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DIAMOND DRILLING REPORT ON THE
INTERNATIONAL DAMASCUS OX CLAIM GROUP
WHITESAIL - TAHTSA REACH AREA
OMINECA MINING DIVISION
(NTS 93E/11)
SMITHERS DISTRICT, BRITISH COLUMBIA

FOR

GRANGES INC.

AUGUST 23, 1989

P.J. DEVEAUX
CONSULTING GEOLOGIST

CLERICAL BRANCH
MINING REPORT

19,094

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CORE ASSAY CERTIFICATES:

File #89-2483	21500 to 21572	-	2 pages
File #89-2623	21573 to 21609	-	1 page
File #89-2623R	21589 & 21591	-	1 page

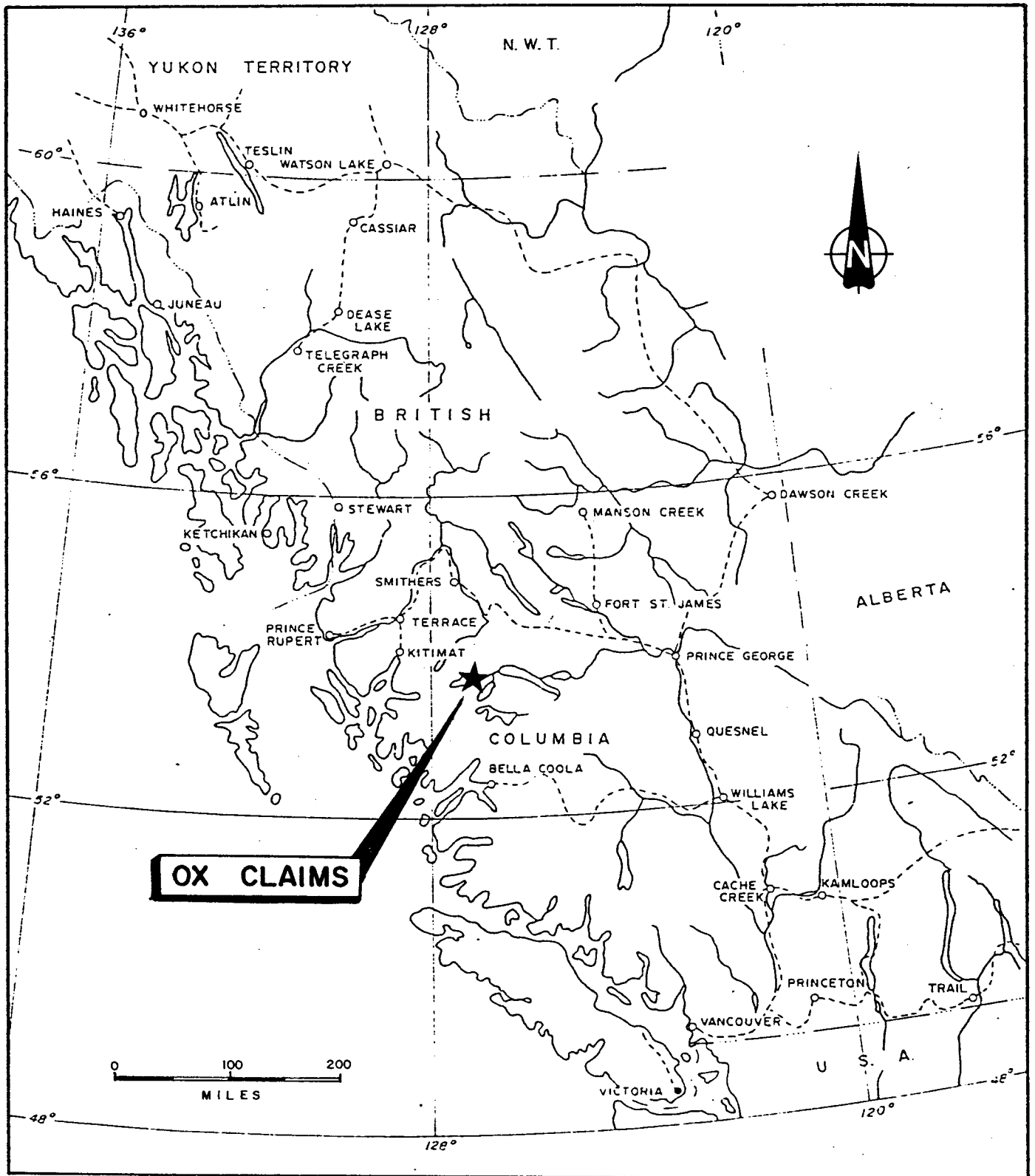
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1.0 INTRODUCTION

- 1.1 The purpose of this report is to summarize the results of the exploration work done on the OX Claim Group held by International Damascus Resources Limited and assess the mine making potential of the property.
- 1.2 The program was conducted under the direction of P.J. Deveaux, consulting geologist, between July 15 and August 1, 1989. A diamond drilling program totalling 748.56 metres in eight holes were completed on the OX-C (Damascus Zone) and OX East Claim Group. Of this drilling, six holes or 561.42 metres were drilled to explore the depth extension of the Damascus Zone, a small silver, lead, and zinc mineralized shear previously explored by International Damascus. A coincident IP-VLF-EM target, and geochem anomaly was investigated by two drill holes.
- 1.3 This drilling failed to intersect economic mineralization over mining widths.
- 1.4 No further work is recommended.

2.0 SUMMARY AND CONCLUSION

- 2.1 The OX Group of mineral claims consists of five 20-unit blocks covering an area of 2500 hectares.
- 2.2 Access to the property is by road and water, or by aircraft from Smithers.
- 2.3 The OX Claims Group was optioned from International Damascus Resources Limited by Granges Exploration Ltd. on September 1, 1988.
- 2.4 The claim area is underlain by steeply dipping Jurassic rhyolite and volcanoclastic sedimentary rocks, intruded by quartz-feldspar tourmaline porphyry. A system of shearing and faulting trending north-south is known to contain narrow veins of silver, lead, zinc with limited tonnage potential.
- 2.5 A diamond drilling program under contract to Van Alphen Exploration Services Ltd., Smithers, B.C. was carried out in July under the direction of Deveaux Exploration Services Ltd., a private exploration company based in B.C. The writer was assisted by John Swenarchuk, student.



LOCATION MAP

OX OPTION

2.6 It is concluded that the Damascus Shear Zone is of insufficient width and grade to warrant further work. The investigation of a coincident IP-VLF-EM target and geochemical soil anomaly by drilling yielded no significant values.

3.0 THE PROPERTY - Location - Access

3.1 The OX Group of mineral claims consists of five twenty unit blocks covering an area of 2500 hectares.

GROUP 1

<u>Claim Name</u>	<u>Claim Number</u>	<u>Area (Hectares)</u>	<u>In Good Standing To</u>
OX A	3732	20 units (500)	May 11, 1997
OX B	3733	20 units (500)	May 11, 1997
OX C	3734	20 units (500)	May 11, 1997
OX East	4888	20 units (500)	November 16, 1997
- Total 2000 hectares			

GROUP II

FOX	10061	20 units (500)	January 23, 1990
- Total 500 hectares			
- Grand Total 2500 hectares			

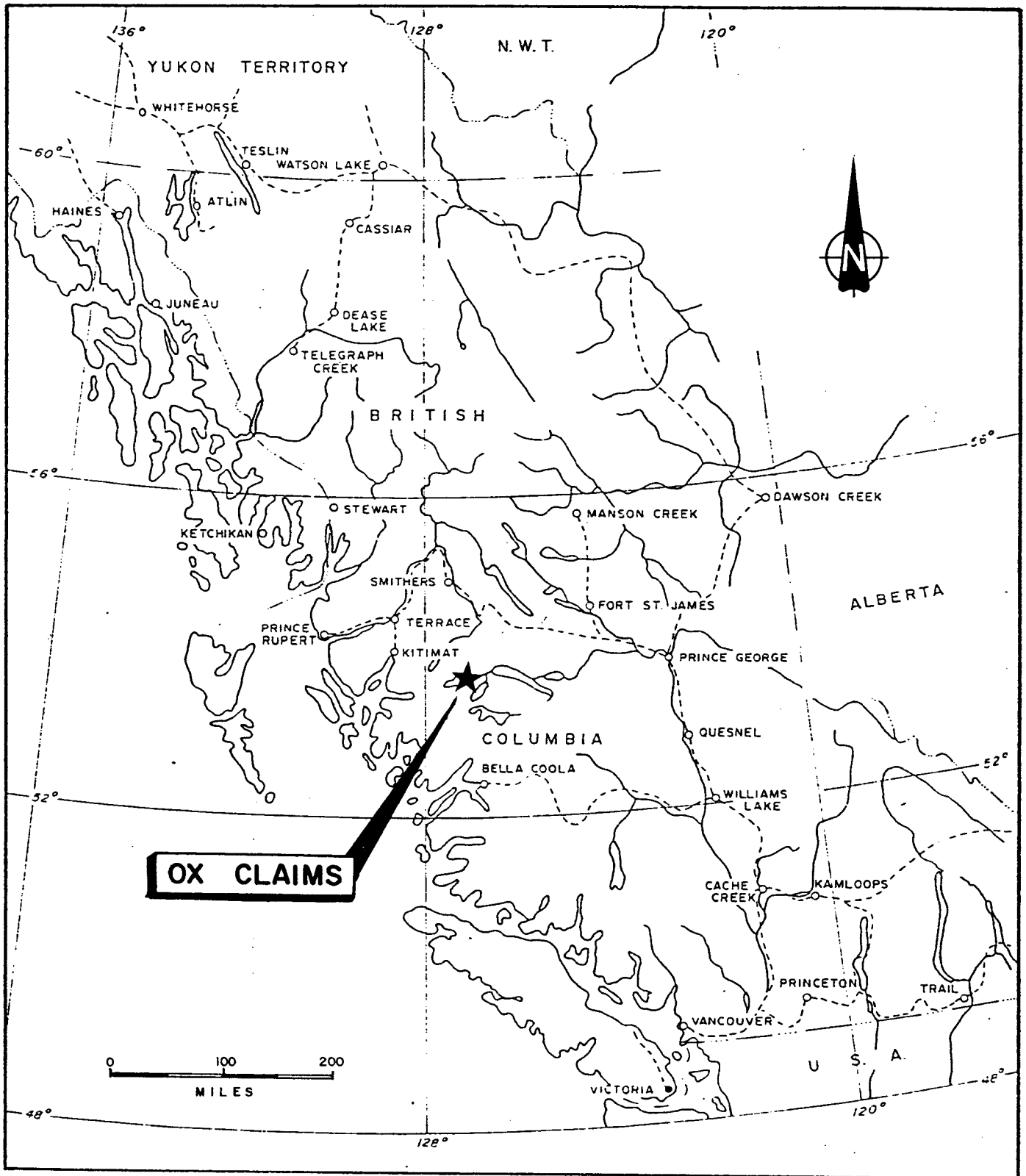
The FOX mineral claim was staked subsequent to the option agreement and was made part of the option on July 14, 1989.

3.2 Location

3.3 The OX Group of mineral claims is located some 145 kilometres south-east of the Town of Houston, British Columbia, in the Omenica Mining Division, about 6 kilometres east of where Kasalka Creek enters Tahtsa Reach.

3.4 Access

3.5 The property is accessible by 140 kilometres of all-weather gravel road from Houston via the following route: Murice FSK to Morice-Nadina FSR to Francois FSR to Andrew Bay cut-off, then Tahtsa Main FSR to shores



LOCATION MAP

OX OPTION

of Tahtsa Reach (part of Kemano hydro-electric project). Boat 25km east to barge landing at mouth of Kasalka Creek. Four-wheel drive road to property, 8.5 kilometres east of landing. Travel time is 3 - 4.5 hours.

4.0 HISTORY

4.1 (a) Prior to 1981:

Major porphyry copper effort in late 1960's. Asarco and silver standard explored OX Lake deposit 5km to north (1968 to 1970) and outlined 23.6 million tons of 0.35 percent copper equivalent.

(b) 1981 - 1983:

Exploration by International Damascus Resources consisting of prospecting, soil geochemistry, ground magnetometer, airborne VLF-EM, diamond drilling; 910m in 36 holes (1983), 4 holes in 1982, outlined silver lead zinc mineralization (Damascus Zone) over narrow widths. Two other less significant zones (K and Hilltop veins) were located some 500 and 900 metres south-southwest of Damascus Zone on the OX-C Claim.

(c) 1984:

Work by Cominco consisted of ground geophysics including IP-VLF-EM, magnetometer surveys, geological mapping, rock geochemical sampling, backhoe, cat and wajax-pump trenching. Some of this work was concentrated in a 2000 by 600 metre high contrast Ag-As-Pb-Zn soil geochemical anomaly upslope from previously drill tested massive sulphide veins. This work located nothing of interest.

Following the Cominco program, exploration by Ager and Associates for International Damascus resulted in the drilling of 7 holes on the Damascus Zone (results of which were not made available to Granges) and 7 holes drilled to explore silver-lead-zinc-arsenic anomalies on the OX East mineral claim. No significant values were obtained from the anomaly drilling.

Additionally, 2 holes were drilled to explore the Hilltop vein, the results of which were again not made available to Granges.

(d) 1986:

A program consisting of line cutting, induced polarization (IP) VLF-EM, geological mapping and prospecting was carried out by Hi-Tec Resources Management Ltd. for International Damascus. The geophysical surveys located a coincident IP, and VLF-EM anomaly near the eastern boundary of the OX East claim.

5.0 REGIONAL GEOLOGY

- 5.1 The Whitesail Range is underlain by a basement sequence of mesozoic volcanic, volcanoclastic and epiclastic rocks, striking north-east and dipping steeply west, overlain by relatively undisturbed tertiary rhyolite ash-flows and basalt flows, dipping gently east. Intrusive rocks present include cretaceous granodiorite and monzonite and mid-tertiary diorite stocks and granitic dykes and sills. All units are displaced by apparent eastside down normal faults, and pretertiary units are transected by north-east verging thrust faults.

6.0 PROPERTY GEOLOGY

- 6.1 The following description of the geology is taken from a 1984 report by J.D. Blackwell, geologist for Cominco.

The OX-C claim is underlain by four disconformable rock packages, ranging in age from Jurassic to Tertiary, overlain by thick blanket deposits of Quaternary to Recent alluvium and lacustrine clay at low elevations in the north, thick basal till upon the hillside, and complex till and debris flow lobes from a recent landslide cover the uppermost southern portion of the property. Rock exposure is limited to 15%.

PACKAGE 1

The oldest package on the property, which is also the host to mineralization, is a homoclinal, west-facing sequence of felsic volcanic and volcanoclastic rocks and sills. The unit is inferred to be equivalent to the upper Jurassic Whitesail Formation of the Hazelton Group, although exposures on the property lack the characteristic reddish and grey-coloured flows described

by Tipper (1979). Neither the base nor the upper contact of this unit has been observed, and it appears to be separated from units to the east by a structural discontinuity. The western or upper contact is masked by overburden. Units strike 010° to 170° , averaging 175° , and dip west to 75° to 80° .

The lowermost unit, observed in drill core and outcrop rubble, is red to green dacite lapilli breccia, calcareous waterlain tuff and volcanoclastic breccia (conglomerate) and wacke. It appears to display a southward fining trend, suggesting a proximal to distal relationship with southward shedding of volcanic debris from a thick breccia ashflow to the north. This unit is at least 30m thick. Overlying is a unit of cream to white rhyolite lapilli tuff and crystal tuff. Two ashflows are recognized here, each with a distinctive basal zone of cream-coloured lapilli in granular matrix, grading upward to crystal tuff. Maximum thickness is approximately 35m. The unit appears to thicken southward. The uppermost 3 to 5m of both ashflows is grey-coloured, perhaps due to post-depositional alteration. This unit hosts the "Damascus Zone" mineralization.

Overlying the rhyolite unit is 20m of mixed buff and grey rhyolite breccia and tuff, passing upward to a distinct 10m sequence of black volcanoclastic mudstone, tuff breccia, chert and pyritic wacke with abundant white rhyolite lapilli. This unit is an important mapping marker. Despite its recessive weathering nature, it can be readily traced through shallow overburden by the black coloration it imparts to the overlying soil.

Separating the black marker and overlying units is an intrusive sill of quartz-orthoclase-tourmaline porphyry. This mass is conformable, thickening to 40m northward and downward. To the south, up Poison Creek the porphyry pinches down to a thin wedge, and roof rocks are cut by 1-3m wide dykes and marked by tourmaline-pyrite coating of fracture surfaces with some wholesale replacement of wacke and breccia beds. The age of the porphyry body is not clear. It may post-date the Whitesail rocks, but pre-dates mid-tertiary Ootsa units which flank and unconformably overly the body.

Hanging wall to the sill is at least 150m of drab, greenish-white thick to medium-bedded lithic wacke and siltstone, with minor interbedded green laminated wacke

and thin rhyolite lapilli. Epiclastic beds appear to be volcanoclastic, derived from felsic material, and much of this unit may actually be altered thin rhyolite tuff beds. The uppermost unit is at least 50m of green to buff-coloured dacite or rhyolite lapilli tuff and breccia with thin, interbedded lithic wacke and siltstone. This unit weathers recessively, and any additional Whitesail Formation units up-section are overburden covered.

A differing and perhaps overlying Jurassic section is exposed along a west-flowing creek at UTM 628,000 E, 5,944, 300 N. Bedding strikes are 140° to 165° N, with an overall west-facing 50° dip. Dip reversals, perhaps due to faults, are common. The contact with older Whitesail formation was not observed.

This unit comprises an exposed section of at least 300m of reddish-brown lithic wacke, grey mudstone, chert and limestone breccia. Clastic rocks comprise 30-50cm thick rhythmic beds of pebbly lithic wacke, cross-laminated arenaceous wacke, slumped and laminated mudstone capped by black thinly laminated chert. Incorporated clasts and lithic fragments include porphyritic andesite, rare limestone, quartz and feldspar. Limestone breccias are heterogenous conformable bodies up to 20m thick.

PACKAGE II

The eastern portion of the property is underlain by flat-lying to gently north-dipping units of Package II. Neither the base nor the top of the section is exposed, and the unit is structurally discordant to the west with Whitesail units and disappears eastward into overburden. The lowermost unit is a distinctive medium-bedded, chocolate-brown weathering limestone containing abundant fossil debris of irregular pelecypods and high-spiral gastropods, plus calcareous arenite and felsic tuffaceous limestone, 15m thick. It passes upward into white to buff calcareous rhyolite breccias, rhyolite tuff and finally a thick (150 m+) lithic lapilli breccia/tuff unit. The lithic lapilli breccia/tuff unit is a distinct grey to green coloured rhyolite with abundant moderately welded black vitrophyre fragments in various stages of alteration and devitrification. The entire sequence is at least 250m thick. This package is considered to be Jurassic or Cretaceous in age.

PACKAGE III

Three small outliers of rhyolite vitrophyre, welded ashflow tuffs and breccias are preserved in the Poison Creek "canyon" walls near UTM 628 700 E and 5,945,500 N. The rocks are tentatively assigned to the mid-Tertiary Ootsa Group, based upon the fresh, unaltered appearance (well preserved obsidian comprises the vitrophyre zones) and their unconformable relationship to older "Whitesail" rhyolite volcanic rocks.

Ootsa units occur as three scalloped outliers along the Poison Creek valley walls. The pre-Ootsa surface is gossanous and fractured. Four black vitrophyre zones are recognized with intervening greenish to pink-buff coloured rhyolite ashflow units in various stages of welding. Internal contacts between welding units are chaotic in general appearance, and steep contacts between welding units are common. Based on detailed field observation (not plotted on accompanying geological maps), it appears that welded zone contacts mimic the outside contacts or valley walls, yet eutaxitic features and flow contacts are subhorizontal. Hence, these rocks are interpreted to represent subaerial pyroclastic flows which avalanched down the Poison Creek valley in mid-Tertiary time. Inherent in this interpretation is that the Poison Creek valley was a valley in Tertiary time, which was filled with pyroclastic debris, and was subsequently exhumed and reoccupied by creek waters.

The exploration significance of these units is that:

- a) they do not appear to have been moved into place structurally (faulted in)
- b) they are not altered, not mineralized, yet rest upon highly mineralized Whitesail rocks, with a paleosurface marked by a gossanous buildup
- c) hence, they constitute an upper age limit to mineralization, as mineralizing processes occurred prior to mid-Tertiary time

PACKAGE IV

Package IV includes plagiophyric basalt flows, breccias and ash units which cap the Whitesail Mountain Range. These rocks are a late Tertiary accumulation erupted from local edifices on Troitsa Peak. The bulk of this unit outcrops south and east of the OX-C claim. It is unconformable upon Mesozoic volcanic units. Ash units and thin flows are flat-lying; however, flow complexes dip in various directions, probably represent original attitudes. On the property, this unit is composed of 100m of bedded greenish coloured plagioclase airfall ash with locally abundant block and bombs of accidental vitric plagiophyric basalt, interbedded with stubby, short block vitric basalt agglomerate units and thin basaltic flows. It is overlain by at least 200m of highly vesicular, plagiophyric basalt flow, flow breccia and vitric scoria beds.

Immediately south of the map area, at approximately UTM 629,000 E, 5,943,000 N, an eruptive centre is defined by a vertical 70m wide pipe-like zone, of chaotic breccias, intense yellow-green clay alteration along joints and fractures, with a peripheral zone of intense hematization. Adjacent exposures of flows and agglomerates dip away from this area, and are interpreted to represent a dissected stratovolcano cone. This eruptive centre may be one of several in the Whitesail Range.

INTRUSIVE ROCKS

a) Granite Stocks, Dykes, Sills

Medium-grained, greenish to white coloured quartz and feldspar-phyric granite outcrops in the east-central portion of the property. An intrusive contact is exposed in trench 6 in which the granite is intensely chlorite epidote-altered and adjacent volcanic units are contact metamorphosed with biotite porphyroblasts and have a "baked" appearance. The granite masses are probably small stocks or apophyses from a larger mass at depth.

Similar granitic rock is intersected in drill hole OX-32, again producing a small contact metamorphic zone in adjacent volcanoclastic rocks. Granite and adjacent country rock is marked by minor disseminated pyrite and tourmaline rich bands. It is possible that much of the eastern portion of the property is underlain at depth by a granitic sill.

During trenching by Cominco several 2 to 4 metre wide, north-trending vertical granitic dykes were exposed in the Poison Creek valley and up to 200 m west. These dykes are frequently clay-altered, can be cut with a knife, and weather recessively.

b) Diorite

Outcrops of greenish to black medium-grained diorite and quartz diorite are found east of the granite stocks. The diorite is locally epidote-bearing and may contain biotite. A Tertiary age is considered likely, based on similar diorite-gabbro bodies in the region which have been assigned this age by Woodworth.

c) Latite

Maroon-coloured, feldspar-quartz-phyric vertical latite dykes striking north are exposed in the lower reaches of Poison Creek. These dykes are up to 5m wide and appear to cross cut major units and the Damascus Zone mineralization.

Metamorphism

The rocks on the OX property are subgreenschist metamorphic rock. Fracture cleavage, marked by cross grain shearing and chlorite cleavage is evident near faults and shears, particularly in volcanoclastic units of package I. Rocks of packages II, III and IV are not metamorphosed.

Structure

Limited rock outcrop and a paucity of marker units limit the delineation of faults.

Three parallel, west-dipping 020° trending reverse faults occur in the Poison Creek area. Sense of displacement is reverse, with east side down, however an unknown sinistral slip component may be present. The eastern most fault marks the contact of packages I and II. Cataclasis and proto mylonites up to 4m wide mark the fault zones.

Small faults, striking 170° , with minor unit displacement, dip west at 70° to 85° . The Damascus Zone and K-vein mineralization occupy structures of this orientation.

7.0 MINERALIZATION

- 7.1 Rocks of package I and to a lesser extent, package II, have been extensively argillic-altered, fractured, and mineralized with disseminated pyrite-arsenopyrite-sphalerite. In addition, there are discrete, larger fracture-filling high grade Ag-Zn-Pb-Cu-Fe-Sb-Bi-As-bearing veins. Mineralizing processes appear epigenetic in nature and are likely early Tertiary aged.

8.0 DAMASCUS ZONE

- 8.1 The Damascus Zone is defined as the vein showing immediately east of Poison Creek which was partially drill delineated by International Damascus in 1983 and 1984 and by Granges Inc. during 1989.
- The zone is a multiple vein system with a single wide, well mineralized zone in the south with minor hangingwall mineralized shears, and two narrow parallel veins in the north, separated by up to 10m of barren rock.
 - The veins neck and swell over relatively short distances.
 - Average dips are 80° west, though local dip reversals occur.
 - Cross fractures which offset the vein structures are not evident. The occurrence of the zone is remarkably predictable.
 - Mineralogy: pyrite-marcasite with lesser arsenopyrite, galena, sphalerite, chalcopyrite, boulangerite, tetrahedrite and argentite.
 - Accessory minerals: tourmaline, chalcedonic quartz, clay, ferromanganese carbonates.
 - Sulphide grain size is highly variable from 2cm down to 5cm.
 - Veins are not mineralogically or texturally zoned or banded.

- The zone has been subjected to 45 diamond drill holes, 34 of which are located such as to intersect the vein structure. Of these, 6 holes explored the vein during 1989.
- North of drill hole OX-33, 5 backhoe trenched by Cominco in 1984 traced the veins north 120m.
- Two veins are present, crossing Poison Creek and transecting a Tertiary latite porphyry dyke.

9.0 RESULTS OF 1989 EXPLORATION PROGRAM

- 9.1 Collars of previously drilled holes on the Damascus Zone in 1983 and 1984 were located in the field and their location used as survey stations from which the horizontal and vertical location of the 89 series of holes was based on.

The grid layout on the attached maps is partly imaginary. The existing 10+00N section line and 92 +00E survey line (both not located in the field) were converted to 1800 north and 9200 east and used as focal points on all maps to which all other co-ordinates and drill holes are related.

- 9.2 During the preliminary field survey of existing drill locations, it was discovered that a total of 9 holes had been drilled during 1984. Data related to this drilling had not been made available to Granges.

Seven of these holes were drilled on the Damascus Zone and 2 holes drilled on the Hilltop vein.

The collar locations for the Damascus Zone drilling were tied into the existing grid and are shown on the attached drill plan but excluded from the longitudinal projection. Only limited information has since been made available to Granges.

A cursory examination of these holes which were found at the old Landsdowne camp situated a short distance west of the Damascus camp was carried out by the writer and Art O'Donnell.

The other 2 holes were drilled to explore the Hilltop vein. Both collars were tied into the vein and trench and their location plotted on Cominco's 1984 trenching and sampling plan no. 4.

9.3 A total of 748.56 metres in 8 holes were drilled on the OX-C (Damascus Zone) and OX East mineral claims during the period July 15 to August 1, 1989.

9.4 The object of the 1989 drilling program was to investigate the depth extension of the Damascus Zone, a small silver, lead, zinc mineralized shear and vein previously drilled by International Damascus during 1983 and 1984. The zone is located near the north end of the OX-C mineral claim.

9.5 A total of 6 holes (561.42 metres) were completed on the Damascus Zone and explored the mineralized vein over a strike length of 150 metres to a depth of 155 metres below surface. The maximum horizontal width intersected was 1.6 metres in hole OX-51 at a vertical depth of 140 metres below surface.

Geochemical assay results from this drilling are as follows.

9.6 Damascus Zone drill assay results:

<u>Hole No.</u>	<u>Intersection</u>	<u>Hor. Depth Below</u>			<u>Grade</u>				
		<u>Width</u>	<u>Collar</u>	<u>Section</u>	<u>Grams</u>		<u>Percent</u>		
					<u>Au</u>	<u>Ag</u>	<u>Cu</u>	<u>Zn</u>	<u>Pb</u>
OX-47	61.72-62.79	0.3	60.7	1838.N	0.28	52.5	0.02	1.6	0.5
OX-48	36.88-38.56	0.7	35.0	1838.N	0.179	36.5	0.02	1.4	0.13
OX-49	49.59-50.08	0.2	47.0	1701.6N	0.820	296.1	0.01	6.8	1.7
OX-50	78.33-83.21	1.1	78.5	1752.5N	0.300	116.8	0.04	3.3	1.5
OX-51	100.28-104.79	1.5	88.0	1691N	0.723	194.3	0.06	2.7	1.1
OX-52	155.14-158.95	0.6	148	1730N	0.282	75.3	N.A.	0.86	0.49

The above geochemical results for silver, lead and zinc are accurate only for values in the range of 34 grams silver and 1 percent for lead and zinc. The most significant assays for each hole were redone by regular acid leach assay and the results are included in Appendix II.

9.7 The 1989 drilling results appear to indicate a shallow southerly plunge (28°) to the zone which is still open in that direction.

9.8 ANOMALY DRILLING

Two holes (187.14 metres) were drilled to investigate a coincident VLF-EM and IP anomaly combined with elevated arsenic and zinc soil geochemical values. These holes are located near the eastern boundary of the OX East claims.

A very strong shear and fault gouge containing disseminated pyrite mineralization was found to be the source of the anomaly. This mineralization carried no values.

9.9 DRILLING RESULTS

Hole OXE-1, drilled at 45° east, collared into a very strongly sheared zone. As a result, core recovery was poor from 8.8 to 15.6 metres. The hole was stopped short of a second I.P. target located to the east, when it became apparent from the core angles that the dip of the formation was also east.

A second hole, OXE-2, located some 14 metres east of OXE-1 was drilled west in an attempt to explore the full width of the shear intersected in OXE-1. This hole was lost at 32.31 metres when the core barrel broke off in very bad ground conditions. A similar shear to that encountered in OXE-1 was intersected in OXE-2 with core recovery equally as poor. Core and sludge samples from this drilling carried no significant values.

The geological suite intersected by this drilling consisted of altered acid volcanics namely, rhyolite agglomerates, fragmentals, lapilli and crystal tuffs interlayered with dark grey to black collared fragmentals.

10.0 RECOMMENDATIONS

10.1 No further work is recommended on the Damascus Zone or the OX East anomaly.

10.2 The Damascus Vein is considered too narrow and low grade to justify additional drilling. Values and width did not improve with depth. Both structural mining walls are very incompetent. The zone appears cut-off to the north. The mineralization is open to the south at depth where it appears to plunge at a shallow angle. Mine development would be costly and grade dilution high.

- 10.3 The area is isolated and would require barging ore and equipment across Tahtsa Reach.
- 10.4 Both the VLF-EM and IP anomalies have been explored by holes OXE-1 and 2 and their source explained by the shear and fault zone encountered in both drill holes.
- 10.5 The arsenic geochemical soil anomaly located down slope from the drill holes is probably due to arsenopyrite not observed in the drill core due to poor recovery.
- 10.6 The zinc geochemical soil anomaly was very local with only one significantly high reading. Its source remains unexplained.
- 10.7 Two samples taken from an iron stained seepage located a short distance to the north and down slope of the VLF-EM and IP target returned no significant values.
- 10.8 The geological suite intersected are considered very favourable for locating polymetallic massive sulphide deposits. However, the lack of solid sulphide mineralization intersected combined with the absence of precious and base metal values, further drilling on this anomaly cannot be justified.
- 10.9 Core from all 9 holes are stored in sturdily built wooden racks a short distance east of the old Damascus camp site located near the mid point of the western boundary of the OX-C Claim.

11.0 1989 STATEMENT OF EXPENDITURES

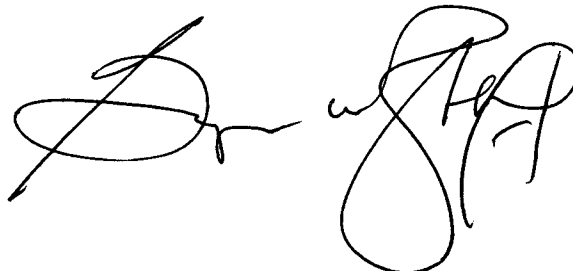
OX-C

Diamond Drilling:	OX-47, OX-48, OX-49, OX-50	
	OX-51, 561.42m	\$64,447.00
Assaying:	100 Au/Ag/Cu/Zn/Pb/Ag geochem @ \$12.00 .	1,200.00
	16 Au/Ag geochem @ \$9.50	152.00
	5 Au/Ag/Cu/Zn/Pb assay @ \$21.75	108.75
	1 Au/Ag/Zn @ \$15.75	15.75
Geologists Wages:	11 days @ \$175.00 per day	1,925.00
	11 days @ \$65.00 per day	715.00
Report Preparation and Drafting	2,500.00
Office Overhead	<u>7,106.35</u>
	TOTAL	\$78,169.85

OX-EAST

Diamond Drilling:	OXE-1, OXE-2, 187.14m	\$21,106.47
Assaying:	39 Au/Ag geochem @ \$9.50	370.50
Geologists Wages:	4 days @ \$175.00 per day	700.00
	4 days @ \$65.00 per day	260.00
Report Preparation and Drafting	850.00
Office Overhead	<u>2,328.69</u>
	TOTAL	\$25,615.65

GRAND TOTAL \$103,785.51

Two handwritten signatures in black ink, one on the left and one on the right, appearing to be initials or names.

12.0 GEOLOGIST'S CERTIFICATE

I, Patrick Joseph Deveaux, of the City of Vancouver of British Columbia do certify that:

- 12.1 I am a Consulting Geologist residing at 1076 Walalee Drive, South Delta, B.C.
- 12.2 I am a 1958 graduate of the University of St. Francis Xavier, Antigonish, Nova Scotia with a Bachelor of Science Degree in Geology.
- 12.3 I have practiced my profession principally in Manitoba, Saskatchewan and British Columbia from 1958 to the present. This has included all phases of surface and mine exploration programs as well as property investigation and feasibility studies of mineral deposits.
- 12.4 I have based this report on my personal on-site supervision of the 1989 exploration program and on a study of previous published and unpublished reports and on data supplied by International Damascus Resources Limited.
- 12.5 I have no interest, direct or indirect, in International Damascus Resources Inc.

Dated at Vancouver,
British Columbia this
23rd day of August, 1989

P.J. Deveaux
1076 Walalee Drive
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V4M 2L8

STATEMENT OF QUALIFICATIONS
GEORGE W. ZBITNOFF
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DELTA, B.C.

Name: Zbitnoff, George William

Birth Date: August 15, 1938

Birthplace: Saskatoon, Saskatchewan

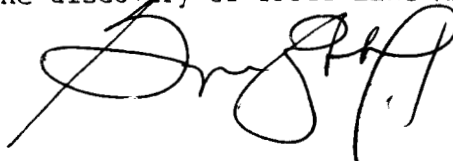
Graduated with Grade 12 matriculation from
Blaine Lake High School in 1955.

Graduated from University of Saskatchewan with a
B.A. (Geology and chemistry majors) in 1963.

Professional

- Associations:
- Member of the Association of Professional Engineers of the Province of Manitoba.
 - Member of the Association of Professional Engineers of the Province of British Columbia since 1973.
 - Member of the Canadian Institute of Mining and Metallurgy.

- Experience:
- Pre-graduation experience in geology with the Department of Mineral Resources of Saskatchewan.
 - May 1962 - Two and one half years, field geologist with Hudson Bay Exploration and Development, Flin Flon area.
 - January 1965 - Six years, field and resident geologist with Noranda Exploration Ltd., Flin Flon area.
 - February 1971 - Twelve and one half years, Assistant Manager, Granges Exploration Aktiebolag in Vancouver, B.C.
 - November 1983 to present - Vice President Exploration, Granges Exploration Ltd. in Vancouver, B.C.
 - Active geological experience in all provinces of Canada and parts of the United States and Mexico.
 - Participated in the discovery of Trout Lake Mine.

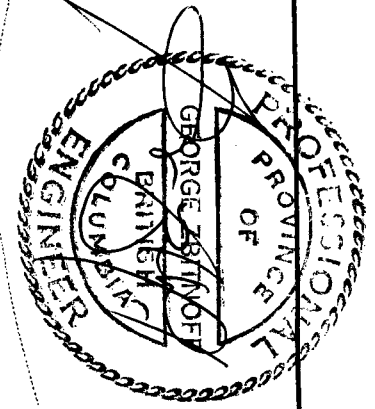
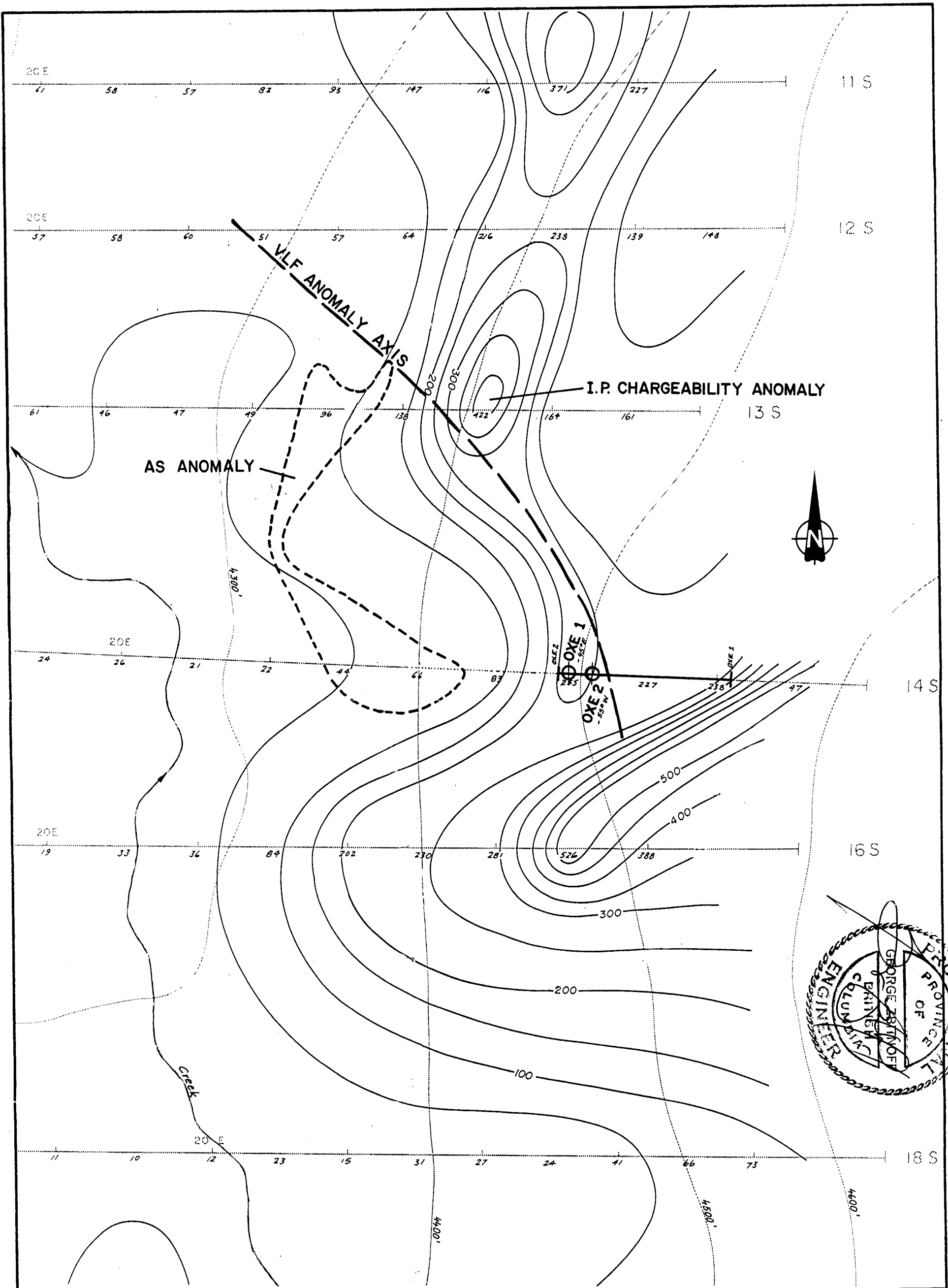


13.0 REFERENCES

- 13.1 A partial list of publications containing information pertinent to the area of the OX Claim Group is as follows:
- 13.2 Review of 1982-83 exploration on OX-A, B, and OX-C mineral claims by L.B. Goldsmith, Paul Kallock, and H.C. Davidson.
- 13.3 1983-84 Exploration Program on OX East mineral claim by P. Kallock and L.B. Goldsmith.
- 13.4 1984 Exploration Program on OX-C mineral claim by J.D. Blackwell, Cominco.
- 13.5 1986 Exploration Program on OX East and OX-C mineral claims by A. Smallwood and J. Paul Sorbara.
- 13.6 OX Lake copper-molybdenum deposit by Gordon Richards, Quintana Minerals Corporation.

APPENDIX I

- Figure 3 Diamond drilling plan and longitudinal projection -
Damascus Zone, in pocket
- Figure 4 Cross sections for holes OX-47 to OX-52, in pocket
- Figure 5 Geophysical plan showing anomaly drilling
- Figure 6 Cross sections for holes OXE-1 and OXE-2

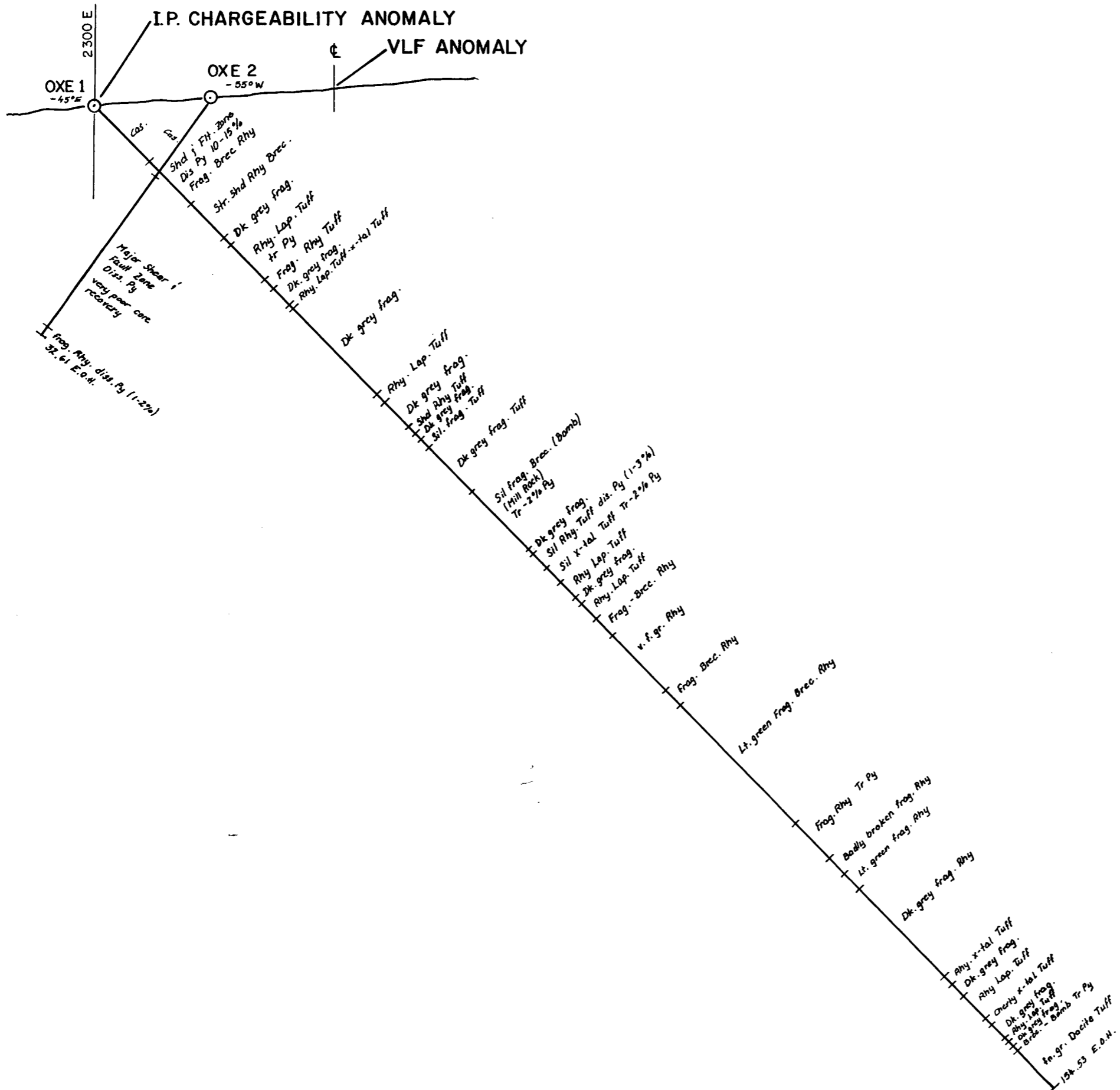


**GEOPHYSICAL PLAN
SHOWING
ANOMALY DRILLING**



**OX OPTION
'OX - EAST' CLAIM**

SCALE: 1:2500
NTS: 93 E/II
FIGURE: 5



SECTION 14 S
DDHs OXE 1, OXE 2
 LOOKING NORTH
OX OPTION
 'OX - EAST' CLAIM



SCALE: 1:500
 NTS: 93 E/11
 FIGURE: 6

APPENDIX II

Diamond drill logs and record sheets for holes OX-47 to 52; OXE-1
and OXE-2

Core Assay Certificates, in pocket

ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: JUL 27 1989

DATE REPORT MAILED: *Aug. 4/89.*

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: Core AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

SIGNED BY *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

GRANGES EXPLORATION PROJECT 133 FILE # 89-2483 Page 1

SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Ag PPM	As PPM	AU* PPB
21500	661	72	479	4.1	105	14
21501	408	327	898	5.8	231	15
21502	165	137	545	3.2	100	5
21503	83	147	349	1.0	197	5
21504	177	22	117	9.0	274	9
21505	323	50	693	4.0	283	4
21506	202	155	307	2.6	553	6
21507	54	777	3745	4.4	2844	131
21508	183	593	1081	6.6	772	10
21509	226	380	691	3.0	120	3
21510	41	381	940	1.4	160	2
21511	457	1361	2147	11.7	429	30
21512	255	267	775	6.5	1658	21
21513	318	823	1509	5.1	3962	43
21514	312	2864	4078	28.1	7687	125
21515	193	843	1860	8.6	7473	74
21516	354	373	991	7.7	2170	31
21517	138	1211	1899	8.2	4929	43
21518	258	5509	15985	52.5	21667	280
21519	195	3451	9832	21.8	27374	250
21520	129	2779	8573	17.9	23634	220
21521	191	3040	13366	20.1	9966	150
21522	262	992	3251	14.3	3456	59
21523	192	501	1392	7.6	1393	24
21524	72	616	1103	4.3	460	7
21525	145	242	550	3.1	613	11
21526	186	3082	5729	17.0	11034	130
21527	117	101	240	1.0	170	6
21528	388	676	2084	8.6	773	15
21529	414	567	4465	7.2	101	9
21530	796	517	916	7.5	264	22
21531	630	135	315	4.8	231	14
21532	1086	584	984	13.6	609	36
21533	270	264	660	3.4	231	13
21535	464	55	147	1.8	18	8
STD C/AU-R	58	44	132	6.6	41	490

OX-47

SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Ag PPM	As PPM	Au* PPB
OX-48 21536	1063	145	771	3.6	221	14
21537	193	2056	18975	27.6	10698	104
21538	263	3437	9765	47.4	15970	270
21539	172	457	657	2.4	329	2
21540	121	17	100	.2	204	2
21541	65	19	113	.3	43	1
21542	119	300	524	3.6	892	9
21543	1510	16889	67939	296.1	44282	820
OX-49 21544	352	1615	3735	34.3	3715	53
21545	101	561	1194	8.6	917	15
21546	102	312	668	2.2	147	1
21547	33	54	206	1.4	678	21
21548	39	73	1013	1.3	432	4
21549	120	18	6486	1.4	361	22
21550	189	103	430	10.2	487	4
21551	514	16836	51381	122.0	13779	310
21552	222	2855	6902	58.0	5189	112
21553	377	13570	35338	82.8	17693	370
21554	507	14214	44237	97.5	15488	410
21555	417	13789	23985	117.3	15015	380
OX-50 21556	513	20807	33991	195.6	14677	310
21557	210	23350	43955	124.5	12157	250
21558	101	1327	4003	14.6	361	10
21559	426	4880	10999	59.9	3525	80
21560	306	4119	5707	57.2	1159	38
21561	211	549	1060	11.5	1830	19
21562	107	281	824	2.5	514	1
21563	375	1349	1649	27.1	509	10
21564	839	10994	40746	248.6	28890	800
21565	837	15090	39519	255.0	37157	860
21566	457	9505	12965	225.2	36757	860
21567	598	10854	19513	193.7	16874	410
21568	379	4272	11017	73.0	8057	129
OX-51 21569	747	13723	25866	246.5	45827	1020
21570	599	21592	51168	191.7	57875	1180
21571	263	6857	11657	112.8	17963	330
21572	350	484	1050	8.8	484	11
STD C/AU-R	59	42	133	6.6	42	510

- ASSAY REQUIRED FOR CORRECT RESULT -

for Pb, Zn, As > 1%
Ag > 30 ppm

ACME ANALYTICAL LABORATORIES LTD.
 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
 PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: AUG 2 1989

DATE REPORT MAILED: *Aug. 7/89*

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: Core AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

SIGNED BY *C. King*. D.TOVE. C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

GRANGES EXPLORATION LTD. PROJECT 133 FILE # 89-2623

SAMPLE#	Pb PPM	Zn PPM	Ag PPM	AU* PPB
21573	-	-	.4	113
21574	-	-	.4	19
21575	-	-	.1	9
21576	-	-	.2	9
21577	-	-	.3	20
21578	-	-	1.3	17
21579	-	-	.4	13
21580	-	-	1.7	8
21581	-	-	2.8	24
21582	-	-	29.5	250
21583	-	-	1.7	20
21584	-	-	29.1	26
21585	-	-	1.4	56
21586	-	-	2.5	6
21587	-	-	2.7	5
21588	-	-	22.6	83
21589	10714✓	8934	175.1✓	590
21590	1521	4087	26.4	38
21591	4864	13551✓	63.0✓	350
21592	-	-	.5	8
21593	-	-	.3	4
21594	-	-	.1	4
21595	-	-	.1	2
21596	-	-	.3	3
21597	-	-	.2	3
21598	-	-	.1	1
21599	-	-	.1	2
21600	-	-	.1	4
21601	-	-	.4	5
21602	-	-	.1	2
21603	-	-	.1	1
21604	-	-	.1	2
21605	-	-	.1	2
21606	-	-	.1	2
21607	-	-	.1	1
21608	-	-	.1	1
21609	-	-	.1	1
21610	40	122	6.6	510

OX-52

OXE-1

✓ Assay Required for Correct Result.

ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: AUG 16 1989

DATE REPORT MAILED: *Aug. 23/89*

ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp

SIGNED BY *C. Lung* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

GRANGES EXPLORATION LTD. PROJECT 133 FILE # 89-2623R

SAMPLE#	Pb %	Zn %	Ag GM/T
21589	1.19	1.05	188.5
21591	.60	1.63	70.5

Recheck of geochemical assays by regular acid leach assays

ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp

SIGNED BY *C. Long* D. TOYE, C. LEONG, J. WANG: CERTIFIED B.C. ASSAYERS

GRANGES EXPLORATION PROJECT 133 FILE # 89-2483R Page 1

SAMPLE#	Pb %	Zn %	Ag GM/T
21518	.56	1.84	56.0
21537	.24	1.91	27.5
21538	.45	1.03	49.5
21550	.01	.04	10.3
21551	2.05	5.26	139.2
21556	1.98	3.23	214.7
21557	3.25	4.80	171.1
21559	.47	1.04	57.6
21560	.44	.50	55.2
21564	2.15	3.38	186.9
21565	2.69	3.65	334.6
21566	.93	1.30	360.5
21567	1.09	1.95	232.6
21568	.40	1.00	71.9
21569	1.17	2.26	287.6
21570	2.03	4.30	203.8
21571	.67	1.06	123.5

SAMPLE#	Mo %	Cu %	Pb %	Zn %	Ag GM/T	Ni %	Co %	Mn %	Fe %	As %	U %	Th %	Cd %	Sb %	Bi %	Au GM/T
21543	.001	.16	6.36	6.79	1112.5	.01	.01	.12	12.00	3.93	.012	.01	.07	1.63	.01	.89



**GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG**

ANOMALY: SAME ANOMALY AS OXE-1

Page 1 OF 1

Property OX OPTION Project No. 133 Depth 32.61 Date Began July 30/89
 Hole No. OXE-2 Coord. 145 Horizontal Length 1.8 Date Completed ^{lost} July 31/89
 Claim No. OX EAST 2313 E Core Size N.O. Drilled By VAN ALPHEN Expl. Serv.
 Grid No. New Grid Angle & Grid Direction 55° WEST Elevation 1372.6 Logged By P.J. DEJAN

INTERVAL METRES	DESCRIPTION	SAMPLE RECORD				Au G/T	Ag G/T	Cu %	Zn %
		FROM	TO	SAMPLE	WIDTH				
0-10.97	CASING								
10.97-31.70	MAJOR SHEAR and FAULT ZONE								
	Most of the core was lost due to bad ground. What was recovered was mainly fragmental Rhyolite pebbles containing 0-2% disseminated Pyrite.								
	The section breaks down as follows:								
	10.97-11.27 - 0.30 grey pebbles.								
	11.27-14.32 - only 0.30 pebbles & gravel recovered - rest lost.								
	14.32-17.37 - lost core.								
	17.37-20.42 - only 1.0l pebbles and very badly broken rock recovered - rest lost.								
	20.42-23.47 - only 1.83 cm of pebbles & gravel - rest lost.								
	23.47-26.5 - 0.61m gravel only, rest lost as follows - 0.61 Fault Gorge 0.30 Broken Core!								
	26.5-29.56 - 1.22 of broken core - Rhyolite Fragmented with disseminated Pyrite (1-2%) Remainder lost.								
	29.56-29.87 Sand of Rhyolite composition with disseminated Pyrite (1-2%)								
	29.87-30.17 very badly broken Rhyolite (Fragmented) & 1 pebbles								
	30.17-30.93 Black Sand								
	30.93-31.70 lost core								
	31.70-33.37 Strongly sheared fragmental Rhyolite with disseminated Pyrite (1-2%)								
	Hole Abandoned when core barrel broke off in sand and cause.								



**GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD**

Property OX OPTION Project No. 133 Depth 32.61 Date Began JULY 30/89
 Hole No. OXE-2 Co ord. 145 Horizontal Length 18 Date Completed abandoned JULY 31/89
 Claim No. OX EAST 2313E Core Size N.Q. Drilled By VAN ALPHEM EXPL. SER.
 Grid No. new grid Angle & Direction Elevation 1372.6 Logged By P.J. D. Jarry

INTERVAL METRES	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	WIDTH X ASSAY						AVERAGES							
							WIDTH	Au.	Ag.	Cu.	Zn.	WIDTH	Au.	Ag.	Cu.	Zn.				
0 - 10.97	easy	10.97																		
10.97 - 11.28	waste	0.31																		
11.28 - 11.58	21623	0.30	10	.2																
11.58 - 17.37	lost core	5.79																		
17.37 - 17.98	21624	0.61	1	.1																
17.98 - 20.42	lost core	2.44																		
20.42 - 20.72	21625	0.30	1	.5																
20.72 - 26.51	lost core	5.79																		
26.51 - 29.56	21626	2.97	2	.1																
29.56 - 29.87	21627	0.31	1	.1																
29.87 - 30.17	21628	0.30	1	.1																
30.17 - 30.93	21629	0.76	1	.1																
30.93 - 31.70	lost core	0.77																		
31.70 - 33.37	21630	1.67	2	.1																
HOLE LOST IN PART																				

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

SLUDGES

Property OX OPTION Project No. 133 Depth 32.61 Date Began July 30/89
 Hole No. OXE-2 Co ord. 145 Horizontal Length 18 Date Completed July 31/89
 Claim No. OX EAST 2313E Core Size N.O. Drilled By JAN ALPHAN EXPL SERV
 Grid No. Angle & Direction 55° West Elevation 1372.6 Logged By P. J. DeJear

INTERVAL METRES	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	WIDTH X ASSAY					AVERAGES							
							WIDTH	Au.	Ag.	Cu.	Zn.	WIDTH	Au.	Ag.	Cu.	Zn.			
8.21 - 11.28	20587	3.07	3	.1															
11.28 - 14.32	20588	3.04	1	.1															
14.32 - 17.37	20589	3.05	1	.6															
17.37 - 20.42	20590	3.05	1	.2															
20.42 - 23.47	91	3.05	1	.2															
23.47 - 26.51	92	3.04	1	.8															
26.51 - 29.56	93	3.05	1	.2															
29.56 - 32.61	20594	3.05	3	.2															
HOLE LOST DUE TO CAVE.																			



GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

ANOMALY: V.L.F.E.M. & I.P.
ARSENIC & ZINC GEOCHEM

Page 1 OF 6

Property OX OPTION Project No. 133 Depth 154.53 Date Began July 28/89
 Hole No. OXE-1 Co ord. 14 S Horizontal Length 110 Date Completed July 30/89
 Claim No. OX EAST 2299E Core Size N.Q. Drilled By JAN ALPHEN EPL SEC
 Grid No. Angle & Grid Direction 45° EAST Elevation 1371.6 m Logged By P. J. DeJoux

INTERVAL METRES	DESCRIPTION	SAMPLE RECORD				Au G/T	Ag G/T	Cu %	Zn %
		FROM	TO	SAMPLE	WIDTH				
0 - 8.8	CASING								
8.8 - 15.6	MAJOR SHEAR AND FAULT ZONE - MINERALIZED FRAGMENTAL to BRECCIATED RHYOLITE WITH SECTIONS CONTAINING 10-15% PYRITE. SECTIONS Reduced to DARK GRAY Gouge and PYRITE (10-15%) SLUDGE Collected From 5.79 to 8.8 has considerable Pyrite in a dark grey to black matrix 8.8 - 9.14 Mineralized Pebbles 5% Pyrite 9.14 - 9.60 Very strongly sheared Rhyolite breccia - 5-10% Pyrite 9.60 - 10.36 Very badly broken Breccia & Pebbles 10.36 - 11.88 Lost Core 11.88 - 13.41 Very badly broken Core - Caomblly disseminated Pyrite 5-10% 13.41 - 13.71 Mineralized FAULT Gouge - MUD - 10-15% Pyrite 13.71 - 14.93 Lost Core 14.93 - 15.63 Very strongly sheared Rhyolite Breccia - Clay Feldspar altered to Kaolinite. Trace								
15.63 - 20.72	STRONGLY SHEARED RHYOLITE BRECCIA - ASSEMBLAGE - BAMB. Large quartz & Feldspar (altered to Kaolinite) fragments. Some dark fragments (unidentified) Disseminated Pyrite 0-2% usually associated with altered Feldspar phenocrysts								
20.72 - 21.94	DARK GREY ^{BLACK} VERY FINE GRAINED FRAGMENTAL trace to large Feldspar altered (to calcite) ?? Phenocryst.								
21.94 - 27.43	RHYOLITE LAPPILITE TUFF (Bedded Tuff). Feldspar Phenocryst altered to Kaolinite. Trace Pyrite								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

ANOMALY:

Page 2 of 6

Property... OX OPTION Project No. 133 Depth Date Began
 Hole No. OXE-1 Co ord. Horizontal Length Date Completed
 Claim No. OX EAST Core Size Drilled By
 Grid No. Angle & Grid Direction Elevation Logged By

INTERVAL /METRES	DESCRIPTION	SAMPLE RECORD				Au G/T	Ag G/T	Cu %	Zn %
		FROM	TO	SAMPLE	WIDTH				
27.43 - 28.95	PASSES by GRADATION to FINE GRAINED RHYOLITE TUFF TRACE PYRITE								
28.95 - 31.39	DARK GREY - BLACK FRAGMENTAL (As described above). TRACE PYRITE								
31.39 - 32.00	RHYOLITIC LAPILLI TUFF (Bedded Tuff) to CRYSTAL TUFF Feldspar Phenocryst altered to Kaolinite TRACE PYRITE CORE L @ CONTACT (31.39) = 35° CORE L @ 31.7 = 35° BOTH CONTACTS Very sharp								
32.00 - 45.41	DARK GREY - BLACK FRAGMENTAL 39.93 - 40.54 grey fragmental tuff. (Bedded Tuff.) with light green colored mineral - Fuschite?? CORE L = 30°								
45.41 - 46.63	SILICEOUS (RHYOLITE) LAPILLI TUFF (Bedded Tuff). TRACE PYRITE CORE L = 33°								
46.63 - 50.44	BLACK Colored FRAGMENTAL 48.25 - 48.55 Buff Colored RHYOLITE LAPILLI TUFF Feldspar altered to Kaolinite TRACE PYRITE								
50.44 - 51.51	SHEARED, SILICEOUS and ALTERED RHYOLITE TUFF SILICEOUS Fragments, Feldspar altered to Kaolinite. clayey and TALCUM. disseminated Pyrite 2-3% plus a dark grey - black metallic mineral 0-1%.								
51.51 - 52.27	DARK GREY - BLACK FRAGMENTAL								



GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

ANOMALY:

Page 3 OF 6

Property OX OPTION Project No. 133 Depth Date Began
 Hole No. OXE-1 Co ord. Horizontal Length Date Completed
 Claim No. OX EAST Core Size Drilled By
 Grid No. Angle & Grid Direction Elevation Logged By

INTERVAL METRES	DESCRIPTION	SAMPLE RECORD				Au G/T	Ag G/T	Cu %	Zn %
		FROM	TO	SAMPLE	WIDTH				
52.27 - 53.76	SILICEOUS FRAGMENTAL TUFF Sheared and Altered. Feldspars all altered to Kaolinite. TALCose Disseminated Pyrite 2-3% with dark grey-black mineral at 0-1% carbonate.								
53.76 - 60.65	GREY to DARK GREY Colored FRAGMENTAL TUFF Irregular Pyrite stringers. - 57.30 - 57.33 CORE ANGLE = 15°								
60.65 - 69.64	MAROON Colored SILICEOUS FRAGMENTAL - BRECCIA (BUMB) Homomite stains & stringers. Trace to 2% Pyrite.								
69.64 - 70.41	DARK GREY - BLACK FRAGMENTAL								
70.41 - 72.69	SILICEOUS RHYOLITIC BEDDED TUFF Disseminated Pyrite 1-3% Fragments mainly light colored. Feldspars altered to Kaolinite. CORE L = 60°								
72.69 - 74.83	SILICEOUS Bedded CRYSTAL TUFF TRACE to 2% Pyrite. SILICEOUS, Fine grained, laminated. white feldspar + talc. Also much dark grey - black fragments								
74.83 - 77.26	RHYOLITIC LAPILLI TUFF TRACE to 2% Pyrite.								
77.26 - 78.33	BLACK COARSE ^{GRAINED} FRAGMENTAL Numerous coarse fragments. Feldspars? altered to kaolinite? - calcite? - trace Pyrite.								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

ANOMALY:

Page 4 of 6

Property OX OPTION Project No. 133 Depth Date Began
 Hole No. OXE-1 Co ord. Horizontal Length Date Completed
 Claim No. OX TEAST Core Size Drilled By
 Grid No. Angle & Grid Direction Elevation Logged By

INTERVAL METRES	DESCRIPTION	SAMPLE RECORD				Au G/T	Ag G/T	Cu %	Zn %
		FROM	TO	SAMPLE	WIDTH				
78.33-80.62	RHYOLITE LAPILLI TUFF Color light to buff with some maroon colored sections. Brecciated at part contact. Buff contacts very sharp. DIP = 23° TRACE to 2% PYRITE.								
80.62-83.21	FRAGMENTAL & BRECCIATED RHYOLITE TRACE to 5% PYRITE.								
83.21-91.89	Very fine grained light to buff colored RHYOLITE massive. TRACE PYRITE.								
91.89-94.18	FRAGMENTAL to BRECCIATED RHYOLITE light maroon color. Feldspar altered to kaolinite, ^{phreatic} Numerous fragments with light colored predominating.								
94.18-112.47	LIGHT GREEN FRAGMENTAL BRECCIATED RHYOLITE Light green color may be due to alteration of feldspar to green mica. 98.30-98.81 Buff-green colored section 99.21-100.18 " " " " TRACE PYRITE. 104.24-112.47 Buff-light maroon - light green colored section with layers.								
112.47-118.26	FRAGMENTAL RHYOLITE Buff colored. TRACE PYRITE. Feldspar altered to kaolinite. Some fragments with hematite staining. Buff light and green fragments present with the light colored predominating.								
118.26-120.64	Very fine grained Altered Rhyolite. Feldspar altered to kaolinite.								
118.26-120.64	Badly Broken Fragmental Rhyolite								



GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

ANOMALY:

Page 5 of 6

Property OX OPTION Project No. 133 Depth Date Began
 Hole No. OXE-1 Co ord. Horizontal Length Date Completed
 Claim No. OX EAST Core Size Drilled By
 Grid No. Angle & Grid Direction Elevation Logged By

INTERVAL /METRES	DESCRIPTION	SAMPLE RECORD				Au G/T	Ag G/T	Cu %	Zn %
		FROM	TO	SAMPLE	WIDTH				
120.64 - 123.14	BUFF - LIGHT GREEN COLORED FRAGMENTAL RHYOLITE								
123.14 - 124.05	SANDY to PEPPERY TEXTURED LAMINATED ROCK with light and dark bands Possibly an altered Sandstone ??? or altered Rhyolite ??? Core L 10° - 20° to 12° trace Pyrite.								
124.05 - 136.70	DARK GREY FRAGMENTAL TUFF								
136.70 - 137.95	RHYOLITE CRYSTAL TUFF trace Pyrite.								
137.95 - 139.75	DARK GREY FRAGMENTAL Phonocryst are altered feldspar and w. calcid.								
139.75 - 143.41	RHYOLITE LAPILLI TUFF to CRYSTAL TUFF trace Pyrite. Core L = 25°								
143.41 - 144.47	VERY SILICEOUS QUARTZ CRYSTAL TUFF Very fine grained. Core L = 25° trace Pyrite.								
144.47 - 146.61	GREY to DARK GREY FRAGMENTAL to DACITE TUFF								
146.61 - 146.91	RHYOLITE LAPILLI TUFF 1-2% Pyrite - disseminated and as stringers. Core L = 20°								
146.91 - 147.67	DARK GREY FRAGMENTAL								
147.67 - 148.47	DARK GREY BRECCIA - Agglomerate - Bombs. with dark and light fragments. Rhyolitic fragments contain % Pyrite								



**GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG**

ANOMALY:

Page 6 OF 6

Property OX OPTION Project No. 133 Depth 154.53 Date Began July 28/89
 Hole No. OXE-1 Co ord. 145 Horizontal Length 110 Date Completed July 30/89
 Claim No. OX EAST 2299E Core Size N.Q. Drilled By U.S. ALLEN, EXPL. & SERV.
 Grid No. Angle & Grid Direction 45° East Elevation 1371.6m Logged By P. J. Deane

INTERVAL METRES	DESCRIPTION	SAMPLE RECORD				Au G/T	Ag G/T	Cu %	Zn %
		FROM	TO	SAMPLE	WIDTH				
148.47-149.83	FINE GRAINED GREY DACITE TUFF								
	CORE ANGLE = 18°								
E.O.H.	HOLE STOPPED. CASING PULLED.								
	SUMMARY & COMMENTS:								
	THIS HOLE WAS STOPPED SHORT OF ITS OBJECTIVE (AN I.P. TARGET TO THE EAST) WHEN IT BECAME APPARENT THE DIP OF THE FORMATION WAS EAST INSTEAD OF WESTERLY. THE I.P. TARGET MAY HAVE BEEN MISSED OR IT WOULD HAVE REQUIRED TO DRILL A DEEPER HOLE.								
	THE HOLE WAS COLLARED INTO THE MAIN I.P. ANOMALY FROM 8.8-15.6 METERS - CONSISTING OF A MAJOR SHEAR AND FAULT ZONE - MINERALIZED WITH PYRITE.								
	THE V.L.F. & M. ANOMALY IS NOW BELIEVED TO HAVE BEEN CAUSED BY THIS SAME SHEAR. IF SO, THE V.L.F. APPEARS TO BE MISPLOTTED BY ABOUT 30 METRES.								
	THE SOURCE OF THE ARSENIC GEOCHEMISTRY SOIL ANOMALY MAY BE DUE TO ARSENOPYRITE ASSOCIATED WITH PYRITE WHICH WAS NOT OBSERVED OR RECOGNIZED BY THE WRITER.								
	THE SOURCE OF THE ZINC ANOMALY (801 P.P.M.) IS NOT KNOWN.								



GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Page 1 of 2

Property OX OPTION Project No. 133 Depth 154.53 Date Began July 28/89
 Hole No. OXE - 1 Co ord. 145 Horizontal Length 110 Date Completed July 30/89
 Claim No. OX EAST 2299E Core Size N.Q. Drilled By JAN ALPHEN Expl. Serv.
 Grid No. Now 62.0 Angle & Direction 45° East Elevation 1371.6 m Logged By P. J. DeJong

INTERVAL / METRES	NUMBER	WIDTH	Au. PPb	Ag. PPM	Cu.	Zn.	WIDTH X ASSAY					AVERAGES								
							WIDTH	Au.	Ag.	Cu.	Zn.	WIDTH	Au.	Ag.	Cu.	Zn.				
0 - 8.84	Casing	8.84																		
8.84 - 9.45	21592	0.61	8	.5																
9.45 - 10.36	21593	0.91	4	.3																
10.36 - 11.88	lost core	1.52																		
11.88 - 13.10	21594	1.22	4	.1																
13.10 - 13.71	21595	0.61	2	.1																
13.71 - 14.93	lost core	1.22																		
14.93 - 15.63	21596	0.70	3	.3																
15.63 - 16.40	21597	0.83	3	.2																
16.40 - 17.98	21598	1.52	1	.1																
17.98 - 21.03	21599	3.05	2	.1																
21.03 - 23.62	waste	2.59																		
23.62 - 24.69	21600	1.07	4	.1																
24.69 - 25.60	21601	0.91	5	.4																
25.60 - 27.12	602	1.52	2	.1																
27.12 - 28.95	603	1.83	1	.1																
28.95 - 30.44	waste	2.49																		
30.44 - 31.51	21604	1.07	2	.1																
31.51 - 32.27	waste	0.76																		
32.27 - 33.70	21605	1.49	2	.1																
33.70 - 60.65	waste	6.89																		
60.65 - 63.70	21606	3.05	2	.1																
63.70 - 66.75	21607	3.05	1	.1																
66.75 - 69.64	21608	2.89	1	.1																
69.64 - 70.34	waste	0.70																		
70.34 - 70.95	21609	0.61	1	.1																
70.95 - 72.54	21610	1.59	2	.1																
72.54 - 74.61	21611	2.07	3	.1																
74.61 - 75.89	21612	1.28	2	.2																
75.89 - 77.20	21613	1.31	3	.1																
77.20 - 78.33	21614	1.13	1	.1																
78.33 - 80.40	21615	2.13	2	.1																
80.40 - 81.99	21616	1.53	1	.1																
81.99 - 83.06	21617	1.07	1	.1																
83.06 - 85.04	21618	1.98	1	.3																
85.04 - 89.30	waste	4.26																		
89.30 - 91.89	21619	2.59	1	.1																
91.89 - 95.70	waste	3.81																		
95.70 - 96.10	21620	0.40	1	.1																



**GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD**

SLUDGES

Property OX OPTION Project No. 133 Depth 154.53 Date Began July 28/89
 Hole No. OXE-1 Co ord. 145 Horizontal Length 110 Date Completed July 30/89
 Claim No. OX EAST 2299E Core Size N.O. Drilled By VAN ALPHAN ENR SAU
 Grid No. new Angle & Direction 45° EAST Elevation 1371.6 m Logged By P. J. DEFEAUX

INTERVAL /METRES	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	WIDTH X ASSAY						AVERAGES							
							WIDTH	Au.	Ag.	Cu.	Zn.	WIDTH	Au.	Ag.	Cu.	Zn.				
5.79 - 8.84	20578	3.05	2	.3																
8.84 - 11.88	20579	3.04	9	.8																
11.88 - 14.93	20580	3.05	3	.1																
14.93 - 17.98	81	3.05	4	.8																
17.98 - 21.03	82	3.05	3	.1																
21.03 - 24.08	83	3.05	5	.1																
24.08 - 27.12	84	3.04	4	.3																
27.12 - 30.17	85	3.05	3	.1																
30.17 - 33.22	20586	3.05	1	.2																
33.22 - 154.53	No Sludge	121.11																		



GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

ZONE:

Page 1 of 1

Property OX OPTION Project No 133 Depth 44.80 Date Began July 18/89
 Hole No. OX-48 Co. ord. 1838 N Horizontal Length 17.0 Date Completed July 19/89
 Claim No. OX-C 9183.5 E Core Size N.Q. Drilled By VAN ALPHEN EXPL. SERV.
 Grid No. Angle & Grid Direction 67° 084° Elevation Same as OX-47 Logged By P.J. DeVeaux

INTERVAL METRES	MAJOR GEOLOGICAL CODE	DESCRIPTION	INTERVAL FEET / METRES	MINOR GEOLOGICAL CODE
0 - 3.66		CASING		
3.66 - 5.18		STAINED RHYOLITE FELDSPAR PORPHYRY		
5.18 - 6.25		MINERALIZED SHEARED RHYOLITE FELDSPAR PORPHYRY stained, 5% Pyrite, Broken.		
6.25 - 35.51		RHYOLITE FELDSPAR PORPHYRY color whitish to creamy, trace Pyrite		
35.51 - 36.88		BRECCIATED RHYOLITE		
		36.57 - 36.88 BLACK RHYOLITE (ALTERED)		
36.88 - 38.55		DAMASCUS SHEAR and FAULT ZONE Weakly mineralized with disseminated Pyrite. 1-2% strongly sheared and BRECCIATED SECTIONS WITH FAULT SOUVE.		
38.55 - 44.80		WHITE to CREAMY COLORED RHYOLITE Sheared and vesicular.		
E.O.H.		42.64 - 42.67 FAULT ZONE		
		CASING PULLED.		
		HIGHLIGHTS DAMASCUS SHEAR INTERSECTED FROM 36.88 - 38.55 BUT CONTAINED NO MASSIVE SULPHIDES. NO VALUES ARE EXPECTED.		



GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Property OX OPTION Project No. 133 Depth 44.80 Date Began JULY 18/89
 Hole No. OX-48 Co ord. 1838 N Horizontal Length 17.0 Date Completed JULY 19/89
 Claim No. OX-C 9045E Core Size N.Q. Drilled By VAN ALPHEN EXPL. SEC
 Grid No. DAMASCUS ZONE Angle & Direction 67° 084° Elevation Same as OX-47 Logged By P.J.D. Jean

INTERVAL METRES	NUMBER	WIDTH	Au. PPM	Ag. PPM	Cu. PPM	Zn. PPM	Pb PPM	WIDTH X ASSAY					AVERAGES								
								As PPM	Au	Ag	Cu	Zn	Pb	WIDTH	Au.	Ag.	Cu.	Zn.	Pb		
0 - 3.66	CASING	3.66																			
3.66 - 5.18	waste	1.52																			
5.18 - 6.25	21536	1.07	14	3.6	1063	771	145	221													
6.25 - 36.88	waste	30.63													grams	grams	%	%	%		
36.88 - 37.80	21537	0.92	104	27.6	193	18,975	2056	10,698	95.7	25.4	177	17,457	1891								
37.80 - 38.56	21538	0.76	270	47.4	263	9,765	3437	15,970	205.2	36.0	200	7421	2612	1.68	0.179	36.54	0.02	1.4	0.13	36.88-38.56	
38.56 - 44.80	waste	6.24							(300.9)	(61.4)	377	(24,878)	(4503)	(0.744)	0.00507	(1.060)	/T				
E.O.H.									179.1	36.54	224	14,808	131								
									0.179												

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

SLUDGE

Property OX OPTION Project No. 133 Depth 44.80 Date Began JULY 18/89
 Hole No. OX-48 Co ord. 1838 N Horizontal Length 17.0 Date Completed JULY 19/89
 Claim No. OX-C 9045 E Core Size N-Q Drilled By VAN ALPHEN EXPL. LTD.
 Grid No. DAMASCUS Zone Angle & Direction 67° 084° Elevation Same as OX-47 Logged By P. J. DeJoux

INTERVAL METRES	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	WIDTH X ASSAY						AVERAGES							
							WIDTH	Au.	Ag.	Cu.	Zn.	WIDTH	Au.	Ag.	Cu.	Zn.				
3.66 - 8.23	20526																			
8.23 - 11.28	20527	3.05																		
11.28 - 14.33	20528	3.05																		
14.33 - 17.37	20529	3.04																		
17.37 - 20.42	20530	3.05																		
20.42 - 23.47	20531	3.05																		
23.47 - 26.52	20532	3.05																		
26.52 - 29.57	20533	3.05																		
29.57 - 38.71	20534	9.14																		
38.71 - 44.80	20535	6.1																		
E.O.H.																				



GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

ZONE: DAMASCUS

Page 1 of 2

Property: OX OPTION Project No. 133 Depth: 66.14 Date Began: July 19/89
 Hole No. OX-49 Co. ord. 1704 N Horizontal Length: 20.8 Date Completed: July 20/89
 Claim No. OX-C 9195.5E Core Size: N.Q. Drilled By: VAN ALPHEN EXP. & SER.
 Grid No. Angle & Grid Direction: 72° 099° Elevation: 1 metre below OX-37 Logged By: P. J. DeJong

INTERVAL / METRES	MAJOR GEOLOGICAL CODE	DESCRIPTION	INTERVAL FEET / METRES	MINOR GEOLOGICAL CODE
0 - 3.05		EASING Start of Core 3.35		
3.35 - 17.07		WHITE to PINKISH COLORED RHYOLITE FELDSPAR PORPHYRY Fine grained, narrow sections with green (chlorite?) clots and fragments. @ 9.90 - 0.40 cm Pyrite stringer parallel to core 15.2 cm in length.		
17.07 - 17.46		BADLY BROKEN RHYOLITE (FELDSPAR) PORPHYRY STRONGLY SHEARED TRACE PYRITE.		
17.46 - 30.32		STRONGLY SHEARED ZONE (FAULT ZONE) VERY STRONGLY ALTERED (RHYOLITE PORPHYRY) Sections colored from grey to black. TRACE PYRITE.		
		18.29 - 18.38 sand (quartz) 18.38 - 18.74 RHYOLITE PEBBLES. 18.74 - 20.42 Last Core 20.42 - 20.60 BLACK MUDSTONE - ARGILLITE OR RHYOLITE FAULT ZONE 20.6 - 25.39 2-5% Pyrite fragments, clots, broken stringers. @ 27.43 10% Pyrite blebs. 28.04 - 28.22 SAND & PEBBLES.		
30.32 - 33.37		MUTUALIZED BRECCIATED RHYOLITE scattered Pyrite clots, cubes, clusters, x-tals (1-5%) CALCAREOUS.		
33.37 - 37.49		WHITE to CREAMY COLORED FINE GRAINED RHYOLITE - QUARTZ STERCITIC. Sections with quartz - Feldspar Phenocryst.		
37.49 - 47.85		RHYOLITE (FELDSPAR) PORPHYRY medium grained. TRACE PYRITE.		



**GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG**

ZONE:

Page 2 of 2

Property OX OPTION Project No. 133 Depth Date Began
 Hole No. OX-49 Co ord. Horizontal Length Date Completed
 Claim No. Core Size Drilled By
 Grid No. Angle & Grid Direction Elevation Logged By

INTERVAL / METRES	MAJOR GEOLOGICAL CODE	DESCRIPTION	INTERVAL FEET / METRES	MINOR GEOLOGICAL CODE
47.85 - 49.59		SLIGHTLY SHEARED RHYOLITE (FELDSPAR) PORPHYRY Broken, trace Pyrite		
49.59 - 50.08		DAMASCUS ORE ZONE - BLACK MASSIVE SULPHIDE - GALENA AND PYRITE, BRECCIATED		
50.08 - 52.73		VERY STRONGLY SHEARED ZONE (FAULT) ALTERED RHYOLITE PORPHYRY. Strongly fractured, soft and crumbly with some gouge. TRACE SULPHIDE - Pyrite		
50.08 - 50.35		Black gouge - calcareous & siliceous - kaolinized, 10% Pyrite		
50.35 - 50.90		Very strongly altered Porphyry (Rhyolite) with black (gouge) crumbly sections, 2-5% Pyrite.		
50.90 - 52.73		Very strongly sheared and badly broken - Very poor core recovery.		
52.73 - 58.82		STRONGLY SHEARED and ALTERED RHYOLITE PORPHYRY 57.6 - 58.82 Very strongly sheared and badly broken.		
58.82 - 60.04		MODERATELY SHEARED RHYOLITE (FELDSPAR) PORPHYRY. Trace Pyrite		
60.04 - 63.70		SLIGHTLY SHEARED RHYOLITE PORPHYRY		
63.70 - 66.14		MODERATELY to STRONGLY SHEARED RHYOLITE PORPHYRY		
<u>T.E.O.H.</u>		CASINGS PULLED.		
		HIGHLIGHTS		
		DAMASCUS ORE ZONE INTERSECTED FROM 49.59 to 50.08 METRES - CONSISTING OF BLACK MASSIVE SULPHIDE MATRIX OF PYRITE AND GALENA WITH SOME SPHALERITE.		
		HORIZONTAL WIDTH OF INTERSECTION IS 0.45 METRES AND PLUGS ON SECTION 1702 NORTH 30 METRES BELOW OX-37		
		SIGNIFICANT VALUES ARE EXPECTED.		


**GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD**

Property OX OPTION Project No. 153 Depth 66.14 Date Began JULY 19/89
 Hole No. OX-49 Co ord. 1704 N Horizontal Length 20.8 Date Completed JULY 20/89
 Claim No. OX-C 9155 E Core Size N.Q. Drilled By VAN ALPHEN EXPL. SER.
 Grid No. DAMASCUS ZONE Angle & Direction 72° 099° Elevation 1.M. below OX 37 Logged By P. J. DeJoux

INTERVAL /METRES	NUMBER	WIDTH	Au. PPb	Ag. PPm	Cu. PPm	Zn. PPm	Pb PPm	WIDTH X ASSAY					AVERAGES							
								AS PPm						WIDTH	Au.	Ag.	Cu.	Zn	Pb	
0 - 3.66	CASING	3.66																		
3.66 - 24.99	waste	21.33																		
24.99 - 25.39	21539	0.40	2	2.4	172	657	457	329												
25.39 - 30.33	21540	4.94	2	0.2	121	100	17	204												
30.33 - 31.85	waste	1.52																		
31.85 - 33.38	21541	1.53	1	0.3	65	113	19	43												
33.38 - 48.95	waste	15.57																		
48.95 - 49.59	21542	0.64	9	3.0	119	524	300	892												
49.59 - 50.08	43	0.49	820	296.1	1560	6743	16869	44282						0.49	0.820g	296.1g	0.01	6.8	1.7	49.59-50.08
50.08 - 50.35	44	0.27	53	34.3	352	3735	1615	3715						0.27	0.024g	(8.60g)	/T			
50.35 - 50.90	45	0.55	15	8.0	101	1194	501	917												
50.90 - 52.43	46	1.53	1	2.2	102	668	312	147												
52.43 - 66.14	waste	13.71																		
E.O.H.																				



**GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD**

Property OX OPTION Project No. 133 Depth 66.14 Date Began July 19/89
 Hole No. OX-49 Co ord. 1704 N Horizontal Length 20.8 Date Completed July 20/89
 Claim No. OX-C 9155 E Core Size N.Q. Drilled By JAN ALPHEN EPL
 Grid No. DAMASCUS ZONE Angle & Direction 72° 082' Elevation 1 meter below 04.37 Logged By P. J. D. Doreau

SLUDGE

INTERVAL METRES	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	WIDTH X ASSAY					AVERAGES								
							WIDTH	Au.	Ag.	Cu.	Zn.	WIDTH	Au.	Ag.	Cu.	Zn.				
3.66 - 6.10	20536	2.44																		
6.10 - 9.14	20537	3.04																		
9.14 - 12.19	20538	3.05																		
12.19 - 15.24	20539	3.05																		
15.24 - 18.29	20540	3.05																		
18.29 - 21.34	20541	3.05																		
21.34 - 24.38	20542	3.04																		
24.38 - 27.43	20543	3.05																		
27.43 - 29.57	20544	2.14																		
29.57 - 32.61	20545	3.04																		
32.61 - 38.71	20546	6.1																		
38.71 - 44.81	20547	6.1																		
44.81 - 50.90	20548	6.09																		
50.90 - 56.10	20549	5.2																		



GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

ZONE: DAMASCUS

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Property OX OPTIM Project No. 123 Depth 93.57 Date Began JULY 20/89
 Hole No. OX-50 Co ord. 1752.5 N Horizontal Length 21.3 Date Completed JULY 21/89
 Claim No. 01-C 9189.5 E Core Size N.O. Drilled By VAN ALPHEN EPL
 Grid No. _____ Angle & Grid Direction 77° 090° Elevation 1.09 below GX-43 Logged By P. J. DeJong

INTERVAL METRES	MAJOR GEOLOGICAL CODE	DESCRIPTION	INTERVAL FEET / METRES	MINOR GEOLOGICAL CODE
0 - 3.05		CASING		
3.05 - 12.41		FINE GRAINED RHYOLITE - RHYOLITE PORPHYRY		
12.41 - 14.93		RHYOLITE PORPHYRY		
14.93 - 21.94		FRAGMENTAL RHYOLITE (FELDSPAR) (TUFF?) FELDSPAR ABUNDANT to KAOLINITE - CARBONATE. Abundant Feldspar Phenocryst. Locally minor blobs and stringers of Pyrite.		
21.94 - 29.81		Fragmental to Brecciated RHYOLITE with Feldspar Phenocryst very abundant. Color white to cream. FELDSPAR altered to illite - carbonate @ 23.0' Pyrite blobs.		
29.81 - 35.66		VERY COARSE GRAINED RHYOLITE BRECCIA - AGGLOMERATE Abundant subangular to rounded quartz size (3mm) fragments, composed of buff colored schistose & grey quartz in a pale grey quartz - sericite matrix. Scattered Pyrite clots & stringers (1-3%)		
35.66 - 36.57		Dust Core		
36.57 - 37.49		VERY Poor Core Recovery - Mostly PEBBLES OF Smoky Grey QUARTZ (RHYOLITE BRECCIA)		
37.49 - 40.84		ALTERED Grey - Smoky RHYOLITE BRECCIA FELDSPAR altered to KAOLINITE - CARBONATE Trace Pyrite. Well, narrow fault gouge section.		

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

ZONE:

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Property OX OPTION Project No. 133 Depth Date Begun
 Hole No. OX-50 Co ord Horizontal Length Date Completed
 Claim No. Core Size Drilled By
 Grid No. Angle & Grid Direction Elevation Logged By

INTERVAL METRES	MAJOR GEOLOGICAL CODE	DESCRIPTION	INTERVAL FEET / METRES	MINOR GEOLOGICAL CODE
40.84 - 46.33		ALTERED FRAGMENTAL RHYOLITE PERPHYRITIC Small green fragment - chlorite? trace Pyrite, calcareous very numerous quartz stringers.		
46.33 - 56.54		White to Buff colored Rhyolite to Rhyolite Breccia @ 49.38 0.40 cm Pyrite sphaerulite stringer @ 10° to Core		
56.54 - 74.98		MASSIVE Fragmental Rhyolite Perphyry slightly streaked trace Pyrite 56.54 - 56.99 strongly streaked at contact.		
74.98 - 77.11		Fine Grained Rhyolite Perphyry. (Fragmental)		
77.11 - 78.33		MINERALIZED FRAGMENTAL RHYOLITE (PERPHYRITIC) 1-7% Pyrite as disseminations, blebs & stringers. Dark green - black fragments.		
78.33 - 84.43		MAIN DAMASCUS MINERALIZED ZONE BLACK SULPHIDE-RICH (SEMI-MASSIVE) MATRIX CONSISTING MAINLY OF FINE PYRITE WITH BLENDS & STREAKS OF GALENA AND SPHALERITE, AND GREY QUARTZ FRAGMENTS. Host Rock is an altered quartz Rhyolite Breccia. QUARTZ FRAGMENT ARE NUMEROUS. MANY SPECTRES ARE BADLY BROKEN AND FRAGMENTED WITH POOR Cu RECOVERY. 81.68 - 82.60 Very badly broken core. 82.60 - 83.21 Very Poor Cu Recovery - Pebbles only 83.21 - 84.43 Lost Core. CORE \angle @ CONTACT (78.33) = 5 to 10°, Both Contacts SHARP.		

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

ZONE:

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Property OX OPTION Project No. 133 Depth Date Began
 Hole No. OX-50 Co ord. Horizontal Length Date Completed
 Claim No. Core Size Drilled By
 Grid No. Angle & Grid Direction Elevation Logged By

INTERVAL FEET / METRES	MAJOR GEOLOGICAL CODE	DESCRIPTION	INTERVAL FEET / METRES	MINOR GEOLOGICAL CODE
84.43 - 89.46		VERY STRONGLY SHEARED ZONE - FAULT BRECCIA. TRACE Pyrite		
		84.43 - 85.65 VERY BADLY BROKEN Core with gouge bands.		
		85.65 - 86.60 Lost Core.		
89.46 - 90.22		STRONGLY ALTERED RHYOLITE		
90.22 - 93.57		SLIGHTLY SHEARED RHYOLITE.		
F.O.H.				
		ACID TEST @ 70.4 = 75° 45' CASING PULLED.		
		HIGHLIGHTS: DAMASCUS MINERALIZED ZONE INTERSECTED FROM		
		78.33 to 84.43. ZONE CONSISTS OF BLACK SULPHIDE-RICH		
		MATRIX OF MAINLY FINE Pyrite WITH BLEBS, PATCHES		
		and STREAKS OF GALENA and SPHALERITE, WITH QUARTZ		
		FRAGMENTS.		
		INTERSECTION IS LOCATED AT 1752.5 N, 72 METRES BELOW		
		OX-43. HORIZONTAL WIDTH OF MINERALIZATION IS 1 METRE		


**GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD**

Property OX OPTION Project No. 153 Depth 93.57 Date Began JULY 20 / 89
 Hole No. OX - 50 Co ord. 1752.5 N Horizontal Length 21.3 Date Completed JULY 21 / 89
 Claim No. OX - C 9100 E Core Size N.Q. Drilled By VAN ALPHEN EPL.
 Grid No. DAMASCUS. ZONE Angle & Direction 77° 090 Elevation 1.09 Lower than Logged By P. J. DeJoux
OX - 43

INTERVAL METRES	NUMBER	WIDTH	Au. PPb	Ag. PPM	Cu. PPM	Zn. PPM	Pb PPM	WIDTH X ASSAY					AVERAGES							
								AS PPM	Au	Ag	Cu	Zn	Pb	WIDTH	Au.	Ag.	Cu.	Zn	Pb	
0 - 3.05	easing	3.05																		
3.05 - 29.81	waste	26.76																		
29.81 - 31.18	21547	1.37	21	1.4	33	206	54	678												
31.18 - 32.86	21548	1.68	4	1.3	39	1013	73	432												
32.86 - 49.38	waste	16.52																		
49.38 - 50.29	21549	1.91	22	1.4	120	6486	18	361												
50.29 - 77.11	waste	26.82																		
77.11 - 78.33	21550	1.22	4	10.2	189	430	103	487												
78.33 - 79.03	551	0.7	310	122.0	51.4	51381	102836	13779	217	85.4	360	35966	11785							
79.03 - 79.80	52	0.77	112	58.0	222	6982	2855	5189	86.2	44.6	171	5314	2198							
79.80 - 80.47	53	0.67	370	82.8	377	35338	13570	17693	247.9	55.4	252	23676	9092							
80.47 - 81.08	54	0.61	410	97.5	507	44237	14214	15488	250.1	59.4	309	26984	8670							
81.08 - 81.69	55	0.61	380	117.3	417	23985	13789	15015	231.8	71.55	254	14631	8411	grams	grams	%	%	%		
81.69 - 82.60	56	0.91	310	195.6	513	33991	20807	14677	282.1	178.0	467	30932	18934							
82.60 - 83.21	21557	0.61	258	124.5	210	43955	23352	12157	152.5	75.9	128	26812	14243	4.88	0.300g	116.8	0.04	3.3	1.5	78.33-83.21
83.21 - 84.43	lost core	1.22							15676	(570.2)	(1941)	(64.315)	(73.333)	(1.144)	0.00802	3.4022	/T			
84.43 - 85.65	21558	1.22	10	14.6	101	4003	1327	361	(300.7)	(116.8)	(397)	(33.67)	(15.027)							
85.65 - 86.00	lost core	0.35																		
86.00 - 86.41	21559	0.41	80	59.9	426	10999	4880	3525	32.8	24.5	174	4509	2001							
86.41 - 87.48	21560	1.07	38	57.2	366	5707	4119	1159	40.6	61.2	327	6106	4467	1.48	0.049	57.9	0.034	0.71	0.43	86.00-87.4
87.48 - 89.00	21561	1.52	19	11.5	211	1060	549	1830												
89.00 - 89.46	21562	0.46	1	2.5	107	824	281	514												
89.46 - 90.22	waste	0.76																		
90.22 - 90.53	lost core	0.31																		
90.53 - 93.57	waste	3.04																		
E.O.H.																				



GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

ZONE: DAMASCUS

Page 1 of 2

Property OX OPTION Project No. 133 Depth 111.86 Date Began July 22/89
 Hole No. OX-S1 Co ord. 1696 N Horizontal Length 44.6 Date Completed July 27/89
 Claim No. OX-C 9175.5 E Core Size N.Q. Drilled By VAN ALPHEN RPL & S
 Grid No. Angle & Grid Direction 65° 098° Elevation 0.92m above OX-49 Logged By P.J. Dabney

INTERVAL METRES	MAJOR GEOLOGICAL CODE	DESCRIPTION	INTERVAL FEET / METRES	MINOR GEOLOGICAL CODE
0 - 3.05		CASING		
3.05 - 6.09		Buff Colored FRAGMENTAL RHYOLITE Iron stained, sections with disseminated grey-green fragments, pyrite, + blebs & stringers		
6.09 - 7.62		LIGHT GREEN DACITE ??		
7.62 - 9.14		Light Green Colored DACITE ?		
9.14 - 11.28		Buff Colored Fragmental RHYOLITE green (black) fragments.		
11.28 - 32.31		MASSIVE WHITE - BUFF COLORED RHYOLITE - RHYOLITE PORPHYRY. Sections with disseminated pyrite. Partly siliceous.		
32.31 - 38.1		Light Green-grey DACITE - DACITE PORPHYRY ?		
38.1 - 41.45		RHYOLITE PORPHYRY Very siliceous fine grained cherty sections.		
41.45 - 51.20		RHYOLITE BRECCIA - AGGLOMERATE COARSE FRAGMENTS.		
51.20 - 52.12		SHEARED and BROKEN FRAGMENTAL RHYOLITE. PORPHYRITIC.		
52.12 - 67.97		RHYOLITE BRECCIA		
67.97 - 100.28		FRAGMENTAL RHYOLITE to RHYOLITE TUFF ?? 89.29 - 82.60 cherty section with green (black) fragments.		
100.28 - 104.79		DAMASCUS MINERALIZED ZONE - SOLID SULPHIDE - MAINLY PYRITE. NARROW ALTERED AND SHEARED SECTIONS CALCAREOUS. BLACK SIFT MATRIX. STRONGLY ALTERED ZONE. PART L at WEST CONTACT and PART CONTACT in 19° B.M. contact - very sharp. FOR THE FIRST TIME THERE IS A LACK OF SHEARING ON THE EAST WALL.		



**GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG**

ZONE: DAMASCUS

Page 1 OF 3

Property... OX OPTION Project No. 133 Depth 163.67 Date Began July 24/89
 Hole No. OX-52 Co ord. 1740 N Horizontal Length 50 Date Completed JULY 26/89
 Claim No. OX-C 91695 E Core Size N.Q. Drilled By VAN ALPHEN EXP. SERV.
 Grid No. Angle & Grid Direction 72° 090° Elevation 4.45 M above OX-50 Logged By P.J. DeJong

INTERVAL METRES	MAJOR GEOLOGICAL CODE	DESCRIPTION	INTERVAL FEET / METRES	MINOR GEOLOGICAL CODE
0 - 3.05		LIGHT GREY - BUFF COLORED FRAGMENTAL RHYOLITE Siliceous fragments Pyrite clots with angular & rounded fragments, + irregular stringers.		
3.05 - 18.89		BUFF COLORED FRAGMENTAL RHYOLITE PORPHYRITIC. Numerous Pyrite clots, specks, blubs, and subrounded to angular fragments.		
18.89 - 28.8		BUFF COLORED RHYOLITE to RHYOLITE PORPHYRY Trace Pyrite green colored fragments.		
28.8 - 37.18		BUFF to PINKISH Colored Fine grained RHYOLITE		
37.18 - 40.23		BADLY BROKEN RHYOLITE. Siliceous Fragments - Trace Pyrite. @ 39.62 - 2.5 cm zone of RHYOLITE BRECCIA.		
40.23 - 44.50		WHITE COLORED RHYOLITE Fine grained - Cherty - ALTERED. Small Feldspar Phenocryst - Altered & KAOLINIZED.		
44.50 - 47.03		MINERALIZED WHITE RHYOLITE to RHYOLITE PORPHYRY GREEN (cherty) fragments. DISSEMINATED PYRITE (1-2%) 46.33 - 46.87 Irregular Pyrite stringer (.63 cm wide) @ 5-10% to core.		
47.03 - 47.70		BEDDED RHYOLITE TRUFF Dip L = 50° SILICEOUS BANDS - FELDSPAR PHENOCRYST - ALTERED to KAOLINITE.		
47.70 - 49.83		MINERALIZED WHITE to BUFF COLORED RHYOLITE Irregular Pyrite stringers @ 5-10% to core with several .63 cm x 2.5 cm blubs of SPHALTERITE		



GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

ZONE:

Page 2 of 3

Property OX OPTION Project No. 133 Depth Date Began
 Hole No. OX-52 Co ord. Horizontal Length Date Completed
 Claim No. OX-C Core Size Drilled By
 Grid No. Angle & Grid Direction Elevation Logged By

INTERVAL METRES	MAJOR GEOLOGICAL CODE	DESCRIPTION	INTERVAL FEET / METRES	MINOR GEOLOGICAL CODE
(47.70 - 49.83)	CONT.	48.40 - 48.46 Mass Solid Sulphide - Pyrite with blobs of SPHALERITE & visible CHALCOPYRITE		
		49.77 - 49.83 SOLID SULPHIDE - Fine Pyrite with Blobs of CHALCOPYRITE and SPHALERITE.		
49.83 - 75.28		RHYOLITE BRECCIA - LAPILLI TUFF FELDSPAR STRONGLY ALTERED to Kaolinite - carbonate. Fine yellowish carbonate stringers abundant. Pyrite variable 0-3%		
75.28 - 77.42		SHEARED RHYOLITE BRECCIA Narrow sections strongly kaolinized.		
77.42 - 81.38		WHITE colored RHYOLITE BRECCIA. CALCAREOUS.		
81.38 - 90.03		VERY FINE GRAINED WHITE RHYOLITE Sections sheared and badly broken. SILICEOUS.		
		82.60 - 83.51 Badly broken & sheared. - kaolinized.		
		85.34 - 85.65 Brecciated & sheared. - kaolinized.		
		86.87 - 87.02 luggy Pyrite stringers parallel to core.		
		85.65 - 90.03 core is sheared & broken.		
90.63 - 112.16		FRAGMENTAL RHYOLITE Rock is much more competent.		
112.16 - 113.99		MUTUALIZED FRAGMENTAL RHYOLITE 5% Pyrite as irregular stringers, fragments & clots.		

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

ZONE: DAMASCUS

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Property OX OPTION Project No. 133 Depth Date Began
 Hole No. OX-52 Co ord. Horizontal Length Date Completed
 Claim No. OX-C Core Size Drilled By
 Grid No. Angle & Grid Direction Elevation Logged By

INTERVAL / METRES	MAJOR GEOLOGICAL CODE	DESCRIPTION	INTERVAL FEET / METRES	MINOR GEOLOGICAL CODE
113.99 - 148.43		FRAGMENTAL RHYOLITE		
		114.91 - 116.43 SHEARED & Fractured		
		117.04 - 118.26 Disseminated Pyrite 1-3%		
		@ 141.58 Pyrite clusters.		
148.43 - 153.01		Badly Broken Core (FRAGMENTAL RHYOLITE)		
153.01 - 155.14		BADLY BROKEN CORE OF GREY COLORED SILICEOUS BRECCIA.		
		Large (1.27cm) subrounded Pyrite fragments		
155.14 - 156.05		MINERALIZED DAMASCUS ZONE - PYRITE 5-20%		
155.14 - 156.05				
156.05 - 160.62		GREY-BLACK FAULT BRECCIA (ALTERED & SHEARED RHYOLITE BRECCIA)		
		Large Rhyolite Fragments with black gouge which is soft and crumbly		
		Trace Pyrite Core Angle is 9°		
160.62 - 163.67		SHEARED RHYOLITE BRECCIA.		
E.O.H.		ACID TEST @ 130M = 72° CASING PULLED.		
		HIGHLIGHTS:		
		DAMASCUS ZONE INTERSECTED FROM 155.14 TO 156.05 METRES. MINERALIZATION IS PYRITE FROM 5-20%.		
		THE ZONE WAS INTERSECTED 60 METRES BELOW THAT OF OX-50 AND IS BELIEVED TO BE UNDER THE PLUNGE.		
		THE ZONE APPEARS TO PLUNGE SOUTH AT ABOUT 27°. THIS WOULD EXPLAIN THE "MISSES" IN HOLES OX 49, 50, 51 AND THE "MISSES" IN HOLES 47, 48 AND OX-50. (THIS HOLE).		
		THE ZONE REVERSES DIP FROM EAST TO WEST WITH DEPTH.		


**GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD**

Property OX OPTION Project No. 133 Depth 163.67 Date Began July 24/89
 Hole No. OX-52 Co ord 1740 N Horizontal Length 50 Date Completed July 26/89
 Claim No. OX-C 9169.5 E Core Size N.Q. Drilled By VAN ALPHEN EXPL. SER.
 Grid No. _____ Angle & Direction _____ Elevation 4.45 m. above 0450 Logged By P.J. DeJoux

INTERVAL METRES	NUMBER	WIDTH	Au. PPb	Ag. PPM	Cu. PPM	Zn. PPM	Pb PPM	WIDTH X ASSAY				AVERAGES							
								Au	Ag	Zn	Pb	WIDTH	Au.	Ag.	Cu.	Zn.			
0 - 3.05	Casing	3.05																	
3.05 - 7.77	waste	4.72																	
7.77 - 9.75	21573	1.98	113	.4															
9.75 - 11.28	21574	1.53	19	.4															
11.28 - 12.80	75	1.52	9	.1															
12.80 - 14.33	76	1.53	9	.2															
14.33 - 15.85	77	1.52	20	.3															
15.85 - 17.37	78	1.52	17	1.3															
17.37 - 18.96	79	1.59	13	.4															
18.96 - 43.89	waste	24.93																	
43.89 - 46.33	21580	2.44	8	1.7															
46.33 - 46.85	81	0.52	24	2.8															
46.85 - 47.67	waste	0.82																	
47.67 - 48.68	21588	1.01	250	29.5															
48.68 - 49.68	83	1.00	20	1.7															
49.68 - 49.90	84	0.22	26	29.1															
49.90 - 87.02	waste	37.12																	
87.02 - 87.33	21585	0.31	56	1.4															
87.33 - 112.17	waste	24.84																	
112.17 - 114.0	21586	1.83	6	2.5															
114.0 - 117.04	waste	3.04																	
117.04 - 118.26	21587	1.22	5	2.7															
118.26 - 153.92	waste	35.66																	
153.92 - 155.14	21588	1.22	83	22.6										grams	grams	%	%		
155.14 - 156.05	89	0.91	590	175.1			8934	10.714	536.9	159.3	8130	9749							
156.05 - 157.58	21590	1.53	38	26.4			4087	1521	58.1	40.4	6253	2327							
157.58 - 158.95	21591	1.37	350	63.0			13.551	4864	479.5	86.3	18,565	6663	3.81	0.282	75.0		0.86	0.49	155.14 - 158.95
158.95 - 159.10	lost Core	0.15							1074.5	286.0	32,948	18,739	(0.611)	0.00807	2.1802				
159.10 - 163.67	waste	4.57							282.0	75.0	5647	4918							
									PPM: 0.2829										
E.O.H.																			



GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

ZONE:

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Property OX OPTION Project No. 133 Depth 81.38 Date Began JULY 16/89
 Hole No. OX-47 Co ord. 1838 N Horizontal Length Date Completed JULY 18/89
 Claim No. OX-C 9183.5 E Core Size N.Q. Drilled By VAN ALPHEN Expl. Serv.
 Grid No. Angle & Grid Direction 76.5° @ 084° Elevation 3.2m lower than OX-21
 Logged By P.J. DeJoux

INTERVAL / METRES	MAJOR GEOLOGICAL CODE	DESCRIPTION	INTERVAL FEET / METRES	MINOR GEOLOGICAL CODE
0 - 3.66	-	CASING		
3.66 - 43.43		RHYOLITE FELDSPAR PORPHYRY		
		Massive white to pink feldspar phenocryst in finer grained matrix of quartz with lesser feldspar.		
		Feldspars altered to kaolinite and possibly sericite		
		Brownish color alteration as a result of oxidized sections (upper) strongly iron stained with some manganese staining associated with fractures.		
		Disseminations of Pyrite as blebs, patches and clots and fine irregular stringers.		
		Foliation Fractured and/or brecciated.		
		3.65-5.48 Broken & stained		
		6.86-7.16 5% Pyrite		
		8.01-8.7 5% Pyrite		
		9.23-10.21 1-4% "		
		12.13-12.65 2-3% Pyrite		
		17.68-19.5 3-6% "		
		20.72-21.33 3-8% "		
		28.04-28.65 Brecciated with cherty fragments with 1% Pyrite		
		22.55-23.04 3-5% Pyrite		
		@ 30.9 - 0.40 cm sphalerite stringer @ 20° to Core.		
		39.47-39.77 30% Pyrite as blebs, patches & clots.		
		35.66-37.49 4% Pyrite		
		39.77-42.52 2% Pyrite		
		42.52-43.13 25% Pyrite as blebs, patches & stringers.		
		43.13-43.43 Broken		
		CORE ANGLE 20°		
43.43 - 57.42		Massive to Broken Rhyolite Porphyry		
57.42 - 73.09		MINERALIZED BRECCIATED STRONGLY SHEARED to FAULT ENGULF ZONE.		
		Disseminated Pyrite 1-8%		
73.09 - 76.04		MINERALIZED WHITE COLORED RHYOLITE. Sheared & SERICITE		
		Scattered 1-5% Pyrite		
		75.59-76.04 10-15% Pyrite		



**GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG**

ZONE:

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Property OX OPTION Project No. 133 Depth Date Began
 Hole No. OX-47 Co ord. Horizontal Length Date Completed
 Claim No. Core Size Drilled By
 Grid No. Angle & Grid Direction Elevation Logged By

INTERVAL / METRES	MAJOR GEOLOGICAL CODE	DESCRIPTION	INTERVAL FEET / METRES	MINOR GEOLOGICAL CODE
76.04-81.38		WHITE COLORED RHYOLITE with weakly disseminated Pyrite (1-3%)		
E.O. H.		76.96-77.42 5-10% Pyrite		
		ACID TEST @ 57 Metres = 78° (Hole Stopped) CASING REMOVED.		
		HIGHLIGHTS: MAIN DAMASCUS ZONE (SHEAR & FAULT ZONE) WAS INTERSECTED FROM 57.42 to 73.09 METRES. ONLY DISSEMINATED PYRITE WAS NOTED. THIS ZONE WAS INTERSECTED 53.5 METRES BELOW OX-21 ON SECTION 1839.5 NORTH.		



GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

P-1 of 2

Property UX OPTION Project No. 122 Depth 81.38 Date Began JULY 16/89
 Hole No. OX-47 Co ord. 1838 N Horizontal Length 17.2 Date Completed JULY 18/89
 Claim No. OX-C 9045 E Core Size N.Q Drilled By VAN ALPHEN EXPL.
 Grid No. DAMASCUS TONE Angle & Direction 76.5° @ 084° Elevation 3.2m below ox-21 Logged By P. J. DeVeaux

INTERVAL METRES	NUMBER	WIDTH	Au. PPb	Ag. PPM	Cu. PPM	Zn. PPM	Pb PPM	As PPM	WIDTH X ASSAY					AVERAGES						
									WIDTH	Au.	Ag.	Cu.	Zn.							
0 - 3.66	CASING	3.66																		
3.66 - 6.86	waste	3.20																		
6.86 - 7.16	21500	.3	14	4.1	661	479	72	105												
7.16 - 8.02	waste	.86																		
8.02 - 8.67	21501	0.65	15	5.8	408	898	327	231												
8.67 - 9.24	waste	0.57																		
9.24 - 10.21	21502	0.97	5		165	545	137	100												
10.21 - 12.13	waste	1.92																		
12.13 - 12.65	21503	0.52	5	1.0	83	349	147	197												
12.65 - 17.69	waste	5.04																		
17.69 - 19.51	21504	1.82	9	9.0	177	117	22	274												
19.51 - 20.73	waste	1.22																		
20.73 - 21.34	21505	0.61	4	4.0	323	693	50	283												
21.34 - 22.56	waste	1.22																		
22.56 - 23.01	21506	.45	6	2.6	202	307	155	553												
23.01 - 28.04	waste	5.03																		
28.04 - 28.65	21507	0.61	131	4.4	54	3745	777	2844												
28.65 - 35.66	waste	7.01																		
35.66 - 37.49	21508	1.83	10	6.6	183	1081	593	742												
37.49 - 40.54	21509	3.05	3	3.0	226	691	380	120												
40.54 - 41.91	21510	1.37	2	1.4	41	940	381	160												
41.91 - 43.13	21511	1.22	30	11.7	457	2147	1361	429												
43.13 - 57.61	waste	14.48																		
57.61 - 58.37	21512	0.76	21	6.5	255	775	267	1658												
58.37 - 58.98	21513	0.61	43	5.1	318	1509	823	3962												
58.98 - 59.19	waste	0.21																		
59.19 - 59.28	lost Core	0.09																		
59.28 - 60.04	21514	0.76	125	28.1	312	4078	2864	7687												
60.04 - 60.35	21515	0.31	74	8.6	143	1860	843	7473												
60.35 - 60.96	21516	0.61	31	7.7	354	991	373	2170												
60.96 - 61.72	21517	.76	43	8.2	138	1899	1211	4929												
61.72 - 62.79	18	1.07	280	52.5	258	15985	5509	21667												
62.79 - 63.09	lost Core	0.3																		
63.09 - 63.70	21519	0.61	250	21.8	195	9832	3451	27374												
63.70 - 64.47	21520	0.77	220	17.9	129	8573	2779	23634												
64.47 - 64.77	21521	0.3	150	20.1	191	13366	3046	9966												
64.77 - 65.22	waste	0.45																		
65.22 - 65.53	lost Core	0.31																		
65.53 - 66.29	21522	0.76	59	14.3	262	3251	992	3456												

61.72 - 62.79 (0.346) (6.00802 1.502) / T



GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

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Property OX OPTION Project No. 133 Depth Date Began

Hole No. OX-47 Co ord. Horizontal Length Date Completed

Claim No. Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

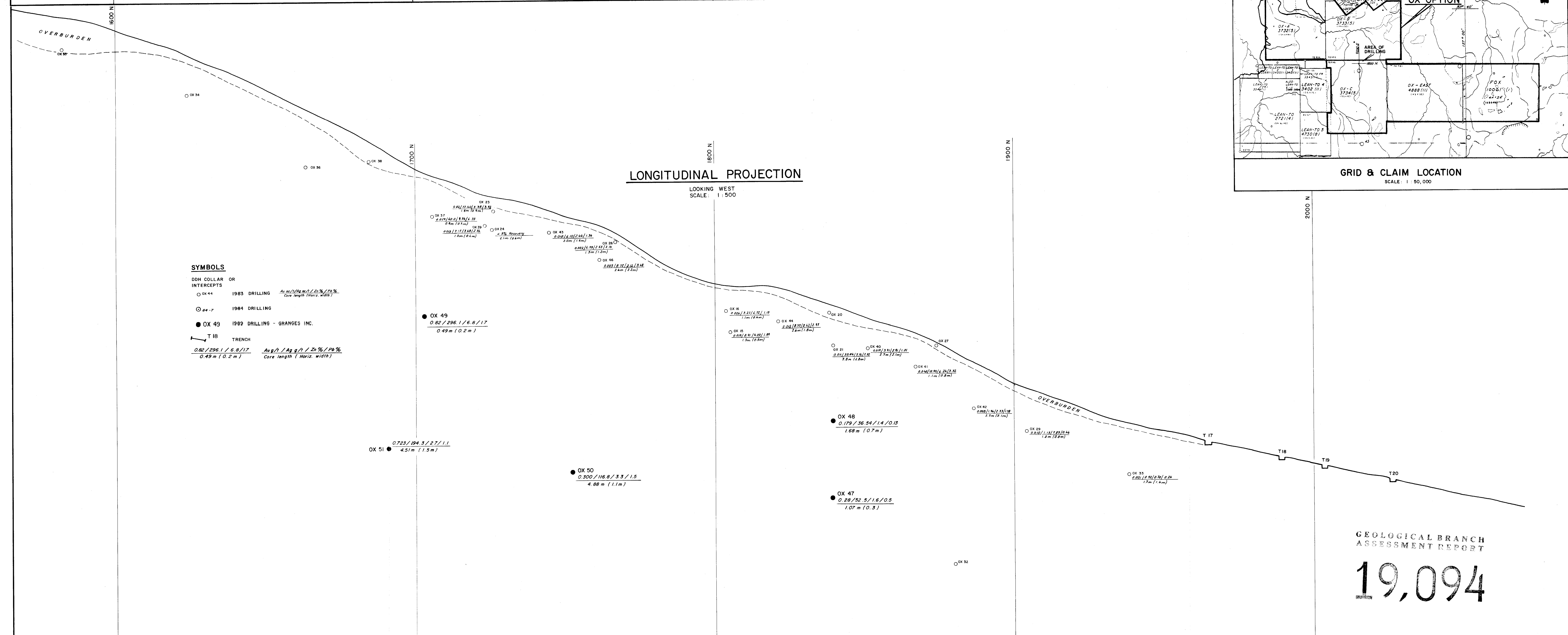
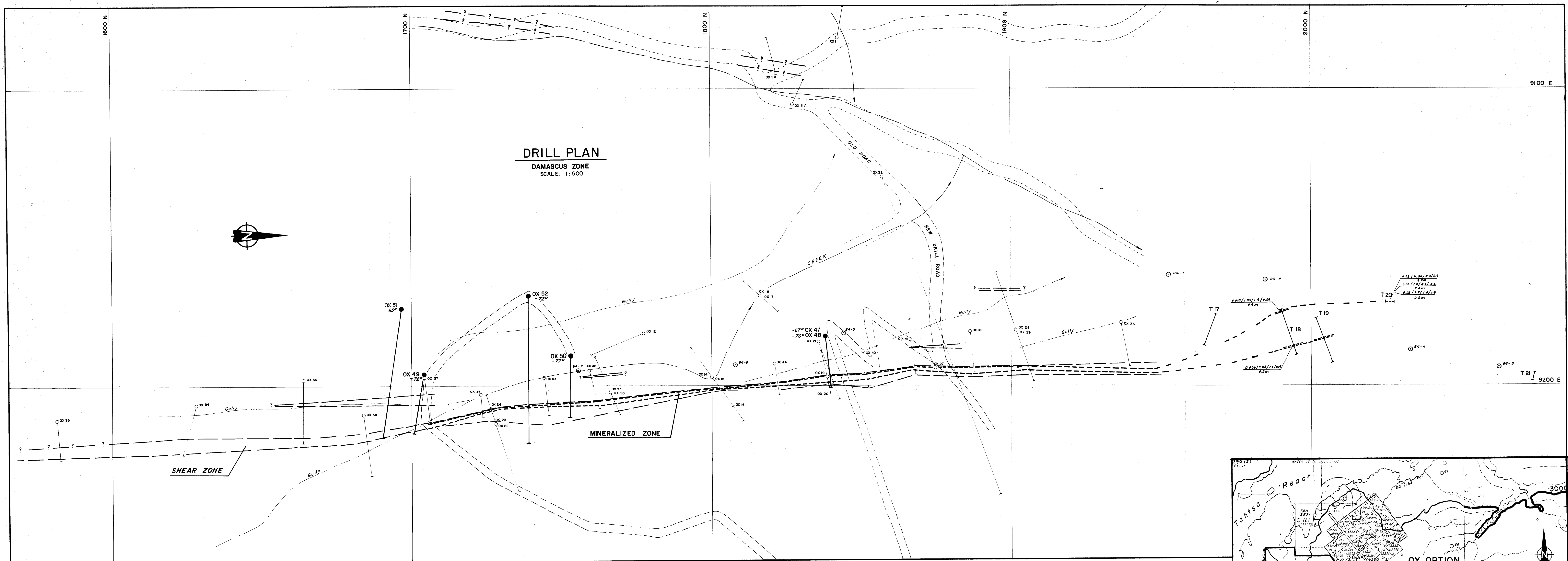
INTERVAL / METRES	NUMBER	WIDTH	Au. PPb	Ag. PPM	Cu. PPM	Zn. PPM	Pb PPM	WIDTH X ASSAY					AVERAGES							
								As PPM						WIDTH	Au.	Ag.	Cu.	Zn.		
66.29 - 67.06	21523	0.77	24	7.6	192	1392	501	1393												
67.06 - 67.82	24	0.76	7	4.3	72	1102	616	460												
67.82 - 68.73	25	0.91	11	3.1	145	550	242	613												
68.73 - 69.19	lost Core	0.46																		
69.19 - 69.95	21526	0.76	130	17.0	186	5729	3082	11,034												
69.95 - 70.56	27	0.61	6	1.0	117	240	101	170												
70.56 - 72.24	lost Core	1.68																		
72.24 - 73.06	21528	0.82	15	8.6	388	2084	676	773												
73.06 - 73.76	21529	0.7	9	7.2	414	4465	567	101												
73.76 - 74.52	21530	0.76	22	7.5	796	916	517	264												
74.52 - 75.29	21531	0.77	14	4.8	630	315	135	231												
75.29 - 75.60	21532	1.08	36	13.4	1086	984	584	609												
75.60 - 76.05	33	0.45	13	3.4	270	660	264	231												
76.05 - 76.81	34	0.76																		
76.81 - 77.42	21535	0.61	8	1.8	464	147	55	18												
77.42 - 81.38	waste	3.96																		
E.O.H.																				


**GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD**

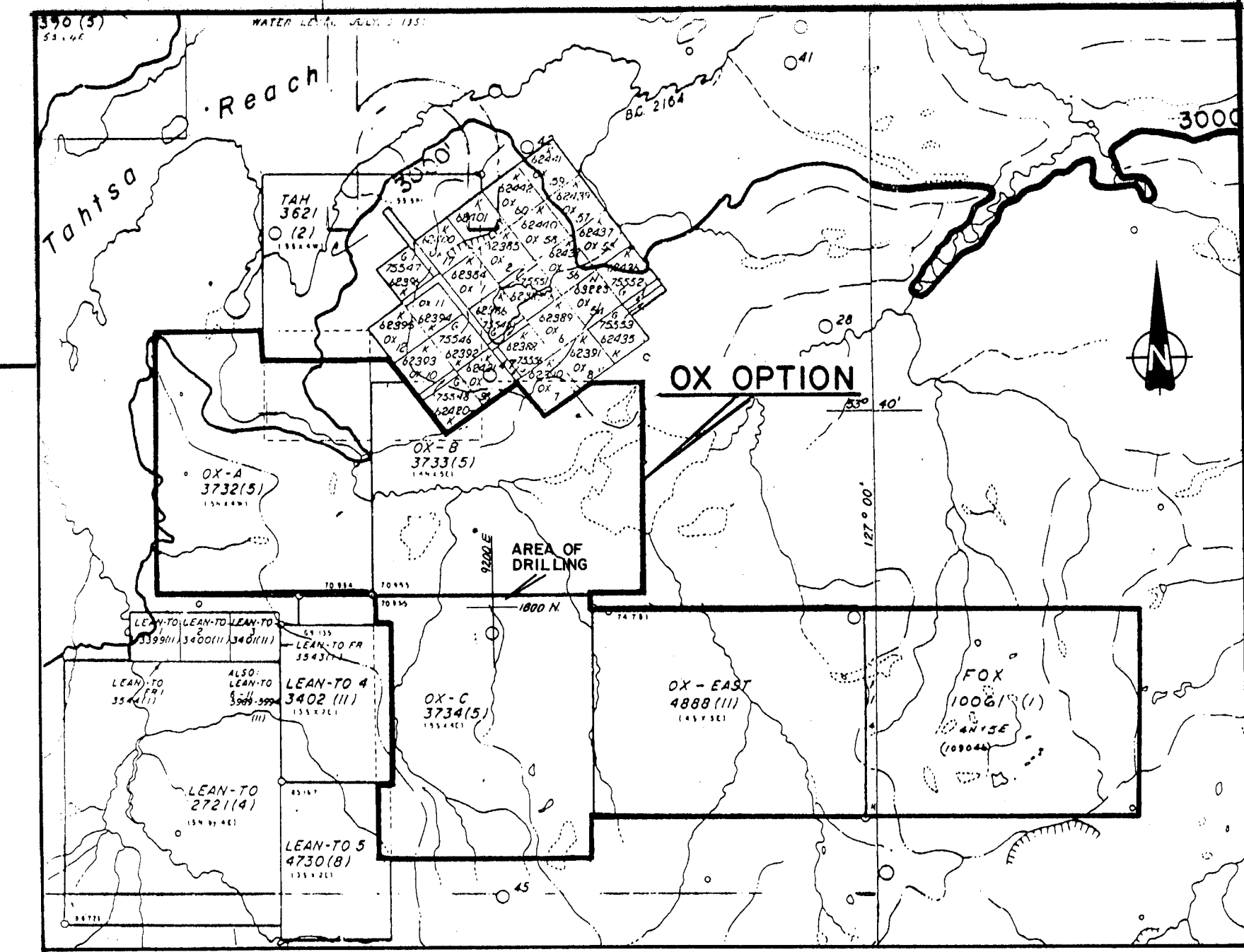
SLUDGE

Property OX OPTION Project No. 133 Depth 81.38 Date Began July 16/84
 Hole No. OX-47 Co ord. 1838 N Horizontal Length 17.2 Date Completed July 18/84
 Claim No. OX-C 9045 E Core Size N.Q. Drilled By VAN ALPHEN
 Grid No. DAMASCUS TAFE Angle & Direction 76.5° 084 Elevation 3.2m below OX-21 Logged By P.J.D.

INTERVAL /METRES	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	WIDTH X ASSAY						AVERAGES							
							WIDTH	Au.	Ag.	Cu.	Zn.	WIDTH	Au.	Ag.	Cu.	Zn.				
3.66-6.71	20500	3.05																		
6.71-9.75	20501	3.04																		
9.75-12.80	20502	3.05																		
12.80-15.85	20503	3.05																		
15.85-18.90	20504	3.05																		
18.90-21.95	20505	3.05																		
21.95-24.99	20506	3.04																		
24.99-28.04	20507	3.05																		
28.04-31.09	20508	3.05																		
31.09-34.14	20509	3.05																		
34.14-37.19	20510	3.05																		
37.19-40.23	20511	3.04																		
40.23-43.28	20512	3.05																		
43.28-46.33	20513	3.05																		
46.33-49.38	20514	3.05																		
49.38-52.43	20515	3.05																		
52.43-55.47	20516	3.04																		
55.47-58.52	20517	3.05																		
58.52-61.57	20518	3.05																		
61.57-64.62	20519	3.05																		
64.62-67.67	20520	3.05																		
67.67-70.71	20521	3.04																		
70.71-73.76	20522	3.05																		
73.76-76.81	20523	3.45																		
76.81-79.86	20524	3.05																		
79.86-81.38	20525	1.52																		



- SYMBOLS**
- DDH COLLAR OR INTERCEPTS
 - OX 44 1983 DRILLING *As 101/108 m / 1.2% / 19%*
Cure length (Horiz. width)
 - OX 47 1984 DRILLING
 - OX 49 1989 DRILLING - GRANGES INC.
 - T 18 TRENCH
0.80 / 296.1 / 6.8 / 117 *As 9.1 / 28.9 / 1.25% / 19%*
0.49 m (1.2 m) *Cure length (Horiz. width)*

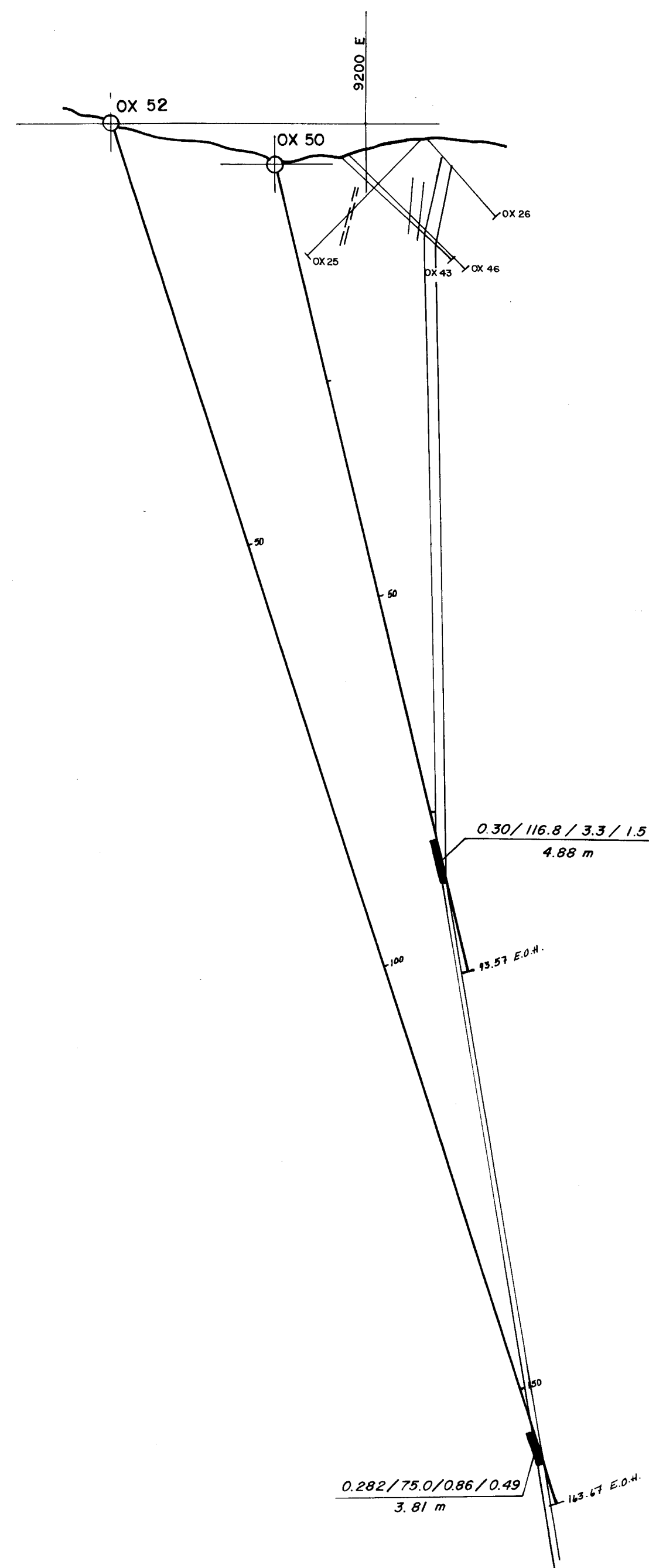


GRID & CLAIM LOCATION
SCALE: 1:50,000

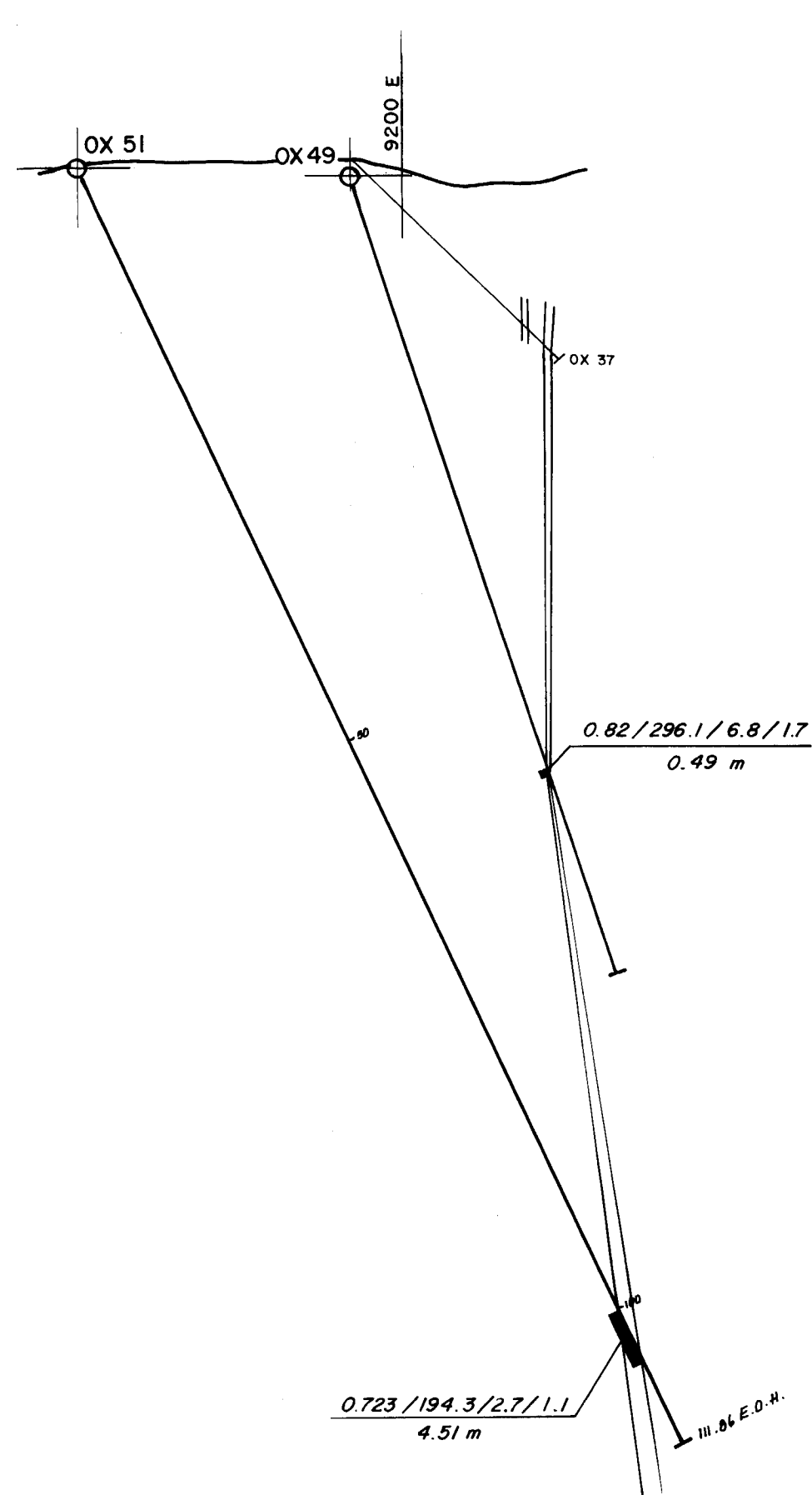
GEOLOGICAL BRANCH
ASSESSMENT REPORT
19,094

DRAWN BY: C.H.K. DATE: AUG., 1989	GRANGES INC. VANCOUVER OFFICE	DRILL PLAN & LONGITUDINAL PROJ. DAMASCUS ZONE OX OPTION TAHTSA REACH AREA, B.C.	SCALE: 1:500 PROJECT No.: 133 N.T.S. No.: 93 E / 11 FIGURE: 3
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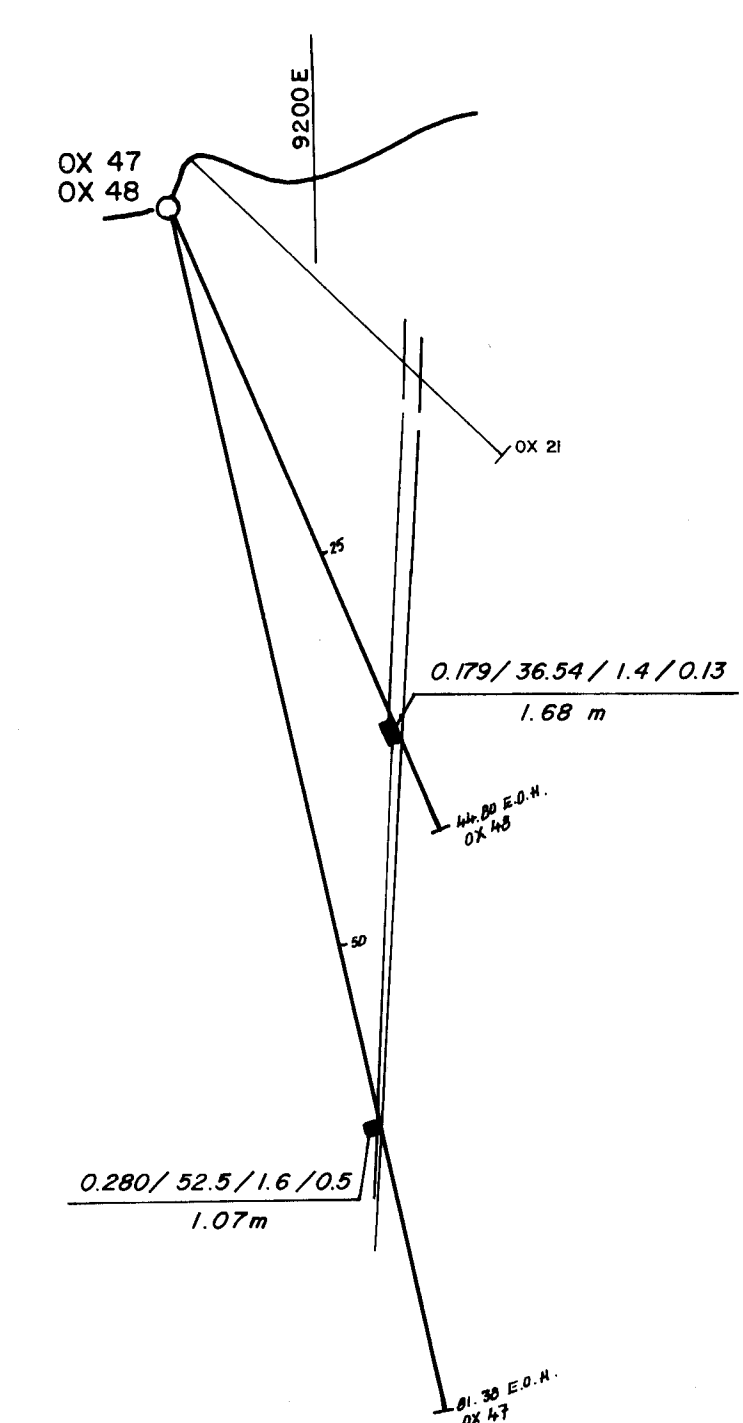
SECTION 1750 N



SECTION 1700 N



SECTION 1838 N



ASSAYS:

$\frac{0.280 / 52.5 / 1.6 / 0.5}{1.07 \text{ m}} = \frac{\text{Au g/t} / \text{Ag g/t} / \text{Zn \%} / \text{Pb \%}}{\text{Core length}}$

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,094

DRAWN BY: C. H. K.	GRANGES INC. VANCOUVER OFFICE	DAMASCUS ZONE DRILL SECTIONS DDHs OX 47, 48, 49, 50, 51, 52 LOOKING NORTH OX OPTION	SCALE: 1 : 500
DATE: AUG., 1989			PROJECT No.: 133
			N.T.S. No.: 93 E / II