

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

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1. Name of Property

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historic name F.E. Company Gold Dredge No. 5

other names/site number AHRS Site No. LIV-00111

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2. Location

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street & number Upper Dome Creek

not for publication n/a

city or town Fairbanks vicinity X

state Alaska code AK county Fairbanks North Star code 090

zip code 99701

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this X nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property X meets does not meet the National Register Criteria. I recommend that this property be considered significant nationally statewide X locally. (See continuation sheet for additional comments.)

Signature of certifying official

Date Feb 3, 2004

Alaska State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional comments.)

Signature of commenting or other official

Date

State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is:

- entered in the National Register See continuation sheet.
determined eligible for the National Register See continuation sheet.
determined not eligible for the National Register
removed from the National Register

other (explain):

Signature of Keeper: Elson H. Beall 3/14/04

Signature of Keeper Date of Action

USDI/NPS NRHP Registration Form

F.E. Company Dredge No. 5
Fairbanks North Star, Alaska

Page 3

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5. Classification

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Ownership of Property (Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property (Check only one box)

- building(s)
- district
- site
- structure
- object

Number of Resources within Property

Contributing	Noncontributing
<u> </u>	<u> </u> buildings
<u> 1 </u>	<u> </u> sites
<u> </u>	<u> </u> structures
<u> 1 </u>	<u> </u> objects
	<u> 0 </u> Total

Number of contributing resources previously listed in the National Register n/a

Name of related multiple property listing (Enter "N/A" if property is not part of a multiple property listing.) n/a

USDI/NPS NRHP Registration Form

F.E. Company Dredge No. 5
Fairbanks North Star, Alaska

Page 4

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6. Function or Use

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Historic Functions (Enter categories from instructions)

Cat: industry/processing/ Sub: extractive facility
extraction

Current Functions (Enter categories from instructions)

Cat: vacant/not in use Sub: n/a

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7. Description

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Architectural Classification (Enter categories from instructions)

no style

Materials (Enter categories from instructions)

foundation n/a
roof asphalt
walls metal, steel
other

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.)

F.E. Company Dredge No. 5 is located on the south side of Dome Creek, approximately six miles southeast of Chatanika, a former F.E. Company camp (listed in the National Register of Historic Places), several miles west of Pedro Dome, and about twenty miles north of the city of Fairbanks.

Bethlehem Steel Company's Shipbuilding Division manufactured Dredge No. 5 for the F.E. Company in 1929. The company shipped the dredge in sections by train and ocean barge from Pennsylvania to Fairbanks. F.E. Company workers assembled the dredge on upper Cleary Creek during the summer of 1929. Dredge No. 5 worked on upper Cleary Creek until 1942. The company moved the dredge to Little Eldorado Creek in 1947, where it worked until moved to Dome Creek in 1955 where it stands today. Dredge No. 5 worked on Dome Creek until it was shut down for good on August 10, 1959.

Similar to F.E. Company Dredge No. 2 and Dredge No. 8 (both listed in the National Register of Historic Places), Dredge No. 5 is a self-contained electrically-powered gold recovery machine. Dredge No. 5 is capable of digging 17 feet above the face and to depths of 36 feet. A coal fired boiler in the hull provided steam heat and power for some of the on-board machinery. This boiler provided sufficient heat under the conveyors and at other vital locations to prevent cold weather from forcing early shutdowns due to ice build-up.

The dredge has a ship-like compartmented steel hull 108 feet long, 60 feet wide, and 9 feet deep. Its superstructure is steel and wood frame with corrugated metal sheathing. A superstructure covers virtually the entire

USDI/NPS NRHP Registration Form

F.E. Company Dredge No. 5

Fairbanks North Star

Page 5

hull area. The middle third of the structure has a second story. When fully loaded, Dredge No. 5 had a draft of 6'10" and displaced 1,255 tons including ballast.

The dredge's bow gantry extends 49'1" above deck, the main gantry 39'9", and the stern gantry 54'3". The digging ladder at the bow of the dredge is 85' long and weighs 79,000 pounds. It was lengthened when moved to Dome Creek in 1955. The spuds are I-beam construction, each 51 feet long and weighing 34,340 pounds. The dredge also has an air compressor with 175 cubic foot per minute displacement, a jitney winch, jib crane, fire pump, line winches, and ladder hoist winch.

The digging ladder had 78 buckets, each weighing 1,750 pounds, suspended from it. After scooping gravel, the buckets passed the gravel on to a series of trommel screens to be washed using water pumped from a series of high pressure, low pressure, and hopper pumps at a flow rate of over 9,000 gallons per minute. The upper tumbler is made of nickel steel, has a diameter of 6 feet and weighs 12,100 pounds. The two piece lower tumbler is made of manganese steel, has a diameter of weighs 12,430 pounds. Gold saving tables and sluice boxes, with a total surface area of 2,125 square feet, recovered the gold. The grade of the steel transverse tables is 1.25 inches per foot, and that of the longitudinal tables is 1.125. A 105' by 32" belt stacker deposited the waste rock, or tailings, behind the dredge. The belt could travel at speeds up to 315 feet per minute with a maximum discharge elevation above water line of 35 feet.

The interior of the dredge retains its original functional appearance. The large machinery is in place. The window glass is gone. The buckets are no longer attached to the digging ladder, but they are on the ground adjacent to the dredge. Shut down for over forty years, F.E. Company Dredge No. 5 retains its physical integrity and is an excellent example of the mechanized gold extraction industrial design of the late 1920s.

USDI/NPS NRHP Registration Form

F.E. Company Dredge No. 5
Fairbanks North Star, Alaska

Page 6

8. Statement of Significance

Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

- A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B Property is associated with the lives of persons significant in our past.
- C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations (Mark "X" in all the boxes that apply.) n/a

- A owned by a religious institution or used for religious purposes.
- B removed from its original location.
- C a birthplace or a grave.
- D a cemetery.
- E a reconstructed building, object, or structure.
- F a commemorative property.
- G less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance (Enter categories from instructions)

industry
engineering

Period of Significance 1929-1959

Significant Dates 1929

Significant Person (Complete if Criterion B is marked above)
n/a

Cultural Affiliation n/a

Architect/Builder Bethlehem Steel Company, Shipbuilding Division

USDI/NPS NRHP Registration Form

F.E. Company Dredge No. 5

Fairbanks North Star

Page 7

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Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.)

With its machinery in place, F.E. Company Dredge No. 5 is an excellent example of one of the large industrial machines used to mine gold in the Fairbanks area for thirty years. The Fairbanks Exploration Company (F.E. Company), a subsidiary of the United States Smelting Refining and Mining Company (USSR&M), operated gold dredges in interior Alaska from 1927 to 1964. Dredge No. 5 was the fourth F.E. Company dredge, and is one of seven of the company's fleet of eight dredges that remain in the Fairbanks area. The company used Dredge No. 5 on upper Cleary Creek from 1929 to 1942, along Eldorado Creek from 1947 to 1955, and on Dome Creek from 1955 to 1959. The company ceased mining operations in the Fairbanks area in 1964. Dredges moved in the course of their work. Because of the dredge's present location on Dome Creek, the period of significance includes the years the dredge worked that drainage, 1955-1959, which is less than fifty years ago. The period of significance for Dredge No. 5 encompasses all the years it operated.

Historic background

Following Felix Pedro's discovery of gold in Interior Alaska in 1902, more than twenty small mining camps sprang up along creeks within a thirty-mile radius of the trading post that started Fairbanks. Most mines were small, drift mining operations. After the richer, more accessible areas had been mined, activity declined. Gold production in the Fairbanks district fell from \$10.5 million in 1909 to \$3 million in 1915.

Completion of the Alaska Railroad in 1923 provided ready access to coal from the Healy area, about eighty miles south of Fairbanks, and lowered freight shipping costs to interior Alaska. The USSR&M Company of Boston started acquiring mining claims in the Fairbanks Mining District. The F.E. Company, a subsidiary of USSR&M, started gold dredging operations in the district in 1927. Dredges could work much more gravel and recover gold from gravel previously mined with rockers and sluice boxes. Eventually the company had eight dredges operating in the Fairbanks area.

The F.E. Company was the largest private employer in interior Alaska from the late 1920s until 1964. Before World War II, about one-third of the approximately 3,500 people in Fairbanks worked for the company. Mining operations ceased under government order during World War II because gold mining was not considered essential to the war effort. Although mining resumed after the war, the F.E. Company did not dominate the regional economy as it had before the war. It did, however, account for more than half the gold production in Alaska between 1950 and 1965.

The company assembled Dredge No. 5 on upper Cleary Creek in 1929. The dredge worked along the creek from 1929 to 1942. Preparations started in 1942 to move the dredge to Little Eldorado Creek, three and a half miles away, but stopped when the federal government shut down gold mining operations later that year as a wartime measure. The move did not occur until late 1947.

USDI/NPS NRHP Registration Form

F.E. Company Dredge No. 5
Fairbanks North Star, Alaska

Page 8

During the summer of 1947 the F.E. Company built a winter road from Cleary Creek to Little Eldorado Creek and dug a pit at the latter for dredge assembly. During the fall, the superstructure was partially dismantled and the hull cut into five parts. The lighter pieces were hauled by trucks and the heavy ones by 100-ton logging sleds pulled by D-8 Cats. It was contemplated at the time that Dredge No. 5 would be moved again in a few years. As a result, its hull was riveted back together instead of welded. Dredge No. 5 started digging along Little Eldorado Creek on July 8, 1948. The total cost of the move was \$162,500.12, of which 16.95% was in dismantling, 15.82% in transportation, 46.04% in erecting, and 21.19% in general expenses.

Six years later, Dredge No. 5 was disassembled again for a move to Dome Creek, a distance of 9.4 miles. The company budgeted \$240,000 for the move and for extending the digging ladder to excavate five feet deeper. The move occurred in January and February 1955. Company employees reassembled the dredge, completely overhauled it, and added the extension to its ladder. Shortly before the dredge was to be launched on Dome Creek, heavy rain washed out a diversion dam above the dredge pit and filled the pit with four feet of mud and silt. The dam was rebuilt and Dredge No. 5 started digging on July 22, 1955. The total cost of the second move and the overhaul was \$228,809.84, of which \$46,027.95 was for repairs. The dredge worked on Dome Creek until the end of the 1959 season. The company ceased operations in 1964.

Dredge No. 5 typically operated on a three-shift 24-hour basis with thirteen men on each crew. Its operating time for thirty years, 1929-1959, averaged 93% efficiency. The average length of the dredging season prior to World War II was 153 days. Spring ice cutting and removal for Dredge No. 5 averaged 1,000 tons per year.

In its preparations for closing, beginning in the late 1950s, the F.E. Company cleaned all of its the dredges, covered the windows with flattened screen plates, closed all openings, and waterproofed all roofs with a heavy coating of pitch. The bucket lines were removed, the level of ponds raised, and the dredges parked on specially prepared sites. After the company discontinued operations, a U.S. Bureau of Mines annual report noted that "U.S.S.R.&M. had long been a leading gold producer in Alaska and in the Nation. The shut-down of the great Nome dredge fields in 1962 and those of Fairbanks in 1964 marked the end of an era in gold mining." The company's care when closing helped preserve Dredge No. 5. It is one of the excellent examples in Alaska of the huge giants that dug gold in Alaska through the second quarter of the twentieth century.

USDI/NPS NRHP Registration Form

F.E. Company Dredge No. 5
Fairbanks North Star, Alaska

Page 9

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9. Major Bibliographical References

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(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

American Society of Mechanical Engineers. Gold Dredge #8. National Historic Mechanical Engineering Landmark pamphlet. May 10, 1986.

Boswell, John C. *History of Alaskan Operations of United States Smelting, Refining, and Mining Company*. Mineral Industries Research Laboratory, University of Alaska Fairbanks, 1979.

Eagan, Pete. Manager of Alaska Gold Company. Personal communication.

Spence, Clark C. *The Northern Gold Fleet: Twentieth-Century Gold Dredging in Alaska*. Champaign: University of Illinois Press, 1996.

U.S. Smelting, Refining and Mining Company. Data on dredges. October 1967. Copy in files of Fairbanks Gold Co. LLC, 2002.

Previous documentation on file (NPS) n/a

preliminary determination of individual listing (36 CFR 67) has been requested.

previously listed in the National Register

previously determined eligible by the National Register

designated a National Historic Landmark

recorded by Historic American Buildings Survey #

recorded by Historic American Engineering Record #

Primary Location of Additional Data

State Historic Preservation Office

Other State agency

Federal agency

Local government

University

Other

Name of repository:

USDI/NPS NRHP Registration Form

F.E. Company Dredge No. 5
Fairbanks North Star, Alaska

Page 10

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10. Geographical Data
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Acreeage of Property less than one

UTM References (Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing	Zone	Easting	Northing
1	<u>06</u>	<u>473007</u>	<u>7211820</u>	3		
2	<u>---</u>	<u>---</u>	<u>---</u>	4		

--- **See continuation sheet.**

Verbal Boundary Description (Describe the boundaries of the property.)

F.E. Company Dredge No. 5 sits on the south bank of Dome Creek, west of Pedro Dome, on the Bismark Placer, U.S. Mineral Survey 1937, as recorded in the Fairbanks Recording District, Fourth Judicial District, State of Alaska, 1926.

Boundary Justification (Explain why the boundaries were selected.)

The boundary encompasses Dredge No. 5 and the 78-bucket line lying on the ground adjacent to it.

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11. Form Prepared By
=====

name/title John Reeves, Owner

organization Fairbanks Gold Co. LLC

date August 19, 2002

street & number P.O. Box 81941

telephone 907-457-2197

city or town Fairbanks

state AK

zip code 99708-1941

USDI/NPS NRHP Registration Form

F.E. Company Dredge No. 5
Fairbanks North Star, Alaska

Page 11

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Additional Documentation
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Submit the following items with the completed form:

Maps

A USGS map (7.5 or 15 minute series) indicating the property's location.

A sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items (Check with the SHPO or FPO for any additional items)

=====
Property Owner
=====

(Complete this item at the request of the SHPO or FPO.)

name John Reeves

street & number P.O. Box 81941

telephone 907-457-2197

city or town Fairbanks

state AK

zip code 99708-1941

USDI/NPS NRHP Registration Form

F.E. Company Dredge No. 5
Fairbanks North Star, Alaska

Page 12

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**NPS Form 10-900-a
(8-86)**

OMB No. 1024-0018

**United States Department of the Interior
National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

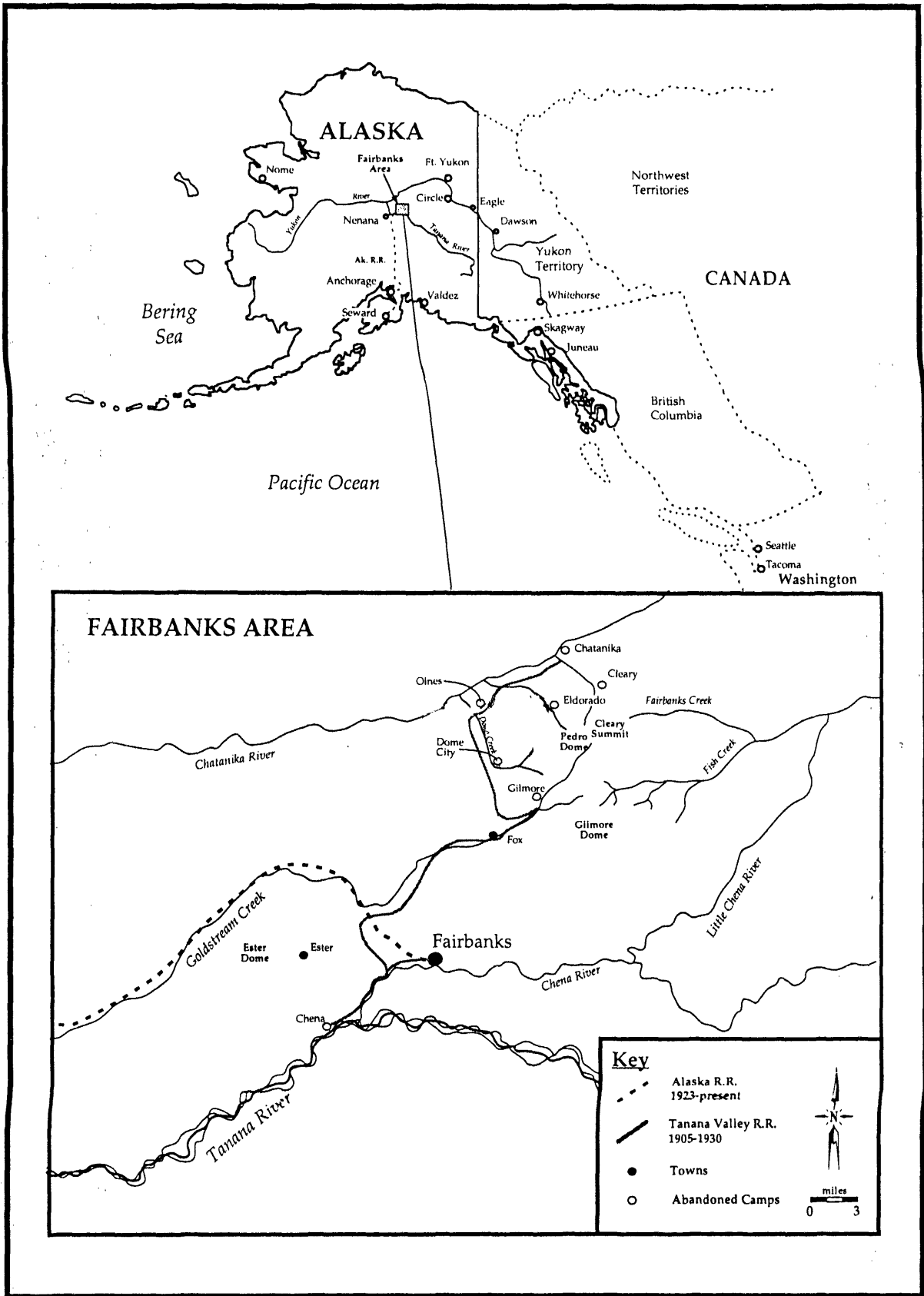
Section photograph identification

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1. F.E. Company Dredge No. 5
Fairbanks North Star, Alaska
John Reeves
March 2002
P.O. Box 81941, Fairbanks, AK 99708-1941
looking northwest at the dredge

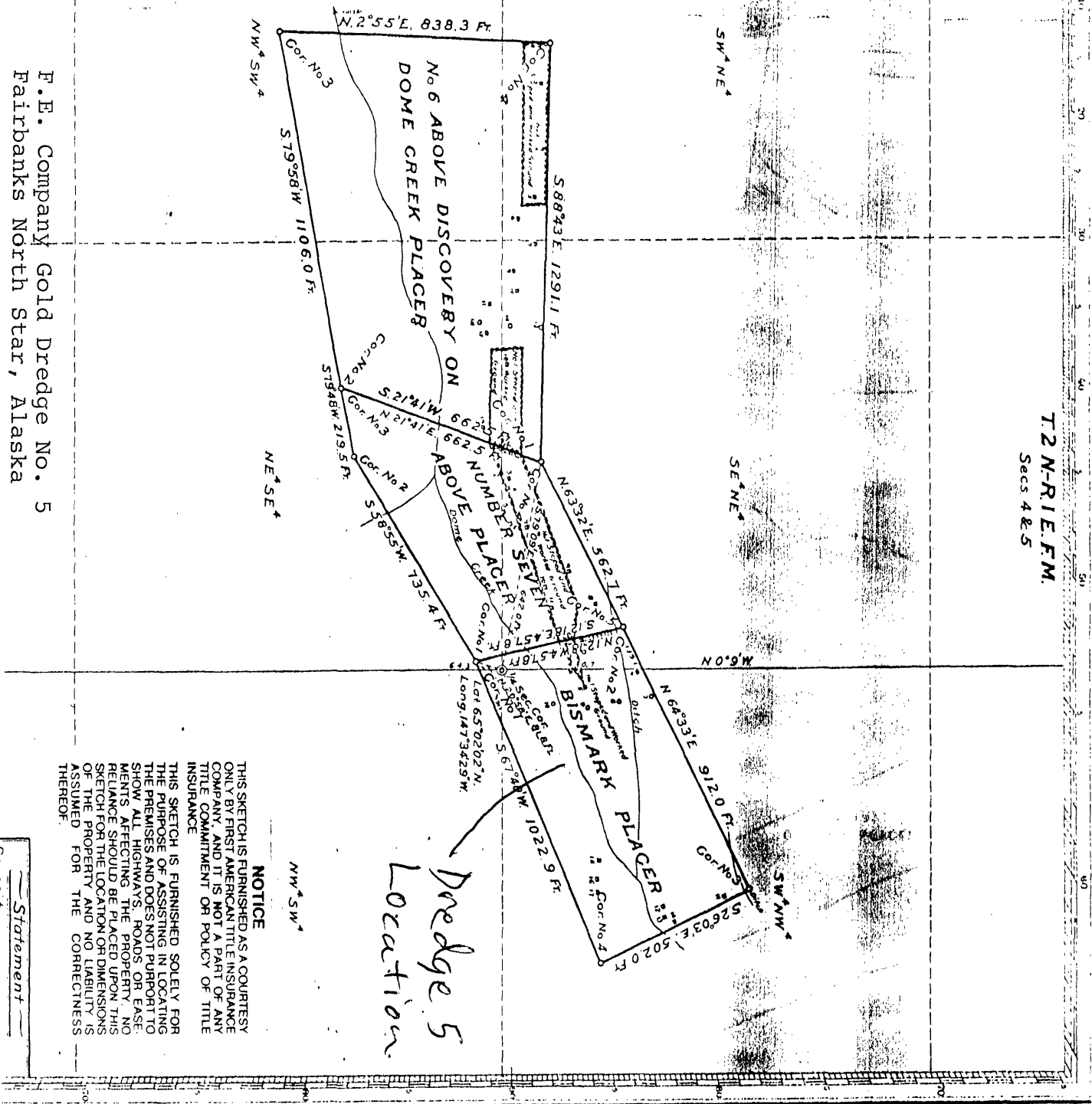
2. F.E. Company Dredge No. 5
Fairbanks North Star, Alaska
John Reeves
March 2002
P.O. Box 81941, Fairbanks, AK 99708-1941
looking northeast at the dredge

3. F.E. Company Dredge No. 5
Fairbanks North Star, Alaska
John Reeves
2002
P.O. Box 81941, Fairbanks, AK 99708-1941
looking south at the dredge



F.E. Company Gold Dredge No. 5
Fairbanks North Star, Alaska

T2-N-RIE-FM.
Secs 4 & 5



NOTICE
THIS SKETCH IS FURNISHED AS A COURTESY ONLY BY FIRST AMERICAN TITLE INSURANCE COMPANY, AND IT IS NOT A PART OF ANY TITLE COMMITMENT OR POLICY OF TITLE INSURANCE.
THIS SKETCH IS FURNISHED SOLELY FOR THE PURPOSE OF ASSISTING IN LOCATING THE PREMISES AND DOES NOT PURPORT TO SHOW ALL HIGHWAYS, ROADS OR EASEMENTS AFFECTING THE PROPERTY. NO RELIANCE SHOULD BE PLACED UPON THIS SKETCH FOR THE LOCATION OR DIMENSIONS OF THE PROPERTY AND NO LIABILITY IS ASSUMED FOR THE CORRECTNESS THEREOF.

Statement

F.E. Company Gold Dredge No. 5
Fairbanks North Star, Alaska

Claim Journal, September 18, 1902 to October 12, 1918
opened October 30, 1906.
Mineral Survey No. 1937

Lot No.
FAIRBANKS
Fairbanks Land District.

OF THE CLAIM OF
PLAT
GEORGE EMERS
KNOWN AS THE
NO. 6 ABOVE DISCOVERY ON DOME CREEK, NUMBER SEVEN ABOVE, AND BISMARCK PLACERS

FAIRBANKS
TERRITORY OF ALASKA.
Containing an Area of 38.44 Acres
Scale of 300 Feet to the inch.
Surveyed April 5 to 7, 1926
IRVING McR. REED
Deputy Mineral Surveyor

The Original Field Notes of the Survey of the Mining Claim of George Emers known as the No. 6 Above Discovery on Dome Creek, Number Seven Above, and Bismark Placers

From which this plat has been made under my direction, have been examined and approved and are on file in this office, and I hereby certify that they furnish such an accurate description of said Mining Claim as will, if implemented into a patent, serve fully to identify the premises, and that such reference is made therein to natural objects or permanent monuments as will justify and give the locus thereof.
I further certify that Five Hundred Dollars worth of labor has been expended on improvements made upon said Mining Claim by said Emers or his assigns and that said improvements consist of 34 shafts, 9 drill holes; stopped and worked ground, Value, \$39,762.00

that the location of said improvements is correctly shown upon this plat, and that no portion of said labor or improvements has been included in the estimate of expenditures upon any other claim.
and I further certify that this is a correct plat of said Mining Claim made in conformity with said original field notes of the survey thereof, and the same is hereby approved.

Public Survey Office
Juneau, Alaska
Industrial Engineer in Charge