

Geotechnical Study
Vicinity of Airport Area, Dawson, Yukon
January, 1997

Transportation Engineering Branch
Geotechnical Services
201 Range Road
Whitehorse, Yukon

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January, 1997

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Figure 1 - Study Area, Geotechnical Evaluation, Dawson Airport

Appendix A - Drill Log Copies

Figure 2 - Terrain Analysis and Study Area Details, 1:10,000.
(In Pocket)

Geotechnical Study
Vicinity of Airport Area, Dawson, Yukon
January, 1997

1. Introduction

Geotechnical Services Section of the Transportation Engineering Branch of the Department of Community and Transportation Services was requested to conduct a geotechnical site evaluation of the property adjacent to the Dawson, Yukon airport. The purpose of the work was to collect and review any previous geotechnical studies and terrain analyses from the area and to provide an evaluation of the suitability of the terrain for development of airport facilities including surface construction such as roads, taxiways, aprons, etc., potential building foundation conditions and construction of underground utilities. Recommendations for further on-site field investigations required to confirm or allow further evaluations were also required. This work was requested by JoAnne Harach, Project Planner for the Department's Aviation and Marine Branch.

The area of study included the actual runway and current facility lot as well as several lots and reserve areas adjacent to this. These lots are shown on figure 1 and are more completely identified on TRBM sheet 116B-3a.

2. Review of Existing Information

Several reports containing geotechnical information within the identified study area were reviewed. Figure 2 shows the location of test holes from these reports in relation to the study properties. This information is dated from 1958 to 1992 and with the exception of test holes along the runway is located west of the Klondike Highway across from the airport. A reference listing of the available studied reports and airphotos is attached.

3. Surficial Conditions

The area of study in the vicinity of the Dawson Airport is comprised of active floodplain, low level alluvial terrace, and alluvial apron of the Klondike River. Topography is relatively level with several seasonal drainage courses occurring primarily on the properties west of the Klondike Highway. Differentiation between the various alluvial terrain features is difficult to map accurately due to the subdued topography and the effect of construction activities on the topography and vegetation cover. In general it would appear that three zones are present in the alluvial deposits; a floodplain zone with active or seasonal channelling and little permafrost evidence, an intermediate low level terrace zone with remnant channel scars but no evidence of recent fluvial activity in the channels; and an alluvial apron zone with no apparent channelling, and indications of deeper organic cover and more prevalent permafrost. Several thermokarst ponds have developed in this third zone. East of the alluvial deposits

and generally bordering the study area the ground rises sharply and is comprised of colluvial veneer or blanket overlying Nasina Series metamorphic bedrock consisting primarily of schists and gneiss.

Vegetation is variable and consists of willow shrubs and stands of spruce, aspen and birch. The active floodplain area west of the highway is more densely covered. The northwesterly facing slopes east of the airport and the alluvial deposits in their shadow appear less densely treed and are generally deeply moss covered.

4. Subsurface Conditions

Subsurface conditions throughout the alluvial deposits of the Klondike River Valley generally consist of an organic mat overlying a layer of sands and/or silty sands which overlie coarse gravels. The coarse gravels typically contain well rounded cobbles and boulders. Thickness of the overlying sand and silt is variable and in the floodplain west of the highway was recorded at 0.2m to 1.6m. Testing along the runway indicated sand/silt depths from 0.3m to 1.2m. Overburden depths are also variable and within the study area varied from near 200mm thick in the Rock Creek Subdivision area to upwards of 1.2m south west of the airport. No on-site geotechnical information is available for the low level terraces and apron to the east of the highway and runway but based on their surface expression they are presumed to be covered with thicker organics and sand-silt layers. Some surface colluvium is also expected near the base of the slope along the eastern edge of the alluvial deposits due to down slope movement off the hill. Permafrost was not encountered in the floodplain testing of the Rock Creek area west of the highway but is expected to be present in most of the deposits underlying the area east of the highway and runway. Estimates of ice content in this area are not predictable without further geotechnical testing. Permafrost was also indicated in the 1958 test holes located on the fringe of the active floodplain south west of the runway. More recent surface construction activities in this area, which would have removed the organic cover, may have induced thawing of the permafrost.

Ground water levels are expected to be high throughout the study area when the ground is in a thawed state. This level will be expected to fluctuate seasonally with variations in the level of the Klondike River and spring runoff. Recorded ground water levels in the Rock Creek Subdivision area, which are expected to be typical for the area west of the highway, varied from 1 to 2 metres. East of the highway frozen conditions are anticipated at levels close to the surface.

5. Development Considerations

The coarse gravels which underlie the entire study area at various depths and are typical of Klondike River Valley should provide suitable foundation support for surface structures and roadways/runways. Conventional foundation support systems could be employed in both the frozen and unfrozen materials assuming that the frozen gravels to the east of the highway are thaw-stable. Additional geotechnical investigations should be conducted in the area east of the highway and runway as well as towards the southern end of the runway to further assess this characteristic.

Roadway/runway or similar construction would, as a minimum, require the removal of surficial organics and may also require removal of the sand/silt layer depending on the site specific conditions and standard of finished roadway required. Where thawed or thaw-stable coarse gravels are present at subgrade elevation no additional granular subgrade courses should be required for structural support or freeze thaw prevention. Where sand/silt materials are encountered at subgrade level, up to 450mm of clean granular subgrade may be required depending on final roadway standard required and quality of the sand/silt materials. Base course gravels up to 150mm in thickness would be required for any paved or BST surfaced roadways.

Foundation support for above ground facilities construction should be founded in the coarse gravel layer. Based on geotechnical studies in the Rock Creek area where no permafrost was indicated, conventional concrete strip and spread footings are suitable. It is anticipated that the gravels underlying the area east of the highway and runway will also be thaw-stable and could employ similar conventional foundations. Site specific geotechnical studies should be conducted prior to final design of any building or above ground facility foundation.

Underground utilities, basements or conventional sewage disposal systems will be difficult to construct and maintain due to the high water table and anticipated permafrost conditions. Localized use of these systems may be acceptable based on more detailed site specific findings.

In addition to geotechnical considerations, other development concerns would include existing land usage, flood potential and environmental restraints to development on a flood plain.

Existing land usage is minimal within the study area with the exception of the current airport facilities located on lot 1019, Group 1052; extended term parking located across the highway on INAC Reserve 080; and the YTG Campground facility and Rock Creek Firehall located on Lot 580, Group 1052.

As referenced in the EBA Engineering Consultants report on the Proposed Rock Creek Rural Residential Subdivision reliable water data is not available. The main flooding mechanism is through ice jamming which is very difficult to predict. Any developments on the west side of the highway near the active floodplain of the Klondike River would be susceptible to flooding. Several instances of flooding due to ice jamming are recorded for this area during the last 15 years. Locations east of the highway would be less susceptible and no recent history of flooding is evident.

Environmental concerns to development would include fisheries concerns applicable to infilling of seasonal watercourses within the floodplain area west of the highway; problems associated with infilling of open water ponds northeast of the runway in the new reserve application area ; and general wastewater contamination concerns due to high water table or permafrost conditions.

6. Recommendations for Further Geotechnical Testing

The findings presented in this report are based on data presented in the referenced reports and on terrain type generalizations. Most of the data is concentrated in the unfrozen active floodplain area northwest of the airport on land which has current encumbrances. It is recommended that a field geotechnical program be completed with test holes located within the other terrain units to confirm the generalized material typing and distribution. A site review of all exposed borrow pit areas to determine excavation depths, subsurface strata limits, and material types is also recommended.

A program involving the drilling of approximately 40 auger holes with associated sampling and testing should be adequate to evaluate the reliability of the terrain unit typing assessments. Holes should be drilled to a minimum of 3.3 metres to evaluate the subsurface strata configuration and to ensure the presence of the coarse gravel layer which is the basis of the foundation support assumptions. Permafrost distribution data and evaluation of the thaw-stability of the subsurface strata is also required. The use of an all-terrain drill rig would be required to provide access to the test sites.

The testing pattern would require approximately 13 holes within the flood plain area west of the highway within INAC reserve 080 and Lot 525; four holes east of the highway and south of the runway within lot 525; six holes along the property east of the runway within lot 1019; and 15 holes east of the highway within the area of the additional reserve application. The estimated cost of this work is in the \$30,000.00 range.

Performance of this geotechnical program would not preclude the requirement for detailed testing on a site specific basis prior to actual design and construction of facilities or roadways, however it would provide sufficient geotechnical data for a detailed functional planning study of airport improvement options.

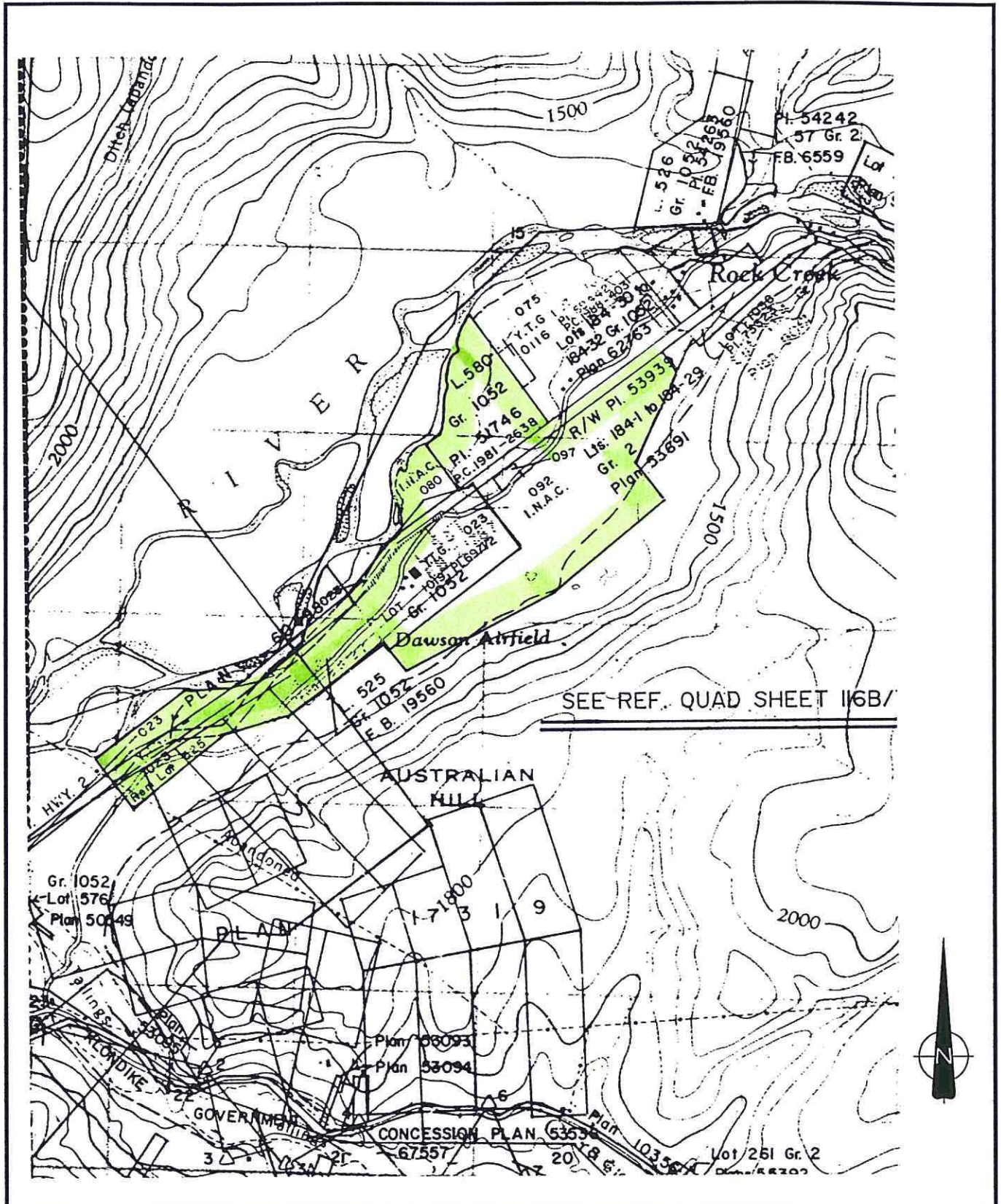
REFERENCES:

Airphotos:


1. RCAF; May 18, 1960; 4200 feet ASL
Photo Line VRR2081/5; Photos 369 - 372
2. Northwest Survey Corp; Sept 17, 1970; 7500 feet ASL
Photo Line A22199; Photos 29-33
3. Northwest Survey Corp; Sept 03, 1972; 7300 feet ASL
Photo Line NW88972; Photos 49-53
4. Northwest Survey Corp; Sept 03, 1972; 3700 feet ASL
Photo Line NW88972; Photos 54-59
5. Western Photogrammetry; July 03, 1990; 11500 feet ASL
Photo Line A27664; Photos 142-145

Reports:

1. Department of Transport, Air Services Branch-Construction Division; Report W127-1; Non-Directional Beacon Site, Dawson City, Yukon; June 16, 1958.
2. Department of Transport, Air Services Branch-Construction Division; Report W127-2; Runway 02-20, Dawson City, Yukon; October, 1959.
3. EBA Engineering Consultants Ltd.; Proposed Rock Creek Rural Residential Subdivision, Dawson City, Yukon; August, 1989.
4. EBA Engineering Consultants Ltd.; Geotechnical and On-Site Sewage Disposal System Evaluation, Proposed Klondike Valley Firehall, Dawson City, Yukon; October, 1991.
5. Cryosphere Geographic; Granular Resource Material Inventory, Dawson Area; November, 1992.
6. Geological Survey of Canada; Memoir 364 and Map 1284A; 1972



SEE REF. QUAD SHEET I16B/

	<p>STUDY AREA</p> <p>GEOTECHNICAL EVALUATION</p> <p>DAWSON AIRPORT</p>	designed:
		drawn: WAE
<p>Transportation Engineering Branch</p>		app'd:
		date: 97-01-21
		scale: 1: 30,000
		drwg: FIGURE 1

KLONDIKE VALLEY FIREHALL	CLIENT: YTG, GOVERNMENT SERVICES	BOREHOLE No. 10807-01
ROCK CREEK SUBDIVISION	MASSEY FURGESON 304 RUBBER-TIRED BACKHOE	Project No: 0201-10807
NEAR DAWSON CITY, YUKON	UTM ZONE: 7 N7104450.00 E592700.00	ELEVATION 0.00 (m)

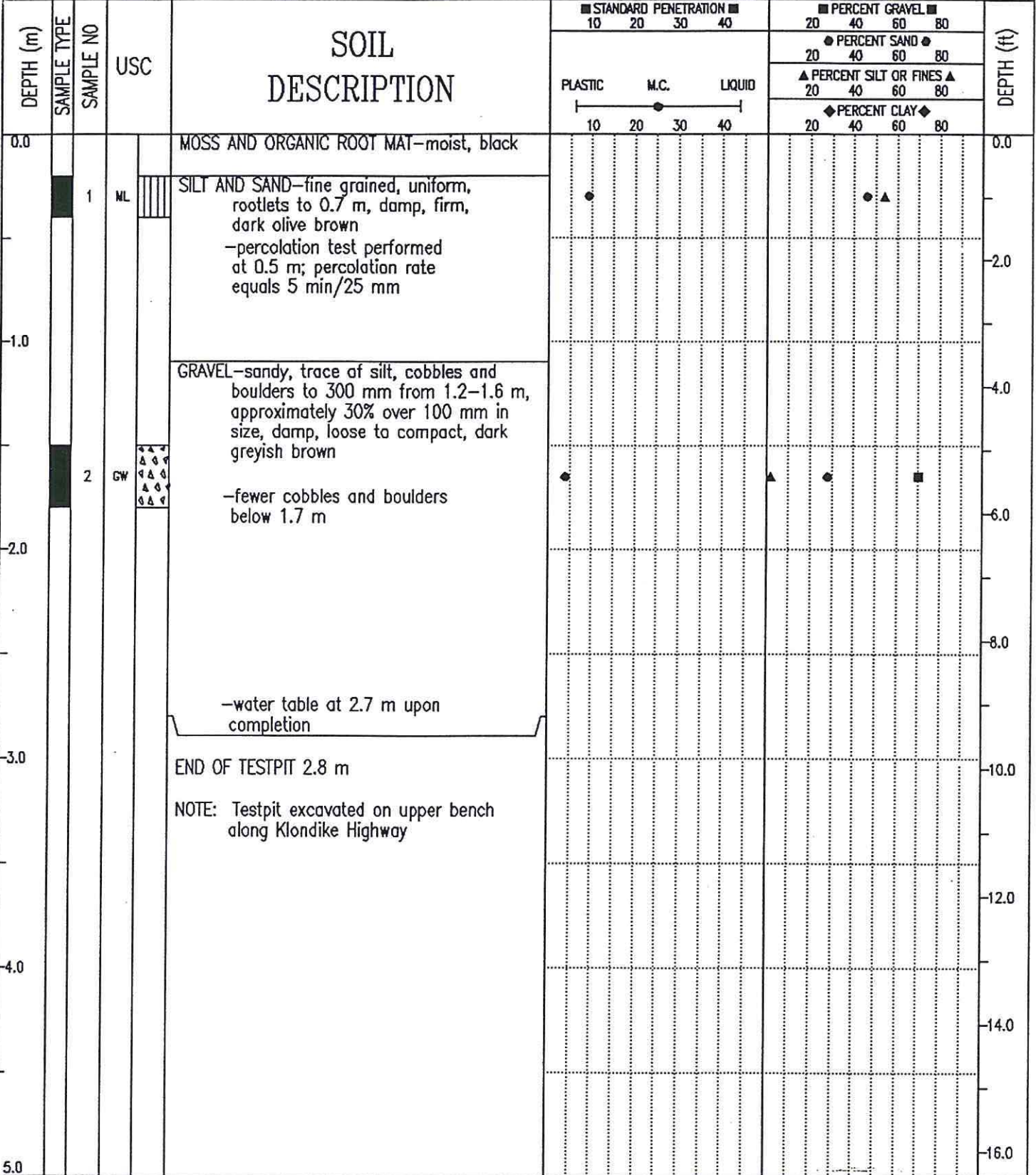
SAMPLE TYPE GRAB SAMPLE NO RECOVERY STANDARD PEN. 75 mm SPOON CRREL BARREL

DEPTH (m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL DESCRIPTION	STANDARD PENETRATION				PERCENT GRAVEL				PERCENT SAND				PERCENT SILT OR FINES				PERCENT CLAY				DEPTH (ft)
					10	20	30	40	20	40	60	80	20	40	60	80	20	40	60	80	20	40	60	80	
0.0				ORGANIC GROUND COVER (MOSS)																			0.0		
				SILT—some sand, rootlets throughout, moist, dark greyish brown																					
		1		SAND—trace of fine gravel, trace of silt, sand is medium to coarse, damp to moist with depth, loose (est.), dark grey																			-2.0		
-1.0				—sandy silt lens																			-4.0		
		2		GRAVEL—sandy, trace of silt to clean, very coarse, saturated with water table at 1.6 m 20 min. after completion, loose (sloughing badly below water table), dark brownish grey																			-6.0		
-2.0				END OF TESTPIT 2.0 m																			-8.0		
				NOTE: Testpit excavated on lower lying area along road to Rock Creek Subdivision																			-10.0		
-3.0																							-12.0		
																							-14.0		
-4.0																							-16.0		
5.0																									

EBA Engineering Consultants Ltd. Whitehorse, Yukon	COMPLETION DEPTH 2.0 m	COMPLETE 91/10/08
LOGGED BY MCP	DWG NO.	Page 1 of 1

KLONDIKE VALLEY FIREHALL	CLIENT: YTG, GOVERNMENT SERVICES	BOREHOLE No. 10807-02
ROCK CREEK SUBDIVISION	MASSEY FURGESON 304 RUBBER-TIRED BACKHOE	Project No: 0201-10807
NEAR DAWSON CITY, YUKON	UTM ZONE: 7 N7104420.00 E592700.00	ELEVATION 0.00 (m)

SAMPLE TYPE GRAB SAMPLE NO RECOVERY STANDARD PEN. 75 mm SPOON CRREL BARREL



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Whitehorse, Yukon

COMPLETION DEPTH 2.8 m	COMPLETE 91/10/08
LOGGED BY MCP	DWG NO.
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RURAL RESIDENTIAL SUBDIVISION	CLIENT: YTG - COMM. AND TRANSP. SERVICES	BOREHOLE No. 4916-02
ROCK CREEK	BACKHOE: KOERING SANTAM	Project No: 0201-4916
DAWSON AREA, YUKON	UTM ZONE: 7 N7105000.00 E593400.00	ELEVATION 0.000 (m)

SAMPLE TYPE GRAB NO RECOVERY STANDARD PENL

DEPTH (m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL DESCRIPTION	PLASTIC	LLC	LIQUID	PERCENT GRAVEL				PERCENT SAND				PERCENT SILT (OR FINES)				PERCENT CLAY				DEPTH (ft)
								20	40	60	80	20	40	60	80	20	40	60	80	20	40	60	80	
0.0				ORGANIC SILT (OL) - roots throughout, moist, black																		0.0		
				GRAVEL (GP) - sandy, trace of silt to clean below 0.8 m, subrounded, coarse, up to 200 mm diameter, approximately 25 % greater than 75 mm diameter, moist to saturated by 1.0 m, stabilized water level at 1.1 m below creek bed, dark grey																				
-1.0		1		- hole sloughing badly																		3.0		
-2.0		2		- standpipe installed to 2.8 m																		10.0		
-3.0				END OF TEST PIT AT 3.2 m NOTE: Creek bed approximately 0.9 m lower than elevation of banks																		40.0		

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COMPLETION DEPTH 3.2 m COMPLETE 88/10/14
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RURAL RESIDENTIAL SUBDIVISION		CLIENT: YTG - COMM. AND TRANSP. SERVICES		BOREHOLE No. 4916-03	
ROCK CREEK		BACKHOE: KOERING BANTAM		Project No: 0201-4916	
DAWSON AREA, YUKON		UTM ZONE: 7 N7105000.00 E593400.00		ELEVATION 0.000 (m)	
SAMPLE TYPE		<input checked="" type="checkbox"/> GRAB	<input checked="" type="checkbox"/> NO RECOVERY	<input checked="" type="checkbox"/> STANDARD PEN.	<input type="checkbox"/>

DEPTH (m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL DESCRIPTION	PLASTIC	M.C.	LIQUID	PERCENT GRAVEL				PERCENT SAND				PERCENT SILT (OR FINES)				PERCENT CLAY				DEPTH (ft)
								20	40	60	80	20	40	60	80	20	40	60	80	20	40	60	80	
0.0				ORGANIC ROOT MAT - moist, black																		0.0		
				GRAVEL (GP) - sandy, trace of silt to clean below 0.6 m, subrounded, coarse, up to 300 mm diameter, approximately 25 % greater than 75 mm diameter, moist to saturated below 1.0 m, dark gray																				
-1.0		1		- hole sloughing badly																				
-2.0		2		END OF TEST PIT 2.0 m																				
-3.0																						10.0		
-4.0																								

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Whitehorse, Yukon

COMPLETION DEPTH 2.0 m

COMPLETE 88/10/14

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RURAL RESIDENTIAL SUBDIVISION		CLIENT: YTG - COMM. AND TRANSP. SERVICES		BOREHOLE No. 4916-05	
ROCK CREEK		BACKHOE: KOERING BANTAM		Project No: 0201-4916	
DAWSON AREA, YUKON		UTM ZONE: 7 N7105000.00 E593400.00		ELEVATION 0.000 (m)	
SAMPLE TYPE <input checked="" type="checkbox"/> GRAB		<input checked="" type="checkbox"/> NO RECOVERY		<input checked="" type="checkbox"/> STANDARD PEN.	

DEPTH (m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL DESCRIPTION	PLASTIC	M.C	LIQUID	PERCENT GRAVEL				PERCENT SAND				PERCENT SILT (OR FINES)				PERCENT CLAY				DEPTH (ft)
								20	40	60	80	20	40	60	80	20	40	60	80	20	40	60	80	
0.0				ORGANIC ROOT MAT - moist, black																				
				SILT (ML) - interbedded with fine-grained uniform sand, roots throughout, moist, dark greyish brown																				
-1.0		1	GP	GRAVEL (GP) - sandy, trace of silt to clean below 1.1 m, cobbles and boulders throughout, subrounded, coarse, up to 300 mm diameter, approximately 25 % greater than 75 mm diameter, damp to moist, dark grey																				
				- wet to saturated by 1.8 m																				
-2.0		2		- water table at 2.1 m																				
				END OF TEST PIT 2.4 m																				
-3.0																								
-4.0																								

EBA Engineering Consultants Ltd. Whitehorse, Yukon		COMPLETION DEPTH 2.4 m		COMPLETE 88/10/14	
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RURAL RESIDENTIAL SUBDIVISION		CLIENT: YTG - COMM. AND TRANSP. SERVICES		BOREHOLE No. 4916-06	
ROCK CREEK		BACKHOE: KOERING BANTAM		Project No: 0201-4916	
DAWSON AREA, YUKON		UTM ZONE: 7 N7105000.00 E593400.00		ELEVATION 0.000 (m)	
SAMPLE TYPE <input checked="" type="checkbox"/> GRAB		<input checked="" type="checkbox"/> NO RECOVERY		<input checked="" type="checkbox"/> STANDARD PEN.	

DEPTH (m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL DESCRIPTION	PLASTIC	M.C	LIQUID	PERCENT GRAVEL				PERCENT SAND				PERCENT SILT (OR FINES)				PERCENT CLAY				DEPTH (ft)
								20	40	60	80	20	40	60	80	20	40	60	80	20	40	60	80	
0.0				ORGANIC ROOT MAT - moist, black																		0.0		
		1		SILT (ML) - interbedded with fine-grained, uniform sand, roots throughout, moist, dark greyish brown																				
-1.0				GRAVEL (GP) - sandy, trace of silt to clean by 1.0 m, cobbles and boulders throughout, subrounded, coarse, up to 300 mm diameter, approximately 25 % greater than 75 mm diameter, damp to moist, dark grey																				
		2		- hole sloughing badly																		5.0		
-2.0				- water table at 2.2 m																				
		3																						
-3.0				END OF TEST PIT 2.6 m																		10.0		
-4.0																								

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RURAL RESIDENTIAL SUBDIVISION		CLIENT: YTG - COMM. AND TRANSP. SERVICES		BOREHOLE No. 4916-07	
ROCK CREEK		BACKHOE: KOERING BANTAM		Project No: 0201-4916	
DAWSON AREA, YUKON		UTM ZONE: 7 N7105000.00 E593400.00		ELEVATION 0.000 (m)	
SAMPLE TYPE <input checked="" type="checkbox"/> GRAB		<input checked="" type="checkbox"/> NO RECOVERY		<input checked="" type="checkbox"/> STANDARD PEN.	

DEPTH (m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL DESCRIPTION	PLASTIC	M.C	LIQUID	PERCENT GRAVEL				DEPTH (ft)										
								20	40	60	80											
								PERCENT SAND				PERCENT SILT (OR FINES)				PERCENT CLAY						
								20	40	60	80	20	40	60	80	20	40	60	80			
0.0				ORGANIC ROOT MAT - moist, black																	0.0	
				SILT (ML) - trace of fine grained sand, rootlets at top of unit, moist, soft, non-plastic, dark greyish brown - percolation test performed at 0.6 m																		
-1.0		1		SAND (SP/SM) - some silt, medium and fine grained, moist, loose, dark greyish brown																		
				GRAVEL (GP) - sandy, trace of silt to clean by 1.7 m, cobbles and boulders throughout, subrounded, coarse, up to 300 mm diameter, approximately 25 % greater than 75 mm diameter, moist, dark grey - water table at 1.8 m																		5.0
-2.0		2		END OF TEST PIT 2.0 m																		
-3.0																						
-4.0																						

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Whitehorse, Yukon

COMPLETION DEPTH 2.0 m

COMPLETE 88/10/14

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RURAL RESIDENTIAL SUBDIVISION		CLIENT: YTG - COMM. AND TRANSP. SERVICES		BOREHOLE No. 4916-08	
ROCK CREEK		BACKHOE: KOERING BANTAM		Project No: 0201-4916	
DAWSON AREA, YUKON		UTM ZONE: 7 N7105000.00 E593400.00		ELEVATION 0.000 (m)	
SAMPLE TYPE <input checked="" type="checkbox"/> GRAB		<input checked="" type="checkbox"/> NO RECOVERY		<input checked="" type="checkbox"/> STANDARD PEN	

DEPTH (m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL DESCRIPTION	PLASTIC	M.C.	LIQUID	PERCENT GRAVEL				PERCENT SAND				PERCENT SILT (OR FINES)				PERCENT CLAY				DEPTH (ft)									
								20	40	60	80	20	40	60	80	20	40	60	80	20	40	60	80										
								0.0				ORGANIC ROOT MAT - moist, black																					0.0
										1	ML	SAND AND SILT (ML) - trace of clay, sand is fine-grained, rootlets at top of unit, non-plastic, dark greyish brown																					
-1.0				- 75 mm thick sand lens at 0.9 m																													
		2		GRAVEL (GP) - sandy, trace of silt to clean by 1.4 m, cobbles and boulders throughout, subrounded, coarse, up to 200 mm diameter, approximately 25 % greater than 75 mm diameter, moist, dark grey																				-5.0									
-2.0				- water table at 2.0 m																													
		3																															
-3.0				END OF TEST PIT 2.4 m																				-10.0									
-4.0																																	

EBA Engineering Consultants Ltd. Whitehorse, Yukon		COMPLETION DEPTH 2.4 m		COMPLETE 88/10/14	
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RURAL RESIDENTIAL SUBDIVISION		CLIENT: YTG - COMM. AND TRANSP. SERVICES		BOREHOLE No. 4916-09	
ROCK CREEK		BACKHOE: KOERING BANTAM		Project No: 0201-4916	
DAWSON AREA, YUKON		UTM ZONE: 7 N7105000.00 E593400.00		ELEVATION 0.000 (m)	
SAMPLE TYPE <input checked="" type="checkbox"/> GRAB		<input checked="" type="checkbox"/> NO RECOVERY		<input checked="" type="checkbox"/> STANDARD PEN.	

DEPTH (m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL DESCRIPTION	PLASTIC	M.C.	LIQUID	PERCENT GRAVEL				PERCENT SAND				PERCENT SILT (OR FINES)				PERCENT CLAY				DEPTH (ft)
								20	40	60	80	20	40	60	80	20	40	60	80	20	40	60	80	
0.0				ORGANIC ROOT MAT - moist, black																		0.0		
				SILT (ML) - trace of fine-grained sand, rootlets at top of unit, moist, soft, non-plastic, dark greyish brown																				
-1.0		1		- 100 mm thick sand lens																				
				GRAVEL (GP) - sandy, trace of silt to clean by 1.5 m, cobbles and boulders throughout, subrounded, coarse, up to 300 mm diameter, approximately 25 % greater than 75 mm diameter, moist, dark grey																				
				- hole sloughing badly																				
-2.0		2		- water table at 2.0 m																				
				END OF TEST PIT 2.2 m																				
-3.0																								
-4.0																								

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RURAL RESIDENTIAL SUBDIVISION		CLIENT: YTG - COMM. AND TRANSP. SERVICES		BOREHOLE No. 4916-10	
ROCK CREEK		BACKHOE: KOERING BANTAM		Project No: 0201-4916	
DAWSON AREA, YUKON		UTM ZONE: 7 N7105000.00 E593400.00		ELEVATION 0.000 (m)	
SAMPLE TYPE <input checked="" type="checkbox"/> GRAB		<input checked="" type="checkbox"/> NO RECOVERY		<input checked="" type="checkbox"/> STANDARD PEN	

DEPTH (m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL DESCRIPTION	PLASTIC	M.C	LIQUID	PERCENT GRAVEL ■				PERCENT SAND ◆				PERCENT SILT (OR FINES) ▲				PERCENT CLAY ◆				DEPTH (ft)
								20	40	60	80	20	40	60	80	20	40	60	80	20	40	60	80	
0.0				ORGANIC COVER - some rootlets, moist, black																				
				GRAVEL (GP) - sandy, trace of silt to clean by 0.5 m, cobbles and boulders throughout, subrounded, coarse, up to 300 mm diameter, approximately 25 % greater than 75 mm diameter, moist, dark grey																				
-1.0		1		- hole sloughing badly																				
-2.0		2	GP	- water stabilized at 2.0 m on 88-10-15 - standpipe installed to 2.3 m																				
				END OF TEST PIT 2.5 m																				
-3.0																								
-4.0																								

EBA Engineering Consultants Ltd. Whitehorse, Yukon		COMPLETION DEPTH 2.2 m		COMPLETE 88/10/14	
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INTER-OFFICE MEMORANDUM

Community and Transportation Services
Box 2703, Whitehorse, Yukon Y1A 2C6

Date: January 30, 1997

File: 2155-0000

To: Peggy Godson
Program Officer
Aviation and Marine Branch S-6
Haines Junction

From: Dick Stilwell
A/Manager, Geotechnical Services
S-3, Whitehorse

Subject: **GEOTECHNICAL STUDY, VICINITY OF AIRPORT AREA**
DAWSON, YUKON, JANUARY, 1997

Attached is a copy of the above noted report which summarizes the past field investigations in the vicinity of the Dawson airport, and outlines further geotechnical investigations required to allow evaluation of airport improvement options. Should you decide to proceed with the investigations, the Geotechnical Services Section would be able to coordinate and supervise the geotechnical investigations.

Please contact me if you have any questions regarding the report or the proposed investigations.

Best regards,

A handwritten signature in dark ink, appearing to read "Dick Stilwell".

Dick Stilwell

att.