



Stephen W. Brashear

Senior Environmental Coordinator

ConocoPhillips Alaska, Inc.

Environmental Sustainability & Permitting

P.O. Box 100360

Anchorage, AK 99510-0360

Phone: (907) 263-4180

Email: steve.w.brashear@conocophillips.com

3/14/2023

DOG Permitting
State of Alaska
Department of Natural Resources
550 West 7th Avenue, Suite 1100
Anchorage, AK 99501-3563

Submitted Electronically to:
dog.permitting@alaska.gov

**RE: Willow KRU Road Upgrades
Request to Amend Unit Plan of Operations LONS 79-016
Kuparuk River Unit**

Dear Regulators,

ConocoPhillips Alaska, Inc. (CPAI) respectfully requests authorization to upgrade sections of the road between the 12-Acre Pad and Drill Site 2L (DS-2L) by placing approximately 47,000 cubic yards (cy) of clean gravel fill, resulting in 5.0 acres of impacted tundra along the roadside. The purpose of this work is to widen the curves in the road system to allow for the safe transport of modules for the Willow development project. These upgrades will require road improvements at six culverts. Additionally, three culverts will be extended, and nine culverts will be replaced. All work will occur on existing gravel in the Kuparuk River Unit.

The proposed work is scheduled to begin April 20, 2023, or as soon as the required permits are received.

Additional details are provided in the attached ADNDR DOG Unit Plan of Operations Amendment Application form, project description, and figures.

If you have any questions or need additional information, please contact me at (907) 263-4180 or steve.w.brashear@conocophillips.com.

Sincerely,

A handwritten signature in blue ink that reads "Stephen W. Brashear". The signature is fluid and cursive, with a long horizontal stroke at the end.

Stephen W. Brashear

Enclosures



UNIT PLAN OF OPERATIONS AMENDMENT APPLICATION

State of Alaska
Department of Natural Resources, Division of Oil & Gas
550 W. 7th Ave, Suite 1100, Anchorage, AK 99501-3563
Phone: 907-269-8800 Fax: 907-269-8943
Permitting Email: dog.permitting@alaska.gov



SECTION I: APPLICANT INFORMATION	
1. Applicant:	2. Applicant Contact:
Name: ConocoPhillips Alaska, Inc. (CPAI)	First Name: Steve Last Name: Brashear
Mailing Address: P.O. Box 100360	Title: Senior Environmental Coordinator
City: Anchorage	Mailing Address: P.O. Box 100360
State: AK Zip Code: 99510-0360	City: Anchorage
Phone: N/A Fax: N/A	State: AK Zip Code: 99510-0360
Email: N/A	Phone: 907-263-4180 Fax: N/A
	Email: Steve.w.brashear@conocophillips.com
3. Unit Name Kuparuk River Unit	
4. Unit Operator Contact:	
First Name: Wendy Last Name: Mahan Title: Field Environmental Coordinator	
Mailing Address: P.O. Box 100360	
City: Anchorage State: AK Zip Code: 99510-0360	
Phone: 907-659-7212 Fax: 907-659-7254 Email: N1438@conocophillips.com	
Describe the relationship between the Unit Operator and the Applicant: CPAI is the unit operator.	
SECTION II: 3RD PARTY INFORMATION (Fill out this section only if you are applying for the Applicant)	SECTION III: APPLICATION DATE AND NUMBER
3rd Party Company Name: N/A	Application Date (Office Use Only):
First Name: N/A Last Name: N/A	
Title: N/A	
Mailing Address: N/A	
City: N/A	
State: N/A Zip Code: N/A	
Phone: N/A Fax: N/A	
Email: N/A	
Describe the affiliation to the Applicant: N/A	Application Number: LONS 79-016
SECTION IV: PROJECT INFORMATION	
1. Project Name:	Willow KRU Road Upgrades
2. Proposed Start Date:	4/20/2023
3. Project Description:	

Is activity discussed in the approved Plan of Development on file with the Division's Units Section? ☐ Yes ☒ No		
Describe what and where: ConocoPhillips Alaska, Inc. (CPAI) requests authorization to upgrade sections of the road between 12-Acre Pad and Drill Site 2L (DS-2L) by placing approximately 47,000 cubic yards (cy) of clean gravel fill, resulting in 5.0 acres of impacted tundra along the roadside. The purpose of this work will be to widen the curves in the road system to allow for the safe transport of modules for the Willow development project (see figures for details). These upgrades will require road improvements at six culverts. Additionally, three culverts will be extended, and nine culverts will be replaced. All work will occur from existing gravel roads in the Kuparuk River Unit.		
SECTION V: LAND STATUS		
1. State Mineral Estate:		
Are supplemental pages for land status included in Appendix C? ☐ Yes ☒ No		
Affected ADL: 025646	Date Effective: 7/1/2018	Date Assigned: 11/13/2018
Oil And Gas Lessee(s): CPAI		
Surface Ownership: State of Alaska		
Do you have, or anticipate having an Access Agreement: ☒ Yes ☐ No		
Special Use Lands: None identified		
Jointly Managed Lands: None identified		
Other Considerations: None		
Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
Gravel	See attached table in Project Description	See attached table in Project Description
N/A	N/A	N/A
N/A	N/A	N/A
2. State of Alaska Surface Lands:		
Are supplemental pages for land status included in Appendix C? ☐ Yes ☒ No		
Oil And Gas Mineral Estate Owner: N/A		
Access Authorization(s): N/A		
Special Use Lands: ADL 50666		
Jointly Managed Lands: N/A		
Other Considerations: N/A		
Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
3. Private Lands:		
Are supplemental pages for land status included in Appendix C? ☐ Yes ☒ No		
Oil And Gas Mineral Estate Owner: N/A		
Surface Ownership And Access Agreement(s): N/A		
Special Use Lands: N/A		
Jointly Managed Lands: N/A		
Other Considerations: N/A		
Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
N/A	N/A	N/A

N/A	N/A	N/A	
N/A	N/A	N/A	
SECTION VI: SEQUENCE AND SCHEDULE OF OPERATIONS			
Project Milestone #	Project Milestone	Proposed Start Date	Proposed End Date
1.	Gravel Placement	4/20/2023	4/20/2024
2.	N/A	N/A	N/A
3.	N/A	N/A	N/A
4.	N/A	N/A	N/A
5.	N/A	N/A	N/A
6.	N/A	N/A	N/A
7.	N/A	N/A	N/A
8.	N/A	N/A	N/A
9.	N/A	N/A	N/A
10.	N/A	N/A	N/A
SECTION VII: PROJECTED USE REQUIREMENTS			
1. Describe the proposed operations, including the location and design, of Well Sites :			
Click here to enter text. N/A			
2. Describe the proposed operations, including the location and design, of Buildings :			
N/A			
3. Describe the proposed operations, including the location and design, of Fuel and Hazardous Substances :			
N/A			
4. Describe the proposed operations, including the location and design, of Solid Waste Sites :			
N/A			
5. Describe the proposed operations, including the location and design, of Water Supplies :			
N/A			
6. Describe the proposed operations, including the location and design, of Utilities :			
N/A			
7. Describe the proposed operations, including the location and design, of Material Sites :			
N/A			
8. Describe the proposed operations, including the location and design, of Roads :			

N/A				
9. Describe the proposed operations, including the location and design, of Airstrips:				
N/A				
10. Describe the proposed operations, including the location and design, of All Other Facilities and Equipment:				
CPAI proposes to place 47,000 cy of clean gravel fill into 5.0 acres of tundra wetlands to widen and thicken road segments from 12-Acre Pad to DS-2L to allow the safe transport of modules for the Willow Development Project.				
11. If another permit(s) is required for the above described Projected Use Requirements, provide the following information:				
Agency	Permit Type	Permit Number	Application Status	Projected Use Requirement(s)
North Slope Borough	Land Management Regulations (LMR) Administrative Approval	Pending	Preparing	10
SECTION VIII: REHABILITATION PLAN				
1. Proposed Level of Infrastructure, Facilities and Equipment Removal:				
N/A				
2. Description of Restoration and Rehabilitation Activities for Vegetation, Habitat, Impacted Wildlife, and Other Applicable Resources:				
The amended application does not change the plans for rehabilitation upon abandonment outlined in the original authorization.				
SECTION IX: OPERATING PROCEDURES DESIGNED TO MINIMIZE ADVERSE EFFECTS				
Describe operating procedures designed to prevent or minimize adverse effects on other natural resources and other uses of the Unit area and adjacent areas including:				
Fish and Wildlife Habitats: CPAI has a Wildlife Avoidance Interaction Plan designed to prevent or minimize adverse effects on other natural resources.				
Historic and Archeological Sites: CPAI does not believe this would have any impacts to cultural resources since the area has been previously cleared from archeological and cultural clearance. No impacts are expected.				
Public Use Areas: This area is not open to the public.				
Other Uses: N/A				
SECTION X: GLOSSARY OF TERMS				
Term #	Term	Term Definition		
1.	CPAI	ConocoPhillips Alaska, Inc.		
2.	N/A	Not Applicable		
3.	TBD	To be determined		
4.	cy	Cubic Yards		
5.	Drillsite 1L	DS-1L		
SECTION XI: CONFIDENTIALITY				
The undersigned hereby requests that each page/section of this application <u>marked</u> confidential be held confidential under AS 38.05.035(a)(8). APPLICANT CONTACT:				
Sign here.	Enter Name.	Enter Title.	Enter Date.	
Signature	Name	Title	Date	

APPENDIX A: MAPS

See the attached maps and figures.

APPENDIX B: MITIGATION MEASURES

No new exceptions are expected

APPENDIX C: OTHER

See Project Description

Additional permits required for the above Project Use Requirements:

Agency	Permit Type	Permit Number	Application Status	Projected Use Requirement(s)
North Slope Borough	Certificate of Traditional Land Use Inventory Clearance	Pending	Preparing	10
USACE	404 Individual Permit	POA-2018-00190	Permit Received	10
ADFG	Fish Habitat Permit	Pending	Preparing	10



**Willow KRU Road Upgrades
LONS 79-016**

Project Description

ConocoPhillips Alaska, Inc. (CPAI) requests authorization to upgrade sections of the road between the 12-Acre Pad and Drill Site 2L (DS-2L) by placing approximately 47,000 cubic yards (cy) of clean gravel fill, resulting in 5.0 acres of impacted tundra along the roadside.

Township, Range, Sections and Coordinates of Road Upgrades

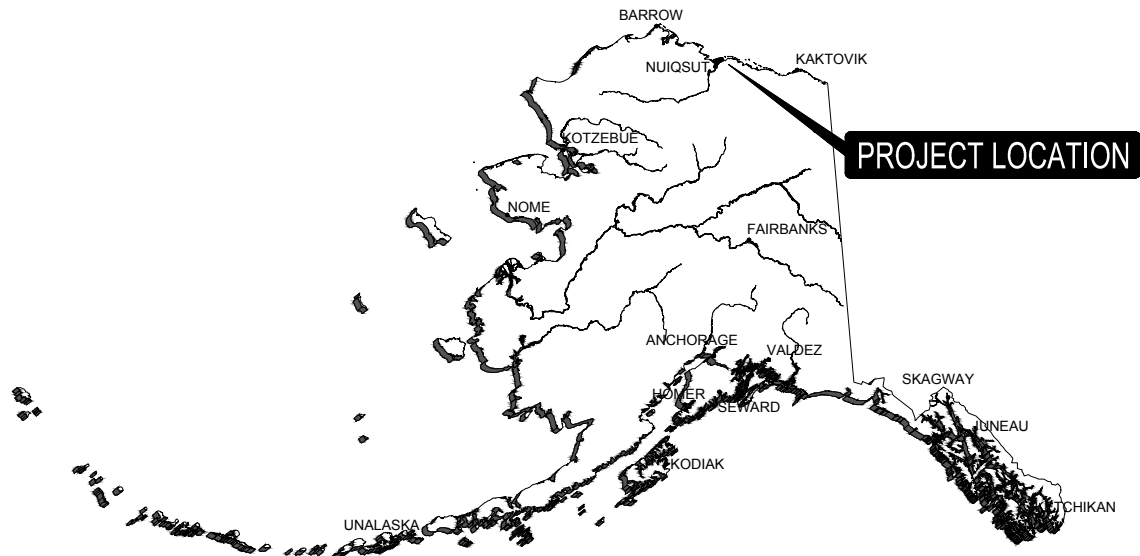
Township	Range	Sections	Latitude & Longitude
13N	9E	28	70.48632° N, 149.84133° W 70.44959° N, 149.81760° W
12N	9E	11, 26	70.41091° N, 149.80210° W
11N	9E	1, 11, 12, 14, 15, 16, 19, 20, 21, 29	70.34264° N, 149.74015° W 70.33971° N, 149.73288° W 70.33787° N, 149.73019° W 70.33284° N, 149.73856° W 70.32632° N, 149.75281° W 70.32187° N, 149.77318° W 70.31807° N, 149.78570° W 70.31215° N, 149.79577° W 70.30806° N, 149.83262° W 70.30763° N, 149.83362° W 70.30318° N, 149.84860° W 70.29876° N, 149.86019° W 70.29147° N, 149.87834° W 70.28677° N, 149.89145° W 70.28071° N, 149.91048° W 70.28612° N, 149.93166° W

			70.29139° N, 149.94004° W
11N	8E	23, 24, 26, 27, 28, 33	70.29311° N, 149.99967° W 70.29266° N, 150.00441° W 70.29035° N, 150.02876° W 70.28827° N, 150.03780° W 70.28530° N, 150.04331° W 70.27507° N, 150.05645° W 70.27196° N, 150.08092° W 70.27204° N, 150.10818° W 70.26961° N, 150.11781° W 70.26624° N, 150.12459° W 70.26307° N, 150.12704° W 70.26002° N, 150.13186° W
10N	7E	13, 14, 22	70.21822° N, 150.23604° W 70.21523° N, 150.25318° W 70.21565° N, 150.27956° W 70.20996° N, 150.32202° W

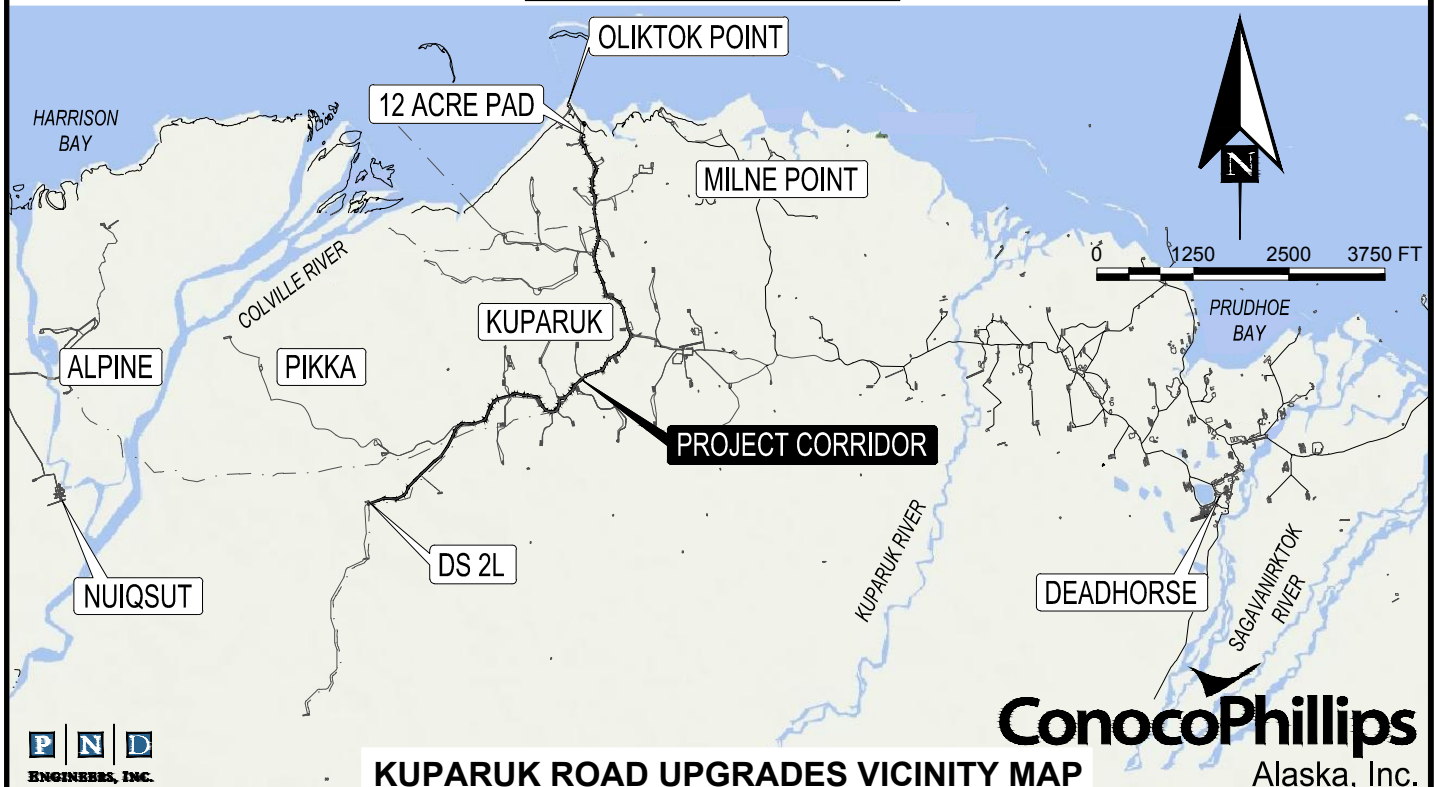
The purpose of this work will be to widen curves and increase thickness of segments of the road system to allow for the safe transport of modules for the Willow development project (see figures for details). These upgrades will require road improvements at six culverts. Additionally, three culverts will be extended, and nine culverts will be replaced. All work will occur from existing gravel roads in the Kuparuk River Unit. Gravel will be sourced from Mine Sites C and E. The project will utilize the nearest available gravel source to reduce driving distances and vehicle traffic.

The proposed work is scheduled to begin April 20, 2023, or as soon as the required permits are received. CPAI will utilize typical construction equipment including gravel-hauling trucks, road graders, and compactors.

All activities will be conducted in accordance with federal, state, and local regulations, permit stipulations and general concurrence stipulations as appropriate. Please see the attachments for additional details. The figures represent the project plan and will be adjusted as needed for varying field conditions.



ALASKA VICINITY MAP



KUPARUK ROAD UPGRADES VICINITY MAP

PURPOSE:
UPGRADE EXISTING KUPARUK
RIVER UNIT (KRU) ROADS FOR
WILLOW MODULE TRANSPORT

DATUM: BPMSL, NAD83 ASP ZONE 4

REFERENCE:

APPLICANT: CONOCOPHILLIPS
ALASKA, INC

LOCATION:

T13N R9E, T12N R9E, T11N R9E,
T11N R8E, T10N R8E, T10N R7E
UMIAT MERIDIAN

PROPOSED: KUPARUK ROAD
UPGRADES (WILLOW
MODULE TRANSPORT)

IN: KUPARUK RIVER UNIT
(KRU)

COUNTY: NORTH SLOPE BOROUGH
STATE: ALASKA

SHEET 1 of 12 3/14/2023

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1	VICINITY MAP
2	SHEET INDEX & QUANTITIES REPORTING
3	ADJACENT LAND OWNERS
4	ADJACENT LAND OWNERSHIP MAP
5	KUPARUK ROAD UPGRADES FOR WILLOW MODULE TRANSPORT OVERVIEW
6	KUPARUK ROAD UPGRADES FOR WILLOW MODULE TRANSPORT (SHEET 1 OF 3)
7	KUPARUK ROAD UPGRADES FOR WILLOW MODULE TRANSPORT (SHEET 2 OF 3)
8	KUPARUK ROAD UPGRADES FOR WILLOW MODULE TRANSPORT (SHEET 3 OF 3)
9	TYPICAL ROAD AND CROSS DRAINAGE CULVERT SECTIONS
10	CHARLIE CREEK FISH HABITAT IMPACTS PLAN VIEW
11	CHARLIE CREEK TRIBUTARY 1 FISH HABITAT IMPACTS PLAN VIEW
12	CHARLIE CREEK TRIBUTARY 2 FISH HABITAT IMPACTS PLAN VIEW

KUPARUK ROAD UPGRADES – QUANTITIES		
ROAD SEGMENTS	FOOTPRINT (AC)	FILL VOLUME (CY)
12 ACRE PAD TO 2L	5.0	47,000

NOTE:

1. ACREAGE AND VOLUME QUANTITIES REPORTED ABOVE ARE PROJECT TOTALS, INCLUDING FILL IN UPLANDS AS WELL AS WATERS OF THE U.S.

FISH HABITAT – QUANTITIES		
STREAM	FOOTPRINT (AC)	FILL VOLUME (CY)
CHARLIE CREEK	0.010	9
CHARLIE CREEK TRIBUTARY 1	0.003	5
CHARLIE CREEK TRIBUTARY 2	0.004	3
TOTAL	0.017	17



REFERENCE:

APPLICANT: CONOCOPHILLIPS ALASKA, INC

PROPOSED: KUPARUK ROAD UPGRADES (WILLOW MODULE TRANSPORT)

AT: NORTH SLOPE, ALASKA

SHEET **2** of **12** 3/14/2023

SHEET INDEX & QUANTITIES REPORTING

KUUKPIK VILLAGE CORPORATION
P.O. BOX 89187
NUIQSUT, AK 99789
(907) 480-6220
ATTN: JOE NUKAPIGAK

BUREAU OF LAND MANAGEMENT
1150 UNIVERSITY AVENUE
FAIRBANKS, AK 99709
ATTN: NICHELLE JONES

ARCTIC SLOPE REGIONAL CORPORATION
P.O. BOX 129
BARROW, AK 99723
ATTN: ERIK KENNING

STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINING, LAND & WATER
3700 AIRPORT WAY
FAIRBANKS, AK 99709
ATTN: JEANNE PROULX

ADJACENT LAND OWNERS



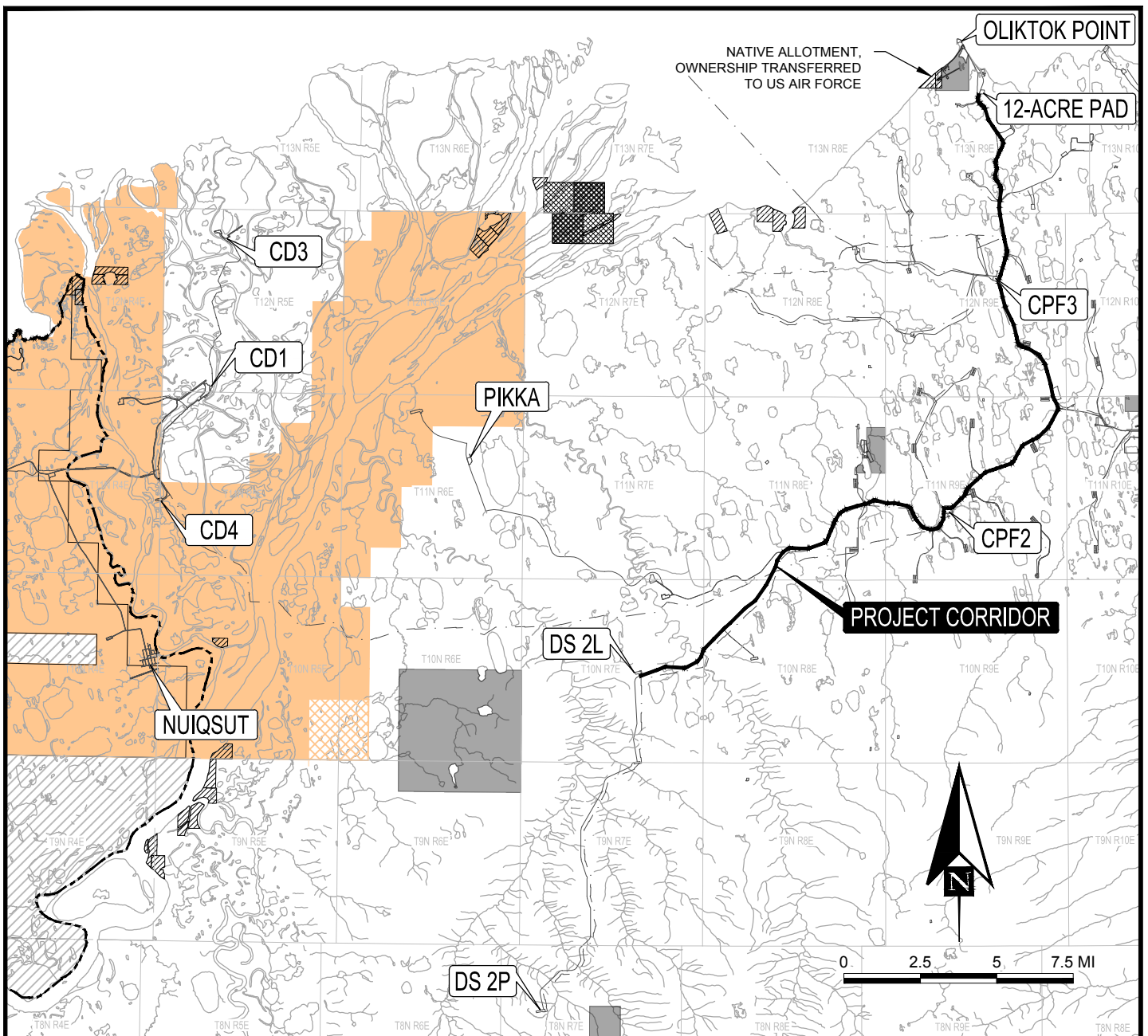
REFERENCE:

APPLICANT: CONOCOPHILLIPS
ALASKA, INC

PROPOSED: KUPARUK ROAD
UPGRADES (WILLOW
MODULE TRANSPORT)

AT: NORTH SLOPE, ALASKA

SHEET **3** of **12** 3/14/2023



LEGEND

	ALASKA DEPARTMENT OF NATURAL RESOURCES (DNR)
	BUREAU OF LAND MANAGEMENT (BLM)
	KUUKPIK VILLAGE CORPORATION
	ASRC CORPORATION
	NATIVE ALLOTMENTS – PENDING & PATENTED
	NORTH SLOPE BOROUGH MUNICIPAL ENTITLEMENT
	PRIVATE LANDS
	NATIONAL PETROLEUM RESERVE ALASKA (NPRA) BOUNDARY

ADJACENT LAND OWNERSHIP MAP



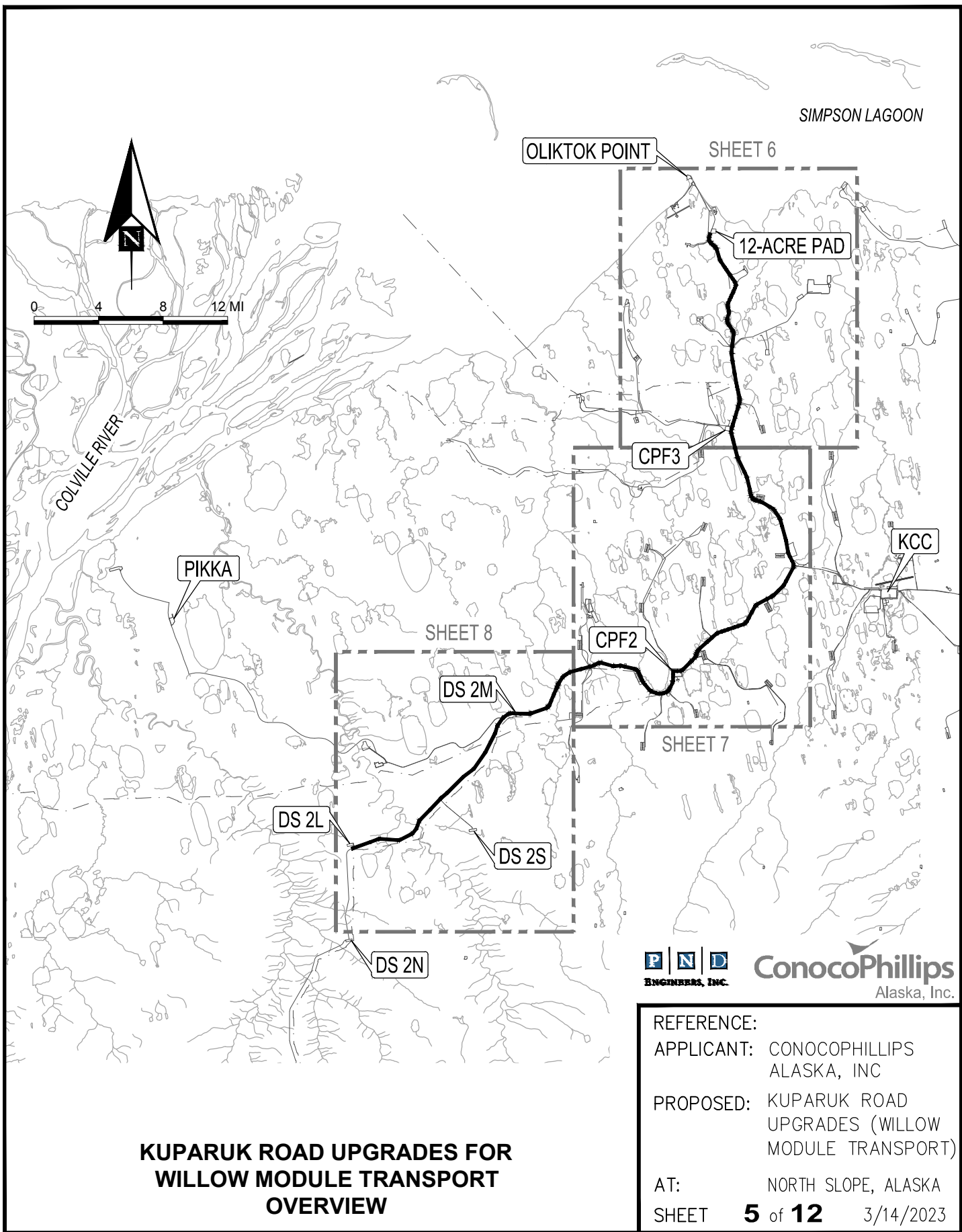
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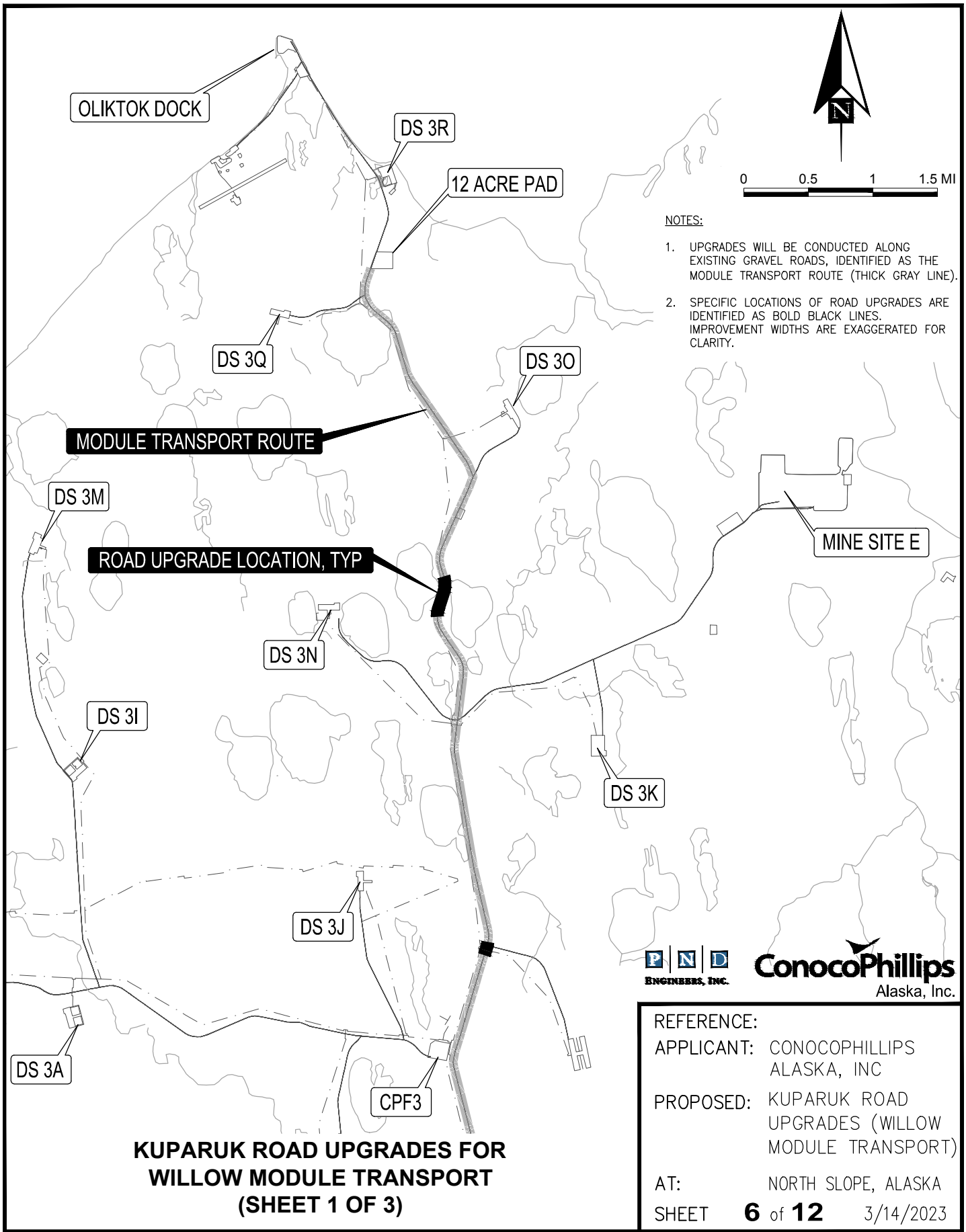
APPLICANT: CONOCOPHILLIPS
ALASKA, INC

PROPOSED: KUPARUK ROAD
UPGRADES (WILLOW
MODULE TRANSPORT)

AT: NORTH SLOPE, ALASKA

SHEET **4** of **12** 3/14/2023





OLIKTOK DOCK

DS 3R

12 ACRE PAD

DS 3Q

DS 30

MODULE TRANSPORT ROUTE

DS 3M

ROAD UPGRADE LOCATION, TYP

DS 3N

DS 3I

MINE SITE E

DS 3K

DS 3J

DS 3A

CPF3

**KUPARUK ROAD UPGRADES FOR
WILLOW MODULE TRANSPORT
(SHEET 1 OF 3)**



0 0.5 1 1.5 MI

NOTES:

1. UPGRADES WILL BE CONDUCTED ALONG EXISTING GRAVEL ROADS, IDENTIFIED AS THE MODULE TRANSPORT ROUTE (THICK GRAY LINE).
2. SPECIFIC LOCATIONS OF ROAD UPGRADES ARE IDENTIFIED AS BOLD BLACK LINES. IMPROVEMENT WIDTHS ARE EXAGGERATED FOR CLARITY.



REFERENCE:
APPLICANT: CONOCOPHILLIPS
ALASKA, INC
PROPOSED: KUPARUK ROAD
UPGRADES (WILLOW
MODULE TRANSPORT)
AT: NORTH SLOPE, ALASKA
SHEET **6** of **12** 3/14/2023



0 0.5 1 1.5 MI

NOTES:

1. UPGRADES WILL BE CONDUCTED ALONG EXISTING GRAVEL ROADS, IDENTIFIED AS THE MODULE TRANSPORT ROUTE (THICK GRAY LINE).
2. SPECIFIC LOCATIONS OF ROAD UPGRADES ARE IDENTIFIED AS BOLD BLACK LINES. IMPROVEMENT WIDTHS ARE EXAGGERATED FOR CLARITY.

MODULE TRANSPORT ROUTE

DS 3B

DS 1Q

DS 2W

KCS

DS 1Y

**CHARLIE CREEK
(FISH BEARING)
SEE SHEET 10**

DS 2X

**CHARLIE CREEK
TRIBUTARIES 1 & 2
(FISH BEARING)
SEE SHEET 11 & 12**

DS 2U

DS 2T

MINE SITE F

DS 2V

DS 2Z

ROAD UPGRADE LOCATION, TYP

DS 2A

DS 2C

CPF2

DS 2B

DS 2H

DS 2F

**KUPARUK ROAD UPGRADES FOR
WILLOW MODULE TRANSPORT
(SHEET 2 OF 3)**



ConocoPhillips
Alaska, Inc.

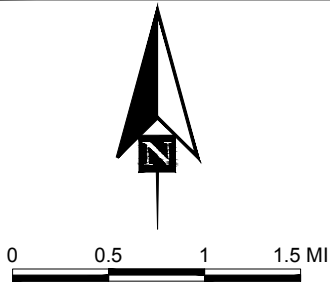
REFERENCE:

APPLICANT: CONOCOPHILLIPS
ALASKA, INC

PROPOSED: KUPARUK ROAD
UPGRADES (WILLOW
MODULE TRANSPORT)

AT: NORTH SLOPE, ALASKA

SHEET **7** of **12** 3/14/2023



NOTES:

1. UPGRADES WILL BE CONDUCTED ALONG EXISTING GRAVEL ROADS, IDENTIFIED AS THE MODULE TRANSPORT ROUTE (THICK GRAY LINE).
2. SPECIFIC LOCATIONS OF ROAD UPGRADES ARE IDENTIFIED AS BOLD BLACK LINES. IMPROVEMENT WIDTHS ARE EXAGGERATED FOR CLARITY.

ROAD UPGRADE LOCATION, TYP

DS 2M

MODULE TRANSPORT ROUTE

DS 2L

DS 2S



ConocoPhillips
Alaska, Inc.

REFERENCE:

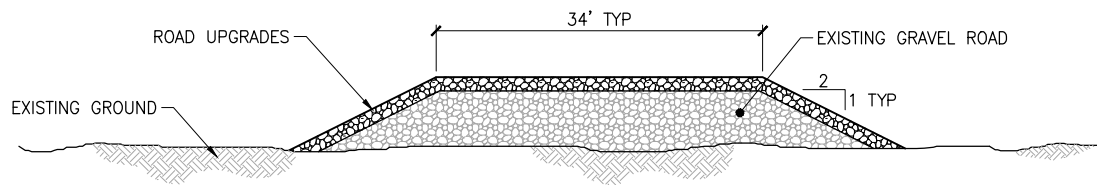
APPLICANT: CONOCOPHILLIPS
ALASKA, INC

PROPOSED: KUPARUK ROAD
UPGRADES (WILLOW
MODULE TRANSPORT)

AT: NORTH SLOPE, ALASKA

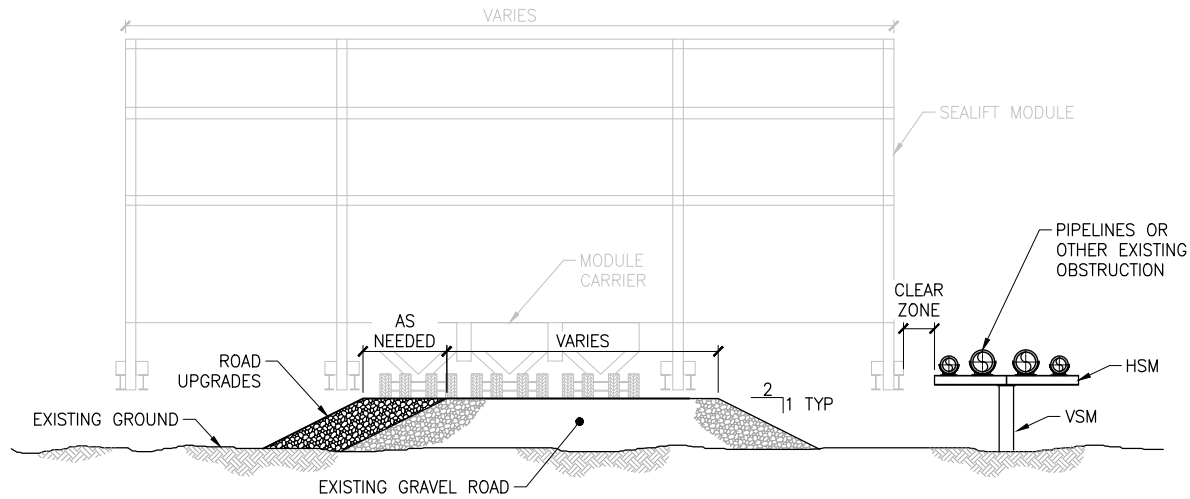
SHEET **8** of **12** 3/14/2023

**KUPARUK ROAD UPGRADES FOR
WILLOW MODULE TRANSPORT
(SHEET 3 OF 3)**



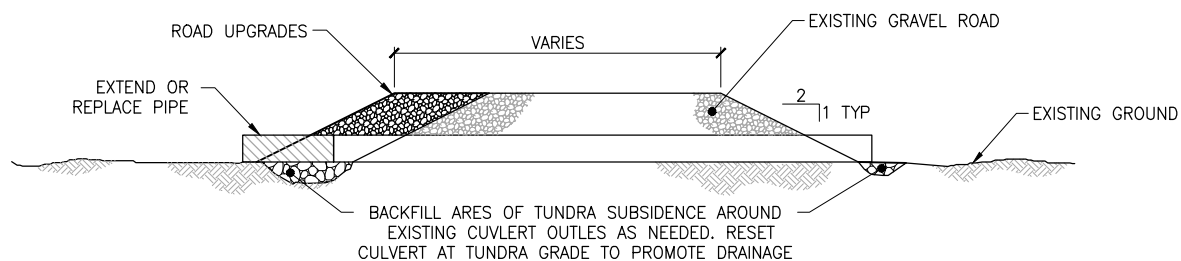
VERTICAL CURVE ROAD UPGRADES - TYPICAL SECTION

NOT TO SCALE



ROAD UPGRADE TYPICAL SECTION

NOT TO SCALE



CULVERT EXTENSION TYPICAL SECTION

NOT TO SCALE

TYPICAL ROAD AND CROSS DRAINAGE CULVERT SECTIONS



REFERENCE:

APPLICANT: CONOCOPHILLIPS
ALASKA, INC

PROPOSED: KUPARUK ROAD
UPGRADES (WILLOW
MODULE TRANSPORT)

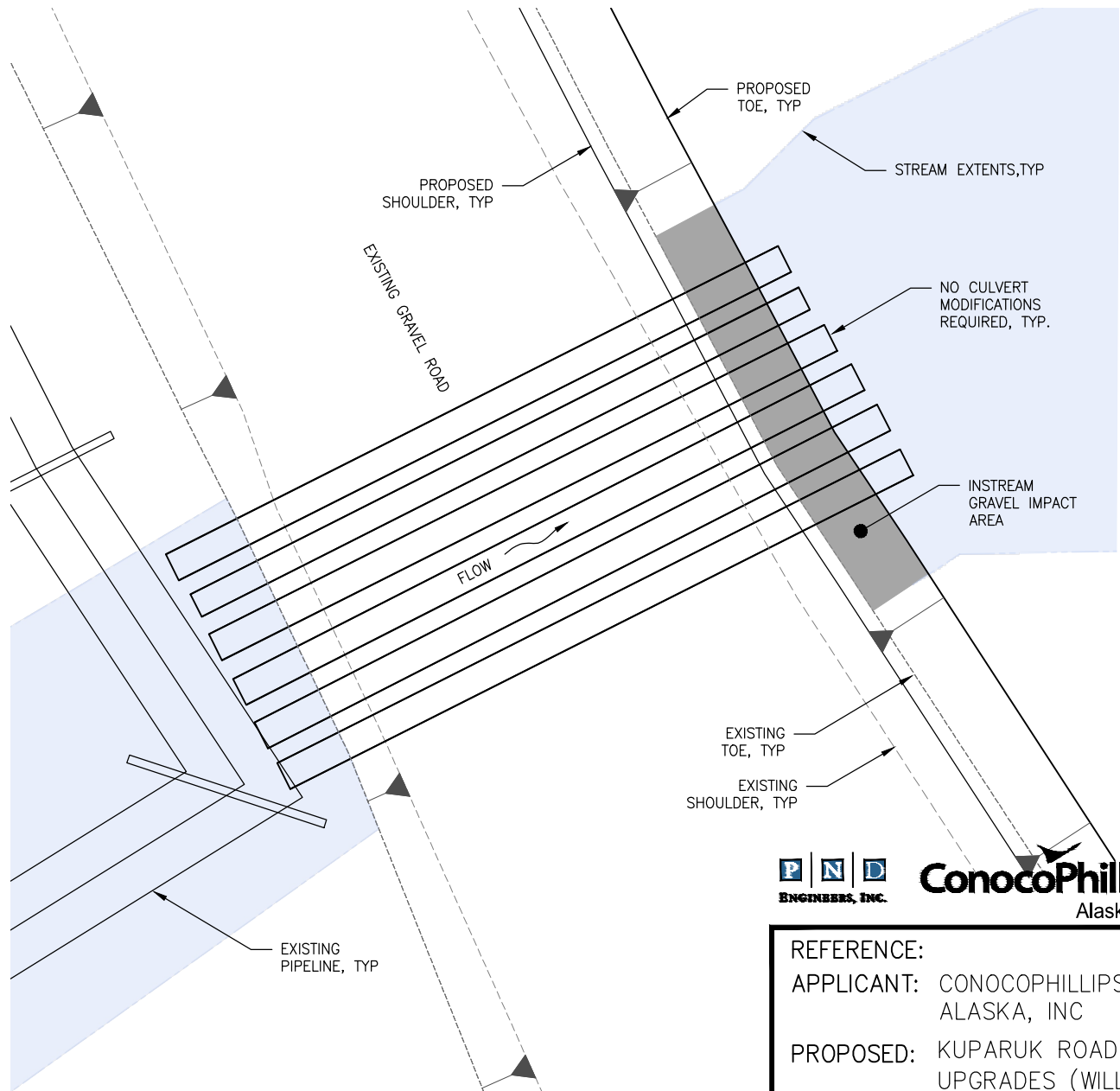
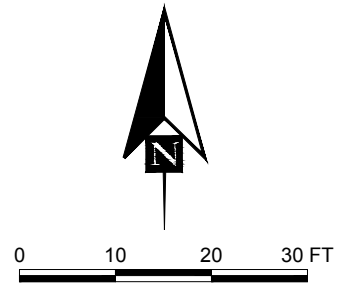
AT: NORTH SLOPE, ALASKA

SHEET **9** of **12** 3/14/2023

CHARLIE CREEK QUANTITIES	
GRAVEL FOOTPRINT	415 SF, 0.010 AC
GRAVEL FILL	9 CY

NOTES:

1. STREAM EXTENTS ARE APPROXIMATE AND HAVE BEEN DEVELOPED FROM AERIAL IMAGERY. WATER SURFACE EXTENTS AND ELEVATIONS VARY SEASONALLY.
2. FISH BEARING STREAMS WERE IDENTIFIED PER, 'TECHNICAL REPORT NO. 80-01, "A SURVEY OF STREAM CROSSING STRUCTURES IN THE NORTH SLOPE OILFIELDS," BY WILLIAM A. MORRIS AND JACK F. WINTERS. DATED FEBRUARY 2008. ALASKA DEPARTMENT OF NATURAL RESOURCES OFFICE OF HABITAT MANAGEMENT AND PERMITTING.'



**CHARLIE CREEK
FISH HABITAT IMPACTS
PLAN VIEW**



ConocoPhillips
Alaska, Inc.

REFERENCE:

APPLICANT: CONOCOPHILLIPS
ALASKA, INC

PROPOSED: KUPARUK ROAD
UPGRADES (WILLOW
MODULE TRANSPORT)

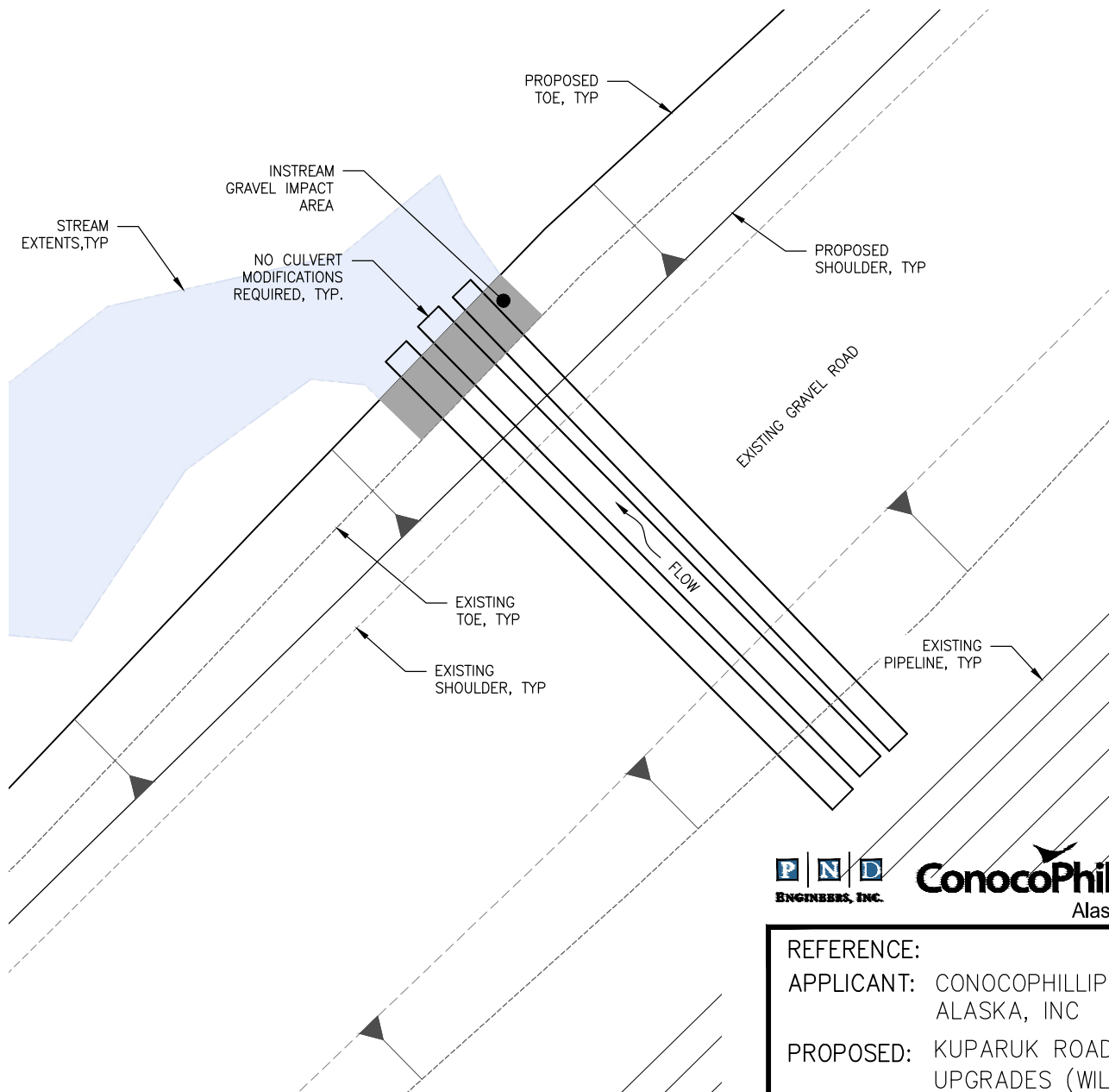
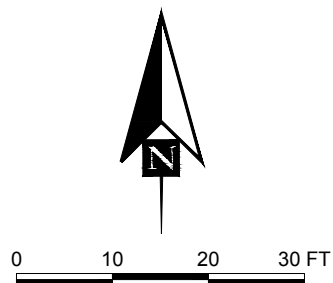
AT: NORTH SLOPE, ALASKA

SHEET **10** of **12** 3/14/2023

CHARLIE CREEK TRIBUTARY 1 QUANTITIES	
GRAVEL FOOTPRINT	147 SF, 0.003 AC
GRAVEL FILL	5 CY

NOTES:

1. STREAM EXTENTS ARE APPROXIMATE AND HAVE BEEN DEVELOPED FROM AERIAL IMAGERY. WATER SURFACE EXTENTS AND ELEVATIONS VARY SEASONALLY.
2. FISH BEARING STREAMS WERE IDENTIFIED PER, 'TECHNICAL REPORT NO. 80-01, "A SURVEY OF STREAM CROSSING STRUCTURES IN THE NORTH SLOPE OILFIELDS," BY WILLIAM A. MORRIS AND JACK F. WINTERS. DATED FEBRUARY 2008. ALASKA DEPARTMENT OF NATURAL RESOURCES OFFICE OF HABITAT MANAGEMENT AND PERMITTING.'



**CHARLIE CREEK TRIBUTARY 1
FISH HABITAT IMPACTS
PLAN VIEW**



REFERENCE:

APPLICANT: CONOCOPHILLIPS
ALASKA, INC

PROPOSED: KUPARUK ROAD
UPGRADES (WILLOW
MODULE TRANSPORT)

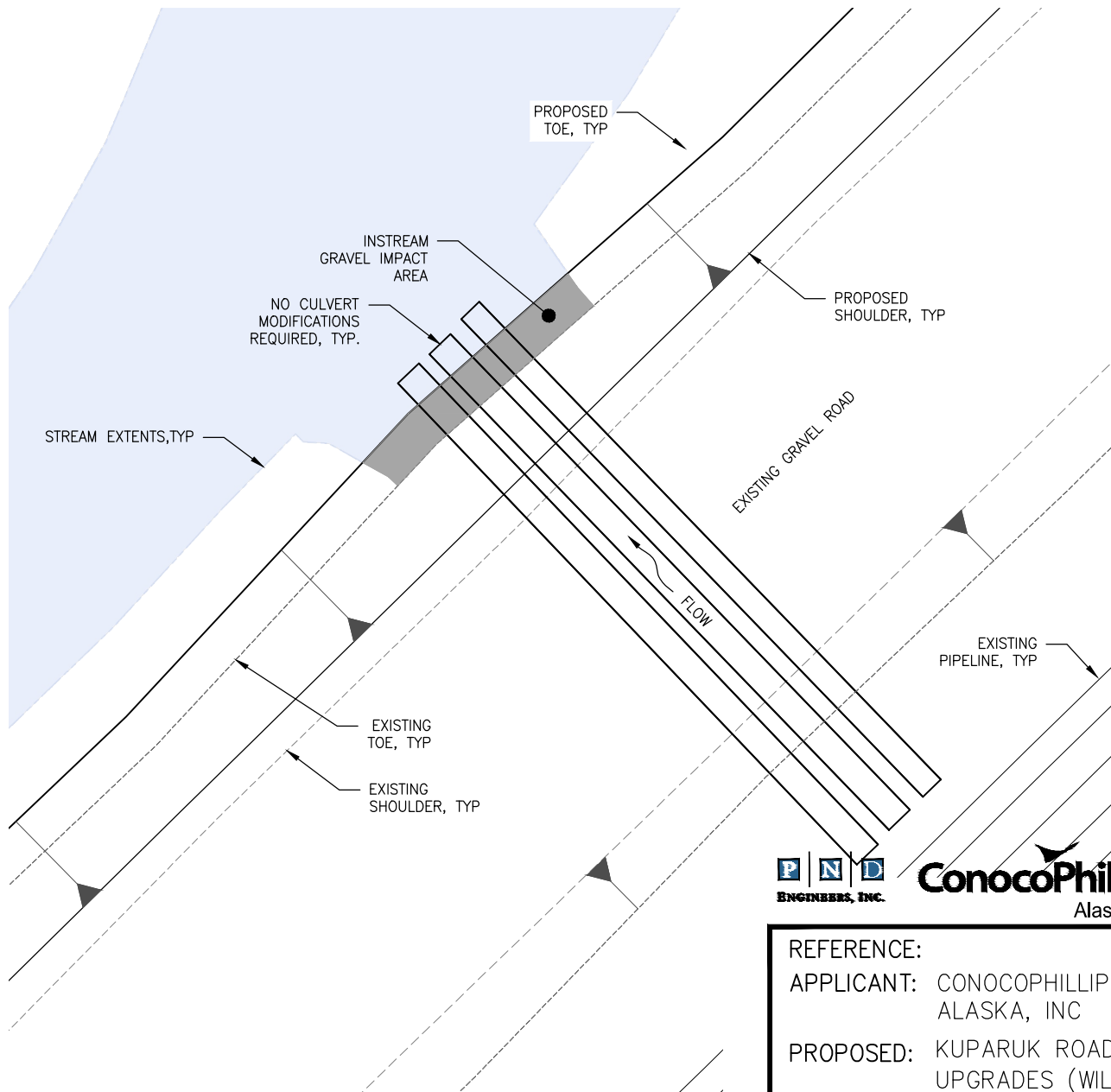
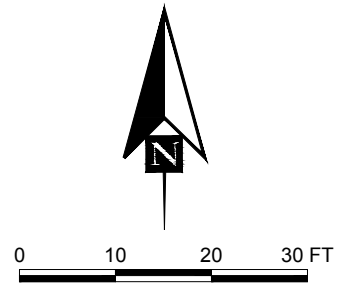
AT: NORTH SLOPE, ALASKA

SHEET **11** of **12** 3/14/2023

CHARLIE CREEK TRIBUTARY 2 QUANTITIES	
GRAVEL FOOTPRINT	162 SF, 0.004 AC
GRAVEL FILL	3 CY

NOTES:

1. STREAM EXTENTS ARE APPROXIMATE AND HAVE BEEN DEVELOPED FROM AERIAL IMAGERY. WATER SURFACE EXTENTS AND ELEVATIONS VARY SEASONALLY.
2. FISH BEARING STREAMS WERE IDENTIFIED PER, 'TECHNICAL REPORT NO. 80-01, "A SURVEY OF STREAM CROSSING STRUCTURES IN THE NORTH SLOPE OILFIELDS," BY WILLIAM A. MORRIS AND JACK F. WINTERS. DATED FEBRUARY 2008. ALASKA DEPARTMENT OF NATURAL RESOURCES OFFICE OF HABITAT MANAGEMENT AND PERMITTING.'



**CHARLIE CREEK TRIBUTARY 2
FISH HABITAT IMPACTS
PLAN VIEW**



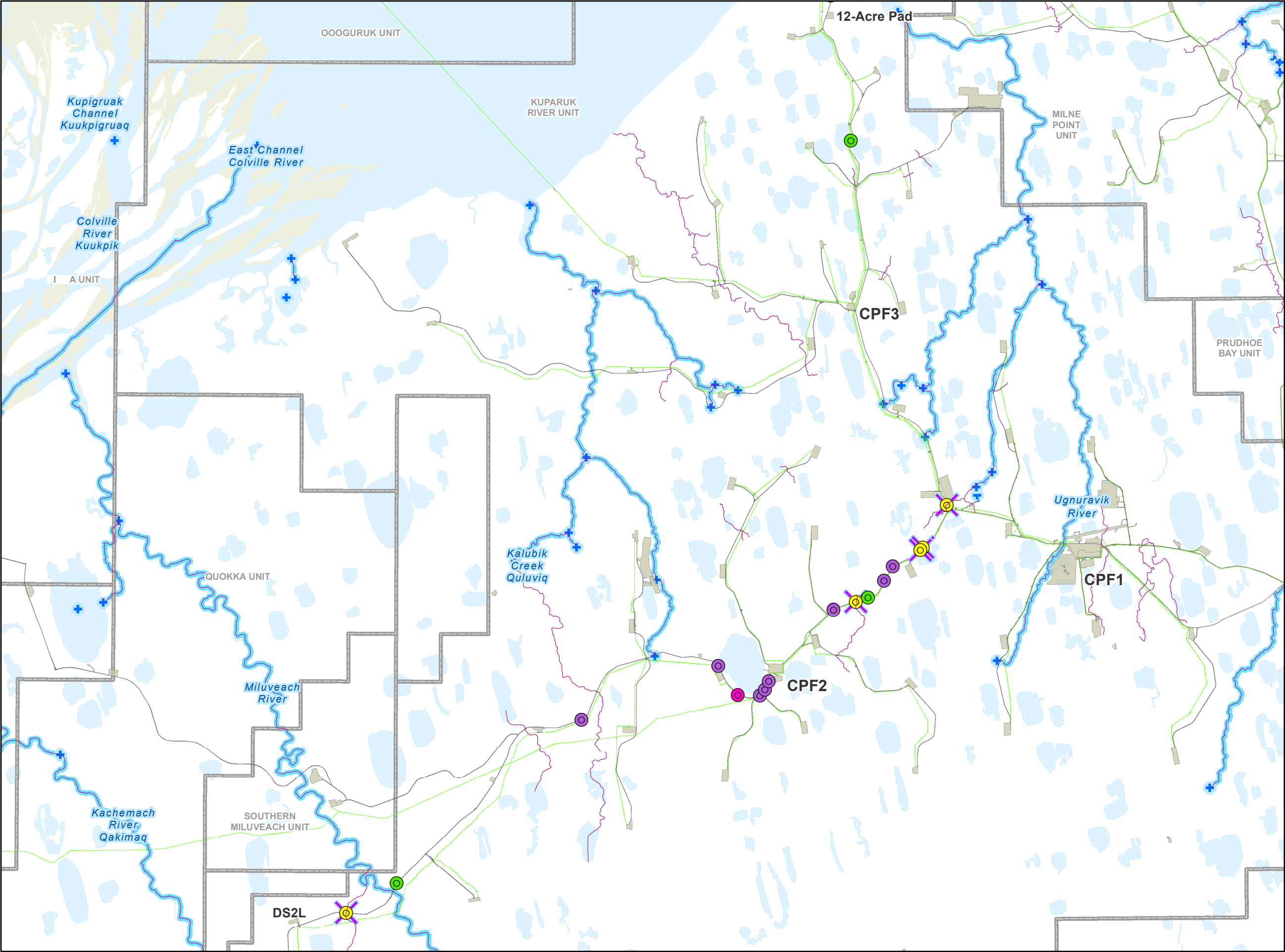
REFERENCE:

APPLICANT: CONOCOPHILLIPS
ALASKA, INC

PROPOSED: KUPARUK ROAD
UPGRADES (WILLOW
MODULE TRANSPORT)

AT: NORTH SLOPE, ALASKA

SHEET **12** of **12** 3/14/2023



Willow

KRU Road Improvements Culvert Locations

KRU Road Improvements

- Culvert Extension
- Culvert Replacement
- Road Improvement
- Road improvement/Culvert Replacement
- Fish Bearing

ADFG Fish Steams and Points

- Suspected Fish Stream
- Anadromous Fish Stream Junction Points
- Anadromous Fish Streams

Infrastructure

- Pipeline
- Road
- Pad

Boundaries

- Oil and Gas Unit

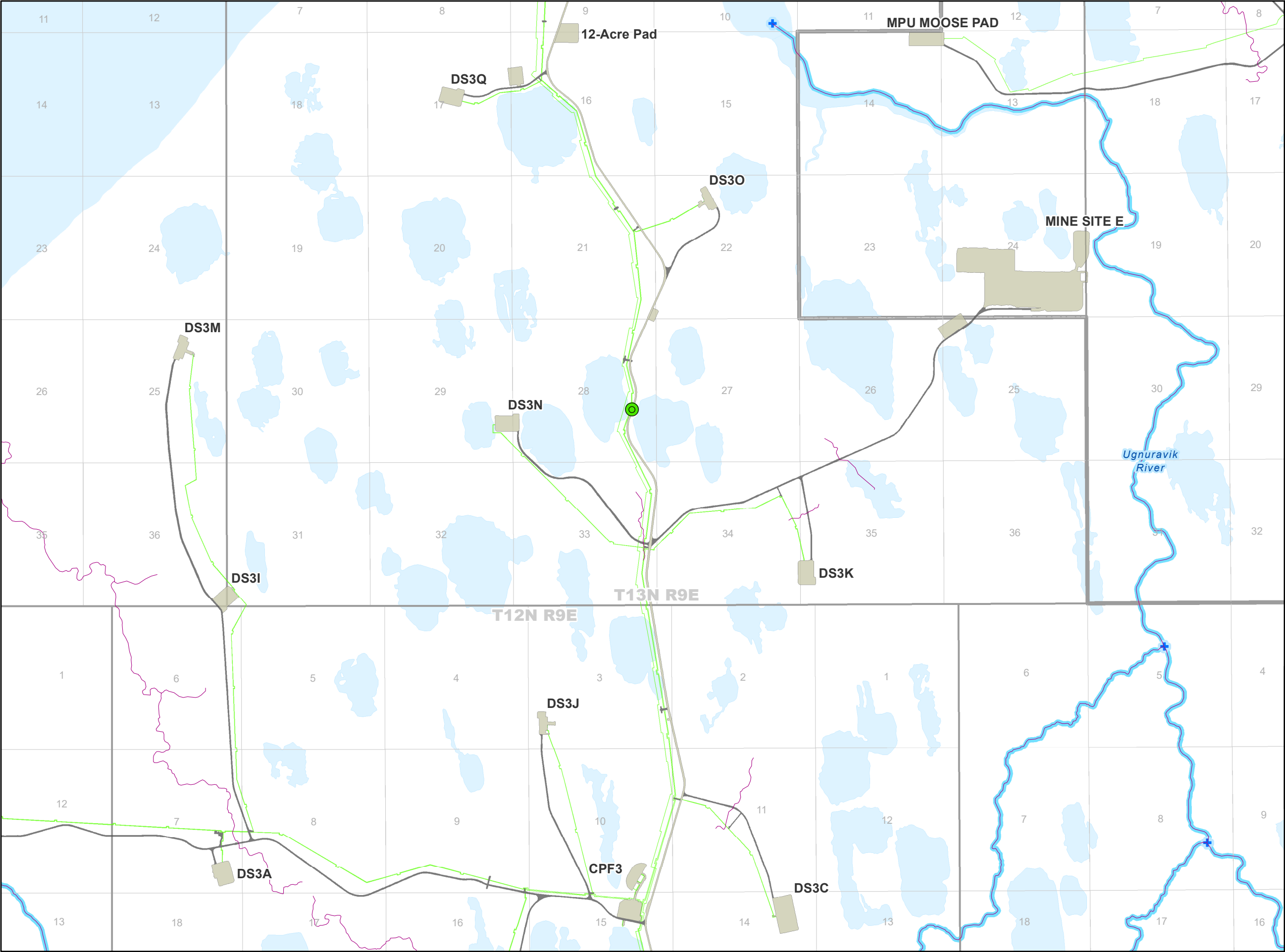
Map Extent

N

0 1 2 Miles

ConocoPhillips
Alaska, Inc.

March 14, 2023



Willow

KRU Road Improvements

12 Acre Pad

Affected Culverts

KRU Road Improvements

- Culvert Extension

ADFG Fish Steams and Points

- Suspected Fish Stream
- Anadromous Fish Stream Junction Points
- Anadromous Fish Streams

Infrastructure

- Pipeline
- Road
- Pad

Boundaries

- Oil and Gas Unit

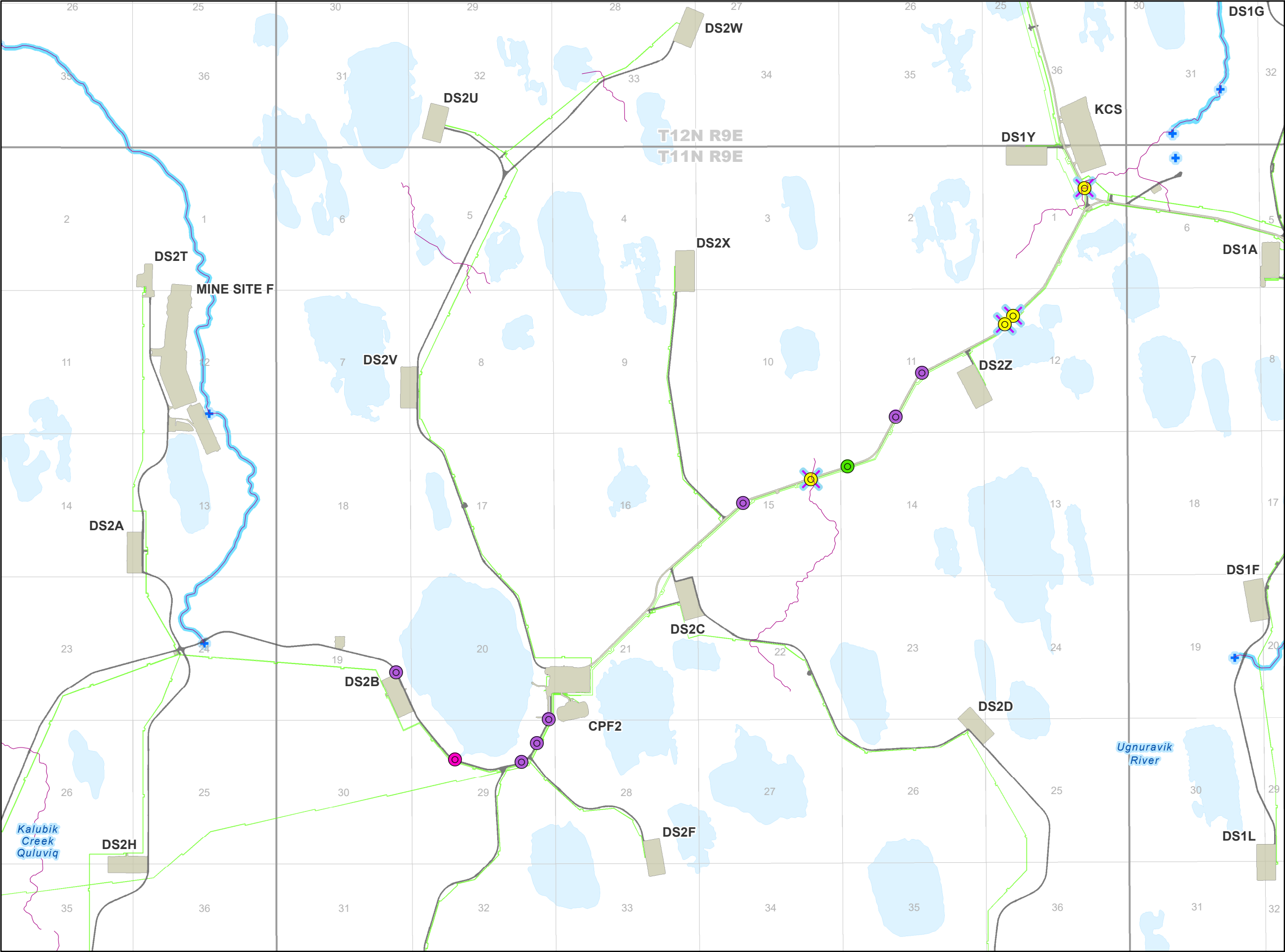
Alpine
Kuparuk
Map Extent
NPR-A
TAPS

N

0 0.5 1 Miles

ConocoPhillips
Alaska, Inc.

March 13, 2023



Willow

KRU Road Improvements

CPF2

Affected Culverts

KRU Road Improvements

- Culvert Extension
- Culvert Replacement
- Road Improvement
- Road improvement/Culvert Replacement
- Fish Bearing

ADFG Fish Steams and Points

- Suspected Fish Stream
- Anadromous Fish Stream Junction Points
- Anadromous Fish Streams

Infrastructure

- Pipeline
- Road
- Pad

Boundaries

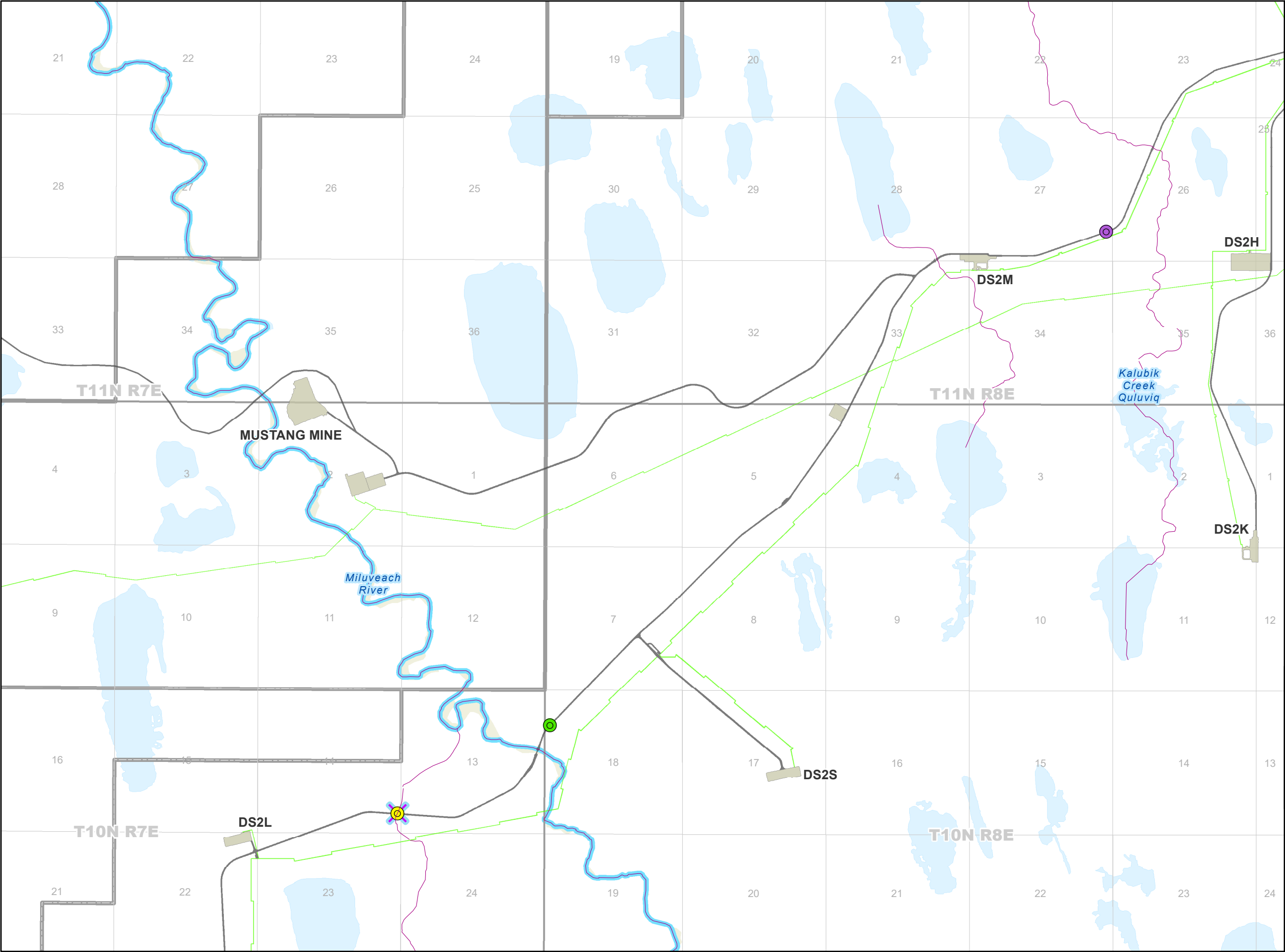
- Oil and Gas Unit

N

0 0.5 1 Miles

ConocoPhillips
Alaska, Inc.

March 13, 2023



Willow

KRU Road Improvements

DS2L

Affected Culverts

KRU Road Improvements

- Culvert Extension
- Culvert Replacement
- Road Improvement
- Fish Bearing

ADFG Fish Steams and Points

- Suspected Fish Stream
- Anadromous Fish Streams

Infrastructure

- Pipeline
- Road
- Pad

Boundaries

- Oil and Gas Unit

N

0 0.5 1 Miles

ConocoPhillips
Alaska, Inc.

March 13, 2023