentration in hydraulic fracturing fluid [% by mass].
16. Any water well constructed by Noble Energy Inc. within the sampling area (one mile area of review) to support the drilling and completion operations for the oil or gas well must be used as a sampling location, as per the recently approved hydraulic fracturing regulations in Chapter 522 of the revised Nevada Administrative Code (NAC).
17. The source and estimated volume of fresh water required for each well completion process will be identified and provided to the Nevada Division of Minerals.
18. The Nevada Division of Minerals is to be informed as to how fresh water for the hydraulic fracturing completion operation will be stored at well site. If fresh water is to be stored in lined surface pit rather than Baker tanks, or

similar storage vessel, additional approvals from the Nevada Division of Environmental Protection may be required.

19. A Cement Bond Log (CBL), or an ultrasonic equivalent, will be run over the intermediate casing, from intermediate casing shoe into the surface casing shoe. This CBL log/ultrasonic equivalent may be acquired at the same time a CBL/ultrasonic equivalent is run over the production casing interval. A digital copy of the log will be provided to the Nevada Division of Minerals as soon as digital version is available.
20. The production casing will be cemented in place to a minimum of 500 feet above the top of the shallowest identified potentially producible zone.
21. A Cement Bond Log (CBL), or an ultrasonic equivalent, will be run over the production casing prior to running the production liner from the casing shoe to a point where the top of the cement can be identified. A digital copy of the log will be provided to the Nevada Division of Minerals as soon as digital version is available.
22. Not less than 14 days before the commencement of hydraulic fracturing, submit for approval by the Division a sundry notice (Form 4) and a report describing all specific aspects of the proposed hydraulic fracturing operation. The report must identify each stage of the hydraulic fracturing operation, the proposed measured depth and true vertical depth below the surface of the ground for each stage, the duration of each stage, all intervals to be perforated in measured depth and true vertical depth below the surface of the ground, the number and diameter of perforations per foot and the estimated hydraulic pressures to be utilized.
23. Not less than 14 days before the commencement of hydraulic fracturing, notify the county commission of the county where the well is located, as well as any private land owner within the one mile radius. The operator shall document and maintain records on the method by which the commission and land owners were notified.
24. The operator shall monitor and record all well head pressures, including each annular space pressure, during the hydraulic fracturing operation. The maximum hydraulic pressure to which a segment of casing is exposed must not exceed the burst-pressure rating of the casing, but the Division may require a lower maximum hydraulic pressure as the Division determines is necessary. The operator shall immediately stop the hydraulic fracturing process and notify the Division if any change in annular pressure is observed suggesting a communication with the hydraulic fracturing fluids. The operator shall provide to the Division a report documenting all recorded hydraulic fracturing pressures for each stage within 15 days following the completion of each stage of the hydraulic fracturing operation.
25. The operator shall contain all liquids that are returned to the surface and discharged from the wellbore at the conclusion of each stage of the hydraulic fracturing operation. The operator shall contain the liquids in enclosed tanks or in accordance with the regulations prescribed by the Division of Environmental Protection pursuant to chapter 445A of NRS. Prior to drilling the well, Noble Energy Inc. may be required to obtain a Storm Water Prevention Plan Permit from the Nevada Division of Environmental Protection, pursuant to NRS 445A.465, NAC 445.266, and NAC 445A.268.
26. Provide to the Division via sundry notice the source and estimated volume of water required for hydraulic fracturing, as well as, a plan for managing and disposal of all fluids to be used in the proposed hydraulic fracturing process.
27. The operator shall report, at a minimum, at www.fracfocus.org for inclusion in FracFocus, or its successor registry, not later than 60 days after the completion of the hydraulic fracturing operation :
 - a. The operator name, the well name and number and API number for the well,
 - b. The date of the hydraulic fracturing treatment, the location of the well by county, public land survey and global positioning system coordinates,
 - c. The true vertical depth of the well and the total volume of water used in the hydraulic fracturing treatment of the well or the type and total volume of the base fluid used in the hydraulic fracturing treatment, if something other than water,

- d. Each hydraulic fracturing additive used in the hydraulic fracturing fluid and the trade name, vendor, and a brief descriptor of the intended use or function of each hydraulic fracturing additive used in the hydraulic fracturing fluid,
 - e. Each chemical intentionally added to the base fluid,
 - f. The maximum concentration, in percent by mass, of each chemical intentionally added to the base fluid, and
 - g. The chemical abstract service (CAS) number for each chemical intentionally added to the base fluid, if applicable.
28. Any production of oil and/or gas will be reported on the Nevada Division of Minerals Oil and Gas Operator's Monthly Report, starting with the month in which production operations commence and continuing each month until the well is physically plugged and abandoned. The Oil and Gas Operator's Monthly report is to be filed with the Nevada Division of Minerals, along with the Administrative fee, by the last day of the month following the month for which production occurred.
 29. All wells, whether drilling, producing, suspended or abandoned shall be identified by a sign or marker with the name of the operator, the well number, and the surveyed description of the well. The sign or marker will also have the BLM lease serial number if the well is located on or enters a Federal lease at depth.
 30. No well abandonment operations will be commenced without the prior approval of the Nevada Division of Minerals. A sundry notice along with the plugging and abandonment procedure will be submitted to the Nevada Division of Minerals for approval.
 31. Upon completion of approved plugging, a well identification marker will be erected at the wellsite location. The following information will be permanently placed on the marker: operator name, well name and number, location by quarter/quarter section, township, range, and federal lease number (if location is on a federal lease, or enters a federal lease at depth).
 32. A Well Plugging Report (Form 12) will be submitted within thirty (30) days following the actual plugging of the wellbore.
 33. Any venting or flaring of gas during drilling or initial well evaluation tests will be conducted in accordance with Nevada Division of Minerals regulations. The operator is to check with the Nevada Division of Environmental Protection for any potential air permit requirements.
 34. Lessees and operators have the responsibility to see that their exploration, development, production, and construction operations are conducted in such a manner which conforms to applicable State of Nevada laws and regulations, as well as Federal laws and regulations if exploration, development, production, and construction operations are being conducted on a Federal lease.
 35. All undesirable events (fires, accidents, blowouts, spills, and discharges) will be orally reported to the Oil, Gas, and Geothermal Program Manager, or the Administrator of the Nevada Division of Minerals immediately. These events will be followed with a written report within fifteen (15) days. The Nevada Division of Environmental Protection will also be notified of blowouts and abnormal surface spills and discharges through their 24 hour telephone notification hotline (in-state 1-888-331-6337, out of state 1-775-687-9485).
 36. The enclosed Abandoned Mine brochures shall be posted in common personnel areas at the well site. The operator shall inform all drilling personnel and contractors associated with the drilling of the well of potential dangers, including bodily injury and death, associated with the exploration of abandoned mine workings, as well as the disturbance of possible bat habitats.