

STATEWIDE MATERIAL SITE INVENTORY

MATERIAL SITE **INSPECTION REPORT**

Federal Project No. STP-000S(530)
AKSAS Project No. 76174

RICHARDSON HIGHWAY

MS 71-1-050-5
16 Mile Quarry

February 24, 2010

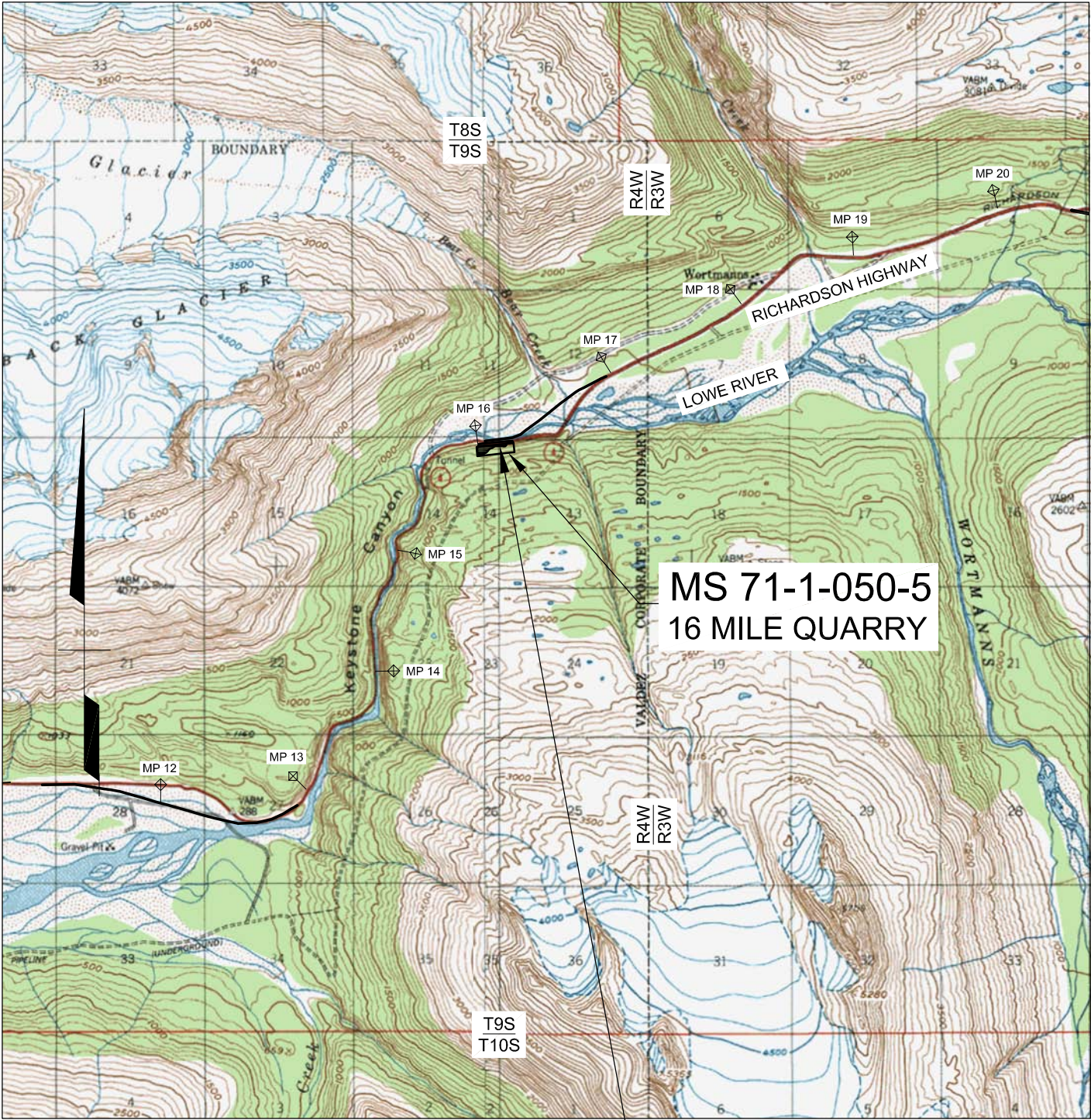
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CATEGORY:

ACTIVE – OPEN

According to information found in the DOT&PF EDMS system in January 2009 and DNR case file abstracts, this site lies on State of Alaska lands managed by DNR. DOT&PF is currently operating under a negotiated material sale contract (ADL 227576) that expires on December 31, 2017. The site lies in Sections 13 and 14, T9S, R4W, CRM but the DNR plat shows the site lying in only Section 13. The DNR case file indicates the site is in Section 23, which appears to be a typo. Other users of the site (City of Valdez and Copper Valley Construction) have described it as lying in Sections 13 and 14. The site adjoins the Richardson Highway right-of-way and processing and stockpiling areas lie within the right-of-way. This site appears to contain significant quantities of rock and should be retained by DOT&PF for future use.

LOCATION MAP



U.S.G.S. QUADRANGLE: VALDEZ (A-5) & (A-6)

GPS COORDINATES FROM GOOGLE EARTH
UTM (WGS84-METERS)
ZONE 6: N6,773,835 E560,593
AK STATE PLANE (NAD83-US SURVEY FT)
ZONE 3: N2,591,977 E1,662,306

ACTIVE - OPEN



GRAPHIC SCALE IN MILES

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
STATEWIDE MATERIAL SITE INVENTORY			
MS 71-1-050-5			
SCALE AS SHOWN	DESIGNED CHECKED P.K.H. C.H.R.	DRAWN DATE P.K.H. JULY 2009	PAGE 2

SITE MAP



BASE MAP IS 2007 AERIAL PHOTOGRAPHY. THIS IS A PLANNING DOCUMENT ONLY. THE MATERIAL SITE BOUNDARIES SHOWN ON THIS DRAWING ARE APPROXIMATE. OWNERSHIP OF THE LANDS ADJACENT TO THIS SITE ARE UNKNOWN. THE ACCESS ROW SHOULD BE VERIFIED.

ACTIVE - OPEN

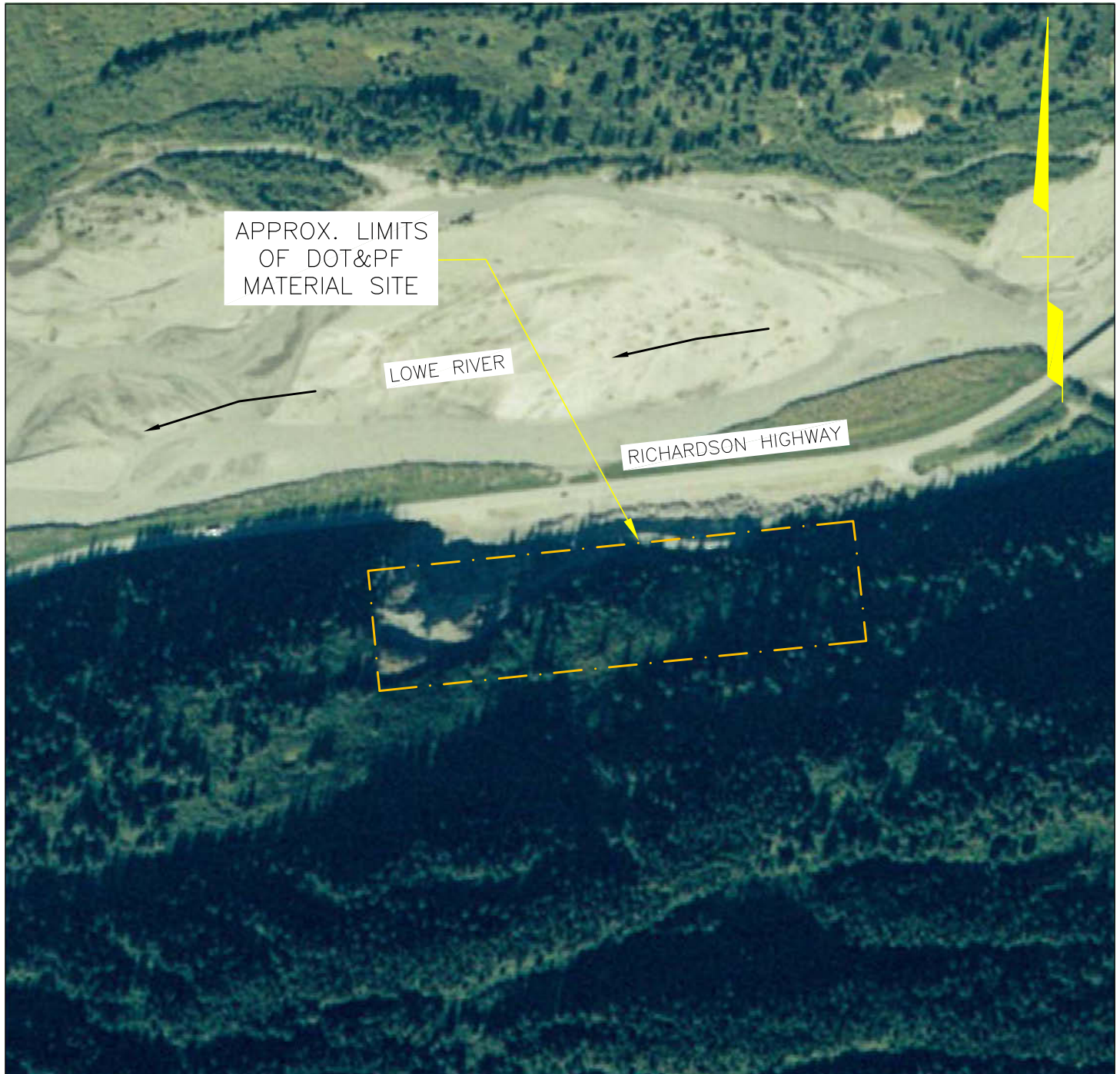


STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
STATEWIDE MATERIAL SITE INVENTORY			
MS 71-1-050-5			
SCALE AS SHOWN	DESIGNED P.K.H.	DRAWN P.K.H.	PAGE 3A
	CHECKED C.H.R.	DATE AUG. 2009	

BASE MAP FROM AERIAL PHOTOS DATED 8/28/07

Prepared By:
R&M CONSULTANTS, INC.

SITE MAP



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DRAWING ARE APPROXIMATE. OWNERSHIP OF THE LANDS ADJACENT TO THIS SITE ARE
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ACTIVE - OPEN



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
STATEWIDE MATERIAL SITE INVENTORY			
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**STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM**

THIS REPORT IS BASED ON A REVIEW OF EXISTING DATA AND BRIEF FIELD INSPECTIONS. THUS THE DATA CONTAINED HEREIN SHOULD BE CONSIDERED PRELIMINARY AND USED FOR PLANNING PURPOSES ONLY. USERS OF THIS DATA SHOULD VERIFY THE INFORMATION PRIOR TO USING IT FOR DESIGN OR CONSTRUCTION PURPOSES.

**IF OTHER IS SELECTED FOR A SECTION, EXPLAIN IT IN SECTION 44. NOTES.
IF AN ANSWER IS UNKNOWN SELECT "UNKNOWN" OR LEAVE BLANK**

1. **MS_ID** 71-1-050-5
Enter the full material site number e.g.. 71-3-045-2
2. **DATE_INSPECT** 10/7/209
Date of field inspection
3. **FLD INSPEC_ORG** WILL RHODES / R&M CONSULTANTS
Name of inspector / Organization or Company

4. **REGION** NORTHERN
5. **LOCATION** RICHARDSON HIGHWAY
Name of Highway Enter Name of Facility or Secondary Route Name (i.e. Kotzebue Airport, Nash Road, etc.)

6. **MILEPOST** 16
List the closest main highway milepost

7. **NAME** 16 MILE QUARRY, LOWE RIVER QUARRY
Enter commonly used name (s), e.g. Hess pit, Gobblers Knob, Midway. List all that apply separated by commas.

8. **MAINT_DIST/STAT** District SOUTHCENTRAL/VALDEZ Station VALDEZ
Highway Maintenance District and Station, for locations not on highways select other.

9. **QUAD** VALDEZ A-5
U.S.G.S. Quad. Map

10. **TOWNSHIP /RANGE** T#S R#E T9S R4W Meridian CRM
Section 13 & 14

11. **COOR_UTM** ZONE 6
NORTHING 6,773,835
EASTING 560,593
UTM WGS84 - Meters
12. **COOR_STATE_PLANE** ZONE 3
NORTHING 2,591,977
EASTING 1,662,306
Alaska State Plane NAD83 - Survey Feet

13. **BOROUGH/CITY** UNORGANIZED **TAX ID NO.** _____

14. **DNR_LAND_USE_PLAN** PRINCE WILLIAM SOUND AREA PLAN

15. **CATEGORY** (To be filled in the office)

- 15a. **CLASSIFICATION** ACTIVE

- 15b. **STATUS** OPEN

STATEWIDE MATERIAL SITE INVENTORY

MATERIAL SITE INSPECTION FORM

16. **POTENTIAL_STATUS** SIGNIFICANT

Estimated quantity of material in the site at the time of inspection.

NONE	There appeared to be no useable material in the site.
LIMITED	There appeared to be less than 25,000 c.y. available within the developed site.
SIGNIFICANT	There appeared to be greater than 25,000 c.y. available within the developed site.
EXPANDABLE	There was limited material within the developed site, but there appeared to be significant material outside existing site limits.
UNDEVELOPED	The pit has not been mined/explored (used only for proposed sites).
CLOSED	There may be useable material left in the pit but it is not available.
UNKNOWN	
OTHER	The site does not fit any of the categories above. Explain in Section 44, Notes.

17. **PRESENT_USERS**

17a. **PRESENT_USER_1** DOT&PF MAINTENANCE

17b. **PRESENT_USER_2** DOT&PF CONSTRUCTION

17c. **PRESENT_USER_3** OTHER USER

18. **PERMITTED_ACREAGE** 10

Area within site permit or R.O.W. boundaries, from permit application or property plat.

19. **DEVELOPED_ACREAGE** 6

Area within an existing pit, excluding spoil berms lying outside the pit, access roads etc. Explain below.

Includes area within highway right-of-way.

20. **ACREAGE_COMP_METHOD** FROM MAP/PHOTO

Method used to determine developed acreage.

21. **EST_QUAN_AVAIL** 350,000 ROUGH ESTIMATE

Estimated quantity available (b.c.y.), may be based on acreage computed above plus expansion area.

Explain computation assumptions and calculations below.

Assuming that there is an average of 4 feet of overburden and a 60-foot working depth there was approx. 342,000 c.y. of material available in this site (6.1 acres x 56 feet x 1,000 c.y. per acre-foot). Care should be taken to maintain access to the top of the benches in order to allow for futher expansion.

**STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM**

22. **ACCESS_TYPE** EXISTING ROAD / OPEN

NONE	No access road has been built.
EXISTING ROAD / OPEN	Drivable. May have gate.
EXISTING ROAD / REVEG	Can be reopened with little effort.
EXISTING ROAD / CLOSED W/BERMS	Can be reopened with little effort.
EXISTING ACCESS / REMOVED	Can be reopened with much effort.
SNOW ROAD	Can only be accessed during winter.
ICE ROAD	Requires crossing river or lake ice in the winter.
BARGE	Material can only be moved by barge.
OTHER	The site does not fit any of the categories above. Describe in Section 44, Notes.

23. **ACCESS_LENGTH** 0

Approx. length from edge of pit to highway/secondary route (ft.)

24. **VEGETATION**

Vegetation in the undeveloped portion of the site consisted of cottonwood trees to 24 in. diameter spaced 10 to 20 ft. apart, alder brush and low ground cover.

25. **TYPE_1** QUARRY 26. **TYPE_2** _____

Dominant type

Subordinate type

General Types of Materials Available

Enter data in Type_2 only if two types of material site available

QUARRY	Bedrock sources requiring blasting
BORROW PIT	Soils or soft bedrock (rippable), above water table
BAILING	Requires production below the water table
RIVER BAR	Sand/gravel bars in active channels

27. **OB_CLASS_1** 3 TO 6 FT. 28. **OB_CLASS_2** NONE

New Site or expansion Area

Existing Pit (Spoil)

A site may have both. Data should be based on actual subsurface exploration, otherwise unknown.

Estimated average depth over the area.

NONE	3 TO 6 FT.	UNKNOWN
<3 FT.	>6 FT.	OTHER

29. **OB_TYPE_1** COLLUVIUM

30. **OB_TYPE_2** _____

New Site or expansion Area

Existing Pit (Spoil)

A site may have both.

SILT	PEAT	SOLID WASTE	OTHER
COLLUVIUM	SPOIL	UNKNOWN	

**STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM**

31. MAT_TYPE_1 Dominant type	BEDROCK	32. MAT_TYPE_2 Subordinate type
BEDROCK WEATHER. BEDROCK FLUVIAL GLACIAL COLLUVIAL EOLIAN SILT	Bedrock sources requiring blasting Bedrock sources requiring ripping Water deposited sand and gravel, includes glaciofluvial Glacial till Talus slopes, etc. Sand Dunes, etc. Silt deposits, loess, fluvial, etc.	

33. PERMAFROST_1 New Site or Expansion Area	DETECTED IN NO TEST HOLES OR PITS
---	--

34. PERMAFROST_2 Existing Site	DATA OUTDATED
--	----------------------

35. GROUNDWATER	<div style="border: 1px solid black; height: 100px; margin-top: 10px; padding: 5px;"> No water table has been observed at this site. </div>
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STATEWIDE MATERIAL SITE INVENTORY

MATERIAL SITE INSPECTION FORM

36. **LITHOLOGY_1**

CATACLASTIC

37. **LITHOLOGY_2**

Dominant type

Subordinate type

IGNEOUS ROCK

Undifferentiated Igneous Rocks

GRANITIC

Granite/Monzonite/Granodiorite

DIORITE/GABBRO

Diorite/Gabbro

BASALT

Dark colored fine-grained Igneous Rocks

GREENSTONE

Altered Volcanic Rocks w/green tint

METAMORPHIC ROCK

Undifferentiated Metamorphic Rocks

SCHIST/PHYLLITE

Includes rocks ranging from slate to schist

GNEISS

Includes hard schistose rocks

MARBLE

CATACLASTIC

Incl. Valdez Formation Rocks, Kenai Penn.

MÉLANGE

Incl. McHugh Formation Rocks, Kenai Penn.

SEDIMENTARY ROCK

Undifferentiated Sedimentary Rocks

CONGLOMERATE

SANDSTONE

Includes greywacke, etc.

SHALE/MUDSTONE

LIMESTONE

FLUVIAL

River and stream deposits (floodplain), includes outwash.

ALLUVIAL

Alluvial / Debris Fan deposits

GLACIOFLUVIAL

Eskers, kames, etc.

GLACIAL

Till

COLLUVIAL

Talus, etc.

EOLIAN

Sand Dunes, etc.

SILT

Loess, fluvial silts, etc.

OTHER

Explain in Section 44.

38. **MATERIAL_CLASSIFICATION**

ASTM Classification, generally they should range from coarse to fine.

38a.

38c.

38e.

38g.

38b.

38d.

38f.

38h.

STATEWIDE MATERIAL SITE INVENTORY

MATERIAL SITE INSPECTION FORM

39. COBBLES_AND_BOULDERS

Test Boring Callout / ASTM Classification, either a. or b. and c. (Can use ranges i.e. 0 to 20)

39a.	CONTAINS	<hr/>	
39b.	Est. % by VOL.	<hr/>	(Est. From Visual Observations)
39c.	MAX. SIZE (in.)	<hr/>	(Observed Size)

40. AGG_TEST_RESULTS

Year of test or report- Test result / Year of test or report- Test Results

40a. SG APP COARSE	1993- 2.78
40b. SG APP FINE	<hr/>
40c. ABSORPTION CRSE	<hr/>
40d. ABSORPTION FINE	<hr/>
40e. NORDIC ABRASION	<hr/>
40f. L.A. ABRASION	1993- 20
40g. DEGRADATION (T-13)	<hr/>
40h. NASO4 LOSS COARSE	<hr/>
40i. NASO4 LOSS FINE	<hr/>

41. POTENTIAL_USABILITY

TYPES A AND B MATERIAL AVAILABLE

Best known potential use of the material, based on records, exploration and laboratory data.

CONCRETE AGGREGATE PRODUCED	The site has produced concrete aggregate
PAVING AGGREGATE PRODUCED	The site has produced paving aggregate
CRUSHED PRODUCTS PRODUCED	Base, Surface Coarse, Subbase, etc. has been produced.
TYPE A AND B MATERIAL AVAILABLE	0 to 10 percent passing 200
TYPE C AVAILABLE	Compactable material
TYPE C NOT AVAILABLE	Uncompactable material (Lower Kuskokwim and Yukon River, etc.)
UNKNOWN	
OTHER	Explain in Section 44.

42. SPECIAL_PROBLEMS

Special problems encountered or anticipated with use of the material, based on records, exploration and laboratory data.

ORGANIC CONTENT	The material is very difficult to compact.
HIGHLY WEATHERED GRAVEL	The gravel is highly weathered and may break down when handled.
BREAKS DOWN UNDER USE	Material breaks down on grade.
SENSITIVE TO WATER CONTENT	Material is sensitive to water content, i.e.. some glacial tills, soft bedrock.
VARIABLE MATERIAL	Deposit contains mixture of suitable and unsuitable material.
POSSIBLE CONTAMINATION	Site may be contaminated by petroleum products or hazardous materials.
CONTAINS ASBESTOS	Site contains naturally occurring asbestos.
POTENTIAL ASBESTOS	Site in area where naturally occurring asbestos is mapped.
ACID ROCK DRAINAGE	Site contains rock susceptible to producing acid rock drainage.
OTHER	Explain in Section 44, Notes.

**STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM**

43. RIPRAP

PREVIOUS PRODUCTION

Class II or larger. Does not include production for erosion control riprap for ditches or culverts.

PREVIOUS PRODUCTION

There is a record of production.

POSSIBLE FURTHER INVESTIGATION NEEDED

The site is a bedrock quarry containing hard rock

NOT POSSIBLE

The site has soft rock or soil.

UNKNOWN

OTHER

Explain in Section 44, Notes.

44. NOTES

Note number of item being discussed.

17c. Other users of the site include the City of Valdez and Copper Valley Construction.

SOIL and AGGREGATE REPORT

Lab Number: 04-488

Project: DAYVILLE ROAD IMPROVEMENTS

Aksas: 60751

Ledger: 30246942

Sampled by: A. SCHAEFER

Date Sampled: 24-Aug-04

Test Hole:

Station: STOCKPILE

Offset:

Depth:

Field Number: RR-Q-1

Material Site: 71-1-050-5

Other Source:

Item #: 611

Sample of: RIP RAP CLASS I,II,IV

Date Rec: 3-Sep-04

Sample Type: QUALITY

ASTM	AASHTO	Tests	Reg Lab	Field Lab	Specs
D-4318	T-89	Liquid Limit			
	T-90	Plastic Index			
C127	Coarse Agg SpG	APP			
	T-85	SSD			
		BULK			
		Absorption			
C128 / D854	T-84 / T-100	Fine Agg SpG APP			
	Sodium Sulfate Soundness	Coarse			
	T-104	Fine			
31	T-96	LA Abrasion	18		
	ATM T-13	Degradation			
	T-267	Organic by Ignition			
C40	T-21	ORGANIC PPM			
C566	T-255 / 265	Moisture Content			
	FRACTURE	Single Face			
	WAQTC-TM-1	Double Face			
D-4791		Flat or Elongated			
D-2419		Sand Equivalent			
		FINENESS MODULUS			
		% Deleterious			

AASHTO T-27 /11			ASTM C-136/117	
mm	inches	% Passing	Field	Specs
75	3"			
50	2"			
37.5	1 1/2"			
25.0	1"			
19.0	3/4"			
12.5	1/2"			
9.5	3/8"			
4.75	#4			
2.36	#8			
2.00	#10			
1.18	#16			
0.850	#20			
0.600	#30			
0.425	#40			
0.300	#50			
0.250	#60			
0.180	#80			
0.150	#100			
0.075	#200			
Hydro	.02mm			
AASHTO	.005mm			
T-88	.002mm			
	.001mm			

AASHTO Class:

DOT & PF Soil Descrip:

UNIFIED Class:

REMARKS:

Acceptance/Assurance Acceptable Unacceptable

Comparison:

Conforms to Specs:

Signature:

Quality Assurance Insp:

Date:

Signature:

Steve Meierotto

Regional Lab Supervisor

Date: 9-10-04

MEMORANDUM

State of Alaska

Department of Transportation & Public Facilities

TO: Joseph H. Keeney, P.E.
Engineering Manager
Northern Region

DATE: August 16, 1999

THRU: Gail Gardner

FILE NO:

FROM: Barry A. Benko
Engineering Geologist
Northern Region

TELEPHONE NO: 451-2229

SUBJECT: Material Sources for
Richardson Hwy MP 14-26
Rehabilitation

This memorandum summarizes known information regarding available materials at the following materials sites along the Richardson Highway: MS 71-1-040-5 (MP 11.2), MS 71-1-050-5 (MP 16), and MS 71-1-028-5 (MP 18.2). These three sites will be listed as materials sources for Project No. 67032, Richardson Highway MP 6-14 Rehabilitation. Attached Figure 1 shows locations of the sites. Known information regarding these sites is summarized below.

MS 071-1-040-5

This site is an existing borrow pit located on the floodplain of the Lowe River at approximately MP 12 of the Richardson Highway. The terrain is flat, and is subject to inundation from the river.

The Alaska Department of Natural Resources (ADNR) Division of Land currently manages this material site, which is permitted for use by ADOT&PF (western 24.8 acres) and Alyeska Pipeline Service Company (eastern 32.4 acres, Alyeska OMS 3-2). ADOT&PF has made application for acquiring the portion permitted to Alyeska, and expects the additional portion to be available for use in the project.

Previous field investigations for characterization of available materials at the site were conducted in August 1978, May 1979, and August 1998. The field work consisted of excavating backhoe test pits (total of twenty-one) to a maximum depth of about 6 meters, logging the materials encountered, and collecting samples of those materials for laboratory testing.

The laboratory testing was performed at the Regional Materials Laboratory in Fairbanks. The testing program included grain size analyses, determination of moisture-density relationship, and testing to determine specific gravity, sodium sulfate soundness, LA abrasion loss, and degradation properties. The information transmitted by this memorandum includes the results of laboratory testing, drawings of the material site that show the locations of the test pits, and test pit logs from the 1978 and 1979 investigations.

Past mining at the site has left the west and south portions of the site about 3 to 4 meters lower in elevation than the northeast portion. Groundwater was encountered about 1 to 1.5 meters below the ground surface in the 4 trenches excavated in the lower portion of the site during the 1998 investigation. No water was encountered in the 2 trenches excavated in the higher portion of the site. The elevation of groundwater at this site should be expected to vary with the stage of the Lowe River. Stipulations in the permit for the use of this site as a material site restrict the depth of excavation to 2 feet above the water table existing at the time of excavation.

The material encountered in the test pits in previous investigations consisted of sandy gravel with cobbles and occasional boulders. Percentage of fines in samples ranged from 1 to 6.4 percent. By visual estimate (1978), the relative amount of 3 to 10 inch rocks ranged from 5 to 25 percent and the amount of + 10 inch rocks ranged from 1 to 5 percent. The maximum sodium-coarse value and sodium-fine values in samples from two locations were 0.2 and 3.2, respectively. LA and degradation results ranged from 22 to 24 (two locations) and 46 to 77 (five locations), respectively.

MS 71-1-050-5

This is a rock quarry site within the existing highway right-of-way at approximately mile 16 on the Richardson Highway.

MS 71-1-050-5 has produced suitable riprap materials for several projects since its opening in 1983. The rock type is a phyllitic graywacke. The Alyeska operation produced rock fragments ranging from 2± inches up to 10± feet in diameter. Considerable secondary blasting was conducted to break up larger fragments into useable sizes.

Test results on-file for MS 71-1-050-5 indicate a specific gravity (coarse) of 2.78 and a L.A. Abrasion Loss result of 20.

MS 71-1-028-5

This 20.5-acre site is located just west of Sheep Creek at about Mile 19 on the Richardson Highway. Access is provided on existing haul roads. The site is owned by ADNR, and has been utilized by ADOT by permit.

The site is essentially flat, and most of the overburden and surface vegetation have been removed from the site proper. The southerly portion of the site sometimes receives floodwater during high water conditions on Sheep Creek.

Past investigations at the site included five test holes in 1980 and nine test holes in 1982-1983. The maximum depth of exploration was approximately 13 feet. Laboratory testing performed at the Regional Materials Laboratory in Fairbanks included grain size analyses and determination of specific gravity, LA abrasion loss, and degradation properties.

The material encountered in the exploratory test holes consisted primarily of sandy gravel with cobbles and boulders. Groundwater was not encountered. By visual estimate, the relative amount

BB

Material Site Location Map (1 page)
Material Site Boundary Maps (2 pages)
MS 71-1-40-5 Test Pit Location Map, 1998 (1 page)
MS 71-1-40-5 Lab Reports, 1998 (6 pages)
MS 71-1-40-5 Test Pit Location Map, 1978 (1 page)
MS 71-1-40-5 Test Pit Logs, 1978 (1 page)
MS 71-1-40-5 Lab Report, 1978 (2 pages)
MS 71-1-28-5 Test Hole Location Map, 1980 (1 page)
MS 71-1-28-5 Test Hole Logs, 1980 (1 page)
MS 71-1-28-5 Lab Report, 1980 (2 page)
MS 71-1-28-5 Test Hole Location Map, 1983 (1 page)
MS 71-1-28-5 Lab Report, 1983 (3 pages)

ALASKA DEPARTMENT OF TRANSPORTATION • PUBLIC FACILITIES

MATERIAL SITE DATA COLLECTION FORM

Collected by: GRAHER

Date: 280624

I. GENERAL SITE DATA

1. Material Site No.: 71-1-050-5

2. Site Name: CDS-RICHARDSON 2
20.8 M.P. 16.0

3. Community: VALDER-EDGERTON HWY

4. Owner/Agency: STATE OF ALASKA

5. Permit No.: NONE

6. Permit Type: 02R 7. Expiration Date: 00

8. Contact:

9. Lat/Long: 61°05'42"N 145°52'19"W

10. Quad Map: VALDEZAS

11. Legal Description: EC1379SR46CRM

12. Acreage: 3 13. Reference Data: 010206

14. Maps & Photos: 020306

15. Special Considerations:

16. History:

17. Remarks: RICHARDSON HWY R.O.W.

CODES

6. PERMIT TYPE

00 None
Grants
01 Grant
02 Rt. of Way Grant
Deeds
11 Deed
12 Quit Claim Deed
Permits
21 Permit
22 PUP
23 FUP
24 SLOP
25 Prospect Permit
26 Mat'l Site Permit
27 Rt. of Entry Permit
28 Rt. of Way Permit
29 PTTB

Other

41 ILMT
42 ILMA
43 Lease
44 Agreement
45 Waste Area Agreement
46 Easement
47 Rt. of Way Easement
48 Court Award
49 Withdrawal
50 Release
51 Material Sales
A Applied for
B Issued

20. TEST VALUES

LA Los Angeles Abrasion
DG Degradation
FV Frost Suscept. Value
P2 1/2 passing #200 screen
SS Sulfate Soundness
SG Specific Gravity
LL Liquid Limit
PI Plastic Index
OR Organic Content
PH pH of Organics

22. PRESENT STATUS

ACT Active Mining
INA Inactive site
DPL Depleted
STK Stockpile site
HWY Highway M & O Use
AVI Aviation M & O Use
STA Maintenance Station
PRV Private Pit
SQU Squatters
DMP Dump site
JNT Joint Use (Remarks)
ZZZ Other (Remarks)

23. RECOMMENDED USE

BOR Borrow
RRP Riprap
AGR Crushed Aggr.
SND Sand Source
BIN Binder Mat'l
TOP Topsoil
STK Stckp./Warehousing
MTN Maintenance Use
STA Maintenance Station
TST Further Testing Rec.
FTR Future Use
REL Relinquish Permits
WPA Waste Disposal Area
ZZZ Other

14. MAPS & PHOTOS

00 None available
01 Sketch map
02 Location map
03 Site plat
04 Vert. air photos
05 Obl. air photos
06 Ground photos
99 Other (Remarks)

15. SPECIAL CONSIDERATIONS

00 None
01 Pit obligated
02 Royalty Payments
03 Proof of Use (incl. yr.)
04 3rd Party Encumbr.
05 Environmental Restr.
06 Historical Site
07 Archeological Site
08 Paleontological Site
09 Quantity Restr. (Remarks)
99 Other (Remarks)

II. LAB DATA

18. Date:

19. Soil Class: GRAYWACKE

20. Test Values:

21. Remarks:

III. USE DATA

22. Present Status: ACT 23. Recommended Use: RRPMTWSHK

24. Quantities - Indicated: cubic yards Date:

Removed: cubic yards Date:

25. Remarks: RRP = CLASS 111

MATERIAL SITE DATA COLLECTION FORM

Material Site No.: 271-1-050-5

Date: 280684

Collected by: GRAHER

IV. SURFACE SITE DATA

26. Date: 280684 27. Investigation: ETO1 28. Drainage: S

29. Geomorphic Description: HILL

30. Vegetation: ALD 0 0 % SPD 0 % D 0 %

31. Topography: CLF % % 32. Debris: 00 % % %

33. Rock Outcrops: YES 34. Water Bodies: 00 35. Access: 04

36. Boundary Markers: 00 37. Utility Corridors: 00

38. Site Improvements: PIT, EHR, STR

39. Remarks: PIT IS QUARRY FACE
NO SCREEN
2 FR HWY @ E. END

CODES

27. & 41. INVESTIGATION BK Backhoe WL Wheel-mount Auger TA Track-mount Auger PD Portable Drill FT Foot Recon. AR Aerial Recon. SM Seismic Survey CD Conductivity Survey RV Resistivity Survey ZZ Other (Remarks) 01 Recon. sparse coverage 02 Part coverage, random 03 Part coverage, specific 04 High-density TH invest. 05 Special Survey	30. VEGETATION 000 None - bare soil BIR Birch COT Cottonwood ASP Aspen WIL Willow species ALD Alder species WSP White Spruce BSP Black Spruce SSP Sitka Spruce HEM Hemlock TAM Tamarack CED Cedar CON Misc coniferous DEC Misc deciduous GRD Low ground cover BOG Bog mosses, etc. ZZZ Other (unknown) 0 None 1 Scattered 2 Low (>10' sep) 3 Moderate 4 High (<3' sep)	30. VEGETATION (cont'd) SH Shrub ST Small Tree (<5" Ø) MT Med Tree (5"-12" Ø) LT Lg Tree (12"-30" Ø) HT Huge Tree (>30" Ø) % of site covered 31. TOPOGRAPHY FLT Flat and level ROL Rolling MOD Moderate hillside STP Steep hillside CLF Cliffside % of site, each category 32. DERRIS WO Woody debris CW Const. waste mat'ls TR Dump mat'l, trash HA Abnd. habitations ZZ Other (Remarks) % of site, each category	33. ROCK OUTCROPS A 1'-10' height B 10'-25' C 25'-50' D 50'-100' E >100' % of site covered 34. WATER BODIES 00 None 01 River 02 Stream 03 Creek 04 Intermitt. Stream 05 Lake 06 Pond 07 Impoundment 08 Bog/Swamp 09 Marine 99 Other % of site covered	35. ACCESS 00 >1 mile from nearest rd 01 Adj to unimproved rd 02 Adj to secondary grl rd 03 Adj to secondary pvd rd 04 Adj to primary pvd rd 05 Access by water 99 Other (Remarks) 36. BOUNDARY MARKERS 00 None found 01 One corner found xx Number corners found RE Rebar IP Iron Pipe WP Witness Post BZ Blaze Marks on trees BR Brush Line LM Landmark (Remarks) SM Survey Monument ZZ Other (Remarks)	37. UTILITY CORRIDORS EL Electric WA Water TL Telephone GS Gas PT Petroleum SW Sewer RR Railroad ZZ Other (Remarks) 38. SITE IMPROVEMENTS FNC Fencing SCR Screening BDG Bridge (Remarks) SCL Scales RMP Loading Ramps SWA Solid Waste Area GAT Locked Gate on access PIT Opened Pit TRL Trailhead EHR Existing Haul Road HAB Habitations BLD Buildings ZZZ Other (Remarks) % of site occupied
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V. SUBSURFACE SITE DATA

40. Date: 41. Investigation: 42. Drainage: P

43. Water Table: NO 44. Permafrost: N 45. Overburden: FC 42' An

46. Soil Description: S An An An 47. %+3": 48. %+10":

49. Quantity Estimate: cubic yards An

50. Remarks: SEYNA YAWN CKE

CODES

43. DRAINAGE P Poor - fine-grn, saturated F Fair G Good - coarse-grn, well-drn	45. OVERBURDEN Soil Type (see Item 46) Thickness (ft.) Moisture (see Item 46) Method of Analysis 49. QUANTITY ESTIMATE Cubic Yds (Visual Est.) Soil Des. or, primary product Method of analysis	46. SOIL DESCRIPTION A Gravel 0 Undetermined B Sand 1 Dry C Silt 2 Damp D Clay 3 Free Moisture E Ash F Organic G Bedrock Z Other Method of Analysis METHOD OF ANALYSIS A Outbank exposure B Shovel pit C Soil auger D Soil probe E Prev. rpts. Z Other
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M.S. 71-1-050-5
MILE 16 QUARRY

LOCATION AND ACCESS

This site is located near Mile 16 on the Richardson Highway, within the existing highway right-of-way. Access is provided by the highway and an existing access trail.

DESCRIPTION

This is an existing quarry opened during the summer of 1983 by a contractor producing riprap for the Alyeska Pipeline Service Company. The rock type is a phylitic graywacke. The Alyeska operation produced rock fragments ranging from 2 + inches up to 10 feet + in diameter. Alyeska did considerable secondary blasting to break up the larger fragments into usable sizes.

CLEARING AND STRIPPING

The vegetal cover on the uncleared portion of the site consists of large spruce trees and brush. Overburden consists of an estimated 2 to 5 feet of organics and soil in the uncleared portion.

FROST CONDITIONS

Frozen material (except seasonal frost) should not be present in this area.

GROUNDWATER

No water table was observed

LAND STATUS

This site lies within the Alaska Department of Transportation and Public Facilities right-of-way for the 16-19 Mile project.

DRAINAGE

The site lies on a steep mountainside. No major concentrated surface drainage runs through this area.

QUALITY

This site is suitable for riprap production.

SOILS TESTING REPORT

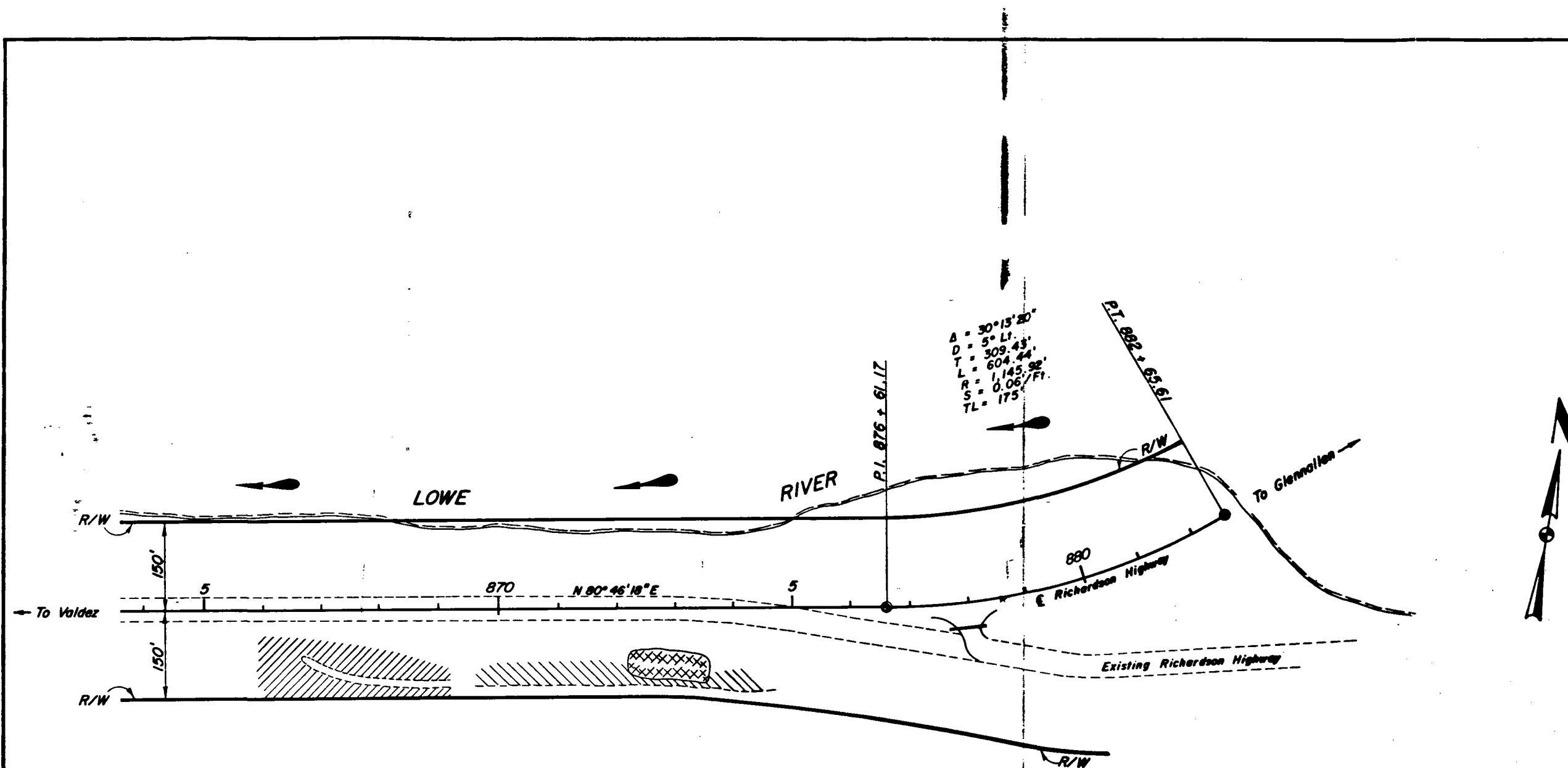
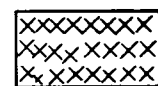
PROJECT NAME Richardson Hwy., Mile 16-19 PROJECT NO. F-071-1(42) SAMPLED BY D. Rasmussen & J. Wallen, Jr.

MATERIAL SITE 71-1-050-5

STATION								
OFFSET (FEET)								
DEPTH (FEET)								
TEST HOLE NO.		Surface						
FIELD NO.								
LAB NO.		83D-23						
ESTIMATED %+10"								
+ 3"								
PERCENT PASSING - 23 -	3"							
	2"							
	1"							
	3/4"							
	1/2"							
	3/8"							
	# 4							
	# 10							
	# 40							
	# 50							
# 200								
.02 mm								
.005mm								
LIQUID LIMIT								
PLASTIC INDEX								
ASHO CLASS								
F.S.V.								
Sp. G., COARSE		2.78						
Sp. G., FINE								
NAT. MOISTURE CONT								
L. A. ABRASION LOSS		20						
DEGRADATION VALUE								
SO. SULF. SND. COARSE								
SO. SULF. SND. FINE								

Post-It™ brand fax transmittal memo 7671 # of pages **1**

To KEN SHREWSBURY	From J.D. BENNETT
Co.	Co.
Dept.	Phone # 2229
Fax # 834-1008	Fax #



State Stockpile (NOT TO BE USED)



Quarry Area With Existing Access



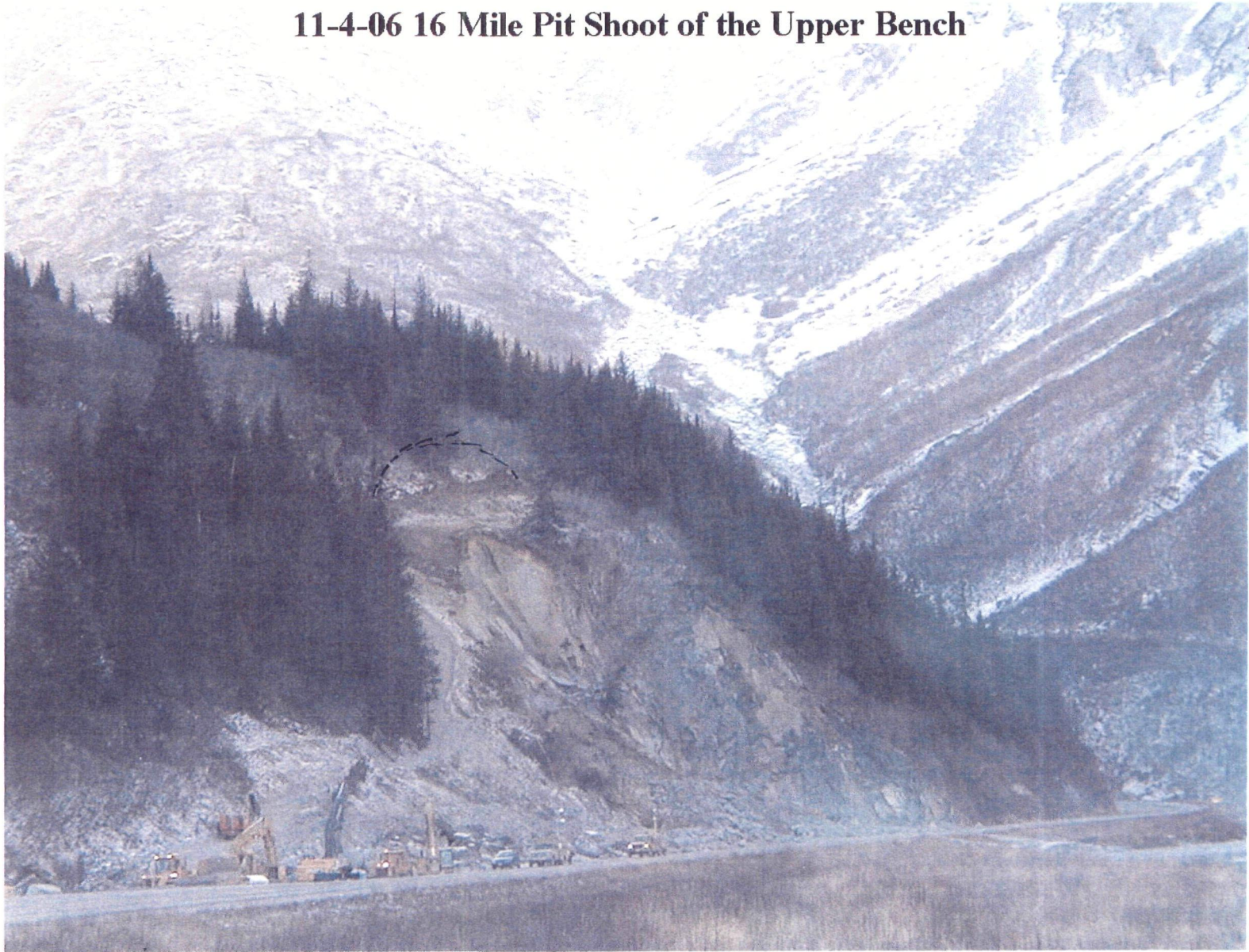
Existing Rubble Pile

RICHARDSON HIGHWAY, MILE 16 TO MILE 19	MATERIALS SITE NO. M.S. 71-1-050-3 RIPRAP SOURCE		
	Scale: 1" = 100'	Date: 11/1983	
Project No. A38872	Data: J.D.R.	Drawn: L.A.M.	Approved: J.L.

11-21-06 16 Mile Pit

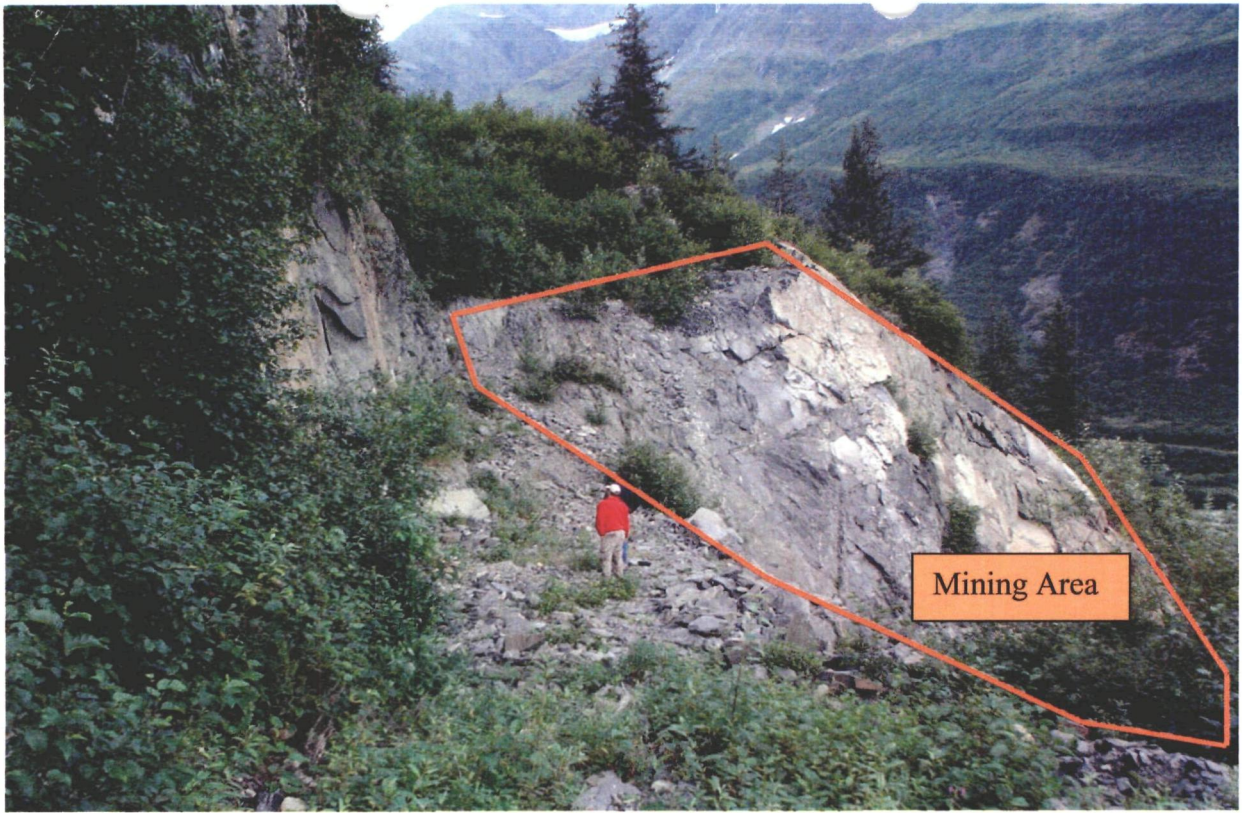


11-4-06 16 Mile Pit Shoot of the Upper Bench





11-21-06 16 Mile Pit





2009/10/7

W:145°52'31.14"
N:061°05'39.93"



2009/10/ 7

W:145°52' 31.14"
N:061°05' 39.93"



2009/10/7

W:145°52'31.14"
N:061°05'39.93"



2009/10/7

W:145°52'31.14"
N:061°05'39.93"



2009/10/ 7

W:145°52'33.38"
N:061°05'41.42"



2009/10/7

W: 145° 52' 33.38"
N: 061° 05' 41.42"



2009/10/ 7

W:145°52'33.38"
N:061°05'41.42"



2009/10/7

W: 145° 52' 33.38"
N: 061° 05' 41.42"



2009/10/ 7

W:145°52'34.54"
N:061°05'41.36"



2009/10/7

W: 145° 52' 33.78"
N: 061° 05' 41.76"



S APL 1
MP 779.8
CNV 122
CS 12-7

2009/10/ 7

W:145°52' 14.95"
N:061°05' 42.25"



Lower
River

2009/10/7

W: 145° 51' 57.90"
N: 061° 05' 48.28"

