

DRILLING REPORT

JULY 15 TO SEPTEMBER 1, 1988

ON THE

INEL RESOURCES LTD.

I NEL 2 CLAIM

ISKUT RIVER AREA

NORTHWESTERN BRITISH COLUMBIA

LIARD MINING DIVISION

56°36'42"N, 130°57'30"W  
N.T.S. 104B/10W

BY

EDWARD W. GROVE, Ph.D., P.Eng.

VICTORIA, B.C. NOVEMBER 30,

18062

ARIS SUMMARY SHEET

District Geologist, Smithers

Off Confidential: 89.09.13

ASSESSMENT REPORT 18062

MINING DIVISION: Liard

PROPERTY: Inel  
 LOCATION: LAT 56 36 42 LONG 130 57 30  
 UTM 09 6275662 379803  
 NTS 104B10W

CLAIM(S): Inel 2  
 OPERATOR(S): Inel Res.  
 AUTHOR(S): Grove, E.W.  
 REPORT YEAR: 1988, 41 Pages

COMMODITIES  
 SEARCHED FOR: Gold, Silver, Copper, Lead, Zinc

GEOLOGICAL

SUMMARY: The underlying country rocks include a layered Unuk River Formation sequence comprising basal rhyolitic breccias, flows and clastic sediments, andesitic volcanoclastics, conglomerates, minor limestones and intercalated basalt flows and breccias. Sulphide-gold mineralization has been superposed upon older stratabound gold, silver, lead, zinc, copper mineralization along basalt lava - sediment boundaries.

WORK  
 DONE: Drilling  
 DIAD 196.1 m 3 hole(s); BQ  
 Map(s) - 1; Scale(s) - 1:1000  
 SAMP 35 sample(s) ;AU,AG,CU,PB,ZN  
 MINFILE: 104B 113

LOG NO: 1205	RD.
ACTION:	
41p	
FILE NO:	

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**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

BY **18,062**

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VICTORIA, B.C. NOVEMBER 30, 1988

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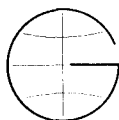
SUMMARY

The INEL mineral deposit lies due east of, and adjacent to the REG property owned by Skyline Explorations Ltd. where a new high grade gold deposit was put into production in July 1988. The INEL mineralization shows strong similarities to the REG Stonehouse Gold Deposit where free gold has been defined in porphyry-like K feldspar zones, and in K feldspar rich sulfide veins which cut the porphyry and altered country rocks. At the INEL sulfide-gold mineralization has been superposed upon older stratabound Au, Ag, Pb, Zn, Cu mineralization localized along basalt lava - sediment boundaries. The overall effect has been to produce an extensive zoned deposit comprising at least nine major showings within an area about two miles square on the west side of the property. Extensive Cu, Zn, Pb, Ag, Au tactite-like mineralization has also been found in the northeast part of the claim area.

Exploration by Skyline prospectors in 1983, 1984, and 1987 has uncovered promising Au, Ag, Cu, Pb, Zn mineralization from the base to the top on both sides of Snippaker Ridge on the INEL claims in a variety of host rocks. Three new gold and silver zones were discovered in the sedimentary rocks above the main mineralization. This Inel Ridge Zone has now been partially explored over a length of about 1000 meters giving results of up to several tens of ounces per ton silver and up to 3 ounces per ton gold across one 15 meter wide exposure of veined, pyritic sediment.

INTRODUCTION

The INEL group of staked mineral claims held by Skyline Explorations Ltd. and Inel Resources Ltd. extend from Bronson Creek and the adjoining REG group property east about 11



kilometers across Snippaker Ridge to Snippaker Creek. Gold and silver bearing sulfide mineralization has been found at nine major locations on the property. The most extensively explored Discovery and Main Sulfide zones have now been sampled on surface and by drilling over a width of 1067 meters and over a vertical height of about 1305 meters.

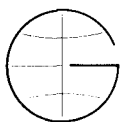
Access to the INEL property has been from the Johnny Mountain Mine air strip 8 kilometers to the west. Like the REG it is about 50 kilometers west of Bob Quinn Lake and about 82 km east of Wrangell, Alaska, the main supply center.

The writer first examined the property for Skyline Explorations Ltd. in 1981, and in 1983, 1984, and 1987 supervised detailed sampling, geological mapping, prospecting and core drilling on the property. In addition, the writer has worked in the general area since 1964 and has been responsible for regional mapping, mineral deposit and metallogenic studies.

The writer has logged some of the 1988 drill core and supervised the current exploration program. The report describes the drilling carried out on the INEL 2 claim in 1988, the results obtained and an interpretation of the observations.

#### LOCATION AND ACCESS

The INEL claim group lies on the south side of the Iskut River in northwestern British Columbia astride the southerly portion of Snippaker Ridge east of Bronson Glacier (Fig. 1). Elevations on the property vary from about 800 meters near Bronson Creek to more than 2100 meters on Snippaker Ridge. Both sides of the ridge are steep and marked by vertical to near vertical bluffs



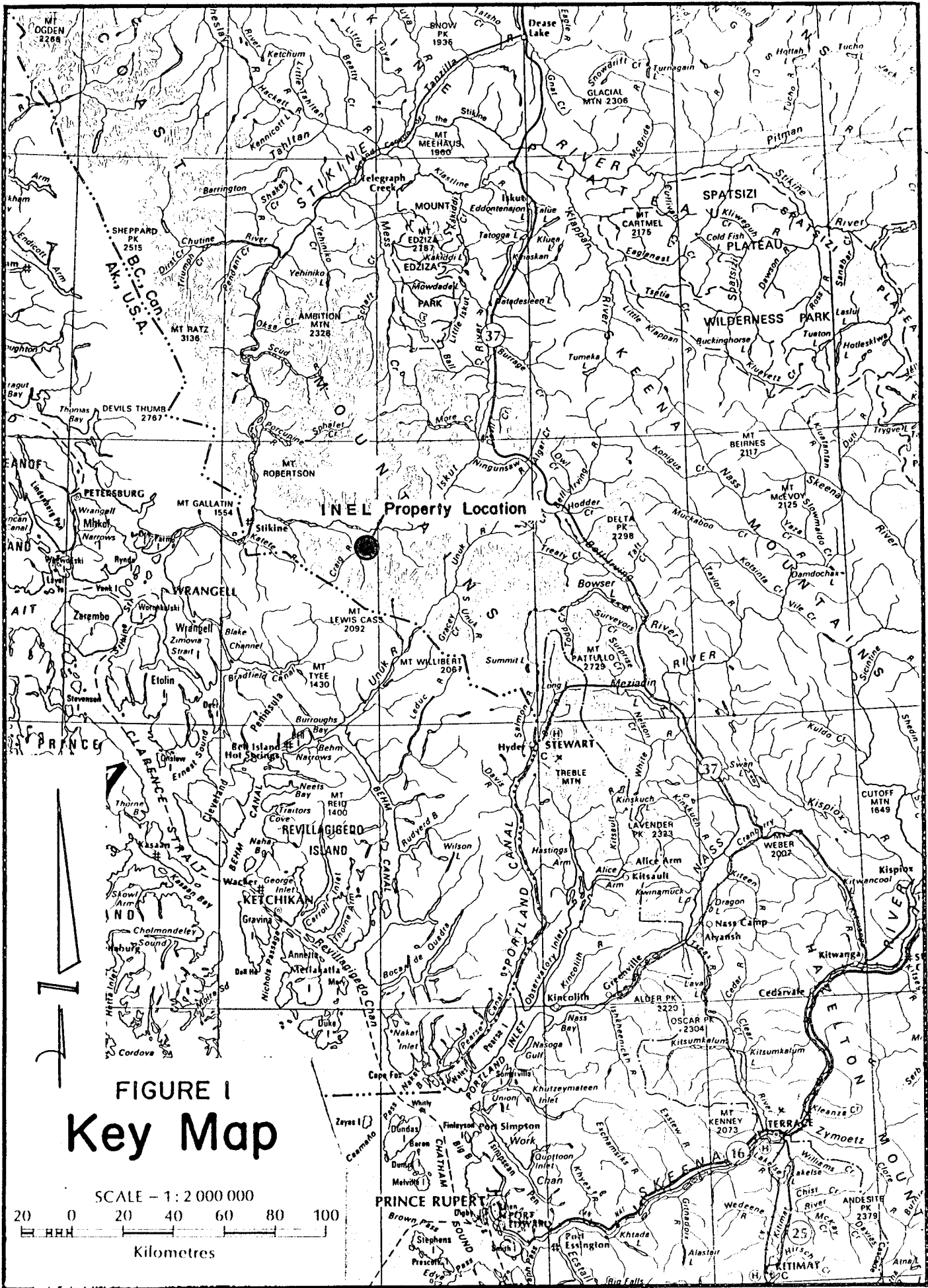
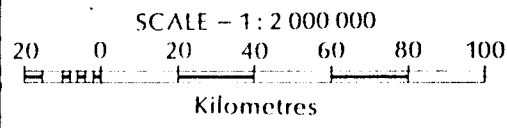


FIGURE I  
Key Map



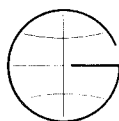
rising step-like to the narrow ridge top. Much of the claims area is open except for sparse alpine vegetation but is covered by talus, snow patches and small glaciers. Like most of this area ablation of ice and snow has increased dramatically since 1972 with the result that new outcrop areas are exposed annually. However, as the ice and snow retreat talus areas expand and slowly cover previously bare rock.

The INEL property lies only 82 kilometers from Wrangell, Alaska, and 50 km from the airstrip at Bob Quin Lake on the Cassiar-Stewart Highway. To date the property has been serviced by helicopter from the REG camp at Johnny Mountain, a three minute flight. For the purpose of surface exploration work the best period is from late June through early September.

#### INEL CLAIM GROUP

The INEL property includes 15 contiguous staked mineral claims comprising a total of 217 units held by Skyline Explorations Ltd. and Inel Resources Ltd. The claims include (Figure 2):

	<u>Units</u>	<u>Record No.</u>	<u>Expiry Date</u>
I NEL 1	9	1243	April 1, 1994
I NEL 2	12	1244	April 1, 1991
I NEL 3	9	1245	April 1, 1994
I NEL 4	12	1246	April 1, 1993
INEL 2	16	2586	October 18, 1994
INEL 3	20	2587	October 18, 1991
INEL 4	20	2588	October 18, 1992
INEL 8	9	2944	October 6, 1992
INEL 9	12	2945	October 6, 1992
KEDGE	20	2584	October 18, 1992
KEDGE 2	20	2585	October 18, 1992





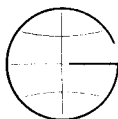


	<u>Units</u>	<u>Record No.</u>	<u>Expiry Date</u>
SLOCUM 1	20	2573	September 13, 1994
SLOCUM 2	20	2574	September 13, 1991
SKX 1	12	3718	December 5, 1994
SKX 2	<u>6</u>	3719	December 5, 1994
	217		

### HISTORY

Stream silt sampling of the Iskut River tributaries by Scud Ventures in 1965 led to prospecting of the Bronson Glacier area and the location of mineralization by Cominco in 1966. In 1971 the well exposed bare hillside east of Bronson Glacier was staked by Skyline Explorations Ltd. and optioned to Texas Gulf, Inc. Texas Gulf's 1972 field program included geological mapping and surface sampling. In 1973 Texas Gulf continued mapping, sampling, made a number of surface cuts and covered a portion of the property by reconnaissance magnetic, R.E.M., and Radem geophysical surveys. Although the surface work disclosed a large number of mineral occurrences, and massive sulfide float boulders, the geophysical coverage failed to locate any obvious anomalous targets. No further work was done on the INEL until 1980 when Skyline Explorations Ltd. restaked the area. Limited sampling, trenching, and geological surface mapping took place during 1980 and 1981.

In 1983 Skyline Explorations Ltd. commenced its first major work on the property. This included detailed chip sampling in the Main Sulfide Zone of an area about 250 meters square at 5 meter intervals on lines 25 meters apart. Parts of claims INEL 1 to 4 were mapped utilizing the detailed sampling grid, and reconnaissance work was carried out along the main ridge. Prospecting including soil and silt sampling was extended to the east side of the ridge opposite the main showings. In addition, as part of a

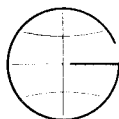


regional airborne survey, the INEL claim group was flown utilizing helicopter borne VLF-EM and magnetometer systems. All of the 1983 results were incorporated in a geological report by the writer (Grove, 1983).

In 1984 Skyline's work on the property started in late June by erecting a cookhouse/dry as well as upgrading the camp with tent frames. Because of the late spring and snow prospecting, core drilling, and geological mapping were not started until late July. Prospecting, trenching, sampling and geological mapping were completed on August 30, and core drilling on the Discovery Zone was completed September 17.

During the 1984 season 22 core holes totalling 1630 meters were drilled on the Discovery and Main Sulfide zones, 287 meters of trench was cut on the lowest part of the Main Sulfide Zone and portions of 5 new discoveries were sampled by short trenches. The lower Bronson Glacier and upper Discovery-Main Zone and Inel Ridge areas were remapped by the writer and Bob Bagshaw who also made a preliminary sketch of part of the SLOCUM 2 - I NEL 3 claim area where prospectors located an extensive high grade gold bearing copper skarn.

No significant work was done on the property in 1985 and 1986 because of priority commitments to the REG property. In 1987 Inel Resources Ltd., a newly created company, commenced underground exploration by drifting at about the 1510 meter elevation. This was continued in 1988 to allow underground core drilling of the major zones. In addition a number of surface core holes were drilled to test surface mineralization. This included the three holes on the I NEL 2 claim reported here.



## GENERAL GEOLOGY

The general geology of this portion of the Iskut River area has been undergoing considerable revision and has now been included by the writer as part of the larger Stewart Complex (Grove, 1969, 1970, 1973, 1982, 1987), one of the most highly mineralized areas in the Western Canadian Cordillera.

Although the area was included in the regional Operation Stikine (GSC 9-1957), the geologic units mapped by Kerr (1948) in the late 1920's and early 1930's were retained with little change. Parts of Kerr's work in the Upper Stikine have been remapped and shown to be fairly accurate. However, Kerr's work in the Iskut area marks the limit of his mapping where stratigraphic units, mainly volcanic, lack fossils and have been in part highly deformed and requires severe modification.

The shaly units forming Snippaker Mountain are fossiliferous and appear to represent variably deformed thick slabs of Carboniferous strata trending along the river and dipping northerly down the slope very much like the zone west of Craig River. The ridge east of Snippaker was also mapped in some detail in 1983 and 1984 and deformed units which include blocks of crinoidal Mississippian limestone form the crude dip slope. The property mapping provides information which suggests that these Carboniferous slope forming slabs unconformably overlie correlatives of the Late Triassic, Lower Jurassic to early Middle Jurassic Betty Creek Formation and Lower Jurassic Unuk River Formation mapped as extending from Tom McKay Lake southeasterly through Stewart to Alice Arm.

The highly contorted, deformed nature of the Carboniferous strata can be seen in the steep cliffs between Bronson Creek and Snippaker Creek. The unconformable nature of

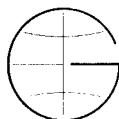


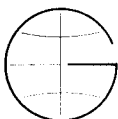
TABLE I  
SUMMARY TABLE OF FORMATIONS - ISKUT RIVER AREA  
SEDIMENTARY AND VOLCANIC ROCKS

ERA:	PERIOD/EPOCH :	FORMATION :	LITHOLOGY
CZ :		Lava Fork :	hotspring, ash, basalt flows
EO :			
NI :	Recent	Iskut :	basalt flows, ash
OC :		Hoodoo :	basalt flows
- :			
		Unconformity	
	Upper Jurassic	Nass Formation :	siltstone, sandstone, conglomerate
M :			
a :		Salmon River :	siltstone, greywacke, sandstone, conglomerate, carbonate
z :	Middle Jurassic	Formation :	
E :			
e :		Betty Creek :	rhyolite breccia, sandstone
s :		Formation :	tuff, volcanoclastics, conglomerate, carbonate, volcanics
t :			
o :		Unconformity	
n :			
Z :			
G :	Lower Jurassic	Unuk River :	volcanoclastics, siltstone, greywacke, porphyry, carbonate, rhyolite
O :		Formation :	
r :		Unconformity	
o :			
I :		Stuhini :	volcanoclastics, volcanics, siltstone, sandstone, chert
u :	Upper Triassic	Formation :	
C :		equivalent :	carbonate
		Unconformity	
P :	Permian		crinoidal limestone
A :		Unconformity	
L :	Pennsylvanian	not yet	?
E :		recognized	
O :		Unconformity	
Z :			
O :	Mississippian		crinoidal limestone, clastic sediments, volcanic
I :		Unconformity	
C :	Devonian		grey limestone

Basement Unknown

PLUTONIC ROCKS - COAST PLUTONIC COMPLEX

ERA :	PERIOD :	LITHOLOGY
C :	Late Tertiary	granodiorite, diorite, basalt
E :		
N :		
O :		Intrusive Contacts
Z :		
O :	Early Tertiary	quartz diorite, granodiorite, quartz monzonite, feldspar porphyry, granite
I :		
C :		
		Intrusive Contact
M :	Middle Jurassic	quartz monzonite, feldspar porphyry, syenite
E :		
S :		Intrusive Contact
O :	Lower Jurassic	diorite, syenodiorite, granite
Z :		
O :		Intrusive Contact
I :	Late Triassic	diorite, quartz diorite, granodiorite
C :		
P O :	?	
A Z :	NOT DETERMINED	quartz diorite, ?
L O :		
E I :		
- C :		

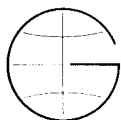


the Carboniferous-Middle Jurassic overlap is well exposed on both sides of Snippaker Ridge north of Snippaker Peak. The same unconformable relationship between these major rock units appears to extend from Forrest Kerr Creek west along the Iskut River to the Stikine River junction. Present interpretation suggests an east-west trending thrust along the axis of the Iskut River which like the King Salmon Thrust Fault pushed up and over to the south.

#### LOCAL GEOLOGY

At this time about one quarter of the INEL property has been examined by either preliminary or detailed mapping. The bulk of the country rocks underlying Snippaker Ridge and the INEL property include a layered Unuk River Formation sequence comprising basal rhyolitic breccias, flows and clastic sediments, andesitic volcanoclastics, conglomerates, minor limestones and intercalated basalt flows and breccias. North of the property line and south of Snippaker Peak this Lower Jurassic sequence includes a thick southerly dipping fossil rich coquina in which specific macrofossils date the rocks as Toarcian, that is, late Lower Jurassic and equivalent to the Upper Member of the Unuk River Formation (Grove, 1973, 1987). Farther north along the south side of the Iskut River these Toarcian and older units have been overthrust by Mississippian and Permian limestone units. These Paleozoic rocks are present as irregular slabs and remnants. Permian limestone units have now been mapped over parts of SLOCUM 2 and INEL 7 claims where they are in fault contact with underlying volcanoclastics.

South of Snippaker Peak the Lower Jurassic units are unconformably overlain by gently dipping to warped early Middle Jurassic Betty Creek Formation equivalents found as structural remnants. These ridge forming members include volcanic sandstone, volcanic breccia, porphyritic andesitic and basaltic flows.

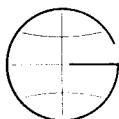


Similar units form the ridge crests on Johnny Mountain to the west and on ridges to the south throughout much of the Stewart Complex.

The Lower Jurassic sequence has been cut by a long, narrow, high angle alaskite (leucocratic quartz feldspar porphyry) pluton that has been mapped in some detail on the I NEL 1 to 4 claims. This intrusive extends from about the south boundary of the INEL group and northerly cutting across Snippaker Ridge south of Snippaker Peak. At the south the contacts are marked by wide granitized margins with zinc-silver mineralization on the west, and oxidized copper-molybdenum on the east. In the Main Sulfide Zone area the east contact is marked by an unusual swarm of narrow dikes. Field relationships indicate the presence of diorite, syenodiorite, quartz monzonite, and alaskite dike in order of decreasing age. These dikes, and mineralized country rocks have been faulted, partly deformed, and cut by wide pyrite-quartz-feldspar injection breccia dikes. Together with the mineralized country rocks and quartz-sulfide veins these pyritic injection breccias form the broad Main Sulfide Zone.

#### LOWER UNIT

In this report the term Lower Unit refers to the Unuk River Formation correlatives lying above Bronson Glacier which are overlain unconformably along Snippaker Ridge by Betty Creek Formation correlatives. The basal units of this Lower Unit sequence include a thick sequence of dark volcanic breccias and volcanic conglomerates in which structural layering is marked by intercalated thin argillaceous siltstone, sandstone and conglomerate. The thickness of the sequence is about 1,500 feet but no definite base has yet been determined. The members trend northwesterly and dip easterly at moderate to high angles. This essentially fragmental andesitic lower member is overlain by a

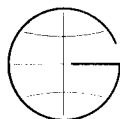


contrasting light colored rhyolitic fragmental/flow sequence in which bedding is outlined by rhyolitic epiclastic volcanic members. This middle sequence has an apparent thickness of at least 1,600 feet forming layered units trending northwesterly to northerly and dipping moderately to gently to the east.

Both of the above units have been intruded by the underlying alaskite pluton which has an apparent width of about 5,000 feet between Bromley Glacier on the west and the Main Sulfide Zone on the east.

The upper member of the Lower Unit sequence lies east of the main alaskite intrusive and is unconformably overlain on the ridge by a Betty Creek age sequence. This upper member includes most of the best known mineralization including the Discovery and Main Sulfide zones, as well as most of the new gold/silver bearing sulfide prospects. In ascending order this member includes well bedded volcanic sandstone, thin bedded somewhat finer grained volcanic sandstone marked by tuffaceous banding and minor carbonate lenses, a finely banded light/dark lithic tuff/sandstone sequence in which thin olivine basalt flows are intercalated and in which the basalt flows increase in thickness and number upwards and to the north. To date most of the known bedded/stratiform sulfide mineralization has been outlined within this complex tuff/basalt sequence. This important tuff/basalt zone is overlain by bedded coarse sandstone, conglomerate and volcanoclastics marked by thinly intercalated siltstone/argillaceous siltstone layers.

The upper member has an apparent aggregate thickness of at least 762 meters as measured on the I NEL 2 claim in Big Bowl and Super Bowl creeks cirques. The overall structure of this gently undulating sequence as measured in outcrop and drill core shows a northerly trend with an overall easterly dip of about 25°.





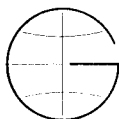
The Lower Unit is unconformably overlain by the Middle Jurassic Betty Creek correlative on Snippaker Ridge and cut by the main alaskite pluton, related dikes and by several strong north-northeast trending cataclasite zones.

#### UPPER UNIT

The ridge forming unit found along the spine of the INEL property has been linked homotaxially to the regionally very extensive, and very distinctive early Middle Jurassic sedimentary-volcanic sequence first recognized in the Stewart area (Grove, 1971, 1973, 1982, 1987). This unit is now recognized from the Iskut River to Smithers and is typically found as structural remnants forming distinctive cliffs and castlements. Although this formation is relatively well exposed along the crest-line on the INEL property the actual contact and the unconformable relationship with the underlying Unuk River sequence strata has been largely obscured by the ice and snow patches dotting the ridge, and by the recently forming talus slides. The contact is well exposed south and southwest of the camp area where undulating to flat lying graphitic siltstone, sandstone, and volcanoclastic members overlie granitized, steeply dipping rhyolite and rhyolite breccia members of the local Unuk River Formation (Lower Unit). In the INEL area, like the REG, these Betty Creek rocks comprise a variety of sediments, lithic and crystal tuffs, and porphyritic andesitic flows with the latter forming much of the crest-line of the ridge.

#### STRUCTURE

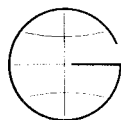
The general overall structure of the Lower Unit comprises a northerly trending easterly dipping homoclinal sequence which has been partly truncated on the west side of the ridge by the



Alaskite stock, and by similar plutons well to the east in the next valley. In detail, the various sedimentary members of the Lower Unit show moderate to strong folding in the vicinity of the dike swarm, but are rather more undulating elsewhere. In the southwest part of the map area the various rhyolite flows, rhyolite breccias, intercalated lapilli tuffs and lithic tuffs have been indurated and variably granitized along the border of the Alaskite stock. These country rocks now comprise indurated zones, hornblendic, somewhat granitized zones and inclusions, and ghost-like to almost completely altered zones and inclusions within the margin of the stock.

The general structure of the overlying Upper Unit - Betty Creek Formation equivalent, appears to fit readily into the regional pattern. That is, it is draped across preexisting country rocks, and displays a succession of flats, rolls and homoclines. Distinctively, sudden thickenings in this sequence generally imply graben or half-graben structural development during deposition related to normal fault motion in the underlying older country rocks. These troughs typically include thick successions of graphitic sediments, sandstones and volcanics. The abrupt thickening of the crest-line volcanics to include such a sedimentary complex at the south end of the property implies fault motion and a fault system currently obscured by the line of ice falls and glaciers south of the INEL and REG properties. North of the INEL property, towards the Iskut River, the Betty Creek strata thicken considerably and overlie faulted, deformed and altered Lower Jurassic and Triassic sequences.

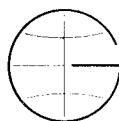
As in other parts of the Stewart Complex, the extensive sulfide mineralization found in association with shears in the Lower Jurassic appear to be related to a late Lower Jurassic period of plutonism. Uplift and erosion planed off these zones



which were then depressed and covered by early Middle Jurassic sequences. It appears that these generally steep, northwesterly trending zones extend from the INEL property across under Bronson Glacier to Johnny Mountain. The easterly extension of these sulfide zones was not traced.

Detailed mapping in 1983 also showed the presence of a small dike swarm localized within the main sulfide showings. Two distinct types of dike were mapped; one, quartz monzonite or alaskite and probably offshoots related to the main stock, and two, syenodiorite generally distinguished by dark color and coarse to very coarse orthoclase phenocrysts. This second type has also been found in many other parts of the property generally related to mineralized zones and vein systems.

Spatial relationships show that all these intrusive units cut the Lower Unit (Lower Jurassic) and the mineralized zones but little good evidence has yet been observed to show spatial relationships to the local Betty Creek Formation equivalents. In the Unuk River area a variety of syenite, syenodiorite and alaskite plutons have been mapped in detail and shown to be of early to late Lower Middle Jurassic age (Grove, 1973, 1982, 1987). These plutons are also related to extensive gold, silver, copper, molybdenum and lead-zinc mineralization such as now being developed at the REG and at Sulphurets Creek. On the basis of the present spatial and petrologic relationships the alaskite stocks and dikes and syenodiorite dikes are interpreted to be of an early Middle Jurassic age. The observations that the alaskite stock and dikes, and the syenodiorite dikes cut the main sulfide mineralization on the INEL property suggests an early Lower Middle Jurassic age for much of the mineralization and alteration of the Lower Jurassic strata.

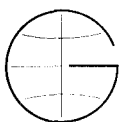


### ALTERATION

General studies of the macrorelationships on the INEL property show a broad alteration zoning related to the overall sulfide mineralization and to intrusive activity.

The most obvious alteration affecting the Lower Unit members is the intense pyritization, silicification and feldspathization found in the area of the main showings extending over at least 500 meters and over more than 1200 meters if the Discovery Zone is included. A considerable number of new mineralized zones north and south of the main showings and on the east side of the ridge were discovered in 1983, 1984, and 1988. Examination of these areas suggests that the main pyritic showings are crudely outlined by a halo dominated by carbonate veining and alteration, and by the presence of barite veins. This halo appears to have a width of at least 2000 meters and extends easterly another 2500 meters. This is in turn crudely surrounded by an outer zone dominated by bright green chlorite and other low temperature minerals (gypsum etc.). This distinctive green chlorite is also found in quartz and calcite veinlets in Betty Creek rocks overlying the sulfide zone on the crest-line of the ridge and higher in this sequence to the east. Thus the INEL pyritic mineralization can be characterized as outlined by shell-like halos of high to low temperature alteration within host rocks which appear to have been thin bedded color banded siltstone and sandstone. The same emerald green chlorite is found at the REG property where it is localized at the margins of the sulfide veins and K feldspar zones. The mineral annite has also been identified within the main sulfide mineralization underground.

Core drilling of the Main Sulfide and Discovery deposits in 1984, and 1988 has confirmed the extensive alteration of

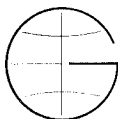


sediments within the mineralized areas and has shown K feldspar, quartz and carbonate stockwork veining, and secondary biotite to be considerably more pervasive than suggested by outcrop studies. This compares favorably to results from studies at the REG property. Core studies also revealed extensive induration, bleaching, and mottling of the host rocks as well as scattered epidote and hematite alteration within parts of the Discovery Zone.

Work on the REG property on the major Stonehouse Gold Deposit has shown the major importance of K feldspar alteration in both hosting major gold mineralization and in playing the role of host to younger gold bearing sulfide-quartz-K feldspar veins.

#### REGIONAL STRUCTURE

The deeply eroded Iskut River valley trends due east-west over a length of 40 miles representing a major structural zone terminated on the west by the Tertiary Coast Plutonic Complex and on the east by Late Jurassic/Cretaceous Meziadin Hinge or Graben (Grove, 1973). The Iskut zone marks one of the region's major thrusts involving Paleozoic strata that have been pushed southerly across Mesozoic units. Prior to this major event mass gravity sliding of Middle Jurassic and younger rocks across Lower Jurassic and Triassic strata took place during development of the Bowser Basin (Grove, 1972, 73, 87). These major structures are exposed in the INEL area and probably represent only part of the region's complex tectonic development.



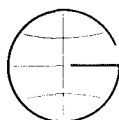
## MINERALIZATION

### STEWART DISTRICT

More than 500 mineral deposits have been found within the various rocks forming the Stewart Complex. Of these, more than 70 deposits have shown some production including the world class Hidden Creek and Granduc copper mines, the B.C. Molybdenum mine, the Silbak Premier gold-silver base metal mine, and the Torbrit-Dolly Varden silver mine, as well as 16 other major B.C. producers. All of these mineral deposits plus several hundred other small or poorly explored showings are located in Mesozoic and Cenozoic units bounded by the Coast Plutonic Complex on the west and the Upper Jurassic strata forming part of the Bowser Basin on the east. The northerly limit of this irregular area lies crudely along the Iskut River where Paleozoic strata predominate.

### PROPERTY MINERALIZATION

Texas Gulf Sulphur Company personnel carried out limited geological mapping, float sampling, trenching, and ground geophysics on exposed mineralization above Bronson Glacier on the west side of Snippaker Ridge in 1972 and 1973 (Assess. Repts. 3980, 4732). This work showed the presence and widespread nature of gold and silver bearing sulfide mineralization and crudely outlined the Big Creek (Discovery), Inel (Main Sulfide), Nunatak (Zinc Knob) zones and scattered sphalerite veining between the glacier and Nunatak trenches. At that time exploration was seriously hindered by snow and ice cover. In only ten years rapid ablation taking place throughout the area has opened most of Snippaker Ridge, except for the small cirque glaciers, to summer exploration.



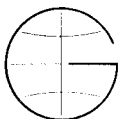
In 1983 Skyline Explorations Ltd. investigated the Main Sulfide Zone by detailed grid sampling, and geological mapping and extended prospect sampling beyond the known areas (Grove, 1983). In 1984 Skyline mounted a major program which included drilling portions of the Main Sulfide and Discovery zones, trenching new prospects and further property mapping, prospecting and sampling.

SURFACE CORE DRILLING, 1988 - I NEL 2 CLAIM

Part of the 1988 exploration and development work program on the Inel mineral property included three BQ size surface core holes drilled by Falcon Drilling Co. Ltd. using a helicopter portable rig. Surface sites were prepared by rock blasting, and erection of timber decks about 5 meters square. Because of the topography all men and materials were transported to and from the drill sites by helicopter.

The location of the three drill holes on the I NEL 2 claim are shown on Figure 3, and the results of the drilling are shown in the logs included here as Appendix I. The drill core is stored on the property. Samples were analysed by Skyline Explorations Ltd.'s laboratory at the Johnny Mountain Gold Mine. The assay sheets are included here as Appendix II.

The three core holes drilled on I NEL 2 were located on the upper west side of Inel ridge below a saddle marking erosion along a shear zone. The three holes intersected altered, indurated, pyritic sedimentary and basaltic rocks forming part of the uppermost Lower Member. These rocks form northerly trending, gently east dipping strata overlain about 20 meters higher on the top of the ridge by the Upper Member equivalents of the Betty Creek Formation.



CONCLUSION

The mineralized strata intersected by these three drill holes represent the southwesterly portion of the Inel Ridge Zone located in 1984. Surface core drilling, underground drifting and underground core drilling continued after completion of holes S-25, 26, and S-27.

REFERENCES

Assessment Report 3980: Geological Survey, INEL Claim Group, R.G. Gifford, for Texas Gulf, Inc., November 28, 1972.

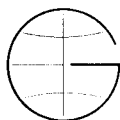
4732: Geological and Geophysical Report, INEL and HIRO Mineral Claims, A.O. Birkenland, for Texas Gulf, Inc., November 30, 1973.

Grove, E.W. (1968): Unuk River, Ann. Rept., Min. of Mines and Pet.Res., British Columbia, pp. 45-46.

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(1984): Geological Report on Certain Structural Features in the Iskut River Region, for B.C. Hydro and Power Authority, April 25, 1984.

(1985): Geological Report, Mineral Reserves and Development Proposal on the Skyline Explorations Ltd. REG Property Stonehouse Gold Zone, Feb.28,1985.

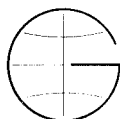
(1985): Geological Report, Exploration and Development Proposal on the Skyline Explorations Ltd. REG Property, April 3, 1985.

(1985): Geological Report and Work Proposal on the Skyline Explorations Ltd. INEL Property in the Iskut River Area, Northwestern B.c., May 28, 1985.

(1987): Geology and Mineral Deposits of the Unuk River Salmon River, and Anyox Map Areas; B.C. Min. of Energy, Mines & Pet. Res., Bull. 63.

Kerr, F.A. (1948): Lower Stikine and Western Iskut River Areas, British Columbia; Geol. Surv. Can. Memoir 246.

G.S.C. Map 9-1957



STATEMENT OF COSTS

Field Personnel:

A. Kikauka, Geologist	July 26-July 29/88	
	4 days @ \$175 x 110%	\$770.00
K. Antoniak, Geol. Assist.	July 26 - July 29	
	4 days @ \$100 x 110%	<u>440.00</u>
		\$1,210.00

Food and accommodation:

Geologist & assistant, 8 man days @ \$100	800.00
Drill crew, 4 men x 4 days @ \$100	<u>1600.00</u>
	2,400.00

Helicopter support: Northern Mountain

Drill moves, 3.7 hours	1501.21
Crew changes, 2 x 20 min/day x 4 days	1440.00
Move core/samples, 3 holes x 20 min x \$540/hr	<u>540.00</u>
	3,481.21

Drilling contract: Falcon Drilling Ltd.

196.1 meters @ \$81/m	15,885.39
-----------------------	-----------

Analytical: Acme Analytical Laboratories Ltd.

35 samples @ \$27.50	<u>962.50</u>
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TOTAL COST	\$23,939.10
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CERTIFICATE

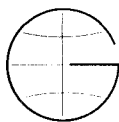
I, Edward W. Grove, of the Municipality of Saanich, do hereby certify that:

1. I am a consulting geologist with an office at 4581 Boulderwood Drive, Victoria, British Columbia.
2. I am a graduate of the University of British Columbia (1955) with a Master's degree, Honours Geology (M.Sc. Hon. Geol.) and a graduate of McGill University (1973) with a doctorate in Geological Sciences (Ph.D.).
3. I have practiced my profession continuously since graduation while being employed by such companies as the Consolidated Mining and Smelting Co. of Canada Ltd., British Yukon Exploration Ltd., the Quebec Dept. of Natural Resources, and the British Columbia Ministry of Energy, Mines and Petroleum Resources. I have been in corporate consulting practice since January 1981.
4. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.

November 30, 1988  
Victoria, B.C.

  
Edward W. Grove, Ph.D., P.Eng.

APPENDIX I  
GEOLOGICAL & ASSAY LOGS



## GEOLOGICAL CORE &amp; ASSAY LOG

COMPANY: INEL RESOURCES LTD.

HOLE: DDH-88-3

E. W. GROVE CONSULTANTS LTD.

PROPERTY: I NEL 2 CLAIM - Inel Ridge (East)

(S-25)

4581 Boulderwood Drive, Victoria, B.C. (604) 658-2366

DATE: 1988

Page 1 of 2

 Logged by: Edward W. Grove, Ph.D., P.Eng. & A. Kikauka  
 Date: July, 29, 1988

 Drilling Commenced: July 26, 1988 (Falcon)  
 Drilling Completed: July 28, 1988

 Length: 87.2 m  
 Core: BQ

 N.T.S. 104B/10W Elevation: 1885.0 m  
 UTM Co-ordinates: 20,190.5 N 10,984.0E

 Dip: -45°  
 Bearing: 060°

METERS			CORE DESCRIPTION	Sample No.	METERS			COPPER ppm	LEAD ppm	ZINC ppm	SILVER ppm	GOLD oz/st
From	To	Length			From	To	Length					
0	2.1	2.1	Casing.									
2.1	7.4	5.3	Dacite, crystal flow or tuff, euhedral-subhedral feldspar phenocrysts (green), light grey matrix; very weak quartz veining; trace to 1% pyrite disseminations.									
7.4	7.6	0.2	Fault zone, 60% recovery; 15% ankerite.	8797	7.4	9.0	1.6	435	24	861	0.7	0.008
7.6	11.0	3.4	Felsite, light grey; silicified, sericite developed, weak quartz veining; 3-5% disseminated pyrite, minor pyrite veining	8798	9.0	11.0	2.0	912	34	10,290	4.8	0.008
11.0	12.0	1.0	Fault zone, 70% recovery, 15% ankerite, 5% pyrite disseminations	8799	11.0	12.5	1.5	540	15	1,056	1.3	0.004
12.0	17.6	5.6	Sandstone, minor calcarenite at 12.2 to 14.3 m; weak sericite developed, 3% ankerite, 2% pyrite disseminations	8800	12.5	14.0	1.5	540	65	2,034	1.0	0.007
				8801	14.0	15.7	1.7	477	10	1,008	0.8	tr
				8802	15.7	17.4	1.7	480	13	1,278	0.6	0.006
17.6	19.0	1.4	Fault zone, 15% ankerite, 3% pyrite disseminations, minor pyrite veining	8803	17.4	18.6	1.2	663	41.9	5,850	4.1	0.025
19.0	21.3	2.3	Breccia, light grey, 3% ankerite, 10% sericite, 5% quartz as veining; 5% pyrite, trace chalcopyrite	8804	18.6	20.1	1.5	537	53	4,125	2.0	0.017
21.3	29.3	8.0	Sandstone, minor breccia, weak quartz/sericite alteration (5%), 3% pyrite disseminations.	8805	20.1	21.6	1.5	459	54	5,550	2.1	0.004
				8806	21.6	23.1	1.5	438	45	3,240	1.2	0.006
				8807	23.1	24.7	1.6	384	35	2,880	0.9	0.005
				8808	24.7	26.2	1.5	492	24	2,871	1.5	0.003
				8809	26.2	27.2	1.0	519	47	5,100	2.0	0.004
				8810	27.2	28.1	0.9	525	35	1,362	1.9	0.005
				8811	28.1	29.3	1.2	435	18	999	1.1	0.009
29.3	32.7	3.4	Fault zone, 80% recovery, minor bull quartz, 20% ankerite, 1% pyrite.	8812	29.3	31.1	1.8	459	26	3,057	0.9	0.002
				8813	31.1	32.8	1.7	205	21	3,940	1.3	0.011

## GEOLOGICAL CORE &amp; ASSAY LOG

COMPANY: INEL RESOURCES LTD.

HOLE: DDH-88-3

E. W. GROVE CONSULTANTS LTD.  
4581 Boulderwood Drive, Victoria, B.C. (604) 658-2366

PROPERTY: I NEL 2 CLAIM - Inel Ridge (East)

(S-25)  
DATE: 1988  
Page 2 of 2

Logged by: Edward W. Grove, Ph.D., P.Eng. & A. Kikauka  
Date: July, 29, 1988

Drilling Commenced: July 26, 1988 (Falcon)  
Drilling Completed: July 28, 1988

Length: 87.2 m  
Core: BQ

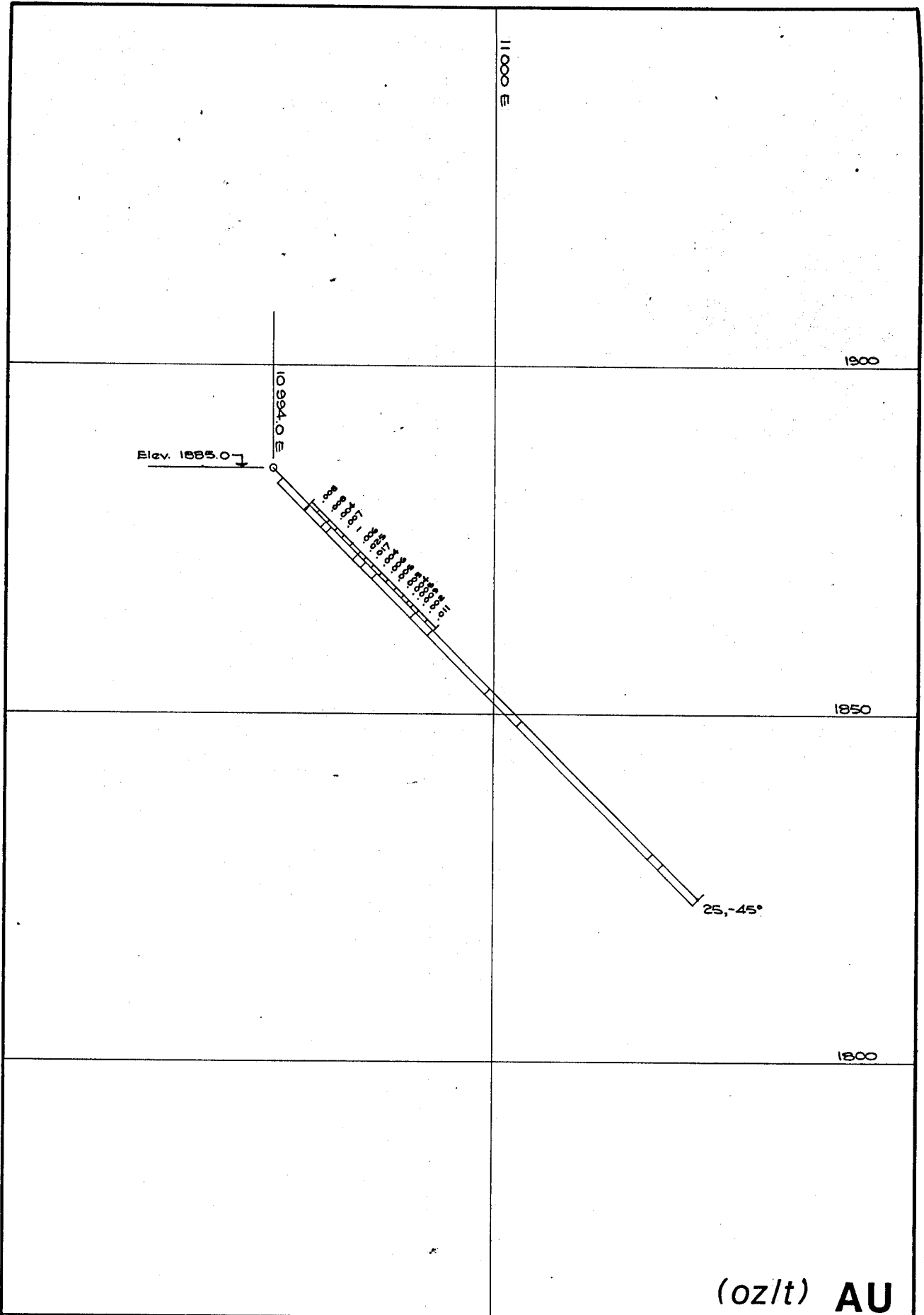
N.T.S. 104B/10W Elevation: 1885.0 m  
UTM Co-ordinates: 20,190.5 N 10,984.0E

Dip: -45°  
Bearing: 060°

M E T E R S			C O R E D E S C R I P T I O N	Sample No.	M E T E R S			C O P P E R ppm	L E A D ppm	Z I N C ppm	S I L V E R ppm	G O L D oz/st
From	To	Length			From	To	Length					
32.7	44.5	11.8	Sandstone, indurated, 1-2 mm feldspar phenocrysts developed; fault zones at 39.7-39.9 m (60% recovery) and 43.0-45.1 m (80% recovery); weak quartz veining 1-3 cm wide, weak breccia; 1% pyrite as disseminations and vein.									
44.5	51.1	6.6	Calcarenite, grey-green colour, strong fault at 47.4-51.1 m (55% recovery); calcite veining.									
51.1	78.0	26.9	Basalt, dark green, massive flow, overall 90% recovery, badly broken and blocky ground; strong faults at 67.4-69.0 and 74.6-76.5 m; secondary epidote clasts 1-5 cm.									
78.0	79.9	1.9	Sandstone, indurated; 5% ankerite, 3% calcite.									
79.9	87.2	7.3	Diorite dyke, calcareous, light green-grey colour, dark green hornblende (5-8%); very weak quartz veining (1-3 cm).									

Note: Dip tests not taken. Hole caved in, difficulty recovering rods due to numerous faults.

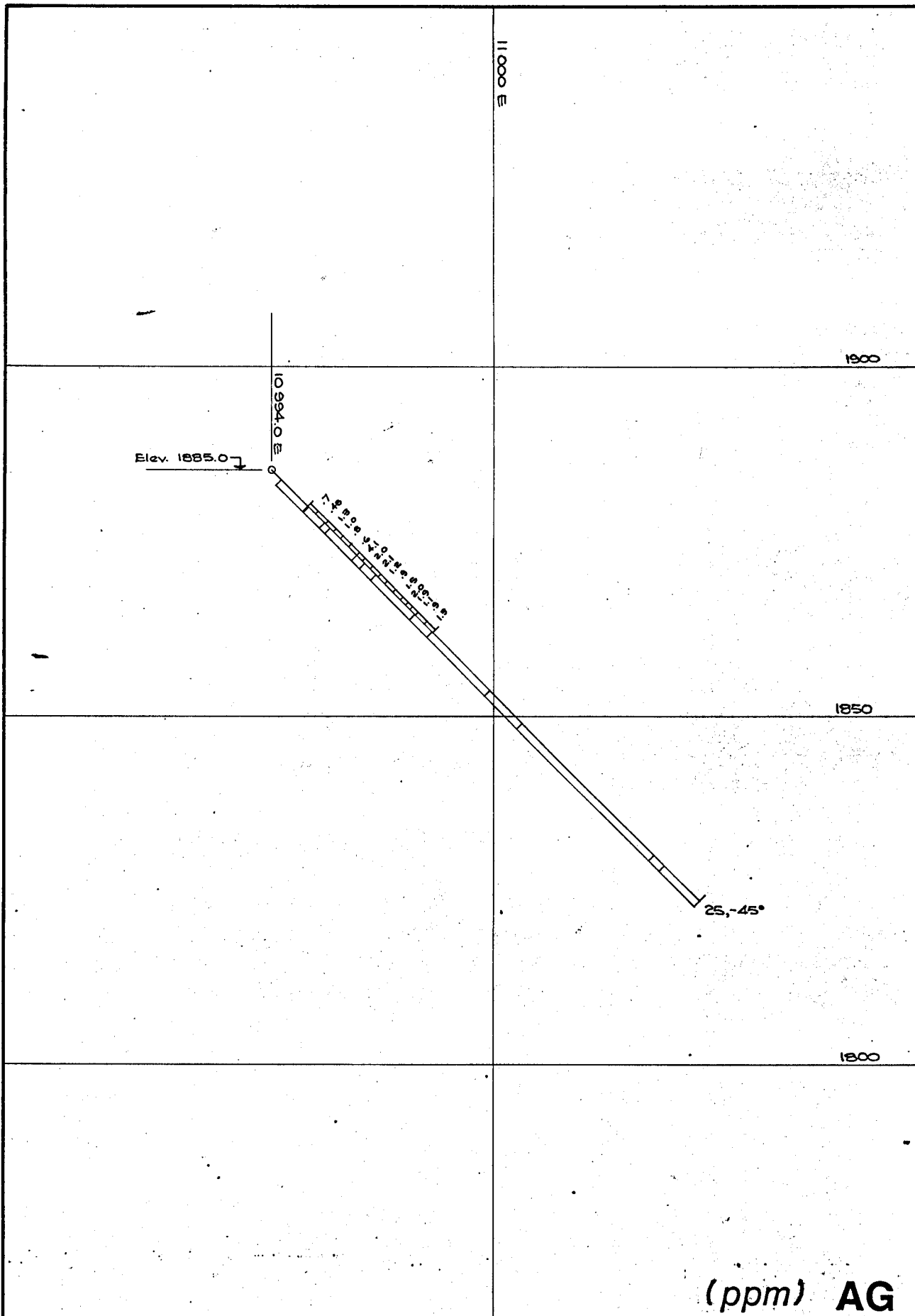
END OF HOLE.



(oz/t) AU

INEL RESOURCES LTD.

Dwn. By <b>JE</b>	Date Dwn. <b>88-09-30</b>	Scale	Title	Cap No.
Checked By	Approved By	<b>1:500</b>	<b>TRUE VIEW DDH S25 AZIMUTH 060°</b>	



(ppm) AG

INEL RESOURCES LTD.

Dwn. By <b>JE</b>	Date Dwn. <b>88-09-30</b>	Scale	Title	Cap No.
Checked By	Approved By	<b>1:500</b>	<b>TRUE VIEW DDH S25 AZIMUTH 060°</b>	



## GEOLOGICAL CORE &amp; ASSAY LOG

COMPANY: INEL RESOURCES LTD.

HOLE: DDH-88-4

E. W. GROVE CONSULTANTS LTD.

PROPERTY: I NEL 2 CLAIM - Inel Ridge (East)

(S-26)

4581 Boulderwood Drive, Victoria, B.C. (604) 658-2366

DATE: 1988

Page 1 of 1

 Logged by: Edward W. Grove, Ph.D., P.Eng. & A. Kikauka  
 Date: August 1, 1988
 

 Drilling Commenced: July 28, 1988 (Falcon)  
 Drilling Completed: July 29, 1988

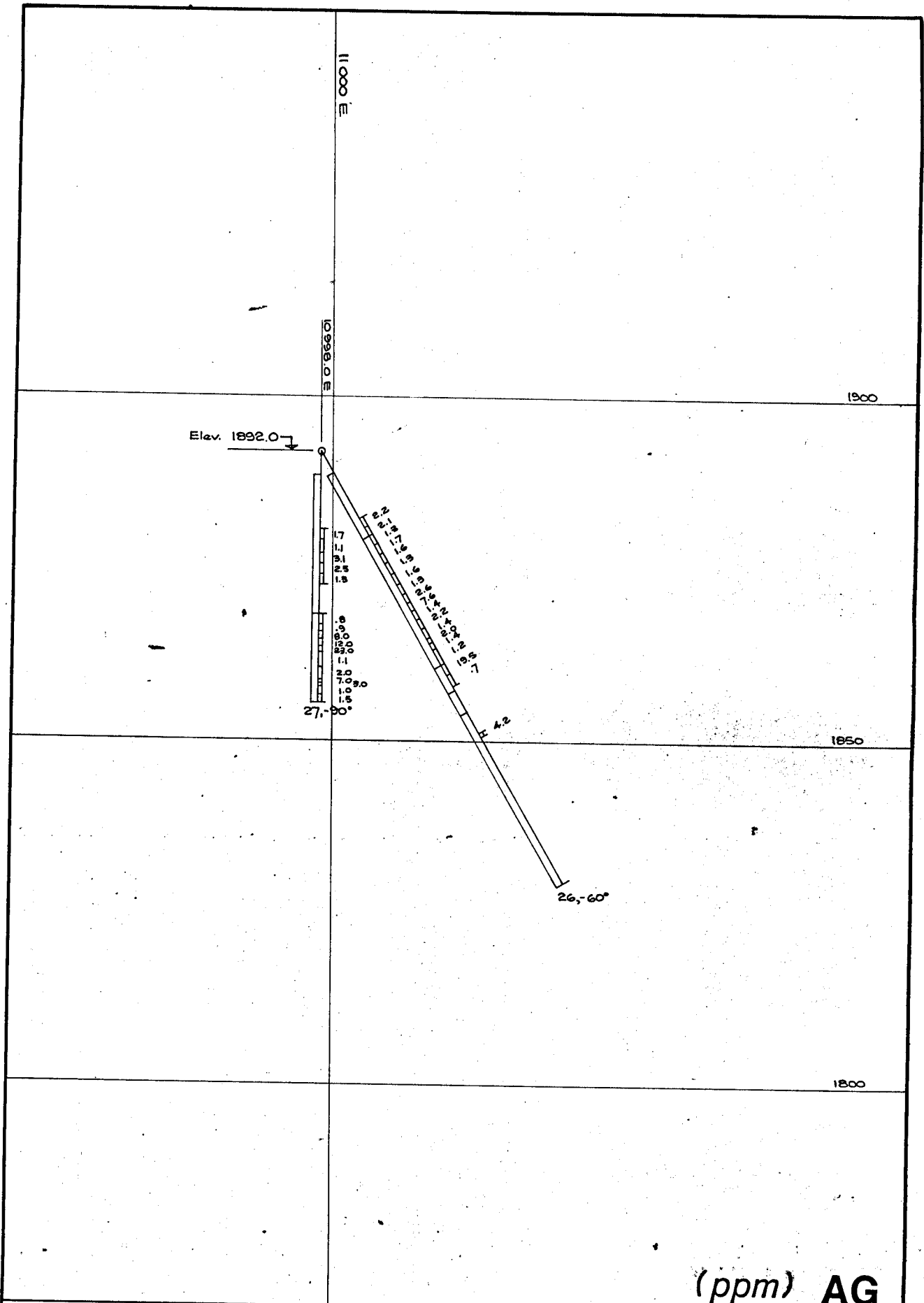
 Length: 72.3 m  
 Core: BQ

 N.T.S. 104B/10W Elevation: 1892.0 m  
 UTM Co-ordinates: 20,241.5 N 10,998.5 E

 Dip: -60°  
 Bearing: 098°

METERS			CORE DESCRIPTION	Sample No.	METERS			COPPER ppm	LEAD ppm	ZINC ppm	SILVER ppm	GOLD oz/st
From	To	Length			From	To	Length					
0	3.7	3.7	Casing.									
3.7	14.2	10.5	Breccia, light to dark grey, euhedral feldspar phenocrysts (1-6mm); 0.1 to 5.0 cm K-feldspar clasts developed, moderate ankerite developed from 10.0-11.3 and 12.6-13.7 m, trace to 2% pyrite.	8829	11.4	12.9	1.5	250	17	2,020	2.2	0.003
				8830	12.9	14.3	1.4	200	50	5,650	2.1	0.003
14.2	35.7	21.5	Sandstone, light grey, moderate faulting at 21.2-21.5, 29.9-30.1, and 33.2-33.8 m (70% recovery); minor sericite, K-feldspar alteration, strong ankerite (20-30%) associated with faults; 1-3% pyrite and trace of sphalerite throughout, trace chalcopyrite from 11.4 to 11.6 m.	8831	14.3	15.8	1.5	105	220	1,300	1.3	0.002
				8832	15.8	17.4	1.6	155	30	860	1.7	0.005
				8833	17.4	18.9	1.5	240	30	950	1.6	0.003
				8834	18.9	20.7	1.8	180	40	510	1.3	0.003
				8835	20.7	22.6	1.9	122	92	900	1.6	0.002
				8836	22.6	24.1	1.5	146	41	480	1.3	0.001
				8837	24.1	25.2	1.1	310	100	1,475	2.6	0.005
				8838	25.2	26.8	1.6	385	115	1,210	7.6	0.020
				8839	26.8	28.3	1.5	130	28	695	1.4	0.002
				8840	28.3	29.9	1.6	105	25	980	2.2	0.002
			8841	29.9	31.4	1.5	65	12	940	1.4	0.003	
			8842	31.4	32.1	0.7	60	20	460	2.0	0.039	
			8843	32.1	33.2	0.9	35	15	830	0.6	0.001	
			8844	33.2	35.7	2.5	65	23	2,820	1.2	0.002	
35.7	39.9	4.2	Breccia (as described above); 0.1 to 5.0 cm K-feldspar clasts developed, trace to 2% pyrite.	8845	35.7	37.5	1.8	555	160	250	19.5	0.148
				8846	37.5	39.3	1.8	136	12	2,170	0.7	0.011
39.9	43.6	3.7	Sandstone, grey-green; quartz veins 1-8 mm wide, 60° to c.a.									
43.6	72.3 EOH	28.7	Basalt, dark green, calcareous; quartz veins 1-8 mm wide 50°-60° to c.a.; 8% pyrite at 47.2-47.9 m along fault. END OF HOLE.	8847	47.2	47.9	0.7	495	55	2,760	4.2	0.006





(ppm) AG

INEL RESOURCES LTD.

Dwn. By <u>JE</u>	Date Dwn. <u>88-09-30</u>	Scale	Title	Cap No.
Checked By	Approved By	1:500	TRUE VIEW DDH 526+27 AZIMUTH 098°	

## GEOLOGICAL CORE &amp; ASSAY LOG

COMPANY: INEL RESOURCES LTD.

HOLE: DDH-88-5

E. W. GROVE CONSULTANTS LTD.

PROPERTY: I INEL 2 CLAIM - Inel Ridge (East)

(S-27)

4581 Boulderwood Drive, Victoria, B.C. (604) 658-2366

DATE: 1988

Page 1 of 1

Logged by: Edward W. Grove, Ph.D., P.Eng. & A. Kikauka  
 Date: August 1, 1988

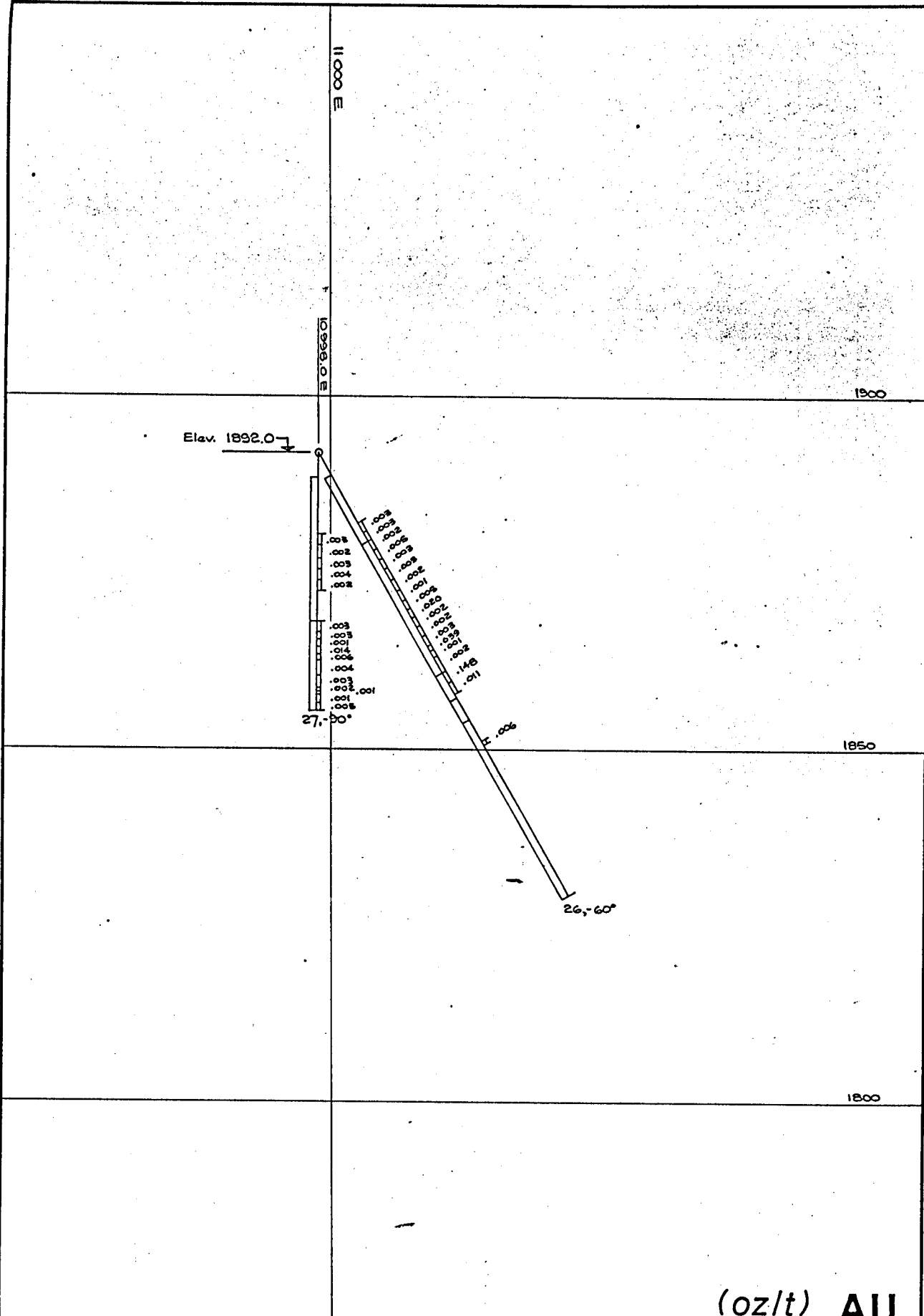
Drilling Commenced: July 29, 1988 (Falcon)  
 Drilling Completed: July 30, 1988

Length: 36.6 m  
 Core: BQ

N.T.S. 104B/10W Elevation: 1892.0 m  
 UTM Co-ordinates: 20,241.5 N 10,998.5 E

Dip: -90°  
 Bearing:

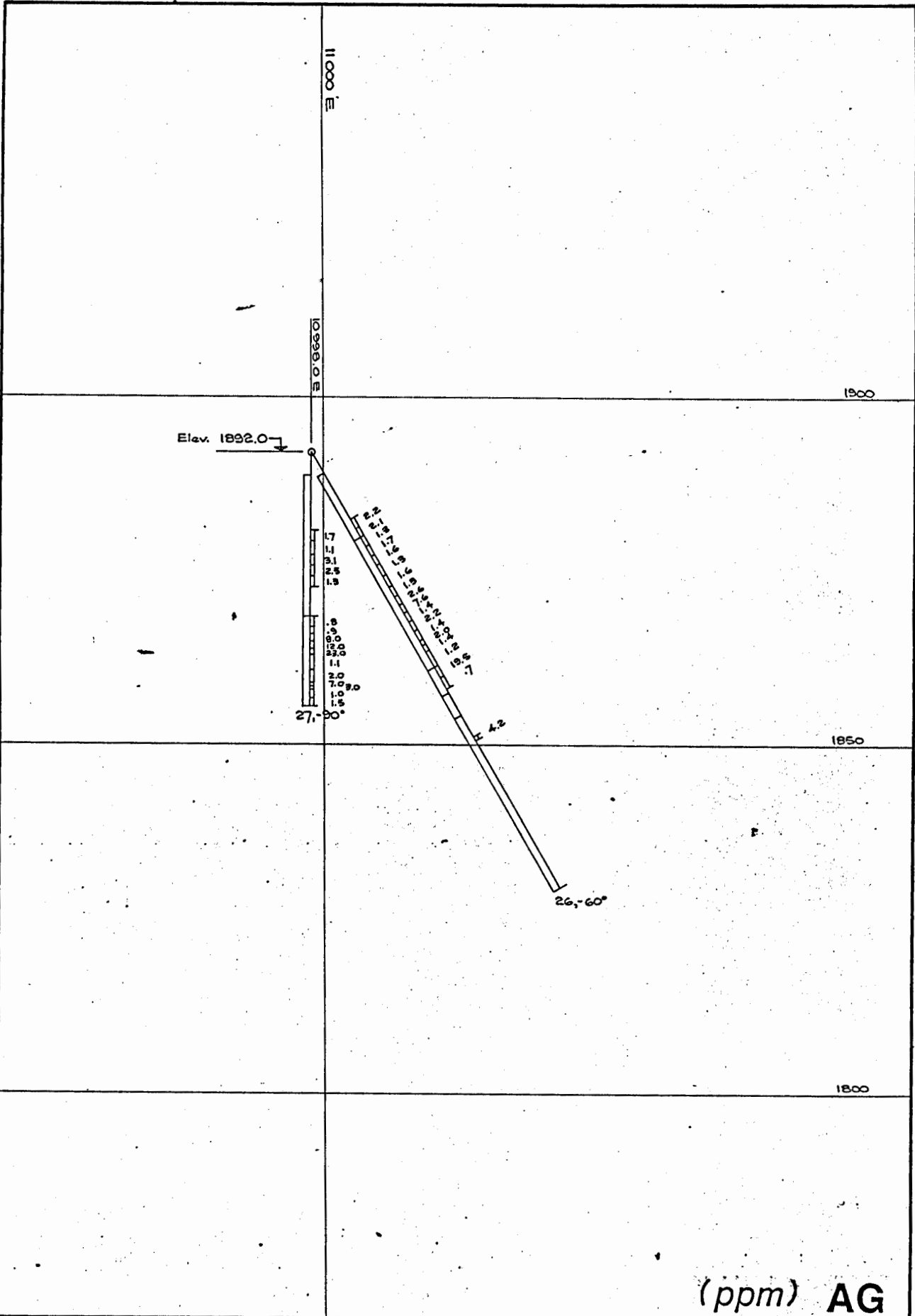
METERS			CORE DESCRIPTION	Sample No.	METERS			COPPER ppm	LEAD ppm	ZINC ppm	SILVER ppm	GOLD oz/st
From	To	Length			From	To	Length					
0	3.7	3.7	Casing.									
3.7	23.9	20.2	Breccia, light to dark grey (probably indurated sandstone); 1-5 cm K-feldspar clasts, bleached and indurated, very weak quartz veining 1-5 mm wide; 1-3% disseminated pyrite, trace to 1% sphalerite from 11.4 to 16.4	8814	11.4	13.0	1.6	150	140	2,480	1.7	0.003
				8815	13.0	14.9	1.9	155	40	2,120	1.1	0.002
				8816	14.9	16.4	1.5	290	80	3,170	3.1	0.003
				8817	16.4	18.0	1.6	195	280	2,190	2.5	0.004
				8818	18.0	19.5	1.5	120	36	401	1.3	0.002
23.9	36.6	12.7	Sandstone, light grey, weak fault at 27.1-27.2 m, strong fault 28.0-28.7 m; bleached, weak to moderate K-feldspar/sericite alteration adjacent to fault (oxidization in fault giving rise to limonite, manganese oxide), weak to moderate silicification, 1-5 mm quartz veinlets throughout; 3-5% disseminated pyrite, trace to 5% sphalerite throughout, quartz-pyrite-sphalerite veins at 26.5-27.0 and 32.4-32.6 m.	8819	23.8	25.4	1.6	60	120	1,050	0.8	0.003
	ECH			8820	25.4	26.4	1.0	80	55	1,140	0.9	0.003
				8821	26.4	27.4	1.0	530	471	5,660	8	0.001
				8822	27.4	28.4	1.0	876	1,110	5,810	12	0.014
				8823	28.4	29.3	0.9	740	2,900	5,310	23	0.006
			END OF HOLE	8824	29.3	31.3	2.0	125	55	1,990	1.1	0.004
				8825	31.3	33.2	0.9	175	36	6,100	2.0	0.003
				8826B	33.2	33.6	0.4	85	50	850	1.5	0.005
				8826	33.6	34.2	0.6	200	610	1,021	7	0.002
				8827	34.2	35.4	1.2	170	85	435	3	0.001
				8828	35.4	36.6	1.2	78	30	636	1	0.001



(oz/t) AU

INEL RESOURCES LTD.

Dwn. By <u>JE</u>	Date Dwn. <u>88-09-30</u>	Scale	Title <u>TRUE VIEW DDH 526+27</u>	Cap No.
Checked By	Approved By	1:500	<u>AZIMUTH 098°</u>	

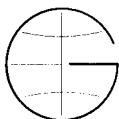


(ppm) AG

INEL RESOURCES LTD.

Dwn. By JE	Date Dwn. 88-09-30	Scale	Title TRUE VIEW DDH 526+27	Cap No.
Checked By	Approved By	1:500	AZIMUTH 098°	

APPENDIX II  
DRILL CORE ASSAYS











Full Volume & Full

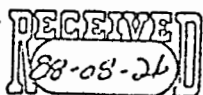
Skyline Explorations Ltd.  
Mine Assay Office

Date/Volume 23/83

Form 88-507

(\*\* Fire Assay)

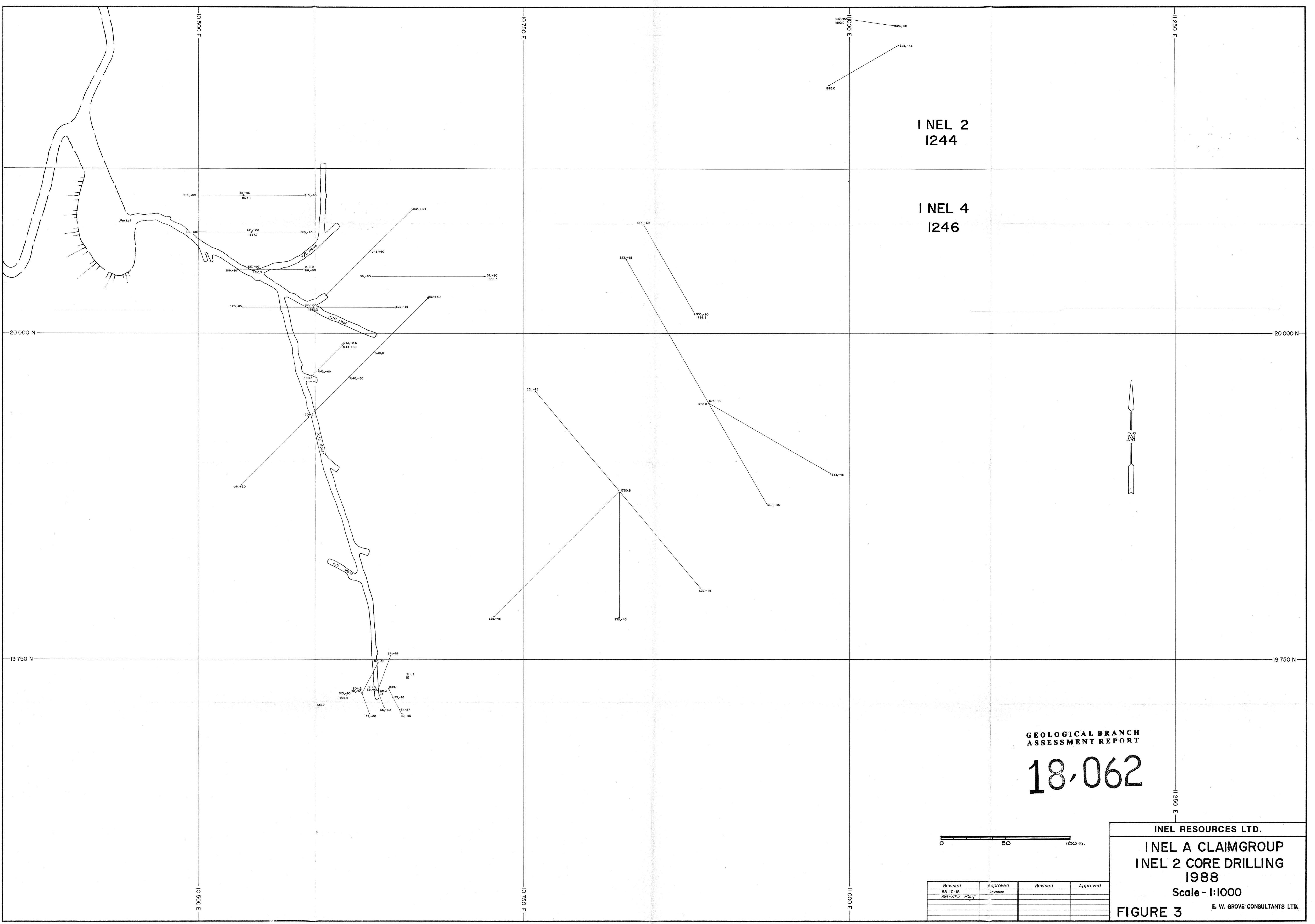
Sample	Au oz/T.	Ag PPM.	Cu PPM.	Zn PPM.	Pb PPM.	Description
8841	.003	1.4	65	940	12	I.D.
42	.039	2.0	60	460	20	
43	.001	0.6	35	830	15	
44	.002	1.2	65	2820	23	
45	.148	19.5	555	250	160	
46	.011	.7	136	2170	12	
47	.006	4.2	495	2760	55	



partially entered  
88-6

M. W. [Signature]

Assayor



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

18-062



INEL RESOURCES LTD.

**INEL A CLAIMGROUP  
INEL 2 CORE DRILLING  
1988**

Scale - 1:1000

FIGURE 3      E. W. GROVE CONSULTANTS LTD.

Revised	Approved	Revised	Approved
SB-10-18	Advance		
SB-12-1	CAS		