6324

DU PONT OF CANADA EXPLORATION LIMITED

REPORT ON EXPLORATION

ATLIN-MCKEE PROJECT

MCKEE CREEK, ATLIN MINING DISTRICT

BRITISH COLUMBIA

SEPTEMBER 1976 - APRIL 1977

NTS: 104-N-5

by

C.B. Gunn, P.Eng.

Vancouver, B.C.

May, 1977

TABLE OF CONTENTS

LIST OF MAPS

APPENDICES

APPENDIX 1

Report on Seismic Refraction Study

APPENDIX 2

Schedule A - Parts 1 and 2

APPENDIX 3

Drill Logs - Becker Hammer Drill

APPENDIX 4

Assay Certificates

APPENDIX 5

Drilling Costs

SUMMARY

In order to test a hypothesis that a potentially valuable buried gold placer channel exists in the McKee Creek Valley, a group of placer leases and mineral claims were optioned by Du Pont of Canada Exploration Limited in 1976. In September and October the property was mapped and a reconnaissance refraction seismic survey made. A feature which warranted drilling was outlined. Test drilling with a Becker hammer drill was carried out in April 1977 which proved that the feature suspected to be a buried channel is a bedrock shear zone with no placer potential. Surface examination and chip sampling of exposed bedrock shear zones in the vicinity of the existing placer workings revealed only minor and subeconomic values in precious metal and other mineral contents. No further work is recommended and the property is to be returned to the owners.

INTRODUCTION

This report describes the exploration work carried out by Du Pont of Canada Exploration Limited on McKee Creek in 1976 and 1977. The object of this work was to discover and evaluate a supposed buried gold placer channel in the upper reaches of McKee Creek. The work was carried out under the direction of C.B. Gunn of Du Pont of Canada Exploration Limited under an option agreement with John Harvey and Harvey Evenden, joint owners of a group of placer and mineral claims on McKee Creek.

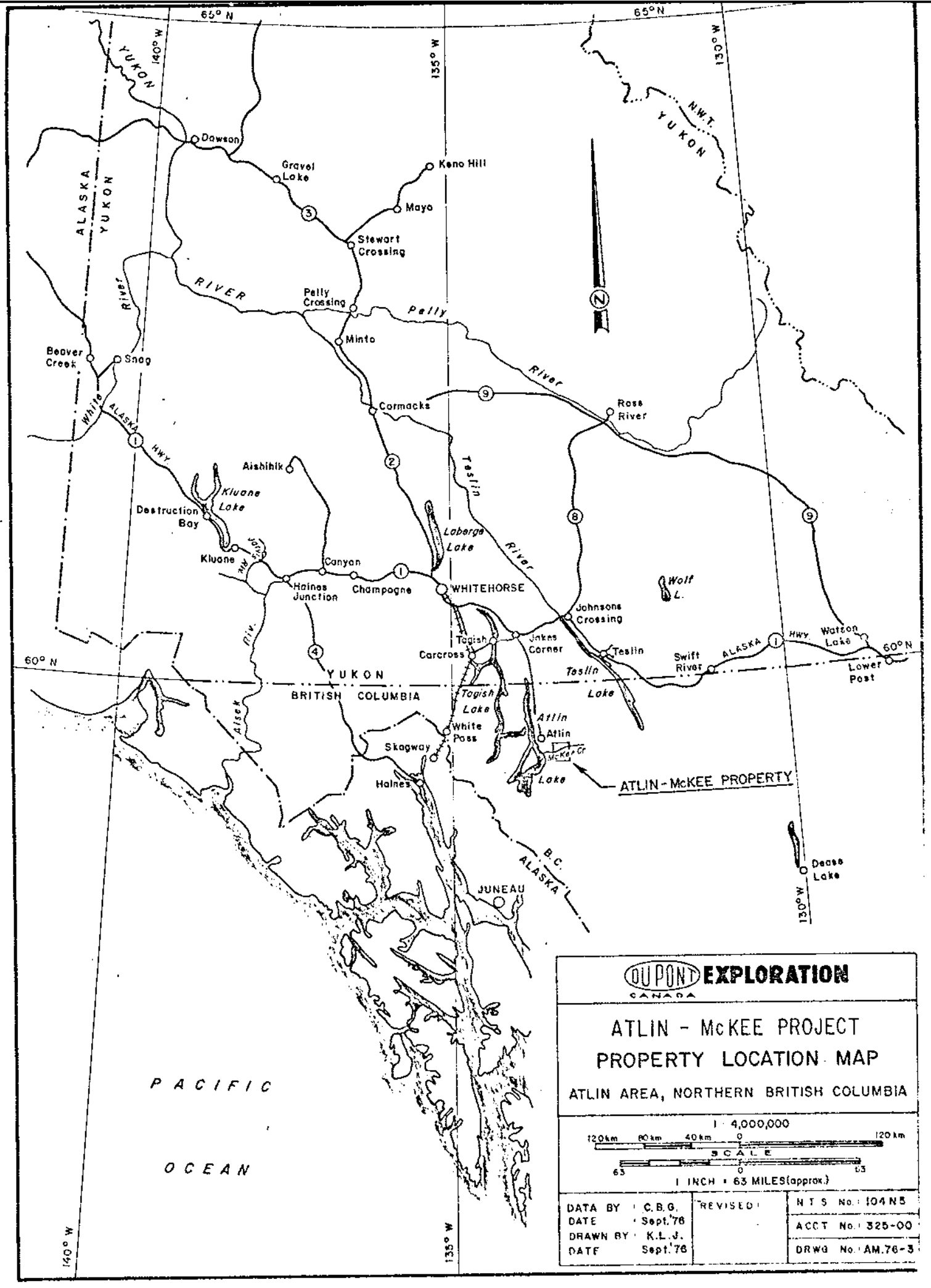
PROPERTY

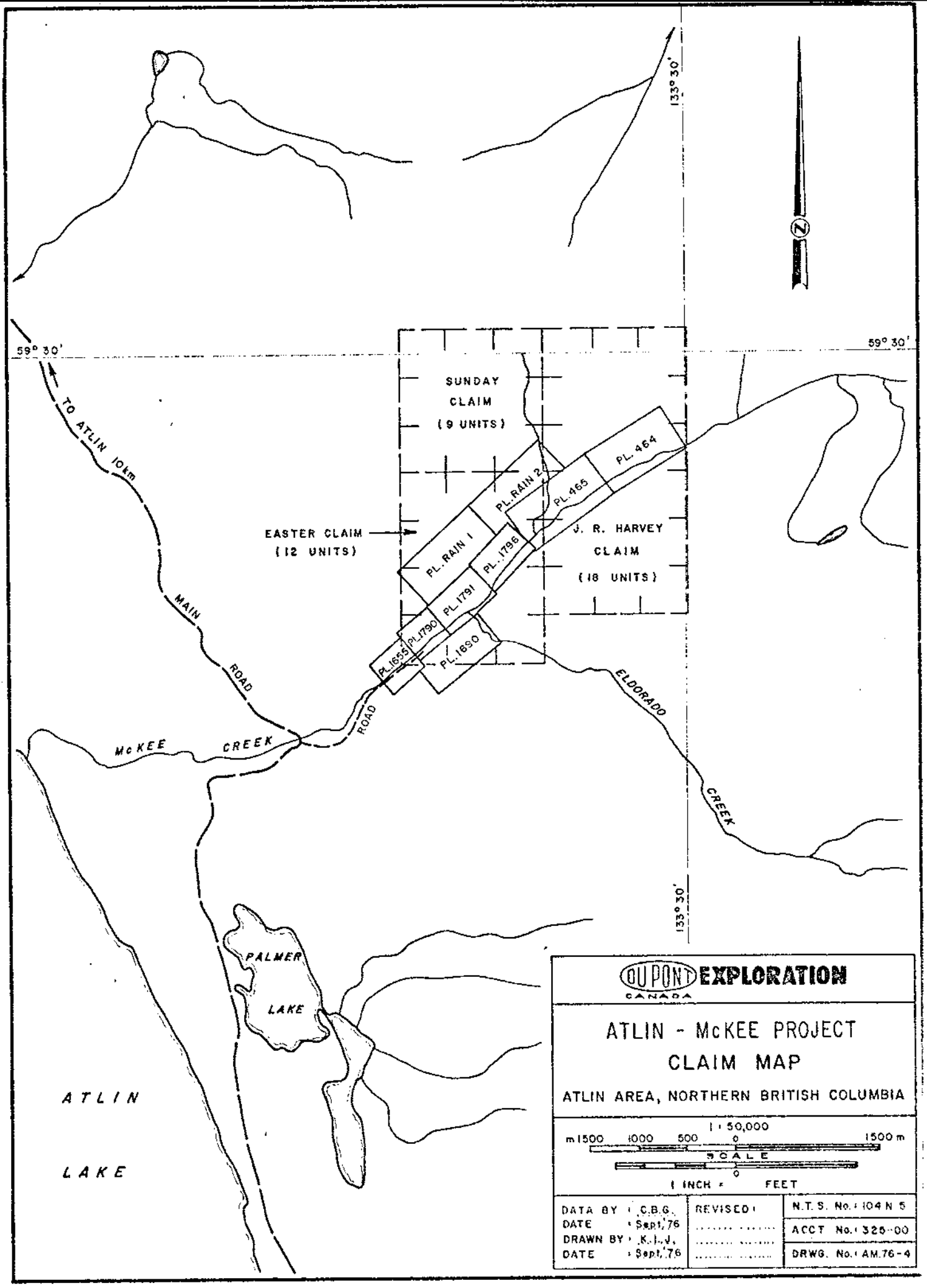
The property covered by the agreement consists of 9 placer leases and 3 mineral claims as shown on the report claim map (Dwg. AM.76-4) and described in Schedule A, (Appendix A). Under the terms of the option any additional leases or mineral claims acquired within a 4 mile radius of the junction of McKee and Eldorado Creeks would be included in the agreement. The granting of placer leases Rain #1 and Rain #2, staked by Du Pont in 1976 and also placer leases 465 and 464, staked by Harvey has been delayed pending a visit of the mining inspector to the area on May 29, 1977.

On April 19, 1977, 3 mineral claims were grouped into a new unit called the Canary claim (39 units) and assessment work was recorded sufficient to hold this claim in good standing until April 19, 1978.

LOCATION AND ACCESS

The property is on McKee Creek, 15 km (9 miles) southeast of the town of Atlin, Atlin Mining District, B.C. It is in NTS quadrangle 104-N-5 at 59°29'N, 133°32'W at an elevation of approximately 3250'.


65° N
140° W
135° W
130° W
60° N
YUKON
ALASKA
YUKON
N.W.T.
YUKON
Dawson
Gravel Lake
Keno Hill
Mayo
Stewart Crossing
RIVER
Pelly Crossing
Pelly
River
Minto
Beaver Creek
Snag
White
River
ALASKA
HWY
Cormacks
Ross River
Aishihik
Kluane Lake
Destruction Bay
Kluane
Canyon
Haines Junction
Champagne
WHITEHORSE
Laberge Lake
Teslin
River
Wolf L.
Johnsons Crossing
Jakes Corner
Tagish
Carcross
Teslin
Swift River
Watson Lake
Lower Post
Teslin Lake
Tagish Lake
Atlin
Atlin Lake
White Pass
Skagway
Haines
ATLIN-McKEE PROPERTY
YUKON
BRITISH COLUMBIA
Alsek
B.C.
ALASKA
JUNEAU
Dease Lake
PACIFIC
OCEAN
DUPONT EXPLORATION
CANADA
ATLIN - McKEE PROJECT
PROPERTY LOCATION MAP
ATLIN AREA, NORTHERN BRITISH COLUMBIA
1 : 4,000,000
120km 80km 40km 0 120km
SCALE
63 0 63
1 INCH = 63 MILES (approx.)
DATA BY : C.B.G.
DATE : Sept.'76
DRAWN BY : K.L.J.
DATE : Sept.'76
REVISED :
N T S No. : 104 N 5
ACCT No. : 325-00
DRWG No. : AM.76-3


133° 30'
59° 30'
59° 30'
133° 30'
N
SUNDAY
CLAIM
(9 UNITS)
EASTER CLAIM
(12 UNITS)
J. R. HARVEY
CLAIM
(18 UNITS)
PL. RAIN 1
PL. RAIN 2
PL. 465
PL. 464
PL. 1796
PL. 1791
PL. 1790
PL. 1655
PL. 1650
TO ATLIN 10km
MAIN ROAD
ROAD
McKEE CREEK
ELDORADO CREEK
PALMER LAKE
ATLIN LAKE
DUPONT EXPLORATION
CANADA
ATLIN - McKEE PROJECT
CLAIM MAP
ATLIN AREA, NORTHERN BRITISH COLUMBIA
1 : 50,000
m 1500 1000 500 0 1500 m
SCALE
0
1 INCH = FEET
DATA BY : C.B.G.
DATE : Sept. '76
DRAWN BY : K.I.J.
DATE : Sept. '76
REVISED :
N.T.S. No. : 104 N 5
ACCT No. : 325-00
DRWG. No. : AM.76-4

The property is accessible by all weather gravel road from Atlin as far as the McKee Creek bridge. From there a private 2-wheel drive mine access road leads to the claims, one mile upstream. A jeep road runs from the mine site to the Du Pont camp area. The camp has been removed.

A full range of essential services, including airport, float base, helicopter base and Mining Recorder, as well as accommodation is available in Atlin. A 96 km (60 mile) road links Atlin with the Alaska Highway at Jakes Corner, Y.T. The city of Whitehorse is 192 km (120 miles) by road from Atlin and is accessible on a year round basis. Whitehorse is serviced daily by commercial air, rail and truck transport services.

HISTORY AND PRODUCTION

Placer gold was discovered on McKee Creek in 1898 although it is possible that Russian trappers visiting from the Alaska coast were aware of its presence before then. Mining on the creek has been almost continuous to the present day by a number of companies, among them the following:

1900-1904	Atlin Mining Co.
1904-1908	Amalgamated McKee Creek Mining Co. Ltd.
1908-1913	Pittsburgh British Gold Co. Ltd.
1913-1932	Delta Mining Co. Ltd.
1934-1937	Atlin Gold Mines Ltd.

Thereafter work continued intermittently to the present day.

There are presently two mines on the creek. Antonio Vesnaver is drift mining gold bearing gravels under the north bank of the lower creek and John Harvey has been hydraulicking on the optioned property. Harvey has been active on the creek since 1973 when he acquired leases previously held and worked by Bruce Morton. Lacking sufficient funds and expertise to explore for the buried channel he optioned the property to Du Pont in 1976. During 1976 Du Pont examined and mapped the property and carried out a seismic reconnaissance survey.

Harvey has recovered in his sluice box a number of large very angular gold nuggets intimately mixed with white quartz vein. From their appearance these have been washed more or less directly from pyrite bearing quartz veins and shear zones in the bedrock.

In 1976 an assay of pyrite, recovered from Harvey's sluice box, returned a value of 172.8 oz/ton Au, and 53.52 oz/ton Ag.

GEOLOGY AND MINERALIZATION

The area lies in the northern part of the Intermontane Belt of the Canadian Cordillera. McKee Creek and the surrounding area north to Atlin and south to O'Donnel River is underlain by a thick sequence

of Late Paleozoic Cache Creek group limestones, cherts and basalts. These are intruded by irregularly spaced and sized ultramafic bodies (the Atlin intrusions). Further to the north, northeast and southeast are large areas underlain by granitic rocks of the coast intrusions and Cretaceous alaskite-quartz monzonite bodies. Granitic intrusive rocks may underlie the McKee Creek area at no great depth.

The geology of the Atlin area is described by J.D. Aitken in G.S.C. Memoir 307. In the area of the property the Cache Creek rocks are folded into broad, generally northeast-southwest trending, faulted fold structures.

Monger (G.S.C. Paper 74-47) has ascribed the rocks underlying McKee Creek to the Nakina and overlying Kedahda formations. The Nakina Formation contains three main lithologies, basalt, diabase and lithic tuff. The basalt is conformable with bedded chert of the Kedahda Formation, the diabase locally intrudes it and the lithic tuff is gradational with it so that the junction between the two formations is ill defined. Observations by Du Pont confirm the above observations except that significant pods and lenses of banded limestone and limestone breccia are also present in the creek beds and banks.

The basalt is typically yellowish or greenish grey but may be locally maroon or purple. Much of the volcanic rock is dense and fine grained. Occasionally pillows weather out as discrete boulders.

In the southern part of the property where bedrock has been exposed by hydraulic mining, at least two north-trending zones of strong shearing underlie the existing placer workings. The shear zones are extensively weathered to red and yellow clay and blue chloritic mud. In many parts of the shear zone conspicuous emerald green sheens of mariposite coat the fault breccia fragments. Small outcrops of pale cream talcose rock represent sheared lenses of ultramafic rocks. In the vicinity of the Harvey sluice box the shear zone is shot through with quartz veins and stringers with disseminated pyrite, arsenopyrite, minor galena and chalcopyrite. The recovery in the sluice box of free nugget gold attached to white quartz vein and an assay of pyrite which contained 172.8 oz/ton Au and 53.52 oz/ton Ag suggest that the shear contains potentially economic concentrations of gold. However, chip samples taken by Du Pont of Canada Exploration Limited in 1977 returned only low values (see Appendix 4). This shear zone is at least 25 m wide and of unknown length. A second and similar zone is present in the bedrock drain 150 m to the northeast. Shearing of this magnitude can be expected to have considerable strike continuity and may well by a source of the placer gold.

Fragments of bedrock brought to the surface by blasting during the seismic survey indicate that the north bank of McKee Creek is underlain largely by greenstones. Becker drilling showed that the seismic "low velocity" zone on lines 2+50N and 5+00N was due to underlying sheared greenstone with included chert and limestone and particularly to talcose sheared ultrabasic rocks similar to those seen in McKee Creek close to the J.R. Harvey workings.

DU PONT OF CANADA EXPLORATION RESULTS

According to Harvey and others, a buried channel should run parallel to McKee Creek on the north bank from a point at the head of the previous hydraulic workings and about opposite the confluence of Eldorado and McKee Creeks. Such a view has been current for a long time among those prospectors and miners familiar with McKee Creek. In order to test this hypothesis, Du Pont in September and October of 1976 surveyed the area at a scale of 1:1000, cut a grid and ran a seismic reconnaissance survey. The seismic survey was carried out under contract to Du Pont by Geotronics Surveys under Du Pont supervision and their report is attached for reference as Appendix 1. The results of the seismic survey are shown as profiles superimposed on Du Pont's property map. (See Seismic Refraction Study, Dwg. AM.76-6 a, b).

The seismic survey indicated that much of the area of interest is underlain by bedrock at shallow depths. However, in the area where the buried channel was thought to lie a low velocity zone was discovered which could be interpreted as indicating the presence of a buried channel.

To confirm the presence or absence of such a channel a drilling contract was negotiated with Becker Drills Limited of Vancouver and after construction of access roads the drill was hauled on to the property on April 14, 1977. The Becker hammer drill, commonly used for placer exploration, drives a double wall drive pipe and retrieves the cuttings continuously by compressed air. The unusually early breakup this year made the positioning and operation of this truck mounted drill unusually difficult. However, between April 14th-21st, 10 holes were drilled to bedrock. Seven of these were in the vicinity of line 2+50N, 1 on line 5+00N and 2 on the access road in McKee Creek. (See Drill Plan and Sections, Dwg. AM.77-2). A total of 93.65 m (307 ft) was drilled.

The results of the drilling showed conclusively that the seismic feature which might have represented a buried channel was caused by sheared greenstones and ultrabasic lenses at shallow depths. No buried channel is present. The discovery of till in Hole #10 in the bottom of the existing McKee Creek indicates that the present line of the creek was in existence at least some time during the glacial period. It had previously been thought that

TABLE 1

BEDROCK CHIP SAMPLE ASSAYS

EASTER CLAIM (P.L. 1790)*

Sample #	Length	Type	% Cu	Ag oz/ton	Au oz/ton	
2161	1.0 m	Panel Chip	0.01	0.02	0.003	Weathered pyrite shear zone at mouth of sluice box.
2162	0.75 m	Panel Chip	<0.01	0.01	0.005	Adjacent to 2161
2163	1.0 m	Panel Chip	<0.01	<0.01	<0.003	0.5 m white quartz vein in sheared volcanics, strong green stain on north side.
2164	2.65 m	Panel Chip	<0.01	<0.01	<0.003	Weathered shear zone with quartz vein. Rusty weathering & green stain
2165	1.3 m	Panel Chip	<0.01	<0.01	<0.003	As 2164
2166	1.25 m	Panel Chip	<0.01	<0.01	<0.003	Manganese stained shear zone with quartz vein containing fine pyrite cubes.

Semi quantitative spectrographic analyses of the above samples did not reveal the presence of any unrecognized mineral content of commercial significance.

*For locations see "General Surface Plan" Dwg. AM.76-7c. See assay sheets Appendix 4.

the existing course of McKee Creek above the placer workings was probably a post-glacial feature.

The positions and depths of the drill holes are shown on the profiles on Dwg. AM.77-2. The drill logs are included in the report as Appendix 3. All the material obtained from the drilling was bagged in 1 metre lengths in heavy polythene sacks, identified by sample tag, and stored at the property for future reference if required.

In addition to the drilling, chip sampling was carried out on exposed bedrock sections in the vicinity of the placer workings where shearing, quartz veining and red and green staining indicates the possible presence of economically significant mineralization. The results of this sampling are shown in Table 1 and the locations of the samples are shown on Dwg. AM.77-2. Assay sheets are included as Appendix 4.

CONCLUSIONS AND RECOMMENDATIONS

The supposed buried channel, long thought to exist on the north flank of McKee Creek above the old hydraulic workings, has been shown by a combination of seismic refraction and Becker drilling not to exist.

The ambiguous interpretation of parts of the seismic profiles on lines SL 0, SL 1 and SL 2 has been satisfactorily resolved by drilling. The "zone of lower velocity" is due to the presence of a bedrock shear zone in which ultrabasic rocks now altered to serpentine and talc are included.

The discovery of glacial till below the water table in the existing McKee Creek gorge indicates that the gorge section of the creek is older than was supposed and it is no longer necessary to postulate the presence of a preglacial drainage in another location.

In view of the lack of encouragement, both with respect to placer and bedrock gold potential, no recommendations are being made for further work.

CERTIFICATION

I, Christopher B. Gunn, of 2867 Panorama Drive, North Vancouver, B.C. hereby certify that:

1. I am a professional geologist and have been engaged in the practice of geology and mineral exploration since 1962 in Europe, Africa, Central and North America.

2. I hold a B.Sc. Honours degree in geology from the University of Wales and a Master of Science degree in geology from the University of Western Ontario.

3. I am a Registered Professional Engineer in the provinces of British Columbia and Ontario. I am also a Chartered Engineer of the United Kingdom.

4. The work described in this report was carried out by me or under my personal supervision.

5. I do not hold any beneficial interest, direct or indirect, in the subject property; nor do I expect to receive any such interest.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C.B. GUNN

Christopher B. Gunn

APPENDIX 1

REPORT ON SEISMIC REFRACTION STUDY

Geotronics Surveys

Telephone 687-6671

302 – 475 HOWE STREET VANCOUVER, B.C. V6C 2B3

Du Pont of Canada Explorations Ltd
102-1550 Alberni Street,
VANCOUVER, B.C.
V6G 1A5

December 3, 1976

Attention: Christopher B. Gunn

Dear Sirs:

RE: SEISMIC REFRACTION SURVEY
ATLIN-McKEE CREEK PLACER DEPOSIT
ATLIN M.D., B.C.
Our Job No. 76-46

The interpretation of data obtained from the seismic refraction survey carried out on McKee Creek has been completed. A total of seven lines, located as shown on the accompanying drawing AM76-5,* were profiled. The purpose of the survey was to locate a buried river channel that was postulated to occur in this area. The geophysical information presented here is based upon our best interpretation of field data which were collected according to generally accepted field procedures.

The procedure was as follows: 12 geophones were planted at 50 or 100 foot intervals along the line of investigation. The 'two-way, in-line' seismic refraction method was used. The data were generally recorded from seven shots, two offend, one at each end and three at 1/4-spread intervals within the spread. A 12-channel, SIE Dresser refraction seismic system was used for recording.

A 100-foot spread was used only on SL-1 (L2+50N) which was the first line completed. It was found that the overburden was too shallow for accurate depth determinations and therefore a 50-foot spread was used from then on.

*Now Dwg. AM.76-6a, b

The data were first interpretted in the field by calculating the delay time for each geophone. The procedure is as follows:

1. Pick the first arrivals from the field records and draw time-distance graphs for each spread;

2. With the help of a 'Russian', determine which points are bedrock and which are overburden, and how many layers occur in the overburden;

3. Draw a delay line for each end shot and from this determine the delay time for each geophone;

4. Proportion the delay time for each geophone into the various times spent in the various layers. Multiply each layer time by the corresponding layer velocity to obtain the layer thickness. Adding the layer thickness together will give the total overburden depth.

Profiles were drawn in the field for lines SL-0 to SL-4. SL-5 and SL-6 were completed on the last day and therefore the field profiles were not calculated for these two lines.

In two or three of the lines, some difficulty was encountered in the field interpretation and therefore the data was put through a computer-assisted interpretation developed by the U.S. Bureau of Mines. The procedure consisted of the following steps:

1. Calculate the depth and velocity of the overburden after making elevation corrections;

2. Decide the number of layers represented by the data and assign each data point a correct layer number;

3. The computer program then went through a modelling sequence whereby the delineation of the interface was done by a ray-tracing procedure which started out by computing the time taken by the ray to reach each geophone location. Any discrepancy between the calculated and observed times was corrected by the subsequent adjustment of the boundaries.

4. The program does not take into account lateral variations in the velocities. This could lead to erroneous depths. All computer assisted interpretations were therefore checked manually with the observed travel time plots. Any discrepancies were subsequently corrected in the final interpretation.

The computer assisted interpretted profiles are shown on drawing No. AM76-6 which is drawn at a scale of 1:1,000 (1 cm = 1 meter). The profiles are placed so that the separation between each line along the baseline is drawn to the same scale. The overburden/bedrock interface as interpretted in the field is shown by a dashed line on each profile. This was put in because of the added information contained in the field profiles, that did not show on the computer interpretation.

We would like to bring the following points to your attention:

1. In general, the depth to bedrock is apparently rather shallow. It varies from only 20 meters on SL-5 to 2 meters on SL-2.

2. The bedrock is shown to have a velocity of 2,900 to 3,500 meters/sec as interpretted by the U.S. Bureau of Mines program. This program averages the velocity over the entire spread length and does not take into

account lateral variations. On spreads SL-1 and SL-2, the field interpretation showed a bedrock velocity of about 1,400 feet/sec with a zone of lower velocity within both spreads of 3,000 to 3,350 meters/sec. The lower velocity could be reflecting a shear zone, or, very possibly, a clay-filled channel (see Note No. 3)

3. From field examinations of clay layers, we feel the clay could easily have velocities of about 3,000 meters/sec. It is, therefore, strongly possible there are velocity inversion layers in this area, that is, clay layers underlain by sands and gravels. The clay layers then could mistakenly be interpretted as bedrock. The depth to bedrock could then be much deeper than is shown on profiles SL-3 to SL-6.

4. Except for SL-3, the fit is generally quite good between the two interpretations. The variation on SL-3 is caused by the inability of the field interpretation to calculate the proper thickness of one or more of the overburden layers.

5. The shot between geophones 3 and 4 exposed a fractured rock that appeared to be a bedrock exposure of peridotite. However, the velocity in this area is only 1,400 meters/sec, which is rather low, even for fractured bedrock. If it is bedrock, then all such velocities on this and the other profiles could be reflecting fractured bedrock. We feel the more likely possibility is that the rock is in fact a large boulder.

6. If the channel is comparatively narrower to depth, the first arrivals from such an interface may be refractions from the channel side rather than the bottom and the channel may appear shallower.than it actually is.

VELOCITY CLASSIFICATION

Velocity (meters/sec)	Material
340 - 490	Loose surface material
600 - 760	More compacted surface material
1,000 - 1,500	Sands, gravels (around 1,500 probably wet sands and gravels) fractured bedrock?
2,900 - 3,500	bedrock, possibly clay lenses

Respectfully submitted,
GEOTRONICS SURVEYS LTD.,

David G. Mark
Geophysicist

DGM:vsm

APPENDIX 2

SCHEDULE A

APPENDIX 2

SCHEDULE A - PART 1

Placer Leases

Lease No.	Name	Tag No.	Lease Expiry Date (3)	Anniv. Date
PL 1790	Sunrise #2	269481M	13/4/81	23/10/77
PL 1791	Sunrise #3	269482M	13/4/81	23/10/77
PL 1796	Sunrise #4	269024M	13/4/81	23/10/77
PL 465	Sunrise #5	416927M	-/-/87 (2)	
PL 464	Sunrise #6	416928M	-/-/87 (2)	
(1)	Rain #1	416948M	-/-/87 (2)	
(1)	Rain #2	416949M	-/-/87 (2)	
PL 1655	Fido	872935M	1/6/90 (4)	23/10/77
PL 1690	Fortuna	80689M	1/6/90 (4)	23/10/77

Notes

1. 10 year lease applied for by Du Pont 27/8/76. Lease No. not yet assigned. Staked in the name of T.M. Harrison, to be transferred to Du Pont.

2. 10 year terms applied for but not yet granted.

3. Rental and assessment work required each and every year to maintain lease in good standing. Rental for each lease is $50 annually and work requirement for each lease is $250. Cash in lieu may be paid once in a three year period.

4. Assigned to J.R. Harvey by Antonio Vesnaver 23/8/76.

APPENDIX 2 (continued)

SCHEDULE A - PART 2

Mineral Claims

Claim	Units	Tag No.	Recorded	Anniv. Date
Easter	12	19011	20/4/76	20/4/77 (2)
Sunday	9	19140	15/6/76	15/6/77
J.R. Harvey	18	19139	15/6/76	15/6/77

Notes

1. 30 day extension for filing work permitted.

2. On April 19, 1977 application was made to group the Easter, Sunday and J.R. Harvey claims into the Canary group and work filed sufficient to hold this group until 19/4/78.

3. Assessment work requirement is $200/unit/year.

4. Rental requirement is $10 per $200 work or $20 per $200 cash in lieu.

APPENDIX 3

DRILL LOGS - BECKER HAMMER DRILL

DRILL HOLE RECORD

DRILLED BY: Becker Drills Limited
HOLE NUMBER: PDH 77-1 LENGTH: 19.5 m
LOCATION: McKee Creek DIP: Vertical
LATITUDE: 2+50 N DEPARTURE: 1+84 E
ELEVATION: AZIMUTH:
HOLE STARTED: April 14, 1977 HOLE COMPLETED: April 15, 1977

ACID &/OR TRO-PARI TESTS					
FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH

SHEET No. 1 OF: 2
HOLE NUMBER: PDE 77-1
PROPERTY: Atlin-McKee
ACCOUNT No.: 325-00
CORE SIZE: 6 5/8" OD
% CORE RECOVERY:
LOGGED BY: C. Gunn

FOOTAGE				DESCRIPTION	SAMPLE						ASSAYS				
FROM	TO	WIDTH	RCVRY		NUMBER	% SULFIDES	FOOTAGE FROM	FOOTAGE TO	FOOTAGE WIDTH	FOOTAGE RCVRY					
0	1 m	1 m	-	Organic material - peat and muck											
1	2 m	1 m		Sandy, gravelly buff till	2801										
2	3 m	1 m		Sandy, gravelly buff till	2802										
3	4 m	1 m		Sandy, gravelly buff till, large boulder	2803										
4	5 m	1 m		Sandy, gravelly buff till	2804										
5	6 m	1 m		Sandy, gravelly buff till	2805-6										
6	7 m	1 m		Sandy, gravelly buff till, large limestone boulders	2807-8										
7	8 m	1 m		Sandy, gravelly buff till, large lst & greenstone boulders	2809-10										
8	9 m	1 m		Gravelly till passing down to bluish grey powdery clay with	2811										
				rounded rock fragments and clay balls.	2812										
9	10 m	1 m		Bluish powdery clay with angular greenstone and chert rock	2813										
				chips.											
10	11 m	1 m		Course angular rock chips with minor blue clay	2814-15										
11	12 m	1 m		Blue grey chloritic clay with rock chips passing down into	2816-17										
				white talc.											
12	13 m	1 m		Rusty powder with few rock fragments becoming gravelly with	2818										
				depth. Green? mariposite and pyrite cubes seen in some	2819										
				fragments.											

DRILL HOLE RECORD

HOLE NUMBER: PDH 77-1 SHEET NUMBER 2 OF 2

FOOTAGE				DESCRIPTION	SAMPLE						ASSAYS				
FROM	TO	WIDTH	RCVRY		NUMBER	% SULFIDES	FOOTAGE FROM	FOOTAGE TO	FOOTAGE WIDTH	FOOTAGE RCVRY					
13	14 m	1 m		Buff orange sand with angular pebbles 2.5 cm with rock chips	2820										
				and rock flour. Small piece of wood recovered (may have	2821										
				dropped from above).											
14	15 m	1 m		Rusty sandy gravel becoming less rusty with depth. Most rock	2822										
				fragments over 2.5 cm.	2823										
15	16 m	1 m		Rusty sandy gravel. Little sand	2824-25										
16	17 m	1 m		Rusty sandy gravel. Much sand rock fragments mostly larger than	2826										
				2.5 cm.											
17	18 m	1 m		Rusty sandy gravel with rounded and angular fragments up to	2827										
				5 cm. Last 40 cm material gets finer and wet.	2828										
18	19 m	1 m		Rusty sandy gravel.	2829-30										
19	19.5	0.5		Rusty gravel with increasing course angular rock chips.	2831										
				Could not make any more progress, rock too hard.											
				Hole stopped.											

DRILL HOLE RECORD

DRILLED BY: Becker Drills Limited

HOLE NUMBER: PDH 77-2 LENGTH: 14 m

LOCATION: McKee Creek DIP: Vertical

LATITUDE: 2+40 N DEPARTURE: 1+50 E

ELEVATION: AZIMUTH:

HOLE STARTED: April 16, 1977 HOLE COMPLETED: April 17, 1977

ACID &/OR TRO-PARI TESTS					
FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH

SHEET No. 1 OF: 1

HOLE NUMBER: PDH 77-2

PROPERTY: Atlin-McKee

ACCOUNT No.: 325-00

CORE SIZE: 6 5/8" OD

% CORE RECOVERY:

LOGGED BY: C.B. Gunn

FOOTAGE				DESCRIPTION	SAMPLE						ASSAYS
FROM	TO	WIDTH	RCVRY		NUMBER	% SULFIDES	FOOTAGE FROM	TO	WIDTH	RCVRY	
0	3 m	3 m		Peat and organic muck.							
3	4 m	1 m		Buff to grey gravelly till.	2832						
4	5 m	1 m		Buff to grey with limestone and greenish chert pebbles.	2833						
5	6 m	1 m		Grey gravelly till.	2834						
6	7 m	1 m		Grey gravelly till.	2835						
7	8 m	1 m		Light grey to white massive powdery talc.	2836						
8	9 m	1 m		Light grey massive powdery talc with sericite chlorite pebbles.	2837-38						
9	10 m	1 m		White powdery talc.	2839						
10	11 m	1 m		White powdery talc.	2840-41						
11	12 m	1 m		White powdery talc.	2842						
12	13 m	1 m		White powdery talc.	2843-44						
13	14 m	1 m		White powdery talc with increasing chlorite and serpentine rock	2845						
				fragments.	2846						
				Drill rods stuck in bedrock. Rods blasted free. Hole stopped.							

DRILL HOLE RECORD

DRILLED BY: Becker Drills Limited
HOLE NUMBER: PDH 77-3 LENGTH: 16.25 m
LOCATION: McKee Creek DIP: Vertical
LATITUDE: 2+35 N DEPARTURE: 1+64 E
ELEVATION: AZIMUTH:
HOLE STARTED: April 17, 1977 HOLE COMPLETED: April 17, 1977

ACID &/OR TRO-PARI TESTS					
FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH

SHEET No. 1 OF: 1
HOLE NUMBER: PDH 77-3
PROPERTY: Atlin-McKee
ACCOUNT No.: 325-00
CORE SIZE: 6 5/8" OD
% CORE RECOVERY:
LOGGED BY: C.B. Gunn

FOOTAGE				DESCRIPTION	SAMPLE						ASSAYS				
FROM	TO	WIDTH	RCVRY		NUMBER	% SULFIDES	FOOTAGE FROM	TO	WIDTH	RCVRY					
0	2 m	2 m		Peat and organic muck.											
2	3 m	1 m		Grey buff sandy gravelly till.	2847										
3	4 m	1 m		Grey buff sandy gravelly till.	2848										
4	5 m	1 m		Coarse boulder till.	2849-50										
5	6 m	1 m		Coarse boulder limestone and greenstone boulders.	2851-52										
6	7 m	1 m		Coarse boulder with gravel.	2853-54										
7	8 m	1 m		Gravel till with cobbles up to 15 cm.	2855-56										
8	9 m	1 m		Sandy gravel till.	2857-58										
9	10 m	1 m		Shattered greenish buff greenstone fragments passing into massive	2859										
				talc rock at 10 m.											
10	11 m	1 m		White talc.	2860-61										
11	12 m	1 m		White talc with soapstone pebbles and chlorite nodules.	2862-63										
12	13 m	1 m		As above with larger soapstone sepentine rock fragments.	2864-65										
13	14 m	1 m		As above.	2866-67										
14	15 m	1 m		Ultrabasic rock chips with talc.	2868-69										
15	16 m	1 m		As above.	2870-71										
16	16.25			As above with quartz vein material and phyllitic greenstone.	2872										

DRILL HOLE RECORD

DRILLED BY: Becker Drills Limited
HOLE NUMBER: PDH 77-4 LENGTH: 4.2 m
LOCATION: McKee Creek DIP:
LATITUDE: 2+26 N DEPARTURE: 2+07E
ELEVATION: AZIMUTH:
HOLE STARTED: April 17, 1977 HOLE COMPLETED: April 17, 1977

ACID &/OR TRO-PARI TESTS

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH

SHEET No. 1 OF: 1
HOLE NUMBER: PDH 77-4
PROPERTY: Atlin-McKee
ACCOUNT No.: 325-00
CORE SIZE: 6 5/8" OD
% CORE RECOVERY:
LOGGED BY: C.B. Gunn

FOOTAGE FROM	FOOTAGE TO	FOOTAGE WIDTH	FOOTAGE RCVRY	DESCRIPTION	SAMPLE NUMBER	SAMPLE % SULFIDES	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE FOOTAGE WIDTH	SAMPLE FOOTAGE RCVRY	ASSAYS
0	1 m	1 m		Organic material.							
1 m	2 m	1 m		Sandy gravelly till.	2873						
2 m	3 m	1 m		Sandy gravelly till.	2874						
3 m	4 m	1 m		Sandy gravelly till with chert fragments from large boulder	2875						
				or bedrock.	2876						
4 m	4.2 m	0.2		Coarse angular fresh chert fragments.	2877						
				Too hard to drill - bedrock.							
				End of hole. Moved forward 3 m for PDH #5.							

DRILL HOLE RECORD

DRILLED BY: Becker Drills Limited

HOLE NUMBER: PDH 77-5 LENGTH: 5.2 m

LOCATION: McKee Creek DIP: Vertical

LATITUDE: 2+29N DEPARTURE: 2+07E

ELEVATION: AZIMUTH:

HOLE STARTED: April 18, 1977 HOLE COMPLETED: April 18, 1977

ACID &/OR TRO-PARI TESTS					
FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH

SHEET No. 1 OF: 1

HOLE NUMBER: PDH 77-5

PROPERTY: Atlin-McKee

ACCOUNT No.: 325-00

CORE SIZE: 6 5/8" OD

% CORE RECOVERY:

LOGGED BY: C.B. Gunn

FOOTAGE				DESCRIPTION	SAMPLE						ASSAYS				
FROM	TO	WIDTH	RCVRY		NUMBER	% SULFIDES	FOOTAGE FROM	TO	WIDTH	RCVRY					
0	1 m	1 m		Peat and organic muck.											
1 m	2 m	1 m		Greenish buff sandy till with chert boulders.	2878										
2 m	3 m	1 m		Greenish buff sandy till with chert boulders.	2879										
3 m	4 m	1 m		Angular chert fragments. Boulder or bedrock.	2880										
4 m	5 m	1 m		Coarse angular chert fragments and fragments of quartz vein.	2881										
					2882										
4 m	5.2			Coarse angular chert fragments and fragments of quartz vein.	2883										
				Bedrock. End of hole.											

DRILL HOLE RECORD

DRILLED BY: Becker Drills Limited

HOLE NUMBER: PDH 77-6 LENGTH: 5 m

LOCATION: McKee Creek DIP: Vertical

LATITUDE: 2+30 N DEPARTURE: 1+95 E

ELEVATION: AZIMUTH:

HOLE STARTED: April 18, 1977 HOLE COMPLETED: April 18, 1977

ACID &/OR TRO-PARI TESTS					
FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH

SHEET No. 1 OF: 1

HOLE NUMBER: PDH 77-6

PROPERTY: Atlin-McKee

ACCOUNT No.: 325-00

CORE SIZE: 6 5/8" OD

% CORE RECOVERY:

LOGGED BY: C.B. Gunn

FOOTAGE				DESCRIPTION	SAMPLE						ASSAYS				
FROM	TO	WIDTH	RCVRY		NUMBER	% SULFIDES	FOOTAGE FROM	FOOTAGE TO	FOOTAGE WIDTH	FOOTAGE RCVRY					
0	3 m	3 m		Peat and organic muck.											
3 m	4 m	1 m		Green grey and buff sandy pebbly till.	2884										
4 m	5 m	1 m		Orange pebbly till or gravel. Weathered angular rock chips at	2885										
				4.5. At 5 m fresh greenstone chips and quartz vein.	2886										
				End of hole.											

DRILL HOLE RECORD

DRILLED BY: Becker Drills Limited
HOLE NUMBER: PDH 77-7
LOCATION: McKee Creek
LATITUDE: 2+41.5 N
ELEVATION:
HOLE STARTED: April 18, 1977

LENGTH: 13 m
DIP: Vertical
DEPARTURE: 1+82.5 E
AZIMUTH:
HOLE COMPLETED: April 21, 1977

ACID &/OR TRO-PARI TESTS					
FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH

SHEET No. 1 OF: 1
HOLE NUMBER: PDH 77-7
PROPERTY: Atlin-McKee
ACCOUNT No.: 325-00
CORE SIZE: 6 5/8" OD
% CORE RECOVERY:
LOGGED BY: C.B. Gunn

FOOTAGE				DESCRIPTION	SAMPLE						ASSAYS
FROM	TO	WIDTH	RCVRY		NUMBER	% SULFIDES	FOOTAGE FROM	TO	WIDTH	RCVRY	
0	2 m	2 m		Peat and organic muck.							
2 m	3 m	1 m		Grey-buff gravelly till.	2887						
3 m	4 m	1 m		Grey-buff gravelly till with boulders.	2888						
3 m	4 m	1 m		Grey-buff gravelly till with large boulders.	2889						
5 m	6 m	1 m		Grey-buff gravelly till.	2890						
6 m	7 m	1 m		Grey-buff gravelly till.	2891-92						
7 m	8 m	1 m		Till with angular rock chips of greenstone.	2893-94						
8 m	9 m	1 m		Angular grey rock chips, minor sand or rock flour.	2895 2896						
9 m	10 m	1 m		Angular grey greenstone rock chips, various sizes.	2897						
					2898						
10 m	11 m	1 m		As above, with narrow white quartz veins and some fragments	2899						
				showing slickenside faces.	2900						
11 m	12 m	1 m		Coarse angular rock chips. Passing down at 11.5 to white talc.	2901-02						
12 m	13 m	1 m		White talc passing to rusty talc at 12.6	2903-04						
				END OF HOLE.							

DRILL HOLE RECORD

DRILLED BY: Becker Drills Limited
HOLE NUMBER: PDH 77-8 LENGTH: 2.5 m
LOCATION: McKee Creek DIP: Vertical
LATITUDE: 5+01 N DEPARTURE: 2+18 E
ELEVATION: AZIMUTH:
HOLE STARTED: April 21, 1977 HOLE COMPLETED: April 21, 1977

ACID &/OR TRO-PARI TESTS					
FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH

SHEET No. 1 OF: 1
HOLE NUMBER: PDE 77-8
PROPERTY: Atlin-McKee
ACCOUNT No.: 325-00
CORE SIZE: 6 5/8"
% CORE RECOVERY:
LOGGED BY: C.B. Gunn

FOOTAGE				DESCRIPTION	SAMPLE						ASSAYS
FROM	TO	WIDTH	RCVRY		NUMBER	% SULFIDES	FOOTAGE FROM	FOOTAGE TO	FOOTAGE WIDTH	FOOTAGE RCVRY	
0	1 m	1 m		Gravel till.	2905						
1 m	2 m	1 m		Gravel till.	2906						
2 m	2.5	0.5		Coarse angular buff coloured rock chips with quartz vein.	2907						
				Bedrock. END OF HOLE.							

DRILL HOLE RECORD

DRILLED BY: Becker Drills Limited
HOLE NUMBER: PDH 77-9 LENGTH: 6 m
LOCATION: McKee Creek DIP: Vertical
LATITUDE: 6+20 N DEPARTURE: 2+54 E
ELEVATION: AZIMUTH:
HOLE STARTED: April 21, 1977 HOLE COMPLETED: April 21, 1977

ACID &/OR TRO-PARI TESTS

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH

SHEET No.: OF: 1
HOLE NUMBER: PDH 77-9
PROPERTY: Atlin-McKee
ACCOUNT No.: 325-00
CORE SIZE: 6 5/8"
% CORE RECOVERY:
LOGGED BY: C.B. Gunn

FOOTAGE FROM	TO	WIDTH	RCVRY	DESCRIPTION	SAMPLE NUMBER	% SULFIDES	FOOTAGE FROM	TO	WIDTH	RCVRY	ASSAYS
0	1 m	1 m		Coarse sand gravelly till.	2908						
1 m	2 m	1 m		Coarse sand gravelly till.	2909						
2 m	4 m	2 m		Coarse till with angular rock fragments	2910						
4 m	4 m	1 m		Till changing to till mixed with grey talcy powder @ 4.5 m	2911						
5 m	6 m	1 m		Talc with soapstone and serpentinite rock fragments.	2912						
					2913						
				END OF HOLE.							

DRILL HOLE RECORD

DRILLED BY: Becker Drills Limited
HOLE NUMBER: PDH 77-10 LENGTH: 8 m
LOCATION: McKee Creek DIP: Vertical
LATITUDE: 1+12 N DEPARTURE: 2+57 E
ELEVATION: AZIMUTH:
HOLE STARTED: April 21, 1977 HOLE COMPLETED: April 21, 1977

ACID &/OR TRO-PARI TESTS					
FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH

SHEET No.: 1 OF: 1
HOLE NUMBER: PDH 77-10
PROPERTY: Atlin-McKee
ACCOUNT No.: 325-00
CORE SIZE: 6 5/8" OD
% CORE RECOVERY:
LOGGED BY: C.B. Gunn

FOOTAGE				DESCRIPTION	SAMPLE						ASSAYS				
FROM	TO	WIDTH	RCVRY		NUMBER	% SULFIDES	FOOTAGE FROM	TO	WIDTH	RCVRY					
0	1 m	1 m		Till with angular rock chips.	2914										
1 m	2 m	1 m		Coarse angular rock chips and gravel. Could be old tailings or	2915										
				till.											
2 m	3 m	1 m		Coarse angular rock chips, probably boulder tailings.	2916										
3 m	4 m	1 m		As above.	2917										
4 m	5 m	1 m		As above, Water at 4.25 m.	2918-19										
5 m	7 m	2 m		Sandy gravel with coarse angular rock chips, probably till.	2920										
7 m	7.5	0.5		Gravel till with angular rock chips.	2921										
7.5	8 m	0.5		Gravel till with rock fragments passing down into coarse	2922										
				fresh angular rock chips with abundant water.	2923										
				To hard to drill.											
				END OF HOLE.											

APPENDIX 4

ASSAY CERTIFICATES

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. SP 0592

INVOICE NO. 19947

RECEIVED May 2/77

ANALYSED May 11/77

TO: Dupont of Canada Exploration Ltd.,
Rm 102 - 1550 Alberni
Vancouver, B. C.

ATTN: C.B.Gunn

SAMPLE NO.	Lower Concentration Limit (PPM)	2161	2162	2163	2164	2165	2166
Antimony	50	bcl	bcl	bcl	bcl	bcl	bcl
Arsenic	50	50	500	200	bcl	bcl	bcl
Barium	5	500	500	150	150	150	200
Beryllium	5	bcl	bcl	bcl	bcl	bcl	bcl
Bismuth	5	bcl	bcl	bcl	bcl	bcl	bcl
Boron	20	bcl	50	bcl	bcl	bcl	20
Cadmium	20	bcl	bcl	bcl	bcl	bcl	bcl
Calcium	0.05%	7%	10%	10%	10%	7%	10%
Chromium	10	1000	1500	1500	2000	2000	200
Cobalt	10	50	50	20	70	70	10
Copper	1	70	30	50	50	50	30
Gallium	2	20	10	5	10	5	10
Germanium	20	bcl	bcl	bcl	bcl	bcl	bcl
Iron	0.05%	10%	10%	5%	5%	5%	2%
Lead	5	5	bcl	5	bcl	bcl	5
Magnesium	0.02%	5%	7%	7%	7%	10%	5%
Manganese	5	1000	1000	1000	700	500	500
Molybdenum	10	bcl	bcl	bcl	bcl	bcl	bcl
Nickel	5	150	200	200	1000	1000	50
Niobium	50	bcl	bcl	bcl	bcl	bcl	bcl
Silver	1	bcl	bcl	bcl	bcl	bcl	bcl
Strontium	20	100	300	200	100	50	50
Tantalum	200	bcl	bcl	bcl	bcl	bcl	bcl
Tellurium	200	bcl	bcl	bcl	bcl	bcl	bcl
Thorium	100	bcl	bcl	bcl	bcl	bcl	bcl
Tin	10	bcl	bcl	bcl	bcl	20	10
Titanium	5	5000	2000	700	1500	1500	1500
Vanadium	10	300	150	100	200	100	100
Zinc	50	100	100	100	50	50	70
Zirconium	20	30	50	20	70	50	70

SEMI QUANTITATIVE SPECTROGRAPHIC ANALYSES

>5000 ppm = > 5000 ppm		50 ppm	= 25–100 ppm
5000 ppm = 2500–10000 ppm		20 ppm	= 10–50 ppm
2000 ppm = 1000- 4000 ppm		10 ppm	= 5–20 ppm
1000 ppm = 500–2000 ppm		5 ppm	= 2–10 ppm
500 ppm = 250–1000 ppm		2 ppm	= 1–4 ppm
200 ppm = 100–400 ppm		1 ppm	= 0.5 -2 ppm
100 ppm = 50--200 ppm		bcl	= below concentration limit

Ranges for Iron, Calcium & Magnesium are reported in %

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: .....

MAY 6 1977

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO. 32398
INVOICE NO. 19887
RECEIVED May 2/77
ANALYSED May 5/77

TO: Dupont of Canada Exploration Ltd.,
1550 Alberni Rm 102
Vancouver, B.C.

ATTN: B.B.Gunn

SAMPLE NO. :	% Copper	Oz/Ton Silver	Oz/Ton Gold
2161	0.01	0.02	0.003
2162	< 0.01	0.01	0.005
2163	< 0.01	< 0.01	< 0.003
2164	< 0.01	< 0.01	< 0.003
2165	< 0.01	< 0.01	< 0.003
2166	< 0.01	0.01	< 0.003

CTA MEMBER CANADIAN TESTING ASSOCIATION

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

INVOICE

becker

TELEPHONE:
(604) 254-0217

BECKER DRILLS LTD.

1217 FRANCIS STREET
VANCOUVER, B.C. V6A 1Z4

HEAD OFFICE:
P.O. BOX 3487 STN.
CALGARY, ALBERTA
T2M 4M2

TO: Du Pont of Canada Exploration Limited
#102-1550, Alberni Street
Vancouver, B.C.

INVOICE No.: 53046

DATE: May 5, 1977.

OUR JOB No.: DO 150-51

OUR P.O. #

LOCATION: Atlin, B.C.

BILLING PERIOD: April 12 to April 23/1977.

		$	¢
HOURLY	46½ hours @ $80.00/hr.	3720.	00
FOOTAGE	327 feet @ $ 3.00/ft.	981.	00
TRAVEL TIME	11½ hours @ $30.00/hr.	345.	00
M & D	@ $3500.00/lump sum	3500.	00

DATE	MAY 9 1977
CHARGE	325-90-1
APPROVED	
APPROVED	A.H. Baker

PAID
D.O.X.
DISBURSEMENT
ACCOUNT
CK. No. 02212
MAY 18 1977

TOTAL $8546.00

ORIGINAL INVOICE

This Invoice is Due Upon Receipt
1½% per month charged after 10th of the month following receipt of Invoice.
Chargeable after:

Subsidiary of Upper Canada Resources Ltd.

ORATION

DE CANADA
DU CANADA
LIMITÉE

DuPont of Canada Exploration Limited
La Société Exploration DuPont du Canada Limitée
MONTREAL, QUEBEC, CANADA

02212

DATE	MONTANT	AMOUNT
May 18/77	$8,546.00	$8,546.00

PAYEZ

DuPont of Canada Exploration Limited

TO THE ORDER OF
Becker Drills Ltd.
1217 Francis Street
Vancouver, BC
V6A 1Z4

À L'ORDRE DE

NON NÉGOCIABLE

DuPont of Canada Exploration Limited
La Société d'Exploration DuPont du Canada Limitée

DETACH STATEMENT BEFORE DEPOSITING VEUILLEZ DÉTACHER AVANT DE DÉPOSI

DATE	YOUR REFERENCE VOTRE RÉFÉRENCE	DETAILS	GROSS AMOUNT MONTANT BRUT	DISCOUNT ESCOMPTE	NET AMOUNT MONTANT NET
May 18/77	53046	Per your invoice			$8,546.00

02212

QV 77-54

BECKER DRILLS LTD.

subsidiary of UPPER CANADA RESOURCES LIMITED

March 25/1977

Du Pont of Canada Exploration Limited
#102-1550, Alberni Street
Vancouver, B.C.
V6G 1A5

ATTENTION: MR. Chris Gunn

Dear Sir

Referring to previous discussions regarding a drilling program in Northern B.C., we are pleased to offer this letter of proposal.

PROGRAM OUTLINE

LOCATION:	Near Atlin, B.C..
ACCESS:	All drillholes will be accessible by truck-mounted equipment. Du Pont of Canada Exploration Limited (hereafter "Du Pont") will provide a tractor and will be responsible for access roads, drill site clearing, and any towing assistance required.
FORMATION:	Till, Sand and Gravel, Sand, Gravel and Boulders.
PURPOSE OF DRILLING:	Gold Placer Exploration.
EXTENT OF WORK:	Approximately 1,300 feet.
HOLE DEPTH:	Approximately 50-150 feet.
HOLE ANGLE:	Vertical
DRILLING:	Becker Hammer Method using 6 5/8" x 4 1/4" wall drive pipe, bringing up a sample of the formation by airlifting through the centre pipe.
EQUIPMENT:	One Becker Truck-mounted Hammer Drill complete with 160 feet of drive pipe, and one pick-up for transportation.

1217 FRANCES • VANCOUVER, B.C. • V6A 1Z4 • PHONE (604) 254-6217

becker

PERSONNEL:	Driller and Helper.
OPERATION:	We will pperate 11 hours per day, 7 days per week.
SUPPLIES:	Becker will provide all supplies required for the drilling.
SAMPLING:	Becker will provide a cyclone for collection of the drilled material. Du Pont will be responsible for logging the soil formation and marking and handling the samples. We will assist as convenient.
CORING:	No coring is required.
ACCOMMODATION:	Room and board for our crew will be provided by Du Pont in Atlin.
FUEL:	Fuel for our drill and service vehicle will, free of charge, be provided and delivered to the drill by Du Pont.
SHIPMENT OF PIPE:	In order to provide sufficient pipe for this job, Becker has to ship extra pipe from Calgary to site and back. The charge for this will be a lumpsum in the amount of $1700.0
BREAK-UP DELAY:	If mobilization to the site is prevented by roadban, or if work on the site becomes impractical because of break-up conditions at the property, Becker agrees to delay the work for a reasonable period of time for a lumpsum charge of . . . . .$2200.00 plus . . . . . $ 200.00 per day for every day that the delay exceeds 15 days.
PROLONGED DELAYS:	Should road ban threaten to tie up the drill for a long period of time, either party will have the option of cancelling the job. In case of such cancellation, Du Pont will pay Becker for all charges incurred to that time.
DEMOBILIZATION DELAY:	Should the Becker Rig, upon completion of your work, be delayed on its return to Calgary because of road bans, and if such a delay would not have occurred had the rig travelled direct to Calgary from Cogasa, then Du Pont shall reimburse Becker for the delay by a lumpsum payment of $1500.0

RATES

MOBILIZATION AND DEMOBILIZATION:	To and from end of reasonably good road . . . . . $3,500.00 This low M & D charge is valid only if job is awarded prior to our rig leaving the Cogasa property.
HOURLY CHARGE:	All working time, including drilling, sampling, pulling pipe, moving, fuelling, etc. but not travel time, will be charged at an hourly rate of . . . . . $ 80.00

becker

OVERBURDEN FOOTAGE	In addition to the hourly rate, drilling of overburden footage will be charged at a rate per foot of . . . . . $ 3.00
STANDBY:	For reasons beyond our control, for example: waiting for orders, waiting for access, etc., to be charged at an hourly rate of . . . . . $ 80.00 (Standby calculated on the basis of 8 hour work day, 7 days per week). Except as provided for under "BREAK-UP DELAY".
TRAVEL TIME:	Daily travel time for our crew to be charged at an hourly rate of . . . . . $ 30.00

TERMS

DAILY APPROVAL:	We will complete and sign a daily drill report. Your representative will daily approve and sign this report. Upon signing, the quantities of the report shall become binding on both parties.
PAYMENT:	Invoices will be submitted monthly and are due on receipt. A 1% per month interest charge will apply to balance unpaid on the 10th of the following month.
WORKMEN'S COMPENSATION:	Becker will pay all dues and assessments payable under the Workmen's Compensation Act or other sumilar Acts within the Province or Territory in respect of its employees.
INSURANCE:	Becker will maintain such insurance as will protect it from all claims and damage for personal injury including death resulting therefrom and from claims for property damage arising from the operation contemplated hereunder.

Pending an early notification, we expect to be able to start this work approximately the middle of April.

Completion of this program is expected to take 12 days.

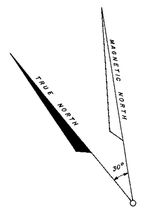
Thank you for the opportunity of quoting this job.

Yours very truly,

Lars G. Anderson

LGA/cb

Agreed.
Vice-Pres.
March 31, 1977.



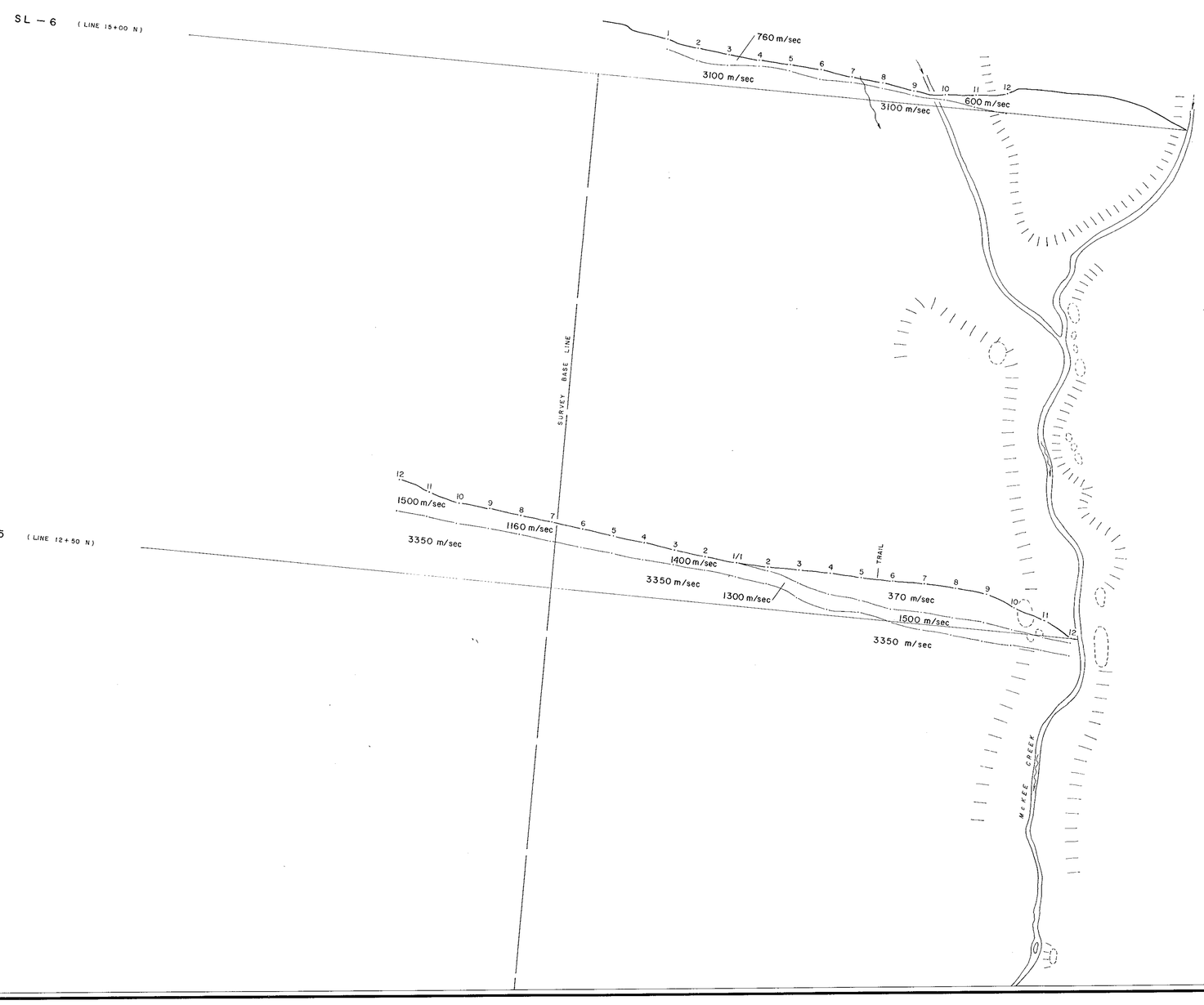
GEOPHYSICAL LEGEND

5	GEOPHONE LOCATIONS
	COMPUTED DEPTH POINT ON INFERRED LAYER BOUNDARY (COMPUTER "BEST FIT")
	COMPUTED DEPTH POINT ON INFERRED LAYER BOUNDARY (ARITHMETICAL "FIELD INTERPRETATION")
470 m/sec	AVERAGE VELOCITY IN METRES PER SECOND

LEGEND

- OUTCROP
- GEOLOGICAL CONTACT
- MAIN CREEK WITH DIRECTION
- MINOR WATERCOURSE OR DRAIN
- SLOPE, VERY STEEP > 75% GRADE
- SLOPE, STEEP, 50 TO 75 % GRADE
- SLOPE, MODERATE, < 50% GRADE
- CREST OF SLOPE
- BASE OF SLOPE OR CLIFF
- MINOR TOPOGRAPHIC FRACTURE, TAILINGS DUMPS, TRENCHES ETC.
- OLD JEEP TRAIL OR WAGON ROAD, SOME SECTIONS IMPASSABLE
- CLAIM POST

NOTE: BASE MAP COMPILED FROM UNCONTROLLED PACE AND COMPASS TRAVERSES.



SEISMIC STUDY DRWG No. AM.76-6a
SEISMIC STUDY DRWG No. AM.76-6b ALSO DRILL PLAN DRWG No. AM.77-2
SURFACE PLAN DRWG No. AM.76-7c

6324

SHEET INDEX

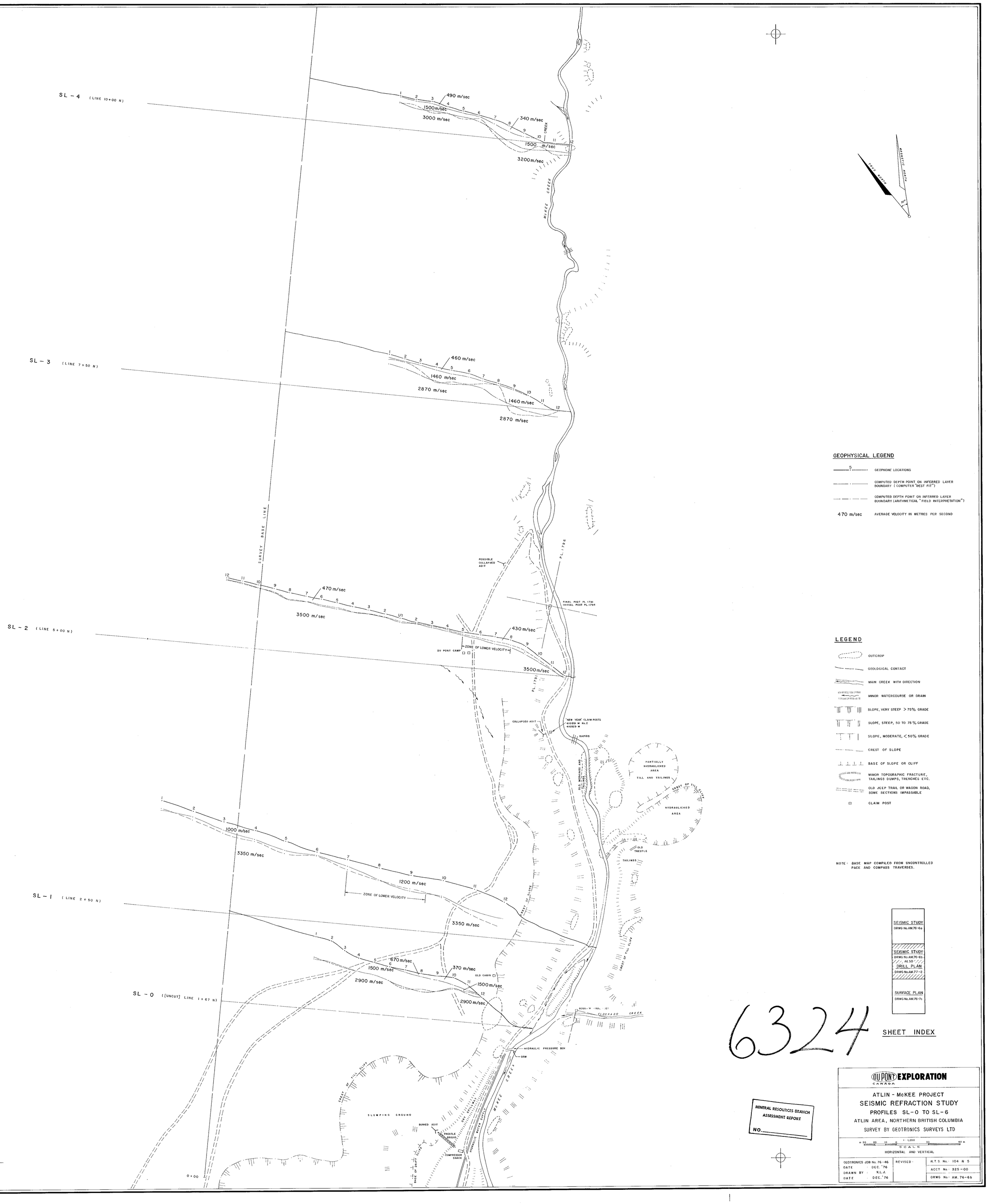
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO.

DUPONT EXPLORATION CANADA

ATLIN - McKEE PROJECT
SEISMIC REFRACTION STUDY
PROFILES SL-0 TO SL-6
ATLIN AREA, NORTHERN BRITISH COLUMBIA
SURVEY BY GEOTRONICS SURVEYS LTD

30 20 10 0 1:1,000 10 20 30 40 m
SCALE
HORIZONTAL AND VERTICAL

GEOTRONICS JOB No. 76-46	REVISED:	N.T.S. No.: 104 N 5
DATE: DEC. '76		ACCT No.: 325-00
DRAWN BY: K.L.J.		DRWG No.: AM.76-6a
DATE: DEC. '76		



GEOPHYSICAL LEGEND

- 5 — GEOPHONE LOCATIONS
- COMPUTED DEPTH POINT ON INFERRED LAYER BOUNDARY (COMPUTER "BEST FIT")
- COMPUTED DEPTH POINT ON INFERRED LAYER BOUNDARY (ARITHMETICAL "FIELD INTERPRETATION")
- 470 m/sec — AVERAGE VELOCITY IN METRES PER SECOND

LEGEND

- OUTCROP
- GEOLOGICAL CONTACT
- MAIN CREEK WITH DIRECTION
- MINOR WATERCOURSE OR DRAIN
- SLOPE, VERY STEEP > 75% GRADE
- SLOPE, STEEP, 50 TO 75 % GRADE
- SLOPE, MODERATE, < 50% GRADE
- CREST OF SLOPE
- BASE OF SLOPE OR CLIFF
- MINOR TOPOGRAPHIC FRACTURE, TAILINGS DUMPS, TRENCHES ETC.
- OLD JEEP TRAIL OR WAGON ROAD, SOME SECTIONS IMPASSABLE
- CLAIM POST

NOTE: BASE MAP COMPILED FROM UNCONTROLLED PACE AND COMPASS TRAVERSES.

SEISMIC STUDY
DRWG No. AM.76-6a

SEISMIC STUDY
DRWG No. AM.76-6b
AL 50
DRILL PLAN
DRWG No. AM.77-2

SURFACE PLAN
DRWG No. AM.76-7c

6324

SHEET INDEX

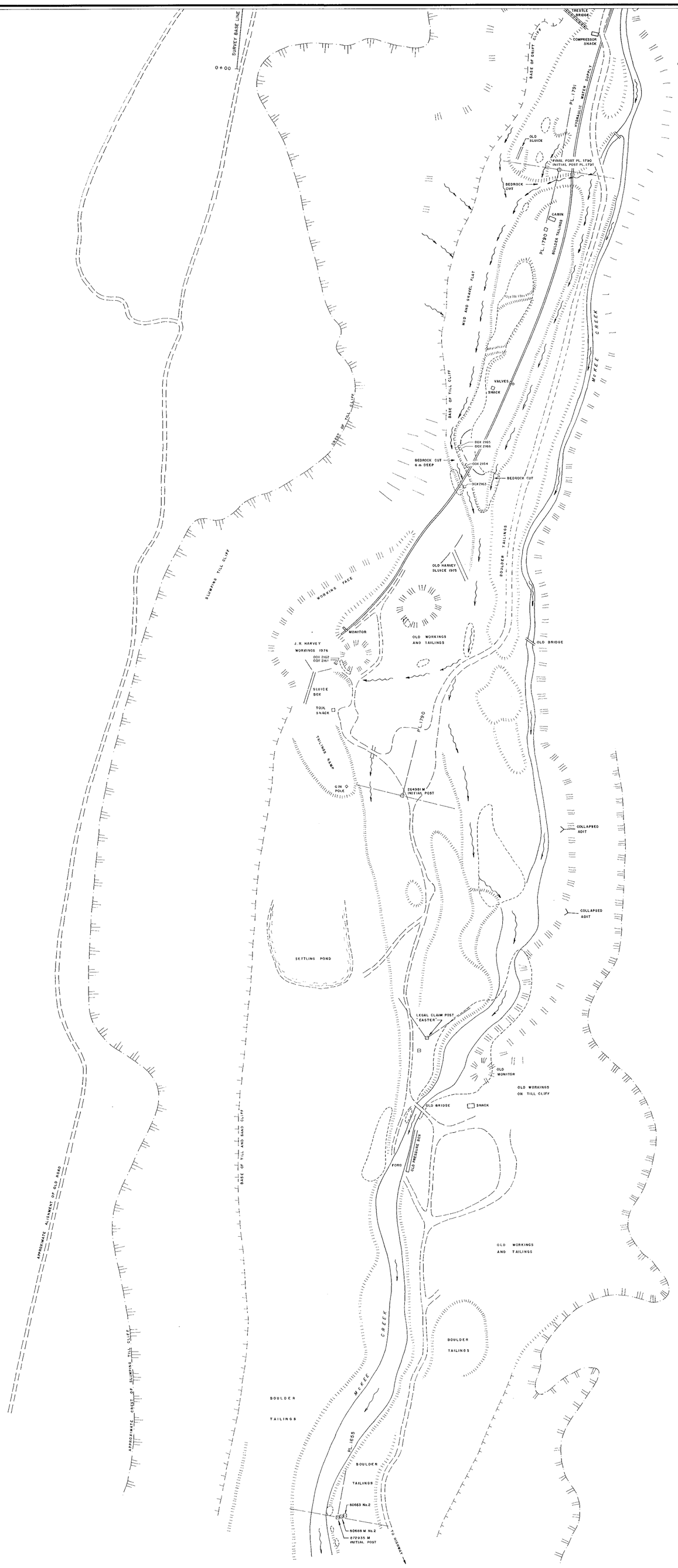
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO.

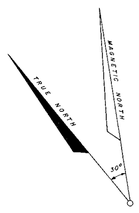
DU PONT EXPLORATION
CANADA

ATLIN - McKEE PROJECT
SEISMIC REFRACTION STUDY
PROFILES SL-0 TO SL-6
ATLIN AREA, NORTHERN BRITISH COLUMBIA
SURVEY BY GEOTRONICS SURVEYS LTD

1:1,000
SCALE
HORIZONTAL AND VERTICAL

GEOTRONICS JOB No. 76-46	REVISED:	N.T.S. No.: 104 N 5	
DATE: DEC. '76		ACCT No.: 325-00	
DRAWN BY: K.L.J.			
DATE: DEC. '76		DRWG No.: AM. 76-6b	





LEGEND

- OUTCROP
- GEOLOGICAL CONTACT
- MAIN CREEK WITH DIRECTION
- MINOR WATERCOURSE OR DRAIN
- SLOPE, VERY STEEP > 75% GRADE
- SLOPE, STEEP, 50 TO 75% GRADE
- SLOPE, MODERATE, < 50% GRADE
- CREST OF SLOPE
- BASE OF SLOPE OR CLIFF
- MINOR TOPOGRAPHIC FRACTURE, TAILINGS DUMPS, TRENCHES ETC.
- OLD JEEP TRAIL OR WAGON ROAD, SOME SECTIONS IMPASSABLE SOME SECTIONS IMPROVED 1976-'77
- CLAIM POST
- DDX 2162 — CHIP SAMPLE LOCATION & NUMBER

NOTE: BASE MAP COMPILED FROM UNCONTROLLED PACE AND COMPASS TRAVERSES.

SEISMIC STUDY
DRWG No. AM.76-6a

SEISMIC STUDY
DRWG No. AM.76-6b
ALSO
DRILL PLAN
DRWG No. AM.77-2

SURFACE PLAN
DRWG No. AM.76-7c

6324

SHEET INDEX

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO.

DUPONT EXPLORATION
CANADA

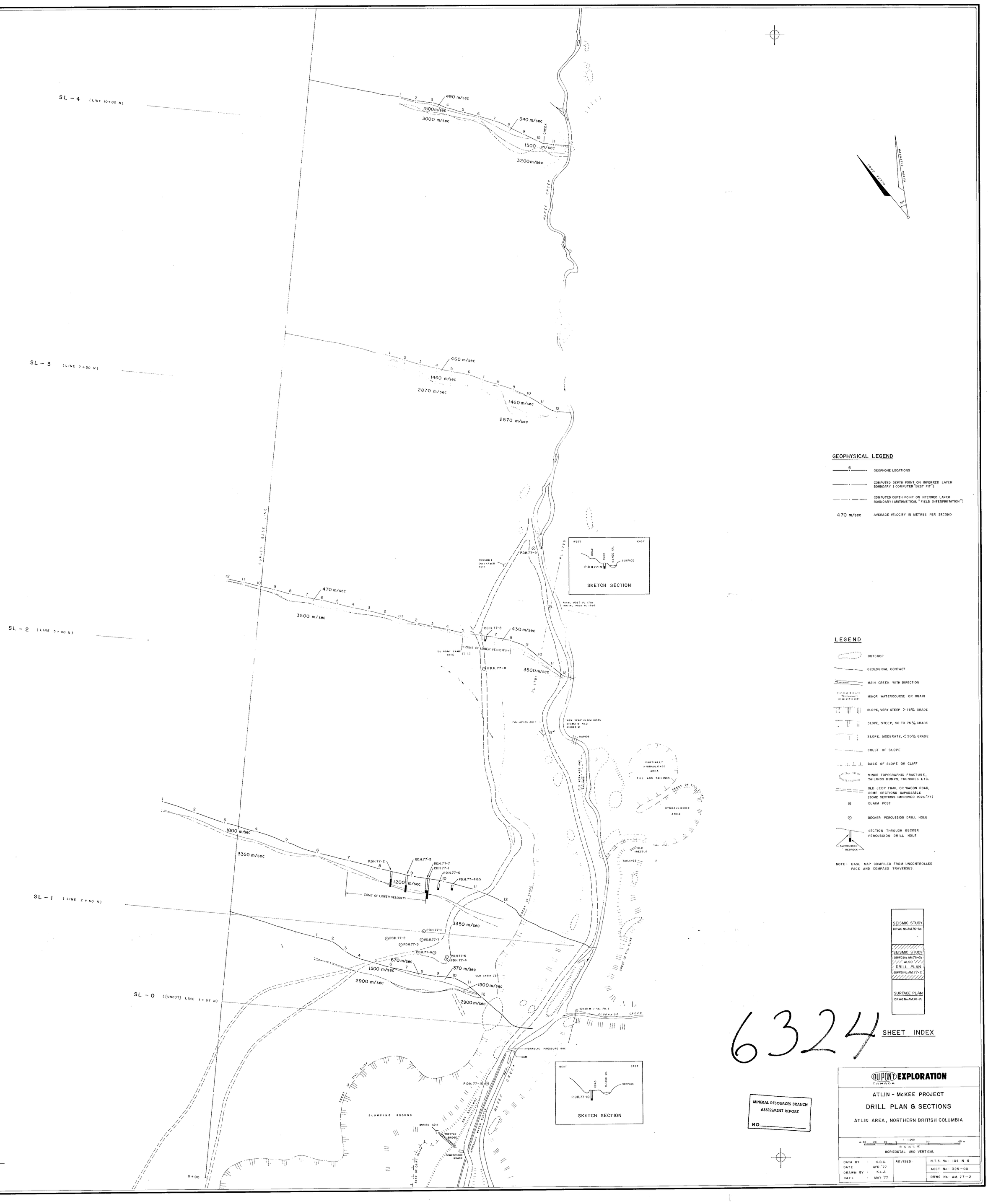
ATLIN - McKEE PROJECT

GENERAL SURFACE PLAN

ATLIN AREA, NORTHERN BRITISH COLUMBIA

SCALE
1" = 1,000 FEET
1 INCH = 0 FEET

MAPPED BY:	C.B.G.	REVISED:	N.T.S. No.: 104 N 5
DATE:	AUG. '76	MAY '77	ACCT No.: 325-00
DRAWN BY:	K.L.J.		DRWG No.: AM. 76-7c
DATE:	DEC. '76		



GEOPHYSICAL LEGEND

5	GEOPHONE LOCATIONS
	COMPUTED DEPTH POINT ON INFERRED LAYER BOUNDARY (COMPUTER "BEST FIT")
	COMPUTED DEPTH POINT ON INFERRED LAYER BOUNDARY (ARITHMETICAL "FIELD INTERPRETATION")
470 m/sec	AVERAGE VELOCITY IN METRES PER SECOND

LEGEND

- OUTCROP
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- CREST OF SLOPE
- BASE OF SLOPE OR CLIFF
- MINOR TOPOGRAPHIC FRACTURE, TAILINGS DUMPS, TRENCHES ETC.
- OLD JEEP TRAIL OR WAGON ROAD, SOME SECTIONS IMPASSABLE (SOME SECTIONS IMPROVED 1976-'77)
- CLAIM POST
- BECKER PERCUSSION DRILL HOLE
- SECTION THROUGH BECKER PERCUSSION DRILL HOLE (OVERBURDEN, BEDROCK)

NOTE: BASE MAP COMPILED FROM UNCONTROLLED PACE AND COMPASS TRAVERSES.

SEISMIC STUDY
DRWG No. AM.76-6a

SEISMIC STUDY
DRWG No. AM.76-6b
ALSO
DRILL PLAN
DRWG No. AM.77-2

SURFACE PLAN
DRWG No. AM.76-7c

6324

SHEET INDEX

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. _____

DU PONT EXPLORATION
CANADA

ATLIN - McKEE PROJECT

DRILL PLAN & SECTIONS

ATLIN AREA, NORTHERN BRITISH COLUMBIA

SCALE
HORIZONTAL AND VERTICAL

DATA BY	C.B.G.	REVISED	N.T.S. No. 104 N 5
DATE	APR. '77		ACCT No. 325-00
DRAWN BY	K.L.J.		DRWG No. AM.77-2
DATE	MAY '77		