Appendix F

Memorandum of Understanding – Aqua Program

MEMORANDUM OF UNDERSTANDING

between

STATE OF NEVADA
by the
NEVADA DIVISION OF MINERALS
and
NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
and
DESERT RESEARCH INSTITUTE

and

NOBLE ENERGY, INC.

This Memorandum of Understanding (hereinafter MOU) to establish the Aquifer Quality Assessment Program to gather and share data and information on groundwater and geological conditions associated with the fate and transport of chemicals used for hydraulic fracturing (hereinafter AQUA PROGRAM) is entered into by and between the following parties: (1) the State of Nevada through the Division of Minerals of the Commission on Mineral Resources (hereinafter NDOM), the Division of Environmental Protection of the Department of Conservation and Natural Resources (hereinafter NDEP), and the Board of Regents of the Nevada System of Higher Education on behalf of the Desert Research Institute (hereinafter DRI) and (2) Noble Energy, Inc. (hereinafter NOBLE). This MOU will become effective as of the date of the signature of the last party to sign.

BACKGROUND AND OBJECTIVES

NOBLE is actively engaged in the exploration of hydrocarbon resources on 370,000 leased acres in Elko County, Nevada. The exploration wells will be drilled on a combination of private lands and lands managed by the United States Bureau of Land Management located in the Upper Humboldt River Basin stretching from the Mary's River Valley southwest along the west side of the Ruby Mountains to the Huntington River Valley to the South. Livestock grazing is the primary existing surface use.

Prior exploration activity in the area was of the deeper and older Paleozoic targets. NOBLE's exploration activity primarily targets the Tertiary aged strata, including the Humboldt and Elko formations at depths between 6,000 and 12,000 feet, but NOBLE may investigate other formations to evaluate prospective hydrocarbon resources. NOBLE seeks to bring modern drilling and completion techniques to assess the economic viability of the low permeability Tertiary aged strata. NOBLE's exploration will involve multiple wellbore tests intended to provide data and information necessary to understand the hydrocarbons in place and the suitable stimulation for economic development. The resulting proprietary data will assist NOBLE in determining the merits of full field development.

At the same time, because of Nevada's statutory mandate to protect all "waters of the State" regardless of depth or water quality, NDOM and NDEP are interested in the data and information related to groundwater that NOBLE may gather during its exploration activities. The AQUA PROGRAM, as described in Section II, sets forth a process by which NOBLE, with the assistance of DRI, will gather and share data and information on groundwater and geological conditions based on NOBLE's exploratory drilling. DRI will use this data to develop a hydrologic model and prepare reports evaluating the fate and transport of chemicals used for hydraulic fracturing. The final reports prepared by DRI will be shared with NDOM and NDEP, to assist in the development of a program to assess the effects of hydraulic fracturing stimulations in the State of Nevada, and shall be made publicly available.

I. AUTHORITY.

NDOM has the authority to enter into this MOU pursuant to NRS 513.073(5), which requires NDOM to "administer the provisions of Chapter 522 of NRS." NDEP has the authority to enter into this MOU pursuant to NRS 445A.450 (2), which permits NDEP to "advise, consult, and cooperate with other agencies of the State ... and with other persons in furthering the purposes of the Nevada Water Pollution Control Law." The Board of Regents of the Nevada System of Higher Education has the authority to enter into this MOU on behalf of DRI pursuant to NRS 396.7952(1), which permits DRI to "enter into contracts with governmental or private agencies ... [wishing] to use the services ... of the Desert Research Institute." Upon approval of the Nevada Interim Finance Committee, DRI also has the authority to receive from NOBLE, hold in trust, and manage funds for the special purpose of implementing the Consulting Agreement dated March 13, 2013 and entered into by DRI and NOBLE for purposes of implementing the AQUA PROGRAM (hereafter CONSULTING AGREEMENT).

II. AQUIFER QUALITY ASSESSMENT PROGRAM.

A. Proposed Project Area for the AQUA Program.

NOBLE plans to drill and complete up to as many as twenty (20) exploration wells over a period of three (3) years beginning from the start (also known as spud) of the first well (hereinafter EXPLORATION PHASE). NOBLE will locate the exploration wells based largely on the results of the two (2) 2012 3D seismic surveys that covered approximately 60 square miles. NOBLE plans to acquire a third 3D seismic survey in the fall of 2013. The data from the third 3D seismic survey is anticipated to be considered in siting of additional exploration wells. The lands to be drilled during the EXPLORATION PHASE, described below and separated into three areas, are shown on Attachment A (hereinafter PROJECT AREA or 3 PROJECT AREAS). The final number of exploration wells to be drilled, not to exceed twenty (20), will be dependent upon Noble's review of data associated with its EXPLORATION PHASE.

Area 1: Huntington - Located ~ 24 Miles South of Elko, NV
Township 28N, Range 55E, Sections 1-3
Township 28N, Range 56E, Sections 2-6

Township 29N, Range 55E, Sections 1-3, 10-15, 22-27, 34-36
Township 29N, Range 56E, Sections 2-11, 14-23, 26-35
Township 30N, Range 55E, Sections 1, 12-13, 24-25, 34-36
Township 30N, Range 56E, Sections 3-10, 15-22, 27-35
Township 31N, Range 55E, Sections 25-36
Township 31N, Range 56E, Sections 27-34

Area 2: Humboldt - Located ~16 Miles East of Elko, NV
Township 34N, Range 58E, Sections 1-30
Township 34N, Range 59E, Sections 5-8, 17-20
Township 35N, Range 58E, Sections 19-36
Township 35N, Range 59E, Sections 19-20, 29-32

Area 3: Mary's River - Located ~ 7 Miles NW of Wells, NV
Township 38N, Range 60E, Sections 1, 2, 11-14, 23-26
Township 38N, Range 61E, Sections 2-11, 14-23, 26-35
Township 39N, Range 60E, Sections 23-26, 35-36
Township 39N, Range 61E, Sections 19-23, 26-35

B. Data Collection and Use.

During the EXPLORATION PHASE, NOBLE, with the assistance of DRI, will collect data and information needed by DRI to prepare the reports required under Section II.F. Such reports will be used by NDOM and NDEP to assess the potential effect of NOBLE's exploration activities on "waters of the State" of Nevada and facilitate the expansion of Nevada's developing regulatory program to address relevant hydraulic fracturing considerations. As detailed in Sections II.C, through E, data collection will include: groundwater monitoring and sampling; use of chemical and/or isotopic tracers; petrophysical logging; and microseismic monitoring.

C. Groundwater Monitoring.

NOBLE will gather data from water wells permitted by the Nevada State Engineer's Office as Domestic, Irrigation, and/or Stock (Wells) before and after the hydraulic fracturing occurring in the EXPLORATION PHASE in the three (3) PROJECT AREAS described in Section II.A. NOBLE will make reasonable attempts to secure permission for groundwater monitoring from all landowners within the PROJECT AREA. NOBLE will document any sites where permission for groundwater monitoring was refused and provide such documentation to NDOM and NDEP. Groundwater monitoring of Wells will be performed only with the permission of the landowner or owner of the Well. Precise well location information may be redacted from any reports prepared by DRI under Section II.F to protect landowner or the Well owners' privacy concerns. As necessary, NOBLE will also seek permission to gather data from any groundwater well drilled by NOBLE for use in its operations.

1. Parameters.

To the extent adequate water volumes are available and to the extent landowner permission is obtained, as required, NOBLE will obtain a sample from each Well and Monitoring Well and will analyze for the following parameters:

Parameters	Units	Sample Type	Test Method
Methane	mg/l	Discrete	EPA SOP RSK175
Ethane	mg/l	Discrete	EPA SOP RSK175
Propane	mg/l	Discrete	EPA SOP RSK175
Alkalinity, bicarbonate (as CaCO3)	mg/l	Discrete	SM 2320B
Alkalinity, carbonate (as CaCO3)	mg/l	Discrete	SM 2320B
Bromide	mg/l	Discrete	SW846 9056
Chloride	mg/l	Discrete	SW846 9056
Fluoride	mg/l	Discrete	SW846 9056
Sulfate	mg/l	Discrete	SW846 9056
Potassium	mg/l	Discrete	SW846 6010C
Sodium	mg/l	Discrete	SW846 6010C
Magnesium	mg/l	Discrete	SW846 6010C
Calcium	mg/l	Discrete	SW846 6010C
Total Petroleum Hydrocarbons	mg/l	Discrete	SW846 8015C (as Discrete Ranges)/EPA 1664A as Oil and Grease
Benzene	µg/l	Discrete	SW846 8260B
Ethylbenzene	µg/l	Discrete	SW846 8260B
Toluene	µg/l	Discrete	SW846 8260B
Xylenes	µg/l	Discrete	SW846 8260B
Lithium Bromide 10mg/l conc.	µg/l	Discrete	Ionic substance analyzed individually as Lithium by SW846 6010C and Bromide by SW846 9056.

In some instances, water sample volumes may preclude NOBLE from completing analyses for all parameters. NOBLE will endeavor to complete analyses on the greatest number of parameters following appropriate EPA-approved laboratory methodologies.

2. Frequency.

To the extent adequate water volumes are available and to the extent landowner permission is obtained, as required, NOBLE will sample each Well and Monitoring Well a total of three (3) times during the EXPLORATION PHASE pursuant to the following schedule:

a. prior to undertaking hydraulic fracturing of the first exploration well on a particular well pad;
b. two (2) months after the first hydraulic fracture on a particular well pad; and
c. twelve (12) months after hydraulically fracturing the final exploration well on a particular well pad.

DRI may recommend additional sampling, which NOBLE may choose to implement at its exclusive discretion.

D. Groundwater Tracer Study.

In conjunction with the groundwater monitoring described in Section II.C, NOBLE will confer with DRI to select one (1) or more tracers to be used during the EXPLORATION PHASE (hereinafter TRACER STUDY) to assist DRI with the completion of its fate and transport model. The TRACER STUDY shall include background information on proposed tracers, protocols for tracer implementation and recommendations for the use of specific tracers. The specific terms and conditions for the TRACER STUDY shall be agreed to by NOBLE and DRI prior to implementation of the TRACER STUDY. NOBLE will add tracers selected by DRI to the parameters list identified in paragraph 1 of Section II.C. Multiple tracers may be used so as to distinguish between individual wells.

E. Well Bore Specific Data

During the EXPLORATION PHASE, at one well per pad site, NOBLE will attempt to gather additional wellbore data from the use, as appropriate, of: (1) a gamma ray log; (2) a porosity log; (3) an induction log up to the shoe of the surface casing (a depth expected to occur at approximately six hundred (600) feet); and (4) a fracture orientation log across the potential producing formations at depths from approximately six thousand (6,000) feet to Total Depth. Since this additional wellbore data is both proprietary and critical to the development of the fate and transport model needed to prepare an impact analysis of hydraulic fracturing, NOBLE shall make this core data available for review by DRI at a NOBLE designated location. NOBLE will also provide opportunities for DRI to review other proprietary data in NOBLE's possession such as

3D seismic data, drill stem test results, petrophysical logs, diagnostic fracture injection testing data, and, when available, micro seismic data. Subject to NDOM's compliance with the confidentiality provisions of Section III.A, below, nothing in this MOU affects NOBLE's legal obligation to provide wellbore and well completion data and information to NDOM. Subject to NDEP's compliance with the confidentiality provisions of Section III.A, below, NOBLE will allow NDEP to review wellbore and well completion data and information gathered pursuant to this MOU.

F. AQUA PROGRAM Reports.

DRI, in consultation with NOBLE, will prepare a series of reports for NDOM, NDEP and the public analyzing the fate and transport of the hydraulic fracture stimulation chemicals that have the potential to be left in the formation. Each report will include an analysis of the first well pad in each of the three (3) PROJECT AREAS described above in Section II.A. The parties anticipate that DRI's fate and transport model will become more refined as additional data and information becomes available. NOBLE must approve the inclusion of any and all proprietary data and information in the AQUA PROGRAM reports prepared by DRI. All final reports will be provided to NDOM and NDEP and made available to the public.

1. The first report will be prepared by DRI prior to hydraulic fracturing stimulations by NOBLE. It will include DRI's best estimate of existing hydrological conditions in the target zones of the first exploration well, which is anticipated to consist of Tertiary aged strata including the Humboldt and Elko formations at depth. The first report will include an estimate of the maximum amount of chemicals anticipated to be pumped in a single stage of the stimulation treatment based on the single stage volumes listed in TABLE 1 without accounting for liquid recovery during the production phase of the well. TABLE 1 volumes represent a total of five (5) separate hydraulic fracturing stimulation treatments per wellbore.

2. Subsequent reports will be prepared by DRI as additional data and information is gathered under Sections II.C through E. It is anticipated that additional reports will be prepared at the completion of the open hole logging analysis when specific target formations, depths and thicknesses are determined and upon obtaining wellbore analysis, which may include actual porosity and permeability information.

3. DRI will prepare a final report following hydraulic fracturing stimulations by NOBLE. The final report will include, when available, the use of microseismic data to refine, as appropriate, DRI's earlier hydraulic fracture growth projections. Subject to Section III.A, below, NDOM and NDEP may review any original reports prepared by DRI for Noble.

TABLE 1

Trade Name*	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)***	Maximum Ingredient Concentration in HF Fluid (% by mass)***	Comments
Fresh Water**			7732-18-5	100.00%	82.00000%	554,000 gals
Sand - White	Proppant - 100 mesh	Crystalline Silica, Quartz	14808-60-7	100.00%	4.00000%	10,000 lbs.
Sand - White	Proppant - 20/40 mesh	Crystalline Silica, Quartz	14808-60-7	100.00%	12.00000%	750,000 lbs.
GW-45LF	Liquid Gelling Agent	Petroleum Distillates	64742-47-8	5 gal/1000 gal	0.50000%	2,800 lbs.
High Perm CRB	Breaker	Ammonium Persulfate	7727-54-0	2.5 gal/1000 gal	0.25000%	1380 gals
HCl, 10.1 - 15%	Acidizing	Hydrochloric Acid	7647-01-0	15.00%	0.10000%	3750 gals
	Chemical Tracer	Inorganic salts	8028-77-1	1 ppm	0.01000%	
Ferrotrol 300L	Iron Control	Citric Acid	77-92-9	50 lbs./1000 gal	0.03600%	1670 lbs.
Potassium Chloride	Clay Stabilizer	KCL	7447-40-7	1.00%	1.00000%	45,000 lbs.
Frac-Cide 1000	Biocide	2,2-Dibromo-3-Nitrilopropionamide	10222-01-2	0.2 gal/1000 gal	0.00200%	1,100 gals
XLW-22C	Crosslinker	Triisopropanolamine	122-20-3	2.25 gal/1000 gal	0.22500%	1,200 gals
BF-9L	Buffer	Potassium Carbonate	584-08-7	0.5 gal/1000 gal	0.05000%	276 gals
NE-945W	Non-Emulsifier	Glycerine	56-81-5	1 gal/1000 gal	0.10000%	550 gals
CI-31	Corrosion Inhibitor	Formic Acid	64-18-6	0.5 ga/1000 gal	0.00034%	2 gals

* Specific chemical Trade Names will vary from company to company
** Total Water Volume sources may include fresh water, produced water, and/or recycled water
*** Information is based on the maximum potential for concentration and thus the total may be over 100%

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.

III. RESPONSIBILITIES.

A. NDOM and NDEP agree to the following:

1. Except for the final AQUA PROGRAM reports provided under Section II.F. prepared by DRI and shared with NDOM and NDEP, and specifically generated for public release pursuant to this MOU, NDOM and NDEP acknowledge and agree that all documents, studies, analyses, and other information in any form (including, without limitation, well logs, chemical tracer studies, micro-seismic data, 3D seismic data, and core data from well bores) provided by NOBLE, or DRI acting as NOBLE's consultant, to NDOM or NDEP will be reviewed by NDEP and/or NDOM to determine if confidential pursuant to NRS 445A.665(1) and/or NAC 522.540. The information will also be reviewed by NDEP and NDOM to determine if the information qualifies as confidential trade secrets pursuant to NRS 49.325 and NRS 600A.030(5). After review, if the information is determined to be confidential it is entitled to the protections provided in NRS 445A.665(1), NAC 522.540, NRS 49.325, and/or NRS 600A.030(5), and will be deemed "Confidential Information" for purposes of this agreement. NDEP and NDOM acknowledge that the Confidential Information is being released to NDEP and NDOM without waiving any of the protections of NRS Chapter 600A. NDEP and NDOM each agree to keep the Confidential Information confidential to the fullest extent permitted by law, to exclude the Confidential Information from the "public books" or "public records," as such terms are used in NRS 239.010, of such agency, and to protect the Confidential Information from disclosure as a public record. NDEP and NDOM acknowledge and agree that, except for the final AQUA PROGRAM reports provided under Section II.F, NOBLE does not intend to, and shall not be compelled to, release any Confidential Information to either NDEP or NDOM; provided, however, that NDEP and NDOM shall have the right to review such data as reasonably necessary to inform themselves of the basis for the final AQUA PROGRAM reports. NDEP and NDOM's respective review of NOBLE's data shall occur at the offices of NOBLE, or at such other locations reasonably agreed to between NOBLE and the reviewing agency. For the purpose of clarity, the purpose of this paragraph is to address the limited instances, if any, where Confidential Information is provided to NDEP or NDOM; this paragraph shall not be interpreted as creating an implied obligation of NOBLE to release any such Confidential Information.

2. Notwithstanding Section III.A.1, above, NDEP or NDOM, as the case may be (as applicable for the remainder of this paragraph, each, a "Public Body"), shall immediately notify NOBLE upon receipt of a public records request under NRS 239.0107 for any of the Confidential Information, and shall provide NOBLE with copies of any such public records requests within five (5) business days of Public Body's receipt of same. Unless specifically authorized by NOBLE, the Public Body subject to a records request for information previously deemed confidential by NDEP and/or NDOM shall decline to respond to such records

request on the grounds of confidentiality. However, if the Public Body subject to a records request believes that it is required by law to comply with such a records request, the Public Body shall comply with the provisions of Chapter 239 of the Nevada Revised Statutes in response to the request. The Public Body shall also provide NOBLE with a listing of the information the Public Body believes it is compelled to disclose.

3. NDOM and NDEP may use the data in the AQUA PROGRAM reports prepared under Section II.F, to support the development of a regulatory program to address relevant hydraulic fracturing considerations as outlined by Senate Bill No. 390 (77th Session, 2013).

B. DRI agrees to the following:

1. DRI, a non-profit environmental research arm of the Nevada System of Higher Education, will assist NOBLE non-exclusively in the data and information collection necessary for the AQUA PROGRAM as described in Section II, including the TRACER STUDY required by Section II.D.

2. Based on its scientific expertise, familiarity with the "waters of the State," and the data and information gathered by NOBLE during the EXPLORATION PHASE, DRI will develop a model appropriate for analyzing the fate and transport of hydraulic fracture stimulation chemicals left in the formation.

3. DRI will prepare the reports for the AQUA PROGRAM specified in Section II.F.

4. DRI shall comply with the confidentiality provisions of Sections III.A.1 and III.A.2, respectively, which provisions are hereby incorporated by reference in their entirety.

C. NOBLE agrees to the following:

1. NOBLE will provide DRI with access to all data and information gathered during the EXPLORATION PHASE.

2. NOBLE will cooperate with DRI in the development of the TRACER STUDY required under Section II.D.

3. NOBLE will use its best efforts to gather the additional well-bore data identified in Section II.E.

IV. MODIFICATION AND TERMINATION.

A. Modification. This MOU may be modified only by a written instrument executed by all four parties.

B. **Termination.** This MOU will terminate:

1. one (1) year after DRI submits the final report required by the AQUA PROGRAM; or

2. immediately upon NOBLE's decision to abandon or otherwise terminate temporarily or permanently the EXPLORATION PHASE; *provided* that NOBLE will undertake one (1) additional round of sampling within one (1) year of termination of the EXPLORATION PHASE as described in this Section IV.B.2.

3. Under no circumstances shall the term of this MOU exceed five (5) years.

V. POINTS OF CONTACT.

The parties to the MOU designate the following persons to be their official contact in matters related to this MOU. Any party may change its contact person upon written notice to the other parties. Any notice, request, demand, or other communication required or permitted to be given under this MOU shall be deemed to have been duly given, if in writing and delivered personally or sent by registered or certified mail or facsimile as follows:

A. **NDOM.**

NAME	**Rich Perry**
TITLE	**Administrator, NDOM**
ADDRESS	**400 W. King St. #106**
ADDRESS	**Carson City, NV 89703**
PHONE	**(775) 684-7040**
FAX	**(775) 684-7052**

B. **NDEP.**

NAME	**David Gaskin, P.E.**
TITLE	**Deputy Administrator, NDEP**
ADDRESS	**901 South Stewart Street, Ste 4001**
ADDRESS	**Carson City, NV 89701**
PHONE	**(775) 687-9302**
FAX	**(775)687-5856**

C. **DRI.**

NAME	**Dr. James Thomas**
TITLE	**Director, Division of Hydrologic Sciences**
ADDRESS	**2215 Raggio Parkway**
ADDRESS	**Reno, NV 89512**
PHONE	**(775) 673-7305**
FAX	**(775) 673-7397**

D. NOBLE.

NAME	Lee Hinman
TITLE	EHS&R Manager
ADDRESS	1625 Broadway, Suite 2200
ADDRESS	Denver, CO 80202
PHONE	(720) 587-2117
FAX	(303) 228-4286

VI. GENERAL PROVISIONS.

A. **Merger.** This MOU, together with any written modifications entered into pursuant hereto, contains all the terms and conditions agreed to by NDOM, NDEP, DRI, and NOBLE with respect to the AQUA PROGRAM. As between NOBLE and DRI, this MOU is intended to compliment, but not alter or amend, the terms and conditions of the CONSULTING AGREEMENT. In the event of a conflict between the terms and conditions of the CONSULTING AGREEMENT and the terms and conditions of this MOU (as applicable between DRI and NOBLE) the terms and conditions of the CONSULTING AGREEMENT shall control; provided, however, that notwithstanding the prior clause, the terms and conditions of the CONSULTING AGREEMENT shall not control if the application of such terms and conditions would limit or abrogate in any manner the confidentiality provisions of this MOU.

B. **Waiver.** No waiver of any provision of this MOU shall be effective unless made in writing and signed by the waiving party. No waiver of any provision of this MOU shall constitute a waiver of any prior, concurrent, or subsequent breach of the same or any other provision hereof.

B. **No Third-Party Beneficiaries.** This MOU does not create any new right or interest in any member of the public as a third-party beneficiary, nor shall it authorize anyone not a party to this MOU to maintain a suit for injuries or damages pursuant to the provisions of this MOU.

C. **Binding Effect.** This MOU shall be binding upon and inure to the benefit of the parties hereto and their respective legal representatives, successors, and assigns. The parties waive the defense of lack of consideration.

D. **Disputes.** NDOM, NDEP, DRI and NOBLE agree that in the event of a dispute between them regarding any provision of this MOU other than Section IV.B.2, they shall promptly use their best efforts to resolve the dispute in an informal fashion through communication and consultation, or through non-binding arbitration; however, in the event any dispute cannot be resolved the terms and conditions of this MOU or any subsequent modification hereto shall remain in full force and effect.

E. **Transfer.** This MOU may be transferred by NOBLE in the event NOBLE transfers its leases in Elko County, Nevada.

F. Duplicate Originals. This MOU may be executed by facsimile signatures and in counterparts, each of which when so executed shall constitute an original, and all of which taken together shall constitute one and the same document. This MOU may be executed in any number of duplicate originals. A complete original of this MOU, and any duly executed modifications, shall be maintained in the official records of each party to this MOU.

IN WITNESS WHEREOF, NDOM, NDEP, DRI and NOBLE have executed this MOU on the date(s) set forth below:

STATE OF NEVADA acting by and through the Commission on Mineral Resources, Division of Minerals

BY: Mike Visher - acting administrator

DATE: 10/30/2013

STATE OF NEVADA acting by and through the Department of Conservation and Natural Resources, Division of Environmental Protection

BY: _____

DATE: _____

STATE OF NEVADA acting by and through the System of Higher Education, Desert Research Institute

BY: _____

DATE: _____

NOBLE ENERGY, INC.

BY: _____

DATE: _____

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STATE OF NEVADA acting by and through the Commission on Mineral Resources, Division of Minerals

BY: _____

DATE: _____

STATE OF NEVADA acting by and through the Department of Conservation and Natural Resources, Division of Environmental Protection

BY: _____

DATE: 11/4/13

STATE OF NEVADA acting by and through the System of Higher Education, Desert Research Institute

BY: _____

DATE: _____

NOBLE ENERGY, INC.

BY: _____

DATE: _____

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STATE OF NEVADA acting by and through the Commission on Mineral Resources, Division of Minerals

BY: _____

DATE: _____

STATE OF NEVADA acting by and through the Department of Conservation and Natural Resources, Division of Environmental Protection

BY: _____

DATE: _____

The Board of Regents of the Nevada System of Higher Education on behalf of the Desert Research Institute

BY: Alan W. Gertler

DATE: 31 October 2013

NOBLE ENERGY, INC.

BY: _____

DATE: _____

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STATE OF NEVADA acting by and through the Commission on Mineral Resources, Division of Minerals

BY: _____

DATE: _____

STATE OF NEVADA acting by and through the Department of Conservation and Natural Resources, Division of Environmental Protection

BY: _____

DATE: _____

STATE OF NEVADA acting by and through the System of Higher Education, Desert Research Institute

BY: _____

DATE: _____

NOBLE ENERGY, INC.

BY: Kevin Vorhaben DD 10/10/13
Kevin Vorhaben
Rockies/Frontier Business Unit Mgr.

DATE: 10/16/2013