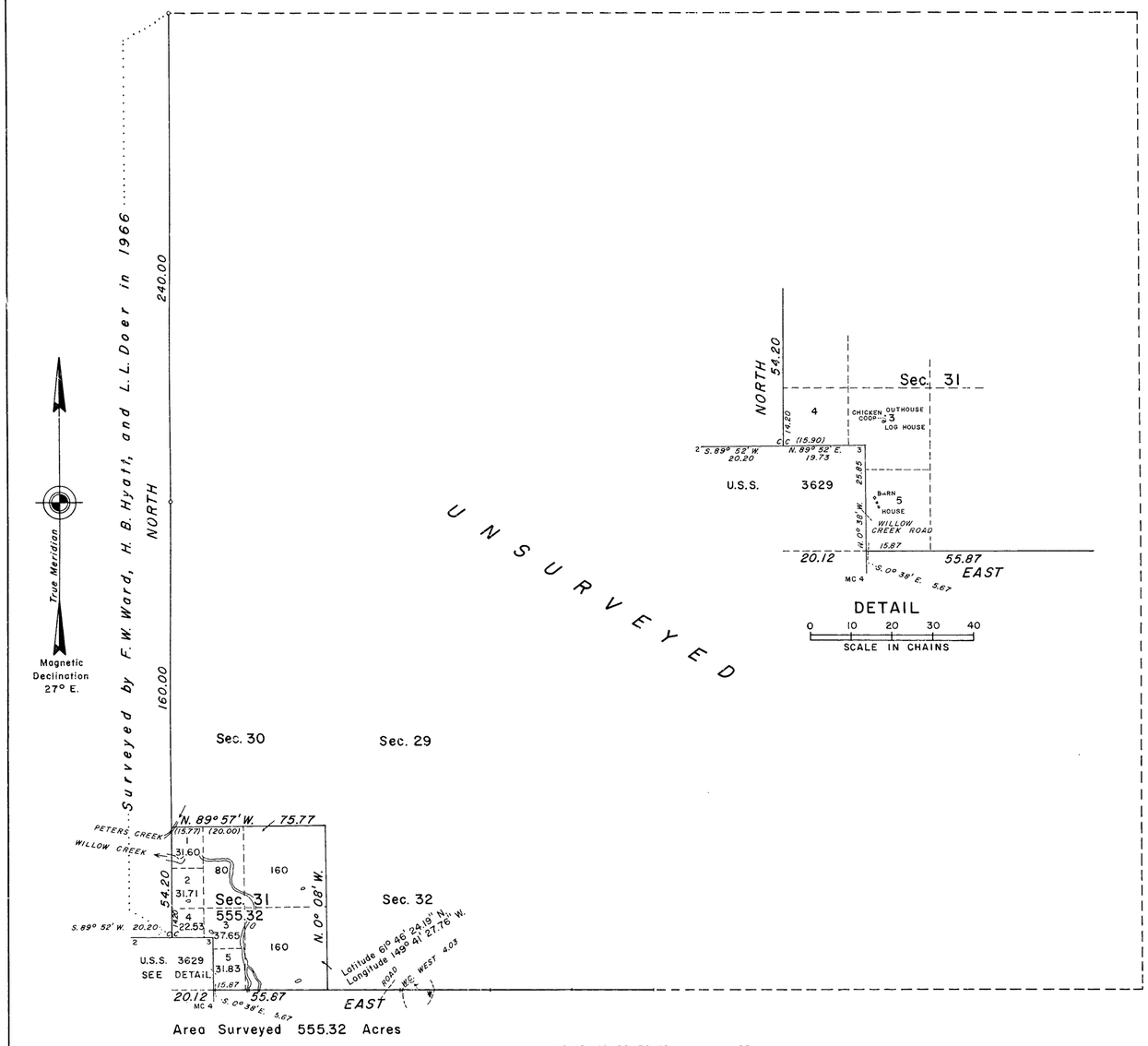
ORIGINAL

TOWNSHIP 20 NORTH, RANGE 2 WEST, OF THE SEWARD MERIDIAN, ALASKA



The survey of a portion of the subdivisional lines of T. 20 N., R. 2 W., Seward Meridian, Alaska, was executed by Edward T. Prendergast, Cadastral Surveyor, June 16, 1969, to June 19, 1969, under Special Instructions dated April 24, 1969, for Group No. 176, Alaska.

A portion of the south boundary was surveyed concurrently with this group.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Washington, D. C. May 28, 1971

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

Clark I. Gumm

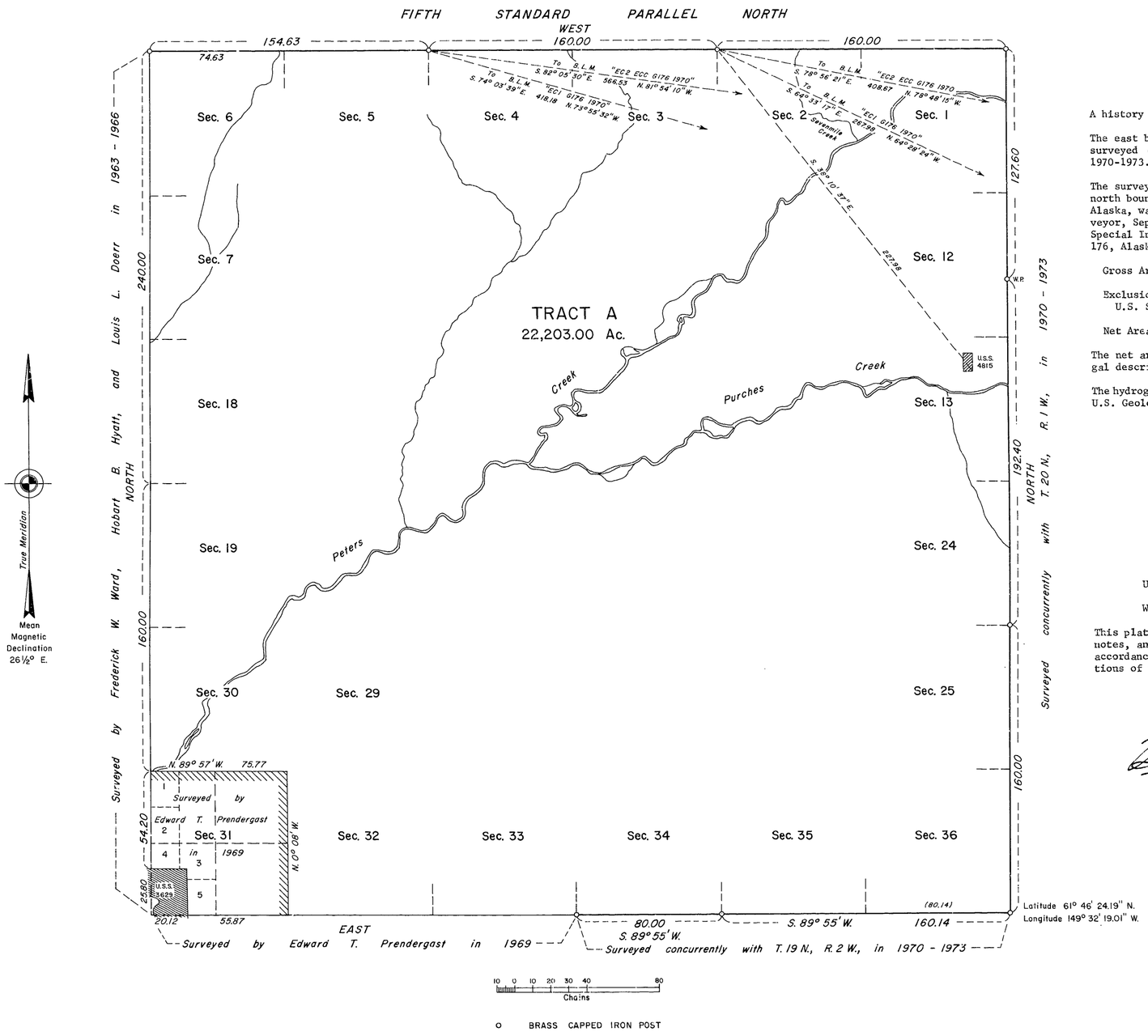
Chief, Division of Cadastral Survey

S.R.P.

5-2-17

ORIGINAL

TOWNSHIP 20 NORTH, RANGE 2 WEST, OF THE SEWARD MERIDIAN, ALASKA



A history of surveys is contained in the field notes.

The east boundary and a portion of the south boundary were surveyed concurrently with the adjoining townships in 1970-1973.

The survey of the Fifth Standard Parallel North along the north boundary of T. 20 N., R. 2 W., Seward Meridian, Alaska, was executed by Frederick W. Ward, Cadastral Surveyor, September 14, 1970 through October 6, 1970, under Special Instructions dated April 24, 1969, for Group No. 176, Alaska.

Gross Area Surveyed	22,208.00 Acres
Exclusions:	
U.S. Survey No. 4815	5.00 Acres
Net Area Tract A	22,203.00 Acres

The net area surveyed has been designated Tract A for legal description purposes.

The hydrography shown on this plat was obtained from current U.S. Geological Survey topographic maps.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Washington, D.C. September 28, 1978

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

Bernard W. Hathorn

Chief, Division of Cadastral Survey

S.R.P.

ORIGINAL

Form 9180–6
(April 1965)
(formerly 4–679)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FIELD NOTES

OF

A PORTION OF THE SUBDIVISIONAL LINES

OF

TOWNSHIP 20 NORTH, RANGE 2 WEST

Of the SEWARD Meridian,

In the State of ALASKA.

EXECUTED BY

EDWARD T. PRENDERGAST, CADASTRAL SURVEYOR

Under special instructions dated APRIL 24, 1969, which provided for the surveys included under Group Number 176, approved APRIL 29, 1969, and assignment instructions dated MAY 12, 1969.

Survey commenced JUNE 16, 19 69

Survey completed JUNE 19, 19 69

2

INDEX DIAGRAM

Township 20 N, Range 2 W 3 M,

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

GPO 849-505

TOWNSHIP 20 NORTH, RANGE 2 WEST, SEWARD MERIDIAN

CHAINS	
	This survey was executed in accordance with the specifications as set forth in the Manual of Surveying Instructions, 1947, and the Special Instructions dated April 24, 1969. The protracted geodetic position of the southeast corner of this survey is Latitude 61° 46' 24.19" North, Longitude 149° 32' 19.01" West. The azimuth used in the execution of this survey was obtained from an azimuth to Bureau of Land Management Control Station No. 101, Group 147, 1963, and checked by solar observations. The magnetic declination is 27° East.
	Beginning the subdivisional survey at the cor. of secs. 5, 6, 31 and 32, on the S. bdy. of the Tp., monumented with an iron post, 2 1/2 ins. diam., flush with the top of a mound of stone, firmly set, mkd. and witnessed as described in the field notes of the N. bdy. of T. 19 N., R. 2 W., S.M. N. 0° 08' W., bet. secs. 31 and 32. Over rolling land through dense spruce timber with willow and alder undergrowth.
12.00	Creek, 4 lks. wide, 3 ins. deep, course NW.
40.00	Point for 1/4 sec. cor. of secs. 31 and 32. Set an iron post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, in a mound of stone, with brass cap mkd. 1/4 T20N | R2W S31 | S32 1969 from which A spruce, 4 ins. diam., bears S. 35° E., 50 lks. dist., mkd. X BT. A spruce, 6 ins. diam., bears N. 20° W., 41 lks. dist., mkd. 1/4 S31 BT.
66.00	Leave timber; enter marsh.
76.00	Leave marsh; enter timber.
80.00	Point for cor. of secs. 29, 30, 31 and 32. Set an iron post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, in a mound of stone, with brass cap mkd. T20N R2W S30 | S29 S31 | S32 1969

PORTION OF SUBDIVISION, T. 20 N., R. 2 W., S.M.

CHAINS	
	from which A spruce, 4 ins. diam., bears N. 36° E., 15 lks. dist., mkd. X BT. A spruce, 4 ins. diam., bears S. 34° E., 45 lks. dist., mkd. X BT. A mound of stone, 3 ft. base, 2 ft. high, W. of cor. Land, rolling. Soil, dark loam. Timber, mostly spruce with some birch and cottonwood.
	N. 89° 57' W., bet. secs. 30 and 31. Over gently rolling land, through spruce timber with willow and alder undergrowth.
1.30	Leave timber; enter marsh; line follows near south edge of marsh.
10.00	Leave marsh; enter timber.
27.60	Top of slope; descend to creek.
27.90	Creek, 7 lks. wide, 5 ins. deep, course SW.; begin ascent.
35.90	Top of ascent.
40.00	Point for 1/4 sec. cor. of secs. 30 and 31. Set an iron post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd. T20N R2W S30 1/4 ——— S31 1969 from which A spruce, 8 ins. diam., bears N. 67° E., 134 lks. dist., mkd. 1/4 S30 BT. A spruce, 8 ins. diam., bears S. 21° E., 44 lks. dist., mkd. 1/4 S31 BT.
54.80	Top of ridge; descend steep SW. slope to Peters Creek.
73.40	Right bank of Peters Creek, 90 lks. wide, 36 ins. deep, course SW.
74.30	Left bank of creek.
75.77	Cor. of secs. 25, 30, 31 and 36, monumented with an iron post, extending 4 ins. above ground, firmly set, mkd. and witnessed as described in the official record of T. 20 N., R. 3 W., S.M. Land, rolling mountainous. Soil, dark loam. Timber, mostly spruce with some birch and cottonwood.

GPO 845-166

TOWNSHIP 20 NORTH, RANGE 2 WEST, SEWARD MERIDIAN

CHAINS

GENERAL DESCRIPTION

The land in sec. 31 is rolling mountainous, at a general elevation ranging from 1400 to 1600 ft. above sea level.

Willow Creek, average width, about 100 lks., is a swift cold water stream, not meanderable or navigable. It traverses sec. 31 in a northwesterly direction and drains most of the section.

Sec. 31 is covered with spruce, birch, and cottonwood timber with willow and alder undergrowth.

The soil is mostly dark loam, except along Willow Creek where it is sand and gravel.

Form 9180–8
(March 1969)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FIELD ASSISTANTS

NAMES	CAPACITY
Richard D. Derrickson	Surveying Technician
Douglas A. Friske	Surveying Aid
William L. Echols	Surveying Aid
Rudolph J. Musial	Surveying Aid
Howard Bailey	Surveying Aid

CERTIFICATE OF SURVEY

(I) (~~We~~) Edward T. Prendergast , HEREBY CERTIFY upon honor that, in pursuance of special instructions bearing date of the 24th day of April , 19 69 , (I) (~~We~~) have surveyed a portion of the subdivision of Township 20 North, Range 2 West.

of the Seward Meridian, in the State of Alaska , which are represented in the foregoing field notes as having been executed by (me), (~~us~~) and under (my) (~~our~~) direction; and that said survey has been made in strict conformity with said special instructions, the Manual of Instructions for the Survey of the Public Lands of the United States, and in specific manner described in the foregoing field notes.

May 6, 1970 — Edward T. Prendergast
(Date) (Cadastral Surveyor)

Edward T. Prendergast

(Date) (Cadastral Surveyor)

CERTIFICATE OF APPROVAL

...ED FOR APPROVAL
MAY 12 1970

BUREAU OF LAND MANAGEMENT
Washington, D.C.

The foregoing field notes of the survey of a portion of the subdivision of Township 20 North, Range 2 West, Seward Meridian.

executed by Edward T. Prendergast, Cadastral Surveyor
having been critically examined and found correct, are hereby approved.

MAY 28 1971 — Clark F. Gumm
(Date) (Chief, Division of Cadastral Survey)

CERTIFICATE OF TRANSCRIPT

I CERTIFY That the foregoing transcript of the field notes of the above-described surveys in , is a true copy of the original field notes.

(Date) (Chief, Division of Cadastral Survey)

GPO 849 - 626

ORIGINAL

Form 9180–6
(April 1974)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

37

FIELD NOTES

OF

THE SURVEY OF

THE

FIFTH STANDARD PARALLEL NORTH

ALONG

THE NORTH BOUNDARY

OF

TOWNSHIP 20 NORTH, RANGE 2 WEST

Of the SEWARD Meridian,

In the State of ALASKA.

EXECUTED BY

Frederick W. Ward, Cadastral Surveyor

Under special instructions dated April 24, 19 69, approved April 29, 1969,

, which provided for the surveys included under ~~XXXXXXXXXX~~Group

Number 176, and assignment instructions dated September 2, , 19 70

Survey commenced September 14, 19 70

Survey completed October 6, 19 73

INDEX DIAGRAM

Township 20 North, Range 2 West,

6	5	4	4 3	2	3 1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

GPO 854-444

33

TOWNSHIP 20 NORTH, RANGE 2 WEST,
SEWARD MER., ALASKA

CHAINS

The following field notes describe the survey of the Fifth Standard Parallel North along the north boundary of Township 20 North, Range 2 West, Seward Meridian, Alaska.

The west boundary was surveyed by Frederick W. Ward and Hobart B. Hyatt, Supervisory Cadastral Surveyors and Louis L. Doerr, Surveying Technician, in 1963-1966. A portion of the south boundary and subdivision of section 31 was surveyed by Edward T. Prendergast, Cadastral Surveyor, in 1969.

This survey was executed in accordance with the specifications as set forth in the Manual of Surveying Instructions, 1947, and the Special Instructions for Group No. 176, Alaska, dated April 24, 1969.

Corners in this survey were established by Airborne Control Survey (ABC) methods, utilizing control stations established by the U.S. Coast and Geodetic Survey, the U.S. Army Corps of Engineers and the Bureau of Land Management. Through the use of precomputed angles or an angle and a distance, a helicopter was positioned over the predetermined location to be monumented and a marker was dropped. Then, by hovering at the height necessary to provide line of sight to control stations, the helicopter served as an aerial platform for the electronic distance measuring equipment. It was also equipped with a beacon to provide a target for angular measurements. The helicopter was maintained in position over the ground point through use of a sight which provided a vertical reference for the pilot. Angular measurements were made using theodolites and distance measurements were made with electronic distance measuring instruments. All were in good condition and in proper adjustment at all times during this survey. Since vertical angles were measured from only one end of the line, the difference in angles attributable to the curvature of the earth and refraction was taken into account.

Corner positions were usually located by ties from two control stations. When only one control station could be occupied an additional independent set of distance and angular measurements was made.

NO LINE OF SIGHT WAS ACTUALLY SURVEYED ON THE GROUND BETWEEN CONSECUTIVE MONUMENTS. Monuments were established at precomputed positions and the distances and bearings between such monuments were determined by calculation. The field note record is prepared in the conventional manner from monument to monument along the lines of the boundaries being established. This is done to lend continuity to the field note record.

Electronic measurements were made in metric units and were converted to feet for computations. Horizontal distances, as given in these notes, are converted from slope measurements and reduced to their sea level equivalents. Where distances are given in chains in the field notes, they have been converted from meters or feet.

Topography not contained in these field notes but shown on the official plat of survey was taken from available maps of the area.

All coordinate positions given in these notes are based upon the Alaska State Plane Coordinate System.

TOWNSHIP 20 NORTH, RANGE 2 WEST,
SEWARD MER., ALASKA

CHAINS

The fiberglas markers referred to in these notes are conical, 25 inches in diameter at the base, 4 inches in diameter at the top, and 24 inches in height; they are open at the top and base and are orange in color.

The magnetic declination was not measured. Information from recent mapping sources indicates an average value of 26½° East.

The following geodetic position used as control for this survey is from the publications of data by the establishing agency.

U.S.C. & G.S. triangulation station
"CONE 29TH ENG 1941 1942"

Lat. 61°43'45.89" N., Long. 149°35'20.78" W.
(Y = 2,824,326 ft., X = 571,258 ft., Zone 4)

The following monuments were established as control stations for concurrent surveys as shown:

"BLM control station EC-1 G176 1970"

Lat. 61°50'21.18" N., Long. 149°30'26.43" W.
(Y = 2,864,567 ft., X = 585,133 ft., Zone 4)

Described in the field note record of T. 19 N., R. 1 W., S.M.

"BLM control station EC-2 ECC G176 1970"

Lat. 61°50'44.85" N., Long. 149°26'47.61" W.
(Y = 2,867,056 ft., X = 595,616 ft., Zone 4)

Described in the field note record of T. 19 N., R. 1 W., S.M.

The position of the following corner was determined as control for the execution of this survey.

Occupying U.S.C. & G.S. triangulation station "CONE 29TH ENG 1941 1942," turn a true forward bearing of N. 25°19' 11" W. (back bearing S. 25°26'06" E.) and measure a distance of 52,858 ft., (800.88 chs.) to a point at:

Lat. 61°51'36.11" N., Long. 149°43'11.99" W.
(Y = 2,871,958 ft., X = 548,353 ft., Zone 4)

The cor. of Tps. 20 N., Rs. 2 and 3 W., monumented with an iron post, 2½ ins. diam., firmly set, projecting 8 ins. above ground, with brass cap mkd.

T 21 N R 2 W
S 31
S 1 | S 6
R 3 W | R 2 W
T 20 N

1964

TOWNSHIP 20 NORTH, RANGE 2 WEST,
SEWARD MER., ALASKA

CHAINS	
	from which An orange painted 55 gal. barrel, bears S. 76° W., 71 lks. dist. This cor. is located on level ground in a swampy area. A small clump of willow brush, 4 ft. high, bears S. 20° W., 140 lks. dist.
	N. BDY. T. 20 N., R. 1 W., SEWARD MER., ALASKA
	Beginning at the cor. of Tps. 20 N., Rs. 1 and 2 W., described in the field note record of the concurrent survey of T. 20 N., R. 1 W. West, along the 5th Stan. Par. N.
160.00	Point for the cor. of secs. 2 and 3, only, thus established: Occupying BLM electronic control station "EC-1 G176 1970" turn a true forward bearing of N. 64°28'24" W. (back bearing S. 64°33'17" E.) and measure a distance of 17,687 ft., (267.98 chs.) to a point; and occupying BLM electronic control station "EC-2 ECC G176 1970" turn a true forward bearing of N. 78°48'15" W. (back bearing S. 78°56'21" E.) and measure a distance of 26,972 ft., (408.67 chs.) to the same point at: Lat. 61°51'36.11" N., Long. 149°35'59.13" W. (Y = 2,872,067 ft., X = 569,117 ft., Zone 4) Set an iron post, 28 ins. long, 2½ ins. diam., 24 ins. in the ground, with brass cap mkd. T 21 N R 2 W S 35 S 3 | S 2 T 20 W R 2 W 1973 Raise a mound of stone, 3 ft. base, 3 ft. high, S. of cor., 8 lks. dist. Place a fiberglas marker over and wired to the monument. This monument is located on a level clear plateau in tall grass with some scattered spruce approximately 600 ft. S. From this point, cor. No. 2, U.S. Survey No. 4815, bears S. 38°10'37" E., 227.98 chs. dist., monumented with an iron post, 2½ ins. diam., firmly set, projecting 6 ins. above ground, with brass cap mkd. S4815 C2 1966 (cap also has C1 stamped on it); from which the original bearing trees A spruce, 8 ins. diam., bears N. 3° E., 94 lks. dist., mkd. X BT.

CHAINS	
	A spruce, 10 ins. diam., bears S. 24° W., 42 lks. dist., mkd. S4815 BT. (Record, S. 27° W., mkd. X BT)
	West, along the 5th Stan. Par. N., beginning new dist.
160.00	Point for the cor. of secs. 4 and 5 only, thus established:
	Occupying BLM control station "EC-1 G176 1970" turn a true forward bearing of N. 73°55'32" W. (back bearing S. 74°03'39" E.) and measure a distance of 27,600 ft., (418.18 chs.) to a point; and occupying BLM control station "EC-2 ECC G176 1970" turn a true forward bearing of N. 81°54'10" W. (back bearing S. 82°05'30" E.) and measure a distance of 37,391 ft., (566.53 chs.) to the same point at:
	Lat. 61°51'36.11" N., Long. 149°39'39.25" W. (Y = 2,872,007 ft., X = 558,558 ft., Zone 4)
	Set an iron post, 28 ins. long, 2½ ins. diam., 24 ins. in the ground, with brass cap mkd.
	T 21 N R 2 W S 33 S 5 | S 4 R 2 W T 20 N
	1973
	Raise a mound of stone, 3 ft. base, 3 ft. high, S. of cor., 8 lks. dist.
	Place a fiberglas marker over and wired to the monument, which is at the center of a cleared area, 50 ft. in diam.
	This monument is located on a gentle SE., grass and willow-covered slope. A south-coursing drain bears W., 9.00 chs. dist.
	West, along the 5th Stan. Par. N., beginning new dist.
80.00	Point for the cor. of secs. 5 and 6 only; not monumented.
154.63	Point for the cor. of Tps. 20 N., Rs. 2 and 3 W.; hereinbefore described.

GENERAL DESCRIPTION

This survey is located approximately 18 miles east of the of the town of Willow and approximately 20 miles northwest of the small town of Wasilla, Alaska. The land is rolling hills in the western portion becoming very mountainous in the central and eastern portions with elevations ranging from 1,600 feet to 3,500 feet above sea level.

TOWNSHIP 20 NORTH, RANGE 2 WEST,
SEWARD MERIDIAN, ALASKA

CHAINS	
	Timber consists of small birch and spruce with willow and alder underbrush. Primary drainage is by Peters and Purches Creeks which become confluent in section 16. Soil consists of sandy loam at the lower elevations and sandy rocky loam in the mountains. Transportation of personnel and equipment for the execution of this survey was accomplished with trucks and helicopters.

Form 9180–8
(March 1969)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FIELD ASSISTANTS

NAMES	CAPACITY
John M. Baldessari	Cadastral Surveyor
Wallace E. Smith	Cadastral Surveyor
James A. Carte, Jr.	Surveying Technician
James A. Rhea	Surveying Technician
Donald L. Dart	Surveying Technician
Chris I. Lampe	Surveying Technician
Eugene P. Marquis	Geodesist
Phillip C. Saunders	Survey Aid
James Person	Survey Aid
Max Haverty	Survey Aid
Michael I. Kenney	Survey Aid

CERTIFICATE OF SURVEY

(I) (We) Frederick W. Ward , HEREBY CERTIFY upon honor that, in pursuance of special instructions bearing date of the 29th day of April , 19 69 , (I) (We) have surveyed the Fifth Standard Parallel North, along the north boundary of Township 20 North, Range 2 West,

of the Seward Meridian, in the State of Alaska , which are represented in the foregoing field notes as having been executed by (me), (us) and under (my) (our) direction; and that said survey has been made in strict conformity with said special instructions, the Manual of Instructions for the Survey of the Public Lands of the United States, and in specific manner described in the foregoing field notes.

Jan 6, 1978 (Date)

Frederick W. Ward (Cadastral Surveyor)

Frederick W. Ward

(Date)

(Cadastral Surveyor)

CERTIFICATE OF APPROVAL

BUREAU OF LAND MANAGEMENT
Washington, D.C.

The foregoing field notes of the survey of the Fifth Standard Parallel North, along the north boundary of Township 20 North, Range 2 West, Seward Meridian, Alaska,

executed by Frederick W. Ward, Cadastral Surveyor,

having been critically examined and found correct, are hereby approved.

SEP 28 1978 (Date)

Bernard W. Foster (Chief, Division of Cadastral Survey)

CERTIFICATE OF TRANSCRIPT

I CERTIFY That the foregoing transcript of the field notes of the above-described surveys in , is a true copy of the original field notes.

(Date)

(Chief, Division of Cadastral Survey)

GPO 849-626