



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Great Plains Regional Office
115 Fourth Avenue S.E.
Aberdeen, South Dakota 57401



IN REPLY REFER TO:
DESCRM
MC-208

FEB 23 2012

MEMORANDUM

TO: Superintendent, Fort Berthold Agency

FROM: ^{ACTING} Regional Director, Great Plains Region

SUBJECT: Supplemental to Environmental Assessment

In compliance with the regulations of the National Environmental Policy Act (NEPA) of 1969, as amended, for the proposed Supplemental for information tiering off of existing Environmental Assessment for EOG Resources Inc., LLC, to drill a second well on each of the following existing well pads: Mandaree 05-16H, Mandaree 12-07H, and Clarks Creek 02-17H. No additional surface disturbance is proposed for areas beyond the existing well pads. This document is tied to the Environmental Assessment EOG Resources, Inc. Proposed Nine Exploratory Wells: Mandaree 02-09H, Mandaree 04-15H, Mandaree 05-16H, Mandaree 06-20H, Mandaree 12-07H, Bear Den 08-21H, Clarks Creek 01-21H, Clarks Creek 03-08H, and Riverview 01-32H (January 2010). EOG Resources, Inc Ten Exploratory Oil Wells From Four Well Pads: Horse Camp 02-11H, Horse Camp 03-16H, Bear Den 03-30H, and Clarks Creek 02-17H. A Categorical Exclusion has been completed.

All the necessary requirements of the National Environmental Policy Act have been completed. Attached for your files is a copy of the Categorical Exclusion.

If you have any questions, please call Marilyn Bercier, Regional Environmental Scientist, Division of Environment, Safety and Cultural Resources Management, at (605) 226-7656.

Attachment

cc: Tex Hall, Three Affiliated Tribes (with attachment)
Elgin Crows Breast, THPO (with attachment)
Derek Enderud, BLM, Dickinson, ND (with attachment)
LB Myers, EOG Resources, (with attachment)
Jeffrey Hunt, Fort Berthold Agency



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EXCEPTION CHECKLIST FOR BIA CATEGORICAL EXCLUSIONS

Project: EOG Resources Inc. proposes to drill three additional wells Date: 2/21/2012

Nature of Proposed Action: To authorize EOG Resources Inc., to drill a second well on each of the following existing well pads: Mandaree 05-16H, Mandaree 12-07H, and Clarks Creek 02-17H. No additional surface disturbance is proposed for areas beyond the existing well pads. This document is tied to the Environmental Assessment EOG Resources, Inc. Proposed Nine Exploratory Wells: Mandaree 02-09H, Mandaree 04-15H, Mandaree 05-16H, Mandaree 06-20H, Mandaree 12-07H, Bear Den 08-21H, Clarks Creek 01-21H, Clarks Creek 03-08H, and Riverview 01-32H (January 2010). EOG Resources, Inc Ten Exploratory Oil Wells From Four Well Pads: Horse Camp 02-11H, Horse Camp 03-16H, Bear Den 03-30H, and Clarks Creek 02-17H.

Exclusion category and number: 516 DM 10.5 F (1)

Evaluation of Exceptions to use of Categorical Exclusion:

1. This action would have significant adverse effects on public health or safety. No Yes
2. This action would have an adverse effect on unique geographical features, such as wetlands, wild or scenic rivers, refuges, floodplains, rivers placed on nationwide river inventory, or prime or unique farmlands. No Yes
3. The action will have highly controversial environmental effects. No Yes
4. The action will have highly uncertain environmental effects or involve unique or unknown environmental risks. No Yes
5. This action will establish a precedent for future actions. No Yes
6. This action is related to other actions with individually insignificant, but cumulatively significant environmental effects. No Yes
7. This action will affect properties listed or eligible for listing in the National Register of Historic Places. No Yes

8. This action will affect a species listed, or proposed to be listed as endangered or threatened. No X Yes _____

9. This action threatens to violate federal, state, local or tribal law or requirements imposed for protection of the environment. No X Yes _____

10. This action will have a disproportionately high and adverse effect on low income or minority populations. No X Yes _____

11. This action will limit access to, and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners, or significantly adversely affect the physical integrity of such sacred sites. No X Yes _____

12. This action will contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area, or may promote the introduction, growth, or expansion of the range of such species. No X Yes _____

A "yes" to any of the above exceptions will require that an EA be prepared.

NEPA Action - - - CE X EA _____

Preparer's Name and Title: Jeffrey Davis, Environmental Protection Specialist

Regional Archeologist Concurrence with Item 7 Canyon N, MS under

Concur: Jeffrey Davis
Regional Office/Agency Environmental Coordinator

Date: 2-21-2012

Concur: Tim Lapointe
ACTING Regional Director/Superintendent

Date: 2-23-2012

**ENVIRONMENTAL ASSESSMENT
Supplement**

**United States Department of the Interior
Bureau of Indian Affairs**

**Great Plains Regional Office
Aberdeen, South Dakota**



EOG Resources, Inc.

**Addendum to Environmental Assessment to Authorize an Additional Well on the
Mandaree 05-16H, Mandaree12-07H, & Clarks Creek 02-17H Well Pads
for the Purpose of Drilling Three Wells**

Fort Berthold Indian Reservation

February 2012

For information contact:
Bureau of Indian Affairs, Great Plains Regional Office
Division of Environment, Safety and Cultural Resources Management
115 4th Avenue SE, Aberdeen, South Dakota 57401
(605) 226-7656

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1. Purpose and Need for the Proposed Action

EOG Resources, Inc. (EOG) proposes to drill three additional oil and gas wells from three existing well pads in order to develop productive subsurface formations underlying oil and gas leases by EOG within the Fort Berthold Indian Reservation (Reservation). Assuming oil will be produced in paying quantities, production facilities would be installed at the referenced locations and commercial quantities of oil would be transported to market via trucks or pipelines. These developments have been proposed on lands held in trust by the United States in McKenzie County, North Dakota (Figures 1 and 2). The Bureau of Indian Affairs (BIA) is the surface management agency for potentially affected tribal lands and individual allotments. The BIA manages surface lands held in title by the tribe and tribal members and subsurface mineral rights associated with the surface ownership. The proposed wells would target specific areas of known oil reserves located in the Bakken or Three Forks formations.

The purpose of the proposed action is to authorize EOG to drill a second well on each of the following existing well pads: Mandaree 05-16H, Mandaree 12-07H, and Clarks Creek 02-17H (Figures 1 and 2). All surface disturbing activities associated with the three additional wells will be contained within previously disturbed areas and no new disturbance will occur. EOG also proposes installing underground utilities, such as electrical and fiber optic lines within the existing disturbance of the access road rights-of-way (ROW). my

2. Authorities

Oil and gas exploration and development activities are conducted under authority of the Indian Mineral Leasing Act of 1938 (25 United States Code [USC] 396a, et seq.), the Indian Mineral Development Act of 1982 (25 USC 2101, et seq.), and the Energy Policy Act of 2005 (42 USC 15801, et seq.).

3. Legal Land Description for Proposed Action

The Mandaree 05-16H well pad is located 2 miles southwest of Mandaree, North Dakota, in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 16, Township 149 North, Range 94 West, McKenzie County, North Dakota (Figure 1). The proposed Mandaree 103-1615H well will have a bottom hole located approximately 4,285 feet south and 6,894 feet east of the surface location, in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 15, Township 149 North, Range 94 West, McKenzie County.

The Mandaree 12-07H well pad is located 3.8 miles west of Mandaree, North Dakota, in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 07, Township 149 North, Range 94 West, McKenzie County, North Dakota (Figure 1). The proposed Mandaree 15-07H well will have a bottom hole located approximately 4,570 feet north and 1,450 feet west of the surface location, in the NW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 07, Township 149 North, Range 94 West, McKenzie County.

The Clarks Creek 02-17H well pad is located 15 miles northwest of Mandaree, North Dakota, in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 17, Township 151 North, Range 94 West, McKenzie County, North Dakota (Figure 2). The proposed Clarks Creek 103-07H well will have a bottom hole located approximately 4,400 feet south and 640 feet east of the surface location, in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 17, Township 149 North, Range 94 West, McKenzie County.

4. Scope of Work for Proposed Action

EOG proposes drilling an additional well on three existing well pads and installing underground pipelines and utilities within the existing access road ROW's. There will be no additional disturbance to the existing well pads or access roads.

Underground utilities including but not limited to fiber optic and power lines would be installed within the existing access road ROW and no new disturbance will occur as a result of the construction and installation activities.

Multiple underground pipelines including natural gas, oil, and water gathering lines from wells would be installed in the existing access road ROW. Gathering lines would be connected to trunk lines approved under other NEPA documents. All pipelines are clearly marked following the U.S. Department of Transportation's (USDOT's) rules and regulations, 49 CFR Parts 192 and 195. Markers would be placed within 1,000 feet of one another, at all public road crossings, railroad crossings, creek crossings, fence crossings, and at all points of major direction change.

Gathering lines are designed and sized to prevent erosion—which is an internal pipe condition caused by excessive abrasion of fine particles in the pipeline system or by excessive velocity of the transported product—by a safety factor of approximately two. Based on these criteria, the oil and gas pipelines would be steel and 12 inches or less in diameter and the water pipelines would be Fiberspar and 6 inches or less in diameter. The gathering lines would be coated with between 14 and 16 millimeters of fusion bonded epoxy, which helps protect the pipelines against corrosive elements in the soil. Field joints are also protected by shrink sleeves. Specialty coatings are also used, as applicable, for underground fittings and bore crossings, to provide additional levels of protection from leakage or corrosion. The coating and shrink sleeves are inspected thoroughly at the time of installation, both visually and electronically.

To prevent potential erosion or rupturing of the pipeline within critical areas near Lake Sakakawea or in drainages, the placement and bore depth of gathering lines is designed based on soil types in the area and surface drainage area within the vicinity of the bore. Gathering lines will be bored underneath drainages at a minimum depth of 8 feet. Additionally, bore pipes will be coated with specialty abrasion-resistant coating that provides substantial protection on the off chance that large erosion or flooding events occur.

Pipelines are also equipped with check valves and manual valves between the trunk line and gathering line, or lateral line, which provide connections to help limit the volume of potential spills. A Spill Response Plan (Plan) for pipeline construction and operation activities has been developed and will be followed by EOG and the pipeline installation company. The Plan includes spill prevention measures and monitoring protocols, notification procedures, spill detection and on-scene spill mitigation procedures, response activities, contacts, training and drill procedures, and response plan review and update procedures. EOG and the pipeline installation company are committed to adhering to the Plan as well as the procedures and requirements set forth by federal law (49 CFR Part 194).

Following installation of the gathering lines, the lines will be cleaned and inspected via internal tools (e.g., cleaning pigs and smart pigs), which helps to identify issues in the pipes.

Hydrostatic testing is conducted to ensure that there is no leakage of the pipe. A cathodic survey using test stations, rectifier pads, and other means designed by cathodic protection specialists is also conducted. Any stress or damage issues identified in the pipelines can be quickly identified and remedied prior to backfill. Throughout the life of the gathering lines, an appropriate amount of cathodic active current is placed on pipeline segments and monitored in accordance with the strict pipeline safety requirements set forth in the USDOT's rules and regulations. In order to assure the quality of the installation and the effectiveness of its corrosion control systems, pig launchers and receivers are also installed on the trunk lines and primary laterals to identify pipeline conditions both internally and externally, in order to maintain the integrity.

Following trench backfilling and compaction, disturbed areas would be restored to the original land contour and the subsoil on the working side of the ROW and other work areas would be ripped to alleviate compaction. Topsoil would be redistributed over the ROW and graded and erosion control measures would be installed as appropriate. Replaced topsoil would be left in a roughened condition to discourage erosion and additional stabilization techniques may be required on steeper slopes, in areas that have highly erodible soils, and in areas adjacent to, or within, drainages. No unnatural depressions would be left that would trap water or form ponds; the trench would be compacted at 1- to 2-foot lifts to avoid subsidence. In no instance would the ROW or expanded work areas be lower than the natural grade.

No reclamation work would be completed when soils are frozen or overly wet and no depressions would be left to trap water or form ponds. If construction is stopped before interim reclamation can be completed due to winter weather conditions, the topsoil will be respread over the ROW after the trench is backfilled and matting or straw will be placed over the all bare ground as a barrier to aid in the prevention of subsidence. If construction is planned for winter months, the trench will be partially filled with useable, non-frozen, backfill soil to the extent possible. The trench would be backfilled and the topsoil distributed as soon as practicable after the soil has defrosted. Topsoil piles would be covered to eliminate the potential for rill erosion and subsequent loss of soil during spring snow melt and precipitation events.

5. Surveys for Proposed Action

SWCA Environmental Consultants (SWCA) conducted a cultural resource inventory of the Mandaree 05-16H and Mandaree 12-07H well pads and associated access roads using an intensive pedestrian methodology. Approximately 20.09 acres were inventoried for the Mandaree 05-16H well pad on September 22, 2009 (Higgins 2009¹) and approximately 13.03 acres were inventoried for the Mandaree 12-07H well pad on September 23, 2009 (Higgins 2009¹). No cultural resources were observed during the course of the inventory.

SWCA conducted natural resource surveys for threatened and endangered species, migratory birds, bald and golden eagles, and wetlands for the Mandaree 05-16H on September 22, 2009

¹ Higgins, Courtney 2009. A Class I and Class III Cultural Resource Inventory of the EOG Resources, Inc. Mandaree 05-16H Well Pad and Access Road, Fort Berthold Indian Reservation, McKenzie County, North Dakota (November 17, 2009).

¹ Higgins, Courtney 2009. A Class I and Class III Cultural Resource Inventory of the EOG Resources, Inc. Mandaree 12-07H Well Pad and Access Road, Fort Berthold Indian Reservation, McKenzie County, North Dakota (November 17, 2009).

and for the Mandaree 12-07H on September 23, 2009. Representatives from the BIA and Bureau of Land Management were present during the site visit. No protected species were observed during the survey.

SWCA Environmental Consultants (SWCA) conducted a cultural resource inventory of approximately 9.39 acres for the Clarks Creek 02-17H well pad and associated access road on May 19, 2010 (Higgins 2009²). A previously recorded sparse material cultural scatter was located nearby however due to the poor integrity of the site it was not recommended for nomination to the NRHP and no further work was recommended. Representatives from the BIA and Bureau of Land Management were present during the site visit. SWCA also conducted natural resource surveys for threatened and endangered species, migratory birds, bald and golden eagles, and wetlands that same day and no protected species were observed during the survey.

6. Potential Effects

Potential impacts to cultural resource sites would occur as a result of direct disturbance and/or the loss of sites eligible for the National Register of Historic Places. Further, potential impacts to natural resources may include the loss of native vegetation and wildlife habitats; soil removal and mixing; and erosion during construction. However, potential impacts as a result of the proposed action were mitigated via previous field surveys and subsequent avoidance of any eligible cultural resource sites within the proposed pad expansion, implementing erosion control features, completing reclamation of the disturbed areas with native grasses and other appropriate native vegetation, and stockpiling and re-using topsoil for reclamation. The proposed action would maintain a single access and single pad for the each location. Optimizing a multi-well pad design minimizes the overall land use impacts compared to the disturbance from multiple well pads and access roads.

Potential indirect impacts to natural resources include noise and other disturbances to wildlife during construction and the introduction of noxious weeds. Impacts would be mitigated through avoidance of any federally listed threatened or endangered species or wetlands, avoidance of nesting migratory birds, implementing best management practices to control the introduction of noxious weeds, and minimizing the length of time between construction and reclamation. Based on resource survey findings, the supplementary assessment of the potential impacts of the proposed action, and the mitigation measures committed to by EOG, no significant impacts to natural and cultural resources are anticipated.

7. Applicable NEPA Document(s)

Environmental Assessment: EOG Resources, Inc. Proposed Nine Exploratory Wells: Mandaree 02-09H, Mandaree 04-15H, Mandaree 05-16H, Mandaree 06-20H, Mandaree 12-07H, Bear Den 08-21H, Clarks Creek 01-21H, Clarks Creek 03-08H, and Riverview 01-32H (January 2010). EOG Resources, Inc. Ten Exploratory Oil Wells From Four Well Pads: Horse Camp 02-11H, Horse Camp 03-16H, Bear Den 03-30H, and Clarks Creek 02-17H.

² Higgins, Courtney 2010. A Class I and Class III Cultural Resource Inventory of the EOG Resources, Inc. Clarks Creek 02-17H Well Pad and Access Road, Fort Berthold Indian Reservation, McKenzie County, North Dakota (July 26, 2010).

8. NEPA Adequacy Criteria

This document has identified two previously prepared NEPA documents, *EOG Resources, Inc. Proposed Nine Exploratory Wells: Mandaree 02-09H, Mandaree 04-15H, Mandaree 05-16H, Mandaree 06-20H, Mandaree 12-07H, Bear Den 08-21H, Clarks Creek 01-21H, Clarks Creek 03-08H, and Riverview 01-32H (January 2010)* and *EOG Resources, Inc. Ten Exploratory Oil Wells From Four Well Pads: Horse Camp 02-11H, Horse Camp 03-16H, Bear Den 03-30H, and Clarks Creek 02-17H* which adequately describe the environmental consequences of the newly proposed action described herein, and meets the following NEPA Adequacy Criteria.

1. The proposed action is substantially the same action and at the site specifically analyzed in the existing NEPA document.
2. The range of alternatives is reasonable with respect to the current proposed action in the existing NEPA document, which appropriately considers and analyzes current environmental concerns, interests, and resource values.
3. The existing analysis and conclusions are adequate in the existing NEPA document. The analysis is still valid in light of new studies or resource assessment information.
4. The methodology and analytical approach used in the existing NEPA document continues to be appropriate for the proposed action.
5. The direct and indirect impacts of the proposed action are unchanged from those identified in the existing NEPA document.
6. The cumulative impacts that would result from implementation of the proposed action are unchanged from those analyzed in the existing NEPA document.
7. A 30-day comment period involving public input and interagency review was used in the development of the existing NEPA document.

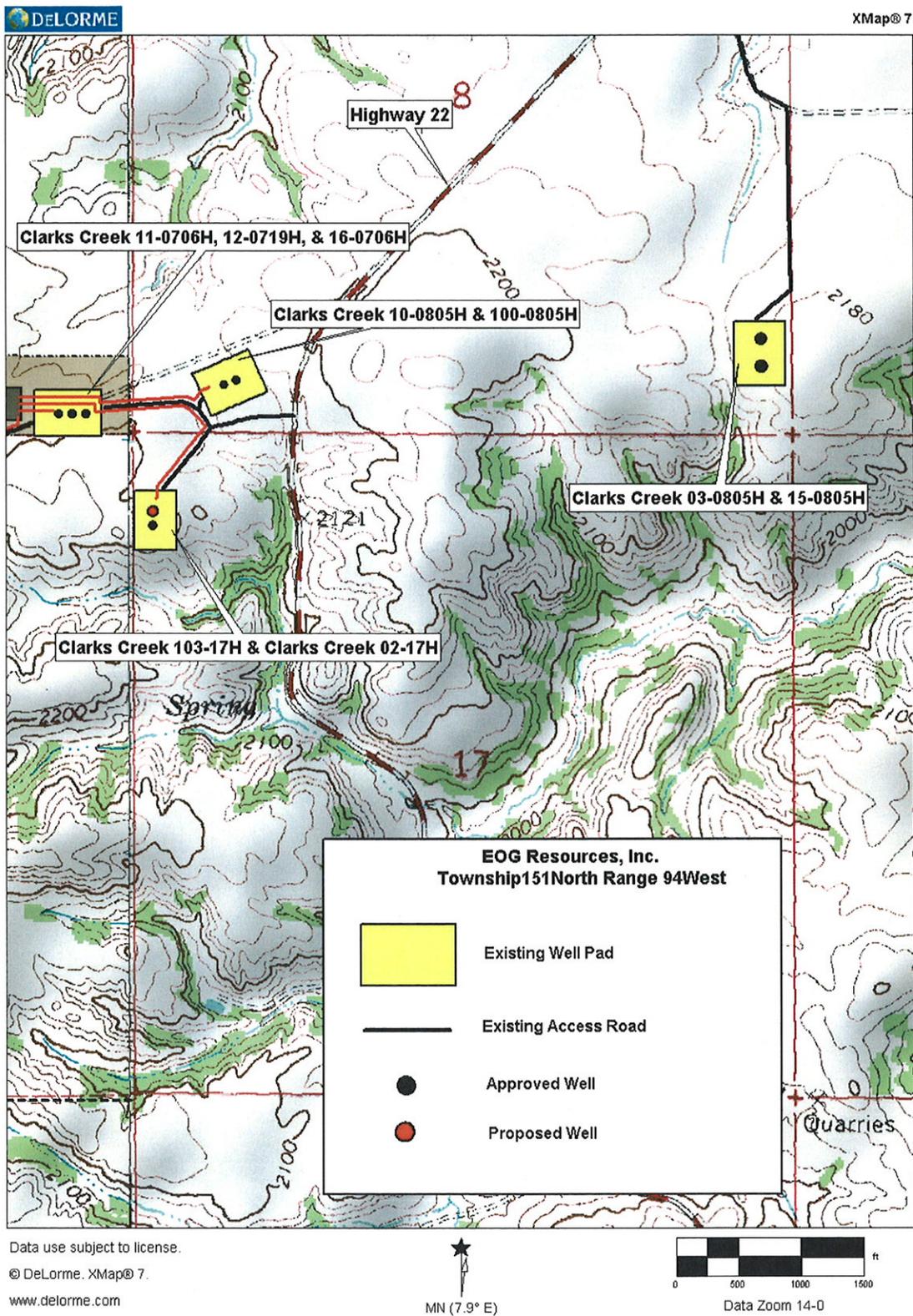
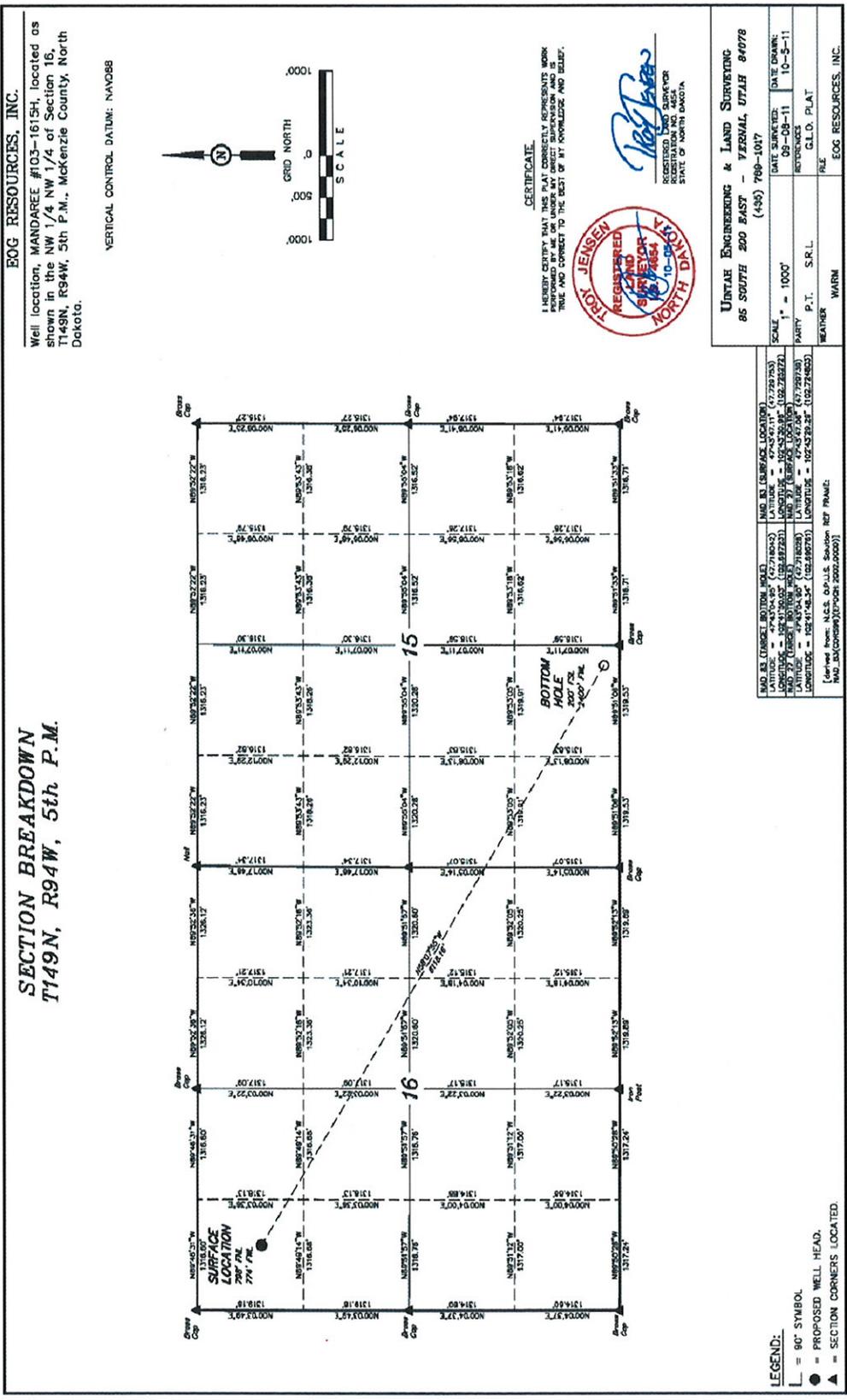


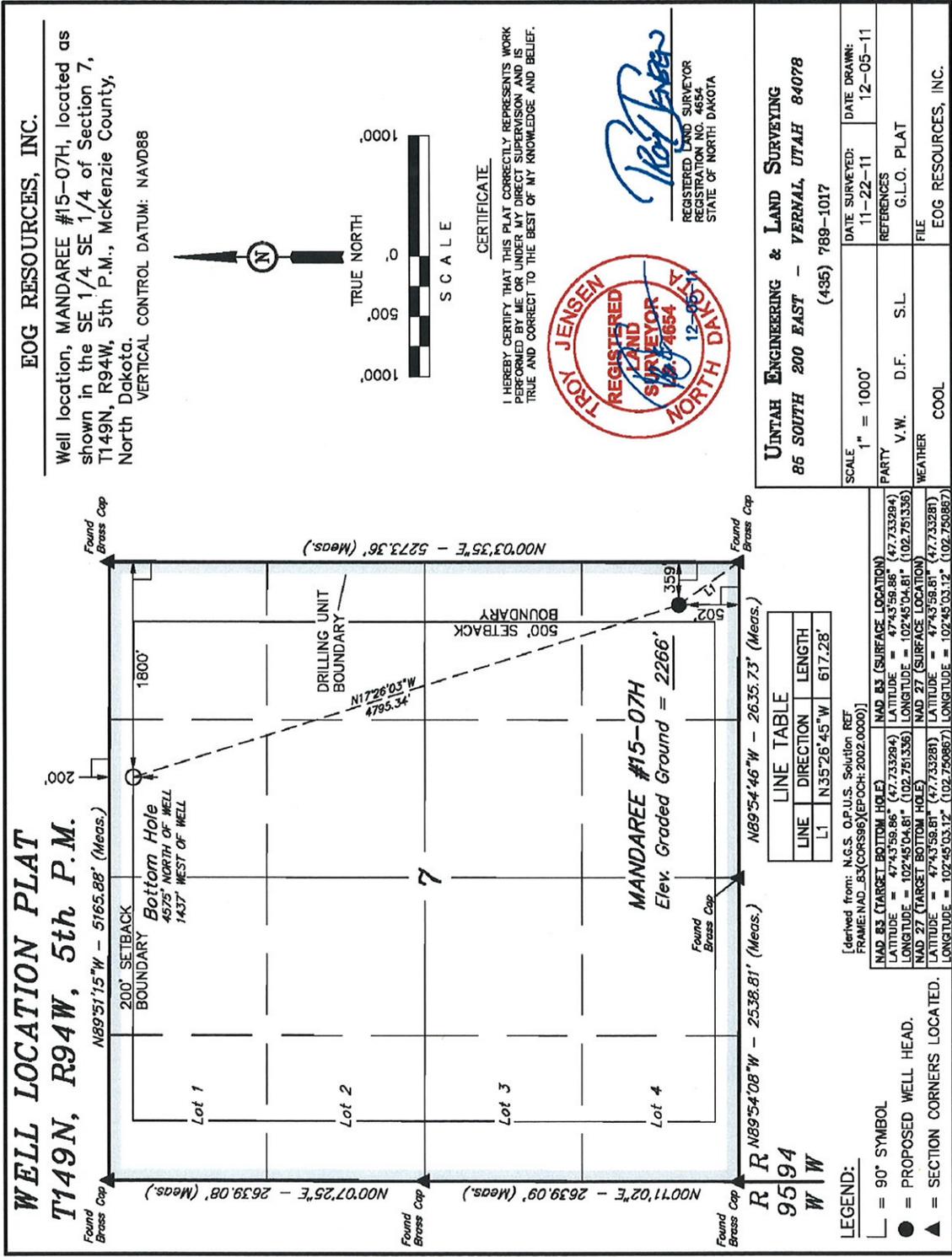
Figure 2. Proposed Clarks Creek 103-17H Location

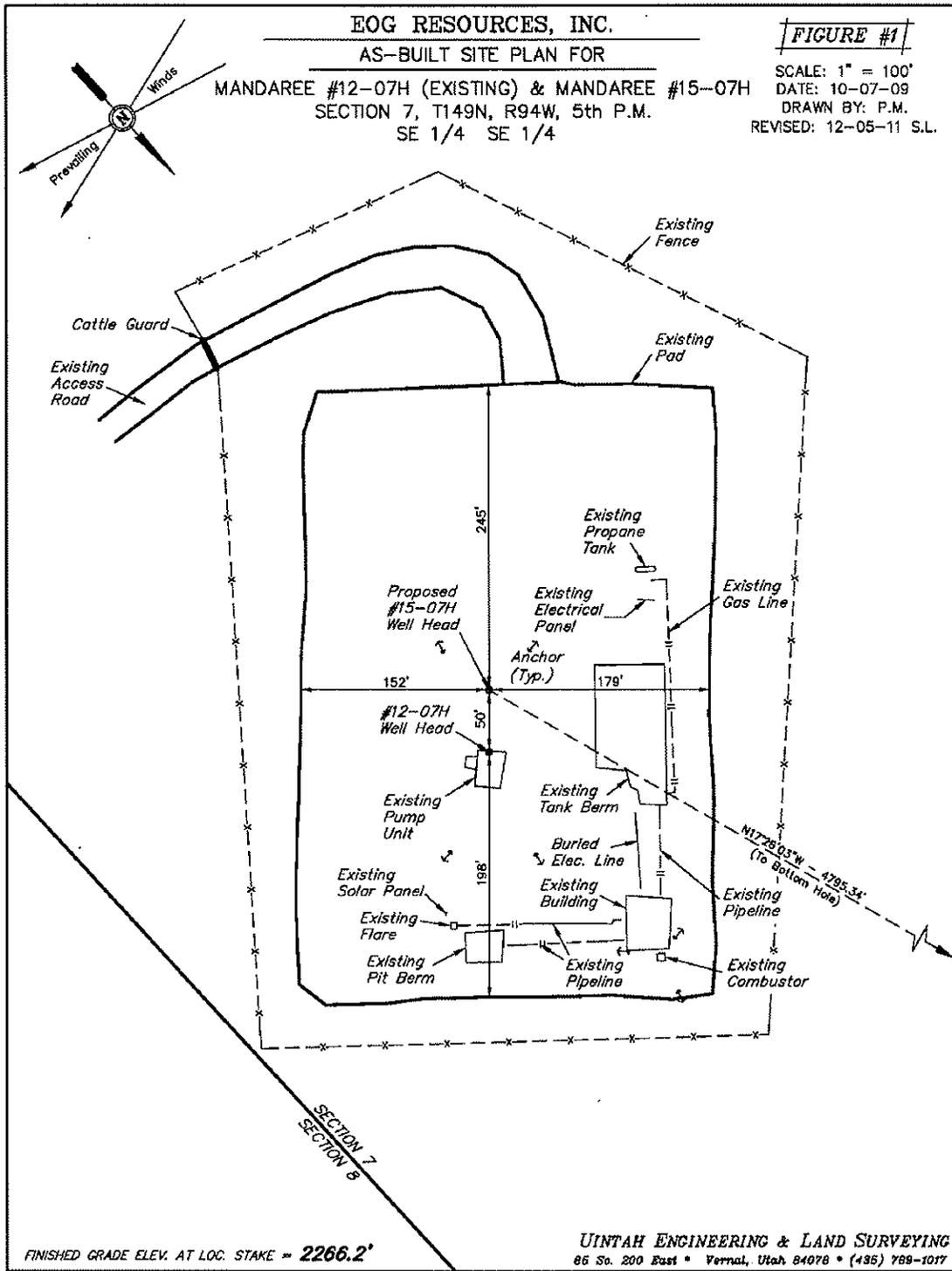
APPENDIX A
Mandaree 05-16H & 103-1615H
Well Pad Layout and Spacing Unit Plat

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APPENDIX B
Mandaree12-07H & 15-07H
Well Pad Layout and Spacing Unit Plats





APPENDIX C
Clarks Creek 02-17H & 103-17H
Well Pad Layout and Spacing Unit Plats

