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UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FIELD NOTES

OF

THE RETRACEMENT OF A PORTION OF THE SOUTH BOUNDARY OF TOWNSHIP 28 NORTH, RANGE 24 WEST OF THE KATEEL RIVER MERIDIAN

AND

THE DEPENDENT RESURVEY AND RETRACEMENT OF THE SIXTH GUIDE MERIDIAN WEST ALONG A PORTION OF THE EAST BOUNDARY

> THE RETRACEMENT OF A PORTION OF THE SOUTH BOUNDARY

> > THE SURVEY OF THE WEST BOUNDARY

THE DEPENDENT RESURVEY AND RETRACEMENT OF A PORTION OF THE SUBDIVISIONAL LINES

AND

THE SURVEY OF A PORTION OF THE SUBDIVISIONAL LINES

OF

TOWNSHIP 28 NORTH, RANGE 25 WEST OF THE KATEEL RIVER MERIDIAN IN THE STATE OF ALASKA

EXECUTED BY

James S. Robar, Registered Alaska Land Surveyor No. LS-6095 for WHPacific, Inc.

Under Special Instructions dated March 20, 2008, approved March 26, 2008, which provide for the surveys included under Group 1049, Alaska, under Contract No. NAA080004, awarded June 9, 2008, and Notice To Proceed dated July 31, 2008.

Survey commenced: August 3, 2008 Survey completed: September 2, 2008 R-299

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UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

INDEX DIAGRAM

Township 28 North, Range 25 West, Kateel River Meridian, Alaska

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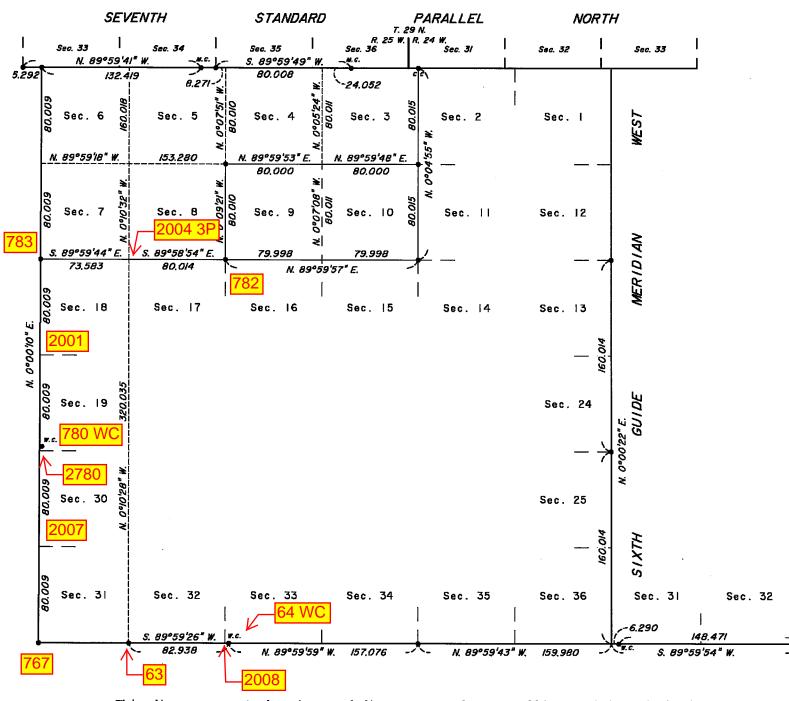
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CALCULATION DIAGRAM

Township 28 North, Range 25 West, Kateel River Meridian, Alaska



This diagram reports bearings and distances to the controlling positions defined by the relationship of identified recovered corners with the protracted lines shown on the official plat of survey accepted December 28, 1978.

Distances are shown to the nearest 0.001 chain and bearings to the nearest second on this diagram, however the information reported on the plat and in the field notes has been rounded to the nearest 0.01 chain and nearest minute of arc.

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Township 28 North, Range 25 West, Kateel River Meridian, Alaska

Chains	
	The following field notes are those of the retracement of a portion of the south boundary of Township 28 North, Range 24 West, Kateel River Meridian, Alaska, and the dependent resurvey and retracement of the Sixth Guide Meridian West, along a portion of the east boundary, the retracement of a portion of the south boundary, the survey of the west boundary, the dependent resurvey and retracement of a portion of the subdivisional lines, and the survey of a portion of the subdivisional lines of Township 28 North, Range 25 West, Kateel River Meridian, Alaska.
	The exterior boundaries of Township 27 North, Range 24 West, Kateel River Meridian, Alaska, were surveyed under contract by George C. Schwaderer in 1976.
	The exterior boundaries and a portion of the subdivisional lines of Township 27 North, Range 25 West, Kateel River Meridian, Alaska, were surveyed under contract by George C. Schwaderer in 1976. A Segregation Survey was accepted September 15, 2006.
	The exterior boundaries of Township 27 North, Range 26 West, Kateel River Meridian, Alaska, were surveyed under contract by George C. Schwaderer in 1976. A Supplemental Plat was accepted April 15, 2005. A Photogrammetric Resurvey and Segregation Survey was accepted September 15, 2006.
	The exterior boundaries and a portion of the subdivisional lines of Township 28 North, Range 24 West, Kateel River Meridian, Alaska, were surveyed under contract by George C. Schwaderer in 1976. A Photogrammetric Resurvey and Segregation Survey was accepted October 6, 2006.
	A portion of the subdivisional lines of Township 28 North, Range 25 West, Kateel River Meridian, Alaska, were surveyed under contract by George C. Schwaderer in 1976. A Photogrammetric Resurvey and Segregation Survey was accepted October 6, 2006.
	A portion of the exterior boundaries of Township 28 North, Range 26 West, Kateel River Meridian, Alaska, were surveyed under contract by George C. Schwaderer in 1976. A Photogrammetric Resurvey and Segregation Survey was accepted October 6, 2006.
	The exterior boundaries and a portion of the subdivisional lines of Township 29 North, Range 24 West, Kateel River Meridian, Alaska, were surveyed under contract by George C. Schwaderer in 1976. A Segregation Survey was accepted October 6, 2006.
	The exterior boundaries and a portion of the subdivisional lines of Township 29 North, Range 25 West, Kateel River Meridian, Alaska, were surveyed under contract by George C. Schwaderer in 1976. A Segregation Survey was accepted October 6, 2006.

Township 28 North, Range 25 West, Kateel River Meridian, Alaska

	Township 20 North, Range 25 West, Rateer River Meridian, Alaska
Chains	A portion of the exterior boundaries of Township 27 North, Range 25 West, Kateel River Meridian, Alaska, were dependently resurveyed and retraced and a portion of the subdivisional lines were surveyed concurrently under contract by James S. Robar in 2008.
	A portion of the exterior boundaries and a portion of the subdivisional lines of Township 29 North, Range 24 West, Kateel River Meridian, Alaska, were dependently resurveyed and retraced and a portion of the subdivisional lines were surveyed concurrently under contract by James S. Robar in 2008.
	A portion of the exterior boundaries and a portion of the subdivisional lines of Township 29 North, Range 25 West, Kateel River Meridian, Alaska, were dependently resurveyed and retraced and a portion of the subdivisional lines were surveyed concurrently under contract by James S. Robar in 2008.
	U.S. Survey No. 6843 was surveyed under contract by William W. McClintock in 1994.
	There are numerous U.S. Surveys located in the general vicinity.
	This survey was executed in accordance with the specifications set forth in the <u>Manual of Surveying Instructions, 1973</u> , and Special Instructions for Group 1049, Alaska, dated March 20, 2008, and Contract No. NAA080004, awarded June 9, 2008, and Notice To Proceed dated July 31, 2008.
	This survey was executed using Global Positioning System (GPS) observations utilizing post processed, relative static positioning techniques and Real Time Kinematic (RTK) positioning techniques, based on a control network established from National Geodetic Survey triangulation stations "ASTRO AZ 1950" and "BUBBLES 1950". No lines were run on the ground.
	The azimuth was obtained from a control network using Global Positioning System (GPS) observations utilizing post processed, relative static positioning techniques. The directions of all lines and ties are reported as mean bearings and refer to the true meridian.
	Corners of this survey were established utilizing the recovered position of rectangular monuments of record.
	Preliminary to the resurvey, required lines of the original surveys were retraced. Found corners that required rehabilitation were remonumented in their original positions; identified corners were reestablished at proportionate positions based on the original record. The retracement data were thoroughly verified and only the true line field notes are given herein.

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Township 28 North, Range 25 West, Kateel River Meridian, Alaska

Chains	The geographic position of the southeast corner of the township, based upon the record plat of Township 28 North, Range 25 West, Kateel River Meridian, Alaska, is:
	Latitude: 67° 46' 32.58" N. Longitude: 164° 11' 11.41" W. NAD 27
	The mean magnetic declination was obtained from the National Oceanic and Atmospheric Administration, National Geophysical Data Center for August 20, 2008 and is based on the International Geomagnetic Reference Field Model, version 10 (1900-2010), and indicates a value of 14 1/4° East.
	Retracement of a portion of the South Boundary of Township 28 North, Range 24 West, Kateel River Meridian, Alaska
	Beginning at the cor. of secs. 4, 5, 32 and 33, on the S. Bdy. of T. 28 N., R. 24 W., monumented with a copper-coated steel rod, 5/8 in. diam., firmly set, projecting 24 ins. above the ground, with a brass cap mkd. T28N R24W S32 S33 S5 S4 T27N 1976. Drive copper-coated steel rod to project 8 ins. above the ground. Add mks. to brass cap as shown.
	T 28 N R 24 W S 32 S 33
	S 5 S 4
	T 27 N
	1976 2008
	from which new accessories
	A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 13 ins. in the ground.
	A magnet in a pink plastic case, bears S. 45° E., 15 lks. dist., buried 14 ins. in the ground.
	A magnet in a blue plastic case, bears S. 45° W., 15 lks. dist., buried 13 ins. in the ground.
	A magnet in an orange plastic case, bears N. 45° W., 15 lks. dist., buried 13 ins. in the ground.
	Bury a magnet, in a clear plastic case, alongside the copper- coated steel rod, 18 ins. in the ground.

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Retracement of

Chains	
Charlis	Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.7 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top.
	Cor. is located in open, level, grassy, tundra.
	Thence West, with a connecting tie.
148.47	The witness cor. to the cor. of Tps. 27 and 28 N., Rs. 24 and 25 W., monumented with a copper-coated steel rod, 5/8 in. diam., firmly set, projecting 24 ins. above the ground, with a brass cap mkd. WC T28N R25W R24W S36 S31 S1 S6 T27N 1976. Drive copper-coated steel rod to project 7 ins. above the ground. Add mks. to brass cap as shown.
	WC
	T 28 N
	R 25 W R 24 W S 36 S 31
	S 1 S 6
	T 27 N
	1976 2008
	from which new accessories
	A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 14 ins. in the ground.
	A magnet in an orange plastic case, bears N. 45° W., 15 lks. dist., buried 14 ins. in the ground.
	Bury a magnet, in a clear plastic case, alongside the copper- coated steel rod, 18 ins. in the ground.
	Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.6 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top.
	Witness cor. is located in open, level, grassy, tundra with scattered small willow bushes. The shore of a lake bears South, 60 lks. dist., shoreline bears N. 59° W. and S. 59° E. The northeasterly shore of same lake bears West, 90 lks. dist., shoreline bears N. 76° W. and S. 59° E.
154.76	True point for the cor. of Tps. 27 and 28 N., Rs. 24 and 25 W., at record dist., unable to monument, falls in a lake.

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Chains	This line was retraced to determine the true bearing and distance between monumented controlling corners. There are no intervening corners and there is not an administrative need to tie meandered water bodies or other calls of record.
	Dependent Resurvey and Retracement of the Sixth Guide Meridian West along a portion of the East Boundary of Township 28 North, Range 25 West, Kateel River Meridian, Alaska
	From the true point for the cor. of Tps. 27 and 28 N., Rs. 24 and 25 W., hereinbefore described.
	Thence North, with a connecting tie, along the E. bdy. of the Tp.
160.01	Point for the cor. of secs. 19, 24, 25 and 30, at proportionate dist.
	Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 25 ins. in the ground, with brass cap mkd.
	T 28 N
	R 25 W R 24 W
	S 24 S 19
	S 25 S 30
	2008
	from which
	A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 12 ins. in the ground.
	A magnet in a pink plastic case, bears S. 45° E., 15 lks. dist., buried 12 ins. in the ground.
	A magnet in a blue plastic case, bears S. 45° W., 15 lks. dist., buried 12 ins. in the ground.
	A magnet in an orange plastic case, bears N. 45° W., 15 lks. dist., buried 12 ins. in the ground.
	Bury a magnet, in a clear plastic case, at the base of the stainless steel post.
	Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.7 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top.

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Dependent Resurvey and Retracement of 299 the Sixth Guide Meridian West along a portion of the East Boundary of Township 28 North, Range 25 West, Kateel River Meridian, Alaska

Chains	
	Cor. is located in open, rocky ground with scattered grasses and low berry bushes on a gentle, southerly facing slope.
	This line was retraced to determine the true bearing and distance between monumented controlling corners. Intervening monuments were searched for but were not found. There is not an administrative need to tie meandered water bodies or other calls of record.
	North, bet. secs. 19 and 24.
80.01	Point for the cor. of secs. 13, 18, 19 and 24, at proportionate dist., not monumented.
	North, bet. secs. 13 and 18.
80.01	The cor. of secs. 7, 12, 13 and 18, monumented with an iron post, 2 1/2 ins. diam., firmly set, projecting 7 ins. above the ground, with a brass cap mkd. T28N R25W R24W S12 S7 S13 S18 1976. Add mks. to brass cap as shown.
	T 28 N
	R 25 W R 24 W
	S 12 S 7
	S 13 S 18
	1976 2008
	from which new accessories
	A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 14 ins. in the ground.
	A magnet in a pink plastic case, bears S. 45° E., 15 lks. dist., buried 16 ins. in the ground.
	A magnet in a blue plastic case, bears S. 45° W., 15 lks. dist., buried 14 ins. in the ground.
	A magnet in an orange plastic case, bears N. 45° W., 15 lks. dist., buried 14 ins. in the ground.
	Bury a magnet, in a clear plastic case, alongside the iron post, 18 ins. in the ground.
	Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.7 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top.

Dependent Resurvey and Retracement of the Sixth Guide Meridian West along a portion of the East Boundary of Township 28 North, Range 25 West, Kateel River Meridian, Alaska

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Chains	Cor. is located in open, wet, grassy tundra on a gentle, northerly facing slope.
	Retracement of a portion of the South Boundary of Township 28 North, Range 25 West, Kateel River Meridian, Alaska
	From the true point for the cor. of Tps. 27 and 28 N., Rs. 24 and 25 W., hereinbefore described.
	Thence West, with a connecting tie.
159.98	The cor. of secs. 2, 3, 34 and 35, monumented with a copper- coated steel rod, 5/8 in. diam., loosely set, projecting 30 ins. above the ground, with a brass cap mkd. T28N R25W S34 S35 S3 S2 T27N 1976. Drive copper-coated steel rod to project 6 ins. above the ground. Add mks. to brass cap as shown.
	T 28 N R 25 W
	S 34 S 35
	R65 s 3 s 2
	T 27 N 1976
	2008
	from which new accessories
	A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 20 ins. in the ground.
	A magnet in a pink plastic case, bears S. 45° E., 15 lks. dist., buried 20 ins. in the ground.
	A magnet in a blue plastic case, bears S. 45° W., 15 lks. dist., buried 20 ins. in the ground.
	A magnet in an orange plastic case, bears N. 45° W., 15 lks. dist., buried 20 ins. in the ground.
	Bury a magnet, in a clear plastic case, alongside the copper- coated steel rod, 18 ins. in the ground.
	Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.7 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top.
	Cor. is located in open, level, wet, grassy, tundra.
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Retracement of a portion of the South Boundary of Township 28 North, Range 25 West, Kateel River Meridian, Alaska

Chains This line was retraced to determine the true bearing and distance between monumented controlling corners. There are no intervening corners and there is not an administrative need to tie meandered water bodies or other calls of record. Thence West, with a connecting tie. 157.08 The witness cor. to the cor. of secs. 4, 5, 32 and 33, monumented with a copper-coated steel rod, 5/8 in. diam., firmly set, projecting 24 ins. above the ground, with a brass cap mkd. WC T28N R25W S32 S33 S5 S4 T27N 1976. Drive copper-coated steel rod to project 12 ins. above the ground. Add mks. to brass cap as shown. WC T 28 N R 25 W S 32 S 33 S 5 | S 4 T 27 N 1976 2008 from which new accessories A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 18 ins. in the ground. A magnet in a pink plastic case, bears S. 45° E., 15 lks. dist., buried 12 ins. in the ground. Bury a magnet, in a clear plastic case, alongside the coppercoated steel rod, 18 ins. in the ground. Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.7 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top. Witness cor. is located in open, level, grassy, tundra. The shore of a lake bears West, 130 lks. dist., shoreline bears N. 40° E. and S. 40° W. From this point, the true point for the cor. of secs. 4, 5, 32, and 33, bears S. 89°59' W., 2.94 chs. dist., not monumented. This line was retraced to determine the true bearing and distance between monumented controlling corners. There are no intervening corners and there is not an administrative need to tie meandered water bodies or other calls of record.

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Retracement of

a portion of the South Boundary of

Township 28 North, Range 25 West, Kateel River Meridian, Alaska

Chains Thence S. 89°59' W., with a connecting tie. 82.94 The cor. of secs. 5, 6, 31 and 32, monumented with a coppercoated steel rod, 5/8 in. diam., bent, loosely set, projecting 42 ins. above the ground, brass cap missing. At the cor. point Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with a brass cap mkd. T 28 N R 25 W S 31 | S 32 S 6 S 5 T 27 N 2008 from which new accessories A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 14 ins. in the ground. A magnet in a pink plastic case, bears S. 45° E., 15 lks. dist., buried 14 ins. in the ground. A magnet in a blue plastic case, bears S. 45° W., 15 lks. dist., buried 14 ins. in the ground. A magnet in an orange plastic case, bears N. 45° W., 15 lks. dist., buried 14 ins. in the ground. Bury a magnet, in a clear plastic case, at the base of the stainless steel post. Place original copper-coated steel rod alongside the stainless steel post. Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.8 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top. Cor. is located in grassy, tundra surrounded by willow brush. This line was retraced to determine the true bearing and distance between monumented controlling corners. There are no intervening corners and there is not an administrative need to tie meandered water bodies or other calls of record.

Chains From the cor. of Tps. 27 and 28 N., Rs. 25 and 26 W., monumented with an iron post, 2 1/2 ins. diam., firmly set, projecting 2 ins. above the ground, with a brass cap mkd. T28N R26W R25W S36 S31 S1 S6 T27N 1976. Add mks. to brass cap as shown. T 28 N R 26 W R 25 W S 36 S 31 S 1 S 6 2008 T 27 N 1976 from which new accessories A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 12 ins. in the ground. A magnet in a pink plastic case, bears S. 45° E., 15 lks. dist., buried 12 ins. in the ground. A magnet in a blue plastic case, bears S. 45° W., 15 lks. dist., buried 12 ins. in the ground. A magnet in an orange plastic case, bears N. 45° W., 15 lks. dist., buried 12 ins. in the ground. Bury a magnet, in a clear plastic case, alongside the iron post, 18 ins. in the ground. Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.8 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top. Cor. is located in tundra surrounded by brush. North, bet. secs. 31 and 36. 17.07 Intersect the S. bdy. of U.S. Survey No. 6843. Point for the southerly closing cor. of secs. 31 and 36. Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd. S 6843 С С S 36 S 31 T 28 N R 26 W R 25 W 2008

Chains	
	from which
	A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 12 ins. in the ground.
	A magnet in a pink plastic case, bears S. 45° E., 15 lks. dist., buried 13 ins. in the ground.
	Bury a magnet, in a clear plastic case, at the base of the stainless steel post.
	Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.6 ft. in the ground, South, 10 lks. dist., with an orange triangular marker on the top.
	Cor. is located in open, level grassy tundra covered with scattered low brush. A small drainage bears South, 68 lks. dist. and bears East and West.
	From this point, cor. No. 2, U.S. Survey No. 6817, on the S. bdy. of U.S. Survey No. 6843, bears N. 89°58' E., 7.10 chs. dist., monumented with a stainless steel post, 2 1/2 ins. diam., firmly set, projecting 4 ins. above the ground, with an brass cap mkd. S6843 C2 L5 S6817 1994.
	from which the original accessories
	A magnet disturbance, bears S. 45° W., 15 lks. dist., buried in the ground.
	A magnet disturbance, bears N. 45° W., 15 lks. dist., buried in the ground.
	Cor. is located in level tundra covered by thick brush.
	From this same point, cor. No. 3, U.S. Survey No. 6843 bears S. 89°58' W., 19.25 chs. dist., monumented with a stainless steel post, 2 1/2 ins. diam., firmly set, projecting 4 ins. above the ground, with an brass cap mkd. S6843 C3 1994. Add mks. to brass cap as shown.
	S 6843 C3
	2008 1994
	from which the original accessories
	A magnet disturbance, bears N. 45° E., 15 lks. dist., buried in the ground.

Chains	
	A magnet disturbance, bears N. 45° W., 15 lks. dist., buried in the ground.
	The original alum. rod, 3/4 in. diam., bears West, 10 lks. dist., projecting 24 ins. and bent flat to the ground, with a faded white triangular marker on the top.
	Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.7 ft. in the ground, South, 10 lks. dist., with an orange triangular marker on the top.
	Cor. is located in open, level, grassy tundra.
	Thence on a blank line, across U. S. Survey No. 6843.
37.07	Intersect the N. bdy. of U.S. Survey No. 6843.
	Point for the northerly closing cor. of secs. 31 and 36.
	Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 22 ins. in the ground, with brass cap mkd.
	T 28 N R 26 W R 25 W S 36 S 31 C C S 6843 2008
	from which
	A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 10 ins. in the ground.
	A magnet in a pink plastic case, bears S. 45° E., 15 lks. dist., buried 12 ins. in the ground.
	A magnet in a blue plastic case, bears S. 45° W., 15 lks. dist., buried 12 ins. in the ground.
	A magnet in an orange plastic case, bears N. 45° W., 15 lks. dist., buried 11 ins. in the ground.
	Bury a magnet, in a clear plastic case, at the base of the stainless steel post.
	Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 1.8 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top.
	Cor. is located in open, level, grassy tundra.

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Chains	From this point, cor. No. 4, U.S. Survey No. 11312, on the N. bdy. of U.S. Survey No. 6843, bears N. 89°59' E., 24.31 chs. dist., monumented with a stainless steel post, 2 1/2 ins. diam., firmly set, projecting 5 ins. above the ground, with an brass cap mkd. S11312 C4 S6843 1994.
	from which the original accessories
	A magnet disturbance, bears S. 45° W., 15 lks. dist., buried in the ground.
	A magnet disturbance, bears N. 45° W., 15 lks. dist., buried in the ground.
	Cor. is located in level tundra covered by thick, low brush.
	From this same point, cor. No. 2, U.S. Survey No. 6843, bears S. 89°59' W., 19.26 chs. dist., monumented with a stainless steel post, 2 1/2 ins. diam., firmly set, flush with the ground, with an brass cap mkd. C2 S6843 1994.
	from which the original accessories
	A magnet disturbance, bears N. 45° E., 15 lks. dist., buried in the ground.
	A magnet disturbance, bears S. 45° E., 15 lks. dist., buried in the ground.
	Cor. is located in open, level, wet, grassy tundra.
	Continue, bet. secs. 31 and 36.
80.01	Point for the cor. of secs. 25, 30, 31 and 36, at proportionate dist., not monumented.
	North, bet. secs. 25 and 30.
60.55	The present day southerly shore of an unnamed lake, at the line of ordinary high water.
62.70	The point for the southerly meander cor. of secs. 25 and 30, on the southerly shore of an unnamed lake, at intersection with the record meanders as graphically depicted on the plat of T. 28 N., R. 25 W., K.R.M., accepted December 28, 1978.
79.25	The present day northerly shore of an unnamed lake, at the line of ordinary high water.
79.70	The point for the northerly meander cor. of secs. 25 and 30, on the northerly shore of an unnamed lake, at intersection with the record meanders as graphically depicted on the plat of T. 28 N., R. 25 W., K.R.M., accepted December 28, 1978.

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Chains	
80.01	True point for the cor. of secs. 19, 24, 25 and 30, at proportionate dist., unable to monument, cor. falls in boggy, unstable ground.
	From this point, the point selected for the offline witness cor. to the cor. of secs. 19, 24, 25 and 30, bears N. 27°03' E., 3.95 chs. dist.
	Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 25 ins. in the ground, with brass cap mkd.
	from which
	A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 12 ins. in the ground.
	A magnet in an orange plastic case, bears N. 45° W., 15 lks. dist., buried 12 ins. in the ground.
	Bury a magnet, in a clear plastic case, at the base of the stainless steel post.
	Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.7 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top.
	Witness cor. is located in open, grassy tundra on the top of a ledge above an unnamed lake on a moderate, southerly facing slope.
	North, bet. secs. 19 and 24.
80.01	Point for the cor. of secs. 13, 18, 19 and 24, at proportionate dist., not monumented.
	North, bet. secs. 13 and 18.
80.01	Point for the cor. of secs. 7, 12, 13 and 18, at proportionate dist.

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Chains	
	Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 25 ins. in the ground, with brass cap mkd.
	T 28 N R 26 W R 25 W
	783 S 12 S 7
	S 13 S 18
	2008
	from which
	A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 12 ins. in the ground.
	A magnet in a pink plastic case, bears S. 45° E., 15 lks. dist., buried 13 ins. in the ground.
	A magnet in a blue plastic case, bears S. 45° W., 15 lks. dist., buried 12 ins. in the ground.
	A magnet in an orange plastic case, bears N. 45° W., 15 lks. dist., buried 12 ins. in the ground.
	Bury a magnet, in a clear plastic case, at the base of the stainless steel post.
	Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.7 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top.
	Cor. is located in level silty ground covered with scattered grasses and brush. The bank of a slough bears East, 250 lks. dist., bank bears N. 25° W. and S. 20° W. The bank of same slough bears South, 409 lks. dist., bank bears N. 37° E. and S. 81° W.
	North, bet. secs. 7 and 12.
48.14	The present day left bank of the Kivalina River, bears N. 56° E. and S. 56° W.
57.70	The point for the southerly meander cor. of secs. 7 and 12, on the southerly bank of the Kivalina River, at intersection with the record meanders as graphically depicted on the photogrammetric resurvey and segregation survey plat of T. 28 N., R. 25 W., K.R.M., accepted October 6, 2006.
60.75	The present day southerly edge of water of the Kivalina River, bears East and S. 84° W.

Chains	
60.90	The point for the northerly meander cor. of secs. 7 and 12, on the northerly bank of the Kivalina River, at intersection with the record meanders as graphically depicted on the photogrammetric resurvey and segregation survey plat of T. 28 N., R. 25 W., K.R.M., accepted October 6, 2006.
62.35	The present day northerly edge of water of the Kivalina River, bears N. 78° E. and N. 89° W.
69.47	The present day right bank of the Kivalina River, bears N. 75° E. and S. 80° W.
80.01	Point for the cor. of secs. 1, 6, 7 and 12, at proportionate dist., not monumented.
	North, bet. secs. 1 and 6.
80.01	The cor. of Tps. 28 N., Rs. 25 and 26 W., on the Seventh Standard Parallel North, monumented, mkd. and witnessed as described in the field notes of T. 29 N., R. 25 W., surveyed concurrently.
	Dependent Resurvey and Retracement of a portion of the Subdivisional Lines of Township 28 North, Range 25 West, Kateel River Meridian, Alaska
	From the cor. of secs. 8, 9, 16 and 17, monumented with an iron post, 2 1/2 ins. diam., leaning, firmly set, projecting 18 ins. above the ground, with a brass cap mkd. T28N R25W S8 S9 S17 S16 1976. Plumb post to project 8 ins. above ground, and in a collar of stone. Add mks. to brass cap as shown.
	2008 T 28 N R 25 W
	58 S9
	S 17 S 16
	1976
	from which new accessories
	A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 22 ins. in the ground.
	A magnet in a pink plastic case, bears S. 45° E., 15 lks. dist., buried 24 ins. in the ground.

Dependent Resurvey and Retracement of a portion of the Subdivisional Lines of Township 28 North, Range 25 West, Kateel River Meridian, Alaska

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Chains	A magnet in a blue plastic case, bears S. 45° W., 15 lks. dist., buried 22 ins. in the ground.
	A magnet in an orange plastic case, bears N. 45° W., 15 lks. dist., buried 22 ins. in the ground.
	Bury a magnet, in a clear plastic case, alongside the iron post, 18 ins. in the ground.
	Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.7 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top.
	Cor. is located in open, grassy, tundra with patches of small berry bushes on a moderate, southwesterly facing slope.
	Thence East, with a connecting tie.
80.00	The cor. of secs. 9, 10, 15 and 16, at proportionate dist., not monumented.
	This line was retraced to determine the true bearing and distance between monumented controlling corners. There are no intervening corners and there is not an administrative need to tie meandered water bodies or other calls of record.
	Thence East, with a connecting tie.
80.00	The cor. of secs. 10, 11, 14 and 15, monumented with an iron post, 2 1/2 ins. diam., slightly leaning, firmly set, projecting 10 ins. above the ground, with a brass cap mkd. T28N R25W S10 S11 S15 S14 1976. Plumb post to project 8 ins. above the ground, and in a collar of stone. Add mks. to brass cap as shown.
	2008
	T 28 N R 25 W
	S 10 S 11
	S 15 S 14
	1976
	from which new accessories
	A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 15 ins. in the ground.
	A magnet in a pink plastic case, bears S. 45° E., 15 lks. dist., buried 12 ins. in the ground.

Dependent Resurvey and Retracement of a portion of the Subdivisional Lines of Township 28 North, Range 25 West, Kateel River Meridian, Alaska

Chains	A magnet in a blue plastic case, bears S. 45° W., 15 lks. dist., buried 12 ins. in the ground.
	A magnet in an orange plastic case, bears N. 45° W., 15 lks. dist., buried 12 ins. in the ground.
	Bury a magnet, in a clear plastic case, alongside the iron post, 18 ins. in the ground.
	Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.8 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top.
	Cor. is located in open, rocky ground with patches of small berry bushes and mosses on a moderate, southeasterly facing slope.
	This line was retraced to determine the true bearing and distance between monumented controlling corners. There are no intervening corners and there is not an administrative need to tie meandered water bodies or other calls of record.
	N. 0°05' W., bet. secs. 10 and 11.
80.02	Point for the cor. of secs. 2, 3, 10 and 11, at proportionate dist.
	Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with brass cap mkd.
	T 28 N R 25 W
	S 3 S 2
	S 10 S 11
	2008
	from which
	A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 18 ins. in the ground.
	A magnet in a pink plastic case, bears S. 45° E., 15 lks. dist., buried 18 ins. in the ground.
	A magnet in a blue plastic case, bears S. 45° W., 15 lks. dist., buried 12 ins. in the ground.
	A magnet in an orange plastic case, bears N. 45° W., 15 lks. dist., buried 12 ins. in the ground.

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312 Dependent Resurvey and Retracement of a portion of the Subdivisional Lines of Township 28 North, Range 25 West, Kateel River Meridian, Alaska

Chains	
Chains	Bury a magnet, in a clear plastic case, at the base of the stainless steel post.
	Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.7 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top.
	Cor. is located in grassy tundra covered with low brush on a gentle, southerly facing slope.
	N. 0°05′ W., bet. secs. 2 and 3.
80.02	The closing cor. of secs. 2 and 3, on the Seventh Standard Parallel North, monumented, mkd. and witnessed as described in the field notes of T. 29 N., R. 24 W., surveyed concurrently.
	Survey of a portion of the Subdivisional Lines of Township 28 North, Range 25 West, Kateel River Meridian, Alaska
	From the cor. of secs. 7, 12, 13 and 18, on the W. bdy. of the Tp., hereinbefore described.
	East, bet. secs. 7 and 18.
73.58	Point for the cor. of secs. 7, 8, 17 and 18, determined by double proportionate measurement, not monumented.
	S. 89°59' E., bet. secs. 8 and 17.
80.01	The cor. of secs. 8, 9, 16 and 17, hereinbefore described.
	N. 0°09′ W., bet. secs. 8 and 9.
80.01	Point for the cor. of secs. 4, 5, 8, and 9, determined by double proportionate measurement.
	Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 25 ins. in the ground, with brass cap mkd.
	T 28 N R 25 W
	S 5 S 4
	S 8 S 9
	2008

Survey of a portion of the Subdivisional Lines of Township 28 North, Range 25 West, Kateel River Meridian, Alaska

Chains	
	from which
	A magnet in a silver plastic case, bears N. 45° E., 15 lks. dist., buried 12 ins. in the ground.
	A magnet in a pink plastic case, bears S. 45° E., 15 lks. dist., buried 12 ins. in the ground.
	A magnet in a blue plastic case, bears S. 45° W., 15 lks. dist., buried 13 ins. in the ground.
	A magnet in an orange plastic case, bears N. 45° W., 15 lks. dist., buried 12 ins. in the ground.
	Bury a magnet, in a clear plastic case, at the base of the stainless steel post.
	Drive an alum. rod, 3.0 ft. long, 3/4 in. diam., 2.6 ft. in the ground, North, 10 lks. dist., with an orange triangular marker on the top.
	Cor. is located in open, rocky tundra with low grasses and scattered small berry bushes on a gentle, easterly facing slope.
	East, bet. secs. 4 and 9.
80.00	Point for the cor. of secs. 3, 4, 9 and 10, determined by double proportionate measurement, not monumented.
	East, bet. secs. 3 and 10.
80.00	The cor. of secs. 2, 3, 10 and 11, hereinbefore described.

Township 28 North, Range 25 West, Kateel River Meridian, Alaska

Chains	
	GENERAL DESCRIPTION
	This township is located approximately 9 miles northeast of the village of Kivalina, Alaska.
	The terrain within the township consists of tundra. The Wulik River runs through low lying, boggy land, dotted with many lakes and ponds, in the southern half of the township. The northern half is characterized by rolling hills. The Kivalina River runs through the northwest quarter of township. Elevations range from 20 to 600 feet above sea level.
	The vegetation consists of grasses and small berry bushes. Alder and willow grow in the hills and along the drainages.
	The soils consist of organics over silt and clay. Gravel can be found in the river and stream valleys. The hill tops are usually rocky. Although permafrost is known to exist within the township none was encountered during this survey.
	Transportation of personnel and equipment for the execution of this survey was accomplished by helicopter.

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U.S. Department of the Interior Bureau of Land Management Alaska State Office - Anchorage, AK

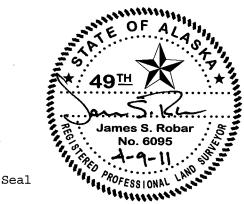
FIELD ASSISTANTS

NAME		CAPACITY
Gene E. LeQuire		Land Surveyor
Jay Saulsbury		Survey Technician
Jason L. Jacobson		Survey Technician
Timothy Carmen		Survey Aid
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CERTIFICATE OF SURVEY

I, James S. Robar, Registered Alaska Land Surveyor No. LS-6095, for WHPacific, Inc, HEREBY CERTIFY upon honor that, in pursuance of Special Instructions bearing the date of the 20th day of March, 2008, under Contract No. NAA080004, awarded the 9th day of June, 2008, I have retraced a portion of the south boundary of Township 28 North, Range 24 West, Kateel River Meridian, Alaska, dependently resurveyed and retraced the Sixth Guide Meridian West, along a portion of the east boundary, retraced a portion of the south boundary, surveyed the west boundary, dependently resurveyed and retraced a portion of the subdivisional lines and surveyed a portion of the subdivisional lines of Township 28 North, Range 25 West, Kateel River Meridian, Alaska, which is represented in the foregoing field notes as having been executed by me, and under my 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 the specific manner described in the foregoing field notes.

APEIL 9, 2011



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CERTIFICATE OF APPROVAL

BUREAU OF LAND MANAGEMENT Anchorage, Alaska

The foregoing field notes of the survey described in the Certificate of Survey above executed by James S. Robar, Registered Alaska Land Surveyor No. LS-6095, having been critically examined and found correct, are hereby approved.

LIGAME OF MEANIGOD

APRIL 15, 2011

(Chief Gadastral Surveyor for Alaska)

survey is a true copy of the original field notes:

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(Chief Cadagtral Surveyor for Magka)