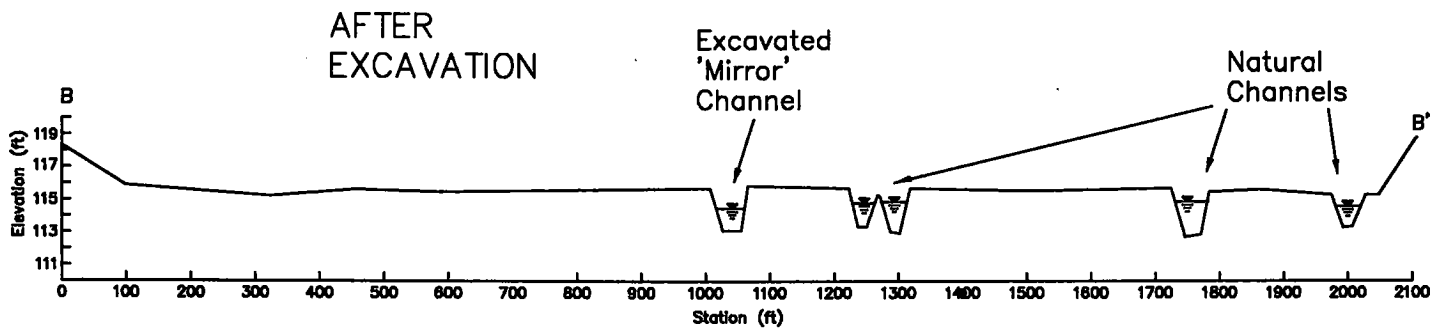
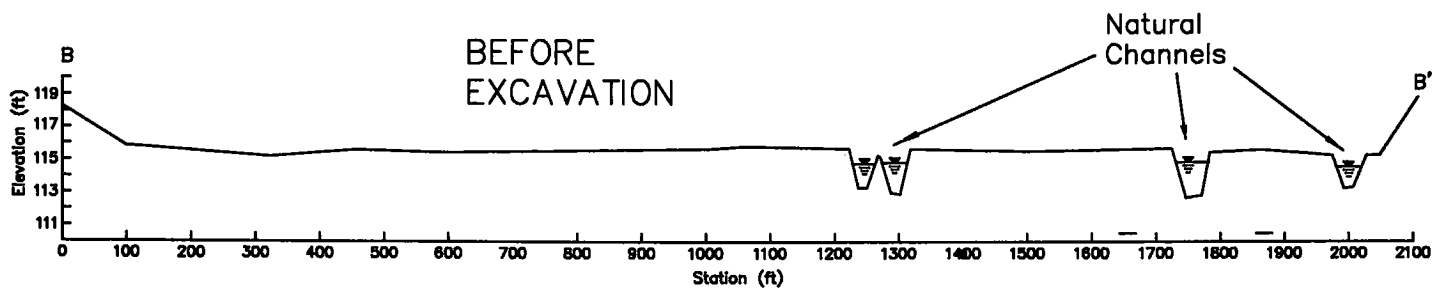


FIGURE 4—EAST FORK RIVER GRAVEL EXTRACTION SITE MAP



### GENERAL NOTES

Typical cross-section after excavation.  
Annual excavation will not  
exceed 5,410 cubic yards.

FIGURE 5—EAST FORK RIVER TYPICAL CROSS-SECTION, SHOWING  
MIRROR CHANNEL GRAVEL EXTRACTION METHOD





PROCESSING  
CRUSHER  
STOCKPILE  
AREA

TOKLAT  
ROAD  
CAMP

TYPICAL  
TEIMPORARY  
ACCESS ROAD

TYPICAL 'MIRROR  
EXCAVATION  
CHANNELS  
LOCATIONS  
VARY FROM  
YEAR TO YEAR

Cross-section A-A'

TOTAL AREA AVAILABLE FOR  
GRAVEL EXTRACTION IS 185  
ACRES.  
TYPICAL GRAVEL EXTRACTION  
(MIRROR CHANNEL) IS 30 FT  
WIDE BY 3 FEET DEEP.  
TYPICAL TOTAL LENGTH OF  
EXTRACTION CHANNELS (2 OR  
MORE) IS 3,342 FEET.  
TOTAL DISTURBANCE FROM  
CHANNEL EXCAVATION IS 2.3  
ACRES.

TYPICAL TEMPORARY  
DISTURBANCE FROM ACCESS  
ROAD CONSTRUCTION IS 1  
ACRE OR LESS.

HEAVY DASHED LINE  
SHOWS LIMITS OF  
AREA TO BE USED  
FOR GRAVEL EXCAVATION.

## LEGEND

- BRAIDED STREAM CHANNELS (TYPICAL)
- GRAVEL FLOODPLAIN
- BANK PROTECTION (FUTURE)

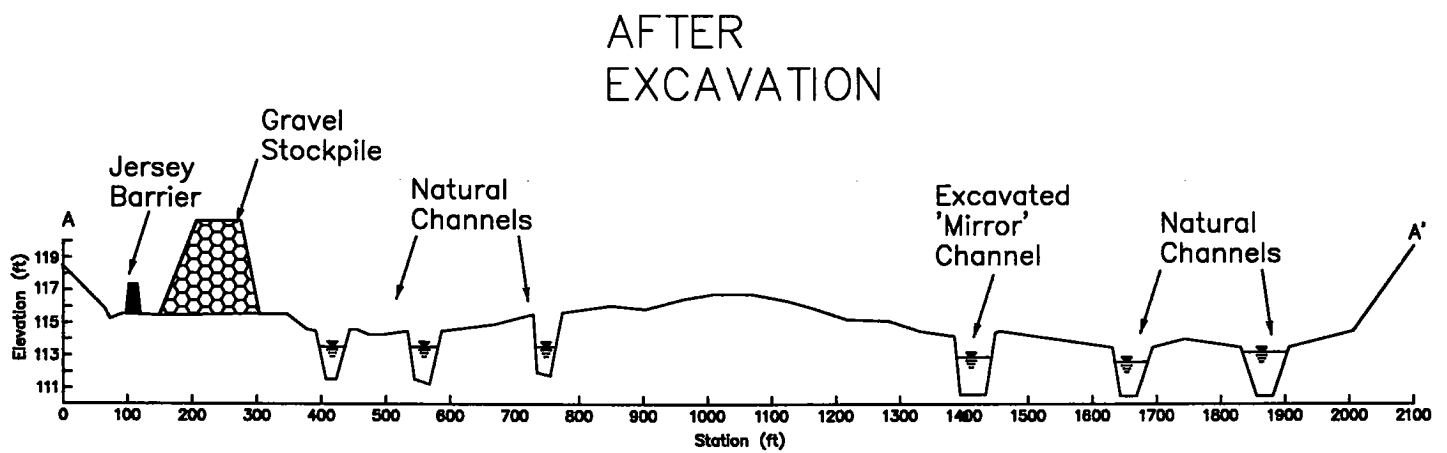
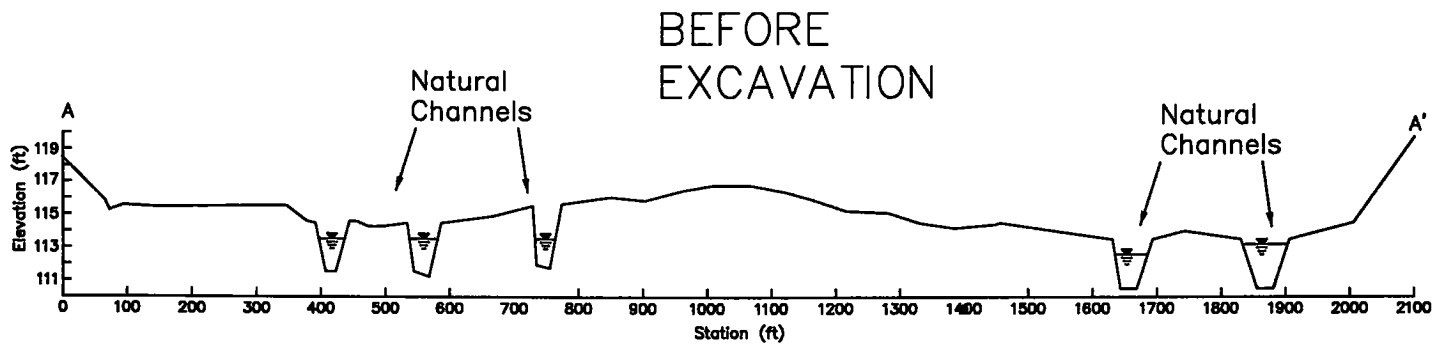
SCALE (FEET)



TOKLAT RIVER BRIDGES

TO PARK  
ENTRANCE  
53 MILES

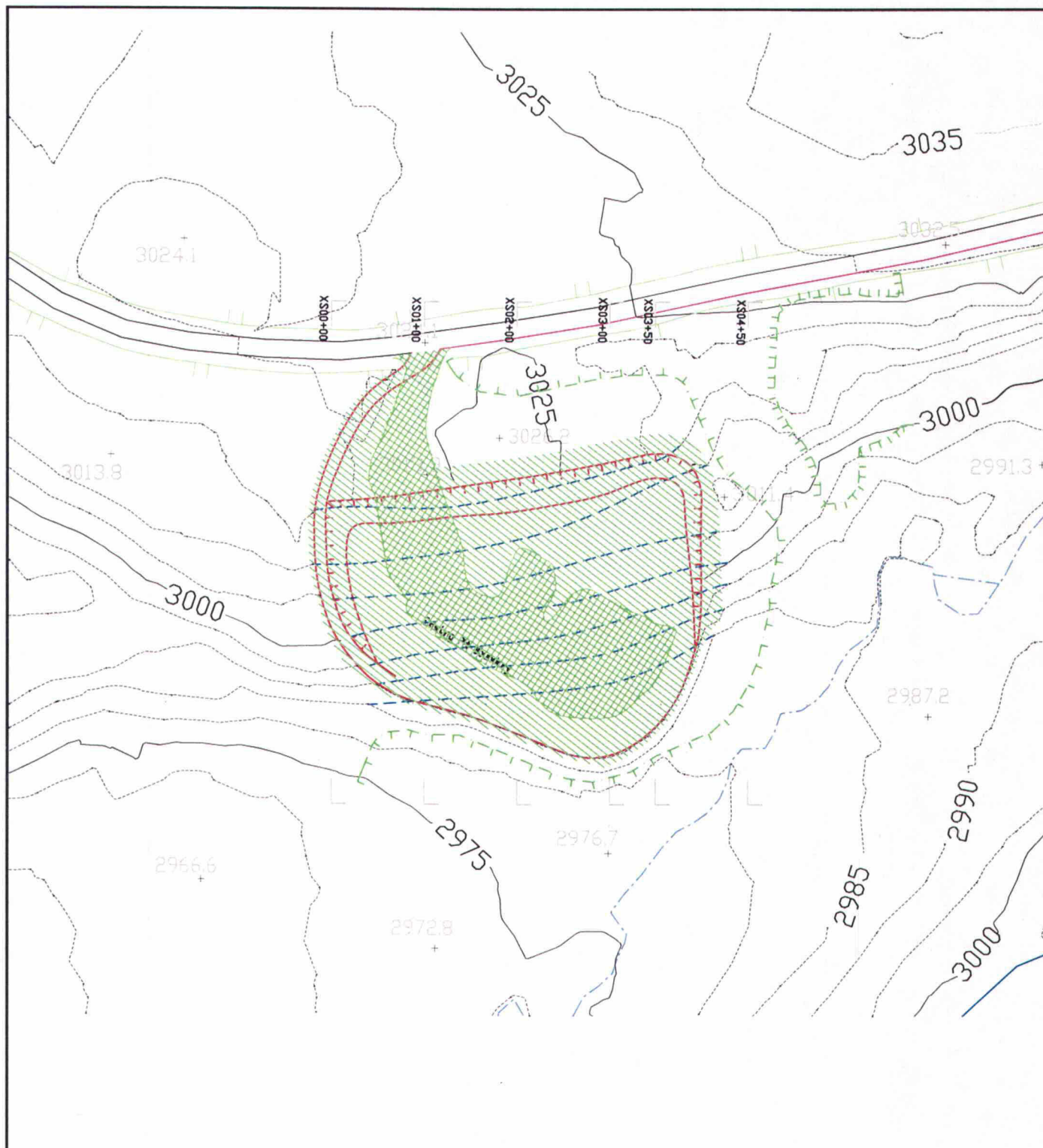
FIGURE 2—TOKLAT RIVER GRAVEL EXTRACTION SITE MAP.









### GENERAL NOTES

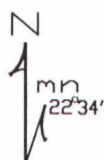
Typical cross-section after excavation.  
Annual excavation will not  
exceed 11,104 cubic yards

FIGURE 3—TOKLAT RIVER TYPICAL CROSS-SECTION SHOWING 'MIRROR CHANNEL'  
GRAVEL EXTRACTION METHOD.



### Legend

-  - Proposed Extraction Area
-  - Post Reclamation Contours
-  - Access Road / Working Area
-  - Cross-Section Locations
-  - Approx. Wetland Boundary (ticks towards wetland)
-  - Approx. Area of Disturbance (post reclamation)



Geologic Resources Division

Denali National Park  
Site Map  
Extraction Plan  
Beaver Pond (MP 70)

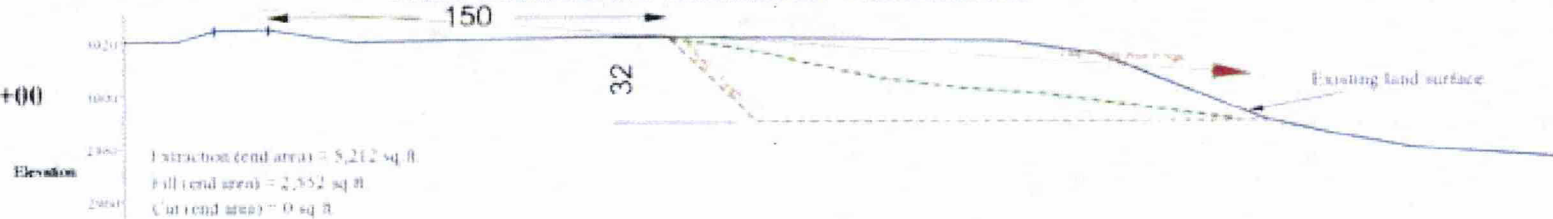
Extraction and Restoration Plan

Modifications  
KZiegenbein 3/12/01 - 5/8/01 - 3/19/03  
D:\Shared D\DENALI\MP70\_BEVP2.dwg

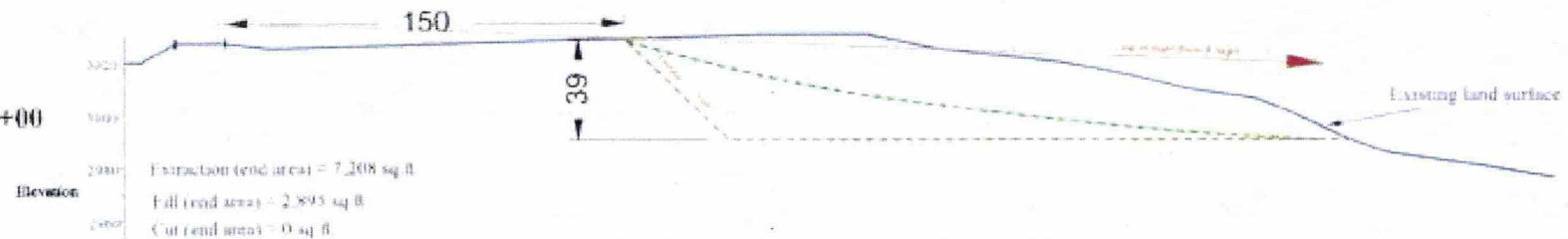
# Beaver Pond Pit (MP 70)

## Cross-Sections for Extraction / Reclamation

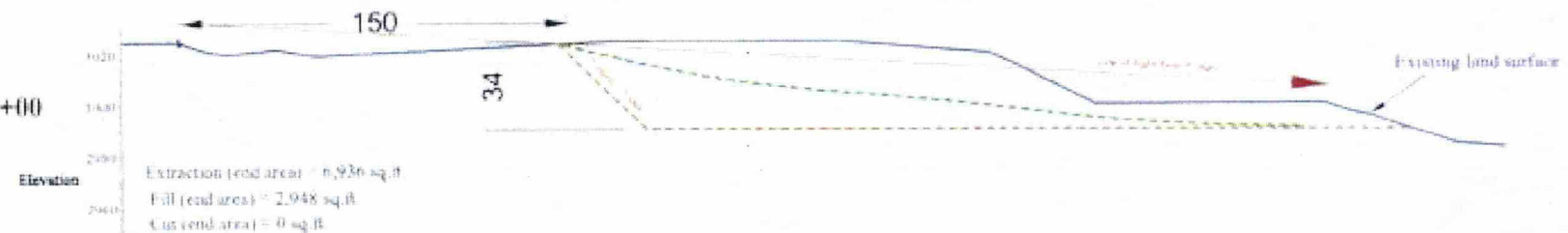
**X-Section - 01+00**  
Looking East



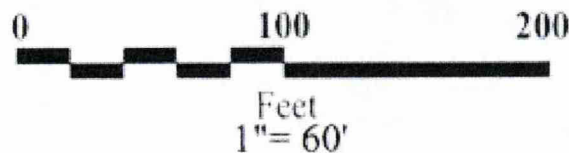
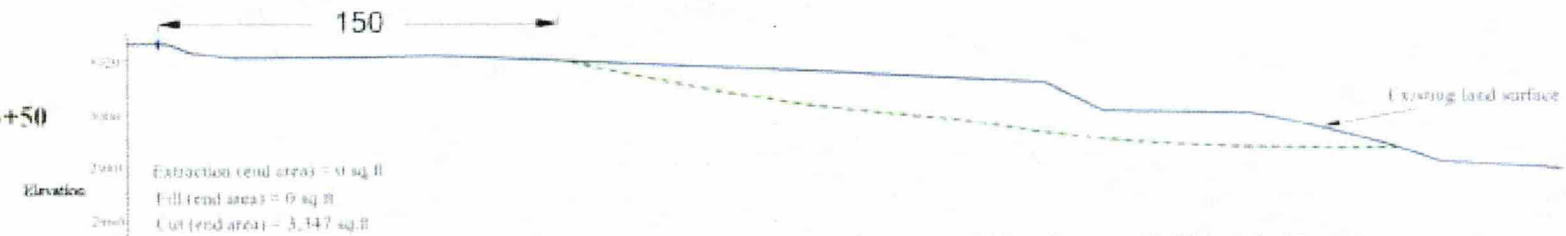
**X-Section - 02+00**  
Looking East



**X-Section - 03+00**  
Looking East



**X-Section - 03+50**  
Looking East

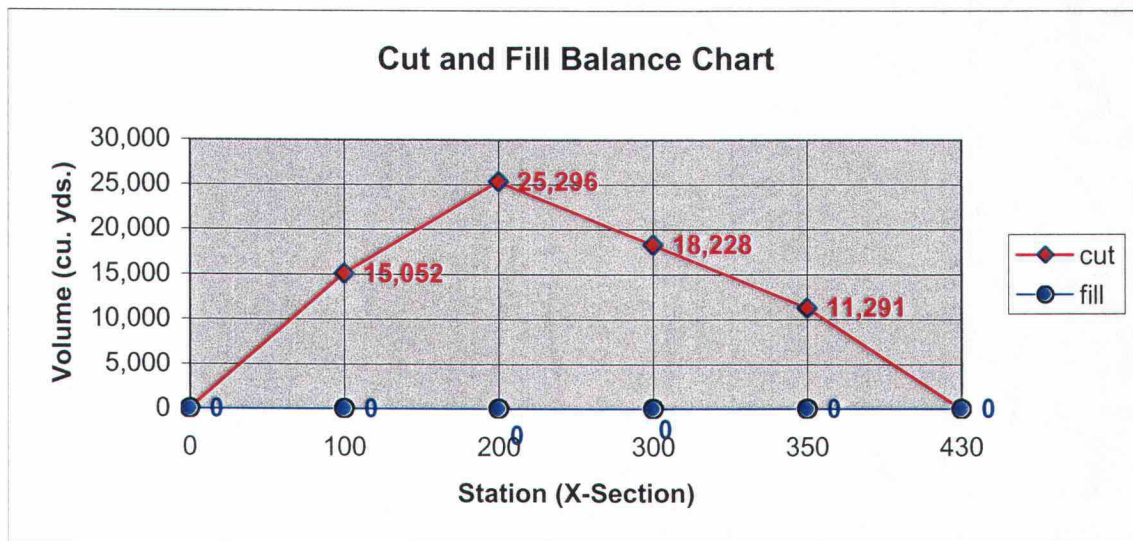


Existing Area of Disturbance: 42,960 sq. ft. (1 acre)  
Proposed Area of Disturbance: 154,365 sq. ft. (3.5 acres)  
Topsoil Salvage Area (new disturbance): 111,405 sq. ft. (2.5 acres)  
Straw Mulch/Revegetation Area: 0 sq. ft. (0.0 acres)



# Volume Calculations Beaver Pond Gravel Pit (MP 70) Denali National Park

Station (X-Section)	Interval	Zone of Influence		End Area (sq. ft.)	Volume (cu.ft.)	Volume (cu.yds.)	
			cut	0	0	0	
0		50					
	50		fill	0	0	0	
	50		cut	4,064	406,400	15,052	
100		100					
	50		fill	0	0	0	
	50		cut	6,830	683,000	25,296	
200		100					
	50		fill	0	0	0	
	50		cut	6,562	492,150	18,228	
300		75					
	25		fill	0	0	0	
	25		cut	4,690	304,850	11,291	
350		65					
	40		fill	0	0	0	
	40		cut	0	0	0	
430		40					
			fill	0	0	0	
TOTAL CUT =			69,867	Cubic yards	Excess Cut =	69,867	Cubic yards
TOTAL FILL =			0	Cubic yards	Fill Needed =		Cubic yards





# Volume Calculations

## Old Boundary Pit

### Denali National Park

[illegible]