

## Nabesna Road (1/2 mile) near Tok Cutoff intersection.

### NOTICE

The Materials Source data and information included in this file has been gathered and compiled for the express purpose of assisting in The Alaska Department of Transportation and Public Facilities during the design process of various projects. It does not signify that the source is available or suitable for use during the construction of any specific current or future project. The included data and information does not determine that this Materials Source will provide suitable materials in the required quantities for any construction project.

The included data and information is suitable for use *by experienced and qualified experts in the fields of geology, geological engineering, and geotechnical engineering* to make reasonable estimates regarding the quantity, quality, and suitability for construction purposes of material that can be produced from the source.

Sources intended for use for any specific construction project will be referenced in the appropriate section of the Plans and Specifications of the Contract Documents for that construction project.

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2011 MATERIAL PRODUCTION REPORT		Agency:	DOT&PF			By:	Joe Sullivan, R/W Agent
PRODUCER (needed to avoid duplication)	LOCATION - place name, lat./long., Region (I-VII) other.	PRODUCTION DATA - enter material as rock, sand & gravel, &/or peat. Volume in appropriate Units (Cu.yds or tons), and total value of product				MAN-DAYS of production, if known	COMMENTS
		MAT'L	VOLUME	UNITS	VALUE		
DOT&PF	MP 7 Taylor Hwy		950 cy				DNR, ADL 413933 MS 785-002-2
DOT&PF	MP 13 Taylor Hwy		350 cy				DNR, ADL 410405 MS 785-006-5
DOT&PF	MP 58 Taylor Hwy		2,500 cy				DNR, ADL 411886 MS 785-025-2
DOT&PF	MP .5 Nebesna Rd		1,080 cy				BLM, A-067438 MS 46-1-007-5
DOT&PF	MP 78.8 Denali Hwy		450 cy				BLM, F-027757 MS 52-2-027-2
DOT&PF	MP 261 Dalton Hwy		5,358 cy				BLM, FF-093027 MS 65-9-021-2
DOT&PF	MP 267 Dalton Hwy		51,635 cy				BLM, FF-093028 MS 65-9-056-2
DOT&PF	MP 274 Dalton Hwy / Galbraith Pit		1,100 cy				BLM, FF-093029 MS 65-9-076-2

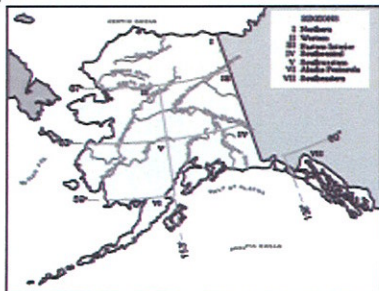
Your contribution is greatly appreciated.



Region	Description
I Northern	North of 67° latitude
II Western	Between 63° and 67° degrees north and west of 153° longitude
III Eastern Interior	Between 63° and 67° degrees north and east of 153° longitude
IV Southcentral	Between 138° and 153° longitude and south of 63° latitude
V Southwestern	Between 59° and 63° latitude and west of 153° longitude
VI Peninsula	South of 59° latitude and west of 153° longitude
VII Southeastern	South of 60° latitude and east of 138° longitude

2010 MATERIAL PRODUCTION REPORT		Agency:	DOT&PF				By:	Joe Sullivan, R/W Agent
PRODUCER (needed to avoid duplication)	LOCATION - place name, lat./long., Region (I - VII) other.	PRODUCTION DATA - enter material as rock, sand & gravel, &/or peat. Volume in appropriate Units (Cu.yds or tons), and total value of product				MAN-DAYS of production, if known	COMMENTS	
		MAT'L	VOLUME	UNITS	VALUE			
DOT&PF	MP 60 Tok Cutoff		1,504 cy				BLM, A-067438 MS 46-1-007-5	
DOT&PF	MP 70 Tok Cutoff		584 cy				BLM, A-057443 MS 46-1-009-5	
DOT&PF	MP .3 Denali Hwy		2,841 cy				BLM, F-028582 MS 52-1-001-5	
DOT&PF	MP 17 Denali Hwy		50 cy				BLM, F-026754 MS 52-1-009-5	
DOT&PF	MP 261 Dalton Hwy		2,694 cy				BLM, FF-093027 MS 65-9-021-2	
DOT&PF	88.4 Dalton Hwy		300 cy				BLM, FF-092987 MS 65-9-043-2	
DOT&PF								
DOT&PF	MP 145 Dalton Hwy		7,000 cy				BLM, FF-093007 MS 65-9-045-2	

Your contribution is greatly appreciated.



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46-1-007-5

P.O. Box 950  
SLANA, ALASKA 99586  
Phone: (907) 291-2388  
Fax: (907) 291-2380

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

NORTHERN REGION  
CONSTRUCTION AND C.I.P. SUPPORT

April 29, 2006

RE: Project ACIM-0074(7)/62306  
Tok Cutoff Earthquake Perm. Repairs  
Mining Plan for MS 46-1-007-5

Pruhs Corporation  
2193 Viking Drive  
Anchorage, AK 99501

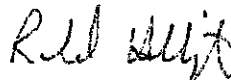
Attention: Mr. Joe Hostetler, Project Superintendent

Gentlemen:

I have reviewed your mining plan dated August 3, 2006, which was received on April 25, 2006 for MS 46-1-007-5, and it is conditionally approved with the following additional stipulations:

1. Prior to any work, survey and flag boundaries or property lines before ground disturbance.
2. Install all erosion & pollution control as required under the approved Erosion and Pollution control plan.
3. Before ground disturbance, provide the Engineer copies of all required permits and clearances for use of the site and a written statement that all permits and clearances necessary have been obtained. Or if applicable, provide a written statement listing agencies or offices contacted stating that no additional action is required. Refer to Sub-section 107-1.02 of the Special Provisions.
4. Maintain access to buildings in the back of the material source.
5. At the completion of this project's mining, leave the floor to drain to the roadway ditch without ponding.
6. No mining is allowed within the highway right-of-way (200' from centerline).
7. Overburden to be placed on the NE boundary.
8. This material source may only be used to produce the additional quantity of materials as established in supplemental agreement #1. No borrow extraction will be allowed from this material source.

Sincerely,



Ronald Hollingsworth  
Project Engineer

CC: Shari Howard, Northern Region, ROW  
Steve Dewit, Slana M&O Foreman

# Pruhs

## Corporation

April 3 2006

Tok Cutoff Earthquake Permanent Repairs

Project No. ACIM-0074(7)/62306

Serial Letter # 28

Ron Hollingsworth  
Project manager  
ADOT-PF  
Northern Region  
2301 Peger Rd  
Fairbanks AK. 99709

Re: Tok cutoff earthquake permanent repairs  
Project number ACIM-0074(7) / 62306

Subject- Mining and Reclamation plan M.R.P

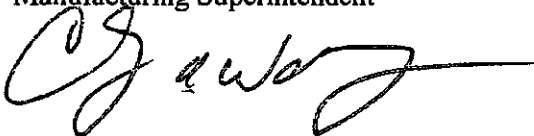
Dear Mr. Hollingsworth:

Pruhs Construction proposes to extract gravel for use on the Project from the State material site at MP .5 of the Slana road, MS 46-1-007-5. Pursuant to Standard Specification Section 106, paragraph 1.02, we hereby submit our Mining Plan. Pruhs proposes to mine aggregates to produce approximately 13,000 tons of asphalt plant mix for Type II asphalt concrete, 35,000 tons of Grading D-1 leveling and to crush it in the pit at the point of extraction. , and 10,000 tons of borrow (58,000 tons total) our proposed mining plan is:

- 1 Ensure SWPPP and HMCP is in place and functional
- 2 Remove topsoil and overburden from the Southwest side of pit and stockpile in the western edge (see map)
- 3 Extract aggregate in the direction of the South West boundary of pit to a depth consistent with the existing floor elevation in the North West Leaving slopes of 2:1
- 4 Stockpile in areas shown on map
- 5 Mining operations shall be conducted in a manner that prevents unnecessary and undue degradation of land and water resources, and the mining operation shall be reclaimed (except stockpiles) as contemporaneously as practicable with the mining operation to leave the site in a stable condition.

Clay Walker

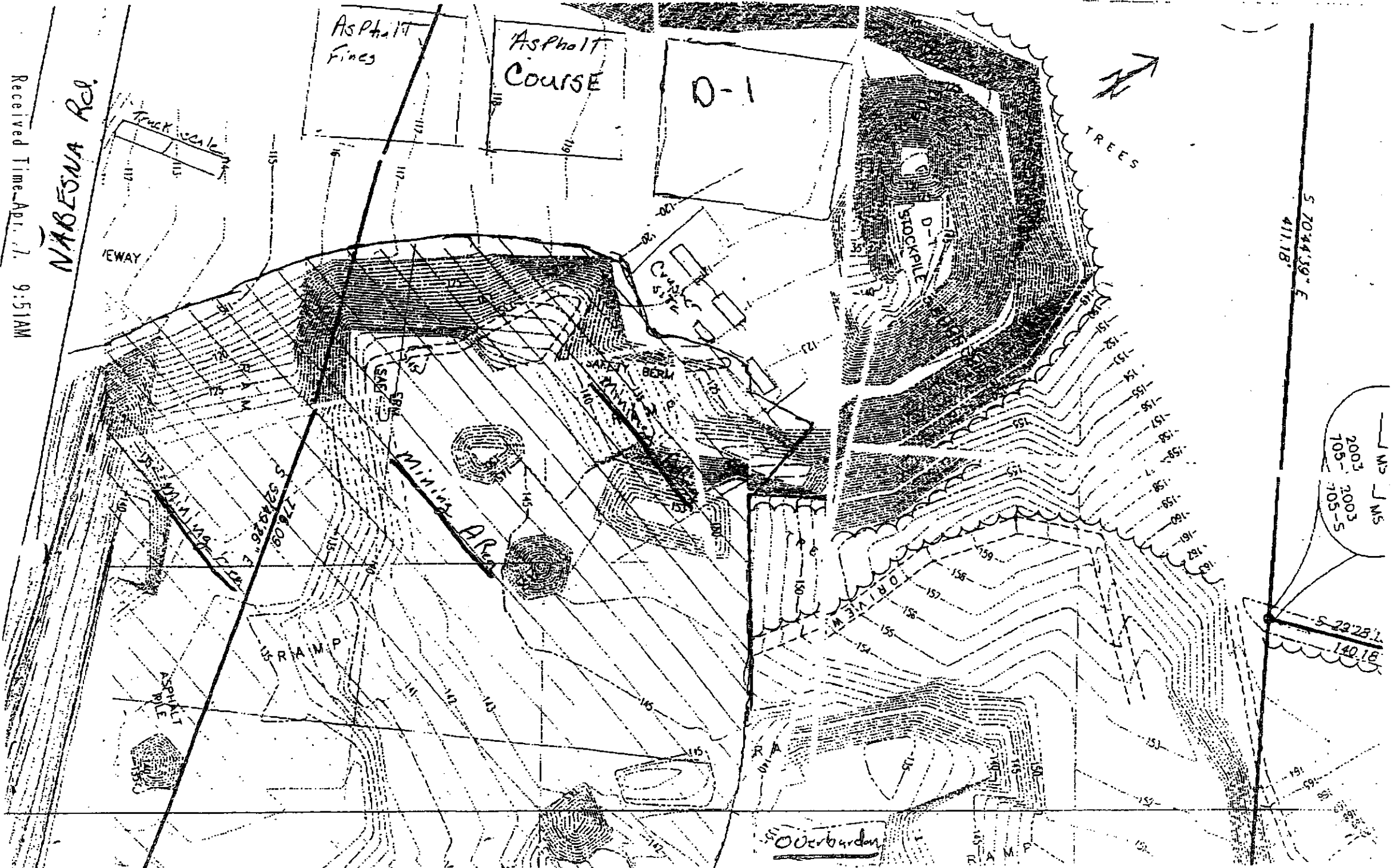
Manufacturing Superintendent





Received Time-Apr. 7. 9:51AM

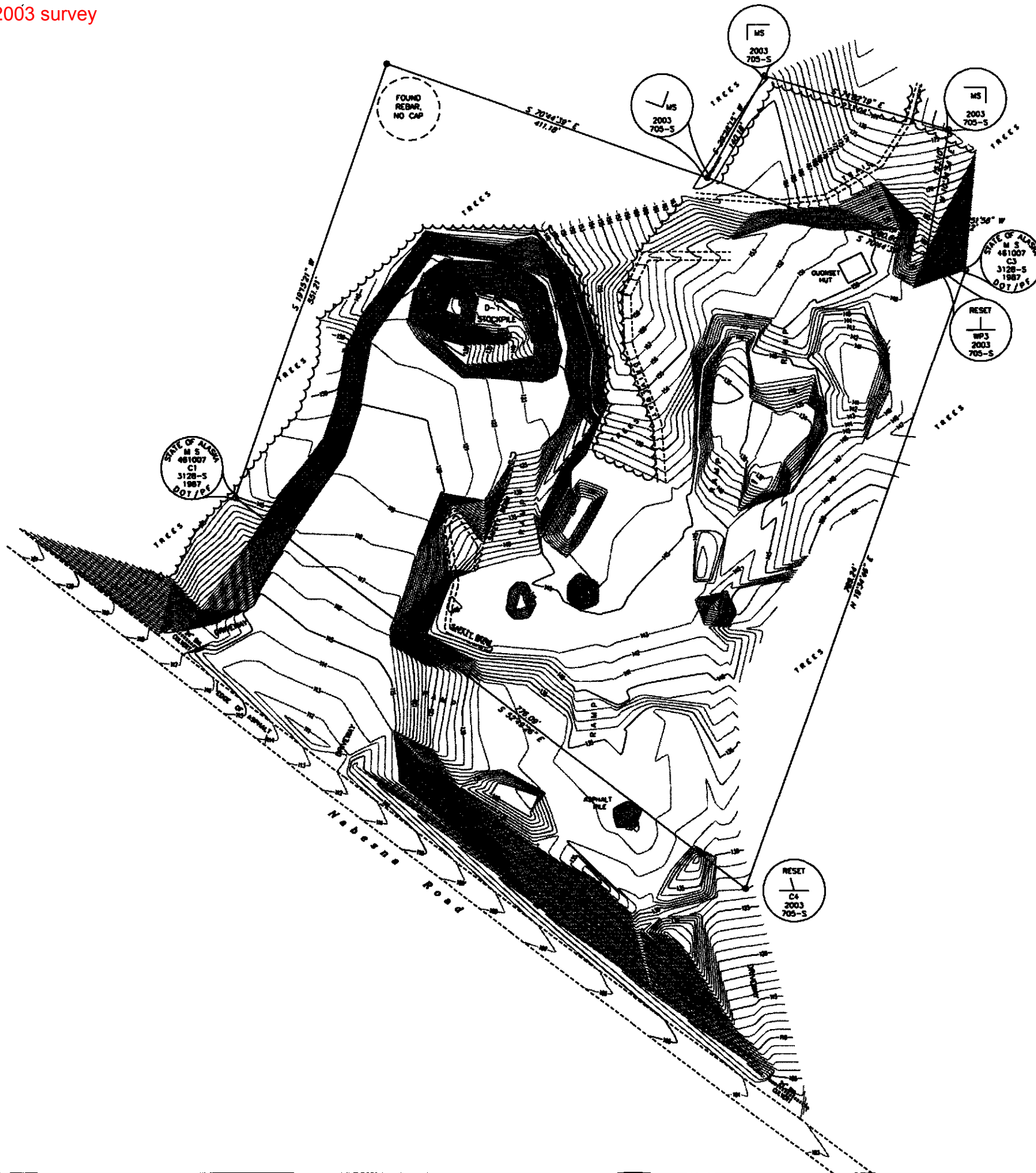
NABESNA Rd.



S 70°44'39" E  
411.18'

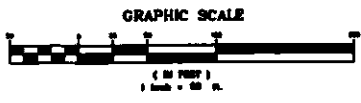
— M5  
 2003  
 105-  
 — M5  
 2003  
 105-5

S 22°28' E  
140.16'



**NOTES**

1. This drawing represents field observations and field data collected September 9 and 10, 2003.



DATE	BY	REVISION
NABESNA PIT SITE TOPOGRAPHY		
FOR: GREAT NORTHWEST, INC.		
LUTZMANN ENGINEERING ASSOCIATES, INC. P. O. Box 1000, Fairbanks, AK 99707 (907) 452-4800		
SCALE	1"=100'	
DATE	09/09/03	
DRAWN BY	BLR	
CHECKED BY	BLR	
DRAWING NO.	C-1	



1995

ASPHALT SURFACE TREATMENT  
HISTORY

The specifications for this project required an asphalt surface treatment to be placed on 13 miles of reconstructed roadway, 3 tourist turnouts, and 36 approaches.

The materials used were emulsified asphalt (HFMS-2s) and Grading D-1 aggregate. The asphalt oil was supplied by Emulsion Products, Inc., of Eagle River, Alaska. The Grading D-1 was produced in a private material source located about 1/2 mile Nabesna Road. The following is a list of the allowable plan gradation ranges and the actual average gradation produced for the D-1 covercoat material:

was this  
M.S. 46-1-007  
NO

<u>Sieve Size:</u>	<u>% Passing Approved Design Specs.</u>	<u>AVG. % Passing of Gradations Run</u>
3/4"	100	100
3/8"	50-80	67
# 4	35-65	45
# 8	20-50	33
# 40	8-30	15
#200	0-6	5

The specified mix design was as follows:

<u>Material</u>	<u>Application Rate and Allowable Tolerance</u>
HFMS-2s Asphalt	0.75 gal. per sq.yd. (+/-0.04 per sq.yd.)
Cover Aggr. D-1	75 lbs. per sq.yd. (+/-2.5 lbs. per sq.yd.)

Other requirements included:

- 1) No surface treatment shall be applied between 8/15 and 5/15.
- 2) The ambient air temperature shall be 60 degrees or above.
- 3) The aggregate should be dried or moistened to achieve 2-4% moisture at the time of application.
- 4) Compaction will be achieved by at least six complete passes using pneumatic tired rollers.
- 5) Asphalt and cover coat material placement will be completed full roadway width at the end of each shift.
- 6) Stopping the aggregate spreader to refill the hopper is not permitted.
- 7) Control of public traffic speeds not to exceed 15 m.p.h. up to 24 hours as directed by the Engineer on the fresh surface.
- 8) Excess material is to be swept off by rotary brooms when the Engineer determines the surface has cured.

The specifications required that the cover coat material be placed with computerized equipment which was not available in Alaska since this type of surface treatment has not been used very much. The prime contractor Eastwind, Inc. purchased a brand new "SuperChipper" Model 2002/CRC Computer Controlled Self-Propelled Chip Spreader manufactured by BearCat. Emulsion Products, Inc., (asphalt supplier) furnished two liquid asphalt distributor trucks with computerized rate control. One truck was brand new called the "SuperSpreader" (Model BC-501/CRC), manufactured by BearCat. Eastwind furnished three self propelled pneumatic tired rollers that exceeded the 10 Ton minimum weight.

The specifications had required an add-on "comb device" which was to allow the material larger than No.4 sieve to reach the surface prior to the finer material. This had been developed in the past for non-computerized spreaders which deposited the aggregate forward causing a "wave" of oil out in front of the spreader. The new BearCat spreader placed the D-1 in the opposite direction eliminating the forward displacement of the oil and locking the aggregate in the mat where dropped. By the recommendation of the manufacturer that this device may adversely affect the performance of their computerized aggregate spreader, Directive "N" was issued May 31, 1995, deleting this add-on device.

Change Order No. 13 was issued June 19, 1995, changing the normal cross slope for the roadway typical sections from 2% to 3%. It was found on past high float surface projects that adequate drainage was not achieved due to the coarser surface trapping water.

By the end of June, the contractor decided to redistribute the one D-1 stockpile produced in 1993, to smaller stockpiles within the project limits. This would reduce the number of hauling units needed and avoid delays in waiting for material to reach the chipsreader. This also remixed the existing stockpile where segregation was visible from sitting for two+ years.

The new BearCat chipsreader was calibrated on July 17, 1995. This setting was field tested by driving over a one square yard canvas tarp and then weighing the material. After several tests, it was accepted as accurate and the dial setting of 75 lbs. per square yard was verified prior to startup each day. Two factory representatives were available to train individuals on the use of their machines. The owner of Bearcat, Ken Hill, agreed to stay on site til the surface treatment was completed since project personnel had very little experience with this type of application.

Eastwind began placement of the cover coat material for asphalt surface treatment on July 18, 1995. The following data was compiled for the period of AST placement:

<u>Date</u>	<u>Project Placement</u>	<u>(F)Temp.H/L</u>	<u>D-1% Moist.</u>	<u>Avg. Oil Rate</u>
7/18	Sta.420+58-512+20	66-42	3.3%-4.3%	0.77 gal/sy.
7/19	Sta.512+20-620+00	68-44	4.4%-4.7%	0.73 gal/sy.
7/20	Sta.620+00-759+90	64-42	4.6%	0.75 gal/sy.
7/21	Sta.759+90-892+00	66-44	3.7%	0.75 gal/sy.
7/22	( No placement of asphalt surface treatment due to rain)			
7/23	Sta.939+00-1012+50	63-42	4.6%	0.75 gal/sy.
7/24	Sta.1012+50-1054+62	55-42	4.7%-4.9%	0.74 gal/sy.
7/25	( No placement of asphalt surface treatment due to rain)			
7/26	Sta.892+00-894+00	60-40	4.8%	0.75 gal/sy.
7/26	(Nabesna Rd/Apprs')	60-40	4.8%	0.75 gal/sy.
7/27	(Tourist Turnouts)	60-41	NA	0.78 gal/sy.
7/28	Sta.895+00-904+00	68-40	NA	0.77 gal/sy.
7/28	Sta.915+00-939+00	68-40	NA	0.77 gal/sy.
7/29	Sta.904+00-915+00	65-41	NA	NA

\* Asphalt temperature was maintained between 165-170 degrees.

\* On July 19 a minor modification was made to the spreader box. Metal plates were added to the sides of the spreader box to force the material to fall more vertical instead of its natural repose. It was observed on July 18, that segregation was visible at this joint and the width of the mat was wider than required.

The contractor completed all Grading D-1, Cover Coat for Asphalt Surface Treatment on July 29, 1995. Directive "R" was issued July 25, 1995, authorizing Eastwind, Inc., to begin brooming excess D-1 from the roadway surface from Sta. 421+87(BOP) to Sta. 800+00. Directive "T" was issued August 2, 1995, authorizing the contractor to broom excess D-1 from the entire project limits. Brooming began on July 25 and was considered completed on August 23, 1995. The contractor had 3-6 rotary brooms operating during this period. The contractor agreed to run a broom and air compressor ahead of the striping truck to help the paint adhere to the surface better. Final striping of the project was complete on August 22, 1995.

Eastwinds' crew was a pleasure to work with during this learning experience. Their genuine attitude of being concerned with doing a good job should be commended.

COMMENTS AND RECOMMENDATIONS

The following observations and comments are made to possibly help in achieving a better product of this type for the future of Alaskas' roads.

1) The specifications allowed placement of the asphalt material in three 12' passes which placed joints in the center of the driving lane. This was observed as the major problem area of the mat where bleeding (too much oil) or potholing (lack of oil) occurred trying to match the next shot of oil to the last one. While on site, the manufacturer of the BearCat computerized chip spreader and distributor truck informed project personnel that extensions were available for both pieces of equipment to expand 20+ ft. allowing for a more uniform mat. The specifications should have required that the material be placed in two passes at eighteen feet since the technology is available.

2) It appears crucial to have a smooth finished subgrade surface prior to cover coat placement. Due to the flexibility of this material it will form to any grade it is placed on. The asphalt material seemed to soften in warmer weather and harden in cooler temperatures (in comparison made to asphalt concrete). It appears if cracks develop that the material has a tendency to knead itself back together when warmed up.

3) The specification for moisture content of the D-1 was to be dampened or dried to achieve 2-4%. Project moistures taken ranged from 3.3% to 4.9%. A visual inspection of the higher moisture material placed appeared to have a better reaction to the oil and required less brooming (A better looking and driving mat, possibly more of the fines were retained). I recommend changing this spec. to 3 to 5%(+). Moisture content can only be controlled if inclement weather specs are adhered to.

4) The ambient air temperature spec. required 60 degrees or above. The climate of this area hardly produced these type of temperatures for any length of time toward the end of July. The contractor was allowed to chip once the temperature reached 50 degrees and rising. Temperatures in the sixties were reached by mid-afternoon and began dropping within a couple hours. No extreme hot or cold days were encountered during the cover coat placement on this project.

5) It was impossible to meet the specification " The aggregate spreader will not be permitted to stop while receiving aggregate into the hopper." This was not an aggregate problem since the contractor had material and trucks available at the site of placement; but having the oil placed ahead of the machine. The

chipsreader stopped continuously waiting for more oil to be heated and transferred from large tanker trucks. Since the spreader was computer controlled this was not considered a problem. The mat looked very uniform despite the stopping and starting.

6) This type of surface coat should not require temporary pavement markings and permanent striping should be done the following year. The markers would not adhere to the coarse surface. An attempt was made to nail them down but was found if traffic didn't pull them up (due to the soft mat), the oil bound to the nail and removing them tore chunks of the mat out also. It did not seem appropriate to place large amounts of nails on the highway for the traveling public to be driving over. Currently this type of surfacing seems to be half the cost of placing asphalt concrete, but the price will rise once contractors realize the expenses involved with brooming the loose aggregate from the surface so they can complete the required striping. Approximately one month was spent brooming the surface before it was felt paint might stick and extra money was spent painting centerline both directions. It seems counterproductive (and costly) that we buy D-1 and want the fines on the surface only to broom part of them off the side. The cost of traffic control increases considerably due to the clouds of fines raised by the rotary brooms. Canadian (Yukon) engineers that were on site stated they wait til the following year to stripe. This allows the traffic to continue kneading the loose material into the mat. An interim signing could be to install the temporary "pass/no pass" signs more permanent until striping was completed. The Bearcat manufacturer, Ken Hill, suggested a flush coat of oil over the surface to seal the top. Ken stated this was common on other projects but he had not worked with this dirty of material.

It was impressive how fast this type of surface coarse could be placed. If the oil placement and aggregate was readily available, it was estimated the BearCat chipsreader could have surfaced this entire 13 mile project in approx. 12 hours. The chipsreader computer console rotated to a seat on both sides of the machine allowing it to be run in either direction, eliminating a lot of backing up and starting a new lane pass. This project was not able to utilize this feature because the operator Eastwind wanted trained had a broken arm. It was relatively easy to patch where potholes did develop (A bucket of D-1 and a heated can of oil). This could be the way to get an intermediate surface on Alaskas' unpaved roads at a reasonable cost.

I recommend this project and others of this type be monitored during the icy/winter conditions to see if there is a reduction in accidents from the coarser surface (better tire grip), and if icing does not develop as easily reducing required sanding by our maintenance personnel. Consideration should be given to trying this surface on a known urban "problem road" where asphalt concrete has proven to be a waste. (Attachments: BearCat specifications)

ASCHENBRENNER & BROOKS

A PROFESSIONAL CORPORATION  
ATTORNEYS AT LAW  
313 SEVENTH AVENUE  
P. O. DRAWER 73998  
FAIRBANKS, ALASKA 99707  
(907) 456-5110

PETER J. ASCHENBRENNER  
WOODY BROOKS  
JOHN L. BARNES

	CHIEF ROW AGENT	4/3
X	PRE AUDIT	2/21
	ENGINEERING	
	TITLE	
	PLANS	
X	MATERIALS	
	APPRAISALS	
	NEGOTIATIONS	
	RELOCATION/PROP. ACQNT.	
	RETURN TO:	
	FILE	

July 8, 1987

Department of Transportation and Public Facilities  
Regional Chief  
Right of Way Agent  
2301 Peger Road  
Fairbanks, Ak 99701

Attn: Howard Cameron

Re: Nabesna Road Gravel Pit

Dear Mr. Cameron:

Please be advised that I represent Ms. Betty Freed of Slana with respect to her Homestead on the Nabesna Road and the two rights of way reserved from her fee title, A 067438, and A 067455 the federal aid material site and the federal aid highway, respectively.

As I understand it the State has developed a gravel pit which is located (to some extent) within the four hundred foot right of way for the highway.

I have also learned from correspondence that DOT/PF and its predecessor agencies have at various times sold or permitted free use of the gravel pit by private persons. At other times there have been questions raised about whether the fee owner (Ms. Freed and one of her grantees, Ms. Scott) may remove gravel from the site.

Let me first advise you as to my reading of the grants of rights-of-way, in light of the relevant federal statutes (23 U.S.C. Section 317), regulations (former 43 CFR Subpart 244 et seq.; present Subpart 2234) and decisional law; (see, e.g., DOT/PF/Kelln & Weidner. IBLA 81-850).

(I am assuming that Ms. Freed's homestead entry followed the original ROW permits of July 26, 1966.)

I believe that three things can be established.

First, as the holder of the fee title underlying both the highway and the material site ROW Mrs. Freed (and her grantees) have all rights not reserved to the BLM under the ROW permits referred to above.

I believe that the material site ROW, in particular, was not intended to exclude or limit the rights of the fee owner, other than by granting the ROW for the material site. It becomes apparent from reading the regulations governing such grants that the BLM felt it necessary, first, to state that the State's use will not interfere with the disposal of the fee by the United States and second that the State consented to the use of the land by grantees of the United States. Moreover, the revisions of the regulations make even more plain that the State's rights under the right of way must coexist with the rights of the grantees of the United States.

244.9 *Terms and conditions.* An applicant, by accepting a right-of-way, agrees and consents to comply with and be bound by the following terms and conditions, excepting those which the Secretary may waive in a particular case:

. . .

(1) That the allowance of the right-of-way shall be subject to the express condition that the exercise thereof will not interfere in any way with the management, administration, or disposal by the United States of the lands affected thereby, and that he agrees and consents to the occupancy and use by the United States, its grantees, permittees, or lessees of any part of the right-of-way not actually occupied by the project, for necessary operations incident to such management, administration, or disposal.

[17 Fed. Reg. 5896-5909 (July 1, 1952); 43 CFR 2234.1-3(c)(12), promulgated 3/31/64, is identical. 43 CFR 2801.1-5(i), promulgated at 35 FR 9634, 6/13/70 and still in effect in 1975, is identical to (i) above; subsection (1) in effect at that time reads as follows:

(1) That the allowance of the right-of-way shall be subject to the express condition that the exercise thereof will not *unduly* interfere ~~in-any-way~~ with the management, administration, or disposal by the United States of the lands affected thereby, and that he agrees and consents to the occupancy and use by the United States, its grantees, permittees, or lessees of any part of the right-of-way not actually occupied or required by the project,

*or the full and safe utilization thereof, for necessary operations incident to such management, administration, or disposal. (Changes shown are from prior language, above.)*

Second, there is nothing in the material site ROW which suggests that the State has the right to sell or give material to private persons. Indeed the grant restrictions refer solely to the operation of the pit for the benefit of the State; if the State is to transfer operation of the pit to another party, that party must agree to the non-discrimination provisions of Title VI of the Civil Rights Act of 1964. ||14, 15, and 16.

Third, a question has arisen as to whether the State is actually operating all or part of the gravel pit with the highway ROW. Paragraph 7 of the permit assumes that the material site, if located adjacent to a road right-of-way, must have an area of 150 feet left undisturbed so that a scenic zone is created to "screen the pit area" from the highway. As I have not been to the site and have not received photographs from my client, I am only able to relate what she says, which is that the pit is visible from the highway and is, in a word, an eyesore.

I understand also that this highway is the northern highway entrance to the Wrangell-St. Elias National Park, which is the largest National Park in the United States. I believe that the National Park Service will take a position that the roadside gravel pit, located between the Tok Cutoff directional signs for the Nabesna Road turn and the sign on the Nabesna Road announcing the Preserve entry is unsightly. Further exploration of this issue may result in a formal request to the National Park Service to seek Bureau of Land Management revocation of the material site ROW permit and complete restoration of the highway ROW to the standards required by BLM regulations and the permits.

Federal regulations prohibit mining of gravel on a highway ROW; obviously this is to prevent the State from circumventing the land use restrictions imposed on states holding material site permits.

{ 244.7 Nature of the interest granted; settlement on right-of-way. (a) No interest granted by the regulations in this part shall give the holder thereof any interest of any kind in fee in the lands. The interest granted shall consist of an easement, license, or permit in accordance with the terms of the applicable statute; no interest shall be greater than a permit revocable at the discretion of the regional administrator unless the applicable statute provides otherwise. Unless a specific statute or regulation provides otherwise, no interest granted shall give the grantee any right whatever to take from the public lands or reservations



any material, earth, or stone for construction or other purpose . . . [43CFR Section 244.7(a)] [emphasis supplied]

Therefore, I suggest that the following action be taken, while the Department reviews this matter:

1. That the Department temporarily suspend all gravel pit operations, if any, within the Nabesna Road highway ROW on Ms. Freed's homestead.

2. That the Department temporarily suspend all permits previously granted and not issue any further permits for gravel removal. This suspension should apply whether the taking is from the highway ROW or the material site ROW by parties other than fee owners removing gravel from within the boundaries of their fee estates.

3. That the Department cease any interference with the right of any fee owners to remove gravel from within the boundaries of their fee estate, such as by requiring permits etc.

4. That the Department immediately survey and monument both the highway and material site ROW so that all affected parties can determine where removal is taking place, where scenic areas should be sited, where vegetation should not be removed, etc.

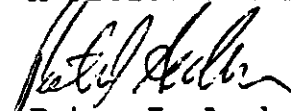
5. That the Department should temporarily cease any cutting or clearing of any land within the ROW highway or material site to avoid further future claims of violation of regulations, see 43 CFR 2801.1-5(1), quoted above.

6. That the Department should provide Ms. Freed an accounting showing where the State has removed gravel and how much, since 1966 and where the State has permitted third parties to remove gravel and how much. Both quantity and fair market value should be given.

7. That the Department should assemble all files relating to this matter in its Fairbanks offices (apparently some files are in Valdez) so that counsel can review and copy the files.

Sincerely,

ASCHENBRENNER & BROOKS  
A Professional Corporation



Peter J. Aschenbrenner

# STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
INTERIOR REGION, RIGHT OF WAY

JAY S. HAMMOND, GOVERNOR

2301 PEGER ROAD  
FAIRBANKS, ALASKA 99701  
(907) 452-1911

October 25, 1982

Re: M.S. 46-1-007-~~8~~<sup>5</sup>  
Glenn Highway

Ms. Margaret Scott  
S.R. Box 460  
Gakona, Alaska 99586

Dear Ms. Scott:

After your September conversation with Shari Howard, a copy of the Freed patent was obtained from the Anchorage office of the Bureau of Land Management (attached) and the questions which you asked have been answered.

As you can see by the patent, the material source (M.S. 46-1-007-~~8~~<sup>5</sup>) was reserved as a Federal-aid material source. An application was made to BLM pursuant to the Act of August 27, 1958 (72 Stat. 885, 23 USC 317) and to the regulations in 43 CFR Part 2800, Subpart 2821.03 through 2821.6-2. A grant was received on July 26, 1966, subject to the terms and conditions of 43 CFR Part 2800, Subpart 2801 through 2802.5.

You indicated that you were told by the prior owner that you could remove materials from the material source as the current owner of the property. It is our position that since the material source was reserved in the patent for construction and maintenance of federal-aid highways, you do not have the free use of the material in M.S. 46-1-007-~~8~~<sup>5</sup>. If you do wish to obtain material from this or any DOT/PF source, your request should be submitted to the proper agency, who will, in turn, request non-objection from the DOT/PF. Both BLM and the State Department of Natural Resources can issue contracts for material sales from their respective sources.

You also expressed concern over the possible fencing of the material source. As long as any fencing is done within the boundaries of the material source, we are within the rights of the grant to protect and control the use of the materials therein.

Scott Letter  
October 25, 1982  
Page 2

If you have any other questions, please feel free to contact Shari Howard at extension 299.

Sincerely,

*Paul Will*  
for Harold A. Cameron  
Regional Chief  
Right of Way Agent

Attachment: as stated

AA-2064

# The United States of America

To all to whom these presents shall come, Greeting:

## WHEREAS

Betty Lou Freed, formerly Betty Lou Wilhelm is entitled to a Land Patent pursuant to the Homestead Laws, Revised Statute 2291, as amended and supplemented; 43 U.S.C. 164 (1970), for the following described land:

Copper River Meridian, Alaska

T. 11 N., R. 8 E.,

Section 19, E $\frac{1}{2}$ SW $\frac{1}{2}$ SW $\frac{1}{2}$ SE $\frac{1}{2}$ , SE $\frac{1}{2}$ SW $\frac{1}{2}$ SE $\frac{1}{2}$ ,  
S $\frac{1}{2}$ SE $\frac{1}{2}$ SE $\frac{1}{2}$ ;

Section 20, W $\frac{1}{2}$ SW $\frac{1}{2}$ SW $\frac{1}{2}$ SW $\frac{1}{2}$ ;

Section 29, Lot 4, W $\frac{1}{2}$ NW $\frac{1}{2}$ NW $\frac{1}{2}$ NW $\frac{1}{2}$ ;

Section 30, Lots 1, 2, and 6, N $\frac{1}{2}$ NE $\frac{1}{2}$ NE $\frac{1}{2}$ ,  
NE $\frac{1}{2}$ NW $\frac{1}{2}$ NE $\frac{1}{2}$ , E $\frac{1}{2}$ NW $\frac{1}{2}$ NW $\frac{1}{2}$ NE $\frac{1}{2}$ ,  
N $\frac{1}{2}$ SE $\frac{1}{2}$ NW $\frac{1}{2}$ NE $\frac{1}{2}$ , SE $\frac{1}{2}$ NE $\frac{1}{2}$ NE $\frac{1}{2}$ .

Containing 130.13 acres:

NOW KNOW YE, that there is, therefore, granted by the UNITED STATES, unto the above named claimant the land above described; TO HAVE AND TO HOLD the said land with all the rights, privileges, immunities, and appurtenances, of whatsoever nature, thereunto belonging, unto the said claimant, her successors and assigns, forever;

## EXCEPTING AND RESERVING TO THE UNITED STATES

1. A right-of-way thereon for ditches and canals constructed by the authority of the United States. Act of August 30, 1890, 26 Stat. 391; 43 U.S.C. 945;

Patent Number

50-76-0088

AA-2064

2. A right-of-way thereon for the construction of railroads, telegraph, and telephone lines, as prescribed and directed by the Act of March 12, 1914, 38 Stat. 305; and
3. Those rights-of-way, Anchorage 067438, for a Federal Aid material site, and Anchorage 067455, 400 feet in width, for a Federal Aid Highway, Act of August 27, 1958, as amended, 23 U.S.C 317.

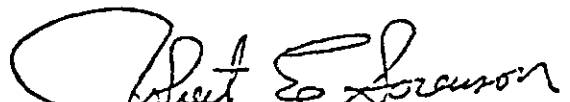
There is excepted and reserved any element of ownership from the lands hereby conveyed, including but not restricted to any estate or interest in property, or permit, or other right, transferred by the United States pursuant to the Alaska Communications Disposal Act approved November 14, 1967 (81 Stat. 441-444) (40 U.S.C. 771-792).

IN TESTIMONY WHEREOF, the undersigned authorized officer of the Bureau of Land Management, in accordance with the provisions of the Act of June 17, 1948 (62 Stat. 476), has, in the name of the United States, caused these letters to be made Patent, and the Seal of the Bureau to be hereunto affixed.

[SEAL]

GIVEN under my hand, in Anchorage, Alaska  
the TWELFTH day of DECEMBER in the year  
of our Lord one thousand nine hundred and SEVENTY-FIVE  
and of the Independence of the United States the two hundred  
xxx

By

  
Chief, Branch of Lands  
and Minerals Operations

Patent Number 50-76-0088

CHITINA

Serial No.

106-313

BOOK

#6 PAGE 312

Chena Recording District

IN REPLY REFER TO:



ADLO 2234-1  
Dec. '64

UNITED STATES  
DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT  
Anchorage District & Land Office  
555 Cordova Street  
Anchorage, Alaska 99501

Date: JUL 26 1966

DECISION

RIGHT - OF - WAY GRANTED

Details of Grant

Serial number of grant

Anchorage 067438

Name of Grantee

State of Alaska  
Department of Highways

Map showing the location and  
dimensions of grant:

Valdez District  
Project S-0880 (1)

Map designations

Parcel No. M.S. 461-007-3

Date Filed

March 4, 1966

Permitted use by Grantee

Material Source

Authority for grant

Act of August 27, 1958  
(72 Stat. 885)

Regulations applicable to grant:

43 CFR 2234.1 - 2234.2-4

Code reference

(23 U.S.C. 317)

Date of grant

JUL 26 1966

Expiration date of grant :

N/A

Rental:

Amount

N/A

When payable by grantee

**CHITINA**

Serial No. 66-313

Terms and Conditions of Grant

Pursuant to the authority vested in the undersigned by Order No. 701 of the Director, Bureau of Land Management, dated July 23, 1964 (64 F.R. 7492), as amended, a right-of-way, the details of which are shown above, is hereby granted for the public lands involved 1/, subject to the following terms and conditions:

1. All valid rights existing on the date of the grant.
2. All regulations in 43 CFR 2234 as more specifically set forth in the attached terms and conditions.
3. Filing of proof of construction within 7 years from date of the grant.
4. Others: **Subject to attached stipulations which are made a part hereof by reference.**

  
Chief Lands Adjudicator  
~~Chief Lands Adjudicator~~

Enclosures:

Map

Terms & Conditions

cc:

**Department of Highways, Right-of-Way Section, Juneau  
Bureau of Public Lands, Anchorage**

---

1/ For the purpose of this grant, public domain lands include those reserved or withdrawn for specific purposes, entered, selected, occupied and/or settled, and leased.

ADLO: 2234-1  
April '66

BUREAU OF LAND MANAGEMENT

TERMS & CONDITIONS FOR RIGHTS-OF-WAY & MATERIAL SITES

1. The grantee or permittee shall comply with State and Federal laws applicable to the project for which the right-of-way or material site is approved, and to the lands which are included in the right-of-way or material site and lawful existing regulations thereunder.
2. The grantee or permittee shall protect all public land survey monuments, witness corners, reference monuments and bearing trees against destruction, obliteration, or damage during his operations. If any monuments or corners are destroyed, obliterated, or damaged by his operations, he shall, at his expense, hire a registered surveyor pursuant to applicable State law and Bureau of Land Management procedures to re-establish the monuments and corners. Instructions and guidance on such procedures may be obtained from the Chief of the Cadastral Engineering Office, 555 Cordova Street, Anchorage, Alaska. A penalty is provided for the unauthorized alteration or removal of any government survey monument or marked trees by Section 57 of the Criminal Code of 1909 (35 Stat. 1088, 1099; 18 U.S.C. Sec. 111).
3. The grantee or permittee shall not deface, injure, cut or remove trees from lands outside the right-of-way or material site unless so authorized by the Bureau of Land Management.
4. The grantee or permittee shall be liable for damages caused by equipment or operations to any trees or landscape feature on the public land outside the right-of-way or material site area. Restoration or other corrective measures will be required by the Bureau.
5. When necessary to cut and remove trees from a right-of-way or material site, they shall be cut no higher than 12 inches above the ground and the limbs and branches removed.
  - (a) All logs or combustible material not utilized by the permittee will be disposed of in a manner approved, in advance and in writing, by the authorized officer.
  - (b) Burning of combustible material is authorized and may be done at the discretion of the permittee. However, full responsibility for preventing the escape of fires rests with the permittee. Any fire trespass action which might arise from the escape of permittee's fires will be in accordance to chapter 138, State of Alaska Fire Control Act.
  - (c) Combustible material may be buried in lieu of burning. Burial site and method of burial must have the advance approval of the authorized officer.
  - (d) The Anchorage Fire Control Dispatcher will be contacted prior to commencing of burning activities. He may be reached by phone at 277-0587.



ADLO 2234-1

6. All operations will be conducted in such a manner as to prevent the erosion of the land, pollution of the water resources and damage to the watershed and all things done necessary to prevent or reduce to the fullest extent the scarring of the lands.
7. The right-of-way will be so developed and used that natural scenic values are preserved. This includes, but is not limited to revegetation of cuts and fills with grass, trees or other appropriate cover, and/or utilization of other accepted screening to maintain and enhance the esthetic value in scenic areas. Where material sites are located adjacent to a road right-of-way, an area of 150 feet shall be left reasonably undisturbed, or shall be satisfactorily restored, to serve as a scenic zone to screen the pit area.
8. No commercial billboards or signs will be erected within the right-of-way, except with written approval of the Bureau of Land Management.
9. The character of streams, lakes, ponds and water holes shall not be modified except by advance approval in writing from the authorized officer.
10. The banks of all gravel pits shall be sloped to a grade of at least 3 to 1, pit installations shall be removed and the area restored to a condition satisfactory to the authorized officer.
11. Berm piles within the right-of-way or material site area, or area adjacent thereto, are not permitted. Where bulldozing is necessary for construction or maintenance, the area shall be leveled before completion.
12. Any roads, trails, fences or other improvements damaged shall be repaired or replaced in a manner satisfactory to the authorized officer.
13. For any breach of these stipulations the grantee or permittee will be fully liable and accountable to the Bureau of Land Management.
14. The grantee covenants and agrees that it will comply with the provision of Title VI of the Civil Rights Act of 1964, and that it will not, for the period during which the property conveyed by this instrument is used for the purposes designated in this grant, or for another purpose involving the provisions of similar services or benefits, engage in any discriminatory actions prohibited by 43 CFR 17.3, to the end that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under the program for which the grantee received Federal financial assistance by this grant. This assurance shall obligate the grantee, or in the case of transfer of the property granted herein, any transferee, for the period of this grant.

ADLO: 2234-1

15. The grantee further agrees that it will not transfer the property conveyed by this instrument for the purpose designated in the grant or for another purpose involving the provision of similar services or benefits, unless and until the transferee gives similar written assurance to the authorized officer, Bureau of Land Management, that it will comply with the provisions of paragraph 14 hereof.

16. The grantee agrees that the right is reserved to the Department of the Interior to declare the terms of this grant terminated in whole or in part and to revest in the United States full title to the property conveyed herein, in the event of a breach of the non-discrimination provisions contained in paragraph 14 hereof during the term of this right-of-way.

17. The grantee agrees that as long as the property conveyed hereby is used for the purpose designated in this grant or for another purpose involving the provision of similar services or benefits, the obligation to comply with the provisions of Title VI of the Civil Rights Act of 1964 shall constitute a covenant running with the land for the term of this grant.

18. The grantee agrees that in the event of a violation or failure to comply with the requirements imposed by paragraph 14, the United States may seek judicial enforcement of such requirements.

19. The assurances and covenants required by paragraphs 14 through 18 above shall not apply to ultimate beneficiaries under the program for which this grant is made. "Ultimate beneficiaries" are identified in 43 CFR 17.12(h) (1965 edition).

20. The grantee agrees that it will, upon request of the Secretary of the Interior or his delegate, post and maintain on the property conveyed by this document signs and posters bearing a legend concerning the applicability of Title VI of the Civil Rights Act of 1964 to the area or facility granted.

ACKNOWLEDGEMENT

STATE OF ALASKA  
GREATER ANCHORAGE AREA BOROUGH

I, Jack C. Means, a Notary Public in and for the said Greater Anchorage Area Borough and State, do hereby certify that on this the 26th day of July, 1966 before me personally appeared Pearl C. Peters, being to me personally well known and known by me to be the Chief, Adjudication Section, Lands Branch, Bureau of Land Management, and acknowledged that the foregoing instrument bearing date of July 26th, 1966, was executed by her in her capacity and by authority in her vested by law, for the purpose and intents in said instrument described and set forth, and acknowledged the same to be her free act and deed as Chief, Adjudication Section, Lands Branch, Bureau of Land Management.

Witness my hand and seal this 26th day of July 1966.

Jack C. Means  
(Notary Public)

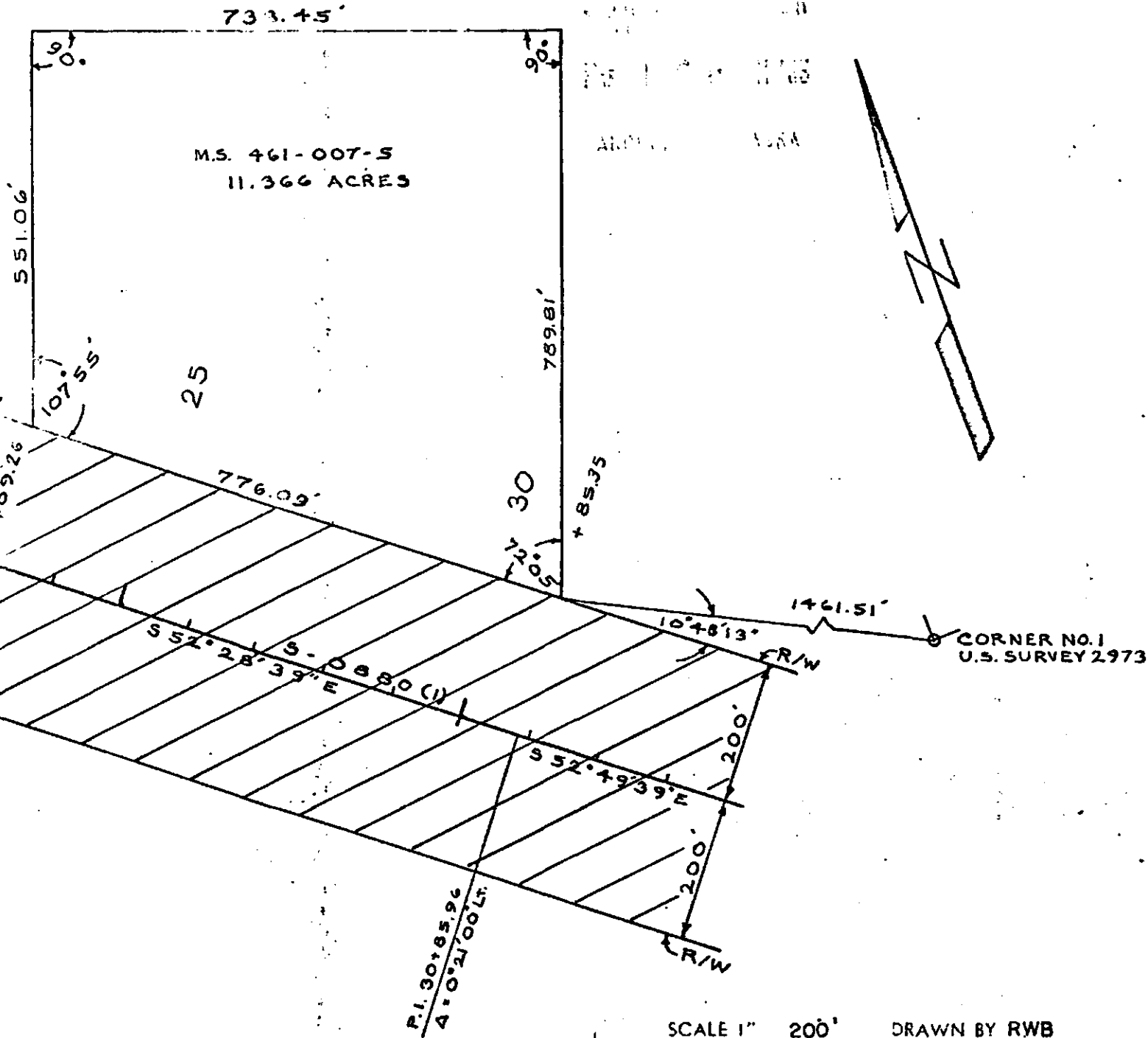
(SEAL)

My Commission expires May 22, 1967.

RECORDED - FILED  
Chitina REC. DIST.  
DATE August 3 1966  
TIME 1:20 P.M.  
Requested by Dept. of Reclamation  
Address Box 7  
Valdez

BOOK *Ord* PAGE *317*  
 Chitina Recording District  
 ANCHORAGE  
 067438

CHITINA  
 Serial No. *313*



SCALE 1" = 200' DRAWN BY RWB

ENGINEER'S STATEMENT

WILLIAM R. WHITNALL STATEMENT THAT HE IS BY OCCUPATION A CIVIL ENGINEER EMPLOYED BY ALASKA DEPT. OF HIGHWAYS TO SUPERVISE THE SURVEY OF HIGHWAY PROJECT NO. S-0880(1) AS SHOWN ON THIS MAP, THAT THE SURVEY OF SAID PROJECT WAS MADE UNDER HIS SUPERVISION AND UNDER AUTHORITY; THAT THIS PARCEL WAS SURVEYED DURING THE SURVEY OF THIS HIGHWAY PROJECT, WHICH WAS CONDUCTED IN 1965; AND THAT SUCH SURVEY IS ACCURATELY REPRESENTED UPON THIS PLAT.

*Wm. R. Whitnall*, ENGINEER

APPLICANT'S CERTIFICATE

THIS IS TO CERTIFY THAT WILLIAM R. WHITNALL WHO SUBSCRIBED THE STATEMENT HEREON IS THE PERSON EMPLOYED BY THE UNDERSIGNED APPLICANT TO SUPERVISE THE PREPARATION OF THIS MAP WHICH HAS BEEN ADOPTED BY THE APPLICANT AS THE APPROXIMATE FINAL LOCATION OF THE PROJECT HEREBY SHOWN; AND THAT THIS MAP IS FILED AS PART OF THE COMPLETE APPLICATION, AND IN ORDER THAT THE APPLICANT MAY OBTAIN THE BENEFITS OF THE ACT OF AUGUST 27, 1958 (72 STAT. 885, 23 U.S.C. 317); AND I FURTHER CERTIFY THAT THE RIGHT-OF-WAY HEREIN DESCRIBED IS DESIRED FOR ALASKA HIGHWAY PROJECT NO. S-0880(1)

*By Campbell*  
 COMMISSIONER, ALASKA DEPT. OF HIGHWAYS

Attest *R. F. Fossil*

STATE OF ALASKA  
 DEPARTMENT OF HIGHWAYS  
 RIGHT OF WAY PLAT  
 SHOWING  
 MATERIAL SOURCE  
 FOR  
 PROJECT S-0880(1) VALDEZ DISTRICT  
 M.S. 461-007-5 DATE 12-1-65



**RIGHT OF WAY INFORMATION**



**GEOLOGIC INFORMATION**

# ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

## MATERIAL SITE DATA COLLECTION FORM

collected by:

Date:

### I. GENERAL SITE DATA

1. Material Site No.:  -  -  -

2. Site Name:

3. Community:

4. Owner/Agency:

5. Permit No.:

6. Permit Type:  7. Expiration Date:

8. Contact:

9. Lat/Long: ° ' " N ° ' " W

10. Quad Map:

11. Legal Description:

12. Acreage:  13. Reference Data:

14. Maps & Photos:

15. Special Considerations:

16. History:

17. Remarks:

### CODES

<b>6. PERMIT TYPE</b>	<b>20. TEST VALUES</b>
00 None	1A Los Angeles Abrasion
01 Grant	DC Degradation
02 Rt. of Way Grant	FV Frost Suscept. Value
03	F2 1/2 passing #200 screen
04	SS Sulfate Soundness
05	SC Specific Gravity
06	LL Liquid Limit
07	PI Plastic Index
08	OR Organic Content
09	PH pH of Organics
<b>Permits</b>	
21 Permit	
22 PUP	
23 PUP	
24 SLIP	
25 Prospect Permit	
26 Mat'l Site Permit	
27 Rt. of Entry Permit	
28 Rt. of Way Permit	
29 PITS	
<b>Other</b>	
41 ILMT	
42 IJMA	
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	
	<b>22. PRESENT STATUS</b>
	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
	JWT Joint Use (Remarks)
	XXX Other (Remarks)
	<b>23. RECOMMENDED USE</b>
	BCR Borrow
	RWP Riprap
	AGR Crushed Aggr.
	SND Sand Source
	SDM Binder Mat'l
	TOP Topsoil
	STK Stip./Warehousing
	MEN Maintenance Use
	STA Maintenance Station
	FTT Further Testing Rec.
	FTF Future Use
	REL Relinquish Permits
	WDA Waste Disposal Area
	XXX Other
<b>13. REFERENCE DATA</b>	
00 None available	
01 Published M.S. rpt.	
02 Lab analyses of mat'l	
03 Design study/loc. rpt.	
04 Construction use data	
05 Environmental data	
06 TR Loc. Map & Logs	
07 Memo (ref. to file)	
99 Other (Remarks)	
<b>14. MAPS &amp; PHOTOS</b>	
00 None available	
01 Sketch map	
02 Location map	
03 Site plat	
04 Vert. air photos	
05 Chl. air photos	
06 Ground photos	
99 Other (Remarks)	
<b>15. SPECIAL CONSIDERATIONS</b>	
00 None	
01 Fit obligated	
02 Royalty Payments	
03 Proof of Use (last 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:

20. Test Values:

21. Remarks:

### III. USE DATA

22. Present Status:  23. Recommended Use:

24. Quantities - Indicated:  cubic yards Date:

Removed:  cubic yards Date:

25. Remarks:

# MATERIAL SITE DATA COLLECTION FORM

 Material Site No.: 46-1-007-5

 Date: 190685

 Collected by: GRAHER

## III. SURFACE SITE DATA

26. Date: 190685      27. Investigation: ETO1      28. Drainage: G

29. Geomorphic Description: MORAINES

30. Vegetation: SP0% ASPD% GRD0%

31. Topography: ROL% STP%      32. Debris: 00% % %

33. Rock Outcrops: 0%      34. Water Bodies: 00      35. Access: 02

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

38. Site Improvements: EHR, PIT, STK

39. Remarks: 7-10 FROM MID-NE EDGE, 11-19 FROM WASTE BERM ± MID-SITE

## CODES

<b>27. INVESTIGATION</b> BK Backhoe MA Wheel-mount Auger TA Track-mount Auger PD Portable Drill FT Foot Recon. AR Aerial Recon. SH Seismic Survey CD Conductivity Survey NV Resistivity Survey ZZ Other (Remarks)  01 Recon, sparse coverage 02 Part coverage, random 03 Part coverage, specific 04 High-density TR invest. 05 Special Survey	<b>29. VEGETATION</b> 000 None - bare soil BIR Birch COT Cottonwood ASP Aspen WIL Willow species ALD Alder species WSP White Spruce BLP Black Spruce SPS Sitka Spruce HEM Hemlock TAM Tamarack CED Cedar COM Misc coniferous DEC Misc deciduous GRD Low ground cover BCG Bog mosses, etc. ZZS Other (unknown)	<b>30. VEGETATION (cont'd)</b> SH Shrub ST Small tree (< 5" g) MT Med Tree (5"-12" g) LT Lg Tree (12"-30" g) HT Huge Tree (> 30" g)  % of site covered  <b>31. TOPOGRAPHY</b> FLT Flat and level NCL Rolling MOD Moderate hillside STP Steep hillside CLF Cliffside  % of sites, each category  <b>32. DEBRIS</b> WO Woody debris CW Const. waste mat'ls TR Dump mat'l, trash HA Abnd. habitations ZZ Other (Remarks)  % of site, each category	<b>33. ROCK OUTCROPS</b> A 1'-10' height B 10'-25' C 25'-50' D 50'-100' E >100'  % of site covered  <b>34. WATER BODIES</b> 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	<b>35. ACCESS</b> 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)	<b>37. UTILITY CORRIDORS</b> EL Electric WA Water TL Telephone GS Gas PT Petroleum SW Sewer RR Railroad ZZ Other (Remarks)
					<b>36. BOUNDARY MARKERS</b> 00 None found 01 One corner found XX Number corners found RB Rebar IP Iron Pipe WP Witness Post BZ Blase Marks on trees BR Brush Line LM Landmark (Remarks) SM Survey Monument ZZ Other (Remarks)
					<b>38. SITE IMPROVEMENTS</b> FNC Fencing SCR Screening BDC Bridge (Remarks) SCL Scales LR Loading Ramps SWA Solid Waste Area GAR Locked Gate on access PIT Opened Pit TRL Trailhead EHR Existing Haul Road HAB Habitations BLD Buildings ZZS Other (Remarks)  % of site occupied

## IV. SUBSURFACE SITE DATA

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

43. Water Table: NO      44. Permafrost: N      45. Overburden: ECKJ An

46. Soil Description: CBA An    An    An      47. %+3": 20      48. %+10": 27

49. Quantity Estimate:    cubic yards    An

50. Remarks: SOME SANDY AREAS

## CODES

<b>45. OVERBURDEN</b> Soil Type (see Item 46) Thickness (ft.) Moisture (see Item 46) Method of Analysis	<b>46. SOIL DESCRIPTION</b> A Gravel      0 Undetermined B Sand      1 Dry C Silt      2 Damp D Clay      3 Free Moisture E Ash F Organic G Bedrock S Other	<b>METHOD OF ANALYSIS</b> A Cutbank exposure B Shovel pit C Soil auger D Soil probe E Prev. rpts. Z Other
<b>49. QUANTITY ESTIMATE</b> Cubic Yards (Visual Est.) Soil Description, primary product Method of Analysis		

**PERMAFROST**  
 Yes  
 Probable  
 Not likely

NAB/R

1000'

46-1-007







**STATE OF ALASKA DEPARTMENT OF TRANSPORTATION - NORTHERN REGION  
LABORATORY TESTING REPORT**

PROJECT NAME: SOUTHCENTRAL LEVELING - PHASE I  
 PROJECT NUMBER: IM-000S(252)  
 AKSAS NUMBER: 67388  
 SOURCE: TOK CUTOFF MATERIAL SITES  
 SAMPLED BY: D N SOLIE

MATERIAL SITE NUMBER	46-2-002-5	46-2-002-5	46-2-002-5	46-2-002-5	46-1-014-5	46-1-018-5	46-1-018-5
DEPTH (feet)	0.0-1.0	0.0-1.0	0.0-1.0	0.0-1.0	1.0-2.0	1.0-3.0	0.0-0.3
STATION (LOCATION)		STOCKPI	STOCKPI	STOCKPI			STOCKPI
LAB NO.	98-2014	98-2015	98-2016	98-2017	98-2018	98-2028	98-2033
DATE SAMPLED	10-Mar-98	05-Mar-98	19-Mar-98	19-Mar-98	19-Mar-98	27-Mar-98	25-Feb-98
% Passing							
3"	100						
2"	96						
1"	76			100			
Gravel 3/4"	67	100	100	93			
1/2"	53	91	89	47			100
3/8"	47	83	79	28			93
#4	34	67	60	1			11
Sand #10	26	49	42				1
#16	23	41	34				1
#30	17	28	24				1
#100	7	10	7				1
Silt/Clay #200	5.6	6.2	4.7				0.8
Hydro 0.02 mm							
0.005							
0.002							
LIQUID LIMIT	NV	NV	NV	NV			NV
PLASTIC INDEX	NP	NP	NP	NP			NP
CLASSIFICATION	A-1-a	A-1-a	A-1-a				A-1-a
SOIL DESCRIPTION	SaGr	SaGr	SaGr				Gr
NATURAL MOISTURE							
ORGANICS	2.2						
SP.GR. (FINE)	2.70						
SP.GR. (COARSE)	2.79						
MAX DRY DENSITY	139.1						
OPTIMUM MOISTURE	5						
L.A. ABRASION			14	13	16		
NORDIC ABRASION							
DEGRADATION FACTOR			62	67	73	78	
SODIUM SULF. (CRSE)			2.3	0.7	0.7	1.2	
SODIUM SULF. (FINE)			3.5		3.8	2.5	

**REMARKS:**

Gradation is based on material passing the 3" sieve, according to Alaska Test Method T-7.

M.S. 46-1-007-5

LOCATION AND ACCESS

The site is located on the Nabesna Road approximately 0.5 miles from Mile 59.9 of the Tok Highway. It is adjacent to the Nabesna Road right-of-way (R.O.W.) and an existing access road connects the work area with the Nabesna Road.

DESCRIPTION

The site includes ice-contact deposits of sand and gravel. It is about 11.4 acres in size and located on a narrow ridge that drops down sharply to the southeast onto the floodplain of Ahtell Creek. The ridge gently slopes down to the northwest onto a flat area.

Test trench and laboratory data indicate the site contains usable material consisting of gravelly sand and sandy gravel. The percentage of cobbles (3 to 10-inch diameter) was visually estimated to comprise from 1 to 20 percent of the volume of usable material, depending on which area of the site is mined. The percentage of material larger than 10 inches in diameter was visually estimated to range from 1 to 5 percent.

The information on this site presented in this report was obtained in 1979 by DOT&PF personnel. Since that time material has been removed from the site and used for maintenance purposes. It is recommended that the construction contractor perform sufficient investigation of his own to satisfy himself what quantity of specified quality material can actually be produced from whatever specific areas of the site he intends to mine. He should also determine for himself the type of equipment and amount of effort which will be required for him to produce material meeting the contract specifications.

CLEARING AND STRIPPING

The major portion of the site has been cleared and stripped. The area in the vicinity of the northwest corner of the site contains overburden consisting of silt and organic material averaging 2 to 3 feet in thickness.

Vegetation in the northwest portion of the site consists of a medium-dense spruce and aspen forest with some areas of brush.

WATER TABLE

The water table was not found in the test trenches dug in this site in August 1979.

FROZEN GROUND

Frozen ground was not found in the test trenches dug in this site in August 1979.

### LAND STATUS

The Alaska Department of Highways (now DOT&PF) was issued a Right-Of-Way Grant by the Bureau of Land Management on July 26, 1966 for use of this site as a source of material for federal-aid highway construction and maintenance. The Grant does not have an expiration date.

### QUALITY OF MATERIALS

Laboratory test data indicate material meeting the requirements for use as Selected Material, Type A and B is present in this site. One laboratory test showed the Los Angeles Abrasion (L.A.) Test loss to be 16 percent and the Degradation Value (DEG.) to be 59, which indicates material suitable for use in producing crushed aggregate is present in the site.

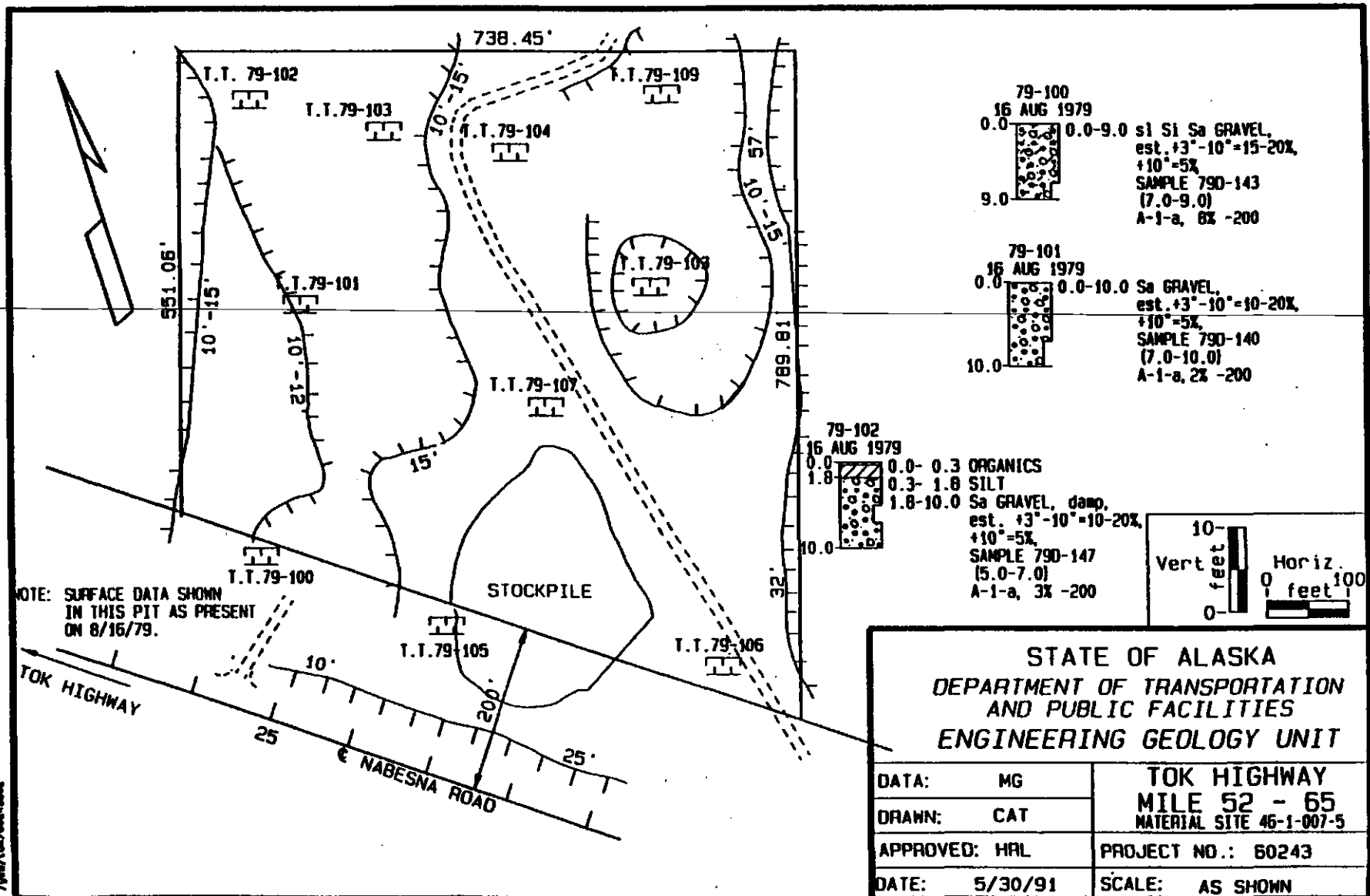
### MINING PLAN GUIDELINES

Personnel from the Slana DOT&PF Maintenance Station routinely use this site as a source of material for road maintenance. The construction contractor should be required to develop a mining plan jointly with the DOT&PF maintenance personnel to minimize interference between users, and to facilitate future use of the site.

**STATE OF ALASKA - NORTHERN REGION**  
**DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES**  
**SOILS TESTING REPORT**

<b>PROJECT NAME:</b>		TOK HIGHWAY MILE 52-65					
<b>PROJECT NUMBER:</b>		TQ-FO46-1(29)/60243					
<b>SOURCE:</b>		M.S.46-1-007-5					
<b>SAMPLED BY:</b>		J.Roach					
<b>TEST HOLE NO.</b>		79-100	79-101	79-102			
<b>DEPTH (FEET)</b>		7-9	7-10	5-7			
<b>STATION (LOCATION)</b>							
<b>OFFSET (FEET)</b>							
<b>LAB NO.</b>		79D-143	79D-140	79D-147			
<b>DATE SAMPLED</b>		8-16-79	8-16-79	8-16-79			
<b>PERCENT PASSING-</b>							
	<b>3"</b>	100	100	100			
	<b>2"</b>	90	89	92			
	<b>1"</b>	77	73	71			
<i>Gravel</i>	<b>3/4"</b>	70	66	65			
	<b>1/2"</b>	65	60	58			
	<b>3/8"</b>	59	52	51			
	<b>#4</b>	50	39	41			
		<b>#10</b>	40	24	31		
<i>Sand</i>	<b>#40</b>	17	8	14			
	<b>#50</b>	12	6	10			
	<b>#100</b>						
<i>Silt - Clay</i>	<b>#200</b>	8	2	3			
<i>Clay Size</i>	<b>02mm</b>						
	<b>.005mm</b>						
<b>LIQUID LIMIT</b>		NV	NV	NV			
<b>PLASTIC INDEX</b>		NP	NP	NP			
<b>CLASSIFICATION</b>		A-1-a	A-1-a	A-1-a			
<b>SOIL DESCRIPTION</b>		sl.SiSaGr	SaGr	SaGr			
<b>NATURAL MOISTURE</b>							
<b>SP.GR. (FINE)</b>							
<b>SP.GR. (COARSE)</b>							
<b>MAX DRY DENSITY</b>							
<b>OPTIMUM MOISTURE</b>							
<b>L.A. ABRASION</b>							
<b>DEGRADATION FACTOR</b>							
<b>SODIUM SULF. (CRSE)</b>							
<b>SODIUM SULF. (FINE)</b>							
<b>ORGANICS</b>							
<b>REMARKS:</b>							
- Gradation is based on material passing the 3 inch sieve, according to Alaska Test Method T-7. See graphic logs for amount of +3 inch material, if any.							

52TK.60

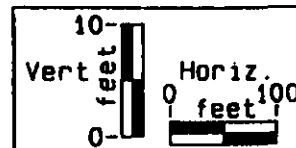
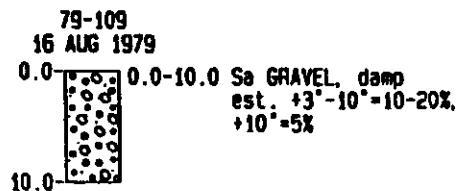
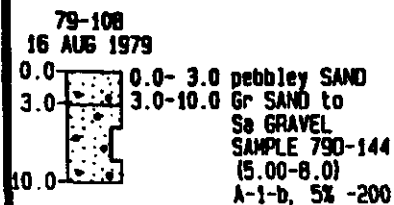
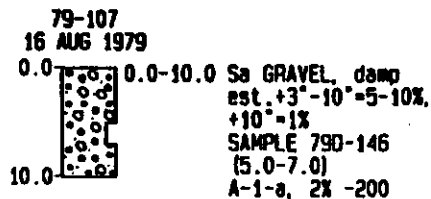
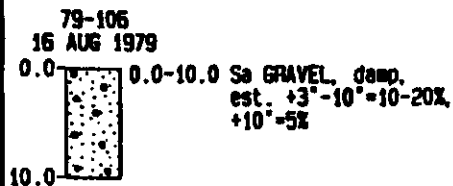
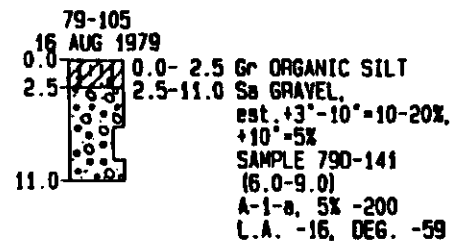
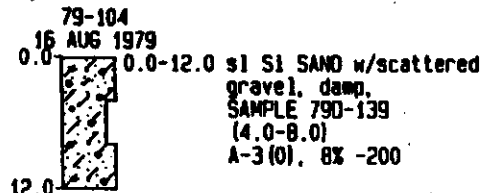
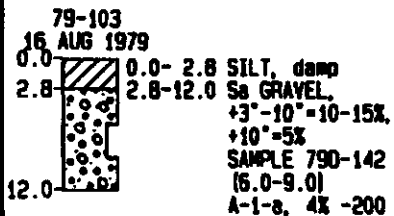


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**STATE OF ALASKA - NORTHERN REGION**  
**DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES**  
**SOILS TESTING REPORT**

<b>PROJECT NAME:</b>		TOK HIGHWAY MILE 52-65					
<b>PROJECT NUMBER:</b>		TQ-FO46-1(29)/60243					
<b>SOURCE:</b>		M.S.46-1-007-5					
<b>SAMPLED BY:</b>		J.Roach					
<b>TEST HOLE NO.</b>		79-103	79-104	79-105	79-106	79-107	79-108
<b>DEPTH (FEET)</b>		6-9	4-8	6-9	4-6	5-7	5-8
<b>STATION (LOCATION)</b>							
<b>OFFSET (FEET)</b>							
<b>LAB NO.</b>		79D-142	79D-139	79D-141	79D-145	79D-146	79D-144
<b>DATE SAMPLED</b>		8-16-79	8-16-79	8-16-79	8-16-79	8-16-79	8-16-79
<b>PERCENT PASSING-</b>							
	<b>3"</b>	100	100	100	100	100	100
	<b>2"</b>	94	100	99	95	90	97
	<b>1"</b>	73	98	81	92	79	83
<i>Gravel</i>	<b>3/4"</b>	65	98	73	89	74	77
	<b>1/2"</b>	57	98	67	83	68	74
	<b>3/8"</b>	50	97	58	77	62	69
	<b>#4</b>	38	97	46	69	53	62
	<b>#10</b>	25	96	36	61	45	46
<i>Sand</i>	<b>#40</b>	11	86	17	36	12	20
	<b>#50</b>	8	77	12	20	7	12
	<b>#100</b>						
<i>Silt - Clay</i>	<b>#200</b>	4	8	5	1	2	5
<i>Clay Size</i>	<b>02mm</b>		4				
	<b>.005mm</b>						
<b>LIQUID LIMIT</b>		NV	NV	NV	NV	NV	NV
<b>PLASTIC INDEX</b>		NP	NP	NP	NP	NP	NP
<b>CLASSIFICATION</b>		A-1-a	A-3(0)	A-1-a	A-1-b	A-1-a	A-1-b
<b>SOIL DESCRIPTION</b>		SaGr	sl.SiSa	SaGr	GrSa	SaGr	SaGr
<b>NATURAL MOISTURE</b>							
<b>SP.GR. (FINE)</b>				2.74			
<b>SP.GR. (COARSE)</b>				2.75			
<b>MAX DRY DENSITY</b>							
<b>OPTIMUM MOISTURE</b>							
<b>L.A. ABRASION</b>				16			
<b>DEGRADATION FACTOR</b>				59			
<b>SODIUM SULF. (CRSE)</b>							
<b>SODIUM SULF. (FINE)</b>							
<b>ORGANICS</b>							
<b>REMARKS:</b>							
- Gradation is based on material passing the 3 inch sieve, according to Alaska Test Method T-7. See graphic logs for amount of +3 inch material, if any.							

52TK81



STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
ENGINEERING GEOLOGY UNIT

DATA:	MG	TOK HIGHWAY MILE 52 - 65 MATERIAL SITE 46-1-007-5
DRAWN:	CAT	
APPROVED:	HRL	PROJECT NO.: 60243
DATE:	5/30/91	SCALE: AS SHOWN



# MEMORANDUM

# State of Alaska

TO: Paul Misterek  
Regional Materials Engineer  
DOT/PF - Fairbanks

DATE: April 29, 1983

THRU: Bob Larson *BL*

FILE NO:

TELEPHONE NO: 835-4322

FROM: Dallas Rasmussen *DR*  
Geologist  
Valdez Residency

SUBJECT: Borrow Sources for  
Richardson Highway, Mile 76  
and Tok Cutoff, 52-91 mile

## Richardson Highway, Mile 76

M.S. 71-1-006-5, the Burma Road Quarry, has produced Class II rip rap before and appears to contain sufficient material to produce the required amount of rip rap for this project.

M.S. 71-1-014-5 has been used very extensively since it was investigated many years ago. DOT has used it on several projects, Alyeska used it extensively and also put their pipeline through it then used it as a waste disposal area. The last Project Engineer, (Paul Mulcahy), to use this site indicated there was not much available material left. I would suggest adding M.S. 71-1-024-5 to the plans and use 014 as a backup site.

## Tok Cutoff, 52-91

All three sites contain usable material but all have been used since last reported on so the Contractor should be required to insure himself that the required quantities are left in the site he chooses to use. The following comments are offered.

M.S. 46-1-007-5 has a sizable quantity of granular material, however, much of the material is very sandy.

M.S. 46-1-022-5 contains a sizable quantity of material, however, the last Project Engineer, (Steve Guest), to use it indicates the gravel tends to be finer and says perhaps Type II paving aggregate might be better. Attached are some diagrams showing the location of the stripping piles and some glacial ice remnants that were encountered.

M.S. 46-1-008-5 is a small pit, about 200' x 500', therefore, there is only a very limited quantity of material available here.

DR/mmw

Attachments

$$A = .5 \times 350' \times 625' \times 9' = 984,375 \text{ ft}^3 = 36,458 \text{ yd}^3$$

$$B = 200' \times 175' \times 9' = 315,000 \text{ ft}^3 = 11,667 \text{ yd}^3$$

$$C = .5 \times 200' \times 225' \times 9' = 202,500 \text{ ft}^3 = 7,500 \text{ yd}^3$$

$$D = .5 \times 150' \times 235' \times 9' = 158,625 \text{ ft}^3 = 5,875 \text{ yd}^3$$

61,500  $\text{yd}^3$

less 10% for slopes 55,350  $\text{yd}^3$

less 10% to 10

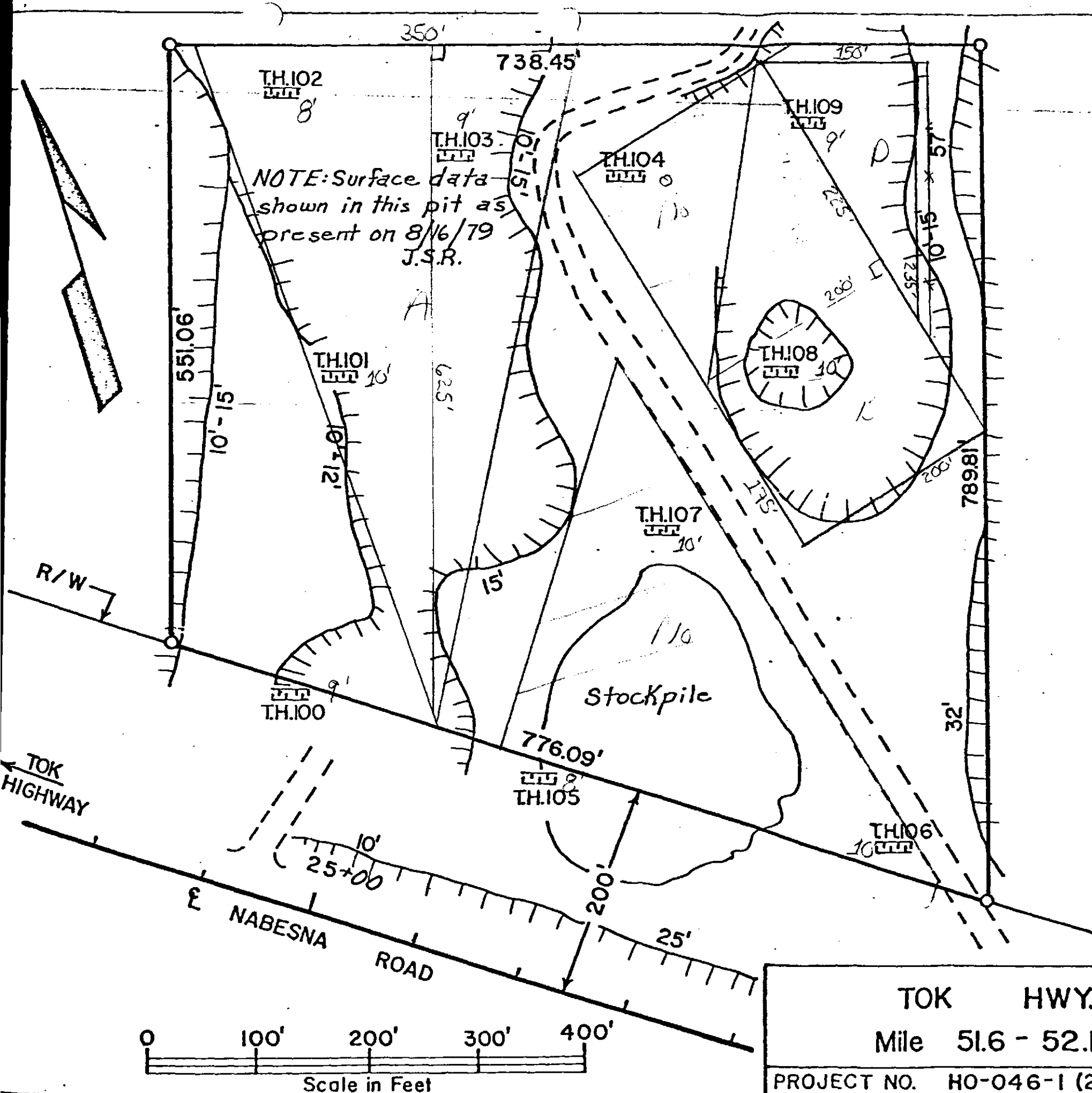
less 5% + 10

less 15%

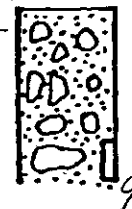
47,048  $\text{yd}^3$

say 45,000  $\text{yd}^3$

461-007-5



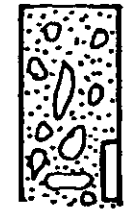
TH 100  
8/16/79



0-9' Slightly Silty Sandy Gravel;  
Est. +3"-10"=15-20%; +10"=5%;  
S\*100=A-1-a, F-1, N.P.

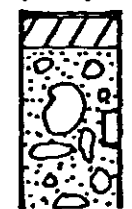
45,000y<sup>3</sup>  
90,000cu yd  
JMB  
7 March 83

T.H.101  
8/16/79



0-10' Sandy Gravel;  
Est. +3"-10"=10-20%; +10"=5%;  
S\*101=A-1-a, N.F.S., N.P.

TH 102  
8/16/79



0-0.3' Organics  
0.3'-1.8' Silt; A-4  
1.8'-10' Sandy Gravel; Damp;  
Est. +3"-10"=10-20%; +10"=5%;  
S\*102=A-1-a, N.F.S., N.P.

TOK HWY. Mile 51.6 - 52.1		MATERIALS SITE NO. 46-1-007-5	
PROJECT NO. HO-046-1 (26)		Scale: 1"=100'	Date: Feb. 1981.
		Data: J.S.R.	Drawn: B. D. Approved:

# STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
VALDEZ RESIDENCY

P. O. Box 507  
Valdez, AK 99686  
(907) 835-4322

March 30, 1983

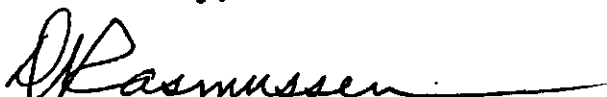
Mr. Sam Giammelva  
Rogers and Babler  
1301 E. 64th Avenue  
Anchorage, Alaska 99502

Dear Mr. Giammelva:

Paul Misterek requested that I send you the most current information on M.S. 46-1-001-5 and M.S. 46-1-007-5. The information is enclosed. M.S. 46-1-001-5 contains very little, if any, usable material; however, M.S. 46-1-017-5 is immediately adjacent and does contain some material. I have enclosed information on M.S. 46-1-017-5.

You should be aware that M.S. 46-1-007-5 and M.S. 46-1-017-5 have both been extensively used by contractors and/or maintenance forces since these investigations and, therefore, do not contain the quantities of material represented by the information in these reports. You must determine for yourself the quantity of material remaining in these sites.

Yours truly,

  
J. Dallas Rasmussen  
Geologist

JDR/sd

cc:  Paul Misterek

Enclosures

M.S. 46-1-007-5  
SLANA MAINTENANCE PIT

Project No. A 84151  
Tok Cut-off Mi. 30-32 &  
1983 52-91

#### LOCATION AND ACCESS

This site is located about 0.5 mile on the Nabesna Road. The Nabesna Road joins the Tok Highway at about Mile 60. The site is adjacent to the highway and access is provided by existing haul roads.

#### DESCRIPTION

This site is located on an old alluvial or ice contact deposit. This is an existing pit which was used during the reconstruction of about 3 miles of the Nabesna Road. It has also been used extensively by the ADOT/PF maintenance forces and contains at this time (1/81) a stockpile of processed material which is unavailable for use.

The useable material varies from coarse cobbly sandy gravel with occasional boulders to sand. By visual estimate the percentage of 3 inch to 10 inch (cobbles) varies from 1 to 20 percent and the percentage of +10 inch material (boulders) from 1 to 5.

The site is located on a narrow ridge. The ridge drops off sharply to the southeast onto the floodplain of Ahtell Creek. The ridge slopes down gently to the northwest onto a flat area.

Most of the site has been cleared and stripped except the northwest corner around Test Holes 102 and 103. Here the overburden consists of 2 to 3 feet of silt and organics. The vegetal cover in this area consists of a medium spruce and aspen forest with some bushy areas.

No frozen ground was encountered.

No groundwater was encountered.

#### APPARENT OWNER

The ADOT/PF has a grant on this site.

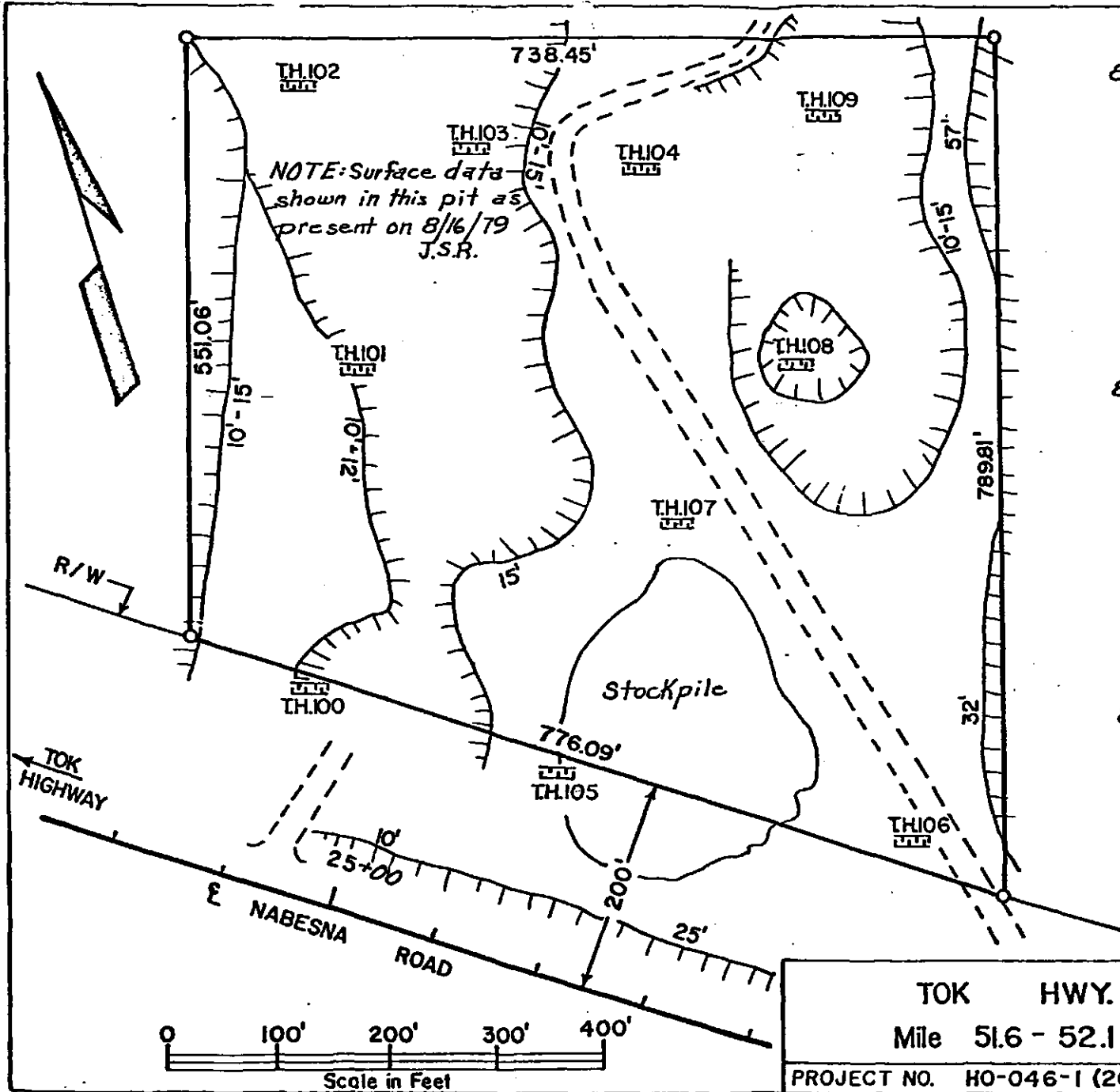
SOILS TESTING REPORT

PROJECT NAME TOK HIGHWAY, Mile 51.6 to 52 PROJECT NO. F-046-1(26) - E90032 SAMPLED BY JERRY ROACH

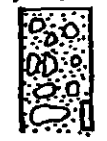
MATERIAL SITE M.S. 461-007-5

STATION								
OFFSET (FEET)								
DEPTH (FEET)	7'-9'	7'-10'	5'-7'	6'-9'	4'-8'	6'-9'	4'-6'	5'-7'
TEST HOLE NO.	100	101	102	103	104	105	106	107
FIELD NO.	100	101	102	103	104	105	106	107
LAB NO.	79D-143	79D-140	79D-147	79D-142	79D-139	79D-141	79D-145	79D-146
ESTIMATED %+10"	-5	-5	-5	-5	-	-5	-	-1
+ 3"	15-20	10-20	10-20	10-20	-	10-20	-	5-10
PERCENT PASSING	3"	100	100	100	100	100	100	100
	2"	90	89	92	94	100	99	95
	1"	77	73	71	73	98	81	92
	3/4"	70	66	65	65	98	73	89
	1/2"	65	60	58	57	98	67	83
	3/8"	59	52	51	50	97	58	77
	# 4	50	39	41	38	97	46	69
	# 10	40	24	31	25	96	36	61
	# 40	17	8	14	11	86	17	36
	# 50	12	6	10	8	77	12	20
	# 200	8	2	3	4	8	5	1
.02 mm					4			
.005mm								
LIQUID LIMIT	NV	NV	NV	NV	NV	NV	NV	NV
PLASTIC INDEX	NP	NP	NP	NP	NP	NP	NP	NP
ASHO CLASS	A-1-a	A-1-a	A-1-a	A-1-a	A-3(0)	A-1-a	A-1-b	A-1-a
F.S.V.	F-1	NFS	NFS	NFS	F-2	NFS	NFS	NFS
Sp. G., FINE						2.74		
NAT. MOISTURE								
L.A. ABRASION						16%		
SODIUM SULFATE								
COARSE						.992		
FINE						2.55		
DEGRADATION VALUE						59		
S.P. G. COARSE						2.75		



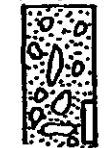


TH 100  
8/16/79



0-9' Slightly Silty Sandy Gravel;  
Est. +3"-10"=15-20%; +10"=5%;  
S\*100=A-1-a, F-1, N.P.

TH 101  
8/16/79



0-10' Sandy Gravel;  
Est. +3"-10"=10-20%; +10"=5%;  
S\*101=A-1-a, N.F.S., N.P.

TH 102  
8/16/79



0-0.3' Organics  
0.3'-1.8' Silt; A-4  
1.8'-10' Sandy Gravel; Damp;  
Est. +3"-10"=10-20%; +10"=5%;  
S\*102=A-1-a, N.F.S., N.P.

-13-

TOK HWY. Mile 51.6 - 52.1		MATERIALS SITE NO. 46-1-007-5	
PROJECT NO. HO-046-1 (26)		Scale: 1"=100'	Date: Feb. 1981.
		Date: J.S.R.	Drawn: B. D. Approved:



T.H.103  
8/16/79



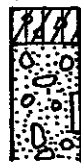
0-2.8' Silt; A-4; Damp  
2.8'-12' Sandy Gravel;  
+3"-10"=10-15%; +10"=5%  
S\*103=A-1-a, N.F.S., N.P.

T.H.104  
8/16/79



0-12' Slightly Silty Sand  
w/scattered Gravel; Damp;  
S\*104=A-3, F-2, N.P.

T.H.105  
8/16/79



0-2.5' Gravelly Organic  
Silt; A-4  
2.5'-11' Sandy Gravel;  
Est. +3"-10"=10-20%;  
+10"=5%  
S\*105=A-1-a, N.F.S., N.P.

T.H.106  
8/16/79



0-10' Gravelly Sand;  
Damp;  
S\*106=A-1-b, N.F.S., N.P.

T.H.107  
8/16/79



0-10' Sandy Gravel; Damp;  
Est. +3"-10"=5-10%;  
+10"=1%;  
S\*107=A-1-a, N.F.S., N.P.

T.H.108  
8/16/79



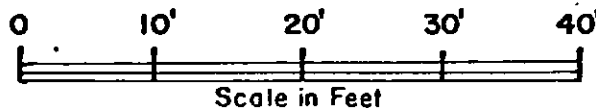
0-3' Pebbley Sand; A-3  
3'-10' Gravelly Sand to  
Sandy Gravel;  
S\*108=A-1-b, N.F.S., N.P.

T.H.109  
8/16/79

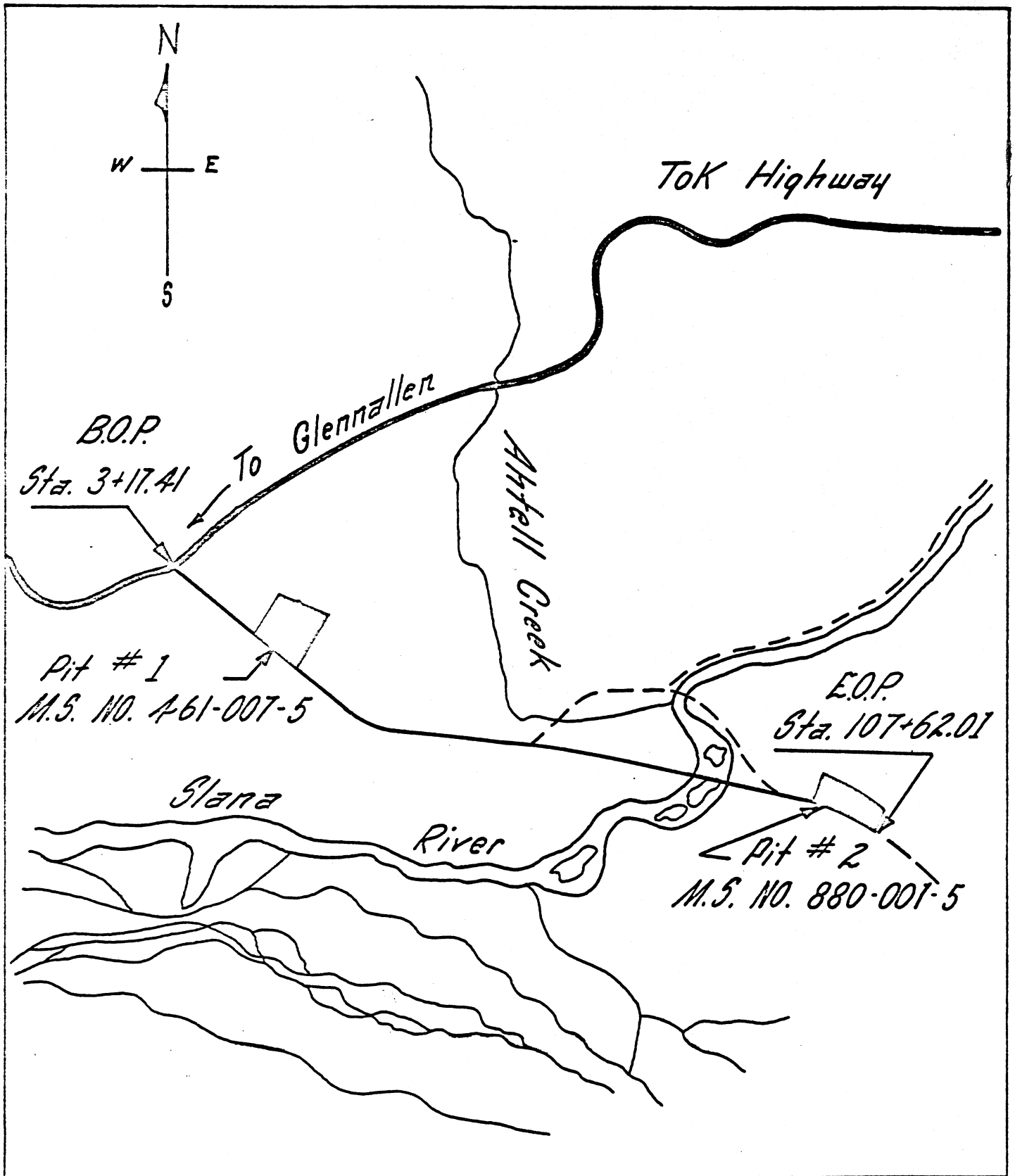


0-10' Sandy Gravel; Damp;  
Est. +3"-10"=10-20%;  
+10"=5%;

-14-



TOK HWY. Mile 51.6 - 52.1		MATERIALS SITE NO. 46-1-007-5	
PROJECT NO. HO-046-1 (26)		Scale: 1"=10'	Date: Feb. 1981
		Date: J. S. R.	Drawn: B. D. Approved: <i>[Signature]</i>

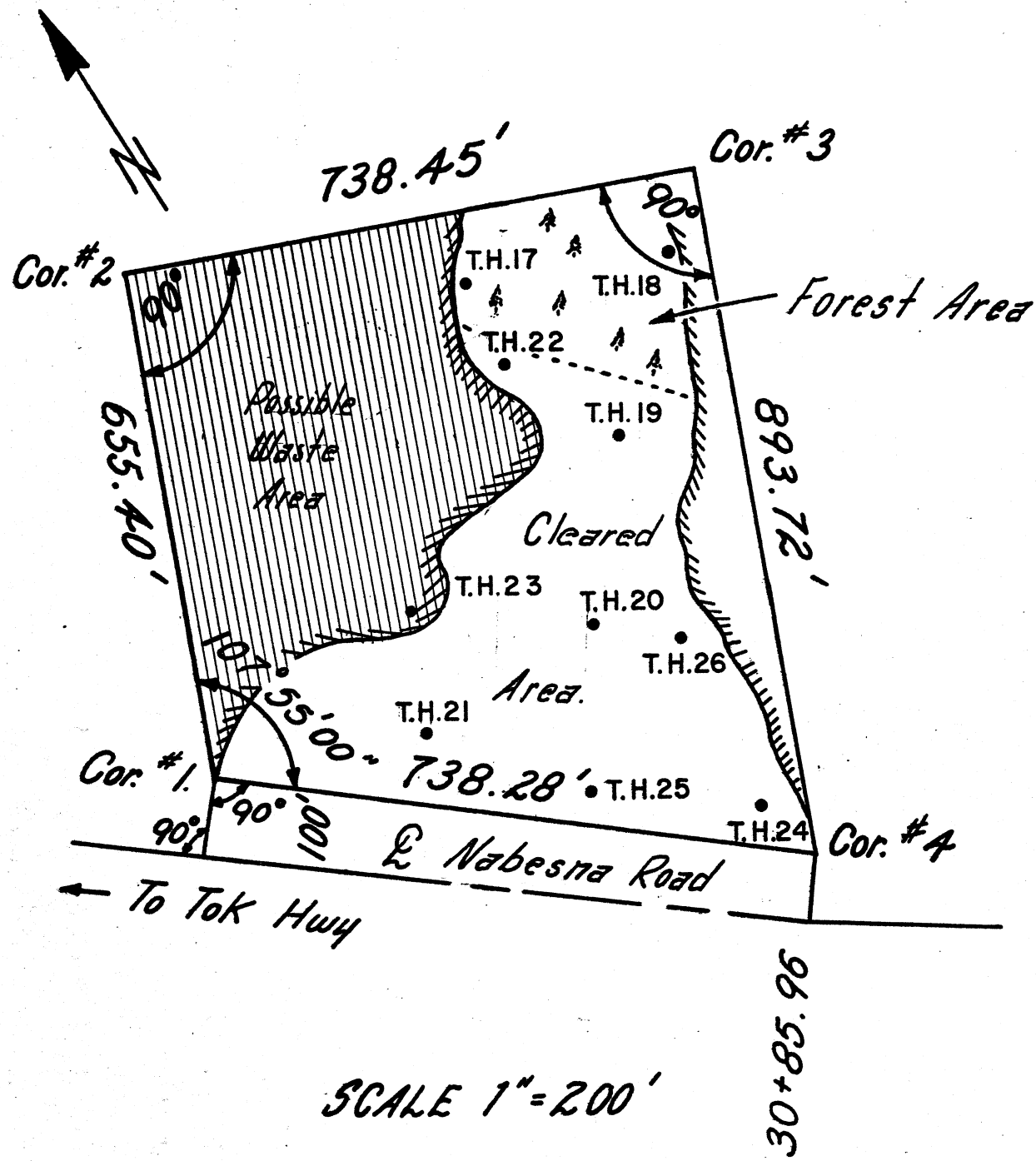


Location Map  
Nabesna Road

STATE OF ALASKA  
 DEPARTMENT OF HIGHWAYS  
 VALDEZ DISTRICT  
 MATERIALS SECTION

Project - S-0880(1)

SCALE 1" = 1/2 MILE DATE Oct. 4, 1965  
 DATA R.H.S. DRAWN D.W.H. APPROV. R.T.P.



<p>T.H. 17 8-4-65</p> <p>0'-0.6' Organic Mtl. 0.6'-8' Sandy Gravel A-1-a, NFS 8'-15' Gravelly Sand A-1-b NFS</p>	<p>T.H. 18 8-4-65</p> <p>0'-0.8' Organic Mtl. 0.8'-15' Sandy Gravel A-1-a, NFS</p>	<p>T.H. 19 8-4-65</p> <p>0'-17' Sandy Gravel A-1-a, NFS</p>	<p>T.H. 20 8-4-65</p> <p>0'-13.5' Sandy Gravel A-1-a, NFS</p>
<p>T.H. 21 8-4-65</p> <p>0'-4' Sandy Gravel A-1-a, NFS 4'-5' Organic Mat. 5'-6.5' Sand w/ Silt 6.5'-13.5' Sandy Gravel A-1-a, NFS.</p>	<p>T.H. 22 8-4-65</p> <p>0'-13.5' Sandy Gravel A-1-a, NFS</p>	<p>T.H. 23 8-4-65</p> <p>0'-2' Sandy Gravel 2'-3' Organic Mat. 3'-4.5' Sand &amp; Silt 4.5'-13.5' Sandy Gravel A-1-a, F-1</p>	<p>T.H. 24 8-4-65</p> <p>0'-3.5' Gravelly Sand A-3, NFS 3.5'-16.5' Sand A-1-b, NFS</p>
<p>T.H. 25 8-5-65</p> <p>0'-13.5' Sandy Gravel A-1-b, NFS</p> <p>Sandy Gravel A-1-a, NFS</p>	<p>T.H. 26 8-5-65</p> <p>0'-13.5' Sandy Gravel A-1-a, NFS</p>	<div data-bbox="2237 1159 2890 1622" data-label="Figure"> <p>Legend:              Moss              Organic Mat.              Gravelly Sand              Sandy Gravel              Silty Sand              - Sample -              Sand              Frozen Water Table</p> </div>	

Scale 1" = 10'

<p>PROPOSED MATERIALS SOURCE NABESNA ROAD PROJECT NO. S-088-0(1)</p>	<p>MATERIALS SITE NO. 461-007-5</p>		
	<p>DATE SEPT. 1965</p>	<p>DATA. RLS</p>	<p>DRAWN. DWL</p>
		<p>APPROV. W.H.S</p>	

MATERIALS SITE DATA

Material Site: 461-007-5

Project: Nabesna Road S-0880(1)

Legal Description: \_\_\_\_\_

Date: July, 1965

Laboratory Analysis

Pit Description

%	Test Hole	17	18	19	20	21	22	23	24	25	26	27	17	21	24	25
	Sample No.	S-21	S-23	S-24	S-26	S-28	S-29	S-35	S-34	S-36	S-39	S-40	S-22	S-27	S-33	S-37
	Lab. No.	660	662	663	665	667	668	673	672	674	677	678	661	660	671	675
	Depth	5'-6'	6'-10'	8'-9'	12'-13'	12'-13'	3'-4'	12'-13'	15'-16'	2'-3'	12'-13'	10'-11'	10'-11'	2'-3'	1'-2'	12'-13'
3" Square					100	100				100						
2"	100	100	100	100	96	96	100			95	100		100			
1"	83	90	87	91	68	75	80			81	90		98	80	97	83
3/4"	78	84	80	86	60	65	70			72	85		96	73	92	73
1/2"																
3/8"	62	65	65	73	46	46	54			53	63		91	55	86	55
No. 4 Sieve	48	54	53	61	34	34	42	100	40	45	100	82	42	81	42	
No. 10	34	44	38	49	24	25	31	99	28	31	99	69	32	77	31	
No. 40	13	10	8	11	10	11	16	50	9	14	78	15	16	54	12	
No. 200	2	0	1	1	3	3	7	1	2	1	1	0	5	2	2	
.02 MM							6									
.005 MM							3									
Liquid Limit	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Plastic Index	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
Sp. G. (Pines)	2.81	2.64	2.75	2.79	2.76	2.77	2.76	2.80	2.77	2.82	2.82	2.82	2.78	2.81	2.81	
Sp. G. (Coarse)		2.73														
Dry Unit Wt. (Loose)		118														
Dry Unit Wt. (Rodded)		125														
Max. Density																
Opt. Moisture																
L. A. Abrasion Loss		15														
Soundness Loss Ratio		7.15														
Clay Lumps		0														
Organ. Impurities																
P.S.V.	NFS	NFS	NFS	NFS	NFS	NFS	F-1	NFS	NFS	NFS	NFS	NFS	NFS	NFS	NFS	NFS
Classification	A-1-a	A-1-a	A-1-a	A-1-a	A-1-a	A-1-a	A-1-a	A-1-b	A-1-a	A-1-a	A-3	A-1-b	A-1-a	A-3	A-1-a	

Field investigation involved the digging of eleven test pits with a backhoe equipped HD-11. The soils thereby exposed were examined, sampled and recorded.

The materials site is located approximately 0.5 miles from B.O.P. on the left side of the Nabesna Road. The pit is situated on a high terrace of the Copper River. Most of the pit area has been cleared and stripped. The vegetation on the covered portion consists of moderately dense to dense spruce, cottonwood, and willows up to twelve inches in diameter. The thick ground cover consists of various bushes and moss. Stripping will consist of 1.0 foot of organic soil in the uncleared area. The material is stream washed sands and gravels. AASHO classification is A-1-a, NFS for the gravels and A-3 for the sands. The maximum diameter is 18 inches with less than one per cent larger than 10 inches and approximately two per cent larger than 3 inches. Volcanic material is predominant with the particles being rounded. The deposit is cross-stratified.

No frost or ground water were encountered in test pits in the previously cleared area. Frost was encountered at 8.0 feet in the uncleared area.

Material Adequate for:

- Embankment
- Select Material, Type I
- Type II
- Type III
- Base Course Aggregate
- Aggregate for Concrete, Coarse
- Fine
- Aggregate for Bitumen
- Riprap

Area of Pit Approx. 13.5 acres Area cleared & stripped at present Approx. 6.0 acres

Clearing \* Medium Stripping \* 1.0 foot Depth to Water Table

Length of Access Road (Existing) None (Additional Required) None

Apparent Owner State of Alaska

Indicated quantity of material 150,000 cu. yds.

\* In forested area

