

# MEMORANDUM

# STATE OF ALASKA

Department of Transportation and Public Facilities

To: Record

Date: November 16, 2004

File No.: 51809

Phone No.: 269-0523

From: Crane Johnson  
Designer  
Aviation Design

Subject: Nightmute Reconstruction  
Project No. 51809

Date of trip: November 15, 2004

DOT Personnel: Gary Lincoln, P.E., Project Manager, Aviation Design  
Ralph Kiehl, P.E., Design Engineer, Aviation Design  
Crane Johnson, Designer, Aviation Design

Community contacts: Jimmy George, Nightmute City Mayor  
Henry Simmons, Chinuruk Incorporated Manager  
Phillip Tulik, Village Council Administrator

## Purpose:

The purpose of this field visit was to familiarize central region design staff with the existing airport, examine alternatives for a haul route to Material Site 5 and meet with the City, Corporation and Tribal Council.

## Existing Airport Facilities:

The existing runway is 50' x 1600' within a 100' x 2000' safety area. The existing runway has experienced differential settlement, some of which has been corrected during a recent project that added surface course to the runway. There are still obvious dips in the surface of the runway. The runway safety area has also experienced differential settlement, which was not addressed during the previous maintenance project. There is a pronounced step (approximately 6" in some spots) between the runway surface coarse and the runway safety area along the lateral edges of the runway. This step does not exist between the end of the runway and the safety area extension beyond each runway end. Our Cessna Caravan flight into Nightmute touched down before the runway threshold markers indicating that the local operators are utilizing the safety area ends for normal operations. The current surface

coarse appears to be adequate in the areas that were improved during the last maintenance project. Larger aggregate was observed in areas that were not resurfaced. The current apron has experienced differential settlement and is small. We observed three planes on the ground at once during our visit. Each plane had to park successively closer to the runway, on the taxiway, with the last plane stopping just on the edge of the runway safety area. The existing snow removal equipment building and passenger waiting shelter are dilapidated and each foundation has experienced differential settlement. The existing wind cone is in place and functional. Lateral depressions were observed along the longitudinal edges of the runway embankment, indicating a thawing of permafrost and settlement adjacent to the existing embankment. The local area was covered with approximately 6" of snow, which has been redistributed by winds. The airport access road has experienced severe differential settlement. Large cobbles in excess of 6 inches were visible on the surface of the road in some areas. It is still passable by four-wheeler traffic, however snow machines were opting to use a trail adjacent to the access road that provided a smoother trip. The top elevation of the access road is near the original ground elevation or slightly above the existing ground elevation due to thawing of the underlying permafrost. The Toksook River has moved laterally towards the airport access road and is within approximately ten feet of the road in one location.

It was noted that large cobbles should be screened from the embankment materials to remove the possibility of frost jacking of these large aggregate. The screened cobbles could be crushed and used as surface coarse material for the runway.

#### Haul Routes:

We examined several possible options for a haul route from Material Site 5 to the Airport. Two options were considered feasible during our field visit.

1. This first alternative would traverse the natural bench from the MS 5 site and descend a natural ramp to the low-lying area between the airport access road and Toksook Mountain. The route traverses the low-lying area then intersects the existing airport access road. It would pass to the west of the mounds that are potential archeological sites. The route would cross the native allotment in the area and would also cross one small drainage.
2. The second alternative for the haul route would be to traverse west along a natural bench on Toksook Mountain and utilize an existing ramp from MS 1. This route would avoid the low-lying areas and also avoid the native allotment in the area. This route would require trucks to travel through the edge of town.

A third option was discussed and dismissed during the field visit. This option was to traverse down from the material site and pass between a large lake and the archeological mounds site. The transition from the bench to the low-lying area is abrupt, and the area is very wet between the lake and the archeological site.

During over field visit an older gentleman from Nightmute stopped us to let us know that the small drainage on the east side of the low-lying area is important for subsistence use. We did observe a fish trap in this drainage.

Meeting with the City, Corporation and Council:

*In general the local community spoke in their native language between themselves. Henry Simmons and Phillip Tulik translated their comments for us. Henry and Philip also translated our English remarks for the meeting.*

1. Gary introduced the airport project and gave an overview of the project.
  - a. Henry Simmons translated.
2. Gary brought up the alternatives for the material haul route.
  - a. Philip Tulik translated.
  - b. One person said that it might not be a good idea to cross the creek below the material site. This creek is important to the community for subsistence. They fish for Black Fish in the creek. (translated)
  - c. One person asked why the material source behind town could not be utilized (translated).
    - i. Gary responded that the area is located beneath an old landslide and AKDOT does not want to mine from that area due to concerns about the landslide.
    - ii. Henry Simmons translated for Gary.
  - d. One person pointed out that the two options for a haul route might both be equally reasonable. (translated)
  - e. Everyone at the meeting examined the smaller maps provided by AKDOT.
  - f. Several people in the group brought up the idea that the allotment owner might be interested in moving the allotment. (translated)
    - i. Gary asked about the timeline for moving an allotment.
    - ii. Phillip replied that the process might start next year but that if it would happen or how long it would take is unknown.
3. One person pointed out the existing airport access road is threatened by the Toksook River and might eroded away. (translated)
4. Phillip remarked that the general consensus from the community representatives was that they preferred the haul route around the native allotment on the natural bench.
5. Gary brought up the issue that this airport improvement project might not go to construction and that a decision would be made in the future whether to construct the project. He also outlined the current schedule for the airport project with construction schedule to begin in 2006.
  - a. Philip translated.
6. Gary explained the process for an airport improvement project and that the decision to build this project would be made just prior to right of way acquisition.
  - a. Philip translated.

7. One person pointed out that the condition of the access road is poor and that it is difficult to transport a sick person to the existing airport. The village would like to see future maintenance to prevent the road from deteriorating.  
(translated)
  - a. Gary explained that once we purchase the airport property and access road property they would be state owned and maintained.
    - i. Philip translated.
8. Henry Simmons asked that the relationship between the airport project and the Nelson Island road project be discussed further. He thought this was a very important issue to discuss with everyone.
9. Gary told the community to voice their opinions about each project and their preference to the local and state government decision makers.
10. Philip pointed out that the general sentiment from the people at the meeting was that the airport was very important to Nightmute and that we should continue with the design.
11. Philip stated that even if the road project were built, Nightmute would like to keep its local services such as the airport, clinics and schools operating.
12. The meeting was adjourned.

Attachments:

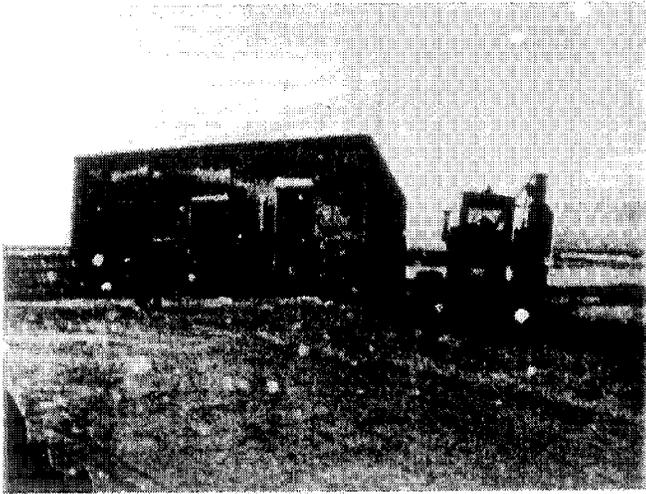
1. Meeting Sign-In sheet.
2. Trip photos with log.

NIG 'TRUSTE 11/15/01

JOINT MEETING

NAME	ORGANIZATION
Thomas Jumbo	
Henry Simons	Chronic
Christy Jk	T.C.
Stuart Julee	City
Albert A. Olick	City or Nat
Don Post	T.C.
Mr. Matthews	
Clint George	T.C.
Mr. Wood	City
Carl Mark	
Phillip Turk	City
Peter Dull	Member
Summer Zuleil	T.C. Sec.
CAROLAN TURK	NME
J. B.	V.P. NTC

Nightmute Trip Photo Log	
Gary Lincoln, Ralph Klehl and Crane Johnson	
11/15/2004	
1010067	Existing waiting shelter and old DOT grader. The new grader is located inside of the SREB building.
1010068	A view of the access road. Its has experienced severe differential settlement. Parts of the road have settled back to the original grade, a majority of the road is approx 1' above original grade.
1010070	Another view of the access road with the Toksook river to the left. Photo taken approx. 200 yds from existing apron along the road.
1010071	Another view of the access road with the Toosok river to the left. This photo is taken in the vicinity of the mounds looking towards the village.
1010072	Another look at the access road with the Toosok river to the left.
1010073	Looking towards the end of the access road. The blue building to the right is a store. The old ROW ends just before the road building in the center. This red building is the village corporation store.
1010074	This a a view along the access road back towards the Toksook river and airport. The building to the left is a store.
1010075	An old historical building in Nightmute.
1010076	This is view looking from town towards the start of the old ROW. The old airport access ROW starts just past the red building on the left. It is 50' wide. Gary and Ralph are in the foreground.
1010077	This is a view looking back into town. Gary and Ralph are in the same location as in picture 1010076. Its shows the opposite view.
1010078	This shows the one culvert that was found along the airport access road.
1010079	Same culvert in picture 10170078, upstream end.
1010080	View from the access road looking back into town. The large lake on the right was altered to bring its southern edge closer to the road. At this point the edge of the lake is adjacent to the airport.
1010081	This is a view along the access road looking towards the airport. The toksook river is to the right. The projection into the river in the foreground is the old turnout that was constructed during the original construction project.
1010082	From the access road looking back into town.
1010083	This is a view of the low lying area that is adjacent to the access road. The possible location of the haul road would be along the bench above the lowlying areas. View to the NW.
1010084	Picture from the same location as 1010083 looking more to the north.
1010085	Same location as picture 1010083, looking to the NE. The potential material site is just over the bluff near the end of the bench. One route discussed for the haul route would be down the natural ramp in the left side of the picture and then across the lowlying area over to the access road.
1010086	A closer look at the bluff. The natural ramp is to the left out of the picture.
1010087	This is a view from below the bluff in picture 1010086 looking to the west upststream in the lowlying area. The possible archeological sites are the mounds to the left in the picture.
1010088	View from the same location as picture 1010087 looking towards the SE. The access road is adjacent to the willows in the background. The mounds are in the right hand side of the photo. Prior to our field visit this was one of the potential haul routes over to the access road. The edge of the lake can be seen in the left hand side of the picture. Active fish traps were located in this area and one elder snowmachined by and let us know that the drainage between the mounds and the bluff in picture 1010086 contains black fish and is used for subsistence fishing.
1010089	Another view looking upstream of the small drainage from the same location as picture 1010088
1010090	A fish trap located in the small drainage. The creek was approximately 2' deep and flowing into the pond. The headwaters of this small drainage is the hill in the right side of the picture.
1010091	Another look at the bluff. The material site is up behind this bluff.
1010092	Another look at the small drainage.
1010093	This is a view from the bluff looking back towards the access road. The natural ramp down is the vegetated tongue located on the right side of the picture.
1010094	This is a view from the bluff looking to the south. The mounds are in the middle with a large lake on the left. One potential haul route would be between the mounds and the lake. This route was dismissed during our field visit. A natural ramp down from the bench is located to the west.
1010095	Another view from the bluff towards town.
1010096	This is a view from the bluff along the bench towards town. A potential haul route was along this bench, tying into a ramp in the existing material site behind town.
1010097	A closer view of the vegetation that is growing in the low lying area between the bench and access road.
1010098	A view from the edge of the existing apron looking towards town. The new apron would be located in this area, between the photographer's location and the river.
1010099	The existing SREB.
1010100	The existing shelter with a view towards the looksok river.
1010101	A view from the same location as 1010100 looking towards the existing unlighted windcone.
1010102	A view from the existing runway/taxiway intersection looking down the runway to the SW.
1010103	A view from the existing runway/taxiway intersection looking towards the existing apron.
1010104	A view from approximately midway down the existing runway towards the SW.
1010105	A view from the existing runway looking down the centering of the proposed runway extension.
1010106	Looking from the SW end of the runway towards the NE end.
1010107	A view from the taxiway looking to the SW. The depression adjacent to the runway is typical for both sides. Estimated to be approx. 2' in depth.



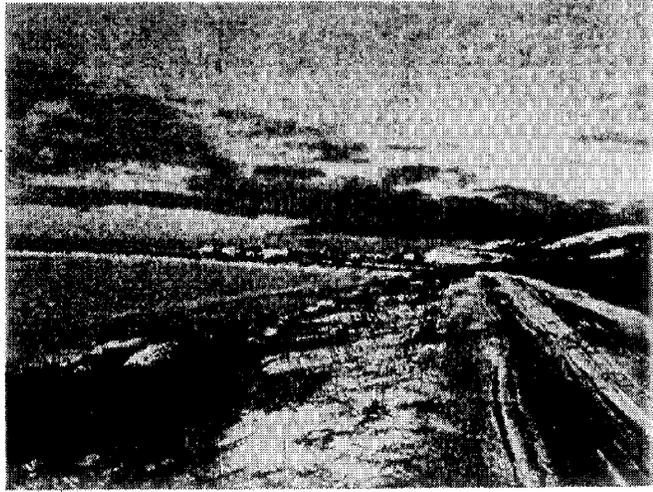
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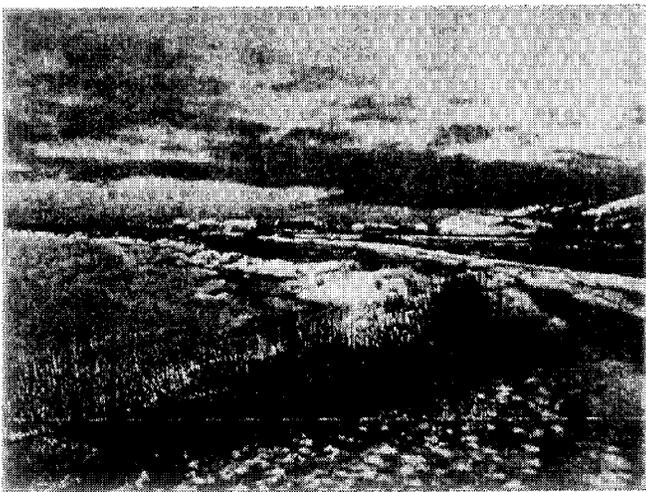
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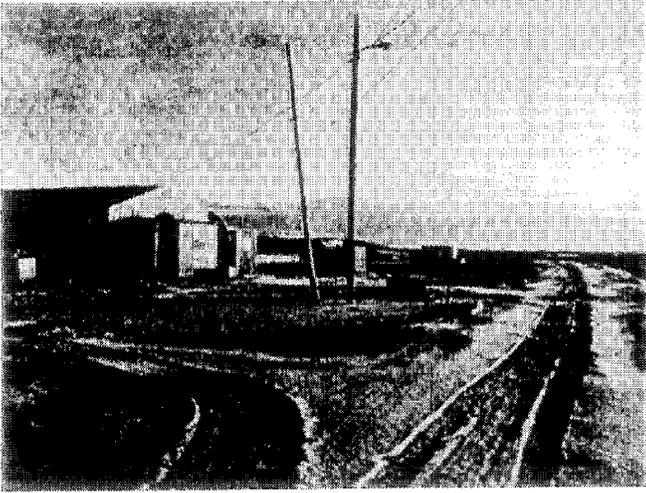
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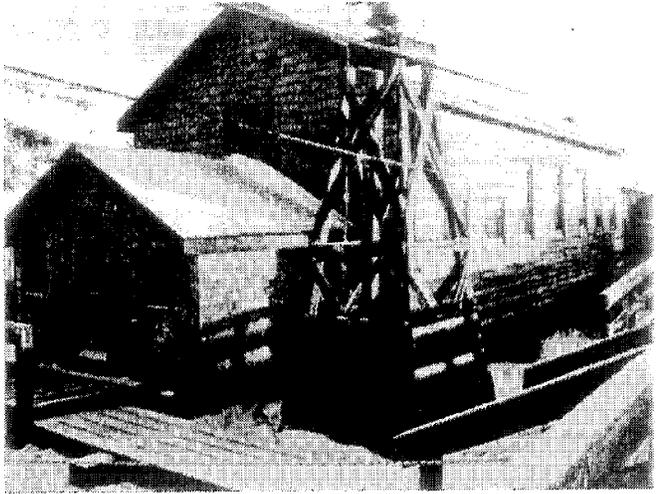
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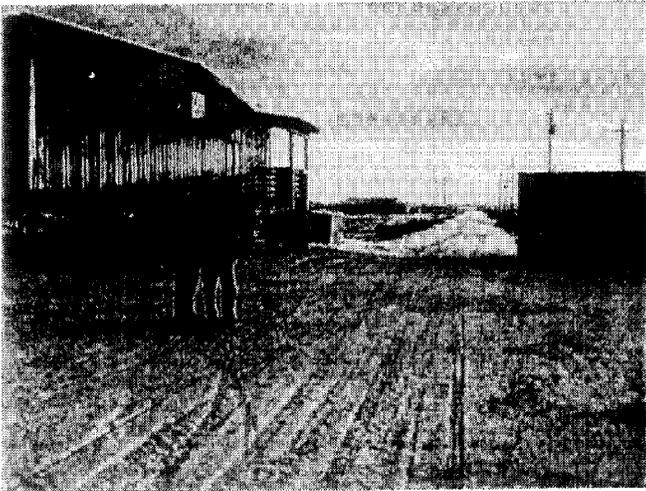
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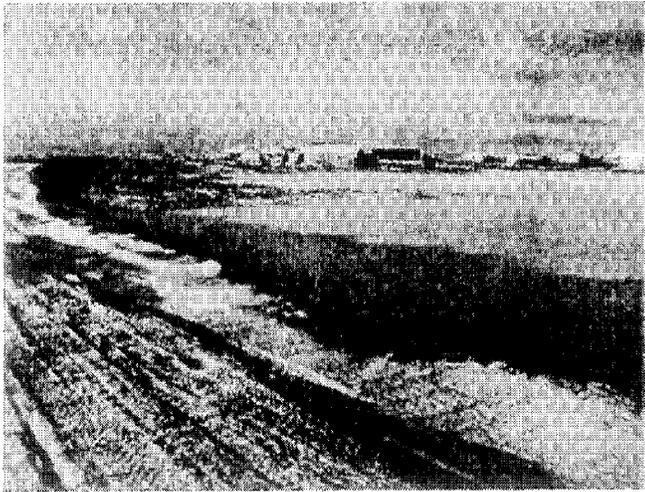
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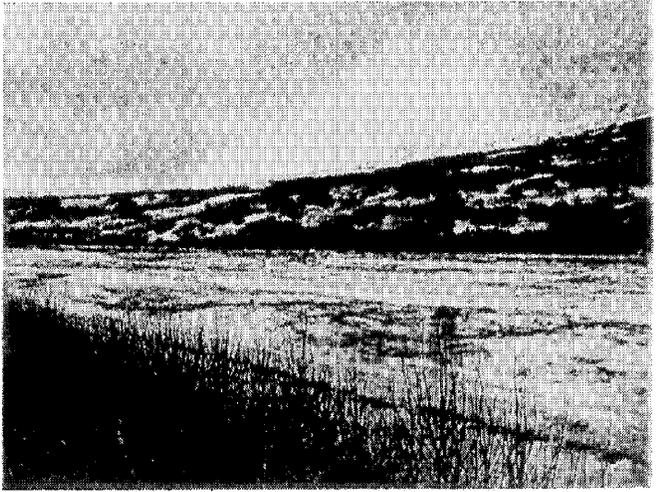
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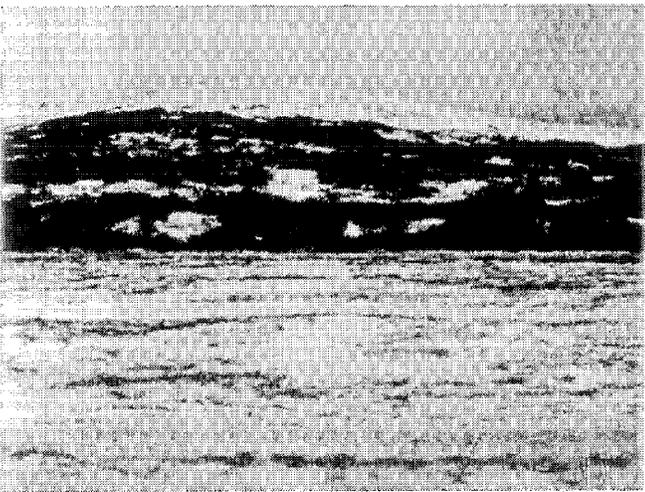
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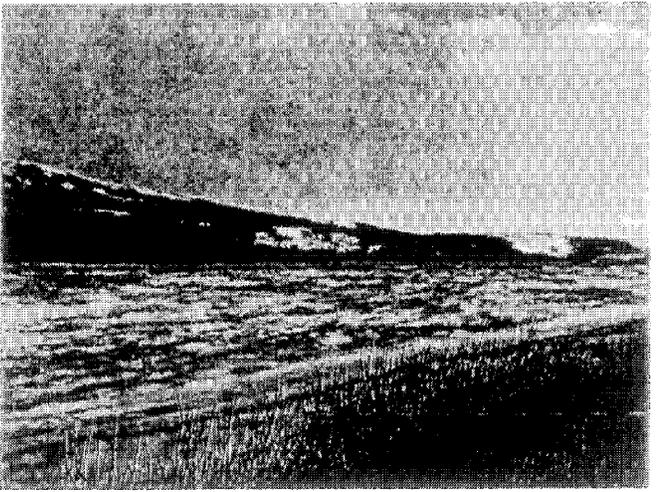
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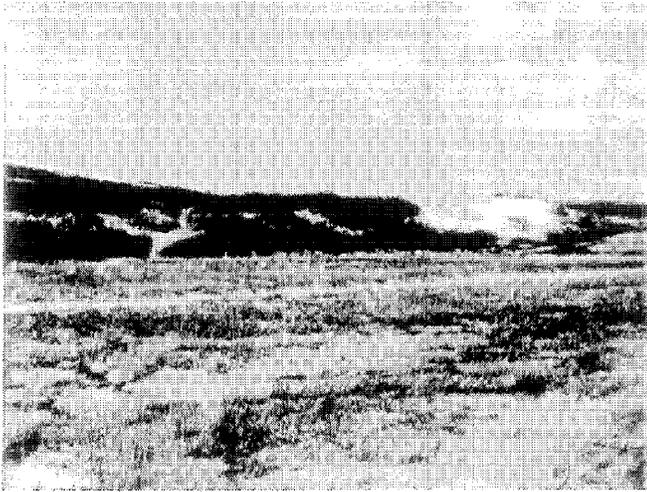
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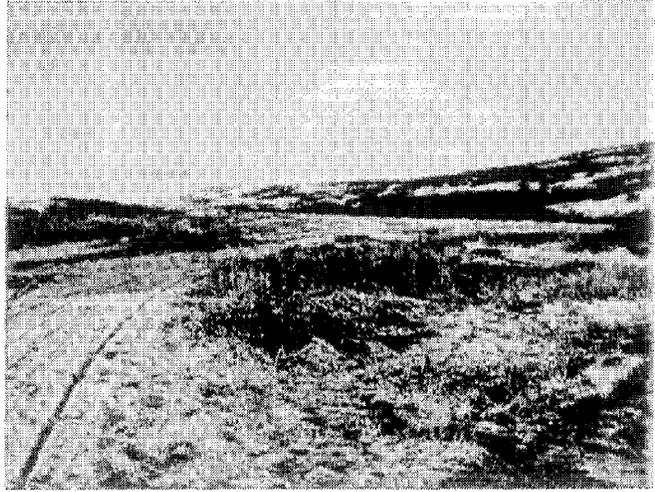
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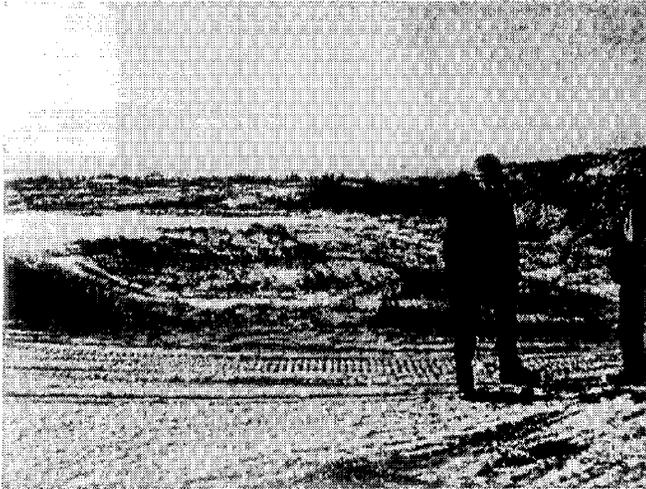
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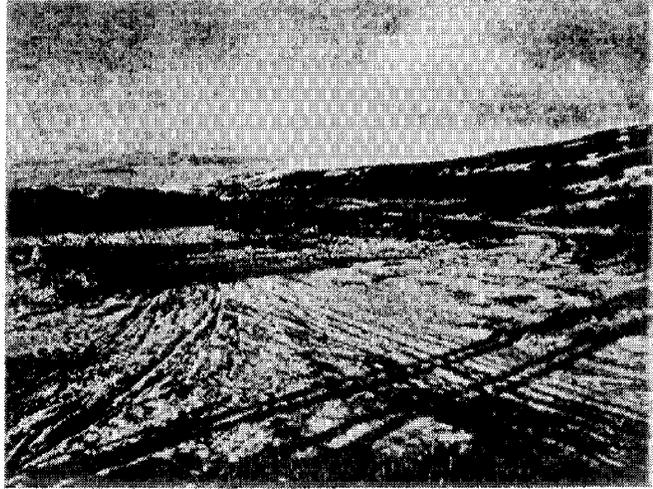
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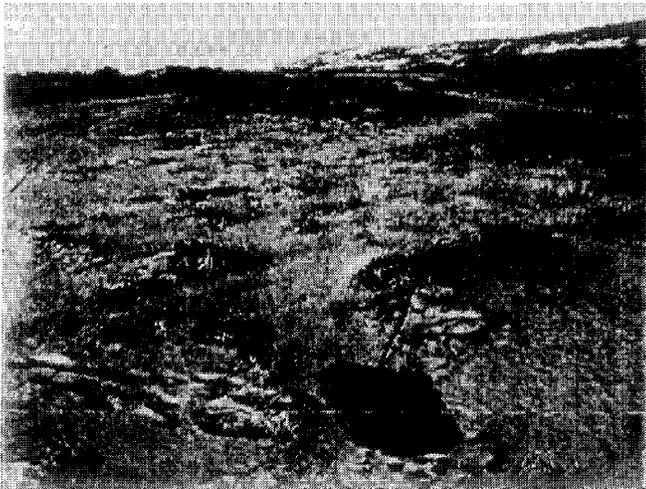
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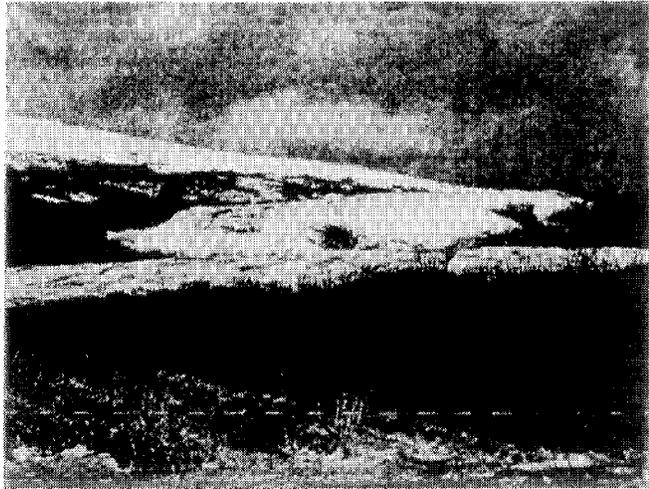
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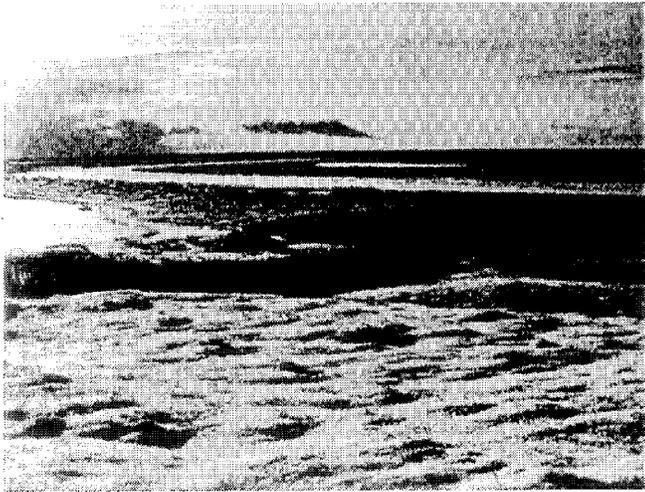
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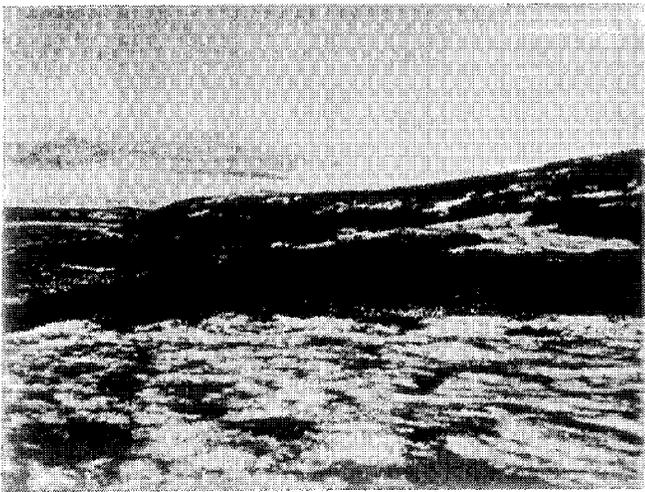
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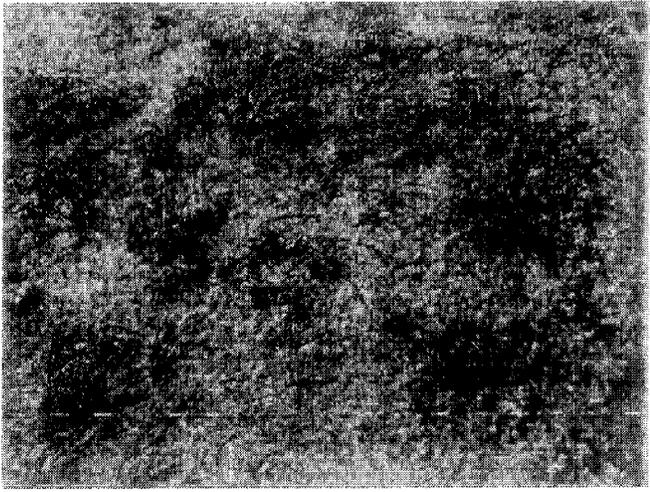
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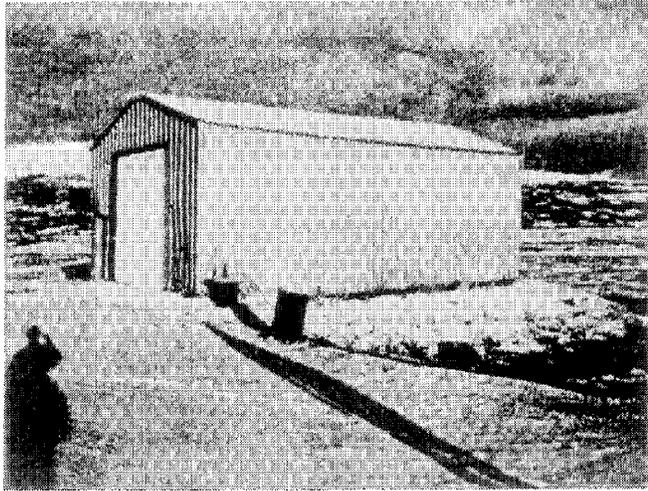
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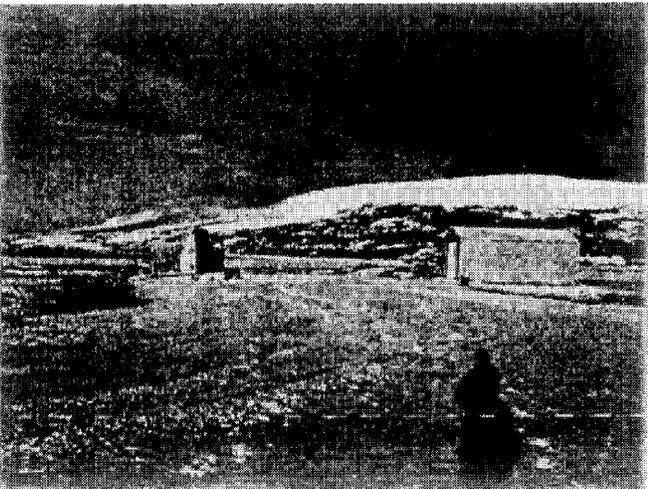
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