Kenneth Guy Exploration Services



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REPORT ON A

SURFACE DIAMOND DRILL PROGRAM - 1986

and

SUMMARY REPORT ON EXPLORATION

FOR

DAVIDSON TISDALE MINES LIMITED

DAVIDSON - BROULAN PRCJECT

TISDALE TOWNSHIP, ONTARIO

Timmins, Ontario

Kenneth Guy

Geologist

February, 1988

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SUMMARY

Davidson Tisdale Mines Limited acquired a 100% interest, subject to a 3% net profits royalty, in the Davidson-Broulan Project in 1985. The property, 18 claims, 720 acres, encloses a portion of favourable, gold bearing stratigraphy along strike from the most prolific gold mines in Canada. The property adjoins and is down dip of the Getty-Davidson Tisdale joint venture where a recent production decision has been made.

The 1986 surface exploration program consisted of:

<u>Diamond Drilling</u> - 15 holes, 1739.5 metres, in a 3-phase
 program:

ARMSTRONG-McGIBBON: assays to 2.9 oz Au/ton over 3.3 ft., results generally erratic and inconclusive.

N-ZONE: No economic assays, program failed to substantiate the Newmont results

KINCH CENTRAL: negative results, failed to locate the reported zone of Broulan drilling in the 1950's

2) <u>Biogeochemical Survey</u> - Humus sampling on a reconnaissance basis - concentrated on the Kinch zone. Many anomalous Au values were detected. Further examination resulted in discovery of a surficial contamination which negated the biogeochemical survey.

3) Frospecting and Geological Mapping - Kinch zone.

Geological mapping outlined four alteration zones, each containing significant quartz veining. Assays from grab samples have been erratic with a high of 0.91 oz.Au/ton and numerous assays from grab samples greater than 0.1 oz.Au/ton.



CONCLUSIONS

The Armstrong-McGibbon alteration zones and quartz veins are quite discontinuous in the vertical sense. The quartz veins would appear to represent gash veins with sub parallel strikes and very limited vertical dips. The "nugget effect" of the gold is very severe making evaluation a difficult task, however lack of results to date suggest that no further work is indicated at this time.

Drilling by Davidson Tisdale failed to substantiate the results obtained by Newmont at the N-zone - no further work is recommended.

Drilling failed to locate or substantiate the results obtained by Broulan in the 1950's at the Central zone. The data has probably been misploted and the actually locations lost.

A diamond drill program is recommended for the Kinch Area where the historic level of work suggests that good results were obtained in the past.

Seven auriferous alteration zones typical of those throughout the Timmins camp have been identified on the Davidson - Broulan project area. Assays have indicated that the potential for economic mineralization is present. Considerable potential remains to expand upon the data base of all the zones.

In addition to the auriferous alteration zones identified to

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date the potential for additional discoveries is excellent.

On-going exploration at the Getty-Davidson Tisdale joint venture should result in extending the known reserves toward the Davidson-Broulan project area at depth.

INTRODUCTION

The Davidson Tisdale Mines Limited - Davidson Broulan Project consists of 18 claims, approximately 720 acres, in Tisdale township, in the heart of the Porcupine gold camp. The Porcupine gold camp is one of the world's major mining camps having produced over 58 million ozs. of gold.

The property lies between and on trend with the Hollinger-Mcintyre, Coniaurm Mines sector, approximately 2 miles to the southwest and the Broulan-Hallnor-Pamour operation, 1 to 3 miles to the east.

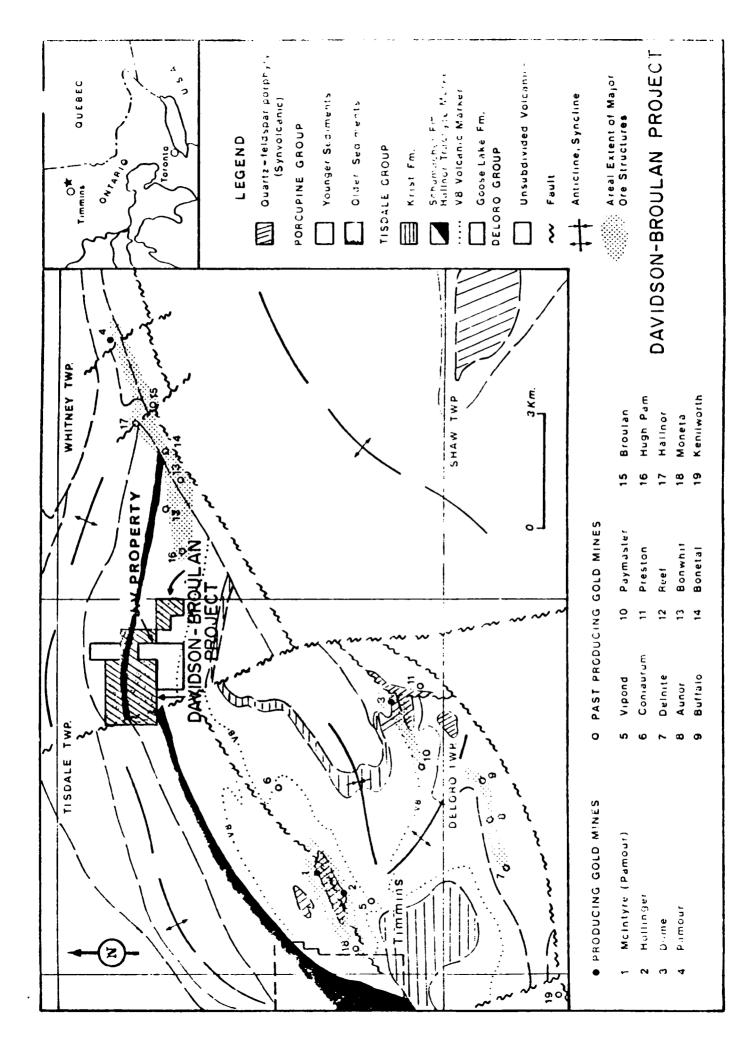
The property was acquired by Davidson Tisdale Mines Limited in 1985 from Broulan Resources Ltd. Broulan Resources maintains a 3% net profits royalty in the property.

The property adjoins and surrounds to the north and west the Getty-Davidson Tisdale joint venture where a recent production decision has been made.

The Davidson-Broulan project overlies rocks of the Tisdale Group which hosts the majority of the gold production of the Porcupine camp. Compared to other areas of the Porcupine camp, and the Tisdale group in particular, the property had been relatively poorly explored.

This report prepared for Davidson Tisdale Mines Limited details the results of the 1986 Exploration Program including:

1) a surface Diamond Drill Program conducted on the



Armstrong-McGibbon, N-zone, and the Central zone

2) a reconnaissance surface bicgeochemical survey

3) a geological mapping and prospecting program. concentrated on the Kinch area

and summarizes exploration to date on the Davidson - Broulan Project.

LOCATION, ACCESS AND INFRASTRUCTURE

The Davidson-Broulan Project is located in Tisdale township, District of Cochrane, Porcupine Mining Division, Ontario. The project lies within the boundaries of the City of Timmins.

Access to the property is from South Porcupine via the Getty-Davidson Tisdale joint venture road. From this all weather gravel road are numerous old roads, bush roads and trails providing ready access to all portions of the property.

A hydro electric line traverses the property providing electrical power to Canamax's Bell Creek Mine and to the Getty joint venture mine.

The City of Timmins, a municipality with a 75 year mining history, is a modern community with all the infrastructure required to sustain major mining operations.

PROPERTY

The Davidson-Broulan Project consists of 18 contiguous patent claims in Tisdale township: P6239, 6254, 6270, 6285, 6287, 6577, 12811, 12812, 12886-890, 12906, 12959, 12969, 12370, 12972 10 Fatented Mining Claims - 720 acres

PREVIOUS WORK

Much of the work conducted on the project area was completed during the earlier part of the century. Little documentation is available for this phase of exploration but extensive trenching, and numerous pits and shafts of unknown depth and extent give testimony to the presence of gold and attempts at exploration.

Recently the most extensive exploration was conducted by Newmont Exploration of Canada who held the property under option in 1983, 84. During this time extensive geophysical surveys as well as geological and limited geochemical surveys were conducted. This was followed by diamond drilling which was targeted on geophysical anomalies, primarily classical Induced Polarization anomalies, ie: conductivity highs with resistivity lows. The Davidson-Broulan project consists of a small portion of the larger holdings maintained by Newmont at that time. Exploration on the property by Davidson Tisdale Mines has consisted of the following:

<u>1985</u>

During the latter portion of 1985 a program of diamond drilling was conducted as follows:

1) Depth Extension of Joint Venture Main Zone - Four holes, 2237.1 metres, drilled by Davidson Tisdale to test for the depth extension of the main zone intersected the alteration zone hosting the occurrence with the most westerly hole assaying 0.25 oz. Au per ton over 4.9 feet. The zone is now known to extend onto the Davidson-Broular project area at a depth of 350 metres below surface. Results confirm a westerly rake of the zone.

2) Armstrong-McGibbon - Eight holes, 1543.0 metres, were drilled to delineate 3 separate quartz-sericite-carbonate alteration zones, 2 of which were found to be auriferous. Visible gold with values up to 0.99 oz.Au/ton/1.0 metre were intersected.

Geology and Economic Geology

The Davidson-Broulan project area is underlain by mafic volcanic rocks which are part of a volcanic-sedimentary succession that forms the north limb of the Porcupine Syncline. The rocks belong to the Tisdale Group of volcanics, the Schumacher formation. The Schumacher formation is the host of the majority of the past and present gold producers in the Porcupine camp.

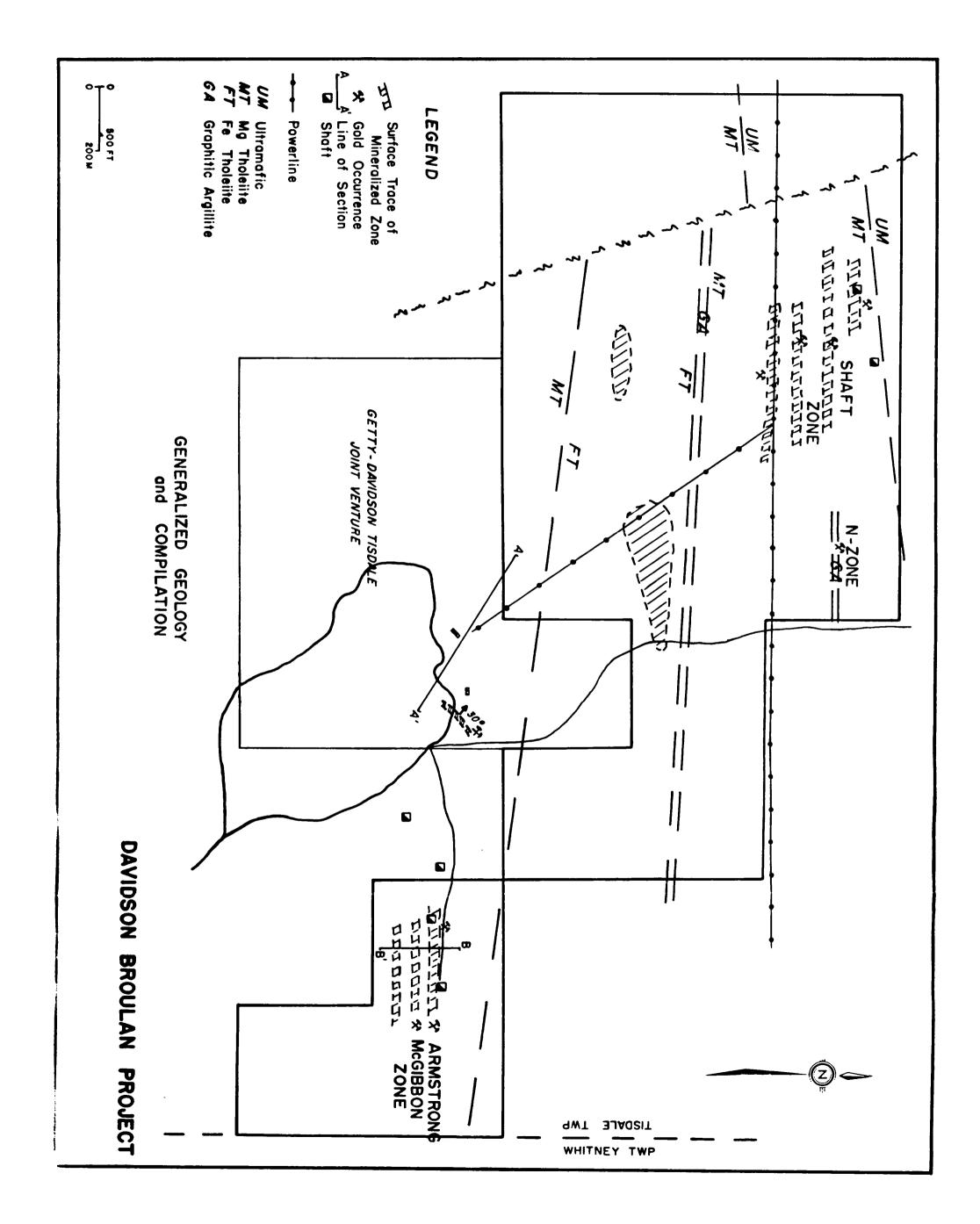
The Schumacher formation on the project area is primarily magnesium tholeiitic basalts and iron tholeiitic basalts. It is the magnesium tholeiites which are of primary importance as they are the host of the majority of the gold occurrences including that of the joint venture property. Alteration of the Magnesium tholeiites can be broken down to two alteration facies easily identifiable in the field and in drill core.

 Chlorite - carbonate: fine grained, dark green colour, quartz/albite, chlorite, calcite, trace epidote

 Sericite-carbonate: grey to brown colour quartz/albite, sericite, ferroan dolomite

The relationship of the alteration facies: Mg Tholeiite, fresh grades to - chlorite - carbonate alteration which grades to - sericite carbonate alteration. Sericitecarbonate rock is the host of the guartz veins detected on the Davidson-Broulan project area and is commonly anomalous in gold. This alteration facies is also the host of the auriferous veins on the joint venture property and of the majority of the auriferous veins in the Porcupine camp.

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		Dia	Diamond Drill Hole Summary -		Davidson-Broulan Project	oject	
						<u>Results</u>	
Hole Number	Location	Inclination	Length(m)	Target	Alteration Zones	Quartz Vein <u>Systems</u>	<u>Assays</u>
DB-86-9	L22W 123+00N	0 ⁰⁶⁻	70.0	Au Occurrence	41.0-63.5	49.8-53.0 52.8 VG	47.0-48.5 365 ppb 52.0-53.0 .038oz/T
DB-86-10	L22W 123+00N	-45 ⁰ az 180 ⁰	60.2	Au Occurrence	No Alteration Zone 42.6-44.0 Fault Zone		No Significant Values
DB-86-11	L24W 123+00N	-90 ⁰	60.0	Au Occurrence	39.5-50.0	None	No Significant Values
DB-86-12	L24W 123+00N	-45 ⁰ az 180 ⁰	62.0	Au Occurrence	No Alteration Zone 1.2-30.0 broken ground fault zone?	Zone n ground	No Significant Values
DB-86-13	L20W 123+00N	006-	86.3	Au Occurrence	40.5-79.0	52.75-53.3	52.5-53.5 2.87 oz/T 53.5-54.5 .026 oz/T
DB-86-14	L20W 123+00N	-45 ⁰ az 180 ⁰	92.0	Au Occurrence	63.5-89.2	78.5-78.9	No Significant Values
DB-86-15	L18W 121+00N	-90 ⁰	101.0	Au Occurrence	42.5-87.0	None	No Significant Values

DAVIDSON TISDALE MINES LTD.

February, 1986

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						<u>Results</u>	
Holc Number	Location	Inclination	Length(m)	Target	Alteration <u>Zones</u>	Quartz Vein <u>Systems</u>	Assays
DB-86-16	L18W 121+00N	-45 ⁰ az 180 ⁰	89.0	Au Occurrence	40.0-68.0	None	No Significant Values
DB-86-17	L22W L28+50N	0 ^{06–}	149.0	Au Occurrence	25.0-48.4	None	No Significant Values
DB-86-18	L24W 111+50N	-55 ⁰ az 180 ⁰	224.0	Test geophysical anomalies	189.5-194.0	Cherty tuff with 10-20% po, py Conductive	No Significant Values

10 HOLES 993.5 METRES

DIAMOND DRILLING

During the Winter and Spring of 1986 a total of 15 diamond drill holes, totaling 1739.5 metres, were completed on the Davidson-Broulan project.

The diamond drill logs and sections are contained in Appendix 1.

The diamond drilling was carried out by Longyear Canada of North Bay, Ontario. A Longyear 38 drilling BQ size was utilized.

Analytical wark was performed by Bell-White Lab of Haileybury, Ontario.

The 3-phase program was conducted as follows:

1) Armstrong McGibbon - 10 holes, 993.5 m

Drilling delineated 3 alteration zones, 2 of which are auriferous. The upper zone has 2 old shafts, has been stripped on surface, and yielded core assays to 0.18 oz. Au per ton over 3.3 feet. Drilling on the middle zone yielded assays to 2.9 oz. Au per ton over 3.3 feet.

Results are summarized on the Diamond Drill Hole Summary Table.

2) <u>N Zone</u> - 4 holes, 445.0 metres

Drilling by Newmont Exploration in 1984 intersected a faulted carbonaceous basalt. Core recoveries were poor with core assays to 0.07 oz. Au/ton over 28.9 feet and sludge

assays to 0.17 oz. Au/ten over 70 feet. Four holes drilled by Davidson Tisdale failed to substantiate the results.

3) <u>Kinch Central Zone</u> - 1 hole, 301.0 metres was drilled to test a reported intersection in 1954 of 0.74 oz.Au/2.0 feet. The location of this discovery was in doubt and it appears likely that the location remains unknown.

<u>Geology/Prospecting</u> - The program was centred upon the Kinch-Shaft Area. Four alteration zones with guartz veining were delineated. Assays from grab samples were erratic with a high of 0.91 oz.Au/ton and numerous assays from grab samples greater than 0.1 oz. Au/ton.

The Geological plan map, figure 3, depicts the extent of the program and the results. The program was primarily concerned with locating and delineating the alteration zones of the Kinch area.

Biogeochemical Survey - the humus biogeochemical program covered the property on a reconnaissance basis with more detailed coverage over the Kinch shaft area. Values of greater than 20x background were encountered at numerous locations including areas of extensive bedrock exposure. This prompted a stripping program which stripped a distance of 1000 feet across a topographic, bedrock high on which humus anomalies of greater than 200 ppb were detected. No explanation for the highly anomalous Au values was found. Additional humus sampling revealed that a surface

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contamination was present. Humus profiles revealed elevated values in the upper horizon progressing downward to background values. This resulted in anomalous Au in humus values wherever the humus horizon was thin and the sample had to be taken from the near surface. Where the humus horizon was thicker the sample was collected from a greater depth and therefore void of the surface contamination. This discovery negated the biogeochemical survey.

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SUMMARY OF DAVIDSON TISDALE WORK TO DATE

A: <u>Geology</u>

The geology of the project area has been compiled from surface mapping and diamond drilling by Davidson Tisdale during 1985,86 and various other sources including Newmont and assorted government geological compilations.

The property is underlain at the northern boundary by ultramafic rocks of Komatiitic afinity. Overlying the ultramafic is a unit of Mg tholeiitic basalts to the south. Minor intercalations of Fe Tholeiite occur at the base with minor graphitic intervals increasing to the top or south. A narrow band of graphitic argillite \pm chert \pm sulphides caps the unit.

Overlying the above unit is a 500 to 1000 feet thickness of Fe tholeiite, capped by graphitic argillite and followed by a thick sequence of Mg basalts occupying the central and southermost sections of the property.

The western section of the property is cut by the northnorthwest trending Burrows-Benedict fault, a major structural feature in the Timmins area, with an offset of up to 2500 feet on the project area.

The emphasis of the geological compilation however, lies with the identification and definition of sericite-carbonate alteration zones. These zones host the majority of the gold occurrences of the Porcupine camp. Throughout the project area sericite-carbonate alteration zones hosting quartz

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veins \pm gold values have been identified and loosely defined, either in drill core or outcrop. Seven of these zones are quartz bearing with economic gold values either in core or grab samples.

B: <u>Geochemistry</u>

During 1986 a reconnaissance humus biogeochemical program was conducted over the Davidson-Broulan project area. the biogeochemical survey was successful in detecting 20 significant gold in humus anomalies. Significant anomalies are those having peaks at least 8 x background, shoulders building to the peaks and possible strike correlation. Seven of the anomalies are rated high priority due to the coincident geophysical response and/or correlation with known alteration zones and/or gold The Kinch Shaft zone consists of 4 biogeochemical occurrences. anomalies with coincident geophysical responses and grab samples assaying to 0.9 oz/ton Au. The discovery of surface contamination throughout the survey area to a large part negated the biogeochemistry survey.

C: <u>Diamond Drilling</u>

During the period 1985 to 1987 a total of 35 holes, 6655.5 metres were drilled by Davidson Tisdale Mines Limited on the Davidson-Broulan Project. the drilling was conducted on five areas as follows:

- Deep drilling for Getty DT Main zone 4 holes, 2237.1 metres
- Historic Armstrong-McGibbon area
 17 holes, 2312.5 metres
- N-Zone area where Newmont had significant results
 4 holes, 445 metres

- Davidson Tisdale work failed to substantiate

- 4) Central zone historic gold occurrence
 1 hole, 301 metres
 Davidson Tisdale work failed to locate or substantiate
- 5) Kinch Area historic gold occurrence 2 shafts, many pits, trenches 9 holes, 1259.9 metres

Description of Occurrences

A. Depth Extension of Getty-DT Zone

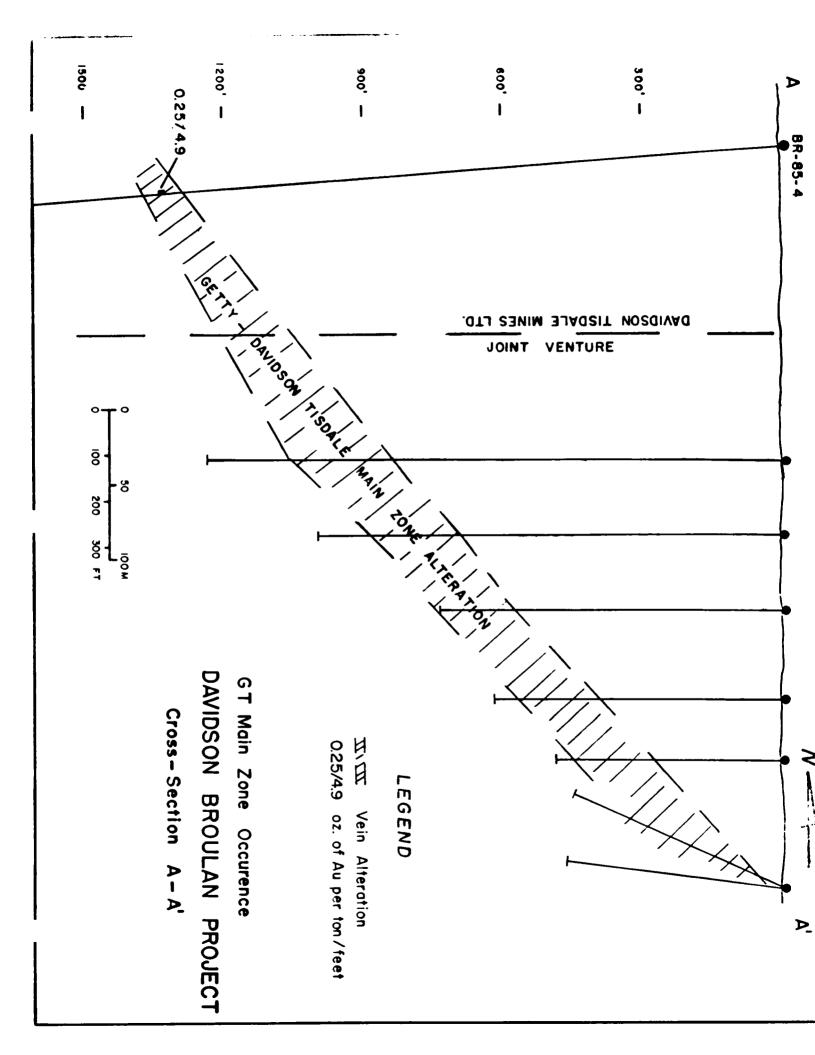
This gold occurrence represents the depth extension of the Getty-Davidson Tisdale joint venture where a production decision has recently been made.

During the period from October to December, 1985, four holes, 2237.1 metres, were drilled from the Broulan option by Davidson Tisdale to test for the depth extension of the Getty-Davidson Tisdale joint venture main zone. The holes, designated BR-85-1,2,3, and 4, were drilled from the southeast corner of patent claim P12887.

It is believed that all holes intersected the alteration zone which hosts the joint venture occurrence. Due to the significant set-outs of almost 300 metres along section this cannot be determined with certainty, however, the nature of the alteration as well as the anomalous gold values obtained tends to support this hypothesis.

Holes BR-1,2, and 3 can be plotted on Section 50.00 S of the joint venture grid. On this section the extrapolation of the alteration zone from the joint venture drilling and

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underground work intersects alteration zones in all three holes. The intersected alteration zones are anomalous in gold averaging approximately 100 ppb Au over the zone with a peak of 754 ppb (0.75 gmc./tonne). Minor quartz veining is noted in the zones in each hole.

Hole BR-85-4 lies on section 137.505 of the joint venture grid. This is an intermediate section on the joint venture grid system with very few data points therefore the hole is onto best projected sections 162.50s or 112.50S. Extrapolation of the main zone on both these sections indicates correlation with an alteration zone containing gold values in hole BR-85-4. The correlative alteration assays 1.8 gms./7.5 metres including 8.5 gms./1.5 zone metres at a depth of 402 m. below surface. Minor guartz veining and silicification is noted. The highly anomalous gold values obtained in this hole tend to support a westerly rake of the orebody within the northeast striking, northwest dipping alteration zone.

The drilling conducted by Davidson Tisdale Mines intersected the Getty-Davidson Tisdale joint venture main zone at depths ranging from 290 metres to 420 metres. Although significant quartz veining was not intersected, the structure, ie: alteration zone, hosting the quartz veins was intersected with minor quartz veining and anomalous gold values including 8.5 gms/tonne over 1.5 metres. The trend of the anomalous gold values suggests that the ore zone rakes to the west onto the Broulan option at depths of greater than

400 metres below surface.

B. Argstrong-McGibbon Zone

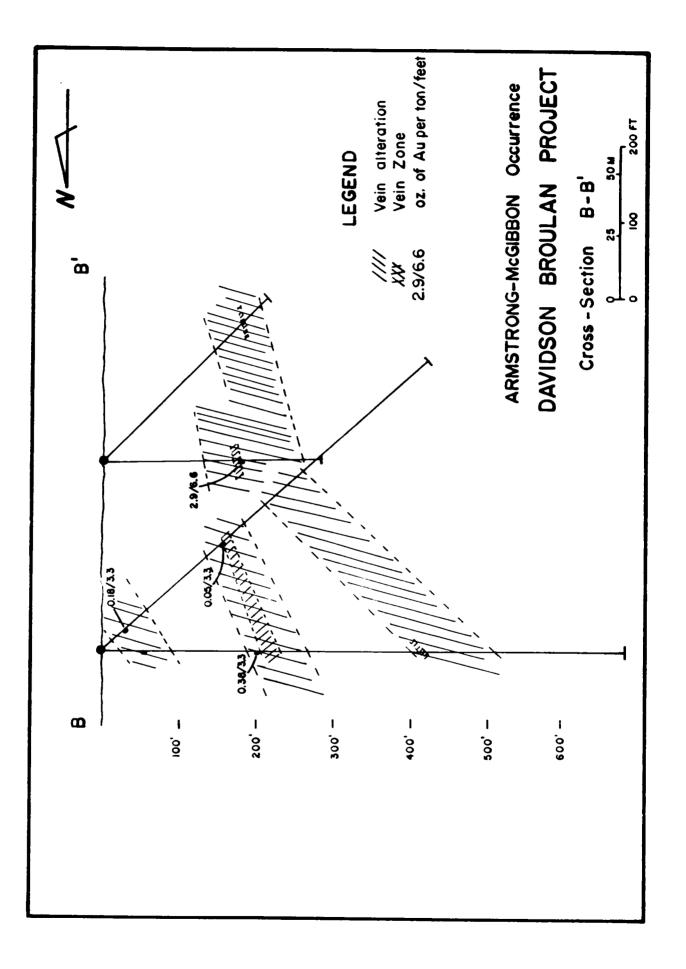
This an historic showing with 2 shafts to approximately 100 feet in depth. Recent drilling by Davidson Tisdale has delineated 3 separate quartz-sericite-carbonate alteration terms, 2 of which are auriferous.

Upper Zone: This represents the historic showing with 2 shafts. The showing was stripped by Newmont, visible gold was noted and a bulk sample taken. Assays were overall low but crratic. Erilling to date has intersected the zone seven times, only one of which contained a significant quartz vein. The best assay result to date is 0.18 oz.Au/ton over 3.3 feet.

Middle Zone: This is a new zone discovered by Davidson Tisdale lying 30-40 metres below the historic upper zone. This zone has returned assays up to 2.9 oz.Au/ton over 3.3 feet. The zone has been intersected 11 times in drill core with visible gold noted 4 times and 4 holes returning economic gold values. The "nugget" occurrence of the gold is quite extreme.

Lower Zone: The lower Zone has only been intersected in 5 drill holes and has yet to contain visible gold or economic assays.

The biogeochemical survey was unsuccessful at the Armstrong-McGibbon area due to substantial surface disturbance, a lack



of humus due to the Newmont stripping and the surface contamination present throughout the area.

C. Kinch Shaft Zone

This is an historic gold occurrence from which there is little documentation or data. Two shafts and numerous pits and trenches remain from the historic exploration.

Geological mapping by Davidson Tisdale outlined four alteration zones, each containing significant quartz veining. Assays from grab samples have been erratic with a high of 0.91 oz.Au/tor. and numerous arrays from grab sampler greater than 0.1 oz.Au/ton.

Diamond drilling by Broulan in the 1930'sindicated numerous substantial quartz veins to 20 feet in width, sulphides, visible gold and alteration zones with no assay data available.

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Guy, K.W.	REPORT ON A DIAMOND DRILL PROGRAM - 1985 AND EXPLORATION PROPOSAL, for Davidson Tisdale Mines Limited, December, 1985.
Guy, K.W.	SUMMARY OF EXPLORATION AND EXPLORATION PROPASAL for Davidson Tisdale Mines Limited, November, 1986.
Ferguson, S.A.	GEOLOGY AND ORE DEPOSITS OF TISDALE TOWNSHIP. ODM Geological Rpt. 58, 1968.
Fyon, J.A. and	GOLD EXPLORATION IN THE TIM- MINS AREA USING FIELD AND LITHOGEOCHEMICAL CHARACTEE- ISTICS OF CARBONATE ALTER- ATION ZONES, OGS Open File Rpt. 5334, 1981

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CERTIFICATE

I, the undersigned, Kenneth Guy, residing at 180 Nadine Street, South Porcupine, Ontario graduated with a Bachelor of Science degree in Earth Science - Geology from the University of Waterloo, Waterloo, Ontaric in 1978.

I have been employed in the field of Goology since graduation in 1978.

I am a fellow of the Geological Association of Canada.

I do not hold, nor do I expect to receive an interest of any kind in these claims held by Davidson Tisdale Mines Ltd. nor in any other mining claims they may have.

The information presented in this report is based on actual field data, collected by myself or my assistants over the course of the past 4 years.

The interpretations and conclusions are based on my experience with the Davidson-Broulan Project, Getty-Davidson Tisdale Joint Venture and other properties in the Timmins area.

Kenneth Geolog st

Timmins, Ontario

Kenneth Guy Exploration Services



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FOR

DAVIDSON TISDALE MINES LIMITED

DAVIDSON - BROULAN PROJECT

TISDALE TOWNSHIP, ONTARIO

Timmins, Ontario January, 1988 Kenneth Guy Geologist



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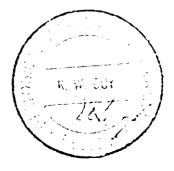
Diamond Drill Logs

back pocket

SUMMARY

Davidson Tisdale Mines Limited acquired a 100% interest, subject to a 3% net profits royalty, in the Davidson-Broulan Project in 1985. The property, 18 claims, 720 acres, encloses a portion of favourable, gold bearing stratigraphy along strike from the most prolific gold mines in Canada. The property adjoins and is down dip of the Getty-Davidson Tisdale joint venture where a recent production decision has been made.

The 1987 surface exploration drill program consisted of 9 drill holes, 1359.9 metres. The holes were all drilled at the Kinch area to test historic showings, including a shaft, where recent geological mapping had revealed four separate alteration zones with quartz veining. Assays from grab samples were erratic with a high of 0.91 oz.Au/ton. All holes intersected alteration zones with quartz vein systems in 6 of 9 holes. Only one economic assay was obtained, this from the shaft zone area in hole - 6, 26.13 gms./tonne over 1.0 metres. The alteration zones were geochemically anomalous in gold.



CONCLUSIONS

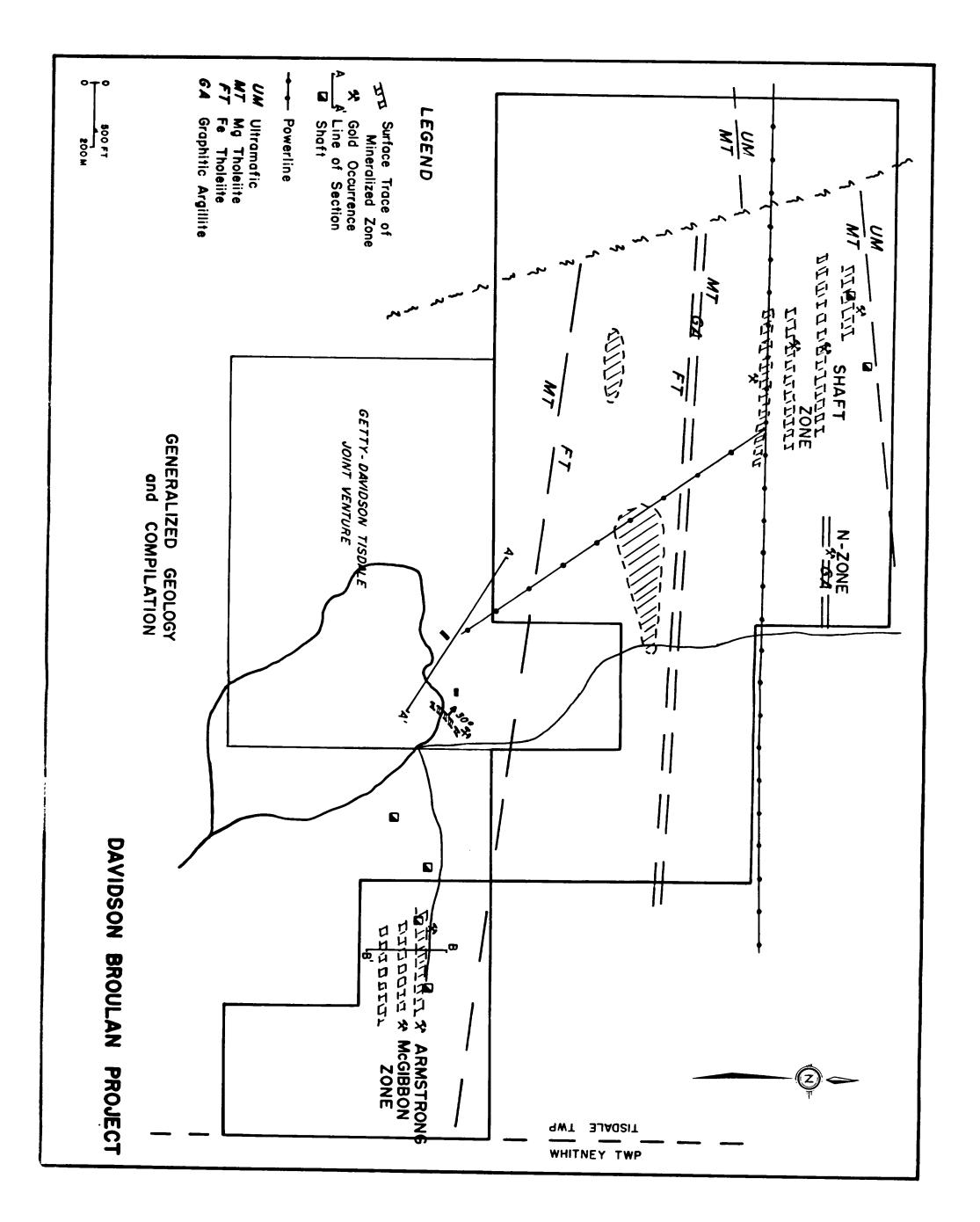
The Kinch area alteration zones and guartz veins are guite discontinuous in the vertical sense. The guartz veins would appear to represent gash veins with sub parallel strikes and very limited vertical dips.

The drilling confirmed that the alteration zones strike az070 and dip steeply north.

Seven auriferous alteration zones typical of those throughout the Timmins camp have been identified on the Davidson - Broulan project area. Assays have indicated that the potential for economic mineralization is present. Considerable potential remains to expand upon the data base of all the zones.

In addition to the auriferous alteration zones identified to date the potential for additional discoveries is excellent.

On-going exploration at the Getty-Davidson Tisdale joint venture should result in extending the known reserves toward the Davidson-Broulan project area at depth.



INTRODUCTION

The Davidson Tisdale Mines Limited - Davidson Broulan Project consists of 18 claims, approximately 720 acres, in Tisdale township, in the heart of the Porcupine gold camp. The Porcupine gold camp is one of the world's major mining camps having produced over 58 million ozs. of gold.

The property lies between and on trend with the Hollinger-Mcintyre, Coniaurm Mines sector, approximately 2 miles to the southwest and the Broulan-Hallnor-Pamour operation, 1 to 3 miles to the east.

The property was acquired by Davidson Tisdale Mines Limited in 1985 from Broulan Resources Ltd. Broulan Resources maintains a 3% net profits royalty in the property.

The property adjoins and surrounds to the north and west the Getty-Davidson Tisdale joint venture where a recent production decision has been made.

The Davidson-Broulan project overlies rocks of the Tisdale Group which hosts the majority of the gold production of the Porcupine camp. Compared to other areas of the Porcupine camp, and the Tisdale group in particular, the property had been relatively poorly explored.

This report prepared for Davidson Tisdale Mines Limited details the results of a surface Diamond Drill Program conducted during January and February, 1987, and summarizes exploration to date on the Davidson-Broulan Project.

LOCATION, ACCESS AND INFRASTRUCTURE

The Davidson-Broulan Project is located in Tisdale township, District of Cochrane, Porcupine Mining Division, Ontario. The project lies within the boundaries of the City of Timmins.

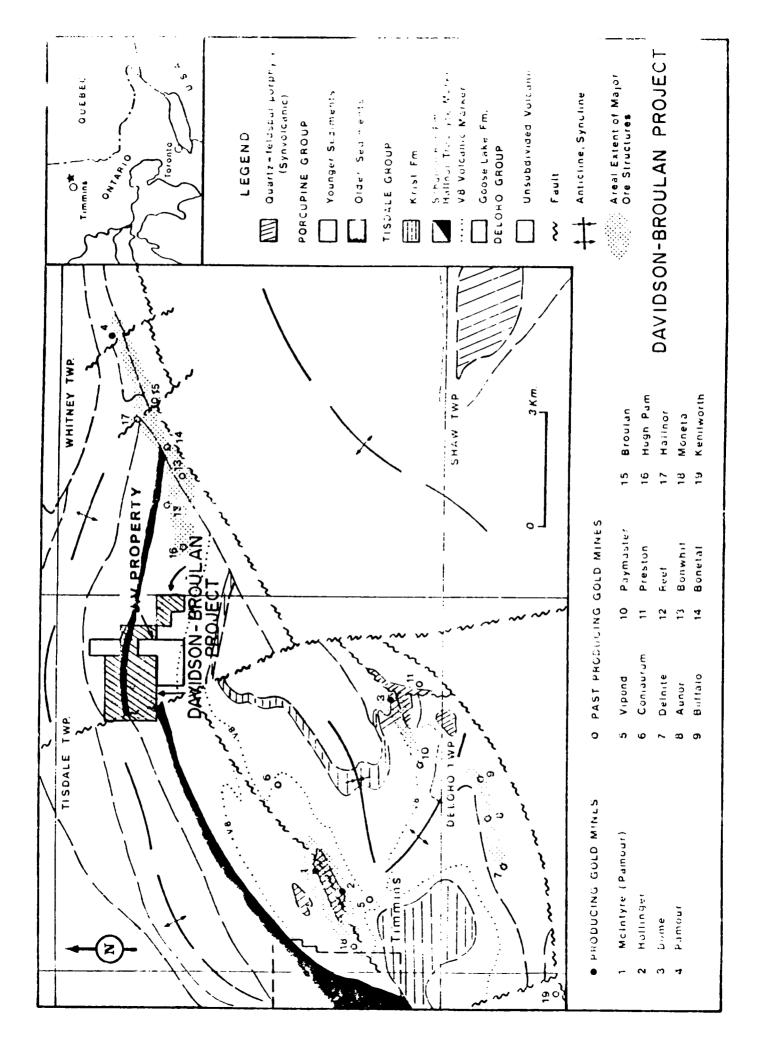
Access to the property is from South Porcupine via the Getty-Davidson Tisdale joint venture road. From this all weather gravel road are numerous old roads, bush roads and trails providing ready access to all portions of the property.

A hydro electric line traverses the property providing electrical power to Canamax's Bell Creek Mine and to the Getty joint venture mine.

The City of Timmins, a municipality with a 75 year mining history, is a modern community with all the infrastructure required to sustain major mining operations.

PROPERTY

The Davidson-Broulan Project consists of 18 contiguous patent claims in Tisdale township: P6239, 6254, 6270, 6285, 6287, 6577, 12811, 12812, 12886-890, 12906, 12959, 12969, 12970, 12972 18 Patented Mining Claims - 720 acres



PREVIOUS WORK

Much of the work conducted on the project area was completed during the earlier part of the century. Little documentation is available for this phase of exploration but extensive trenching, and numerous pits and shafts of unknown depth and extent give testimony to the presence of gold and attempts at exploration.

Recently the most extensive exploration was conducted by Newmont Exploration of Canada who held the property under option in 1983, 84. During this time extensive geophysical surveys as well as geological and limited geochemical surveys were conducted. This was followed by diamond drilling which was targeted on geophysical anomalies, primarily classical Induced Polarization anomalies, ie: conductivity highs with resistivity lows. The Davidson-Broulan project consists of a small portion of the larger holdings maintained by Newmont at that time.

Exploration on the property by Davidson Tisdale Mines has consisted of the following:

<u>1985</u>

During the latter portion of 1985 a program of diamond drilling was conducted as follows:

1) Depth Extension of Joint Venture Main Zone - Four holes, 2237.1 metres, drilled by Davidson Tisdale to test for the depth extension of the main zone intersected the alteration zone hosting the occurrence with the most westerly hole assaying 0.25 oz. Au per ton over 4.9 feet. The zone is now

known to extend onto the Davidson-Broulan project area at a depth of 350 metres below surface. Results confirm a westerly rake of the zone.

2) Armstrong-McGibbon - Eight holes, 1543.0 metres, were drilled to delineate 3 separate quartz-sericite-carbonate alteration zones, 2 of which were found to be auriferous. Visible gold with values up to 0.99 oz.Au/ton/1.0 metre were intersected.

<u>1986</u>

During the Winter and Spring of 1986 a program of diamond drilling was conducted as follows:

1) Armstrong McGibbon - 9 holes, 769.5 m

Drilling delineated 3 alteration zones, 2 of which are auriferous. The upper zone has 2 old shafts, has been stripped on surface, and yielded core assays to 0.18 oz. Au per ton over 3.3 feet. Drilling on the middle zone yielded assays to 2.9 oz. Au per ton over 3.3 feet.

2) <u>N Zone</u> - 4 holes, 445.0 metres

Drilling by Newmont Exploration in 1984 intersected a faulted carbonaceous basalt. Core recoveries were poor with core assays to 0.07 oz. Au/ton over 28.9 feet and sludge assays to 0.17 oz. Au/ton over 70 feet. Four holes drilled by Davidson Tisdale failed to substantiate the results.

3) <u>Kinch Central Zone</u> - 1 hole, 301.0 metres was drilled to test a reported intersection in 1954 of 0.74 oz.Au/2.0 feet. The location of this discovery was in doubt and it appears

likely that the location remains unknown.

During the summer of 1986 a program of geological mapping/prospecting and a biogeochemical survey were conducted.

<u>Geology/Prospecting</u> - The program was centred upon the Kinch-Shaft Area. Four alteration zones with quartz veining were delineated. Assays from grab samples were erratic with a high of 0.91 oz.Au/ton and numerous assays from grab samples greater than 0.1 oz. Au/ton.

Biogeochemical Survey - the humus biogeochemical program covered the property on a reconnaissance basis with more detailed coverage over the Kinch shaft area. Values of greater than 20x background were encountered at numerous locations including areas of extensive bedrock exposure. This prompted a stripping program which stripped a distance of 1000 feet across a topographic, bedrock high on which humus anomalies of greater than 200 ppb were detected. No explanation for the highly anomalous Au values was found. Additional humus that sampling revealed а surface contamination was present. Humus profiles revealed elevated values in the upper horizon progressing downward to This resulted in anomalous Au in humus background values. values wherever the humus horizon was thin and the sample had to be taken from the near surface. Where the humus horizon was thicker the sample was collected from a greater depth and therefore void of the surface contamination. This

discovery negated the biogeochemical survey.

<u>Geology and Economic Geology</u>

The Davidson-Broulan project area is underlain by mafic volcanic rocks which are part of a volcanic-sedimentary succession that forms the north limb of the Porcupine Syncline. The rocks belong to the Tisdale Group of volcanics, the Schumacher formation. The Schumacher formation is the host of the majority of the past and present gold producers in the Porcupine camp.

The Schumacher formation on the project area is primarily magnesium tholeiitic basalts and iron tholeiitic basalts. It is the magnesium tholeiites which are of primary importance as they are the host of the majority of the gold occurrences including that of the joint venture property. Alteration of the Magnesium tholeiites can be broken down to two alteration facies easily identifiable in the field and in drill core.

 Chlorite - carbonate: fine grained, dark green colour, quartz/albite, chlorite, calcite, trace epidote

2) Sericite-carbonate: grey to brown colour quartz/albite, sericite, ferroan dolomite The relationship of the alteration facies: Mg Tholeiite, fresh grades to - chlorite - carbonate alteration which grades to - sericite carbonate alteration. Sericitecarbonate rock is the host of the quartz veins detected on the Davidson-Broulan project area and is commonly anomalous

in gold. This alteration facies is also the host of the auriferous veins on the joint venture property and of the majority of the auriferous veins in the Porcupine camp.

DIAMOND DEILL PROGRAM - 1987

During the period January, February 1987, a total of nine diamond drill holes, totaling 1359.9 metres were completed on the Davidson-Broulan project.

The diamond drill logs are contained in Appendix 1. The locations of the holes can be seen on the compilation map, Figure 3.

The diamond drilling was carried out by Longyear Canada of North Bay, Ontario. A Longyear 38 drilling BQ size core was utilized.

Analytical work was performed by Bell-White Lab of Haileybury, Ontario.

The entire program was conducted on the Kinch area. The objective of the program was to test the historic showings and shaft area where recent geological mapping and prospecting had revealed four separate quartz-sericitecarbonate alteration zones with quartz veining. Assays from grab samples were erratic with a high of 0.91 oz.Au/ton at the shaft area.

Diamond drilling by Broulan in the 1930's indicated numerous substantial quartz veins to 20 feet in width, sulphides, visible gold and alteration zones with no assay data available.

A summary of the diamond drill holes and results is given in the folowing Kinch area diamond drill hole summary table.

HOLE NUMBER		BBARING	đĩđ	LENGTR (m)) TARGET		QUARTI VEIN SYSTEM	ASSATS(gms/tonne)
DBR-87-6 1868 1721		180	- 45	41.4	-45 41.4 SHAPT ZOWR		19.6 - 41.4 35.6 - 41.4 39.0-40.0 26.13	39.0-40.0 26.13
DBK-87-6A	1069 1720	180	- 45	265.0	265.0 SHAPT ZONE	4.9 - 8.5 15.5 - 125.0	40.4-52.6 moderate 59.7-75.4 strong 97.2-108.9 moderate	118.5-121.5 0.64
DBK-87-7	186 4 1721	180	-65	156.0	SHAPT ZONE	34.0 - 41.0 116.0 - 126.2	77.1-78.7 moderate 112.4-116.0 veak	NO SIGNIPICANT Assays
DBK-87-8	166+60M	350	-15	261.0	SHAPT ZONE	4.3 - 27.0 29.5 - 40.6 87.7 - 94.0 101.5 - 229.0	7.1-8.2 weak 110.4-112.4 moderate 114.9-124.5 weak 211.2-213.5 strong	13.5-16.5 0.51 90.5-92.0 0.84 220.5-222.0 1.85
DBK-87-9	170+50M	180	-15	133.0	SHAPT ZONR	2.0 - 8.0 70.2 - 84.9 106.0 - 122.0 126.3 - 130.2	NONS	NO SIGNIFICANT ASSAYS
DBK-87-10	L96 0 170+401	180	-45	166.0	SURPACE ALTERATION	10.2 - 44.2 109.4 - 118.0 140.0 - 146.2	11.7-15.9 moderate 17.1-24.4 moderate	13.5-14.5 0.68
D8K-\$7-11	196 0 170+408	180	-67	92.5	SURFACE ALTERATION	18.5 - 83.5	47 7-50.8 strong	NO SIGNIPICANT Assays
DBR-87-12	1849 1618	180	-45	151.0	SURPACE ALTERATION	3.0 - 47.3 58.3 - 81.0 101.7 - 133.3	61.7-74.9 gf-arg gf-arg	115.0-116.5 0.67
DBK-87-13	L84 4 161+30N	180	-65	94.0	SURPACE ALTERATION	24.8 - 51.0 56.5 - 78.0	NONE	NO SIGNIPICANT Assays
		و	HOLBS	1359.9	HETRES			

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DAVIDSON TISDALE MINES LTD.- TABLE 1

XINCH ARBA DIAMOND DRILL HOLB SUMMARY

JANUARY, 1987

The drilling indicated major discontinuities of the alteration zones, quartz veins and gold values. All holes intersected alteration zones with quartz vein systems in 6 of the 9 holes. Only one economic assay was obtained, this from the shaft zone area in hole -6, 26.13 gms./tonne over 1.0 metres. The alteration zones were geochemically anomalous in gold.

The drilling confirmed that the alteration zones strike az070 and dip steeply north. The guartz veins would appear to be gash veins with sub-parallel strikes and vertical dips with flats likely being present. The vertical continuity of the veins is guite limited.

SUMMARY OF DAVIDSON TISDALE WORK TO DATE

A: <u>Geology</u>

The geology of the project area has been compiled from surface mapping and diamond drilling by Davidson Tisdale during 1985,86 and various other sources including Newmont and assorted government geological compilations.

The property is underlain at the northern boundary by ultramafic rocks of Komatilitic afinity. Overlying the ultramafic is a unit of Mg tholeilitic basalts to the south. Minor intercalations of Fe Tholeilite occur at the base with minor graphitic intervals increasing to the top or south. A narrow band of graphitic argillite \pm chert \pm sulphides caps the unit.

Overlying the above unit is a 500 to 1000 feet thickness of Fe tholeiite, capped by graphitic argillite and followed by a thick sequence of Mg basalts occupying the central and southermost sections of the property.

The western section of the property is cut by the northnorthwest trending Burrows-Benedict fault, a major structural feature in the Timmins area, with an offset of up to 2500 feet on the project area.

The emphasis of the geological compilation however, lies with the identification and definition of sericite-carbonate alteration zones. These zones host the majority of the gold occurrences of the Porcupine camp. Throughout the project area sericite-carbonate alteration zones hosting guartz

veins ± gold values have been identified and loosely defined, either in drill core or outcrop. Seven of these zones are quartz bearing with economic gold values either in core or grab samples.

B: <u>Geochemistry</u>

During 1986 a reconnaissance humus biogeochemical program was conducted the Davidson-Broulan over project area. the biogeochemical survey was successful in detecting 20 significant gold in humus anomalies. Significant anomalies are those having peaks at least 8 x background, shoulders building to the peaks and possible strike correlation. Seven of the anomalies are rated high priority due to the coincident geophysical response and/or correlation with known alteration zones and/or gold The Kinch Shaft zone consists of 4 biogeochemical occurrences. anomalies with coincident geophysical responses and grab samples assaying to 0.9 oz/ton Au. The discovery of surface contamination throughout the survey area to a large part negated the biogeochemistry survey.

C: <u>Diamond Drilling</u>

During the period 1985 to 1987 a total of 35 holes, 6655.5 metres were drilled by Davidson Tisdale Mines Limited on the Davidson-Broulan Project. the drilling was conducted on five areas as follows:

- Deep drilling for Getty DT Main zone
 4 holes, 2237.1 metres
- Historic Armstrong-McGibbon area
 17 holes, 2312.5 metres
- N-Zone area where Newmont had significant results
 4 holes, 445 metres

- Davidson Tisdale work failed to substantiate

- 4) Central zone historic gold occurrence
 1 hole, 301 metres
 Davidson Tisdale work failed to locate or substantiate
- 5) Kinch Area historic gold occurrence 2 shafts, many pits, trenches 9 holes, 1359.9 metres

Description of Occurrences

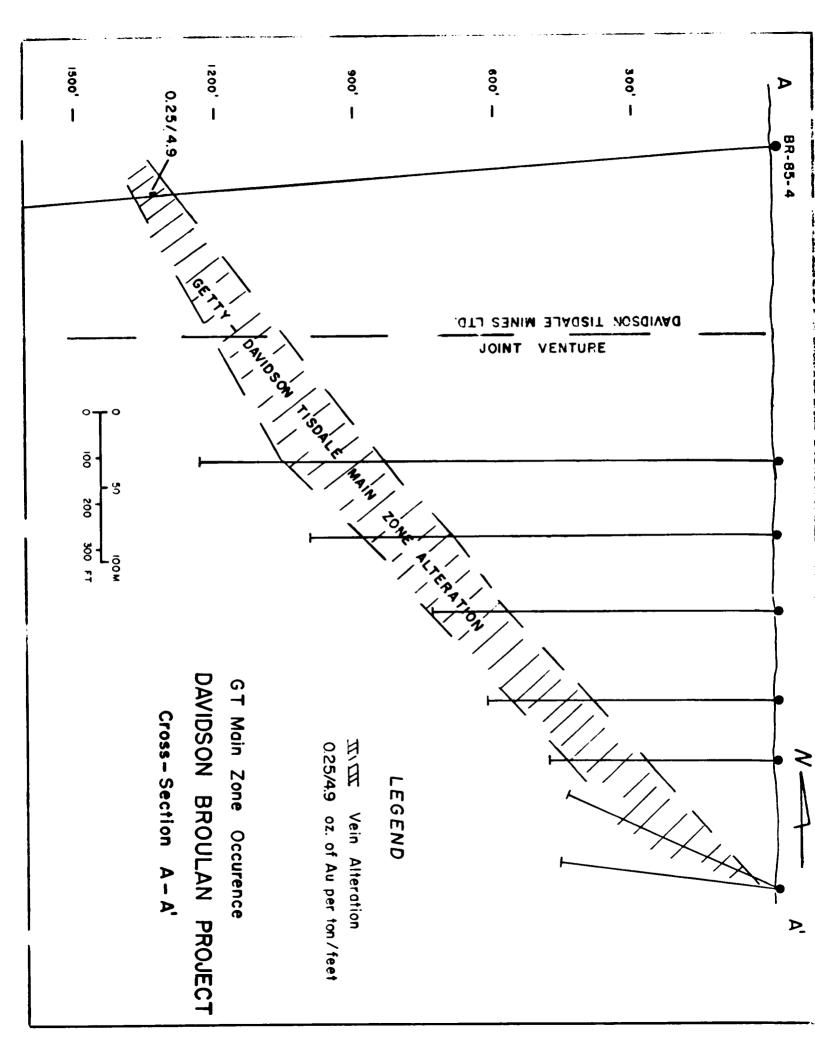
A. Depth Extension of Getty-DT Zone

This gold occurrence represents the depth extension of the Getty-Davidson Tisdale joint venture where a production decision has recently been made.

During the period from October to December, 1985, four holes, 2237.1 metres, were drilled from the Broulan option by Davidson Tisdale to test for the depth extension of the Getty-Davidson Tisdale joint venture main zone. The holes, designated BR-85-1,2,3, and 4, were drilled from the southeast corner of patent claim P12887.

It is believed that all holes intersected the alteration zone which hosts the joint venture occurrence. Due to the significant set-outs of almost 300 metres along section this cannot be determined with certainty, however, the nature of the alteration as well as the anomalous gold values obtained tends to support this hypothesis.

Holes BR-1,2, and 3 can be plotted on Section 50.00 S of the joint venture grid. On this section the extrapolation of the alteration zone from the joint venture drilling and



underground work intersects alteration zones in all three holes. The intersected alteration zones are anomalous in gold averaging approximately 100 ppb Au over the zone with a peak of 754 ppb (0.75 gms./tonne). Minor guartz veining is noted in the zones in each hole.

Hole BR-85-4 lies on section 137.50S of the joint venture grid. This is an intermediate section on the joint venture grid system with very few data points therefore the hole is onto sections 162.50S 112.50S. or best projected Extrapolation of the main zone on both these sections indicates correlation with an alteration zone containing gold values in hole BR-85-4. The correlative alteration zone assays 1.8 gms./7.5 metres including 8.5 gms./1.5 metres at a depth of 402 m. below surface. Minor quartz veining and silicification is noted. The highly anomalous gold values obtained in this hole tend to support a westerly rake of the orebody within the northeast striking, northwest dipping alteration zone.

The drilling conducted by Davidson Tisdale Mines intersected the Getty-Davidson Tisdale joint venture main zone at depths ranging from 290 metres to 420 metres. Although significant quartz veining was not intersected, the structure, ie: alteration zone, hosting the quartz veins was intersected with minor quartz veining and anomalous gold values including 8.5 gms/tonne over 1.5 metres. The trend of the anomalous gold values suggests that the ore zone rakes to the west onto the Broulan option at depths of greater than

400 metres below surface.

B. <u>Armstrong-McGibbon Zone</u>

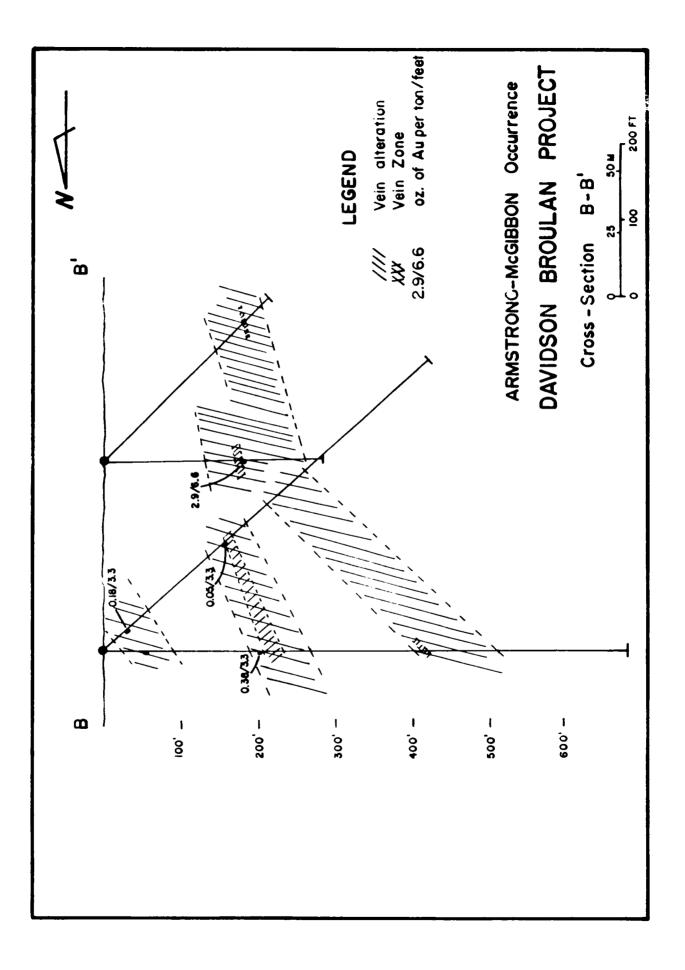
This an historic showing with 2 shafts to approximately 100 feet in depth. Recent drilling by Davidson Tisdale has delineated 3 separate guartz-sericite-carbonate alteration zones, 2 of which are auriferous.

Upper Zone: This represents the historic showing with 2 shafts. The showing was stripped by Newmont, visible gold was noted and a bulk sample taken. Assays were overall low but erratic. Drilling to date has intersected the zone seven times, only one of which contained a significant quartz vein. The best assay result to date is 0.18 oz.Au/ton over 3.3 feet.

Middle Zone: This is a new zone discovered by Davidson Tisdale lying 30-40 metres below the historic upper zone. This zone has returned assays up to 2.9 oz.Au/ton over 3.3 feet. The zone has been intersected 11 times in drill core with visible gold noted 4 times and 4 holes returning economic gold values. The "nugget" occurrence of the gold is quite extreme.

Lower Zone: The lower Zone has only been intersected in 5 drill holes and has yet to contain visible gold or economic assays.

The biogeochemical survey was unsuccessful at the Armstrong-McGibbon area due to substantial surface disturbance, a lack



of humus due to the Newmont stripping and the surface contamination present throughout the area.

C. Kinch Shaft Zone

This is an historic gold occurrence from which there is little documentation or data. Two shafts and numerous pits and trenches remain from the historic exploration.

Geological mapping by Davidson Tisdale outlined four alteration zones, each containing significant quartz veining. Assays from grab samples have been erratic with a high of 0.91 oz.Au/ton and numerous assays from grab samples greater than 0.1 oz.Au/ton.

Diamond drilling by Broulan in the 1930'sindicated numerous substantial quartz veins to 20 feet in width, sulphides, visible gold and alteration zones with no assay data available.

Drilling by Davidson Tisdale intersected alteration zones with quartz vein systems. Only one economic assay was obtained, 26.13 gms.Au/tonne over 1.0 metres. The drilling indicated that the alteration zones, quartz vein systems and Au values are all of a discontinuous and erratic nature.

REFERENCES

Guy, K.W.	REPORT ON A DIAMOND DRILL PROGRAM - 1985 AND EXPLORATION PROFOSAL, for Davidson Tisdale Mines Limited, December, 1985.
Guy, K.W.	SUMMARY OF EXPLORATION AND EXPLORATION PROPASAL for Davidson Tisdale Mines Limited, November, 1986.
Ferguson, S.A.	GEOLOGY AND ORE DEPOSITS OF TISDALE TOWNSHIP. ODM Geological Rpt. 58, 1968.
Fyon, J.A. and	GOLD EXPLORATION IN THE TIM- MINS AREA USING FIELD AND LITHOGEOCHEMICAL CHARACTER- ISTICS OF CARBONATE ALTER- ATION ZONES, OGS Open File Rpt. 5334, 1981

CERTIFICATE

I, the undersigned, Kenneth Guy, residing at 180 Nadine Street, South Porcupine, Ontario graduated with a Bachelor of Science degree in Earth Science - Geology from the University of Waterloo, Waterloo, Ontario in 1978.

I have been employed in the field of Geology since graduation in 1978.

I am a fellow of the Geological Association of Canada.

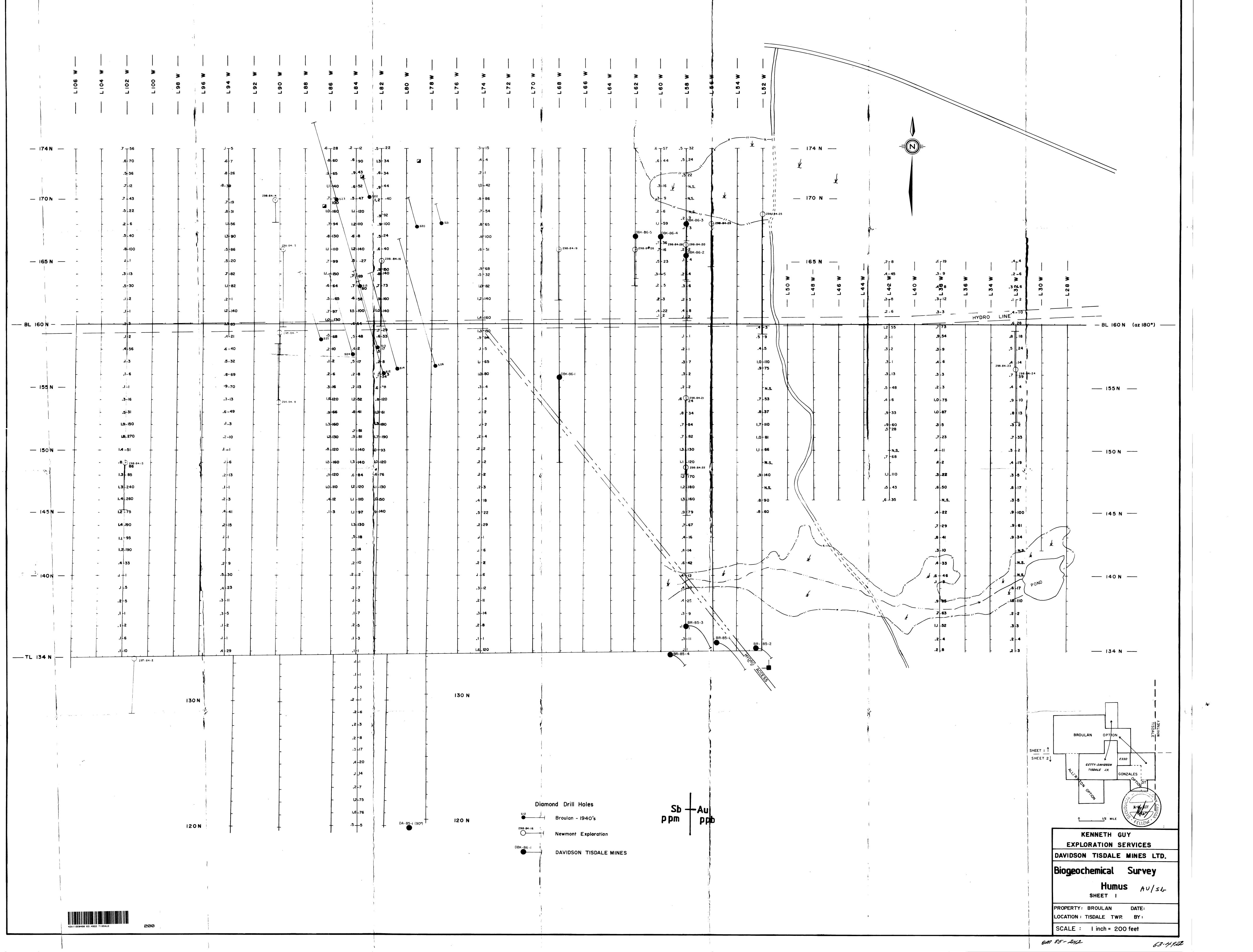
I do not hold, nor do I expect to receive an interest of any kind in these claims held by Davidson Tisdale Mines Ltd. nor in any other mining claims they may have.

The information presented in this report is based on actual field data, collected by myself or my assistants over the course of the past 4 years.

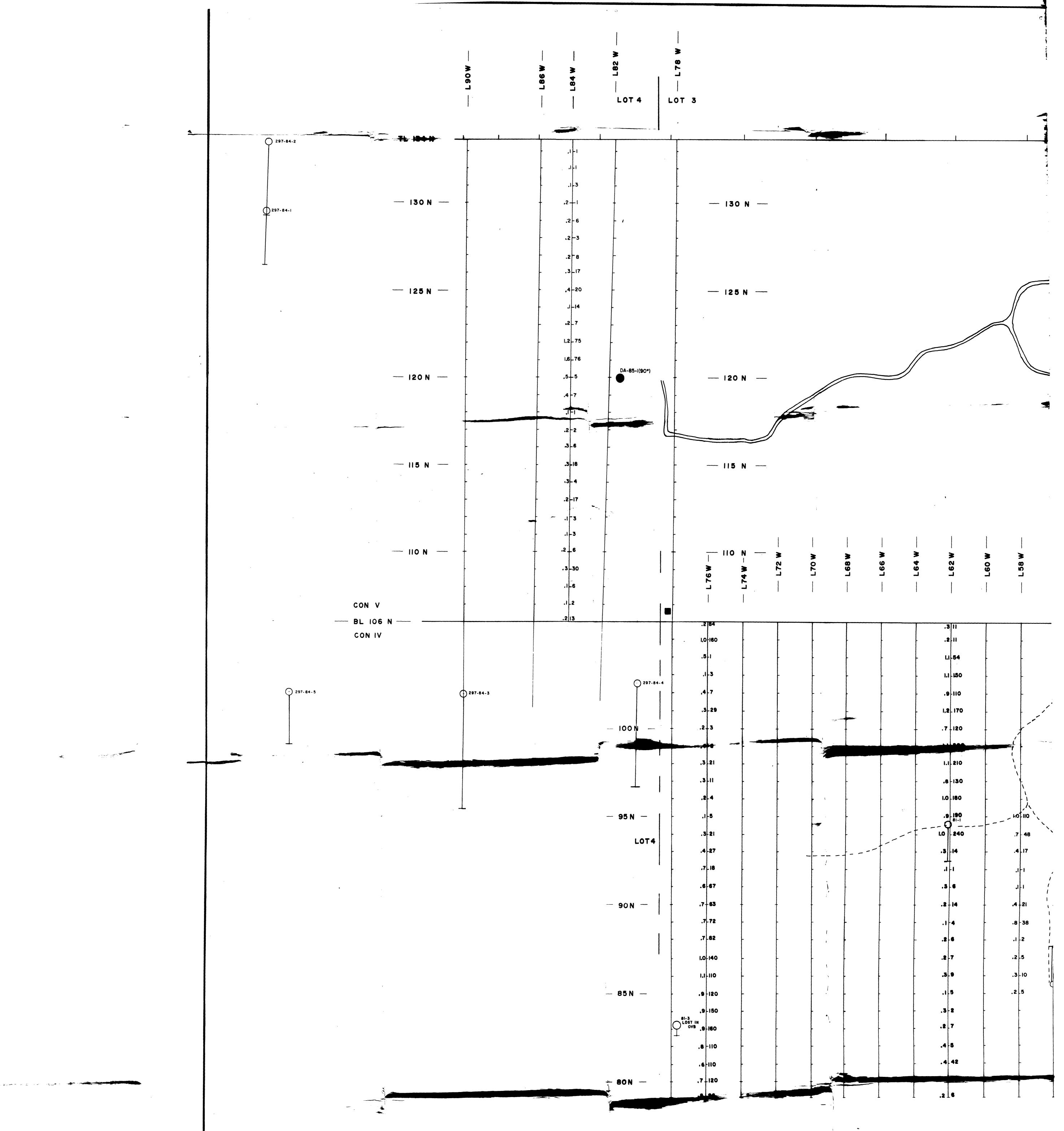
The interpretations and conclusions are based on my experience with the Davidson-Broulan Project, Getty-Davidson Tisdale Joint Venture and other properties in the Timmins area.

Timmins, Ontario

Guy:







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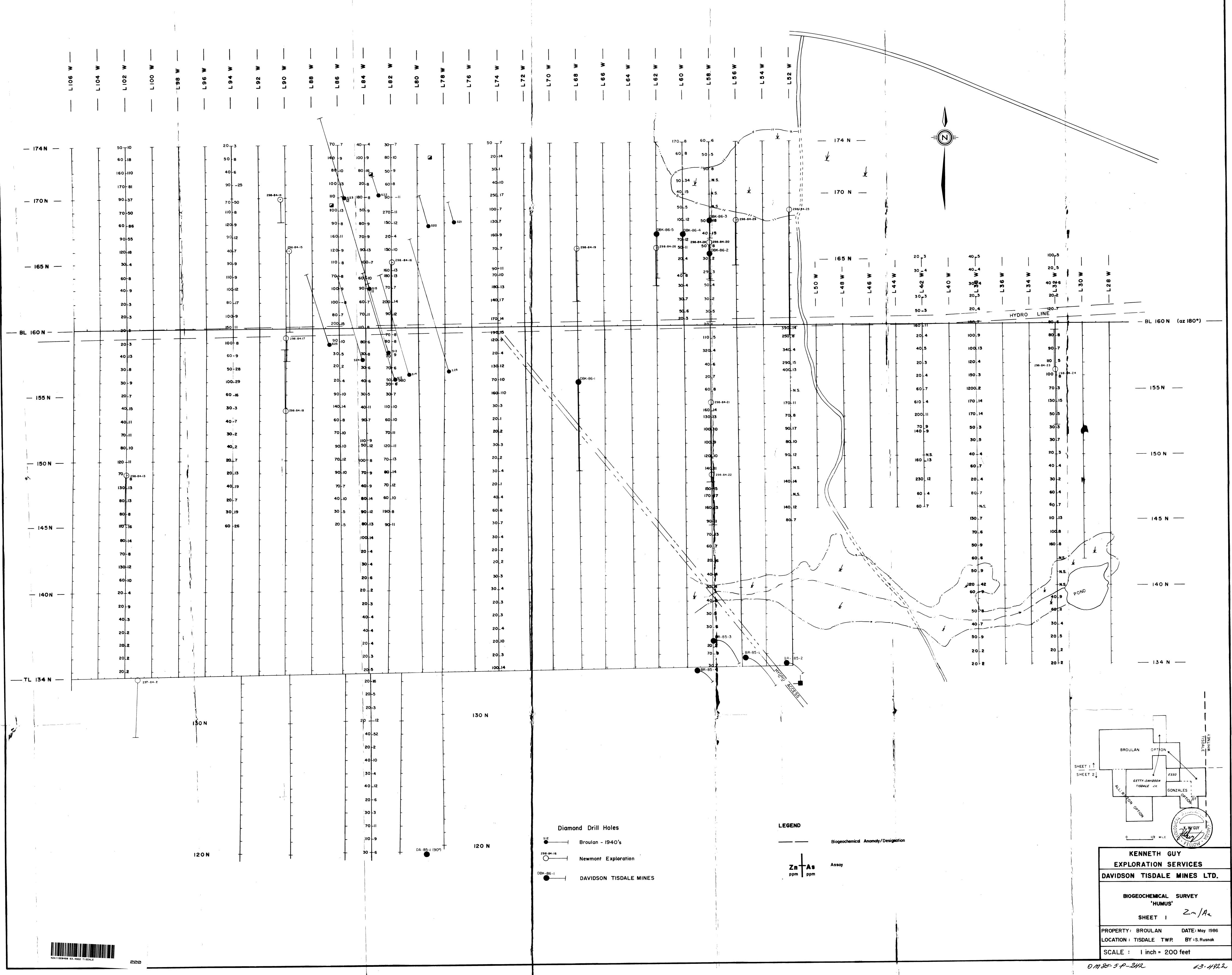
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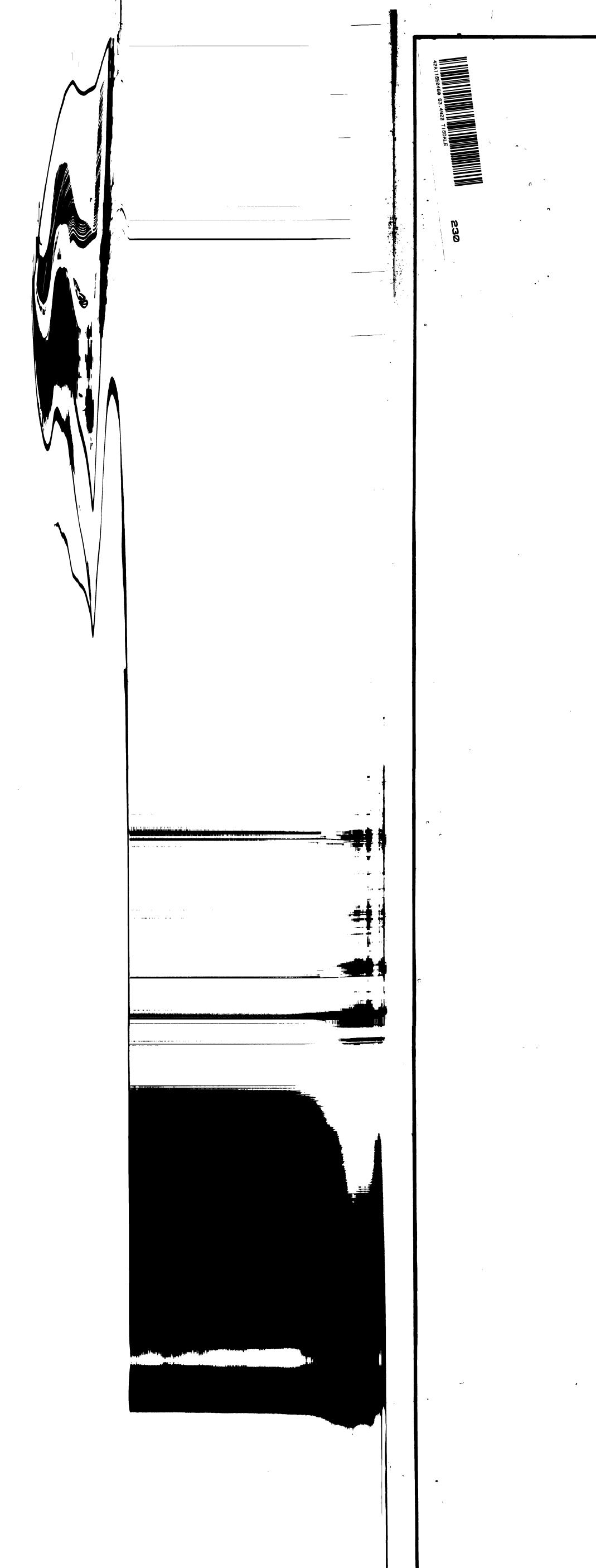
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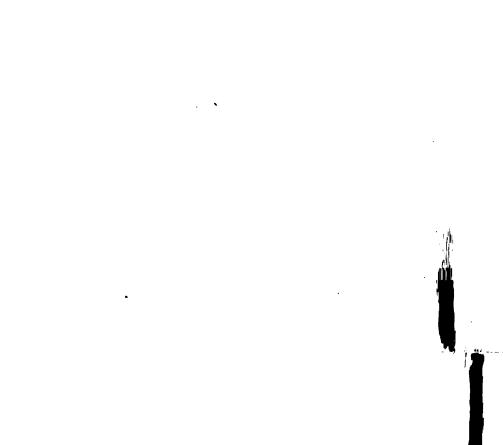
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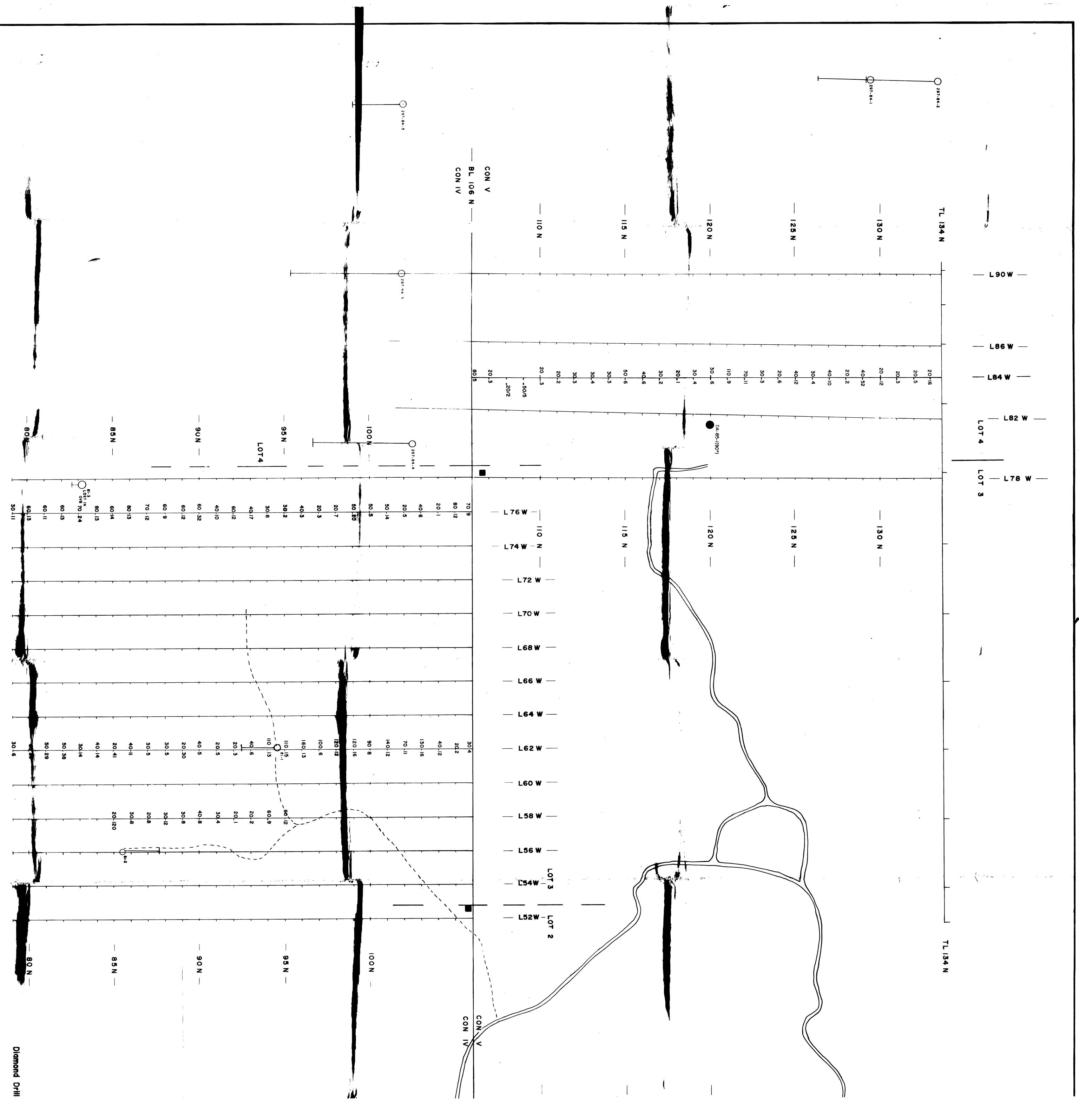
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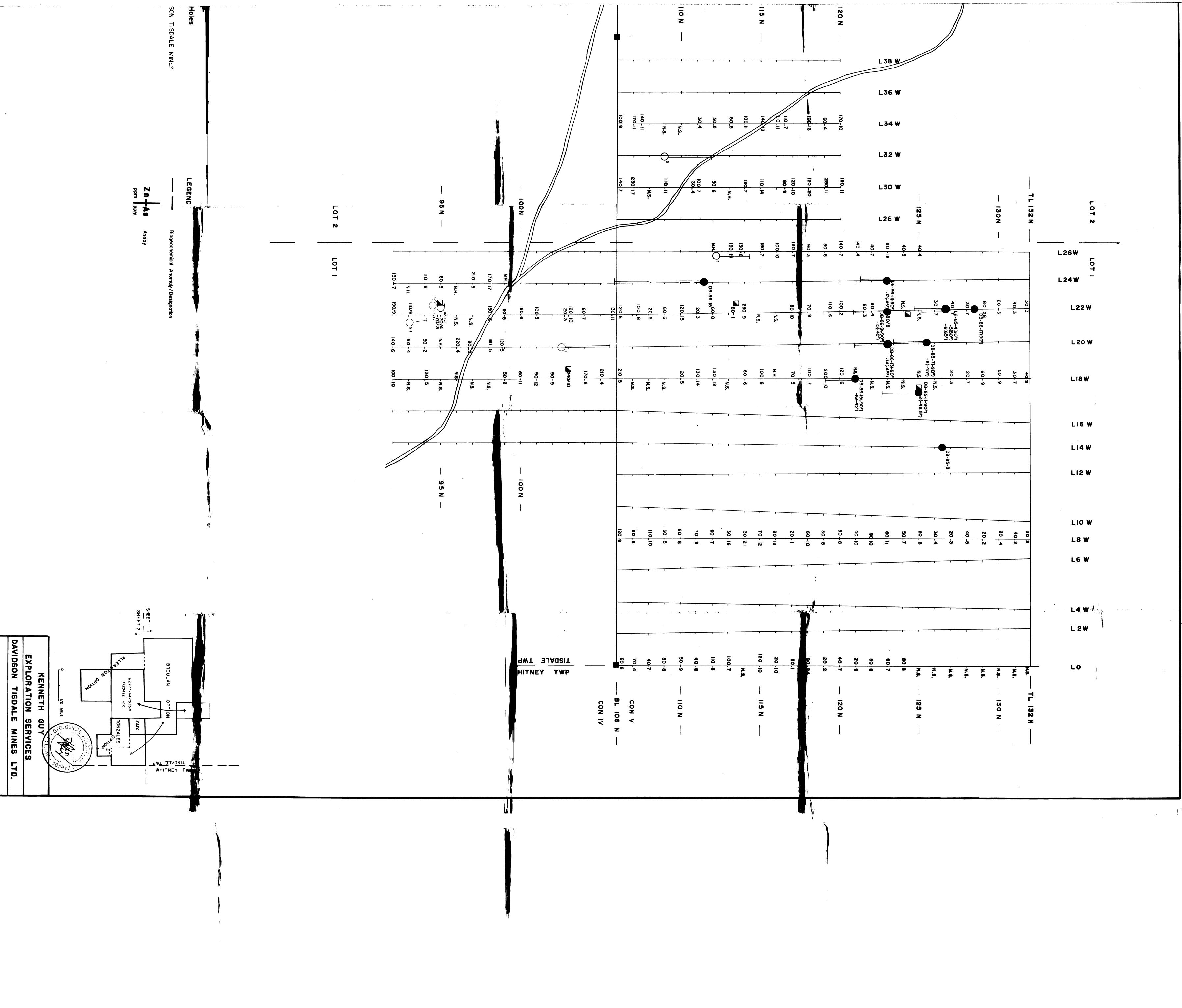


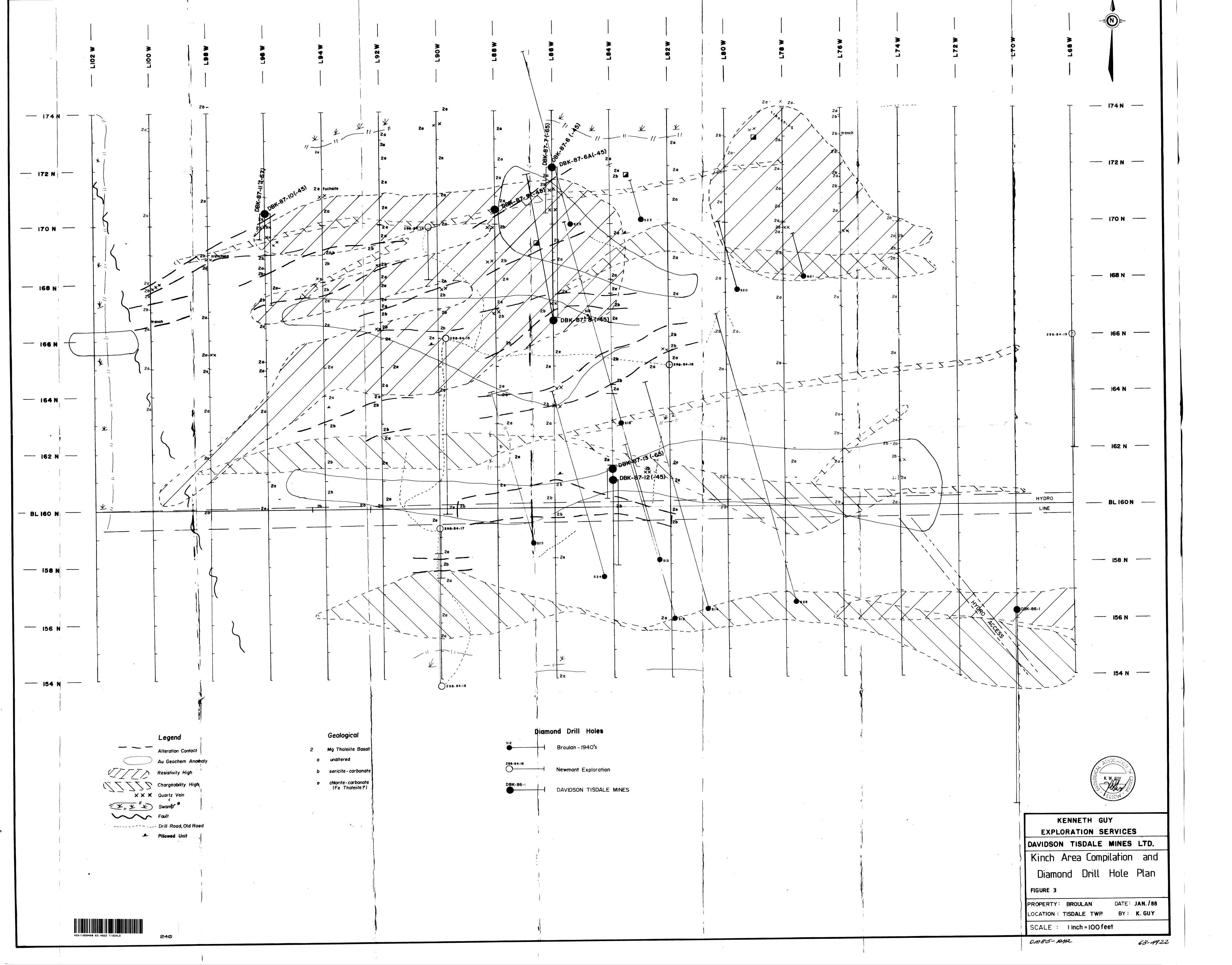




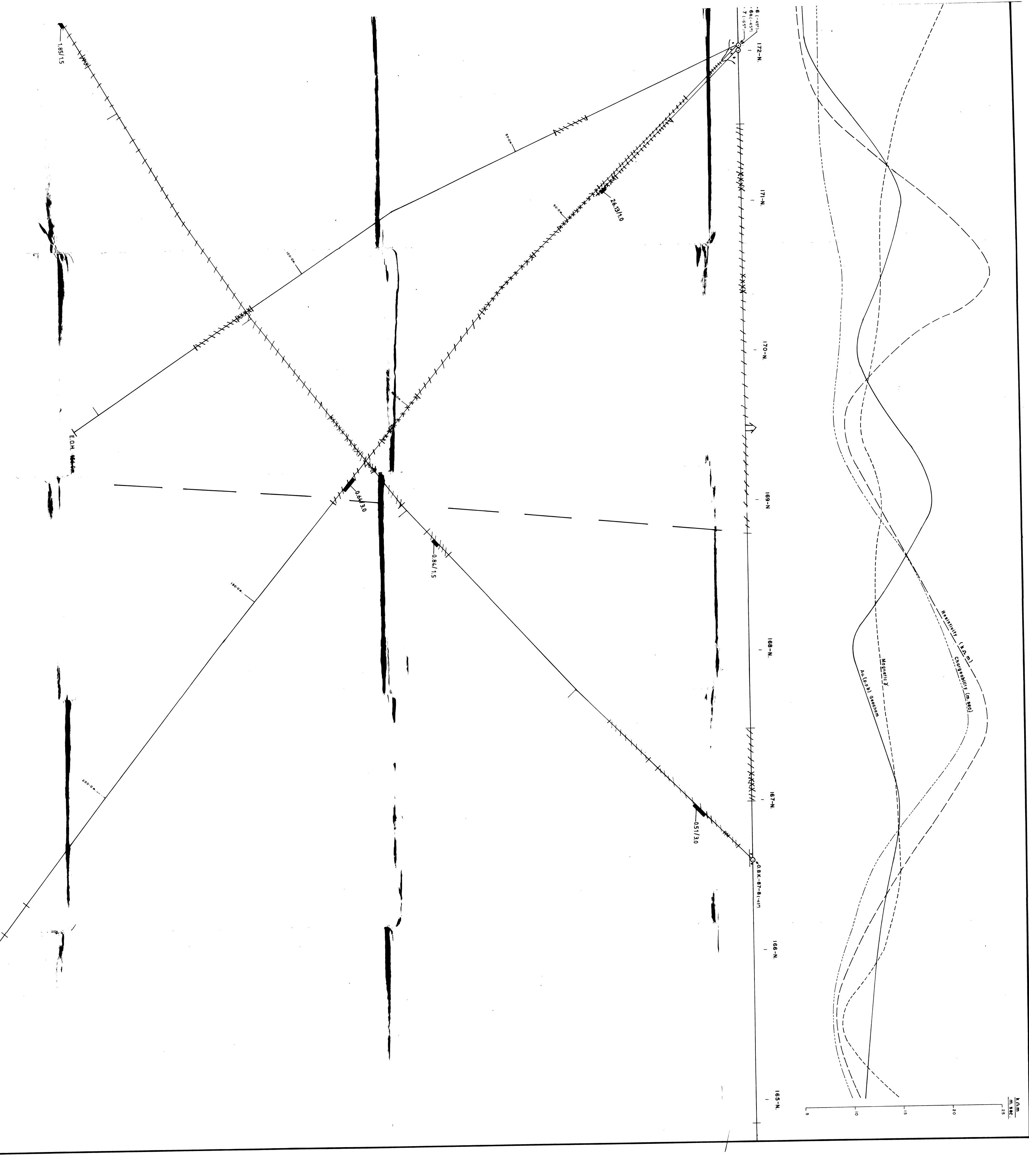
0m 25-242 53-1922	SCALE : I inch = 200 feet	PROPERTY: BROULAN DATE: May 1986 LOCATION: TISDALE TWP. BY: S. Rusnak	SHEET 2	BIOGEOCHEMICAL SURVEY
538				

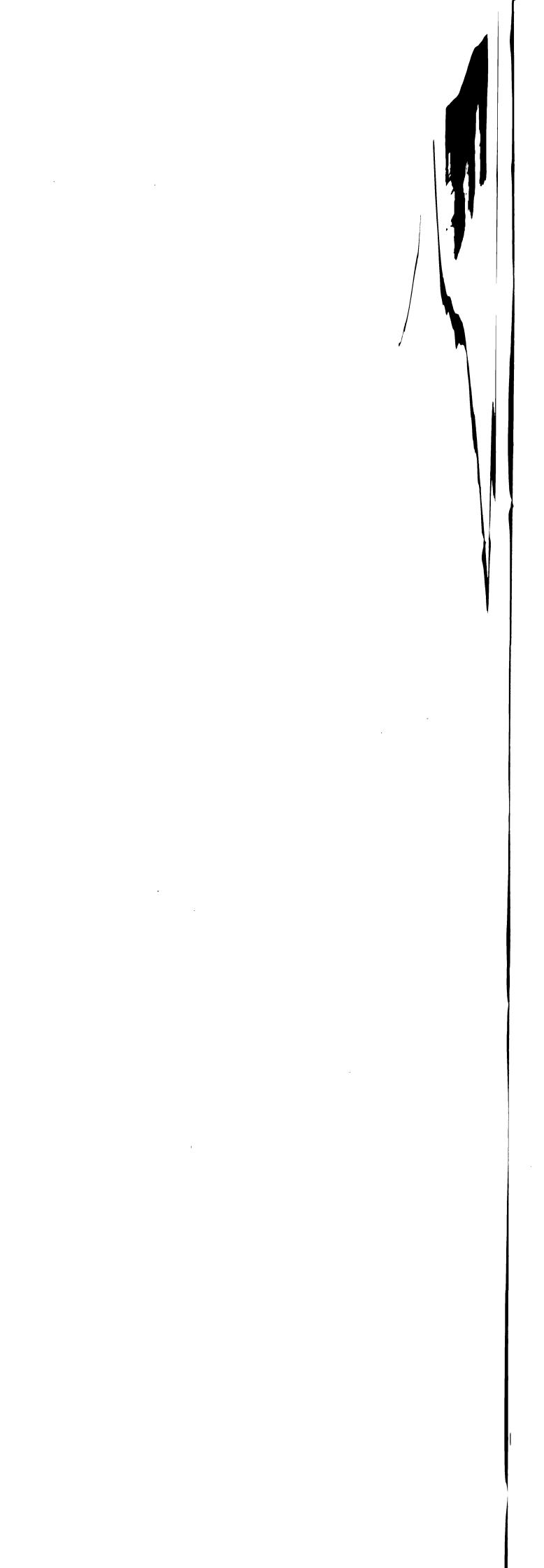
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	Alteration 2613/10 gms. Au/tonne / metres
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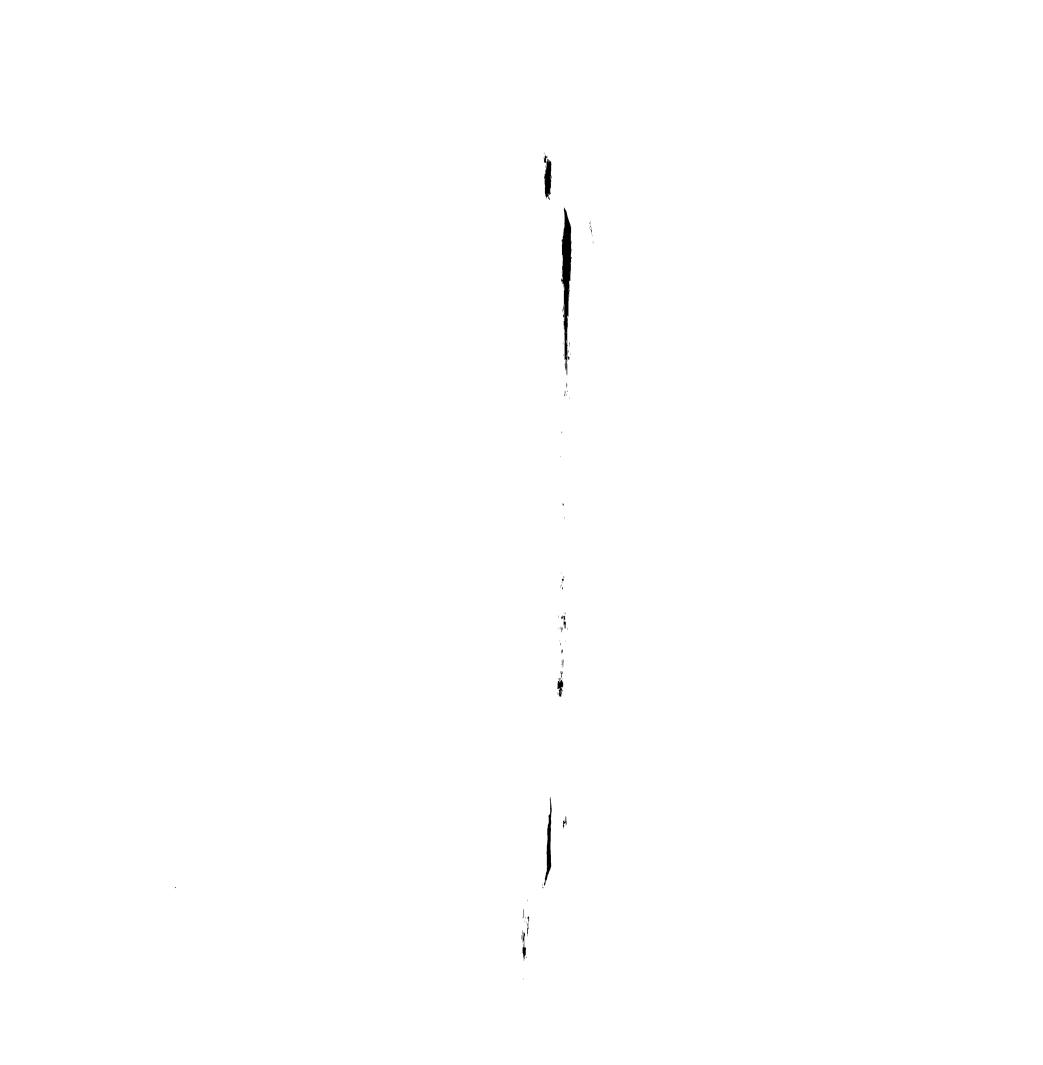


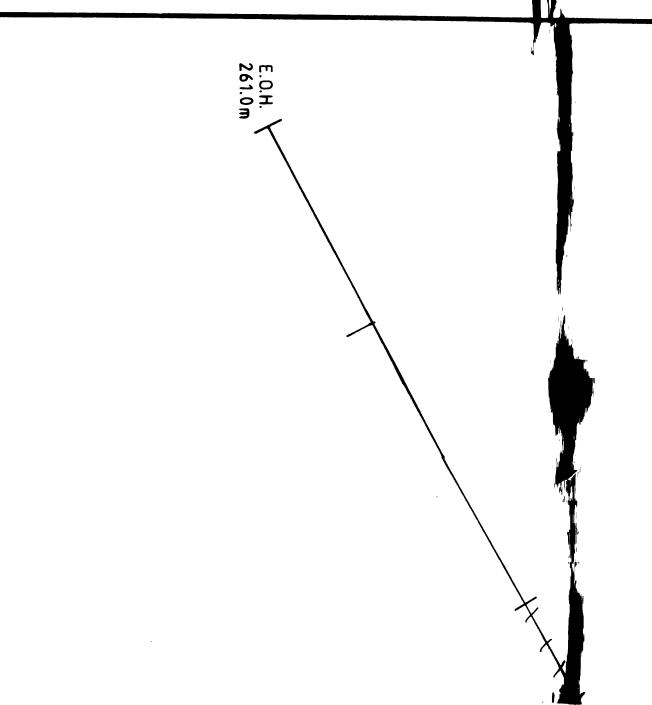


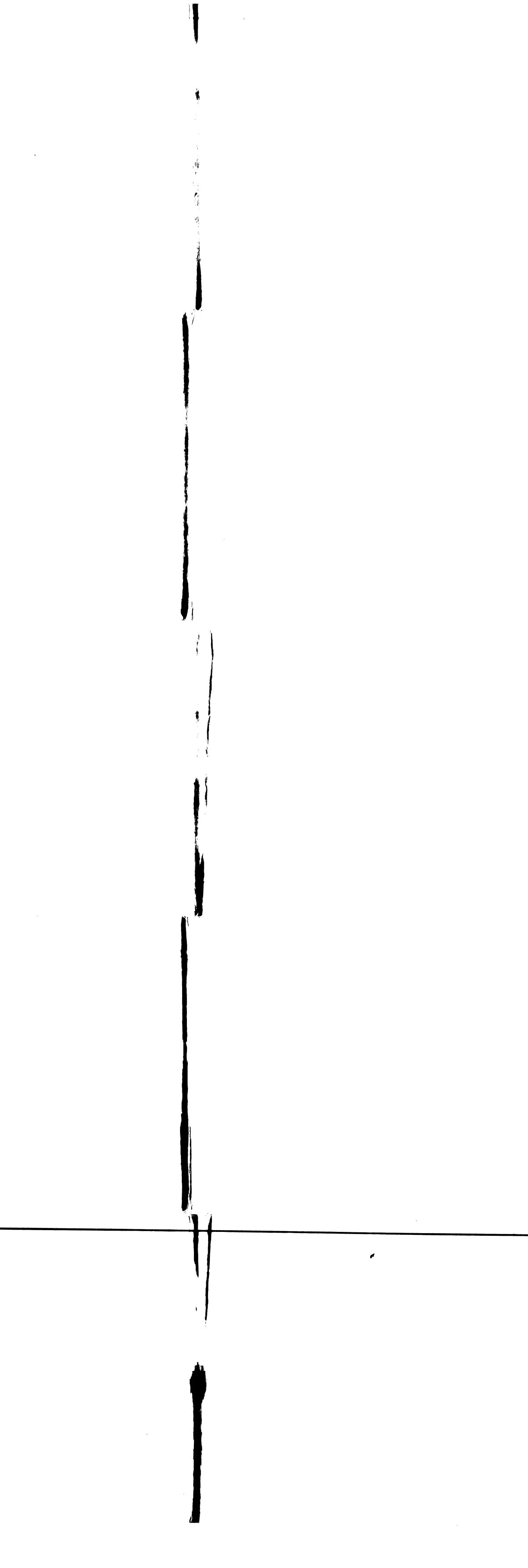
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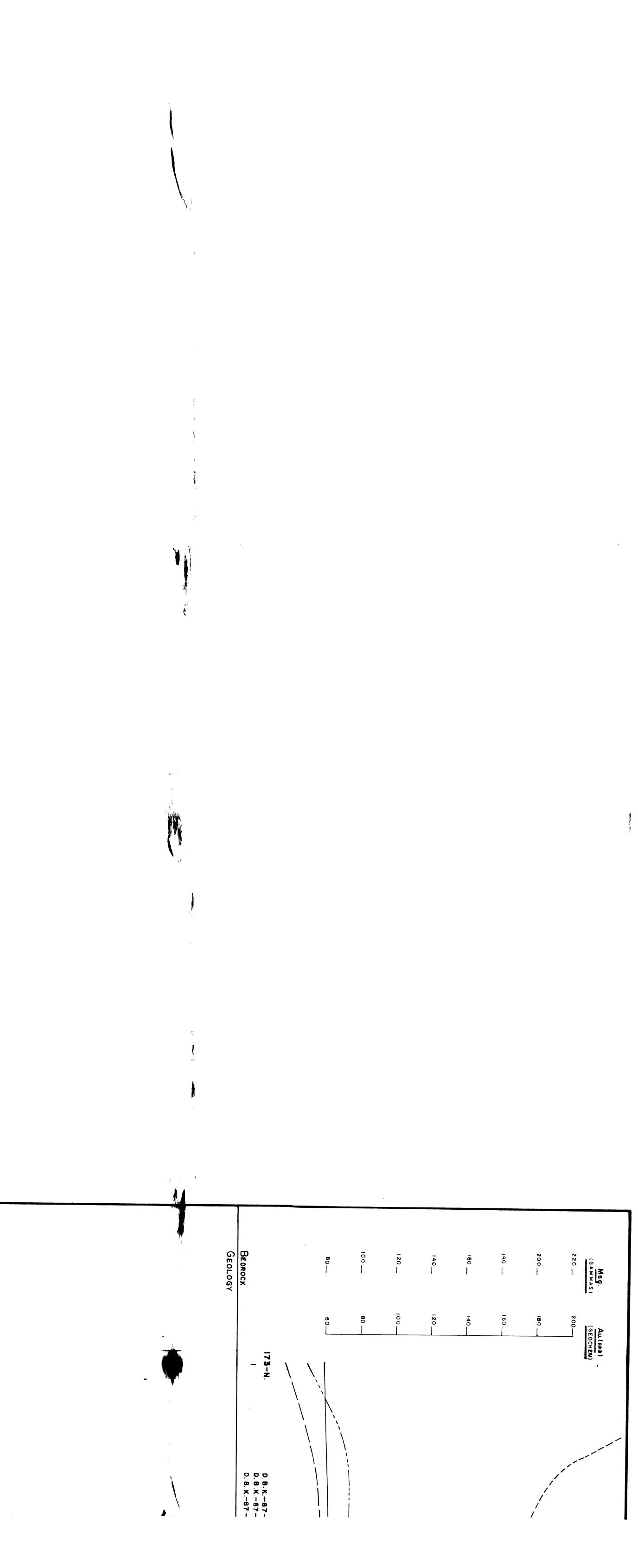
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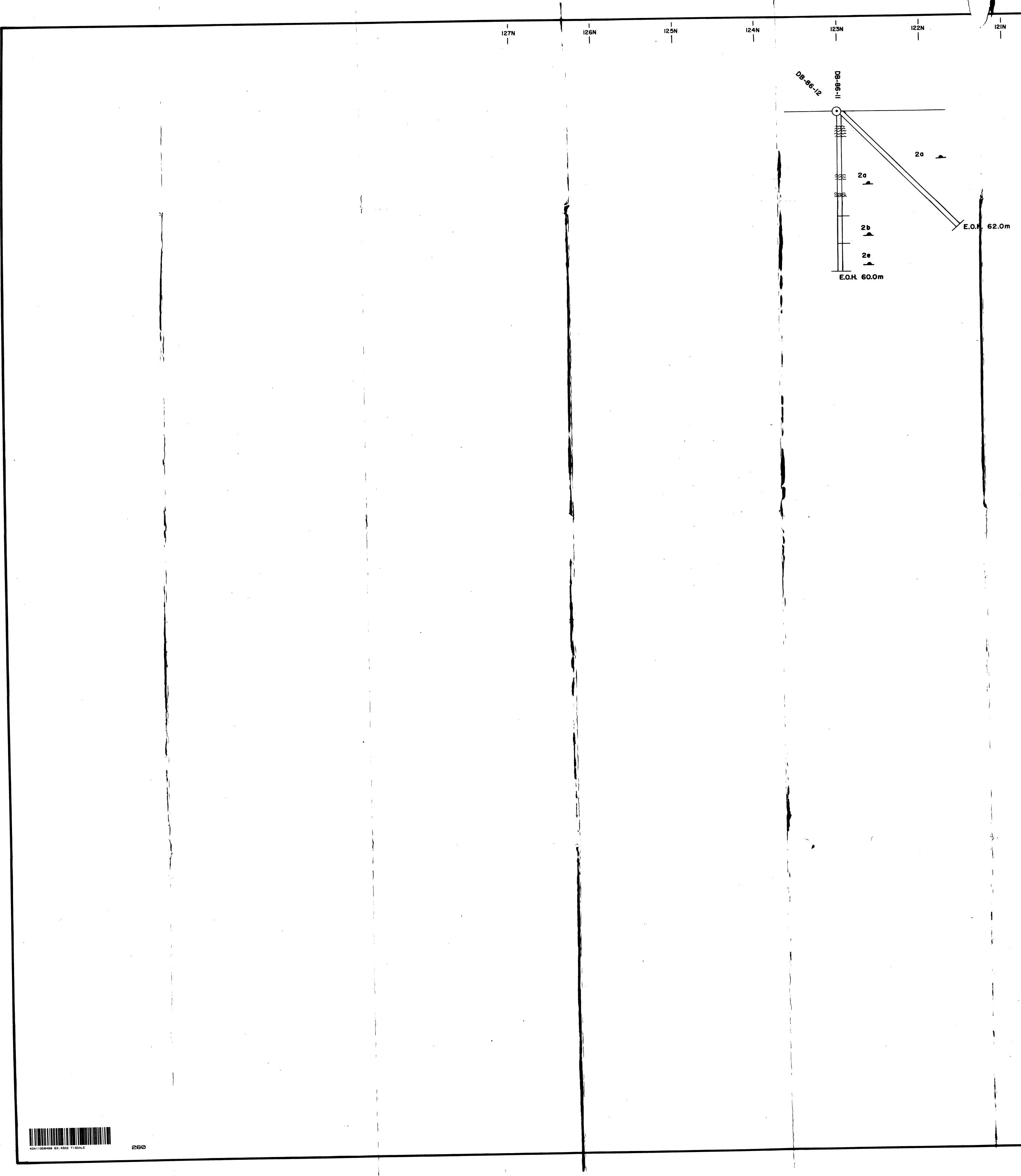












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2a unaltered 4 FELSIC TUFF QVS VG pillowed sh ≈ fault zone الر سخطخان ا

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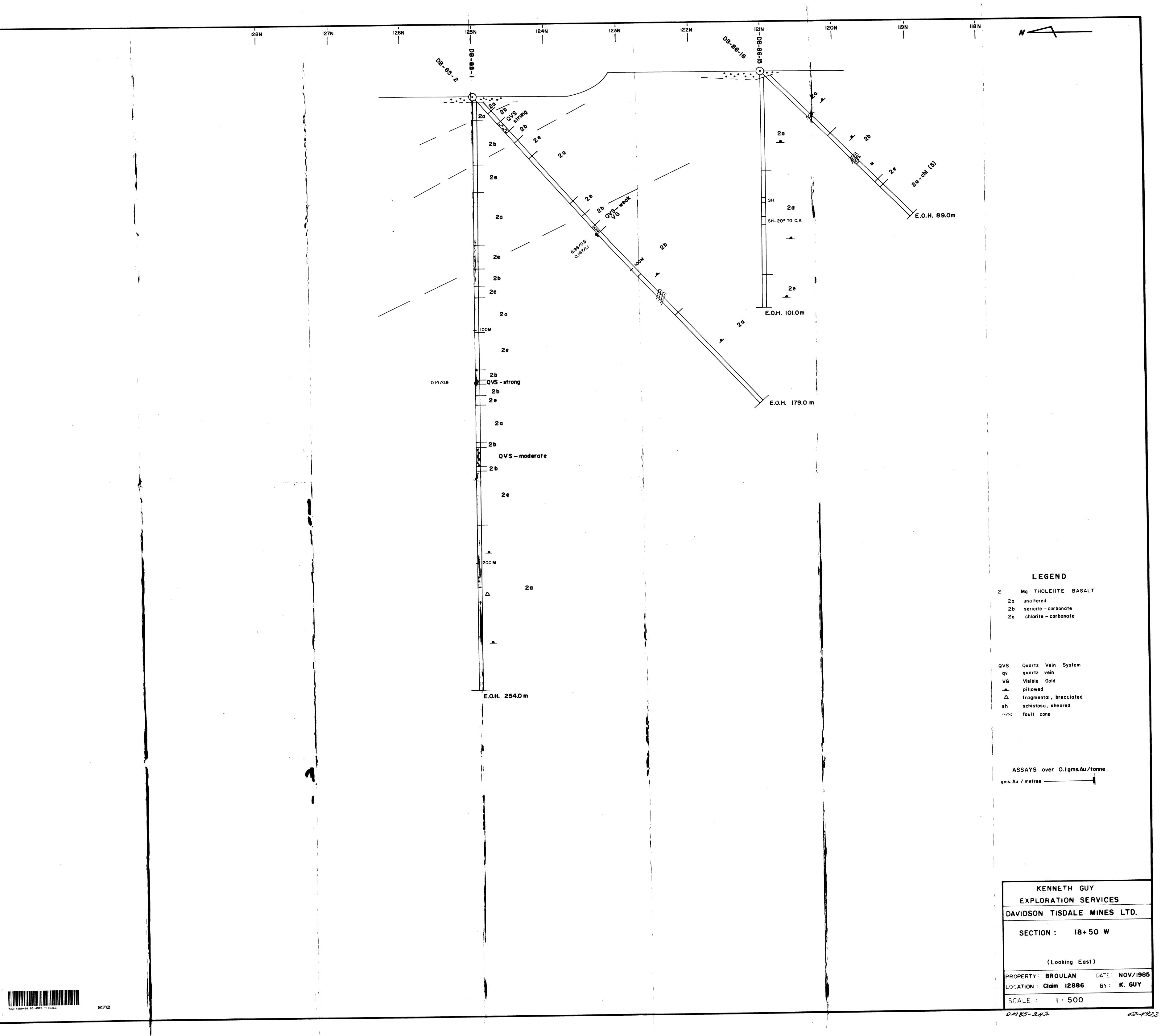
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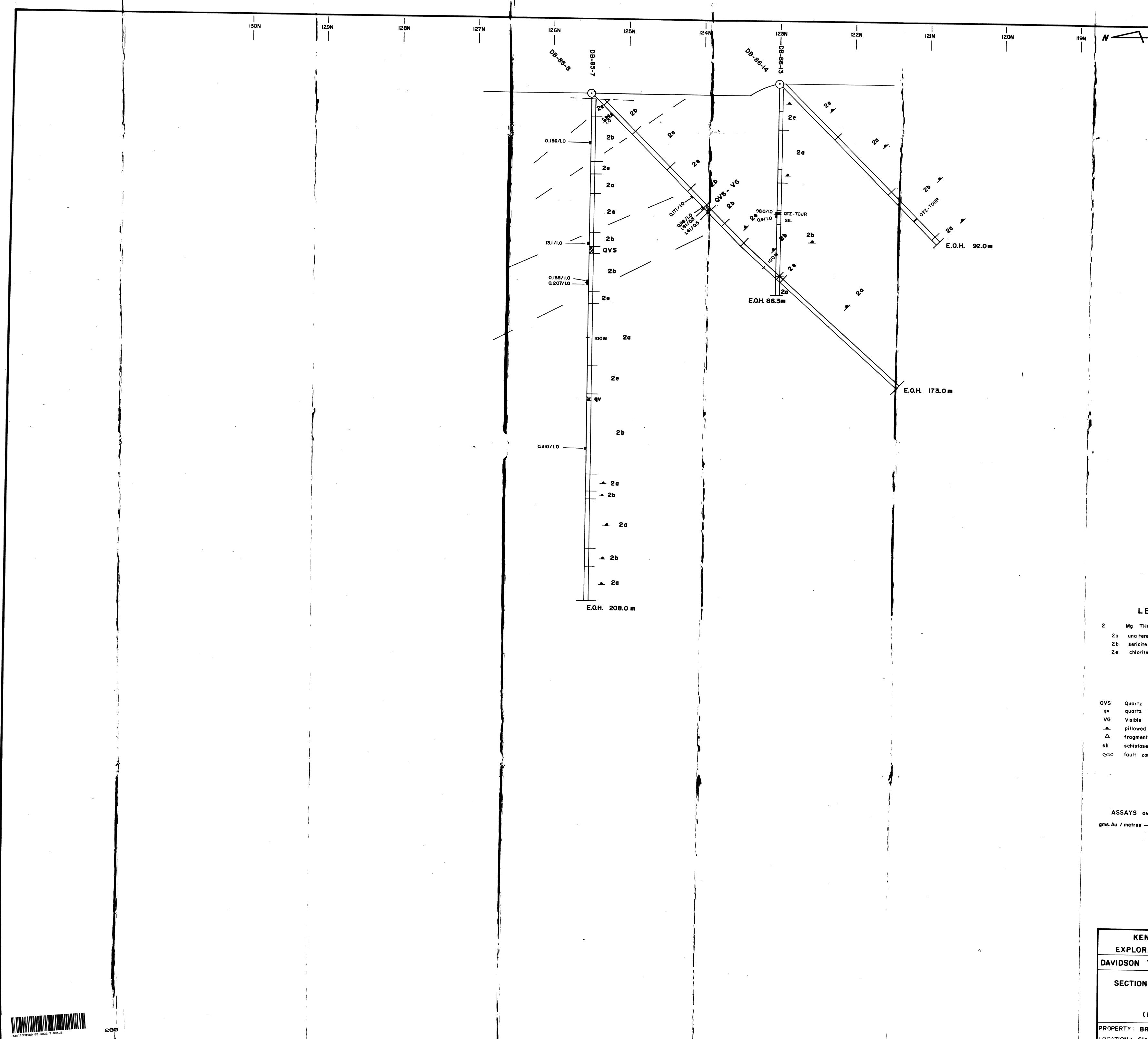
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LEGEND Mg THOLEIITE BASALT 2b sericite – carbonate 2e chlorite – carbonate Fe THOLENTE BASALT Quartz Vein System quartz vein Visible Gold Δ fragmental, brecciated schistose, sheared ~ ASSAYS over O.Igms.Au/tonne gms. Au / metres ------KENNETH GUY EXPLORATION SERVICES DAVIDSON TISDALE MINES LTD. SECTION : L 24+00 N (Looking East) DATE: FEB/1986 BY: K. GUY SCALE : 1 : 500

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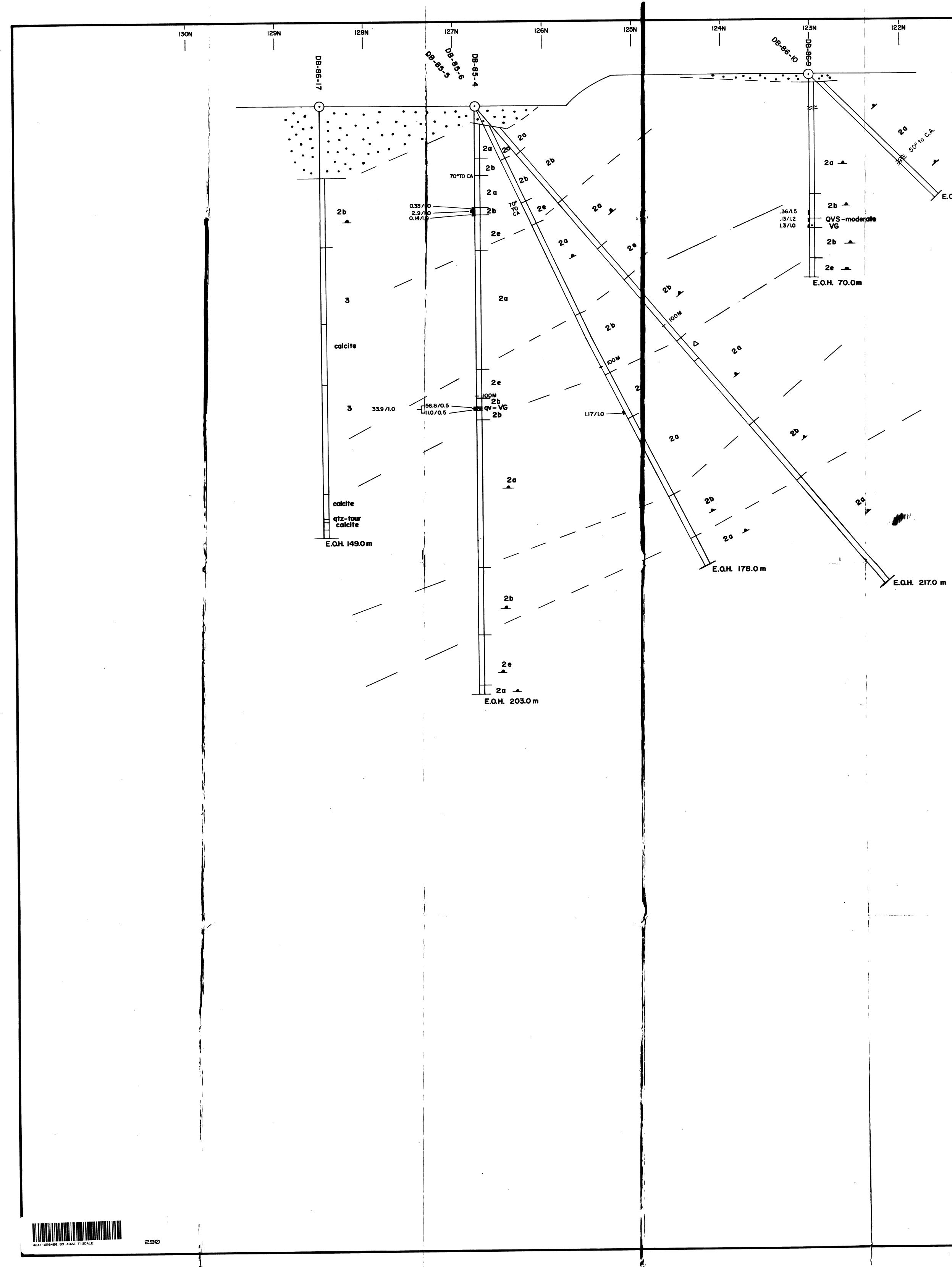
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LEGEND Mg THOLEIITE BASALT 2a unaltered 2b sericite – carbonate2e chlorite – carbonate QVS Quartz Vein System quartz vein Visible Gold pillowed Δ fragmental, brecciated sh schistose, sheared ∞ fault zone ASSAYS over O.Igms.Au/tonne gms. Au / metres ------

KENNETH GUY EXPLORATION SERVICES DAVIDSON TISDALE MINES LTD. SECTION: 20 W (Looking East) PROPERTY: BROULAN DATE: NOV/1985 LOCATION : Claim 12886 BY : K. GUY SCALE : I : 500

Om 85-242

62.4090



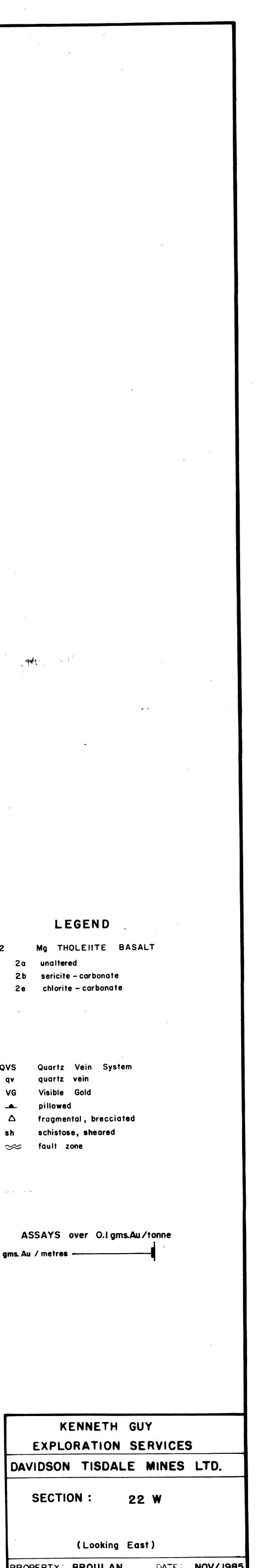
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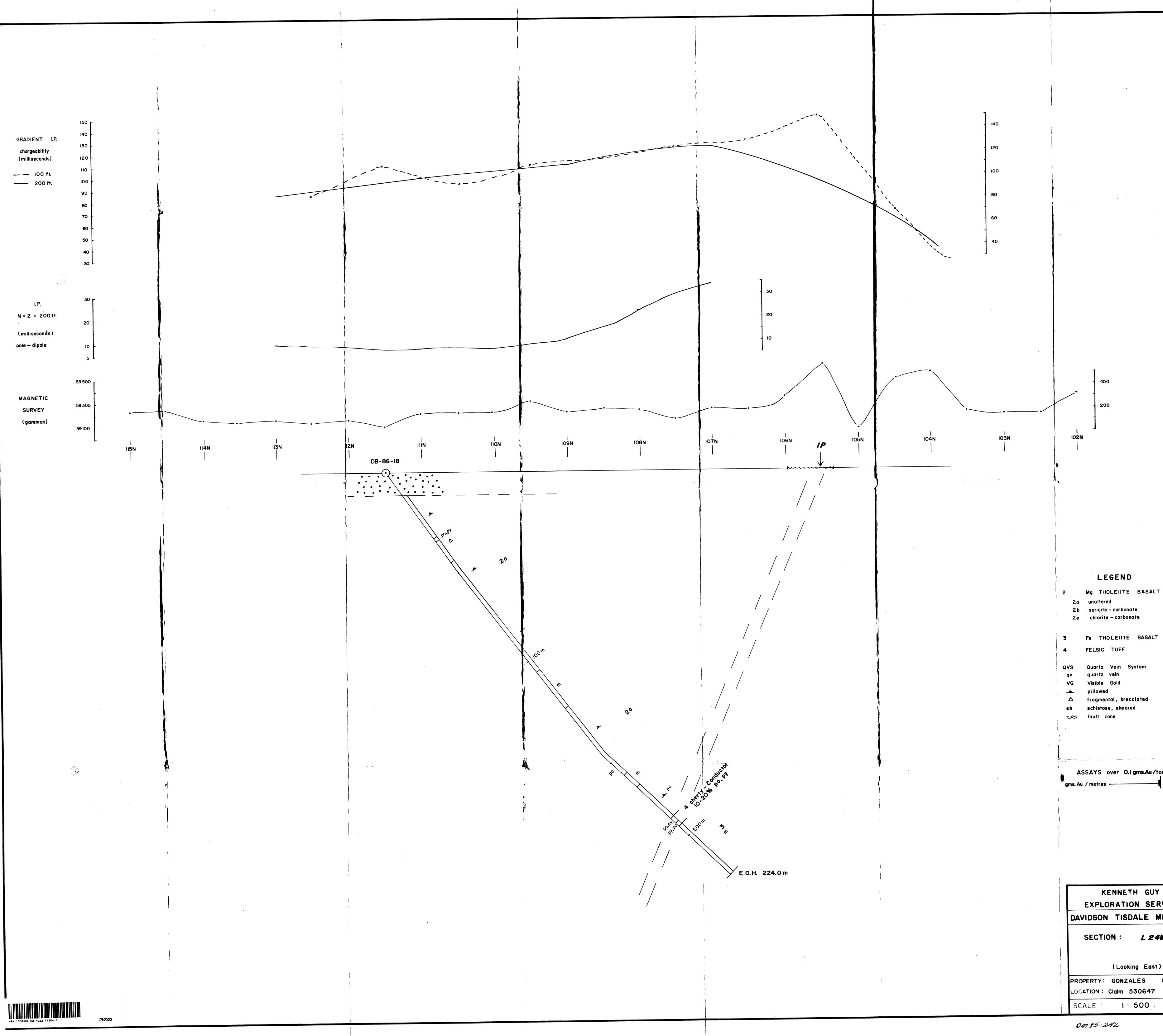
2a unaltered QVS pillowed sh schistose, sheared ∞ fault zone gms. Au / metres ------

-4444

SECTION: 22 W (Looking East) DATE: NOV/ 1985 PROPERTY: BROULAN LOCATION : Claim 12886 BY : K. GUY SCALE : I: 500 QM85-242



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LEGEND 2 Mg THOLEIITE BASALT ASSAYS over O.Igms.Au/tonne KENNETH GUY EXPLORATION SERVICES DAVIDSON TISDALE MINES LTD. SECTION : L24W (Looking East) PROPERTY: GONZALES DATE: FEB. 1986 LOCATION : Claim 530647 BY : K. GUY SCALE : I : 500 ·

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