



## **Treadwell Mine Cyanide Tailings Stabilization Cap Inspection and Maintenance Plan AJT Mining Properties, Inc Douglas, Alaska**

### ***Summary***

In late July of 2007 the Treadwell Mine lower tailings area site was graded, capped and seeded by Channel Construction in accordance with the grading plan submitted to and approved by the City and Borough of Juneau and as requested by the State of Alaska Department of Environmental Conservation. The stabilization cap covers about 40,000 square feet and is approximately 15 inches thick; the top six inches consist of crushed rock and the lower nine inches are larger shot rock fill. The east side along the Gastineau Channel is contained with a sloped armor rock wall four feet high and 225 feet long. The cap was immediately hydro-seeded with wildflowers and fertilized.

The upper tailings area had been re-vegetated as part of a reclamation project by the State of Alaska Department of Natural Resources in 1996.

Both of these tailings areas are owned by AJT Mining Company and are within the area of operations used by Alaska Canopy Adventures. A utility road in support of Alaska Canopy Adventures runs through both tailings areas. The shot rock road through the lower tailings area runs east-west across the tailings stabilization connecting the main utility road to the beach.

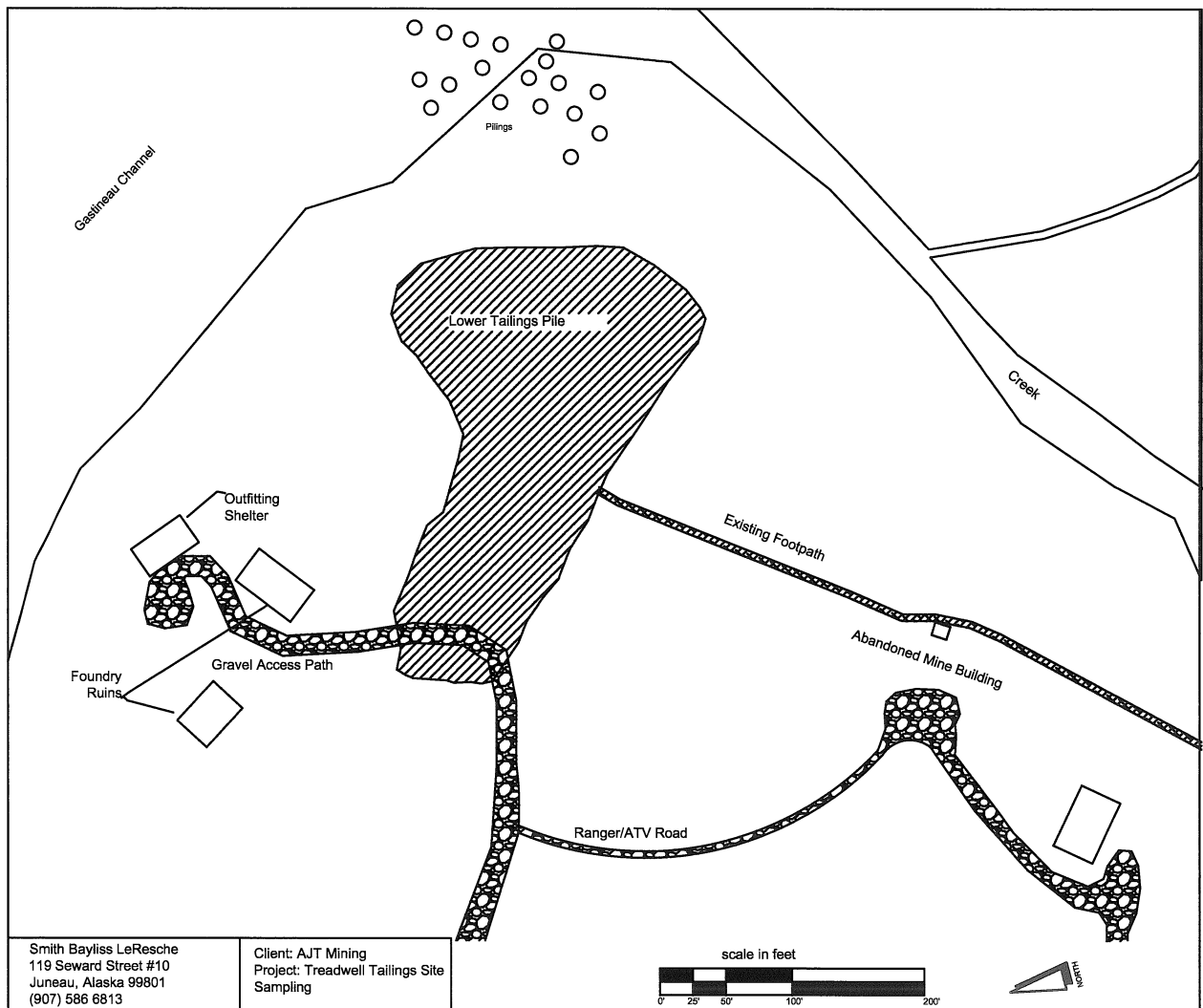
The road over the upper tailings area is located on the west side of the tailings area running roughly north-south. This road consists of one foot of shot rock fill placed on geotextile and is used to transport Alaska Canopy Adventures' clients to the start of the aerial zipline tour.

### ***Inspections and Maintenance***

Both tailings areas should be inspected at least twice annually to ensure that:

- Tailings caps and tailings area vegetation have not been damaged by vehicle traffic
- Water runoff is not causing erosion within the tailings areas

Should any areas within the lower tailings stabilization cap or the upper tailings area show damage to the vegetation within the tailings area or damage to the stabilization caps, the date of inspection, date of damage and actions taken to repair and prevent further damage shall be logged and made available to ADEC. ADEC has requested that AJT Mining Company notify them in the event of any construction or excavation work within the tailings areas. Stormwater drainage ditches and culverts shall be maintained in such a manner that does not cause erosion within the tailings areas. ADEC should also be notified of any changes made to the tailings stabilization caps, such as additional fill etc.



ENVIRONMENTAL & ENGINEERING CONSULTANTS  
2400 College Road, Fairbanks, Alaska 99709  
(907) 452-5688 FAX: (907) 452-5694

Site Map  
Treadwell Mine Cyanide Tailings Stabilization  
AJT Mining Properties, Inc  
Douglas, Alaska

DATE: 14 November 2007

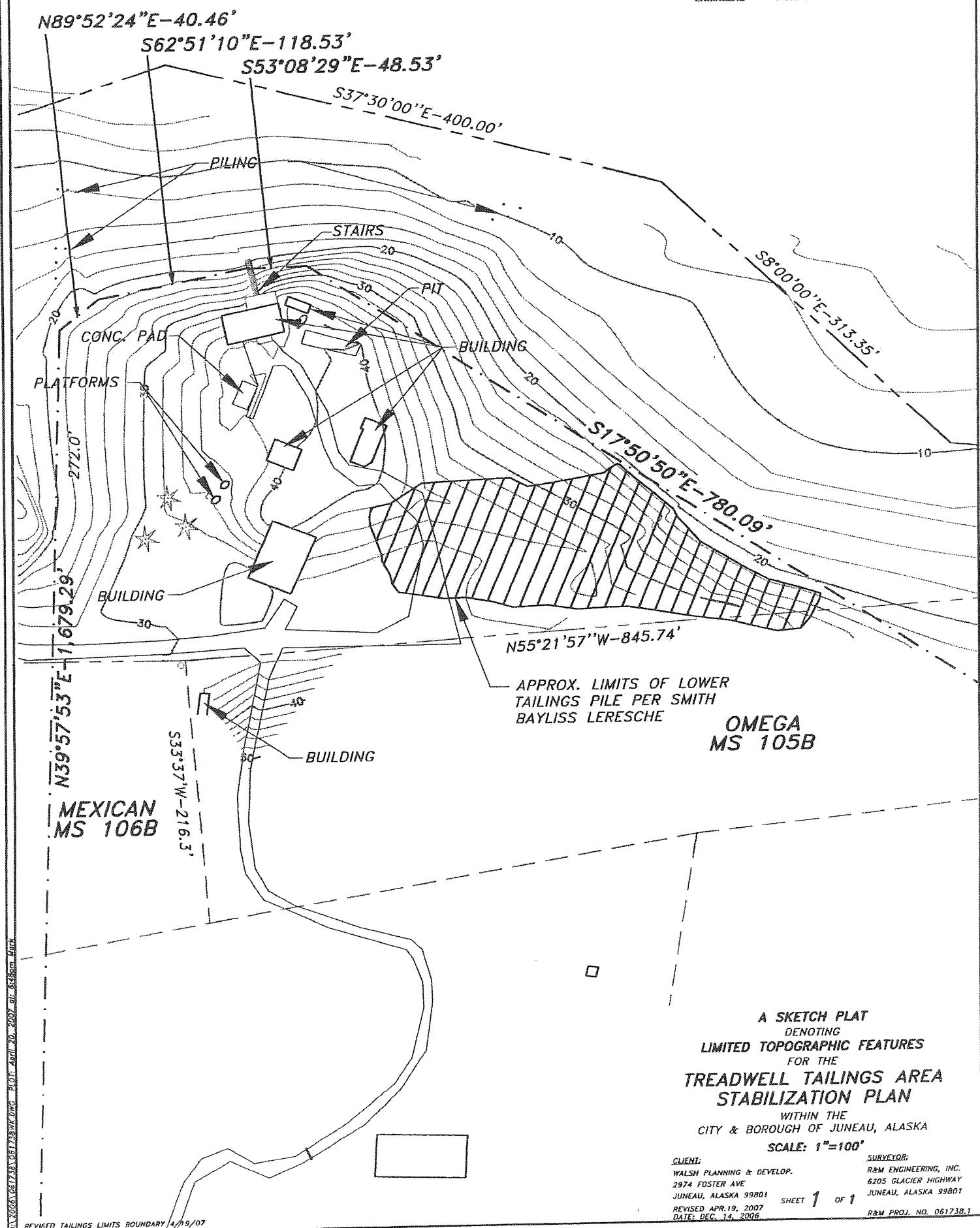
DESIGN: NA

DRAWN: Jason Ginter

PROJECT NO: 07-1088

DWG: Version 1

SCALE: NA



N89°52'24"E-40.46'  
S62°51'10"E-118.53'  
S53°08'29"E-48.53'  
S37°30'00"E-400.00'

CONC. PAD  
PLATFORMS  
272.0'  
N39°57'53"E-1,679.29'

MEXICAN MS 106B  
S33°37'W-216.3'

APPROX. LIMITS OF LOWER TAILINGS PILE PER SMITH BAYLISS LERESCHE

OMEGA MS 105B

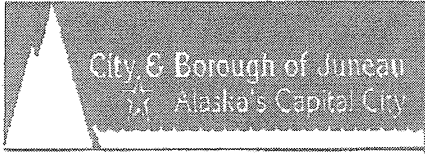
A SKETCH PLAT  
DENOTING  
LIMITED TOPOGRAPHIC FEATURES  
FOR THE  
TREADWELL TAILINGS AREA  
STABILIZATION PLAN  
WITHIN THE  
CITY & BOROUGH OF JUNEAU, ALASKA  
SCALE: 1"=100'

CLIENT: WALSH PLANNING & DEVELOP.  
2974 FOSTER AVE  
JUNEAU, ALASKA 99801  
REVISD APR. 19, 2007  
DATE: DEC. 14, 2006

SURVEYOR: R&M ENGINEERING, INC.  
6205 GLACIER HIGHWAY  
JUNEAU, ALASKA 99801

SHEET 1 OF 1  
R&M PROJ. NO. 061738.1

06/2006 061738.061738.WK.DWG - PLOT - APRIL 20, 2007 at 8:48am Mike  
 REVISED TAILINGS LIMITS BOUNDARY 4/19/07



## Grading Permit Checklist

JUNEAU PERMIT CENTER, 4TH FLOOR MARINE VIEW CENTER, (907) 586-0770

All grading must conform with CBJ Title 19.12, Excavation and Grading.

### Section I:

Case Number: \_\_\_\_\_

Applicant's Name AJT Mining Properties, Inc., Murray Walsh, Agent  
Mailing Address 2974 Foster Ave. Juneau, AK 99801  
Phone Number 723-8444  
Project Address Tract A ATS 204  
Project Parcel Number 2D0301020050

### Section II:

#### GRADING PLAN REQUIREMENTS

Grading permit applications must be accompanied by a drawing which graphically shows the grading site and the proposed grading changes. The plan shall show the following features:

- A. Name, address and phone number of applicant
- B. Lot number, legal description, and street address of grading site
- C. Lot boundary lines
- D. Buildings (existing and proposed)
- E. All easements affecting lot
- F. Location of driveway, including width and size of culvert
- G. Streams, ditches, swales and all other drainage features including locations where drainage leaves the grading site. (PLAN SHALL SHOW ALL DRAINAGE FLOWING INTO AN APPROVED DRAINAGE WAY)
- H. Location of underground utilities (water, sewer, phone, power, tv)
- I. Limits of all proposed cuts and fills
- J. Elevations and dimensions of proposed grading and buildings
- K. All structures within 15 feet of the boundaries of the site
- L. Survey of existing terrain shown with, elevations, cross sections or contours

The Building Official may require a more detailed plan and/or survey by licensed professionals for grading on sites with steep slopes, large excavations or fills (greater than 5,000 cubic yards), or for structural fills.

Section III:

Will there be excavation activity?  YES  NO

How many cubic yards? \_\_\_\_\_ Cubic Yards

What type of material will be excavated? \_\_\_\_\_

Will excavated material be removed from the site?  YES  NO

How many cubic yards of material will be removed? \_\_\_\_\_ Cubic Yards

What is the location of the disposal site? \_\_\_\_\_

Has a permit been obtained for the disposal site?  YES  NO

Will fill be brought on to site?  YES  NO

How many cubic yards? 1935 Cubic Yards

What type of material? 1075 c.y. crushed rock, 860 c.y. sandy fill

From where will the material be obtained? local vendors

Will stumps need to be removed?  YES  NO

Describe method of disposal: \_\_\_\_\_

Will erosion protection be required?  YES  NO

Describe method: Rock containment wall

Will a retaining wall be required to hold the cut or fill?  YES  NO

(Note: Walls four feet or greater in height must be designed by a professional engineer licensed in the State of Alaska.)

**Section III:**

Has a grading plan been stapled to this checklist? (Note: See Grading Plan Requirements on the back of this page.)	YES XXX	NO
If a driveway is to be constructed to a State of Alaska Department of Transportation right-of-way, attach a copy of the ADOT driveway permit. (Note: Glacier Highway, Mendenhall Loop Road, and other major arterial roads in the CBJ are ADOT rights-of-way.) Are ADOT permits required and attached to this checklist?	YES	N/A NO
If grading project will require a well or on-site sanitary sewer disposal, permits from the State of Alaska Department of Environmental Conservation are required. Are ADEC permits required and attached to this checklist?	YES	N/A NO
CBJ Land Use Code may require a Conditional Use Permit be issued by the Planning Commission for Sand and Gravel Extraction. Please respond to the following questions in order to determine if the extraction is exempt from a planning permit.		
Is the extraction a necessary incident to work authorized under a valid building permit for a proposed permitted use?	YES	NO XXX
Has a building permit been issued for the proposed permitted use?	YES	N/A NO
Is the extraction a necessary incident to improvements which are part of an approved subdivision plat?	YES	NO XXX
If associated with subdivision improvement, will the material excavated remain entirely on the property or original tract or parcel subdivided?	YES	N/A NO
Is the extraction less than two feet in depth and not creating a slope greater than five feet in height or steeper than one and one-half horizontal to one vertical?	YES	N/A NO
Does the extraction involve the removal of less than two hundred cubic yards from the lot?	YES	NO XXX
Is the extraction a necessary incident to the location or placement of work located primarily in the public way which is exempt from the building code?	YES	NO XXX
Is the extraction for cemetery graves, excavations for wells or tunnels, utilities or exploratory excavation totaling less than two hundred cubic yards?	YES	XXX NO

A NO answer to one or more of the questions A through H above may indicate that a Conditional Use Permit is required.

**Narrative to Support Grading Permit Application**

**June 7, 2007**

(Section letters conform to Grading Permit Checklist, Section II)

- A. Applicant:** AJT Mining Properties Inc.  
David G. Stone, President  
5601 Tonsgard Court  
Juneau, AK 99801  
Tel.: 465-6302
- Agent:** Murray R. Walsh, AICP  
Walsh Planning & Development Services  
2974 Foster Ave.  
Juneau, AK 99801  
Tel.: 723-8444
- B. Site:** Tract A, A.T.S 204, see Sheet 1-B  
4,000 feet SE of the end of St. Anns Ave., see Sheet 1-A
- C. Lot Boundary Lines:** See Sheet 1-B
- D. Buildings:** None on area to be graded. There are building ruins and one new building to support the nearby zipline tour. No other new planned. See Sheet 1-B
- E. Easements:** None
- F. Driveway:** See Sheets 1-A and 1-B
- G. Drainage:** There will be ditches on the north and south sides to intercept sheet drainage from the hills on either side. There will be a center drain to carry sheet drainage from the cap itself. All drainage will be directed toward the beach.
- H. Utilities:** None
- I. Cuts and Fills:** See Stabilization Plan
- J. Elevations:** Finished elevation will be +28 on the West side and +24 on the East side.
- K. Structures Within 15 feet of Site Boundaries:** None
- L. Survey:** See Stabilization Plan

**Purpose:**

The owner, AJT Mining Properties, has negotiated an agreement with the Alaska Department of Environmental Conservation to place a cap over mining tailings left from the Treadwell Mine. The site is 4000 feet from the end of St. Anns Ave cul-de-sac. The site is part of a larger area recently developed with a zipline tour experience. The tailings are not dangerous to public health or the natural environment. Even so, the state wants the area capped and this permit is necessary to do the work.

**The Project:**

The area to be capped contains about 40,000 square feet. The tailings are a fine-ground silt-like substance that can be very muddy when wet. There are some left over steel and wood objects dating back to the mining period. All steel objects will be relocated off the tailing site. Wood objects having no historic significance (there are none) and no creosote will be burned or removed. The site will then be graded and capped as shown in the enclosed drawings.

At an average thickness of 9 inches, the shot rock layer will require importation of 1075 cubic yards of material. Above the crushed rock, there will be a six inch layer of sandy fill. This will require importation of 860 cubic yards of fill. A hard-packed trail will be left along the south side.

The elevation, after completion of grading and fill, will be the same as the surrounding forest land, +28 on the west and +24 on the east edge which runs along the beach. No fill will be placed below Elevation +20.8. This edge will be contained with a sloped rock wall that is four feet high and 225 feet long. The area will then be seeded with wildflowers and other ground cover and fertilized.

**Construction Method:**

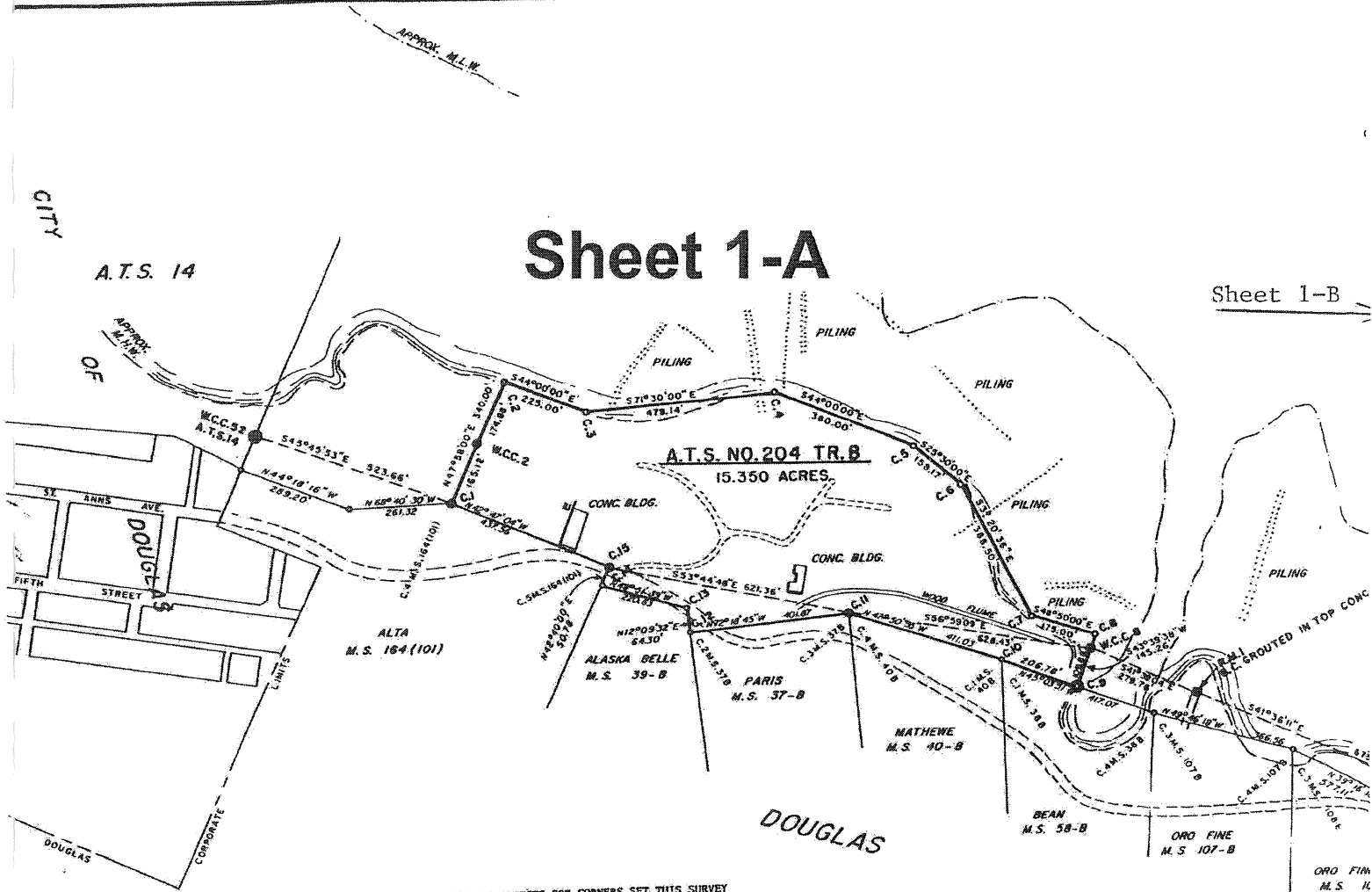
All material and equipment will be brought to and removed from the site by barge.

Drawings attached.



# Sheet 1-A

Sheet 1-B



**DESCRIPTION TRACT "A" A.T.S. NO 204**

Beginning at Cor. No. 1, identical with Cor. No. 5, of U.S.M.S. No. 768. Thence from Cor. No.1 by meters and bounds:

N. 50° 19' 41" W.	185.33 ft.	to Cor. No. 2;
N. 43° 26' 35" W.	241.26 ft.	to Cor. No. 3;
N. 27° 15' 10" W.	337.58 ft.	to Cor. No. 4;
N. 40° 45' 25" W.	304.43 ft.	to Cor. No. 5;
N. 71° 54' 15" W.	129.82 ft.	to Cor. No. 6;
N. 58° 21' 57" W.	845.74 ft.	to Cor. No. 7;
N. 51° 22' 23" W.	129.82 ft.	to Cor. No. 8;
N. 39° 16' 10" W.	190.00 ft.	to Cor. No. 9;
N. 32° 30' 00" E.	196.20 ft.	to Cor. No.10;
S. 69° 27' 40" E.	815.05 ft.	to Cor. No.11;
S. 37° 30' 00" E.	400.00 ft.	to Cor. No.12;
S. 80° 00' 00" E.	313.35 ft.	to Cor. No.13;
S. 45° 50' 00" E.	1319.48 ft.	to Cor. No.14;
S. 12° 54' 30" W.	190.00 ft.	to Cor. No. 1;

The place of beginning containing in all 14.8886 acres, more or less.

**DESCRIPTION OF TRACT "B" A.T.S. NO. 204**

Beginning at Cor. No. 1, identical with Cor. No. 4, of U.S.M.S. 164(101), from whence W.C.C. 52 of A.T.S. No. 14 bears N. 45° 45' 53" W., 523.66 ft. distant. Thence from Cor. No. 1 by meters and bounds:

N. 47° 58' 00" E.	340.00 ft.	to Cor. No. 2;
S. 44° 00' 00" E.	225.00 ft.	to Cor. No. 3;
S. 71° 30' 00" E.	479.14 ft.	to Cor. No. 4;
S. 44° 00' 00" E.	380.00 ft.	to Cor. No. 5;
S. 25° 30' 00" E.	158.17 ft.	to Cor. No. 6;
S. 30° 20' 36" E.	388.50 ft.	to Cor. No. 7;
S. 48° 50' 00" E.	175.00 ft.	to Cor. No. 8;
S. 43° 39' 38" W.	145.26 ft.	to Cor. No. 9;
N. 45° 03' 51" W.	206.78 ft.	to Cor. No.10;
N. 47° 50' 55" W.	64.30 ft.	to Cor. No.11;
N. 72° 18' 45" W.	401.87 ft.	to Cor. No.12;
N. 120° 09' 32" E.	220.63 ft.	to Cor. No.13;
N. 48° 51' 39" W.	50.78 ft.	to Cor. No.14;
N. 48° 40' 00" E.	30.78 ft.	to Cor. No.15;
N. 42° 47' 04" N.	437.56 ft.	to Cor. No. 1;

The place of beginning containing in all 15.350 acres, more or less.

Latitude: 58° 17' N. Longitude: 134° 23' W.  
AT CORNER NO. 1

**BEARING OBJECTS FOR CORNERS SET THIS SURVEY**

- TRACT A**  
 Cor. No. 1  
 B.C. Mon. bears N. 16° 28' 15" W., 82.88 ft.  
 B.C. in large granite boulder bears N. 66° 28' 15" N., 12.12 ft.  
 Cor. No. 5  
 Conc. nail in bedrock outcrop bears N. 55° 57' 16" N., 75.40 ft.  
 Cross on 5"x3"x4" granite boulder bears S. 70° 13' N., 46.10 ft.  
 Cor. No. 7  
 Spike in power pole bears S. 77° 48' W., 5.35 ft.  
 Northerly corner of conc. structure bears S. 15° 17' N., 30.40 ft.  
 Cor. No. 9  
 24" Spruce bears N. 86° 40' W., 14.18 ft.  
 24" Spruce bears N. 56° 46' 37" W., 31.95 ft.  
 W.C.C. 10  
 Spike in 14" piling bears N. 64° 31' 50" W., 25.94 ft.  
 24" Spruce bears S. 59° 52' 30" W., 72.22 ft.  
 W.C.C. 14  
 B.C. Mon. bears N. 46° 53' W., 47.05 ft.  
 B.C. in large boulder bears S. 27° 19' 55" W., 47.82 ft.

- TRACT B**  
 Cor. No. 1  
 6" Alder bears N. 80° 35' W., 14.50 ft.  
 12" Poplar bears S. 4° 16' 40" E., 17.90 ft.  
 W.C.C. No. 2  
 5" Alder bears S. 42° 52' 40" W., 38.23 ft.  
 5" Alder bears N. 77° 48' 40" W., 22.09 ft.  
 W.C.C. No. 8  
 Spike in 14" piling bears S. 80° 17' 24" W., 37.31 ft.  
 Conc. nail in bedrock outcrop bears S. 25° 51' 37" E., 106.95 ft.  
 Cor. No. 9  
 Conc. nail in bedrock outcrop bears S. 60° 10' 14" E., 33.67 ft.  
 Cross cut on 4"x3"x2" granite boulder bears N. 43° 39' 38" E., 11.82 ft.  
 Cor. No. 11  
 20" Alder bears S. 83° 04' E., 31.71 ft.  
 8" Spruce bears S. 48° 25' W., 12.91 ft.  
 Cor. No. 15  
 Southerly corner conc. building 8'x24' bears N. 62° 25' 40" W., 90.02 ft.  
 5" Spruce bears S. 73° 56' E., 40.56 ft.  
 R.M. No. 1  
 12" Alder bears S. 54° 50' 50" W., 41.02 ft.  
 16" Poplar bears S. 4° 34' 40" W., 79.53 ft.  
 R.M. No. 2  
 Northerly corner building bears N. 8° 38' W., 2.19 ft.  
 Northeastly corner building bears S. 52° 15' E., 18.85 ft.

UPLAND OCCUPANTS  
A.J. INDUSTRIES INC.

Sheet 1-B

**CERTIFICATE OF OWNERSHIP**

I hereby certify that we are the legal claimants of the pr shown hereon and that we hereby approve the plat of this s

Aug 15 1972

Witnessed By:  
*[Signature]*

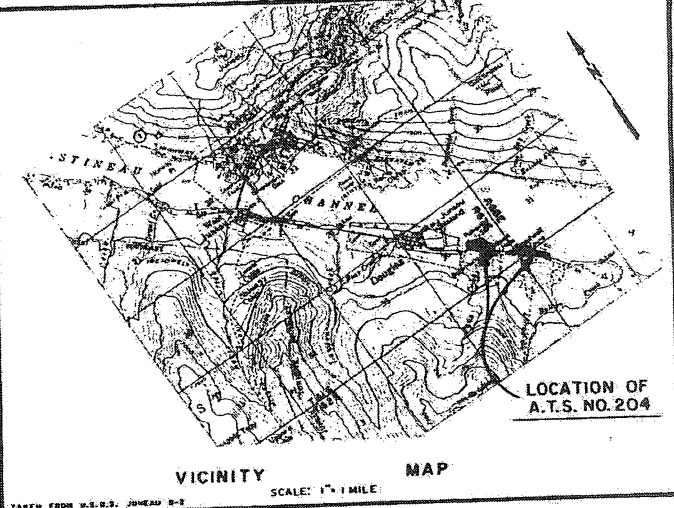
A. J. Industries Inc.  
By *[Signature]*  
General Manager, Juneau, Alaska  
Box 429  
Juneau, Alaska

Subscribed and sworn to before me this 15th day of Aug.



*[Signature]*  
By Commission Expires: 12/31/72

TINEAU



VICINITY MAP  
SCALE: 1" = 1 MILE  
TAKEN FROM U.S.G.S. JUNEAU 8-2

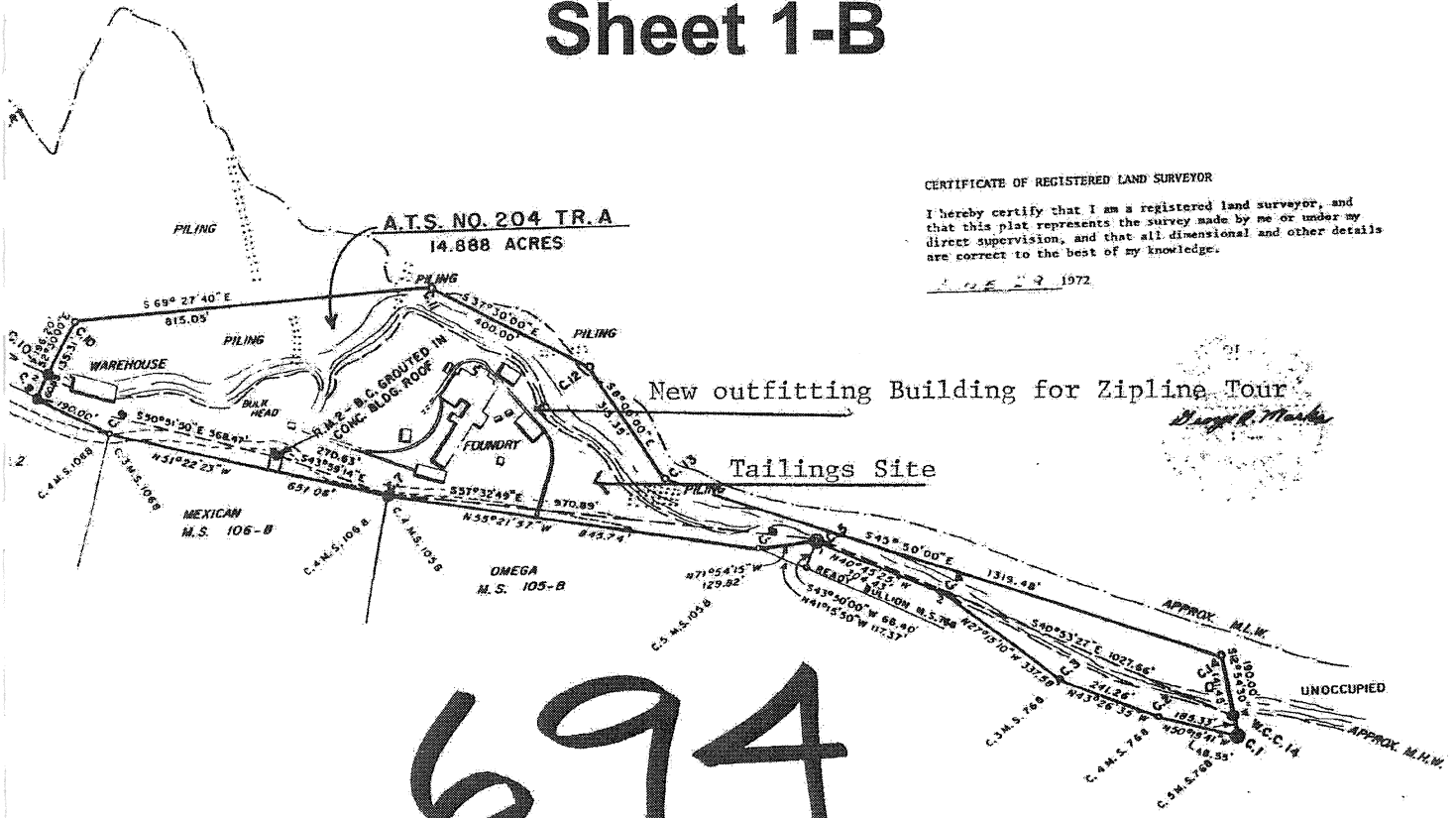
Sheet 1-A

# Sheet 1-B

### CERTIFICATE OF REGISTERED LAND SURVEYOR

I hereby certify that I am a registered land surveyor, and that this plat represents the survey made by me or under my direct supervision, and that all dimensional and other details are correct to the best of my knowledge.

JUNE 22 1972



Sheet 1-A

#### NOTE:

The bearing of origin originated between the monuments at the intersection of 3rd. and "M" street and 3rd. and "I" street, U.S. Survey No. 1180, Douglas Townsite, officially reported as S. 45° 32' E.

#### LEGEND

- ⊙---Indicates existing B.C. Monument
- ⊙---Indicates B.C. Monument set this survey
- ⊙---Indicates B.C. grouted in rock this survey
- ⊙---Indicates existing B.L.M. cross on 4'x3'x2' granite rock

PLAT PREPARED 6-28-72

DATE OF SURVEY  
Beginning: AUGUST 9, 1961  
Ending: JUNE 25, 1972

TONER & NORDLING  
REGISTERED ENGINEERS  
JUNEAU, ALASKA

ALASKA DIVISION OF LANDS  
STATE OF ALASKA  
ANCHORAGE, ALASKA

ALASKA TIDELANDS SURVEY  
NO. 204 (CR, T41S, T42S, R67E, R68E)

Drawn By: J. D.	Approved: <i>Charles H. Toner</i> Chief Civil Engineer
Date Approved: 7-1-72	Approved: <i>F. J. Keenan</i> Director of Lands
Scale: 1" = 200'	Checked: File No.

#694

RECORDED-FILED  
JUNEAU REC.  
DISTRICT  
JUN 28 1972  
ALASKA RIGHTS, INC.

724677