

**ENVIRONMENTAL ASSESSMENT
Addendum**

United States Bureau of Indian Affairs

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



Zenergy Operating Company, LLC

**Addendum to
Two Bakken Formation Exploratory Wells at Two Locations:**

**Nathan Hale #3-18H
Alisia Fox #16-9H**

Fort Berthold Indian Reservation

September 2009

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

Finding of No Significant Impact

Zenergy Operating Company, LLC (Zenergy)

**Addendum to
Nathan Hale #3-18H
Alisia Fox #16-9H**

**Fort Berthold Indian Reservation
Dunn and McKenzie Counties North Dakota**

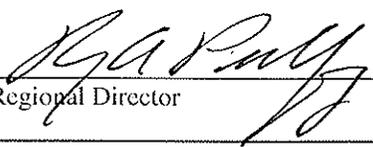
The U.S. Bureau of Indian Affairs (BIA) has received a proposal for an addendum to two exploratory oil/gas wells, access roads and related infrastructure on the Fort Berthold Indian Reservation to be located in Section 18, Township 149N, Range 93W, 5th P.M. and Section 9, Township 149N, Range 93W, 5th P.M. Associated federal actions by BIA include determinations of effect regarding cultural resources, approvals of leases, rights-of-way and easements, and a positive recommendation to the Bureau of Land Management regarding the Applications for Permit to Drill.

Potential of the proposed actions to impact the human environment is analyzed in the attached addendum to an existing Environmental Assessment (EA), as required by the National Environmental Policy Act. Based on the recently completed addendum to the EA, I have determined that the proposed project will not significantly affect the quality of the human environment. No Environmental Impact Statement is required for any portion of the proposed activities.

This determination is based on the following factors:

1. Agency and public involvement was solicited and environmental issues related to the proposal were identified.
2. Protective and prudent measures were designed to minimize impacts to air, water, soil, vegetation, wetlands, wildlife, public safety, water resources, and cultural resources. The remaining potential for impacts was disclosed for both the proposed action and the No Action alternative.
3. Guidance from the U.S. Fish and Wildlife Service has been fully considered regarding wildlife impacts, particularly in regard to threatened or endangered species.
4. The proposed actions are designed to avoid adverse effects to historic, archaeological, cultural and traditional properties, sites and practices. Compliance with the procedures of the National Historic Preservation Act is complete.
5. Environmental justice was fully considered.
6. Cumulative effects to the environment are either mitigated or minimal.
7. No regulatory requirements have been waived or require compensatory mitigation measures.
8. The proposed projects will improve the socio-economic condition of the affected Indian community.

ACTING


Regional Director

9/8/09
Date

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1. Purpose and Need for the Proposed Action

Zenergy is proposing to drill two exploratory oil and gas wells on the Fort Berthold Indian Reservation to evaluate and possibly develop the commercial potential of natural resources. Developments have been proposed on land held in trust by the United States in Dunn and McKenzie counties, North Dakota. The BIA is the surface management agency for potentially affected tribal lands and individual allotments. The BIA also holds title to subsurface mineral rights. The economic development of available resources and associated BIA actions are consistent with BIA's general mission. Leasing and development of mineral resources offers substantial economic benefits to both the Three Affiliated Tribes of the Mandan, Hidatsa, and Arikara Nation and to individual tribal members.

The purpose of the proposed actions is to authorize the land use by Zenergy for the construction and installation of gathering pipelines to transport product and waste from productive wells. Installation would include three pipelines, each 4 inches in diameter, to transport oil, gas, and produced water from wells to markets and disposal facilities. All gathering lines are to be buried within the access roads rights-of-way (ROWS) leading to the wells.

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 Descriptions of Proposed Action:

Nathan Hale #3-18H gathering lines would be located on federal land along the west side of the well pad access road approximately 2.5 miles east of North Dakota Highway 22, in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 18, Township 149N, Range 93W, 5th P.M. (Figure 1). Alisia Fox #16-9H gathering lines would be located on federal and fee land along the north side of the well pad access road off of BIA Route 10, approximately 4.0 miles east of North Dakota Highway 22, in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ (federal) and SE $\frac{1}{4}$ SW $\frac{1}{4}$ (fee) of Section 9, Township 149N, Range 93W, 5th P.M. (Figure 2).

4. Scope of Work for Proposed Action

Zenergy proposes to construct and install oil, gas, and water gathering pipelines on federal and fee land to tie two wells located on individual well pads into existing Arrow Trunk Pipelines. The majority of construction and installation activities would take place on federal land; however, a small portion of related activities would occur on fee land in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 9, Township 149N, Range 93W. Oil, gas, and water pipelines would be buried together in one trench parallel to the well pad access roads. Oil and gas pipelines would be 4 inches in diameter and constructed of steel. Water pipelines would be 4 inches in diameter and constructed of Fiberspar[®]. Approximately 95 feet of oil line, 324 feet of gas line, and 154 feet of water line would be needed for the Nathan Hale #3-18H location (Appendix A). In addition to well pad disturbance, surface disturbance for Nathan Hale #3-18H would be approximately 0.070 acre of construction disturbance and 0.035 acre of permanent disturbance (Figure 1). Approximately 2,628 feet of oil line, 2,964 feet of gas line, and 2,827 feet of water line would be needed for the Alisia Fox #16-9H location (Appendix A). In addition to well pad disturbance, surface disturbance for Alisia Fox #16-9H gathering pipelines would be approximately 5.40 acres of construction disturbance and 2.70 acres of permanent disturbance (Figure 2). Gathering pipelines would be installed adjacent to well pad access roads, and all construction and permanent surface disturbance would occur within previously approved access road ROWs and well pads.

5. Applicable National Environmental Policy Act (NEPA) Document(s)

Environmental Assessment: Zenergy Dakota-3 Nathan Hale #3-18H, Alisia Fox #16-9H. October 2008.

6. Other Relevant Documentation

1) Environmental Assessment: Arrow Midstream Holdings Pipelines and Utilities. March 2009. 2) Amended Right-of-Way Permit 299 for Zenergy Dakota-3 Nathan Hale #3-18H, Alisia Fox #16-9H.

7. NEPA Adequacy Criteria

This document has identified a previously prepared NEPA document, *Environmental Assessment: Zenergy Dakota-3 Nathan Hale #3-18H, Alisia Fox #16-9H (October 2008)*, which adequately describes 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.

8. Cultural Resources

Cultural resource inventories of these well pads and access roads were conducted by personnel of SWCA Environmental Consultants, using an intensive pedestrian methodology. For the Nathan Hale #3-18H project approximately 10.43 acres were intensively inventoried on July 14, 2008 (Ferris 2008a). For the Alisia Fox project approximately 15.88 acres were inventoried (Ferris 2008b). No historic properties were located within these project areas that appear to possess the quality of integrity and meet at least one of the criteria (36 CFR 60.6) for inclusion on the National Register. As the lead federal agency, and as provided for in 36 CFR 800.5, on the basis of the information provided, BIA reached a determination of **no historic properties affected** for these undertakings. This determination was communicated to the THPO on September 19, 2008, and the THPO concurred on October 6, 2008 (see below). The project additions covered in this EA Addendum are within the areas covered by these cultural resource inventories. Likewise, the tie-in from the Nathan Hale #3-18H well pad is to the Arrow Midstream Pipeline, for which a cultural resource inventory was conducted by personnel of SWCA Environmental Consultants on November 17-25, 2008 (Markman *et al.* 2009). A **no adverse effect** determination was communicated to the THPO for this project on February 18, 2009, with which the THPO concurred on that same day.

Ferris, Kade M.

(2008) CR Inventory of the Zenergy Incorporated Nathan Hale 3-18H Well Pad on the Fort Berthold Reservation, Dunn County, North Dakota. SWCA Environmental Consultants for Zenergy Inc. Tulsa, OK.

Ferris, Kade M.

(2008) CR Inventory of the Zenergy Incorporated Alicia Fox 16-9H Well Pad on the Fort Berthold Reservation, Dunn County, North Dakota. SWCA Environmental Consultants for Zenergy Inc. Tulsa, OK.

Markman, Jon M., Kade M. Ferris, Erin Salisbury and Scott Slessman

(2009) A Class I and Class III Cultural Resource Inventory of the Proposed Arrow Pipeline and Compressor Station in McKenzie and Dunn Counties, North Dakota. SWCA Environmental Consultants for Arrow Midstream Holdings LLC, Tulsa, OK.



IN REPLY REFER TO:
DESCRM
MC-208

United States Department of the Interior

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



SEP 17 2008

Perry No Tears Brady, THPO
Mandan, Hidatsa and Arikara Nation
PO Box 429
Parshall, North Dakota 58770

Dear Mr. Brady:

We have considered the potential effects on cultural resources of three oil well pads and access roads in Dunn County, North Dakota. Approximately 76.77 acres were intensively inventoried using a pedestrian methodology. Potential surface disturbances are not expected to exceed the areas depicted in the enclosed reports. No historic properties were located that appear to possess the quality of integrity and meet at least one of the criteria (36 CFR 60.4) for inclusion on the National Register of Historic Places. No resources are known to be present that appear to qualify for protection under the American Indian Religious Freedom Act (16 USC 1996).

As the surface management agency, and as provided for in 36 CFR 800.5, we have therefore reached a determination of **no historic properties affected** for these undertakings. Catalogued as **BIA Case Number AAO-1562/FB/08**, the proposed undertakings, locations, and project dimensions are described in the following reports:

- (2008) CR Inventory of the Zenergy Incorporated Nathan Hale 3-18H Well Pad on the Fort Berthold Reservation, Dunn County, North Dakota. SWCA Environmental Consultants for Zenergy Inc., Tulsa, OK.
- (2008) CR Inventory of the Zenergy Incorporated Alicia Fox 16-9H Well Pad on the Fort Berthold Reservation, Dunn County, North Dakota. SWCA Environmental Consultants for Zenergy Inc., Tulsa, OK.
- (2008) CR Inventory of the Zenergy Incorporated Nathan Hale 4-25H Well Pad on the Fort Berthold Reservation, Dunn County, North Dakota. SWCA Environmental Consultants for Zenergy Inc., Tulsa, OK.

If your office concurs with this determination, consultation will be completed under the National Historic Preservation Act and its implementing regulations. The Standard Conditions of Compliance will be adhered to.

Page 2

If you have any questions, please contact Dr. Carson N. Murdy, Archeologist, at (605) 226-7656.

Sincerely,



Regional Director

Enclosures

cc: Chairman, Three Affiliated Tribes
Superintendent, Fort Berthold Agency

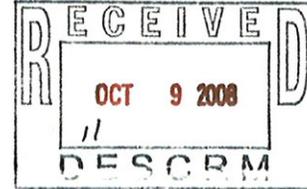


TRIBAL HISTORIC PRESERVATION

Mandan Hidatsa Arikara
Perry 'No Tears' Brady, Director.
404 Frontage Road,
New Town, North Dakota 58763
Ph/701-862-2474 fax/701-862-3401
pbrady@mhanation.com

October 6, 2008

Mr. Carson Murdy
Archaeologist
Bureau of Indian Affairs
115 4th Avenue SE
Aberdeen, South Dakota 57401



RE: BIA Case Number AAO-1562/FB/08

Dear Mr. Murdy:

As per the Three Affiliated Tribes Tribal Historic Preservation Office, (THPO) Policies and Procedures, regarding BIA Case Number AAO-1562/FB/08, we are in receipt of your letter dated September 17, 2008 and have had the opportunity to review it.

The MHA Nation THPO has also reached a determination of **no historic or cultural properties affected** for these undertakings.

The Tribal Historic Preservation Office will conduct a short public Ceremonial at the construction site prior to any drilling/construction activity in order to bless and ask forgiveness from Mother Earth. The THPO request one week advance notice in order to prepare for said ceremony.

Therefore, the THPO concurs with this determination and the project is ready to proceed. If you have any questions or need additional information, please contact me at (701) 862-2474

Sincerely:

A handwritten signature in blue ink that reads "Perry Brady". The signature is written in a cursive style.

Perry "No Tears" Brady
Director
Mandan, Hidatsa, & Arikara Nation Tribal Historic Preservation Office



IN REPLY REFER TO:
DESCRM
MC-208

United States Department of the Interior

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



FEB 13 2009

Perry 'No Tears' Brady, THPO
Mandan, Hidatsa and Arikara Nation
PO Box 429
Parshall, North Dakota 58770

Dear Mr. Brady:

We have considered the potential effects on cultural resources of an oil pipeline in McKenzie and Dunn Counties, North Dakota. Approximately 330.74 acres were intensively inventoried using a pedestrian methodology. Potential surface disturbances are not expected to exceed the area depicted in the enclosed report. No historic properties were located that appear to possess the quality of integrity and meet at least one of the criteria (36 CFR 60.4) for inclusion on the National Register of Historic Places, although site 32DU87 had previously been recorded as eligible within the project area. No properties were located that appear to qualify for protection under the American Indian Religious Freedom Act (16 USC 1996).

As the surface management agency, and as provided for in 36 CFR 800.5, we have therefore reached a determination of **no adverse effect** for this undertaking, as the supposed site area will be monitored. Catalogued as BIA Case Number **AAO-1607/FB/09**, the proposed undertaking, location, and project dimensions are described in the following report:

Markman, Jon M., Kade M. Ferris, Erin Salisbury and Scott Slessman
(2009) A Class I and Class III Cultural Resource Inventory of the Proposed Arrow Pipeline and Compressor Station in McKenzie and Dunn Counties, North Dakota. SWCA Environmental Consultants for Arrow Midstream Holdings LLC, Tulsa, OK.

If your office concurs with this determination, consultation will be completed under the National Historic Preservation Act and its implementing regulations. The Standard Conditions of Compliance will be adhered to.

If you have any questions, please contact Dr. Carson N. Murdy, Regional Archaeologist, at (605) 226-7656.

Sincerely,

Regional Director

Enclosure

cc: Chairman, Three Affiliated Tribes
Superintendent, Fort Berthold Agency



TRIBAL HISTORIC PRESERVATION

Mandan Hidatsa Arikara
Perry 'No Tears' Brady, Director.
404 Frontage Road,
New Town, North Dakota 58763
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pbrady@mhnanation.com

February 18, 2009

Dr. Carson N. Murdy
Regional Archeologist
Bureau of Indian Affairs
Great Plains Regional Office
115 Fourth Ave. S.E.
Aberdeen, SD, 57401

RE: Project #AAO-1607/FB/09

Dr. Murdy:

Thank you for your letter in which you notified our Nation of the proposed Project;

Arrow Pipeline & compressor Station, Dunn/McKenzie Counties, ND.

After review of the documentation provided by your office, the Mandan Hidatsa Arikara Nations THPO concurs with the determination of 'No Adverse Affect'/No Historic Properties Affected' to any pre and post-historic relics, artifacts or sacred and cultural resources in the proposed Project area. We respectfully request to be notified should any NAGPRA issues arise as the Project progresses.

We look forward to further opportunities to participate in any future consultations.

Sincerely,

Perry 'No Tears' Brady 

Perry 'No Tears' Brady,
Tribal Historic Preservation Officer,
Mandan Hidatsa Arikara Nations.

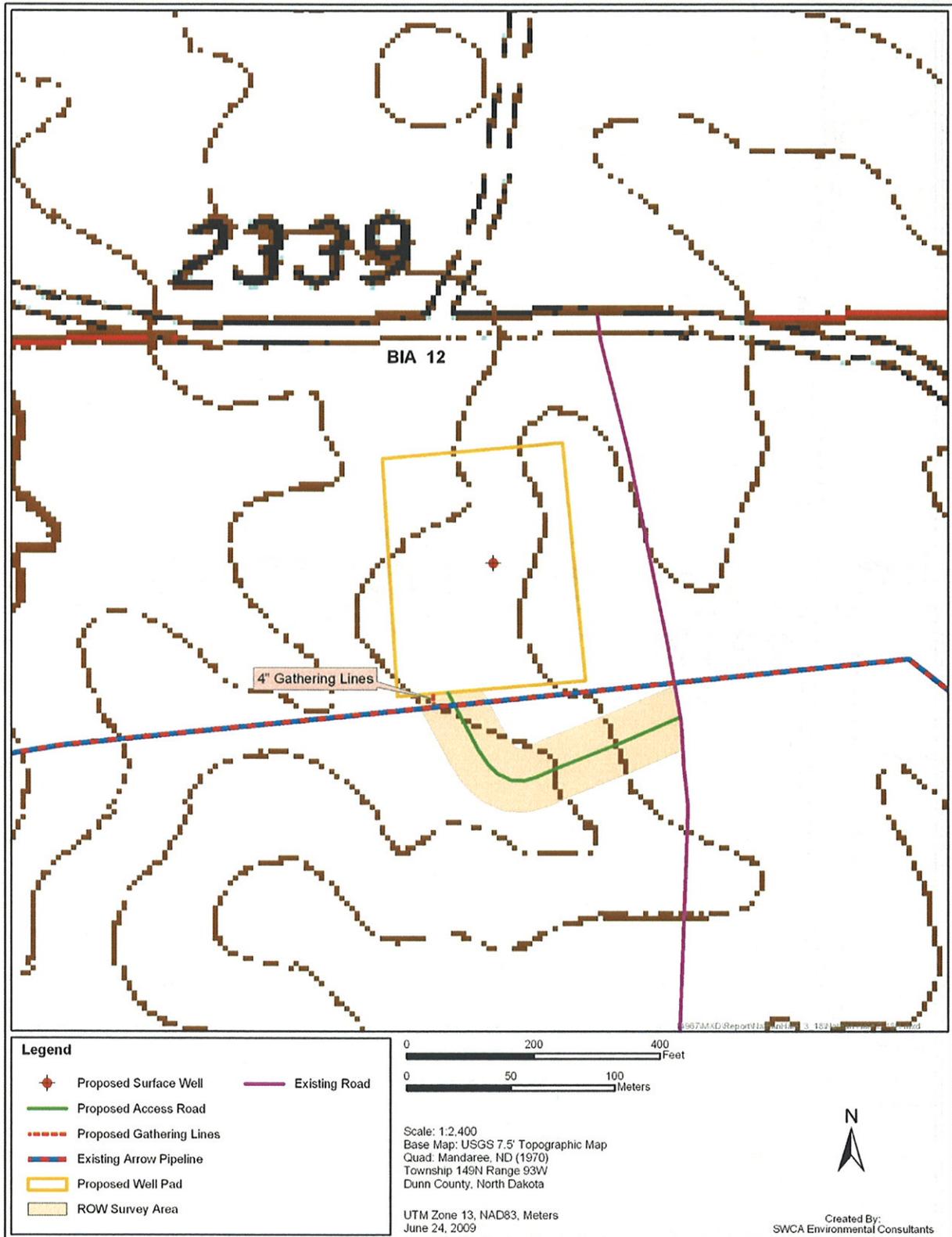


Figure 1. Map of Nathan Hale #3-18H.

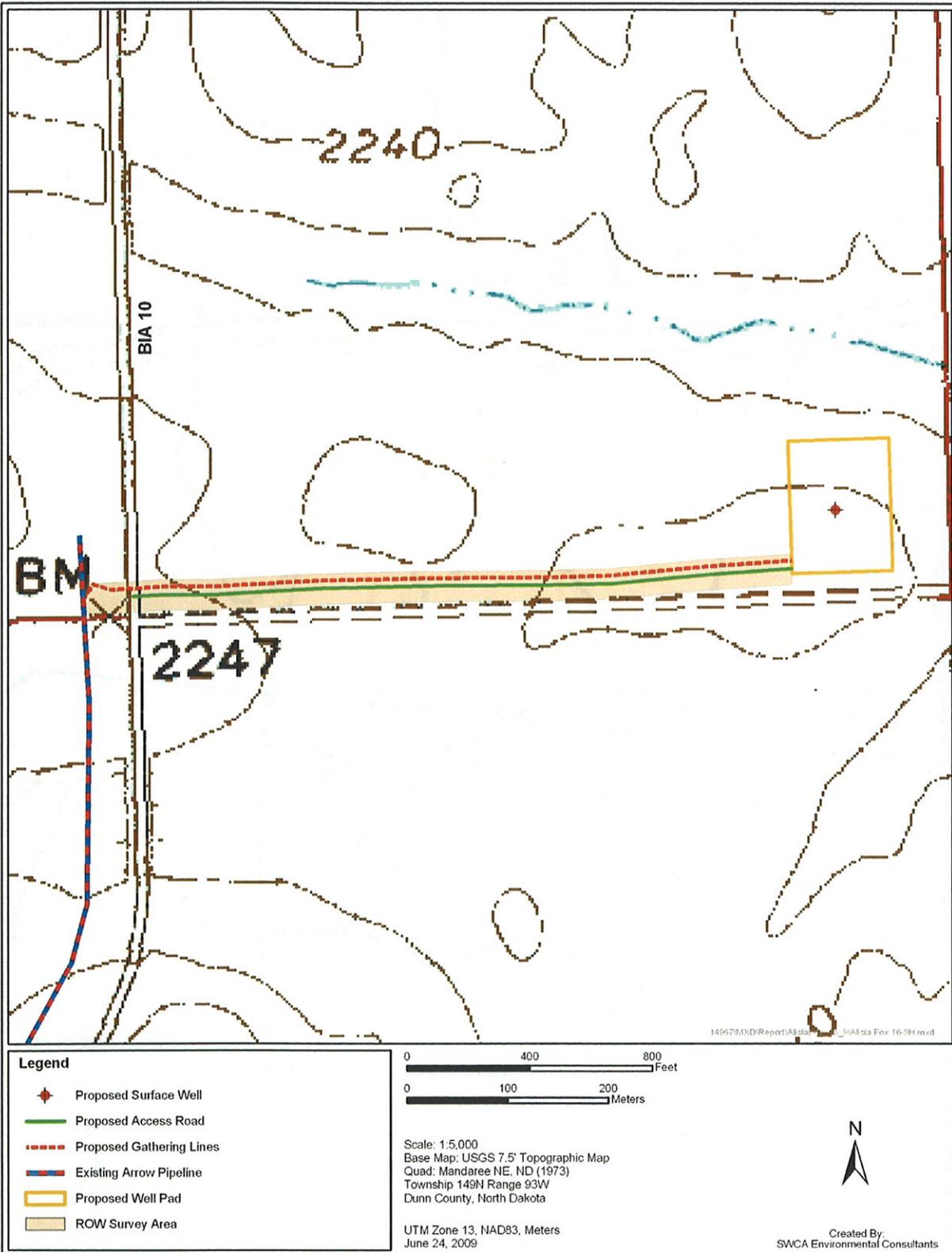
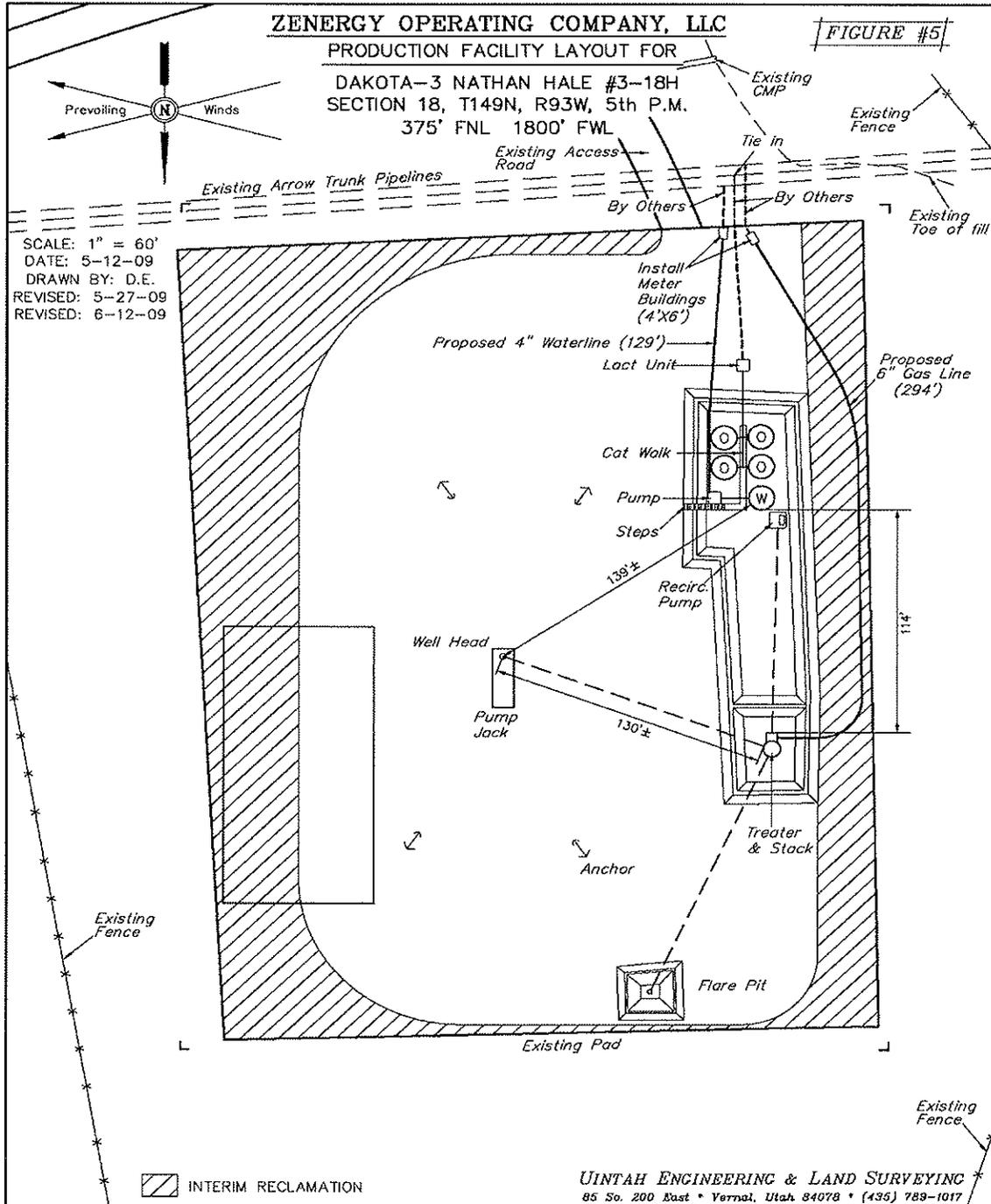
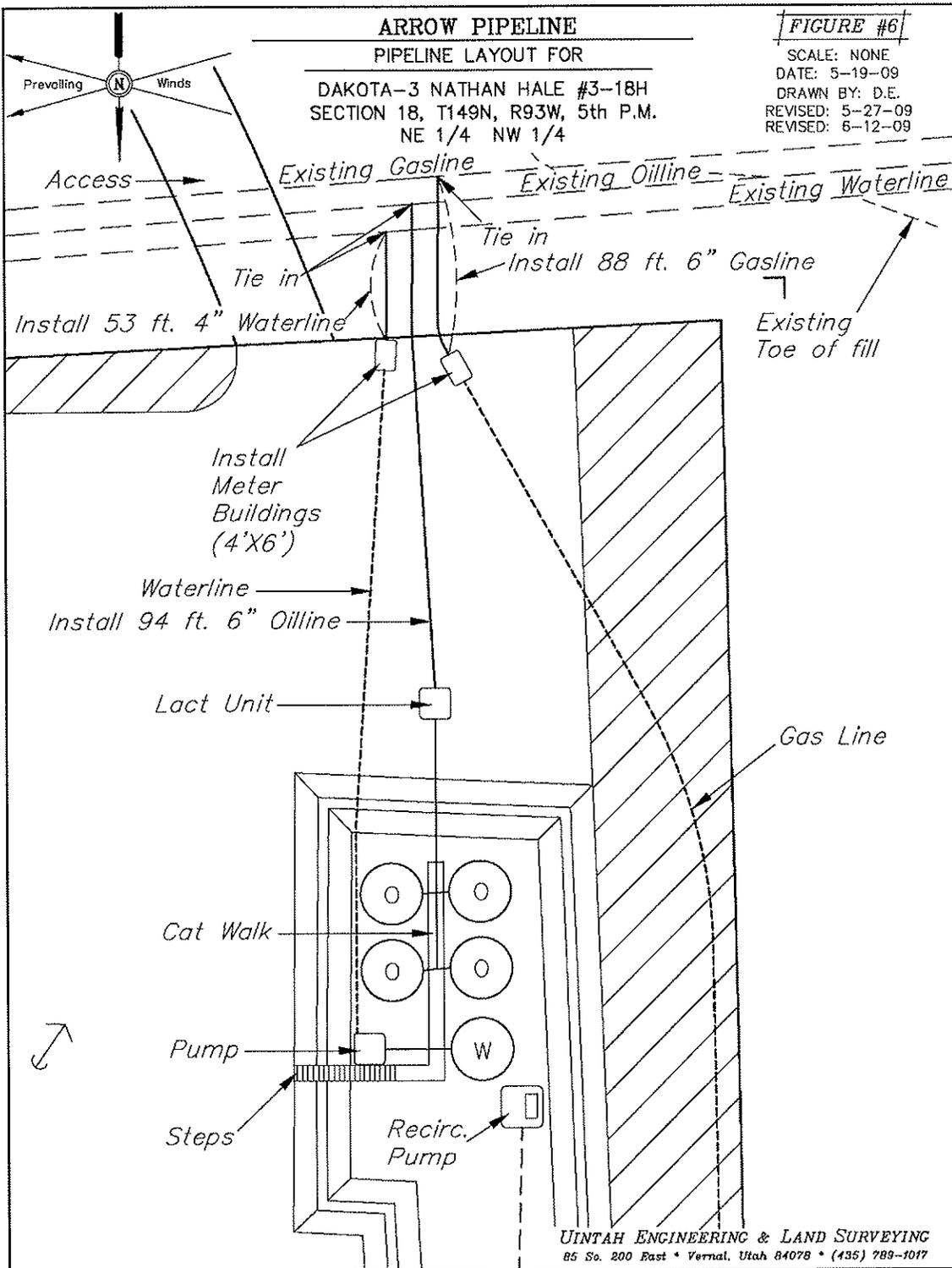
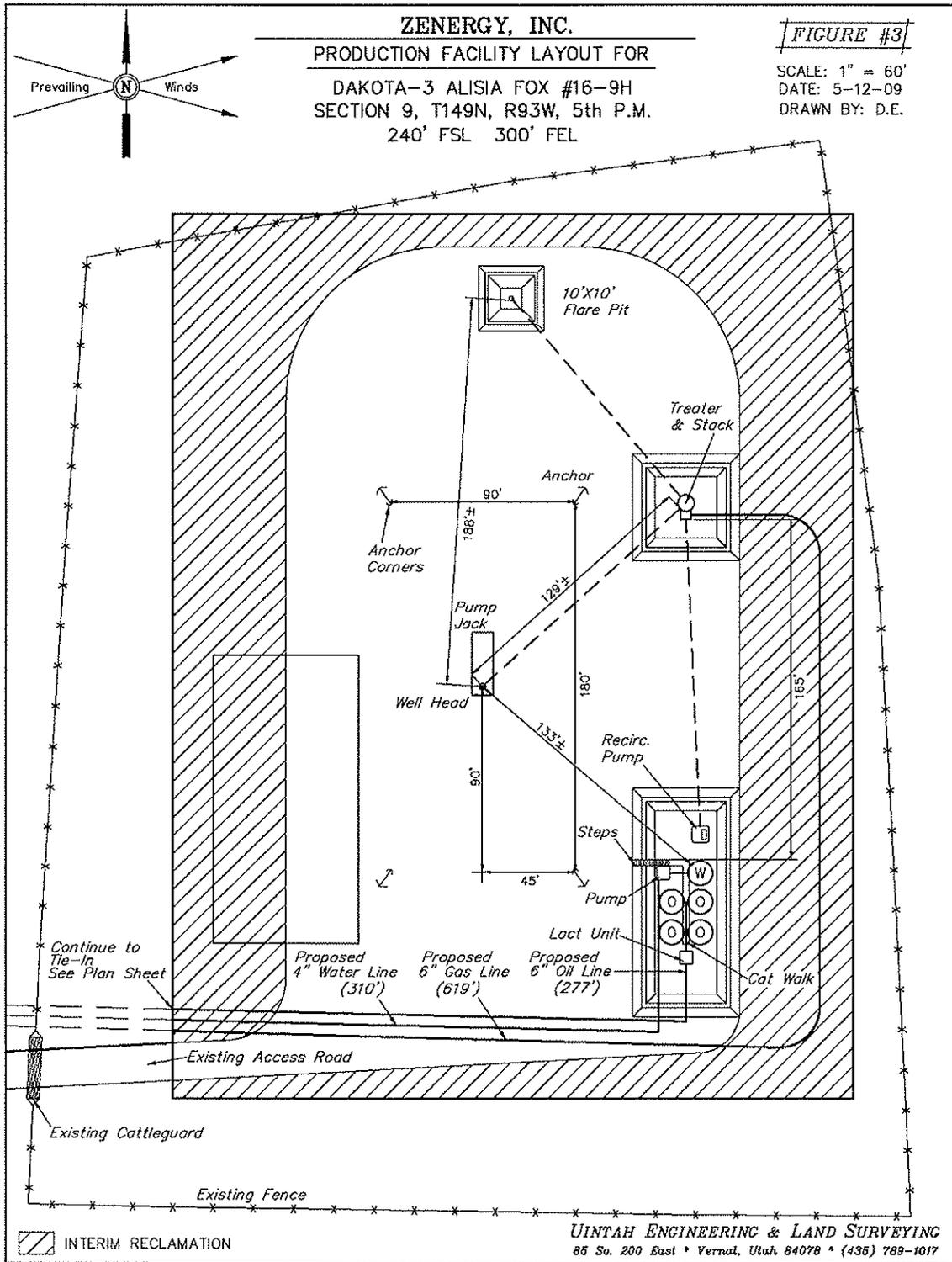


Figure 2. Map of Alisia Fox #16-9H.

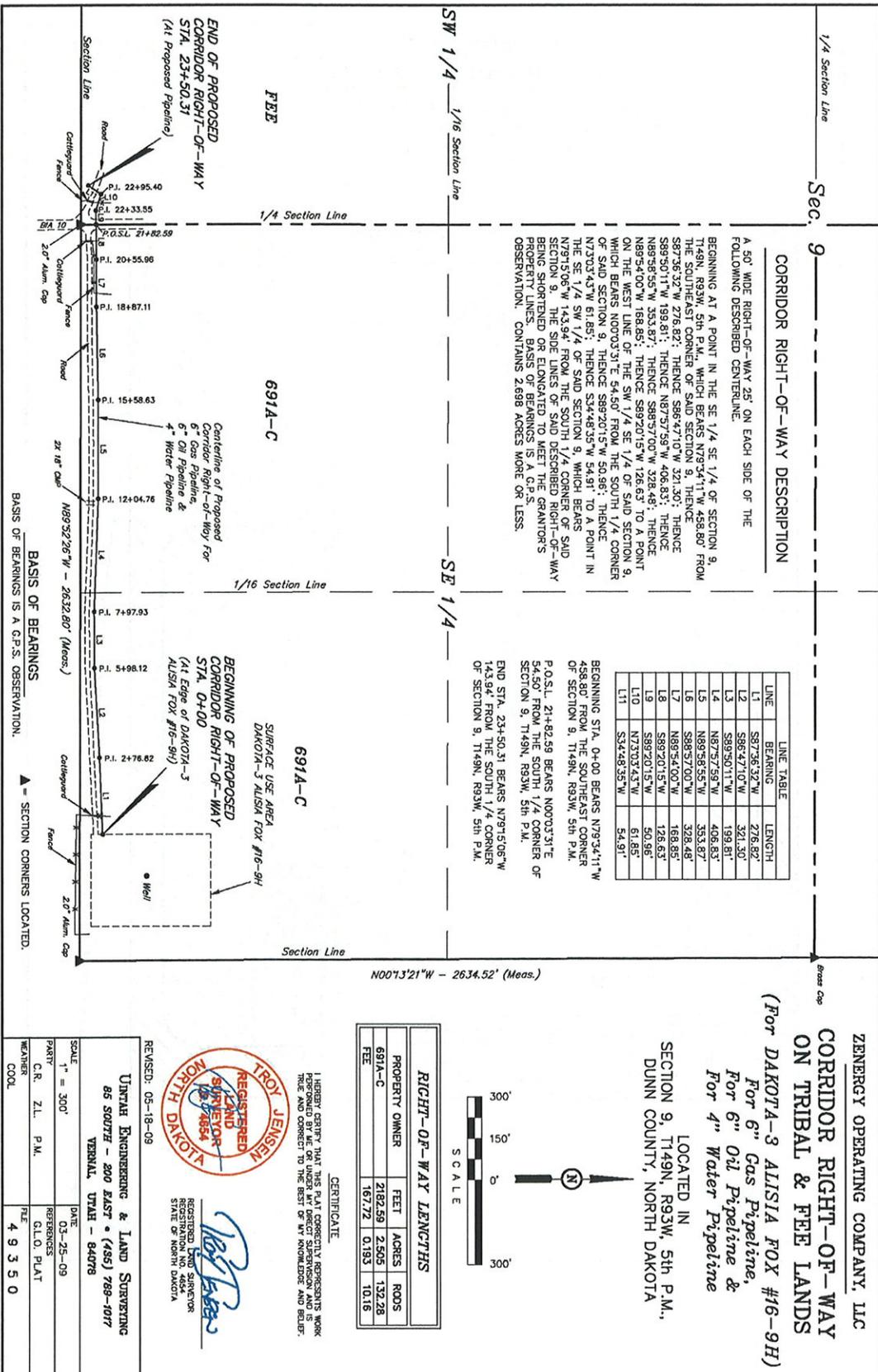
APPENDIX A
PRODUCTION FACILITY LAYOUT FOR
DAKOTA-3 NATHAN HALE #3-18H
AND
DAKOTA-3 ALISIA FOX #16-9H







9H.September 2009.



9
CORRIDOR RIGHT-OF-WAY DESCRIPTION

A 50' WIDE RIGHT-OF-WAY 25' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:
BEGINNING AT A POINT IN THE SE 1/4 SE 1/4 OF SECTION 9, T149N, R93W, 5TH P.M., THE SOUTHEAST CORNER OF SAID SECTION 9, THENCE S87°36'32"W 276.82'; THENCE S89°50'11"W 199.81'; THENCE N87°57'59"W 406.83'; THENCE S89°50'11"W 199.81'; THENCE N87°57'59"W 406.83'; THENCE N89°54'00"W 168.85'; THENCE S89°20'15"W 126.63' TO A POINT ON THE WEST LINE OF THE SW 1/4 SE 1/4 OF SAID SECTION 9, WHICH BEARS N00°03'31"E 54.50' FROM THE SOUTH 1/4 CORNER OF SAID SECTION 9, THENCE S89°20'15"W 50.98'; THENCE N73°03'43"W 61.85'; THENCE S34°48'35"W 54.91' TO A POINT IN THE SE 1/4 SW 1/4 OF SAID SECTION 9, WHICH BEARS N79°15'06"W 143.94' FROM THE SOUTH 1/4 CORNER OF SAID SECTION 9, THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED AND MET THE SURVEY OBSERVATION, CONTAINS 2.698 ACRES MORE OR LESS.

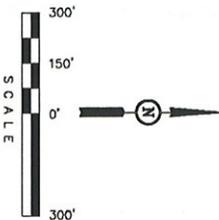
LINE TABLE

LINE	BEARING	LENGTH
L1	S87°36'32"W	276.82'
L2	S89°50'11"W	321.50'
L3	S89°50'11"W	199.81'
L4	N87°57'59"W	406.83'
L5	N89°54'00"W	353.87'
L6	S89°20'15"W	328.48'
L7	N89°54'00"W	168.85'
L8	S89°20'15"W	126.63'
L9	S89°20'15"W	50.98'
L10	N73°03'43"W	61.85'
L11	S34°48'35"W	54.91'

BEGINNING STA. 0+00 BEARS N79°15'06"W 143.94' FROM THE SOUTHEAST CORNER OF SECTION 9, T149N, R93W, 5TH P.M.
P.O.S.L. 21+82.59 BEARS N00°03'31"E 54.50' FROM THE SOUTH 1/4 CORNER OF SECTION 9, T149N, R93W, 5TH P.M.
END STA. 23+50.31 BEARS N79°15'06"W 143.94' FROM THE SOUTH 1/4 CORNER OF SECTION 9, T149N, R93W, 5TH P.M.

ZENERGY OPERATING COMPANY, LLC
CORRIDOR RIGHT-OF-WAY
ON TRIBAL & FEE LANDS
(For DAKOTA-3 ALISIA FOX #16-9H)
For 6" Gas Pipeline,
For 6" Oil Pipeline &
For 4" Water Pipeline

LOCATED IN
SECTION 9, T149N, R93W, 5TH P.M.,
DUNN COUNTY, NORTH DAKOTA



RIGHT-OF-WAY LENGTHS

PROPERTY OWNER	FEET	ACRES	RODS
691A-C	2182.59	2.505	132.28
FEE	167.72	0.193	10.16

CERTIFICATE
I HEREBY CERTIFY THAT THE PLAT HEREON REPRESENTS WORK PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

TROY JENSEN
REGISTERED LAND SURVEYOR
NO. 17854
STATE OF NORTH DAKOTA

Troy Jensen
REGISTERED LAND SURVEYOR
REGISTRATION NO. 4654
STATE OF NORTH DAKOTA

REMOVED: 05-18-09

UNIVAH ENGINEERING & LAND SURVEYING
85 SOUTH - 200 EAST • (485) 789-1017
VERNAL, UTAH - 84078

SCALE: 1" = 300'
DATE: 03-25-09
PARTY: C.R. Z.L. P.M.
REFERENCES: G.L.O. PLAT
WEATHER: FIE
COOL: 4 9 3 5 0

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.
BASIS OF BEARINGS IS A G.P.S. OBSERVATION. ▲ SECTION CORNERS LOCATED.

