



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Great Plains Regional Office
115 Fourth Avenue S.E., Suite 400
Aberdeen, South Dakota 57401



IN REPLY REFER TO:

DESCRM
MC-208

NOV 22 2011

MEMORANDUM

TO: Superintendent, Fort Berthold Agency

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

SUBJECT: Environmental Assessment Addendum and Finding of No Significant Impact

In compliance with the regulations of the National Environmental Policy Act (NEPA) of 1969, as amended, an Addendum has been completed and a Finding of No Significant Impact (FONSI) has been issued. The addendum authorizes land use for gathering pipelines connecting the Fort Berthold #148-94-36D-25-2H & #147-94-1A-12-2H wells to the proposed Arrow #147-94-3A-10-1H gathering pipeline system on the Fort Berthold Indian Reservation.

All the necessary requirements of the National Environmental Policy Act have been completed. Attached for your files is a copy of the EA Addendum, FONSI and Notice of Availability. The Council on Environmental Quality (CEQ) regulations require that there be a public notice of availability of the FONSI (40 C.F.R. Part 1506.6(b)). Please post the attached notice of availability at the Agency and Tribal buildings for 30 days.

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, Chairman, Three Affiliated Tribes (with attachment)
Elgin Crows Breast, Tribal Historic Preservation Officer (with attachment)
Derek Enderud, BLM, Bureau of Land Management (with attachment)
Mike Cook, SWCA (with attachment)
Jonathon Shelman, Corps of Engineers
Jeff Hunt, Fort Berthold Agency

Finding of No Significant Impact

Arrow Pipeline, LLC

Addendum to Environmental Assessment to Authorize Land Use for Gathering Pipelines Connecting the Fort Berthold #148-94-36D-25-2H & #147-94-1A-12-2H Wells to the Proposed Arrow #147-94-3A-10-1H Gathering Pipeline System

Dunn County, North Dakota

The U.S. Bureau of Indian Affairs (BIA) received a proposal to authorize land use by Arrow Pipeline, LLC (Arrow) for gathering pipelines connecting the Fort Berthold #148-94-36D-25-2H & #147-94-1A-12-2H Wells to the Proposed Arrow #147-94-3A-10-1H Gathering Pipeline System on the Fort Berthold Reservation. Associated federal actions by BIA include determinations of effect regarding cultural resources and approvals of leases, rights-of-way and easements.

Potential of the proposed action to impact the human environment is analyzed in the attached Environmental Assessment (EA), as required by the National Environmental Policy Act. Based on the recently completed addendum to the EA, I have determined 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, water resources, and cultural resources. The 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. This guidance includes the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.) (MBTA), the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.) (NEPA), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d, 54 Stat. 250) (BGEPA), Executive Order 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds", and the Endangered Species Act (16 U.S.C. 1531 et seq.) (ESA).
4. The proposed action was designed to avoid adverse effects to historic, archaeological, cultural, and traditional properties, sites, and practices. The Tribal Historic Preservation Officer has concurred with BIA's determination that no historic properties will be affected.
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 project will improve the socioeconomic condition of the affected Indian community.

Acting


Regional Director – Great Plains Regional Office

11-22-11
Date

ENVIRONMENTAL ASSESSMENT Addendum

United States Bureau of Indian Affairs

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



Arrow Pipeline, L.L.C

**Addendum to Environmental Assessment to Authorize Land Use for Gathering Pipelines
Connecting the Fort Berthold #148-94-36D-25-2H & #147-94-1A-12-2H Wells to the
Proposed Arrow #147-94-3A-10-1H Gathering Pipeline System**

Fort Berthold Indian Reservation

November 2011

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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Arrow #147-94-3A-10-1H Gathering Pipeline System
(November 2011)*

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*Addendum to Environmental Assessment to Authorize Land Use for Gathering Pipelines
Connecting the Fort Berthold #148-94-36D-25-2H & #147-94-1A-12-2H Wells to the Proposed
Arrow #147-94-3A-10-1H Gathering Pipeline System
(November 2011)*

1. Purpose and Need for the Proposed Action

The purpose of the proposed action is to authorize the land use by Arrow Pipeline, LLC (Arrow) for the construction and installation of three gathering pipelines including one oil pipeline, one gas pipeline, and one produced water pipeline. As proposed, the gathering pipeline system (pipelines) for the Fort Berthold (FB) #148-94-36D-25-2H & #147-94-1A-12-2H-wells would transport oil, gas, and produced water to markets and approved disposal sites. A buried electrical line may be installed in the future within the approved right-of-way (ROW).

Developments have been proposed on land held in trust by the United States in Dunn County, North Dakota, where the Bureau of Indian Affairs (BIA) is the surface management agency for potentially affected individual allotments. 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 the Three Affiliated Tribes of the Mandan, Hidatsa, and Arikara Nations and to individual tribal members.

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 pipelines would be located on trust land originating from the northeast corner of the FB #148-94-36D-25-2H & #147-94-1A-12-2H well pad (well pad), in the NE1/4 NE1/4 of Section 1, Township (T) 147 North (N), Range (R) 94 West (W), 5th Prime Meridian (P.M.), Dunn County, North Dakota. The pipelines would run west-northwest and terminate at the Arrow #147-94-3A-10-1H Gathering Pipeline System (tie-in) in the NE1/4 NE1/4 Section 1, T147, 94W 5th P.M., Dunn County, North Dakota.

4. Scope of Work for Proposed Action

Oil, gas, and produced water pipelines would be buried in either two 2.5-foot-wide trenches, spaced 5.0 feet apart, or one 5.0-foot-wide trench. Oil and gas pipelines would be no greater than 8 inches in diameter and constructed of new steel. The produced water pipeline would also be no greater than 8 inches in diameter and constructed of Fiberspar[®] or similar corrosion resistant material. All of the construction disturbances would occur within a 120-foot-wide temporary construction ROW and permanent surface disturbance would occur

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within a 50-foot-wide ROW between the well pad and the respective tie-in gathering pipeline.

The pipelines, as proposed, would originate from the southeast corner of the well pad, traverse west-northwest, and tie in to the proposed tie-in, which has been previously surveyed for impacts to natural and cultural resources with no significant findings.

Approximately 609 feet of oil, gas, and produced water pipe would be needed to connect the FB #148-94-36D-25-2H & #147-94-1A-12-2H wells to the tie-in. Approximately 1.68 acres would be disturbed as a result of activities associated with the construction of the proposed gathering pipelines. Pipeline plats are provided in Appendix A.

5. Materials Information and Corrosion Rates

Steel Pipe

Arrow proposes to construct the oil and gas pipelines using new steel pipe rated by the American Petroleum Institute (API) as 5L X52. Arrow would ensure that each steel pipe segment is coated with approximately 14 to 16 millimeters of fusion bonded epoxy coating. Further, Arrow would deploy an active cathodic protection system for all steel pipe, which further reduces the likelihood of external corrosion. Arrow would ensure that each steel pipe segment is allotted a 1/16-inch corrosion allowance; however, because of the non-corrosive nature of Bakken crude and the low concentrations of hydrogen sulfide, Arrow does not anticipate any external or internal corrosion during the operating lifetime of the pipe, which, at a minimum, is estimated to be 50 years.

Fiberspar® or Similar Pipe

Arrow proposes to construct the produced water gathering pipeline using a material known as Fiberspar or one with the same corrosion resistant characteristics as Fiberspar. This type of material is not subject to internal or external corrosion.

6. Spill Response Plan

Arrow has developed a Spill Response Plan (Plan) (Middick 2011¹) for the Phase 3SW pipeline. The spill preventative 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, as referenced in the Plan, apply to the proposed pipelines. A copy of the Plan has been filed with the BIA and Arrow has legally committed to adhering to the procedures and

¹ Middick, Andy. 2011. *Operations Monitoring and Spill Response Plan*. Blackshare Environmental Solutions. Oklahoma City, Oklahoma.

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requirements as defined by federal law (Title 49 Code of Federal Regulations [CFR] 194). Arrow has committed to submitting a spill response plan, specific to this proposed project, to the BIA prior to the commencement of construction activities.

7. Pipeline Marking Procedures

Arrow adheres to the requirements of 49 CFR 192.707 with regard to the marking of buried pipelines. Specifically, Arrow would place pipeline markers 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.

8. Quality Control/Quality Assurance Measures

Arrow purchases steel pipe that is rated as API 5L X52 and inspects all pipe while at the mill to ensure quality. Arrow is also present to ensure that external epoxy coating is applied to a minimum thickness of 14 millimeters. During construction, all welds are visually inspected for quality and completeness by qualified professionals. Once welds have passed visual inspection, they are subjected to 100 percent Non Destructive Testing. After passing these tests, the weld areas are covered for corrosion protection. After the weld areas have been covered, the external coating of the pipe is inspected using a jeepmeter to detect holes and cracks. The pipe is lowered into the trench and buried. Prior to being put into service, the steel pipe is hydrotested to approximately 1.5 times the minimum design pressure of 1,180 pounds per square inch gauge (psig). The produced water pipe is designed to sustain a minimum pressure of 750 psig and is hydrotested to approximately 900 psig prior to being approved for service.

9. Valve Locations

Two valves would be installed at each end of the proposed pipelines. One valve would be installed at the well location while the second valve would be installed at the proposed tie-in. The installation of two valves would allow Arrow to isolate the proposed gathering pipelines if required.

10. Reclamation

Interim Reclamation

Reclamation would continue to occur over the life of the pipelines. Initial reclamation would be required after initial construction and then following any maintenance work or additions of infrastructure. Reclamation would be required before final abandonment of the decommissioned pipeline. A successful reclamation would at all times be the responsibility of the system's operator.

Trenches would be back-filled immediately after the pipe is installed and testing is complete, assuming frozen or saturated soils are not present. Back-fill piles would be stored opposite

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of the topsoil piles during construction. If construction is to occur during winter, Arrow will partially fill the trench with useable, non-frozen, back-fill soil to the extent possible and cover the entire ROW including the trench with straw. The trench would be back-filled and 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.

Applicable short- and long-term best management practices would be used to minimize and control erosion in disturbed areas. To reduce compaction, the ROW would be plowed before the stockpiled topsoil is distributed.

The disturbed areas would be reclaimed and contoured as soon as possible after construction is complete (fall/spring). The ROW would be covered with stockpiled topsoil and reseeded with a seed mixture determined by the BIA. Arrow would control noxious weeds within the ROW and other applicable facilities by approved chemical or mechanical methods. If seeding of the ROW does not occur due to growing season constraints, Arrow will deploy approved weed-free hay across the entire ROW. The presence of hay across the ROW will reduce the potential for excessive erosion as a result of spring snow melt and precipitation.

The entire ROW would be monitored for erosion, subsidence, or noxious weeds. In areas where problems are found to occur, reclamation efforts would continue until the BIA feels the ROW is successfully reclaimed. Reclamation is considered successful when:

- seeded areas are established;
- adjacent vegetative communities spread back into the disturbed areas; and
- noxious weeds are under control.

If after two growing seasons the new seeding is not successful, the BIA may require additional efforts to establish vegetation. For noxious weeds, a survey was conducted on the ROW prior to the construction commencing. The BIA has developed a weed management plan to treat known or likely to occur noxious weed species.

Final Reclamation

Final reclamation would occur when the pipeline is decommissioned. All disturbed areas would be reclaimed, reflecting the BIA's view of oil and gas exploration and production as temporary intrusions on the landscape. All facilities would be removed. Access roads and work areas would be leveled or backfilled as necessary, scarified, recontoured, and seeded. Exceptions to these reclamation measures might occur if the BIA approves assignment of an

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(November 2011)*

access road either to the BIA roads inventory or to concurring surface allottees. It is economically and environmentally unfeasible to excavate and remove the decommissioned pipeline. Instead it would be purged with water of any natural gas remaining in the lines and abandoned in place.

11. Surveys

SWCA Environmental Consultants (SWCA) conducted natural resource surveys for threatened and endangered species and habitat, migratory birds and active nests, bald and golden eagles and nests, and wetlands/waterbodies on June 30, 2011. BIA Environmental Specialist, Jeff Desjarlais, approved the location and proposed alignment of the gathering pipelines on July 6, 2011. No wetlands are anticipated to be impacted by the construction of the proposed gathering pipelines. No threatened and endangered species or bald/golden eagles or nests were observed during the natural resource survey. Migratory bird habitat is prevalent in the survey area and Arrow has committed to following 1 of the 3 listed mitigation procedures in order to reduce the potential for impact on migratory birds and their nests. Either, conduct construction outside of the migratory bird breeding season (February 1st - July 15th), or regularly mow vegetation in ROW prior to February 1st and maintain through July 15th, or conduct a field survey for nesting migratory birds within 5 days of construction commencement.

A cultural resource inventory of this pipeline route was conducted by personnel of SWCA Environmental Consultants, using an intensive pedestrian methodology. Approximately 3.02 acres were inventoried between June 22 and 30, 2011 (Schleicher and Riordan 2011). No historic properties were located 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 this undertaking. This determination was communicated to the THPO on October 24, 2011; however the THPO did not respond within the allotted 30 day comment period.

Schleicher, Jolene, and Carolyn Riordan

(2011) A Class I and Class III Cultural Resources Inventory of the Arrow Fort Berthold 148-94-36D-25-2H and 147-94-1A-12-2H Gathering Pipeline, Fort Berthold Indian Reservation, Dunn County, North Dakota. SWCA Environmental Consultants for Arrow Pipeline, LLC, Tulsa.

12. Potential Effects

Potential direct impacts to cultural resource sites would occur as a result of disturbance and/or the loss of sites eligible for the National Register of Historic Places. All potential impacts as a result of the proposed action were mitigated via field survey and subsequent avoidance of any eligible cultural resource sites within the proposed ROW.

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Potential direct impacts to natural resources may include the loss of native vegetation and wildlife habitat, soil disturbance, and erosion during construction that may adversely affect air and water quality. Impacts would be mitigated by using best management practices during construction to minimize disturbance. Once construction activities are completed, reclamation would take place within 6 months and would include the return of topsoil and contouring, and seeding of native vegetation.

Potential indirect impacts 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 trenching, pipeline burial, and reclamation. These mitigation measures are consistent with the approved National Environmental Policy Act (NEPA) document, which received a finding of no significant impact (FONSI) (September 2011).

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

- *Environmental Assessment and Finding of No Significant Impact: Arrow Pipeline, LLC Phase 3 Southwest Pipeline (September 2011).*
- *Addendum to Environmental Assessment to Authorize Land Use for Arrow-Petro-Hunt Gathering Pipelines Connecting the Proposed: Fort Berthold #147-94-1A-12-1H, Fort Berthold #147-94-3A-10-1H, Fort Berthold #148-94-9D-04-1H, -2H, Fort Berthold #148-94-17D-08-1H, -2H, Fort Berthold #148-94-35D-26-1H, -2H, Fort Berthold #147-94-2A-11-1H, -2H Wells to the Arrow Phase 3 Southwest Pipeline (September 2011).*

14. NEPA Adequacy Criteria

This document has identified two previously prepared NEPA document, *Environmental Assessment and Finding of No Significant Impact: Arrow Pipeline, LLC Phase 3 Southwest Pipeline (September 2011)* and *Addendum to Environmental Assessment to Authorize Land Use for Arrow-Petro-Hunt Gathering Pipelines Connecting the Proposed: Fort Berthold #147-94-1A-12-1H, Fort Berthold #147-94-3A-10-1H, Fort Berthold #148-94-9D-04-1H, -2H, Fort Berthold #148-94-17D-08-1H, -2H, Fort Berthold #148-94-35D-26-1H, -2H, Fort Berthold #147-94-2A-11-1H, -2H Wells to the Arrow Phase 3 Southwest Pipeline (September 2011)*, 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.

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(November 2011)*

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.

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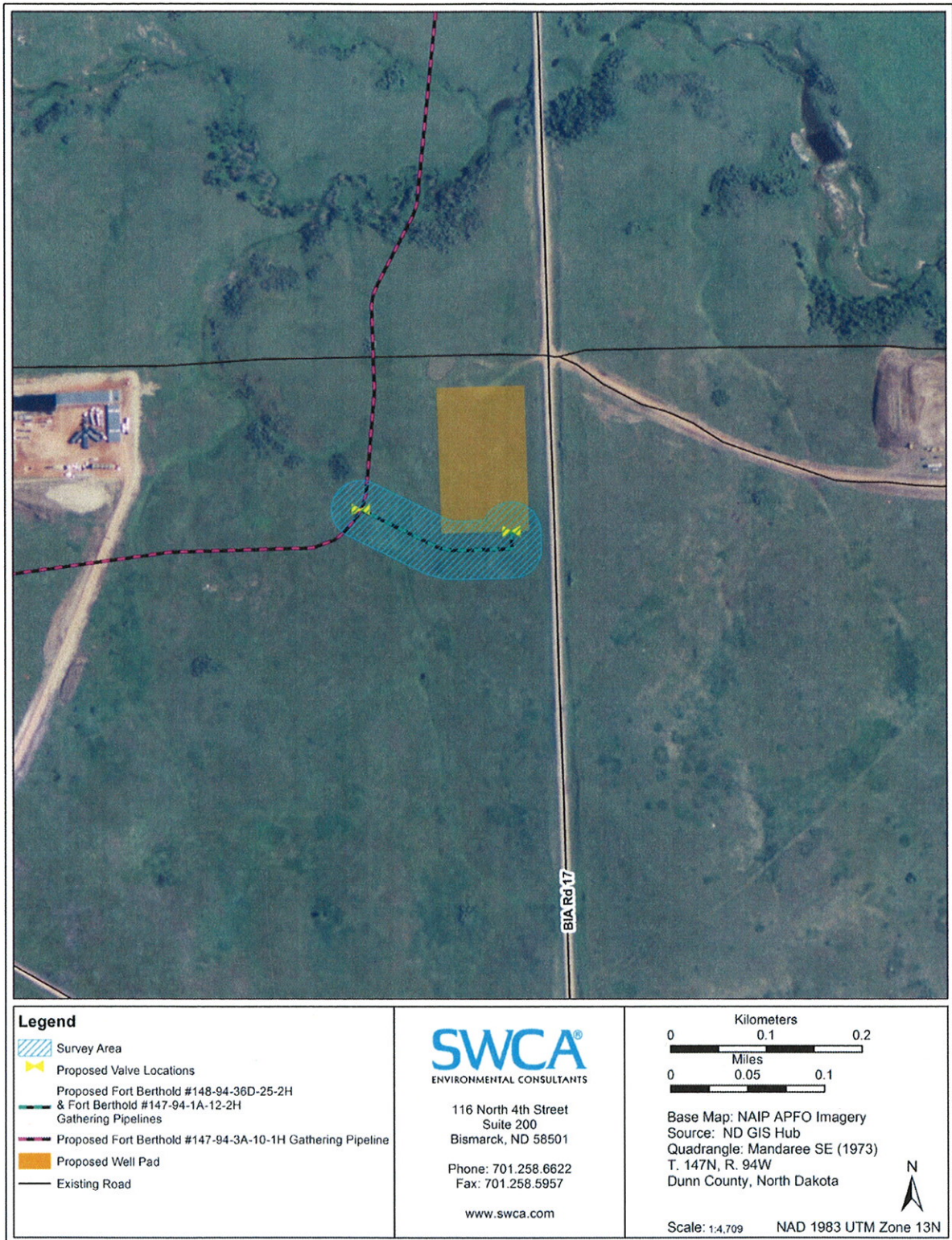


Figure 1. FB #148-94-36D-25-2H & #147-94-1A-12-2H gathering pipeline alignment

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(November 2011)*



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Great Plains Regional Office
115 Fourth Avenue S.E., Suite 400
Aberdeen, South Dakota 57401



IN REPLY REFER TO:
DESCRM
MC-208

OCT 24 2011

Elgin Crows Breast, THPO
Mandan, Hidatsa and Arikara Nation
404 Frontage Road
New Town, North Dakota 58763

Dear Mr. Crows Breast:

We have considered the potential effects on cultural resources of a gathering pipeline in Dunn County, North Dakota. Approximately 3.02 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. No properties were located that appear to qualify for protection under the American Indian Religious Freedom Act (42 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 this undertaking. Catalogued as **BIA Case Number AAO-1980/FB/11**, the proposed undertaking, location, and project dimensions are described in the following report:

Schleicher, Jolene, and Carolyn Riordan
(2011) A Class I and Class III Cultural Resources Inventory of the Arrow Fort Berthold 148-94-36D-25-2H and 147-94-1A-12-2H Gathering Pipeline, Fort Berthold Indian Reservation, Dunn County, North Dakota. SWCA Environmental Consultants for Arrow Pipeline, LLC, Tulsa, OK.

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

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

Sincerely,

ACTING Regional Director

Enclosure

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

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(October 2011)*

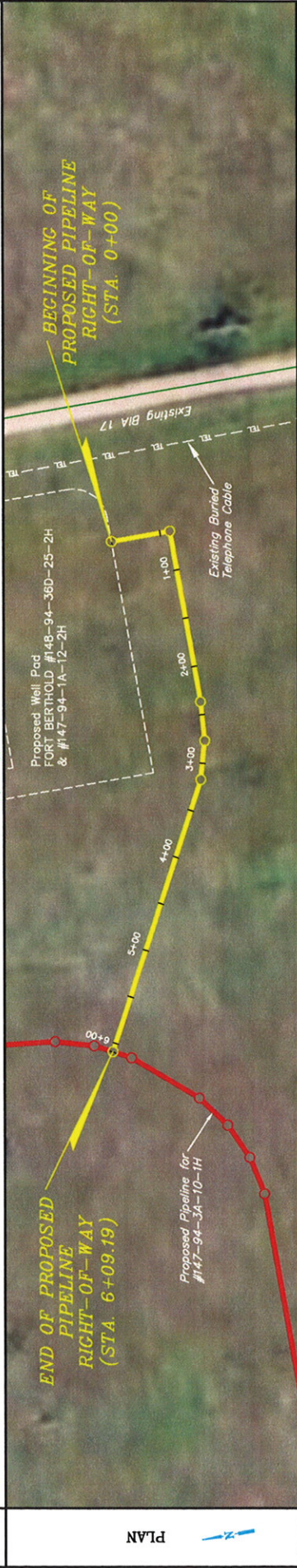
APPENDIX A

**Pipeline Layout and Pipeline Right-of-Way
For FB #148-94-36D-25-2H & #147-94-1A-12-2H
Gathering Pipelines**

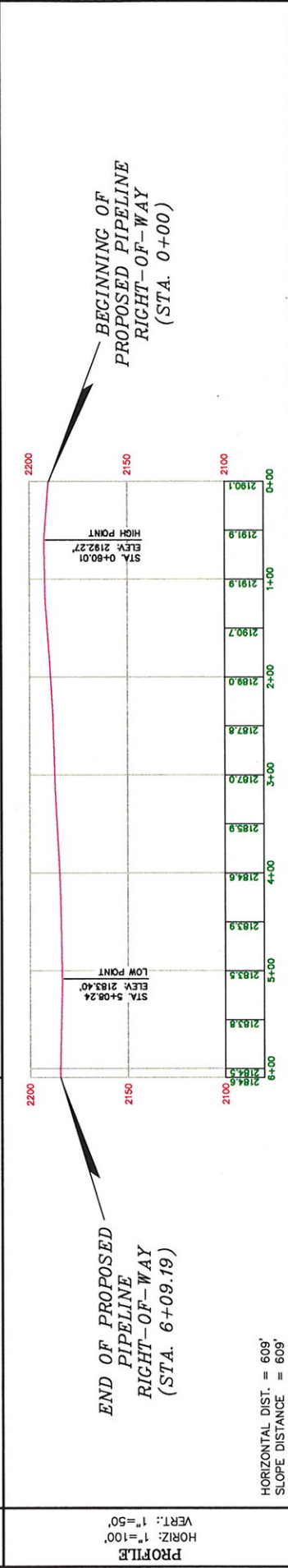
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OWNER: 832A NE 1/4 NE 1/4 SEC. 1, T147N, R94W, 5th P.M.
 6+09.19 36.92 0+00

RODDAGE
 STATIONING
 3+16.94 P.L. 1159.35R
 2+76.98 P.L. 1159.18R
 2+36.92 P.L. 358.34R
 0+60.01 P.L. 903.14R



CLASS A
 TERRAIN PASTURE



EASEMENT WORKSPACE
 PERM. EASEMENT
 TEMP. EASEMENT
 ADD. TEMP. WORKSPACE

CLASS	MATERIAL	MATERIAL SUMMARY	CASING	COATING	TERRAIN	PROJECT DATA
						SCALE: AS SHOWN
						SURVEYED BY: A.K.
						DRAWN BY: S.B.
						DATE: 09-19-11
						SHEET: 1 OF 1

UP: UPRYK Engineering & Land Surveying
 815 S. 20th Street East - Waskia, ND 58478
 (406) 788-1017

ARROW PIPELINE, LLC
 FORT BERTHOLD #148-94-36D-25-2H
 & #147-94-1A-12-2H
 PIPELINE PLAN & PROFILE

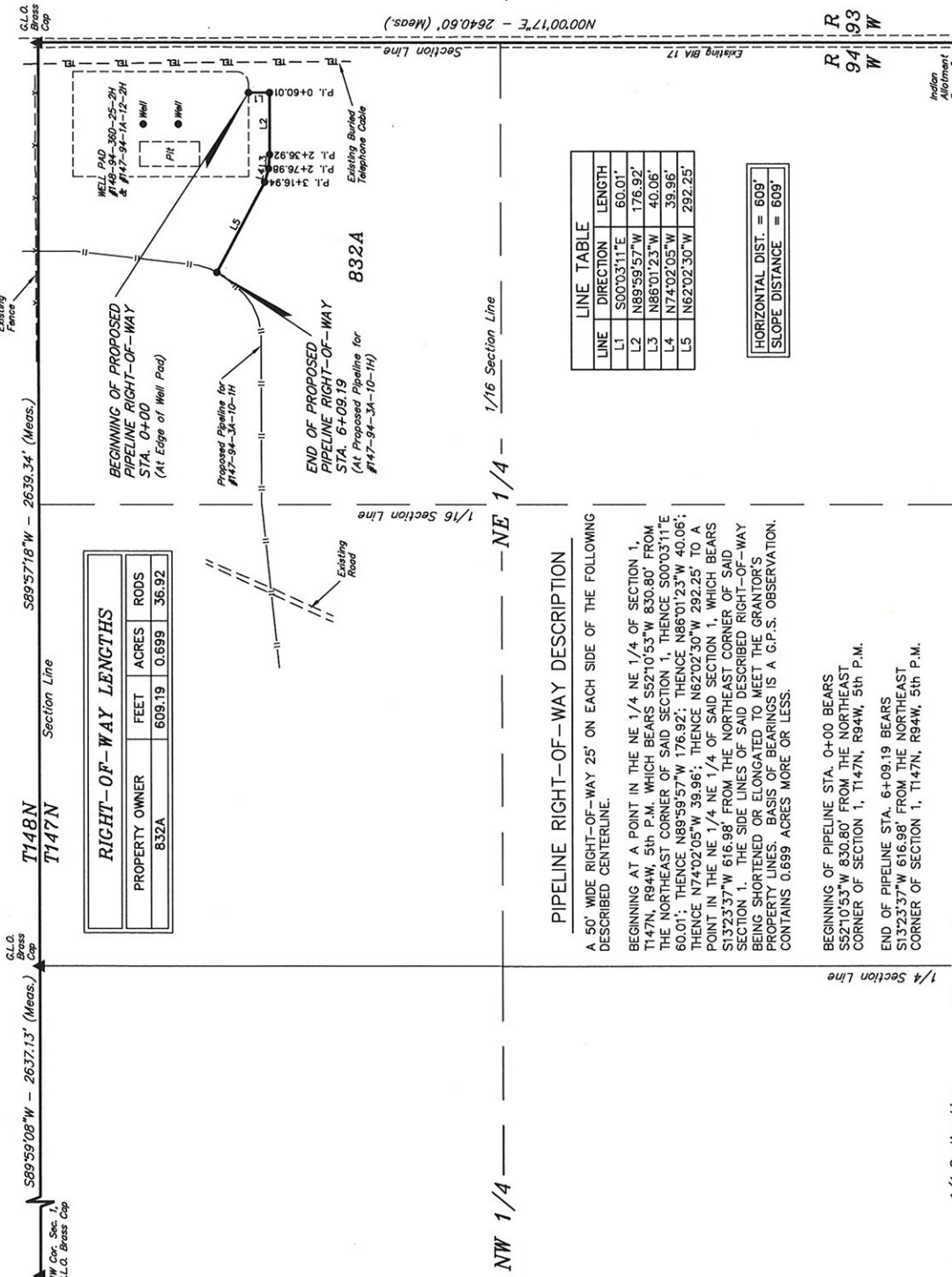
LOCATED IN SECTION 1, T147N, R94W, 5th P.M., DUNN COUNTY, NORTH DAKOTA

ARROW PIPELINE, LLC

PIPELINE RIGHT-OF-WAY ON TRIBAL LANDS

(For FORT BERTHOLD #148-94-36D-25-2H & #147-94-1A-12-2H)

LOCATED IN SECTION 1, T147N, R94W, 5th P.M., DUNN COUNTY, NORTH DAKOTA



RIGHT-OF-WAY LENGTHS			
PROPERTY OWNER	FEET	ACRES	RODS
832A	609.19	0.699	36.92

LINE	DIRECTION	LENGTH
L1	S00°03'11"E	60.01'
L2	N89°59'57"W	176.92'
L3	N86°01'23"W	40.08'
L4	N74°02'05"W	39.96'
L5	N62°02'30"W	292.25'

HORIZONTAL DIST. = 609'
SLOPE DISTANCE = 609'

PIPELINE 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 NE 1/4 NE 1/4 OF SECTION 1, T147N, R94W, 5th P.M. WHICH BEARS S52°10'53"W 830.80' FROM THE NORTHEAST CORNER OF SAID SECTION 1, THENCE S00°03'11"E 60.01'; THENCE N89°59'57"W 176.92'; THENCE N86°01'23"W 40.08'; THENCE N74°02'05"W 39.96'; THENCE N62°02'30"W 292.25' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 1, WHICH BEARS S137°33'37"W 616.98' FROM THE NORTHEAST CORNER OF SAID SECTION 1. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A G.P.S. OBSERVATION. CONTAINS 0.699 ACRES MORE OR LESS.

BEGINNING OF PIPELINE STA. 0+00 BEARS S52°10'53"W 830.80' FROM THE NORTHEAST CORNER OF SECTION 1, T147N, R94W, 5th P.M.
END OF PIPELINE STA. 6+09.19 BEARS S137°33'37"W 616.98' FROM THE NORTHEAST CORNER OF SECTION 1, T147N, R94W, 5th P.M.

CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAT CORRECTLY 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
REGISTRATION NO. 4854
STATE OF NORTH DAKOTA

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

UNTACH ENGINEERING & LAND SURVEYING
65 SOUTH - 200 EAST • (435) 789-1077
VERNAL, UTAH - 84078

SCALE 1" = 300'	DATE 09-19-11
PARTY A.K. S.B.	REFERENCES G.L.O. PLAT
WEATHER WARM	FILE 51082

1/4 Section Line --- Sec. 1 ---

R 94 W

R 93 W

Indian Abandonment Cross Cap

ARROW PIPELINE, LLC
FORT BERTHOLD #148-94-36D-25-2H
& #147-94-1A-12-2H
PIPELINE RIGHT-OF-WAY
SECTION 1, T147N, R94W, 5th P.M.

TOTAL PIPELINE RIGHT-OF-WAY ON TRIBAL LANDS

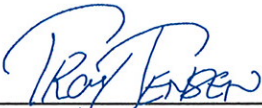
TOTAL LENGTH OF RIGHT-OF-WAY IS 609.19' OR 0.115 MILES. WIDTH OF RIGHT-OF-WAY IS 50' (25' PERPENDICULAR ON EACH SIDE OF THE CENTERLINE). CONTAINS 0.699 ACRES MORE OR LESS.

ENGINEER'S AFFIDAVIT

STATE OF MONTANA }
COUNTY OF RICHLAND } SS

TROY JENSEN, BEING FIRST DULY SWORN DEPOSES AND STATES THAT HE IS THE REGISTERED LAND SURVEYOR, FOR ARROW PIPELINE, LLC, THAT THESE SURVEYS WERE MADE BY HIM (OR UNDER HIS SUPERVISION): THAT HE HAS EXAMINED THE FIELD NOTES OF THE SURVEYS OF THE PIPELINE RIGHT-OF-WAY AS DESCRIBED AND SHOWN ON THIS MAP, THAT THIS MAP WAS PREPARED UNDER HIS DIRECTION FROM SAID FIELD NOTES; AND THAT SAID RIGHT-OF-WAY, 0.115 MILES IN LENGTH BEGINNING AND ENDING AS SHOWN ON THIS MAP IS ACCURATELY REPRESENTED.




REGISTERED LAND SURVEYOR
REGISTRATION NO. 4654
STATE OF NORTH DAKOTA

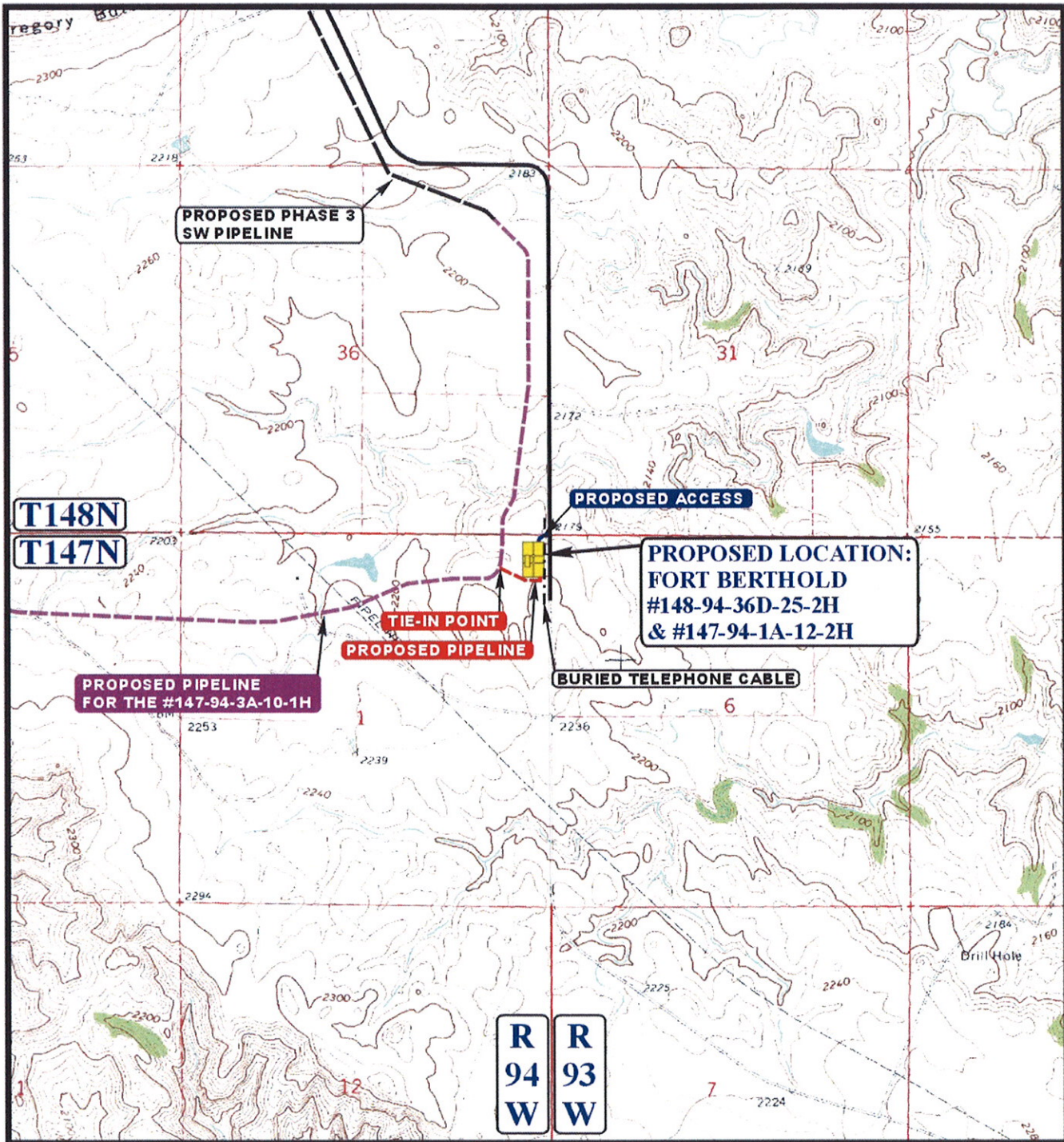
APPLICANT'S CERTIFICATE

I, JOHN M. DOLAN, DO HEREBY CERTIFY THAT I AM THE V.P. OF ENGINEERING FOR ARROW PIPELINE, LLC, HERINAFTER DESIGNATED THE APPLICANT; THAT TROY JENSEN WHO SUBSCRIBED TO THE FOREGOING AFFIDAVIT, IS EMPLOYED BY THE APPLICANT AS A LAND SURVEYOR AND THAT HE WAS DIRECTED BY THE APPLICANT TO SURVEY THE LOCATION OF THIS PIPELINE RIGHT-OF-WAY, 0.115 MILES IN LENGTH BEGINNING AT STA. 0+00 AND ENDING AT STA. 6+09.19, THAT SAID PIPELINE RIGHT-OF-WAY IS ACCURATELY REPRESENTED ON THIS MAP; THAT SUCH SURVEY AS REPRESENTED ON THIS MAP HAS BEEN ADOPTED BY THE APPLICANT AS THE DEFINITE LOCATION OF THE RIGHT-OF-WAY THEREBY SHOWN; AND THAT THE MAP HAS BEEN PREPARED TO BE FILED WITH THE SECRETARY OF THE INTERIOR OR HIS DULY AUTHORIZED REPRESENTATIVE AS PART OF THE APPLICATION FOR SAID RIGHT-OF-WAY TO BE GRANTED THE APPLICANT, ITS SUCCESSORS AND ASSIGNS, WITH THE RIGHT TO CONSTRUCT, MAINTAIN, AND REPAIR IMPROVEMENTS, THEREON AND THEREOVER, FOR SUCH PURPOSES, AND WITH THE FURTHER RIGHT IN THE APPLICANT, ITS SUCCESSORS AND ASSIGNS TO TRANSFER THIS RIGHT-OF-WAY BY ASSIGNMENT, GRANT, OR OTHERWISE.

APPLICANT


V.P. OF ENGINEERING

TITLE



APPROXIMATE TOTAL PIPELINE DISTANCE = 609' +/-

LEGEND:

-  PROPOSED ACCESS ROAD
-  EXISTING PIPELINE
-  PROPOSED PIPELINE
-  PROPOSED PIPELINE (SERVICING OTHER WELLS)

ARROW PIPELINE, LLC

N
 FORT BERTHOLD #148-94-36D-25-2H & #147-94-1A-12-2H
 SECTION 1, T147N, R94W, 5th P.M.
 NE 1/4 NE 1/4



Uintah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 (435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP
 09 16 11
 MONTH DAY YEAR
 SCALE: 1" = 2000' DRAWN BY: B.D.H. REVISED: 00-00-00



Notice of Availability and Appeal Rights

Arrow Pipeline: Addendum to Environmental Assessment to Authorize Land Use for Gathering Pipelines Connecting the Fort Berthold #148-94-36D-25-2H & #147-94-1A-12-2H Wells to the Proposed Arrow #147-94-3A-10-1H Gathering Pipeline System

The Bureau of Indian Affairs (BIA) is planning to issue administrative approvals related to an Addendum to Environmental Assessment to Authorize Land Use for Gathering Pipelines Connecting the Fort Berthold #148-94-36D-25-2H & #147-94-1A-12-2H Wells to the Proposed Arrow #147-94-3A-10-1H Gathering Pipeline System on the Fort Berthold Reservation as shown on the attached map. Construction by Arrow Pipeline, LLC is expected to begin in 2011.

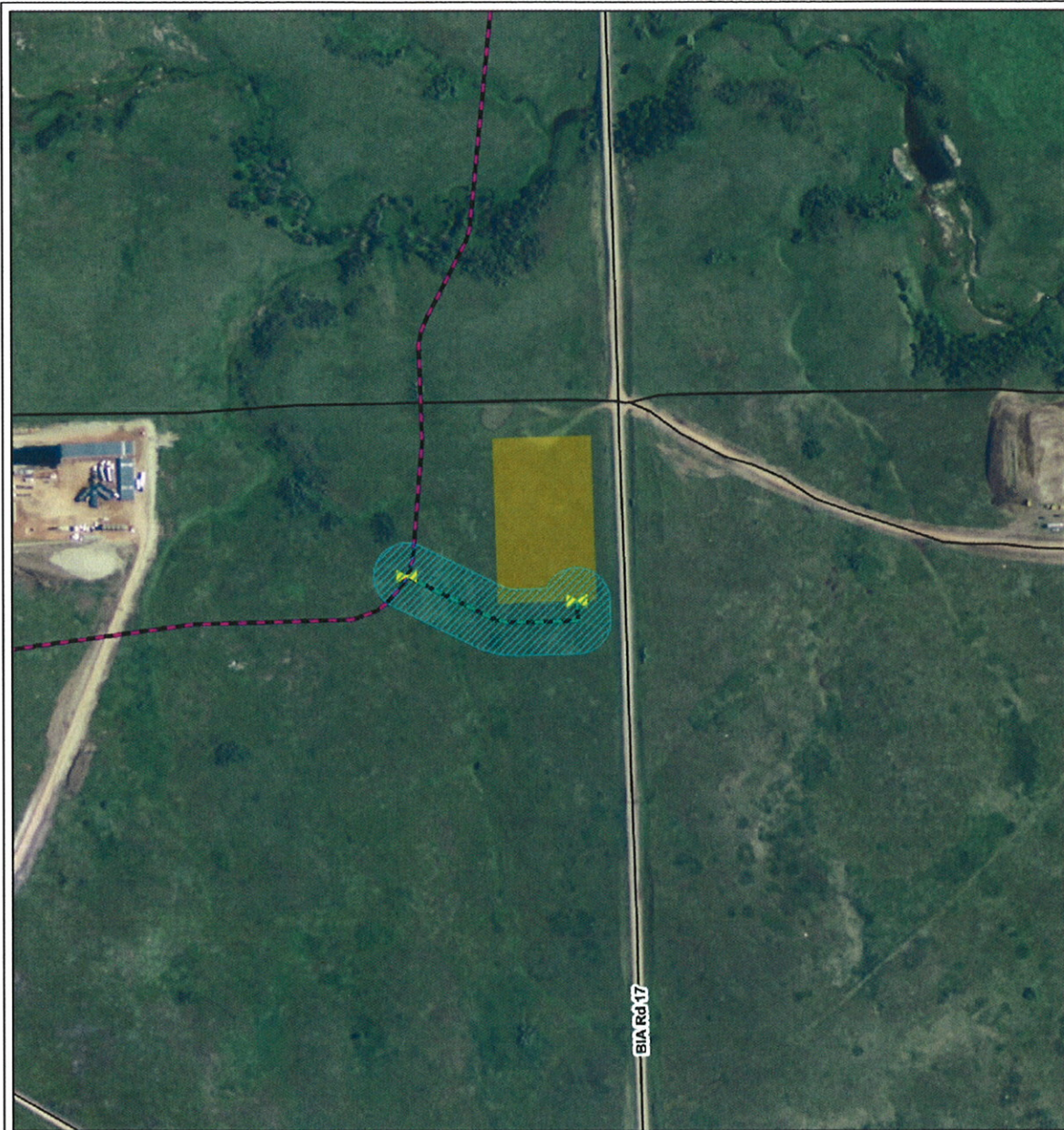
An environmental assessment (EA) determined that proposed activities will not cause significant impacts to the human environment. An environmental impact statement is not required. Contact Earl Silk, Superintendent at 701-627-4707 for more information and/or copies of the EA and the Finding of No Significant Impact (FONSI).

The FONSI is only a finding on environmental impacts – it is not a decision to proceed with an action and *cannot* be appealed. BIA's decision to proceed with administrative actions *can* be appealed until December 23, 2011, by contacting:

**United States Department of the Interior
Office of Hearings and Appeals
Interior Board of Indian Appeals
801 N. Quincy Street, Suite 300, Arlington, Va 22203.**

Procedural details are available from the BIA Fort Berthold Agency at 701-627-4707.

Project locations



Legend

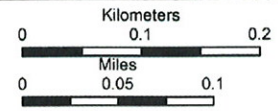
-  Survey Area
-  Proposed Valve Locations
-  Proposed Fort Berthold #148-94-36D-25-2H & Fort Berthold #147-94-1A-12-2H Gathering Pipelines
-  Proposed Fort Berthold #147-94-3A-10-1H Gathering Pipeline
-  Proposed Well Pad
-  Existing Road



116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957

www.swca.com



Base Map: NAIP APFO Imagery
Source: ND GIS Hub
Quadrangle: Mandaree SE (1973)
T. 147N, R. 94W
Dunn County, North Dakota



Scale: 1:4,709 NAD 1983 UTM Zone 13N