To: Brent Petrie

From: Doug Vaught

Date: May 12, 2005

SUBJECT: New Stuyahok to Ekwok Intertie Route

Attached is a proposed intertie route between the villages of New Stuyahok and Ekwok. The route parallels the Nushagak River through mostly upland tundra terrain with several areas of brush and/or conifer forest. The attached infrared aerial photograph indicates the primarily open tundra nature of the area. The route requires one major ravine crossing (about 100 feet deep), located approximately two miles south of the New Stuyahok runway. A shallower ravine located immediately south of the New Stuyahok runway must also be crossed. Following the deep ravine crossing, the route follows mostly open descending terrain to Ekwok. Because this proposed intertie route is located on upland terrain, there is no flooding potential.

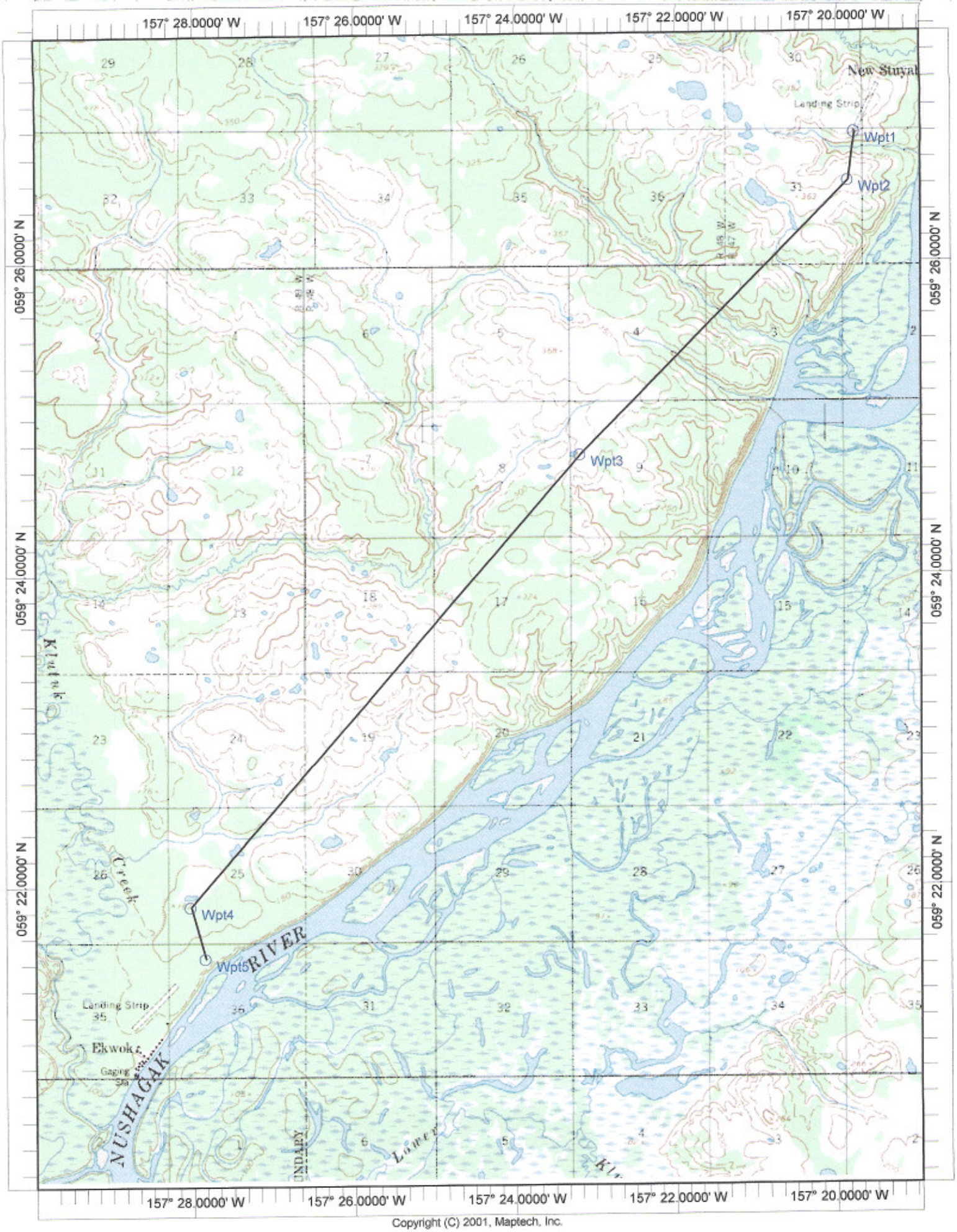
This proposed route was selected to be the shortest distance between New Stuyahok and Ekwok, avoid several native allotments, and avoid forested terrain where possible. Rick Elliott researched land ownership along the proposed route and identified a number of native allotment claims in the area. These allotments are shown in green in the accompanying maps. U.S. Survey maps are also included for native allotments that are near the proposed route. This proposed route avoids native allotment claims. Identification of land ownership, other than the native allotments, was also obtained. Two native corporations – Stuyahok Ltd. and Ekwok Natives Ltd. – own the land through which the proposed route traverses.

Route information:

- Total route distance: 7 miles, 4981 feet (see route details sheet)
- Two ravine crossings
- Dry upland tundra (light-colored areas of infrared photograph): approx. 5.4 miles
- Brushy or forested terrain (darker-colored areas of infrared photograph): approx. 2.5 miles
- No flooding risk

Doug Vaught

Doug



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Routes

Name: New Stuyahok to Ekwok

Short Name: NwStyh

Distance: 7 miles, 4981 feet

Number of Waypoint: 5

Name: Wpt1

Short Name: R22W01

Coordinates: 059° 26.8289' N, 157° 19.7797' W

Distance to next Waypoint: 1901 feet

Bearing to next Waypoint: 187 degrees (true)

Name: Wpt2

Short Name: R22W02

Coordinates: 059° 26.5184' N, 157° 19.8548' W

Distance to next Waypoint: 2 miles, 4240 feet

Bearing to next Waypoint: 224 degrees (true)

Name: Wpt3

Short Name: Wpt3

Coordinates: 059° 24.7716' N, 157° 23.1879' W

Distance to next Waypoint: 4 miles, 2029 feet

Bearing to next Waypoint: 220 degrees (true)

Name: Wpt4

Short Name: Wpt4

Coordinates: 059° 21.8699' N, 157° 28.0280' W

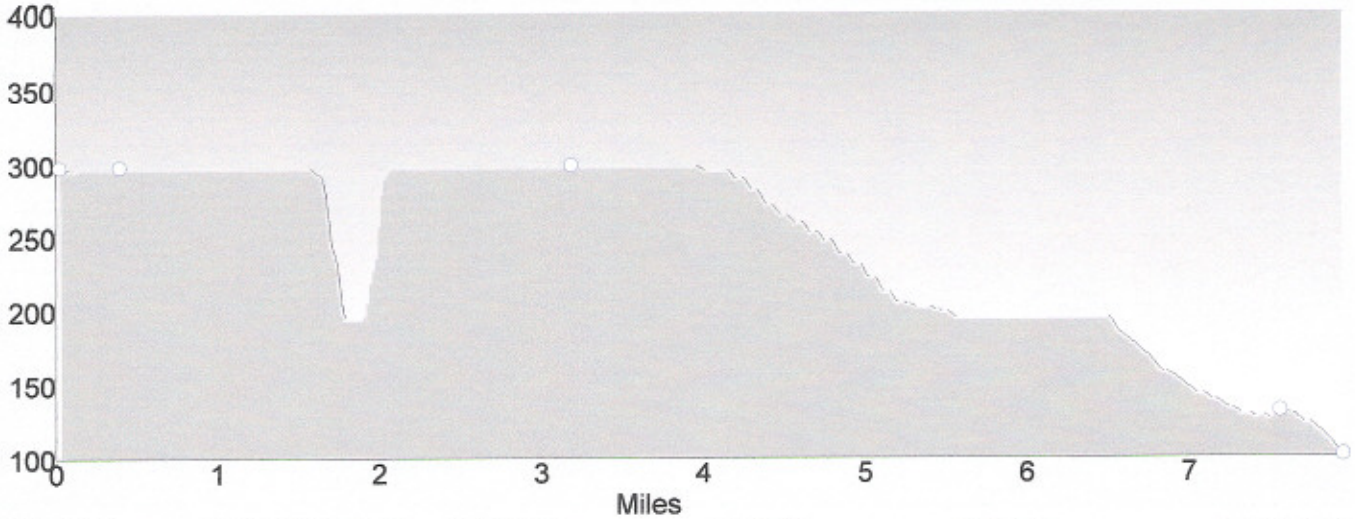
Distance to next Waypoint: 2090 feet

Bearing to next Waypoint: 164 degrees (true)

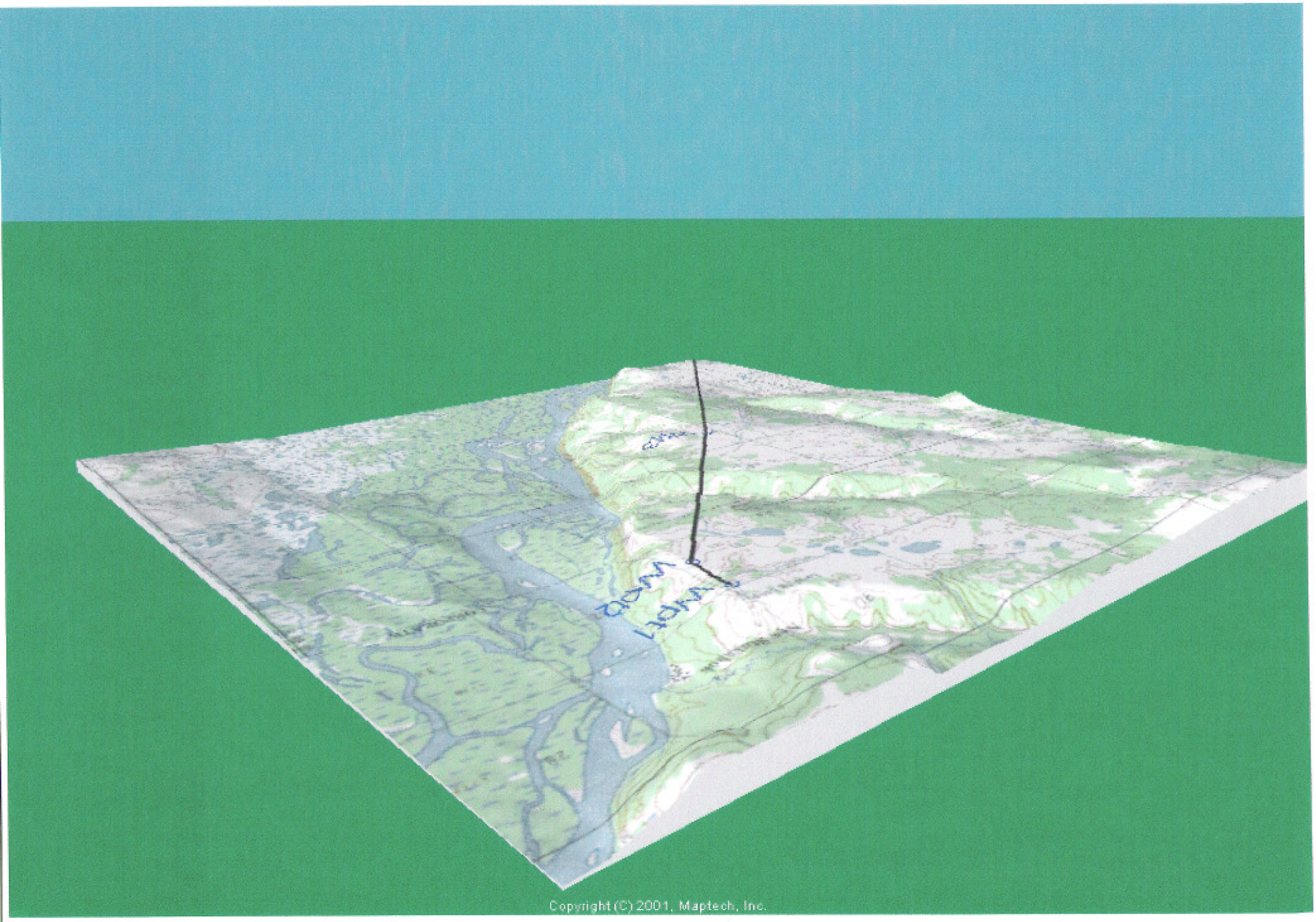
Name: Wpt5

Short Name: Wpt5

Coordinates: 059° 21.5380' N, 157° 27.8525' W



Total distance:	7 miles, 4981 feet	Climbing:	113 feet	Latitude:	059° 23.5411' N
		Descending:	-309 feet	Longitude:	157° 25.2404' W
Ground distance:	7 miles, 4999 feet	Elevation change:	-196 feet	Elevation:	223 feet
		Min/Max:	101/298	Grade:	0%



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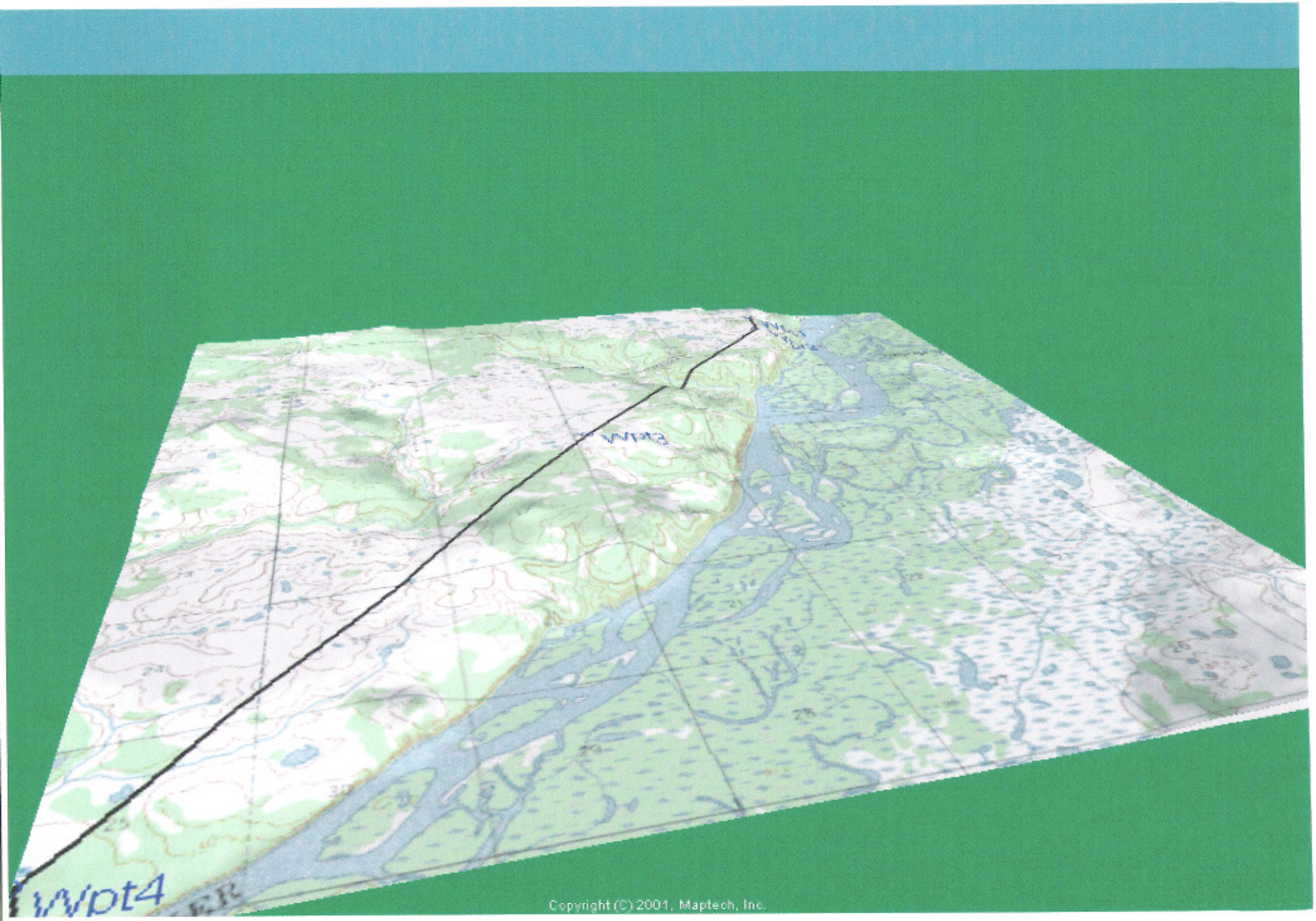

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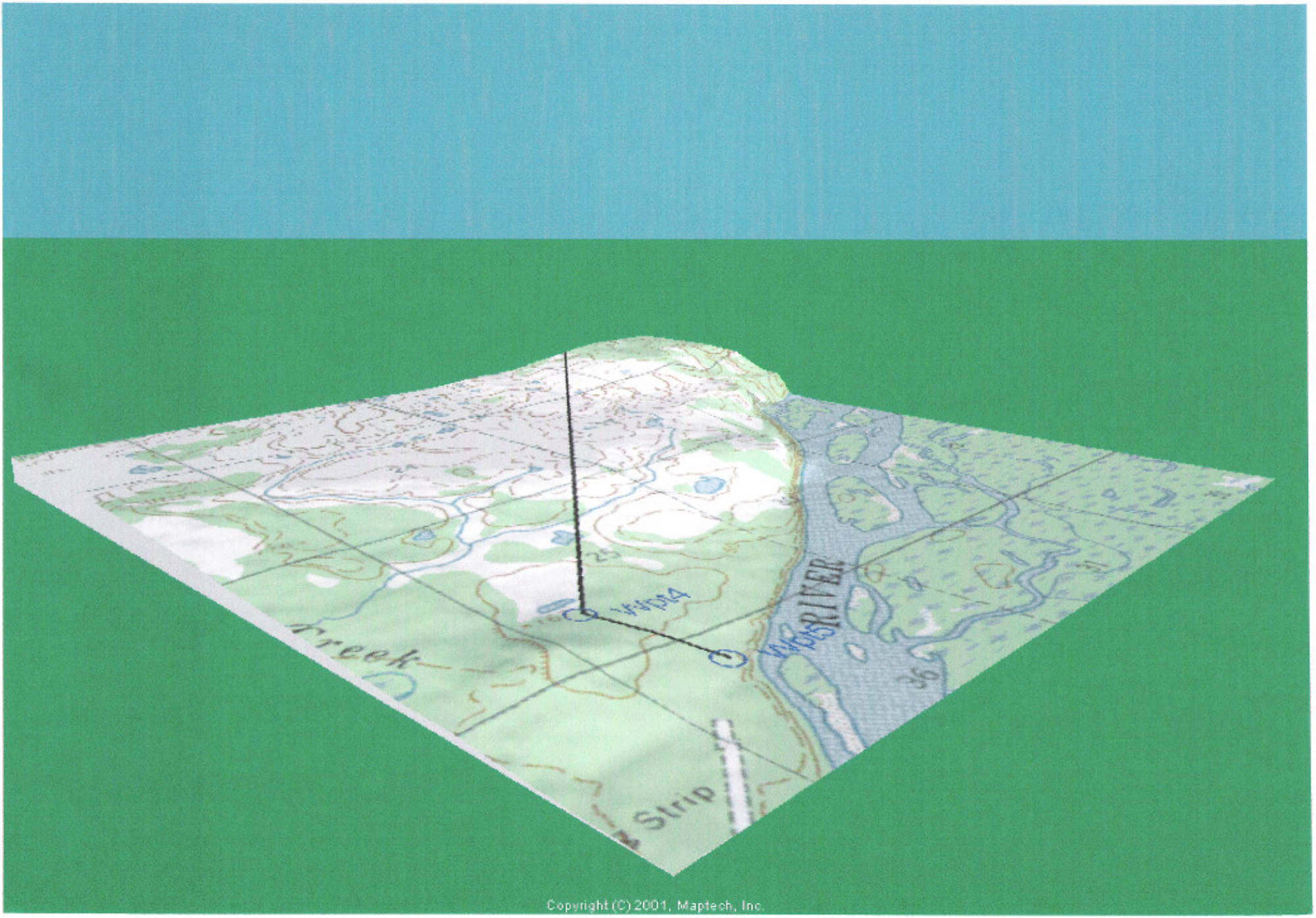

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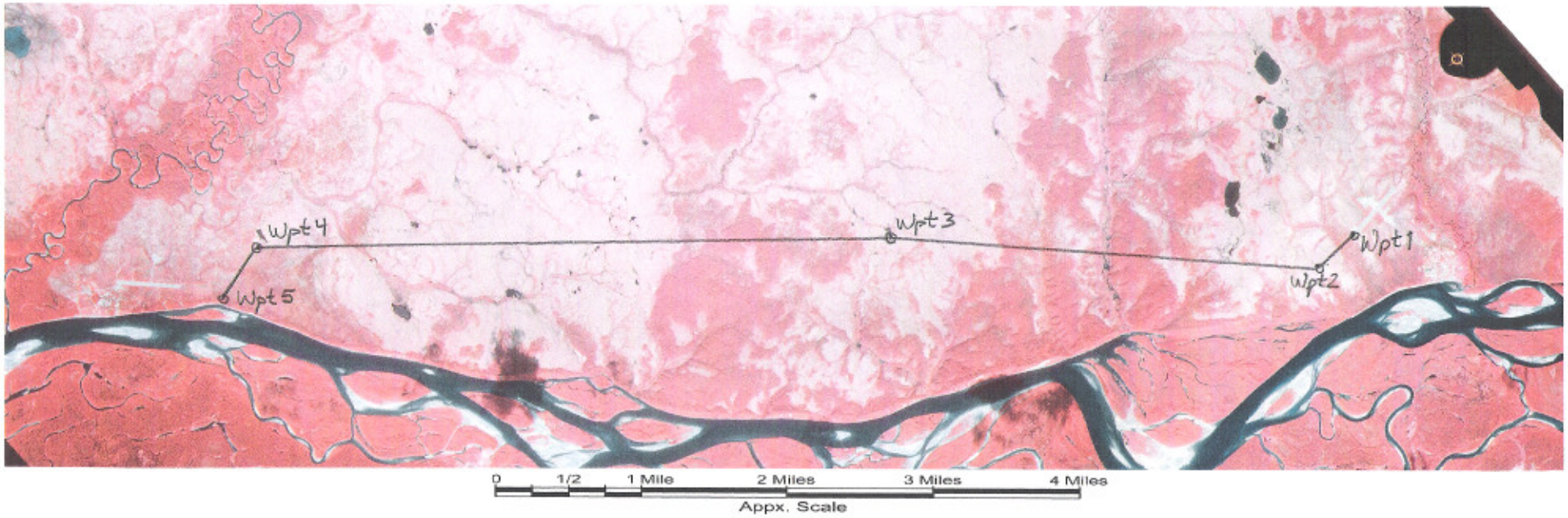
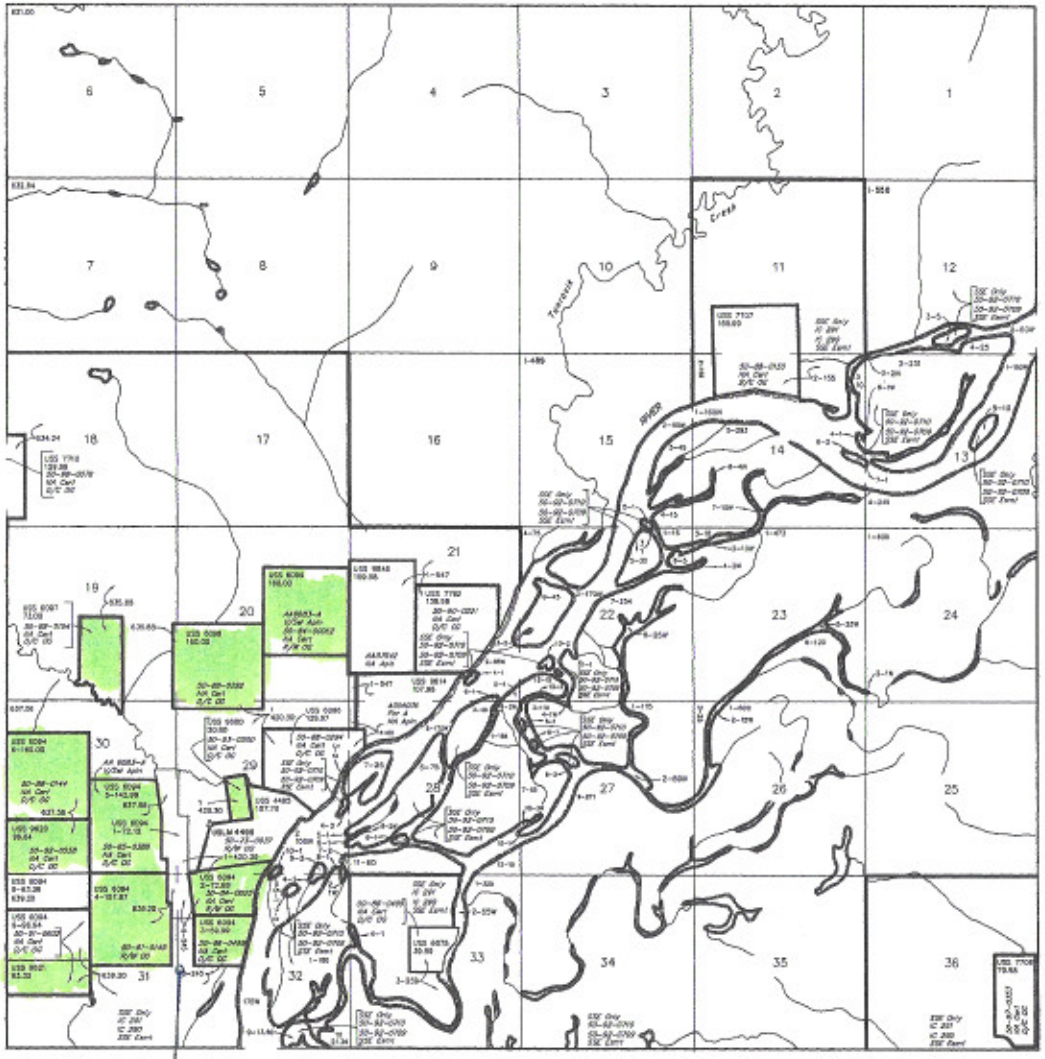

Wpt 4
Wpt 3
Wpt 1
Wpt 2
Wpt 5
0
1/2
1 Mile
2 Miles
3 Miles
4 Miles
Appx. Scale

SURVEYED TOWNSHIP 8 SOUTH RANGE 47 WEST OF THE SEWARD MERIDIAN, ALASKA



STATUS OF PUBLIC DOMAIN
LAND AND MINERAL TITLES

MTP

FOR ORDERS AFFECTING DISPOSAL OR USE OF UNSURVEYED LANDS WITHDRAWN FOR CLASSIFICATION MINERALS, WATER AND/OR OTHER PUBLIC PURPOSES REFER TO INDEX OF MISCELLANEOUS DOCUMENTS.

PL 82-203 Wd AA6683 Lds W/A AA6683-A AA6683-L

AA6683-L V/Ser Apln entire Sp Excl Except V/Ser Apln

PLO 5184 Wd Cl effects Lds/Interests not conveyed

Lat 59°26'00.62"N
Long 157°31'01.42"W

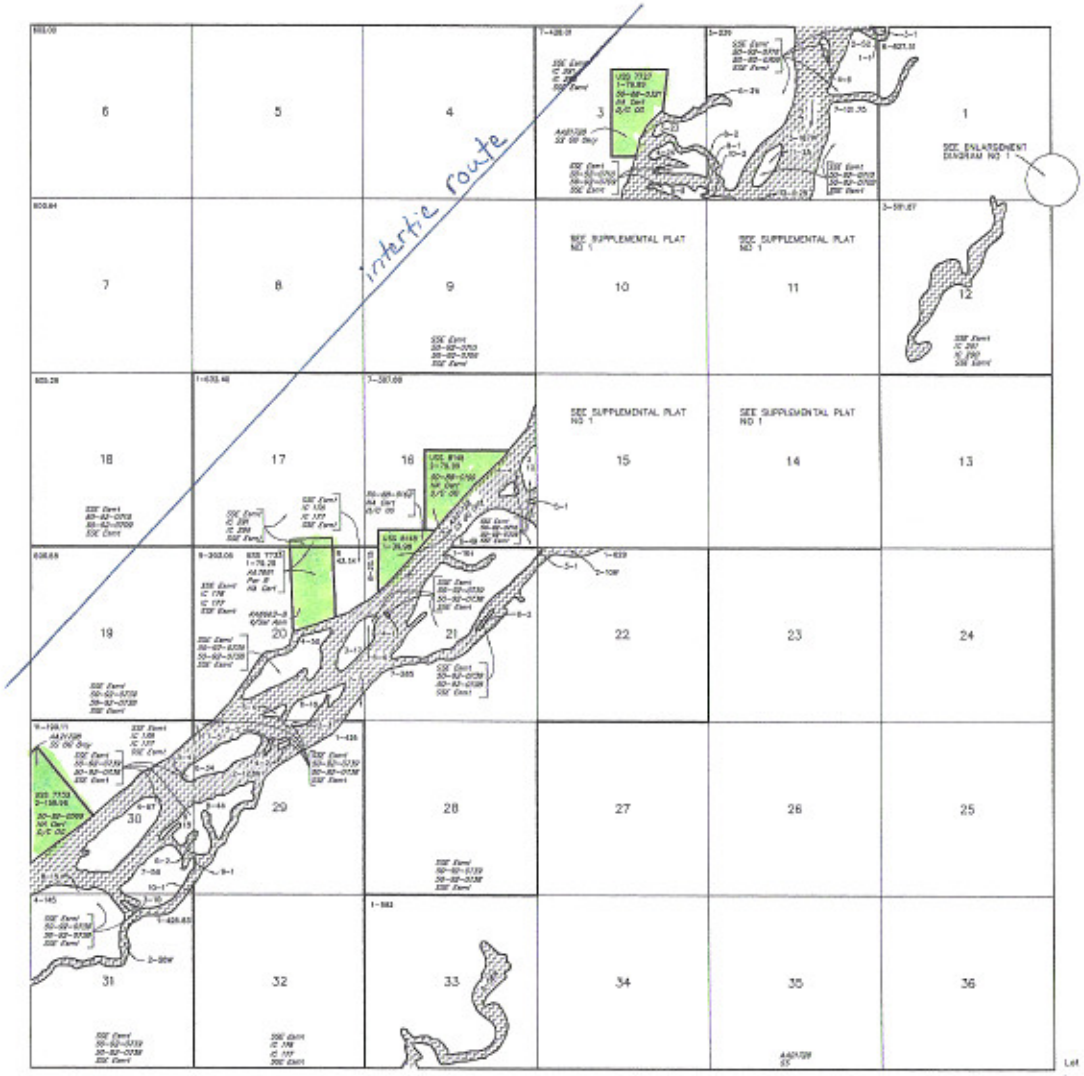
SCALE in chains
10 0 5 10 20 30 40

Warning:
This plat is the Bureau's Record of Title, and should be used only as a graphic display of the township survey data. Geographic features do not reflect title changes which may have been effected by minor movements of rivers or other bodies of water. Refer to the adjacent surveys for official survey information.

CURRENT TO		Sev Mer
3-3-2005		T. 8 S.
		R. 47 W.

D.V.

SURVEYED TOWNSHIP 9 SOUTH RANGE 48 WEST OF THE SEWARD MERIDIAN, ALASKA



STATUS OF PUBLIC DOMAIN LAND AND MINERAL TITLES

MTP

FOR GRANTS EFFECTING DISPOSAL OR USE OF UN-IDENTIFIED LANDS WITHDRAWN FOR CLASSIFICATION MINERALS, WATER AND/OR OTHER PUBLIC PURPOSES REFER TO INDEX OF MISCELLANEOUS DOCUMENTS.

FL 92-203 Wdr AA8583 Lds W/T AA8583-B

FL 92-203 Wdr AA8583 Lds W/T AA8583-B,AA8583-L

PLO 5184 WD D effects Lots/Interests not conveyed

AA8583-L V/Sel Apln Excl Elrock previous V/Sel Apln & USS 7727 Lot 1

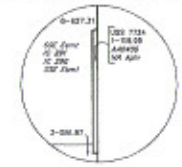
Sec 1

Sec 12

Secs 15-18

AA21708 SS Amdt FL 96-487 Sec 956(a) Top Filed

ENLARGEMENT DIAGRAM NO 1



SCALE in chains

Lat 58°20'48.79"N

Long 157°16'23.00"W

SCALE in chains

WARNING:
This plat is the Bureau's Record of Title, and should be used only as a graphic display of the township survey data. Meander lines do not retain the changes which may have been effected by natural movements of rivers or other bodies of water. Refer to the underlying surveys for official survey information.

CURRENT TO		See Mer
8-19-2002		T 9 S
		R 48 W

ACAD

SURVEYED TOWNSHIP 9 SOUTH RANGE 48 WEST OF THE SEWARD MERIDIAN, ALASKA

STATUS OF PUBLIC DOMAIN
LAND AND MINERAL TITLES

MTP
SUPPL SEC 10,11,14,15

NO 1

FOR ORDERS EFFECTING DISPOSAL OR USE OF UN-IDENTIFIED LANDS WITHDRAWN FOR CLASSIFICATION MINERALS, WATER AND/OR OTHER PUBLIC PURPOSES REFER TO INDEX OF MISCELLANEOUS DOCUMENTS.

PL 92-203 Vol AA8663, Lds W/I AA8663-B

PL 92-203 Vol AA8663, Lds W/I AA8663-B,AA8663-L

PLO 5184 Vol O affects Lds/Interests not conveyed

AA8663-L V/Tel Aplr Erol Ellwek previous V/Tel Aplr
IN USS 7727 Lot 1
Spc 1
Sec 12
Secs 15-18

AA21728 SS Amdt PL 96-487 Sec 906(a) Top Filed

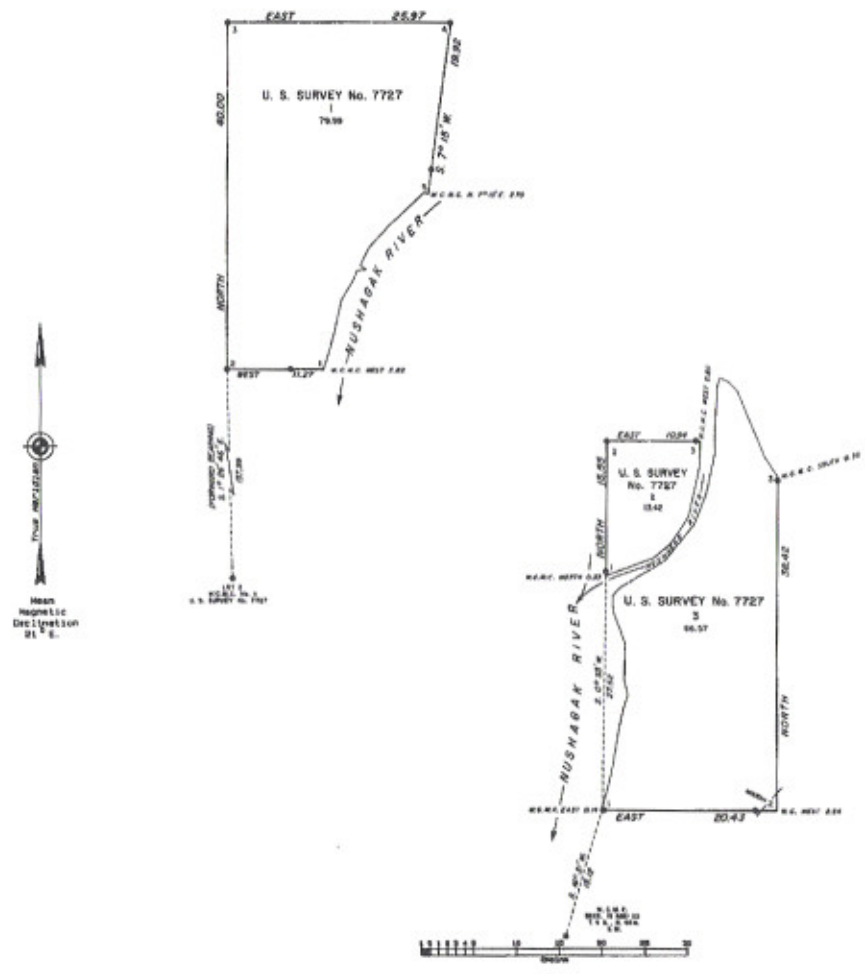
CURRENT TO		Seq Nbr
6-19-2002		T 9 S
		R 48 W

NO 1

ACAD

WARNING
This plat is the Bureau's Record of Title, and should be used only as a graphic display of the township survey data. Records herein do not reflect title changes which may have been affected by natural movements of lines or other bodies of water. Refer to the cadastral surveys for official survey information.

Officially Filed ORIGINAL
DATE JANUARY 20, 1988



U.S. SURVEY No. 7727, ALASKA

COMPRISING LOTS 1 THROUGH 3
SITUATED
ON
THE NUSHAGAK RIVER
APPROXIMATELY 2 MILES SOUTHWESTERLY
OF
NEW STUYAHOK, ALASKA

GEOGRAPHIC POSITION
OF
THE WITNESS CORNER TO CORNER NO. 1, LOT 3
WHICH IS A MEANDER CORNER, IS:
LATITUDE: 59°23'34.21" NORTH
LONGITUDE: 157°20'39.52" WEST

AREA: 159.96 ACRES

SURVEYED
BY
BRIAN C. ANDERSON, CADASTRAL SURVEYOR
JUNE 27 THROUGH JULY 3, 1986
UNDER SPECIAL INSTRUCTIONS
DATED APRIL 27, 1983
APPROVED AUGUST 18, 1983

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Anchorage, Alaska

This plat is strictly conformable to the approved field notes, and the survey, having been correctly executed in accordance with the requirements of law and the regulations of this Bureau, is hereby accepted.

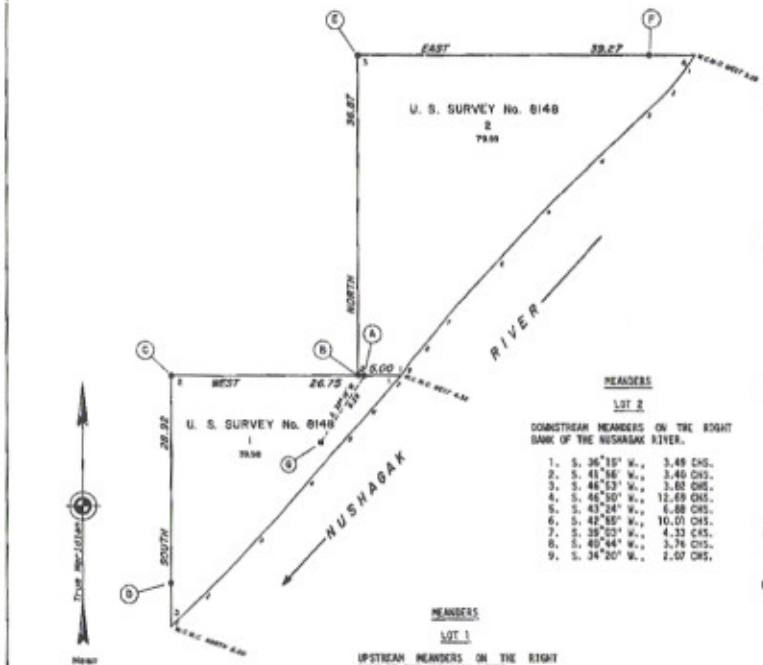
For the Director

20 Oct 1987
Date

Deputy State Director for Cadastral Survey, Alaska

Off
DATE

U.S. Survey 8148
Lots 1 + 2



MEANDERS

LOT 2

DOWNSTREAM MEANDERS ON THE RIGHT BANK OF THE NUSHAGAK RIVER.

1. S. 36°15' W., 3.48 CHS.
2. S. 41°56' W., 3.49 CHS.
3. S. 46°53' W., 3.82 CHS.
4. S. 46°50' W., 12.69 CHS.
5. S. 43°24' W., 6.88 CHS.
6. S. 42°55' W., 10.01 CHS.
7. S. 38°03' W., 4.33 CHS.
8. S. 40°44' W., 3.74 CHS.
9. S. 34°20' W., 2.07 CHS.

MEANDERS

LOT 1

UPSTREAM MEANDERS ON THE RIGHT BANK OF THE NUSHAGAK RIVER.

1. N. 64°50' E., 0.14 CHS.
2. N. 46°48' E., 8.95 CHS.
3. N. 43°16' E., 8.78 CHS.
4. N. 41°08' E., 7.99 CHS.
5. N. 41°44' E., 7.95 CHS.
6. N. 41°09' E., 6.81 CHS.
7. N. 34°19' E., 9.10 CHS.

BLM LOCATION TAG

FROM WCMC NO. 1, LOTS 1 AND 2, A DEAD BIRCH, 4 INS. DIAM., BEARS S. 64°12' E., 0.17 CHS. DIST., WITH TWO BLM LOCATION TAGS NKD. AA7805-B FRED KELSON 8-4-74 AND AA7966-B PHILIP AKELKOK 8-9-74 RESPECTIVELY.

I, Brian C. Anderson, HEREBY CERTIFY upon honor that in pursuance of Special Instructions dated April 30, 1984, I have executed the survey depicted on this plat in strict conformity with said Special Instructions, the Manual of Instructions for the Survey of the Public Lands of the United States, 1973, and in the specific manner described on this plat.

November 6, 1987 — Brian C. Anderson
Date — Cadastral Surveyor

(A) Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with alum. cap mkd. as shown, from which

A birch, 6 ins. diam., bears S. 3° W., 41 lks. dist., mkd. X BT.

A birch, 6 ins. diam., bears S. 62° W., 78 lks. dist., mkd. X BT.

(B) Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 28 ins. in the ground, with alum. cap mkd. as shown, from which

A birch, 4 ins. diam., bears S. 16° E., 66 lks. dist., mkd. S8148 C2 L1 BT.

A birch, 4 ins. diam., bears S. 71° W., 27 lks. dist., mkd. X BT.

(C) Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 28 ins. in the ground, with alum. cap mkd. as shown

No accessories available.

(D) Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 28 ins. in the ground, with alum. cap mkd. as shown, from which

A birch, 5 ins. diam., bears N. 61° E., 19 lks. dist., mkd. X BT.

A birch, 6 ins. diam., bears N. 35° W., 14 lks. dist., mkd. X BT.

(E) Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 25 ins. in the ground, with alum. cap mkd. as shown, from which

A spruce, 5 ins. diam., bears S. 88° E., 481 lks. dist., mkd. S8148 C3 L2 BT.

A spruce, 3 ins. diam., bears S. 59° W., 66 lks. dist., mkd. X BT.

(F) Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 29 ins. in the ground, with alum. cap mkd. as shown

No accessories available.

(G) Found an alum. post, 2 1/2 ins. diam., firmly set, projecting 1 in. above the ground, with alum. cap mkd. as shown, from which

A birch, 6 ins. diam., bears S. 61° W., 14 lks. dist., mkd. X BT on open blazes.

A spruce, 4 ins. diam., bears N. 5° W., 15 lks. dist., mkd. X BT on partially healed blazes.

SURVEYED TOWNSHIP 9 SOUTH RANGE 49 WEST OF THE SEWARD MERIDIAN, ALASKA

SCALE in chains

STATUS OF PUBLIC DOMAIN
LAND AND MINERAL TITLES

MTP

FOR ORDERS EFFECTING DISPOSAL OR USE OF UN-IDENTIFIED LANDS WITHDRAWN FOR CLASSIFICATION MINERALS, WATER AND/OR OTHER PUBLIC PURPOSES REFER TO INDEX OF MISCELLANEOUS DOCUMENTS.

PL 92-203 Rel AA8863, Lds Rel AA8863-A

PLO 5184 Rel CI effects Lds/Minerals not conveyed

CURRENT TO		Sec Mer
5-10-2002		T 9 S
		R 49 W

ACAD

Officially Filed

DATE APRIL 4, 1989

ORIGINAL

Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with alum. cap mkd. as shown, from which

A spruce, 4 ins. diam., bears N. 11° E., 93 lks. dist., mkd. 2 BT.

A spruce, 4 ins. diam., bears N. 58° W., 41 lks. dist., mkd. 2 BT.

Bury a clear DEEP-1 magnet at the base of the alum. post.

Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with alum. cap mkd. as shown, from which

A spruce, 6 ins. diam., bears S. 8° E., 25 lks. dist., mkd. 2 BT.

A spruce, 5 ins. diam., bears N. 68° E., 53 lks. dist., mkd. 27954 C2 BT.

Bury a clear DEEP-1 magnet at the base of the alum. post.

Set an alum. post, 30 ins. long, 2 1/2 ins. diam., flush to the ground, with alum. cap mkd. as shown, from which

A spruce, 7 ins. diam., bears S. 23° E., 93 lks. dist., mkd. 27954 C3 BT.

A spruce, 4 ins. diam., bears S. 62° W., 41 lks. dist., mkd. 2 BT.

Bury a clear DEEP-1 magnet at the base of the alum. post.

Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with alum. cap mkd. as shown, from which

A spruce, 4 ins. diam., bears N. 11° E., 33 lks. dist., mkd. 2 BT.

A spruce, 5 ins. diam., bears N. 79° W., 54 lks. dist., mkd. 2 BT.

A spruce, 4 ins. diam., bears N. 58° W., 41 lks. dist., mkd. 2 BT.

A spruce, 5 ins. diam., bears N. 13° W., 16 lks. dist., mkd. 2 BT.

Bury a clear DEEP-1 magnet at the base of the alum. post.

Recovered an alum. rod, 5/8 in. diam., finely set, projecting 5 ins. above the ground, with alum. cap mkd. as shown, from which

A spruce, 4 ins. diam., bears N. 88° E., 16 lks. dist., mkd. 2 BT.

A spruce, 6 ins. diam., bears N. 30° W., 47 lks. dist., mkd. 2 BT.

Recovered an alum. rod, 5/8 in. diam., finely set, projecting 5 ins. above the ground, with alum. cap mkd. as shown, from which

An alum. rod, 5/8 in. diam., with a triangular orange marker on top 24 ins. above the ground, 18 ins. south of monument.

Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with alum. cap mkd. as shown, from which

A spruce, 4 ins. diam., bears N. 90° E., 51 lks. dist., mkd. 2 BT.

A spruce, 4 ins. diam., bears S. 19° E., 88 lks. dist., mkd. 2 BT.

MEANDERS

ALONG THE RIGHT BANK OF THE MUSHAGAK RIVER AT THE LINE OF ORDINARY HIGH WATER.

1. S. 66°53' W. 10.57 CHS.
2. S. 60°17' W. 24.58 CHS.
3. S. 61°53' W. 9.69 CHS.

IMPROVEMENTS

FROM MONE NO. 1

THE SW COR. OF A HOUSE, 20 X 36 FT., BEARS N. 14°05' E., 1.86 CHS. DIST., LONG SIDE BEARS N. 37° E.

THE SE COR. OF A STORAGE SHED, 4 X 8 FT., BEARS N. 39°00' E., 1.49 CHS. DIST., LONG SIDE BEARS S. 63° W.

THE NE COR. OF A HOUSE, 24 X 44 FT., BEARS N. 14°29' E., 6.91 CHS. DIST., LONG SIDE BEARS S. 77° W.

THE SE COR. OF A STORAGE SHED, 10 X 14 FT., BEARS N. 30°17' E., 7.46 CHS. DIST., LONG SIDE BEARS N. 88° W.

THE SW COR. OF A HOUSE, 16 X 32 FT., BEARS N. 88°41' E., 10.14 CHS. DIST., LONG SIDE BEARS N. 72° E.

THE SE COR. OF A STORAGE SHED, 6.5 X 16 FT., BEARS N. 14°34' E., 9.23 CHS. DIST., LONG SIDE BEARS S. 64° W.

I, Douglas R. Gardner, HEREBY CERTIFY upon honor that in pursuance of Special Instructions dated October 25, 1983, I have executed the survey depicted on this plat in strict conformity with said Special Instructions, the Manual of Instructions for the Survey of the Public Lands of the United States, 1973, and in the specific manner described on this plat.

3/6/89 Douglas R. Gardner
Date Cadastral Surveyor

M.A.S.

U.S. SURVEY No. 7954, ALASKA

This plat contains the entire survey record.

The east boundary of Township 9 South, Range 45 West, Seward Meridian, Alaska, was surveyed by Timothy A. Kent, Cadastral Surveyor, in 1978.

This survey was executed by Douglas R. Gardner, Cadastral Surveyor, June 14 through June 17, 1987, in accordance with the specifications set forth in the Manual of Surveying Instructions, 1973, Special Instructions dated October 25, 1983, approved March 2, 1984, and Assignment Instructions dated May 19, 1986.

Field assistant was:

Willard M. Olson, Land Surveyor

Area: 159.83 Acres.

The azimuth was obtained from a direct observation of the sun, using the hour angle method, and refers to the true meridian.

The geographic position of the witness corner to corner No. 1, a meander corner, is:

Latitude: 58°21'37.04" North
Longitude: 157°27'19.92" West
NAD 27

The mean magnetic declination was taken from U.S. Geological Survey quadrangle map "DILLINGHAM (B-4)," Alaska, 1964 edition.

This survey is situated 3/4 mile northeasterly of Ekwok, Alaska, on the right bank of the Mushagak River.

The land is gently rolling tundra; vegetated with spruce, willow, native grasses, and berry plants.

Permafrost lies approximately 6 to 8 inches below the tundra.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Anchorage, Alaska

The survey represented by this plat, having been correctly executed in accordance with the requirements of law and the regulations of this Bureau, is hereby accepted.

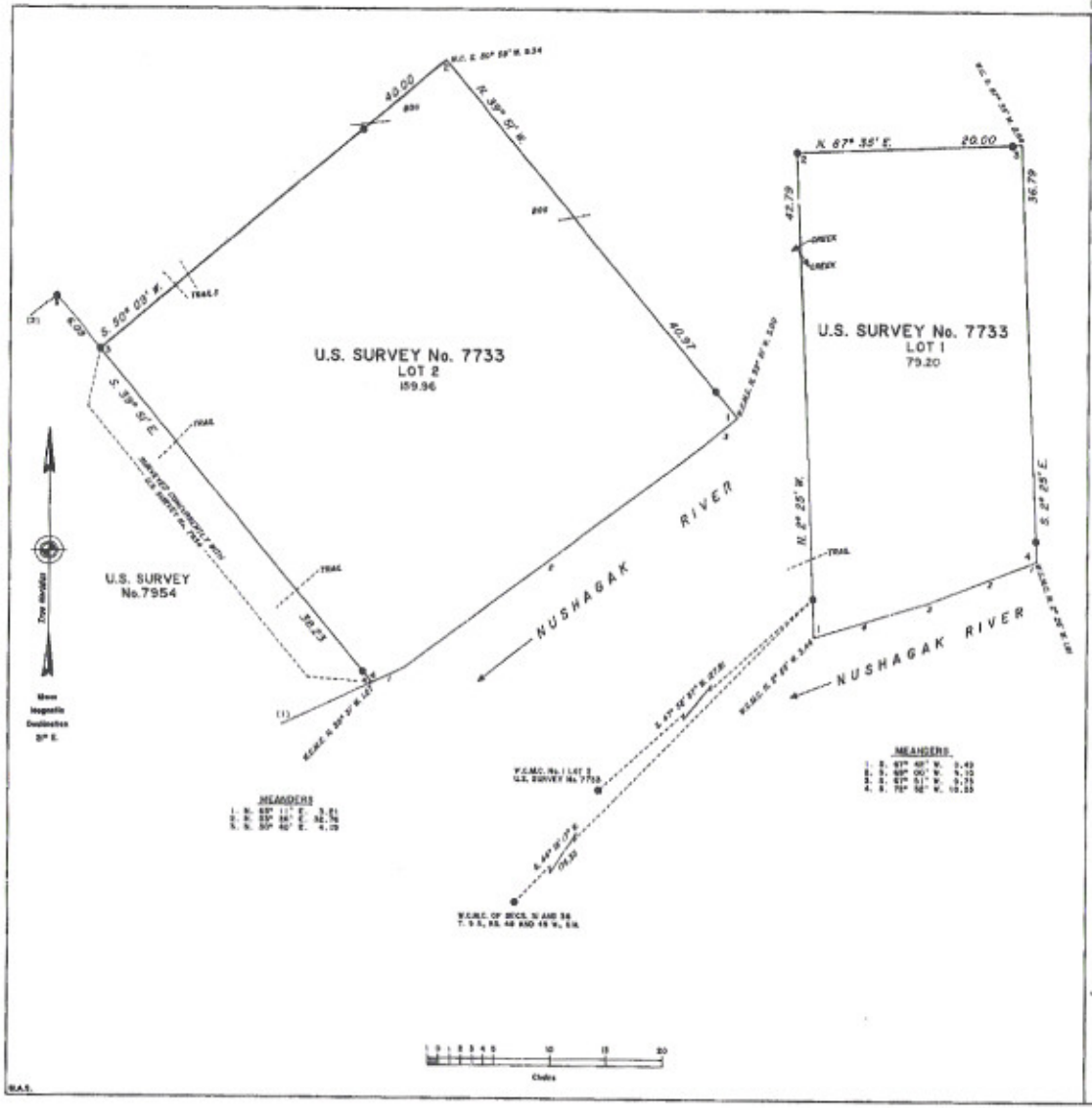
For the Director

Robert H. Anderson 20 March 1989
Date

Deputy State Director for Cadastral Survey, Alaska

Officially Filed
DATE. APRIL 4, 1989

ORIGINAL



U.S. SURVEY No. 7733, ALASKA

COMPRISING LOTS 1 AND 2

LOT 1 IS SITUATED ON THE RIGHT BANK OF
THE NUSHAGAK RIVER
APPROXIMATELY 2 MILES NORTHEASTERLY
OF
EKWOK, ALASKA

LOT 2 IS SITUATED ON THE RIGHT BANK OF
THE NUSHAGAK RIVER
APPROXIMATELY 3/4 MILE NORTHEASTERLY
OF
EKWOK, ALASKA

GEOGRAPHIC POSITION
OF
THE WITNESS CORNER TO CORNER NO. 1, LOT 1
WHICH IS A MEANDER CORNER, IS:

LATITUDE: 59°23'01.47" NORTH
LONGITUDE: 157°23'53.37" WEST
NAD 27

AREA: 239.16 ACRES

SURVEYED
BY
WILLARD M. OLSON, CADASTRAL SURVEYOR
JUNE 22 THROUGH SEPTEMBER 23, 1987
UNDER SUPPLEMENTAL SPECIAL INSTRUCTIONS
DATED APRIL 28, 1983
APPROVED OCTOBER 26, 1983

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Anchorage, Alaska

This plat is strictly conformable to the approved field notes, and the survey, having been correctly executed in accordance with the requirements of law and the regulations of this Bureau, is hereby accepted.

For the Director

20 MARCH 1989
Date

Deputy State Director for Cadastral Survey,
Alaska

New Stuyahok | City Office: (907) 693-3171 | Revised:

STATUS	2nd class city	LAST FLOOD EVENT	
POPULATION	475	FLOOD CAUSE	
BUILDINGS		ELEVATION	
RIVER SYSTEM	Nushagak River	FLOOD OF RECORD	
COASTAL AREA	none	FLOOD CAUSE	
		ELEVATION	
NFIP STATUS	not participating	WORST FLOOD EVENT	
FLOODPLAIN REPORT	no	FLOOD CAUSE	
FLOOD INSURANCE STUDY	no	FLOOD GAUGE	no

Comments: No known flooding.

Floodplain Manager (907) 753-2610

Ekwok | City Office: (907) 464-3311 | Revised:

STATUS	unincorporated	LAST FLOOD EVENT	
POPULATION	115	FLOOD CAUSE	
BUILDINGS		ELEVATION	
RIVER SYSTEM	Tanana River	FLOOD OF RECORD	
COASTAL AREA	none	FLOOD CAUSE	
		ELEVATION	
NFIP STATUS	not participating	WORST FLOOD EVENT	
FLOODPLAIN REPORT	no	FLOOD CAUSE	
FLOOD INSURANCE STUDY	no	FLOOD GAUGE	no

Comments: After the flooding in the mid-1940's the village began moving to high ground. In June 1993, only 1 home was occupied in the flood prone area. Flooding was caused by an ice jam in the spring of 1931 or 1932. The worst known flood occurred in 1936. A high water mark was set at a residence 25 ft back from the riverbank in the center of town and about 1 ft above the ground. This marks a flood occurring most likely in 1957: The exact date is not known. The flooding was caused by an ice jam.

Floodplain Manager (907) 753-2610