1994 SUMMARY REPORT

ON THE

ASCOT 1-22 MINERAL CLAIMS

Located in the Smithers Area
Omineca Mining Division
NTS 93L/15E

54° 47′ North Latitude
126° 43′ West Longitude

-prepared for-

EQUITY ENGINEERING LTD.

-prepared by-

Henry J. Awmack, P.Eng.

January, 1995

SUMMARY

The Ascot 1-22 claims cover 550 hectares of subalpine terrain in north central British Columbia, located approximately 30 kilometres east of Smithers. The property is accessible by four-wheel drive truck along eight kilometres of dirt road from the all-weather Babine Lake Road, a one hour drive from Smithers.

Texas Gulf Sulfur Company carried out extensive exploration of the Ascot property from 1967-69, discovering several zinc+lead± barite mineral occurrences and recognizing its potential to host volcanogenic massive sulphide (VMS) deposits. Three diamond drill holes were targeted at EM conductors; one of these intersected 14.6 metres grading 0.67% zinc and 0.11% lead. The property was explored by a number of operators through the late 1970's and 1980's, leading to the delineation of strong zinc-lead-arsenic soil geochemistry and the discovery of several more VMS-style occurrences. All claims subsequently lapsed and the Ascot 1-22 claims were staked in September 1994 by Equity Engineering Ltd..

The Ascot property is underlain by a complex stratigraphy dominated by intermediate to felsic flows and fragmentals, argillaceous and tuffaceous sediments and impure limestone. These units form part of the Early Jurassic Nilkitkwa Formation of the Hazelton Group and have been isoclinally folded about southeasterly-trending fold axes.

Most of the zinc+lead±barite occurrences lie within two distinct belts of syngenetic mineralization. Sphalerite, barite and galena form fine-grained lamina and disseminations in tuffaceous limestone exposures along a 1000 metre section of Canyon Creek, on the west side of the property. With the effects of isoclinal folding, this might represent a strike-length of several thousand metres in an area of poor exposure. A backhoe trench at the northern end of this belt assayed 6.5% zinc across a true width of eight metres, along with several percent barite. At the eastern end of the property, sphalerite and galena have been noted within andesitic or dacitic tuffs and lapilli tuffs along a strike length of 1,400 metres, accompanied by strong zinc+lead±arsenic soil geochemistry. A 1994 float sample of tuff assayed 4.85% zinc and 4.38% lead. Mineralization in this sample was composed of fine-grained syngenetic sphalerite, galena and pyrrhotite within glassy volcanic fragments and between fragments.

The next exploration program should focus on the two areas of syngenetic zinc+lead±barite occurrences. It should consist of grid-based soil geochemistry, magnetic and VLF-EM surveys and detailed geological mapping. This will lead to the definition of backhoe trenching and diamond drilling targets.

1994 SUMMARY REPORT ON THE ASCOT 1-22 MINERAL CLAIMS

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1.0 INTRODUCTION

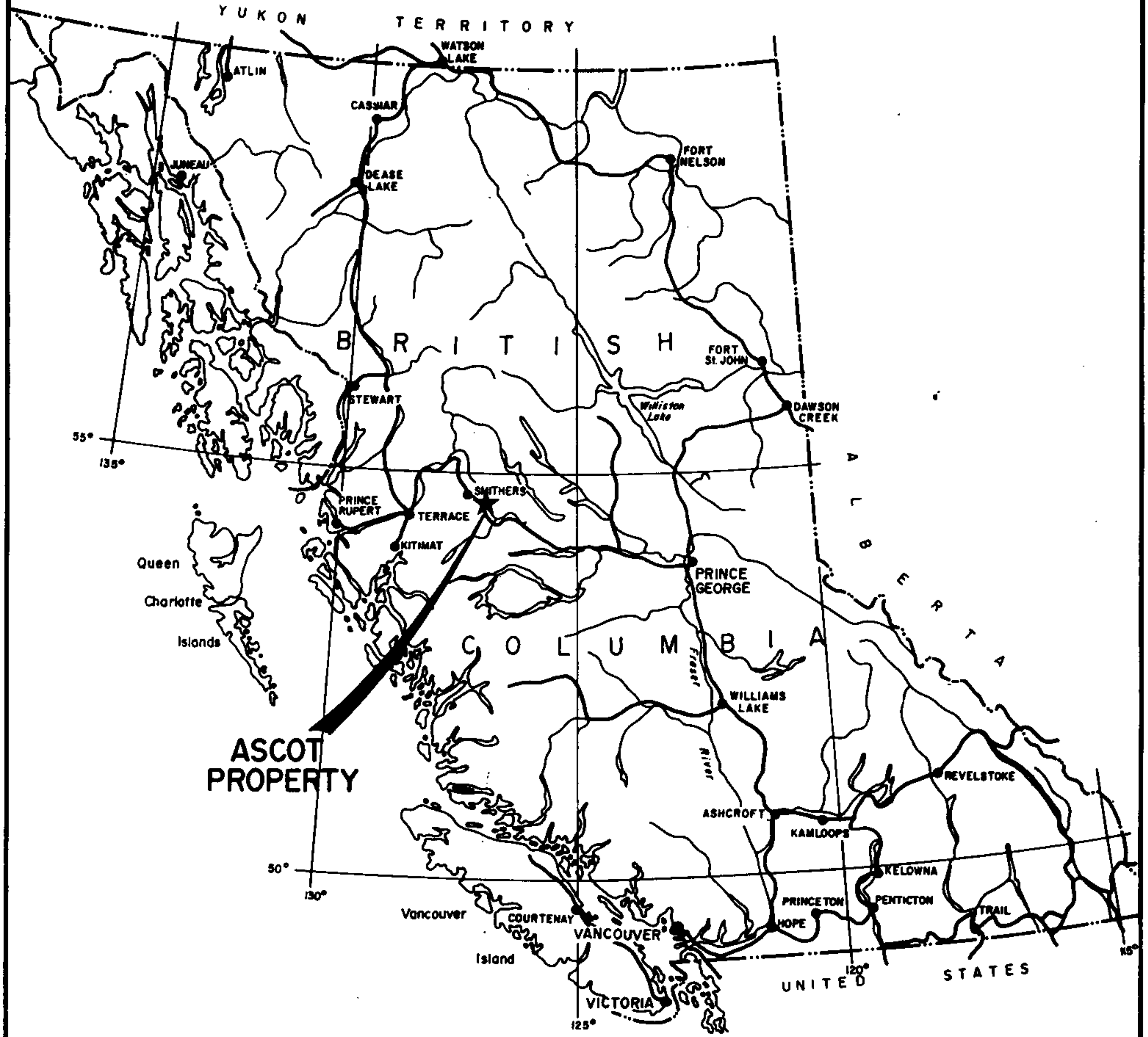
The Ascot 1-22 claims cover an Early to Middle Jurassic Hazelton Group felsic/sedimentary package near Smithers (Figure 1) thought to be prospective for volcanogenic massive sulphide deposits. The claims were staked in September 1994 over highly anomalous zinc-lead-arsenic soil geochemistry and several previously reported zinc-lead-barite occurrences. One day of prospecting and geological mapping was carried out on the Ascot property following staking. This report details results from the 1994 program and summarizes all previous data available on the property.

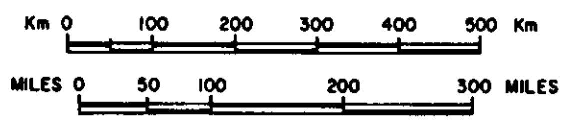
2.0 LIST OF CLAIMS

The Ascot property consists of 22 contiguous 2-post mineral claims in the Omineca Mining Division of British Columbia, as summarized in Table 2.0.1 (Figures 2a and 2b). Records of the British Columbia Ministry of Energy, Mines and Petroleum Resources indicate that the Ascot 1-22 claims are owned by the author. Separate documents indicate that they are held in trust for Equity Engineering Ltd..

TABLE 2.0.1
CLAIM DATA

Claim Name	Tenure Number	No. of Units	Record Date	Expiry Year
Ascot 1	330819	1	Sept. 13, 1994	1995
Ascot 2	330820	1	Sept. 13, 1994	1995
Ascot 3	330821	1	Sept. 13, 1994	1995
Ascot 4	330822	1	Sept. 13, 1994	1995
Ascot 5	330823	1	Sept. 13, 1994	1995
Ascot 6	330824	1	Sept. 13, 1994	1995
Ascot 7	330825	1	Sept. 13, 1994	1995
Ascot 8	330826	1	Sept. 13, 1994	1995
Ascot 9	330827	1	Sept. 13, 1994	1995
Ascot 10	330828	1	Sept. 13, 1994	1995
Ascot 11	330829	1	Sept. 13, 1994	1995
Ascot 12	330830	1	Sept. 13, 1994	1995
Ascot 13	330831	1	Sept. 13, 1994	1995
Ascot 14	330832	1	Sept. 13, 1994	1995
Ascot 15	330833	1	Sept. 13, 1994	1995
Ascot 16	330834	1	Sept. 13, 1994	1995
Ascot 17	330835	1	Sept. 13, 1994	1995
Ascot 18	330836	1	Sept. 13, 1994	1995
Ascot 19	330837	1	Sept. 13, 1994	1995
Ascot 20	330838	1	Sept. 13, 1994	1995
Ascot 21	330839	1	Sept. 13, 1994	1995
Ascot 22	330840	1	Sept. 13, 1994	1995
		22		

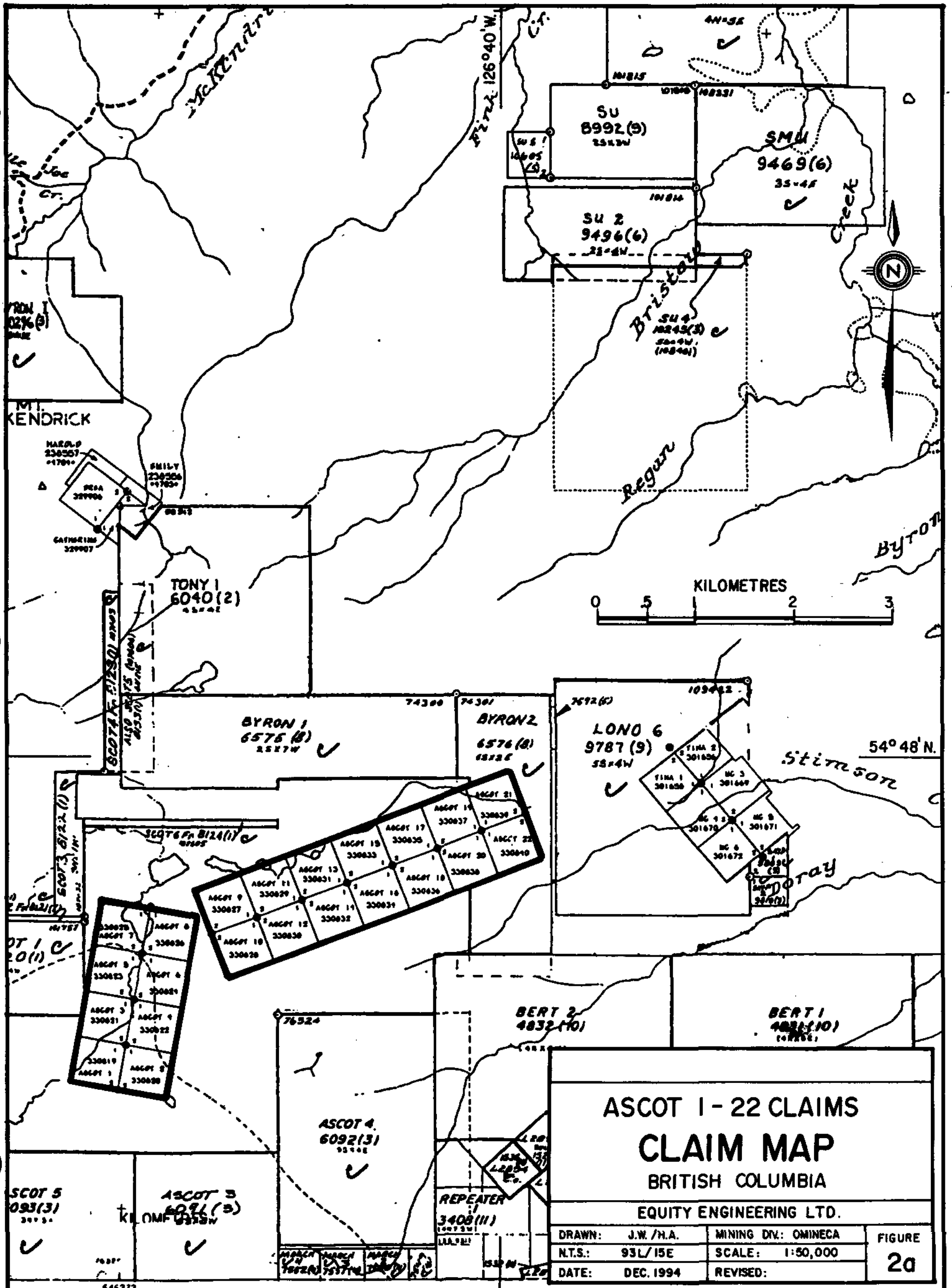




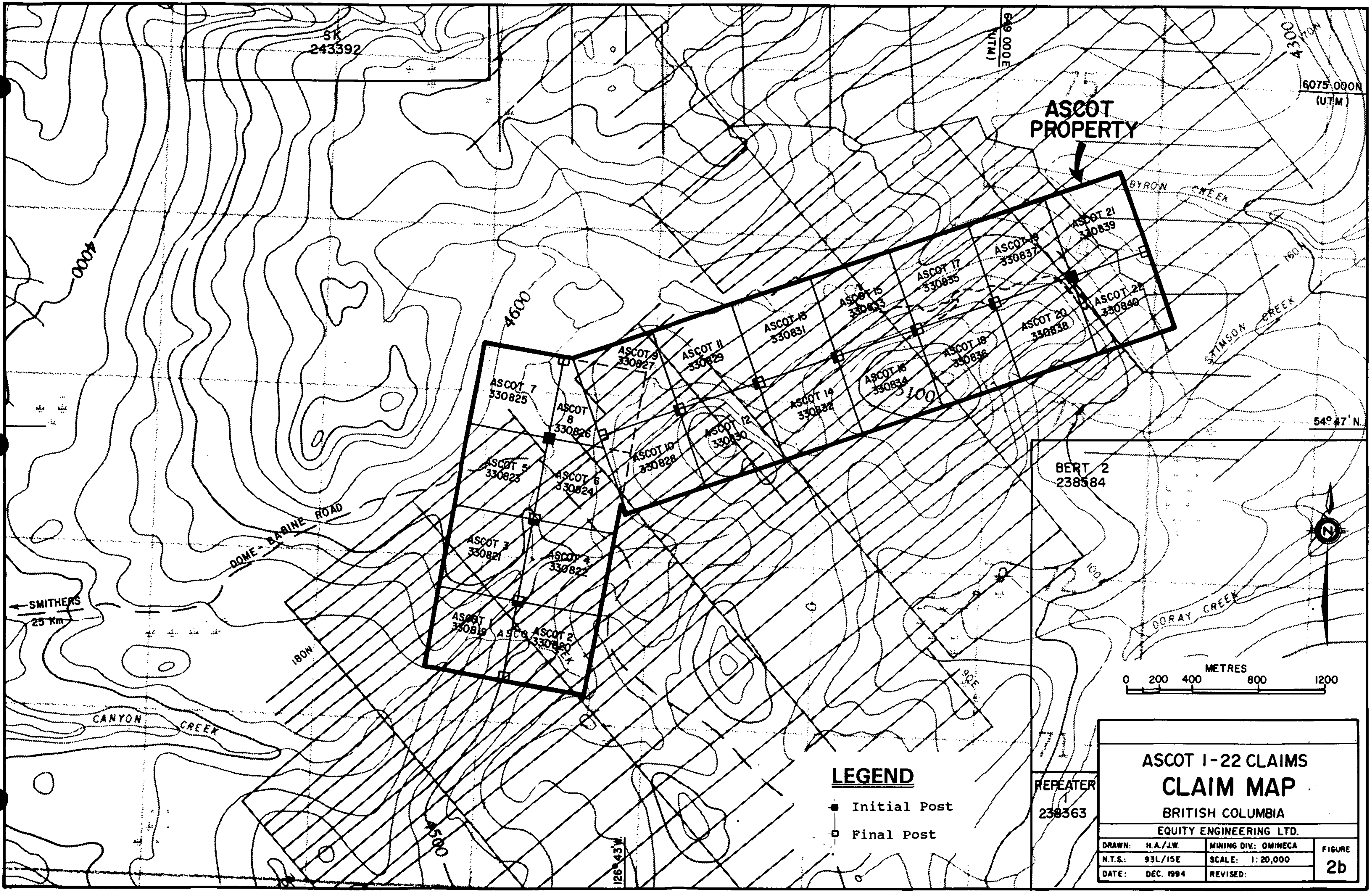
ASCOT I-22 CLAIMS
LOCATION MAP
BRITISH COLUMBIA

EQUITY ENGINEERING LTD.

DRAWN: H.A / J.W.	MINING DIV. OMINECA	FIGURE
N.T.S.: 93L / 15E	SCALE: AS SHOWN	1
DATE: DEC. 1994	REVISED:	



ASCOT 1 - 22 CLAIMS
CLAIM MAP
BRITISH COLUMBIA
EQUITY ENGINEERING LTD.
DRAWN: J.W. /H.A.
MINING DIV.: OMINECA
N.T.S.: 93L/15E
SCALE: 1:50,000
DATE: DEC. 1994
REVISED:
FIGURE 2a
KILOMETRES
0 .5 1 2 3
54° 48' N.
126° 40' W.
N
MT. KENDRICK
Su
8992 (9)
SMU
9469 (6)
SU 2
9496 (6)
TONY 1
6040 (2)
BYRON 1
6575 (8)
BYRON 2
6576 (8)
LONO 6
9787 (9)
BERT 2
4832 (10)
BERT 1
ASCOT 4
6092 (3)
ASCOT 3
REPEATER
3408 (11)
Bristol
Creek
Regan
Byron
Stimson
Doray
646272



SK
243392
ASCOT
PROPERTY
6075 000N
(UTM)
669 000E
(UTM)
BYRON CREEK
STIMSON CREEK
DOME - BABINE ROAD
CANYON CREEK
DORAY CREEK
← SMITHERS
25 Km
ASCOT 1
330819
ASCOT 2
330820
ASCOT 3
330821
ASCOT 4
330822
ASCOT 5
330823
ASCOT 6
330824
ASCOT 7
330825
ASCOT 8
330826
ASCOT 9
330827
ASCOT 10
330828
ASCOT 11
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ASCOT 12
330830
ASCOT 13
330831
ASCOT 14
330832
ASCOT 15
330833
ASCOT 16
330834
ASCOT 17
330835
ASCOT 18
330836
ASCOT 19
330837
ASCOT 20
330838
ASCOT 21
330839
ASCOT 22
330840
BERT 2
238584
REPEATER
238363
54° 47' N.
126° 43' W.
4000
4600
4500
4300
5100
METRES
0 200 400 800 1200
LEGEND
Initial Post
Final Post
ASCOT 1-22 CLAIMS
CLAIM MAP
BRITISH COLUMBIA
EQUITY ENGINEERING LTD.
DRAWN: H.A./J.W.
MINING DIV.: OMINECA
N.T.S.: 93L/15E
SCALE: 1:20,000
DATE: DEC. 1994
REVISED:
FIGURE
2b

3.0 LOCATION, ACCESS AND GEOGRAPHY

The Ascot property lies in the Babine Mountains, approximately 30 kilometres east of Smithers, British Columbia, centred at 54° 47′ north latitude and 126° 43′ west longitude. The claims cover a chain of subalpine meadows and lakes at the divide between Canyon Creek (which flows westerly) and Byron and Stimson Creeks (which flow easterly). Topography is fairly gentle, with elevations ranging from 1230 metres above sea level on Byron Creek to approximately 1600 metres on a hill top on the Ascot 18 claim (Figure 2b).

Access to the claims is via eight kilometres of the Dome-Babine Road, an unmaintained dirt road which leaves the all-weather Babine Lakes Road near kilometre 21. The drive from Smithers to the Ascot claims takes approximately one hour with a four-wheel drive vehicle and would be passable from June to late September. In winter, this road and the chain of lakes on the Ascot claims are used for snowmobile recreation. The Dome-Babine Road continues southeasterly across the Ascot 4-6 claims. A cat road, used for Texas Gulf's 1969 drilling and Geostar's 1987 backhoe trenching, extends 1500 metres easterly from the chain of lakes through the Ascot 15-22 claims. Helicopter service is available from several bases in Smithers, about ten minutes away. Smithers, with daily jet service to Vancouver, lies on the Yellowhead Highway and the Canadian National rail line, approximately 300 kilometres from deep water port facilities in Prince Rupert.

Vegetation on the property consists of stunted balsam fir, pine and spruce, with no commercial timber values. Grassy meadows and swamps flank the chain of lakes which divide Canyon Creek from Byron Creek. Tree line lies at approximately 1550 metres. The Ascot property is subject to a continental climatic regime, with warm summers and cold winters. Snowfall is moderate with an accumulation of one to two metres during the winter. Fieldwork is best carried out from May through October; geophysics and drilling could be performed year-round.

4.0 PROPERTY EXPLORATION HISTORY

4.1 Previous Work

The earliest mineral exploration in the vicinity of the Ascot claims was targeted at gold-bearing quartz-carbonate-sulphide veins on Dome Mountain, five kilometres to the southeast. Trenching, underground exploration and limited mining on Dome Mountain has been carried out intermittently from 1914 to the present (MacIntyre, 1985). At least eight steeply-dipping quartz-carbonate veins are known; native gold is associated with abundant sphalerite, galena, pyrite and arsenopyrite. These veins both parallel and cross-cut foliation and some have been folded and brecciated; MacIntyre et al (1987a) believes them to have been emplaced during the early stages of folding. Current in-situ reserves for the Boulder and Argillite Veins total 221,330 tonnes grading 14.9 g/tonne gold (Habsburg News Release, April 6/94).

In 1911, a 90 centimetre wide, steeply dipping, quartz-pyrite-sphalerite-arsenopyrite-chalcopyrite-galena vein (the Pioneer Vein) was discovered on the southern slopes of Mount McKendrick, approximately four kilometres northwest of the Ascot claims. By 1934, the Pioneer Vein had been traced over 600 metres by pits and at least two short adits (Holland, 1986).

Lead-zinc-barite showings were first staked on Canyon Creek in 1951, on the current Ascot 1 claim, but no work was recorded. Following up anomalous silt results from a reconnaissance exploration program in 1967 and 1968, Texas Gulf Sulphur Company staked their 160 claim Ascot Group over the headwaters of Canyon Creek, Byron Creek and Stimson Creek. In 1968, Texas Gulf carried out property-wide geological mapping at a scale of 1:12,000 (Peatfield and Loudon, 1968), a reconnaissance ground electromagnetic survey (Watson and Loudon, 1968) and analyzed 368 soil samples for cold-extractable zinc (McLeod and Loudon, 1968). Peatfield and Loudon (1968) mapped several mineral occurrences, including: five zinc-lead and barite occurrences within impure limestones along Canyon Creek; a small massive pyrite lens at the contact between rhyolite and graphitic argillite in Canyon Creek; and copper showings within rhyolite on Byron Creek and south of Canyon Creek.

In June 1969, Texas Gulf flew an electromagnetic-magnetic airborne survey over 39 square kilometres of their Ascot Group (Crosby and Hillman, 1969). Selected airborne anomalies were ground-truthed in July and August of that year, using McPhar IREM and Crone JEM electromagnetic survey equipment and a fluxgate magnetometer. The ground geophysical grid, which totalled 43 line-kilometres, was soil sampled at 61 metre (200′) intervals on lines 122 metres (400′) apart. Soil samples were analyzed for total copper and cold-extractable zinc (Schmidt, 1969). Three diamond drill sites were selected on the basis of the ground geophysical surveys, in areas of limited mapping and no known mineralization. Texas Gulf did not report any results for these short holes, but Barry Price (1978a) re-logged and re-sampled hole DDH-1, which was drilled on the current Ascot 17 claim. Price reported that the top 14.6 metres of this hole assayed 0.67% zinc and 0.12% lead within altered dacitic tuff. Drill holes DDH-2 and -3 were cored through a diorite/argillite contact, apparently without intersecting significant mineralization.

Texas Gulf allowed their claims to lapse in 1977. The main showings were staked and re-staked several times over the next decade, with several small mapping, prospecting and geophysical programs carried out. Price (1978a) completed a detailed geological mapping and a magnetometer survey in the area around Texas Gulf's drill hole DDH-1. He reported three horizons of low-grade stratiform zinc-lead mineralization in the vicinity of hole DDH-1. Price (1978b) also prospected in the vicinity of Texas

Gulf's zinc, lead and barite showings in Canyon Creek. He discovered several new showings and identified a felsic breccia with pyrite and sphalerite in the matrix. Three packsack holes, totalling 7.0 metres, were drilled on one limestone-hosted sphalerite occurrence in Canyon Creek. The best drill sample assayed 1.6% zinc over 3.5 metres. Two more prospecting days in 1981 were also directed at the Canyon Creek zinc-lead-barite showings (Price, 1981).

In 1984, the main Texas Gulf showings were acquired by Geostar Mining Corporation. Limited magnetometer and VLF-EM surveying were carried out in October 1984 on reconnaissance lines in areas of known mineralization (Price, 1984). The following year, Geostar collected 172 soil samples from two small grids near the headwaters of Byron Creek, north and east of Texas Gulf's hole DDH-1. One of the grids was also covered by a reconnaissance VLF-EM survey (Christopher, 1986).

In 1985, Noranda Exploration Company staked the Byron 1 and 2 claims, north and east of Geostar's claims at the east end of Texas Gulf's former Ascot claim group. Noranda took 313 soil samples at 50 metre intervals on lines 500 metres apart, analyzing them for Au, Ag, Cu, Pb, Zn and As. Anomalous zinc, lead and arsenic samples were clustered on the west edge of their Byron 2 claim, approximately 700 metres east of Texas Gulf's hole DDH-1. Noranda also carried out reconnaissance mapping and took 28 silt samples (Myers and Seel, 1985).

The following year, Canadian United Minerals Ltd. acquired the Byron 1 and 2 claims and the Tony, Harold and Emily claims, which lie further northwest over the Pioneer Vein. Canadian United established an 8200 metre cut baseline (100E), trending 320°, with perpendicular crosslines at 250 metre intervals. They collected 1449 soil samples for Ag, Cu, Pb, Zn and As analysis; maximum values were 4209 ppm Zn, 566 ppm As, 1188 ppm Cu and 290 ppm Pb. Noranda's Byron 2 anomaly was verified, with most of the strongly anomalous samples collected between there and Texas Gulf's hole DDH-1 (Holland, 1986).

In 1987, Geostar carried out a comprehensive exploration program on their Ascot property, consisting of mapping, soil geochemistry, VLF-EM surveying and backhoe trenching. They extended Canadian United's 1986 grid to the southwest, using the same numbering system and line orientation. Baselines were cut 1000 metres apart; crosslines were flagged 100 metres apart, running from baseline to baseline. A total of 5473 soil samples were collected at 25 metre intervals along the grid lines and analyzed for Ag, Cu, Pb, Zn and As. VLF-EM surveying was carried out over 137 line-kilometres of the grid. Fifteen backhoe trenches were excavated in geochemically anomalous areas, revealing several new zinc-lead occurrences (Helgason, 1988).

Canadian United and Teeshin Resources Ltd. acquired the Ascot property from Geostar in 1989. Geological mapping was concentrated on Ascot Creek, one of the tributaries of Canyon Creek, where a zinc-lead mineralized horizon was traced for 250 metres. A further 377 soil samples were taken to the southeast of existing coverage, without revealing new anomalies (Holland, 1989). No further work has been reported and all claims were subsequently allowed to lapse.

4.2 1994 Exploration Program

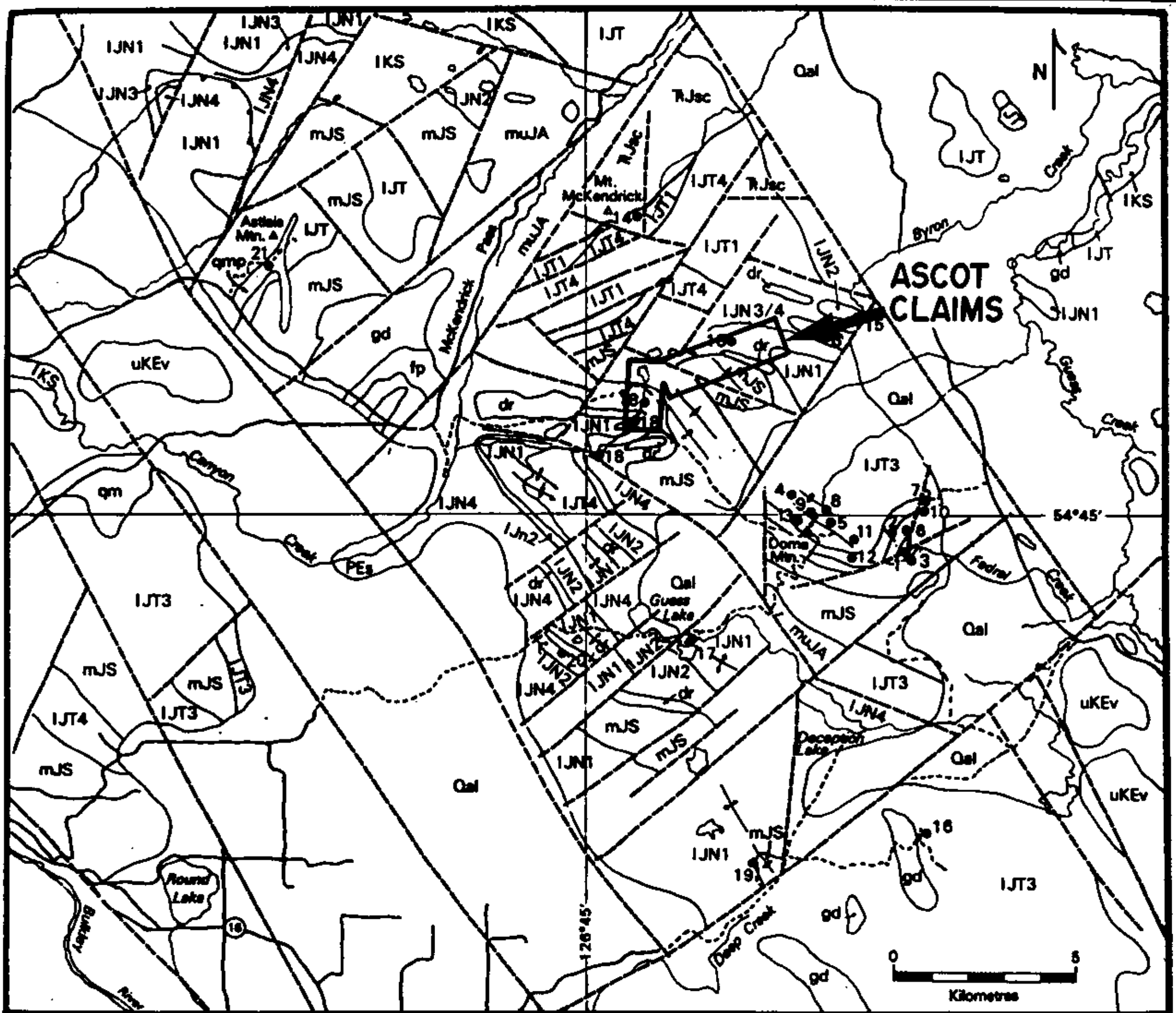
The Ascot 1-22 claims were staked on September 13, 1994. Prospecting and mapping were carried out the following day, entirely confined to road and trench exposures from Geostar's 1987 exploration program. All fieldwork was carried out using a magnetic declination of 27.5° east of true north. Ten samples were taken from mineralized float and outcrop. They were assayed for barium and analyzed geochemically for gold and by ICP for 32 elements at Chemex Laboratories in North Vancouver. Two overlimit samples were assayed for zinc and one for lead. Rock samples are described in Appendix C and analytical certificates form Appendix E. Petrographic descriptions for two thin sections and one polished thin section were prepared by Dr. Jeff Harris of Vancouver Petrographics Ltd. and are included in Appendix D.

5.0 REGIONAL GEOLOGY

The Geological Survey of Canada mapped the Smithers area at a scale of 1:253,440 in the early 1970's (Tipper, 1976). More detailed mapping was carried out by MacIntyre et al (1987a, 1987b and 1989) in the Babine Range around the Ascot property (Figure 3). This area lies within the Stikine terrane, which includes: submarine calc-alkaline to alkaline island arc volcanics of the Late Triassic Takla Group; subaerial to submarine calc-alkaline island arc volcanics and sediments of the Early to Middle Jurassic Hazelton Group; successor basin sediments of the Late Jurassic and Early Cretaceous Bowser Lake, Skeena and Sustut Groups; and Late Cretaceous to Tertiary calc-alkaline continental volcanics of the Kasalka, Ootsa Lake and Goosly Lake Groups.

Most of the Babine Range is underlain by Hazelton Group strata, with Takla Group greenstones exposed only on the northern slopes of Mount McKendrick (Figure 3). The Hazelton Group has been divided into three formations in the Smithers area: Telkwa, Nilkitkwa and Smithers. The Telkwa Formation, which is comprised of subaerial and submarine pyroclastics and flows with lesser intercalated sediments, is the thickest and most extensive formation. Four Telkwa Formation map-units were recognized by MacIntyre et al (1987a): a basal, polymictic conglomerate (**Unit lJT1**); porphyritic andesite fragmentals and rare flows (**Unit lJT2**); lahars, tuff-breccias and lapilli tuffs with lesser lithic, crystal and ash tuffs and epiclastics (**Unit lJT3**); and fine-grained, phyllitic, red to maroon tuff or epiclastic (**Unit lJT4**).

The Nilkitkwa Formation conformably to disconformably overlies



LEGEND

QUATERNARY

Qal	alluvium

PALEOCENE TO EOCENE

PEs	mudstone, siltstone

LATE CRETACEOUS TO TERTIARY

uKEv	andesitic volcanic rocks

EARLY CRETACEOUS – SKEENA GROUP

IKS	RED ROSE FORMATION micaceous wacke, siltstone, conglomerate, mudstone

LATE JURASSIC

BOWSER LAKE GROUP

muJA	ASHMAN FORMATION argillite, shaly siltstone, quartzose turbidites

EARLY TO MIDDLE JURASSIC

HAZELTON GROUP

mJS	SMITHERS FORMATION tuffaceous wacke, siltstone, conglomerate
IJN4	NILKITKWA FORMATION thin bedded argillite, chert and limestone
IJN3	tuffaceous conglomerate, siltstone, cherty tuff
IJN2	rhyolitic volcanic rocks
IJN1	red epiclastics, amygdaloidal flows, foliated lapilli tuff
IJT4	TELKWA FORMATION phyllitic maroon tuff
IJT3	fragmental volcanic rocks
IJT2	porphyritic andesite
IJT1	polymictic conglomerate, epiclastic rocks

TRIASSIC TO LOWER JURASSIC

TrJsc	greenstone – sill complex

INTRUSIVE ROCKS

dr	diorite
gd	granodiorite
qmp	quartz monzonite porphyry
fp	feldspar porphyry
qp	quartz porphyry

MINERAL OCCURRENCES

	Type	Occurrence Name	Commodity
1	Qz Vein	Dome Mtn. – Forks	Au, Ag, Zn, Pb, Cu, (As, Sb)
2	Qz Vein	Dome Mtn. – Cabin	Au, Ag, Zn, Pb, Cu, (As, Sb)
3	Qz Vein	Dome Mtn. – 9800	Au, Ag, Zn, Pb, Cu, (As, Sb)
4	Qz Vein	Dome Mtn. – Ptarmigan	Au, Ag, As, Zn, Pb, Cu
5	Qz Vein	Dome Mtn. – Hawk	Au, Ag, As, Zn, Pb, Cu
6	Qz Vein	Dome Mtn. – Boulder	Au, Ag, Zn, Pb, Cu
7	Qz Vein	Dome Mtn. – Free Gold	Au, Ag, Zn, Pb, Cu
8	Qz Vein	Dome Mtn. – Eagle	Au, Ag, Zn, Pb, Cu
9	Qz Vein	Dome Mtn. – Gem	Au, Ag, Zn, Cu, Pb
10	Qz Vein	Dome Mtn. – Chance	Au, Ag, Cu, Zn, Pb
11	Qz Vein	Dome Mtn. – Hoopes	Au, Ag, Cu, Pb, Zn
12	Qz Vein	Dome Mtn. – Jane	Au, Ag, Cu, (Zn, Pb, Ba)
13	Qz Vein	Dome Mtn. – Raven	Au, Ag, Cu
14	Qz Vein	Mt. McKendrick	Au, Ag, Pb, Zn, Cu, (As, Sb)
15	Cu Vein	Tina	Cu, Ag
16	Cu Vein	Brenda, Tony	Cu, Ag
17	Cu Vein	Camp Lake	Cu, Ag
18	Massive	Ascot	Zn, Pb, Ba
19	Massive	Del Santo	Cu, Zn, Ag
20	Porph	Burbridge Lake	Cu, Mo
21	Porph	Big Onion	Cu, Mo

(After MacIntyre et al, 1987a)

0 2 4 8 12
KILOMETRES

ASCOT 1-22 CLAIMS
REGIONAL GEOLOGY
BRITISH COLUMBIA

EQUITY ENGINEERING LTD.

DRAWN:	J.W. / H.A.	MINING DIV.:	OMINECA	FIGURE
N.T.S.:	93 L/15E.	SCALE:	1:200,000	3
DATE:	DEC. 1994	REVISED:		

the Telkwa Formation. West of the Babine Range, it comprises mainly red epiclastics; to the east, it includes Early Pliensbachian to mid-Toarcian marine sedimentary rocks overlying rhyolite and basalt flows and red epiclastics. MacIntyre et al (1987a) divided the Nilkitkwa Formation into four map-units. Well-bedded red epiclastics and green to maroon amygdaloidal flows and welded tuffs (**Unit lJN1**) overlie Telkwa Formation phyllitic maroon tuffs on Dome Mountain. Cream to grey-weathering, quartz-feldspar-phyric ash flow, spherulitic rhyolite and siliceous lapilli tuff (**Unit lJN2**) overlie the red epiclastic/amygdaloidal flow unit. A thick section of massive rhyolite outcrops in lower Byron Creek east of the Ascot property. "At Dome Mountain a mottled cherty tuff occurs at the same stratigraphic position as the rhyolitic volcanic rocks and may be their distal equivalent" (MacIntyre et al, 1987a). A thin unit of brown to buff-weathering conglomerate, with intercalated beds of volcanic wacke and siltstone (**Unit lJN3**), overlies the red epiclastic/amygdaloidal flow. These sediments typically contain angular felsic clasts in a silty matrix. Pliensbachian pelecypods were noted by MacIntyre et al, 1987a) within this unit at Dome Mountain. Recessive, thin-bedded, rusty-weathering silty argillite with minor dark chert and argillaceous limestone (**Unit lJN4**), overlies the Nilkitkwa volcanics. Slaty cleavage, tight small-scale folds and disseminated and laminated pyrite are typical of Unit lJN4; fossils are generally absent.

Shallow marine sediments of the Bajocian Smithers Formation (**Unit mJS**) disconformably overlie the Nilkitkwa Formation in the Babine Range. They include fossiliferous sandstone and siltstone, with lesser intercalated felsic tuff. On Dome Mountain, the 500 metre thick Smithers Formation section consists of thick-bedded siltstone, overlain by argillaceous limestone, limy siltstone and wacke, and overlain in turn by poorly-bedded light green crystal tuff.

The Ashman Formation (**Unit muJA**) is part of a continuous fining-upward sequence, deposited when the shallow marine environment of the Smithers Formation became gradually deeper. The contact between the two is conformable, defined largely by Callovian fossil age rather than lithology. The Ashman Formation, composed mainly of well-bedded, fine-grained dark grey siltstone and black shale, has been included within both the Hazelton Group (MacIntyre et al, 1989) and the Bowser Lake Group (Tipper and Richards, 1976; MacIntyre et al, 1987a).

Several dykes or sills of fine- to medium-grained diorite or diabase (**Unit dr**) cut Nilkitkwa, Smithers and possibly Ashman Formation strata in the Babine Range. Multiphase granitic intrusives (**Units gd, qmp, fp and qp**), variously dated at 117, 75 and 48 million years (MacIntyre et al, 1987a), intrude Hazelton Group strata between Astlais Mountain and Canyon Creek, northwest of the Ascot property, and are associated with the Big Onion copper porphyry deposit.

6.0 GEOLOGY AND MINERALIZATION

6.1 Geology

The most extensive mapping of the Ascot area was carried out by Peatfield and Loudon (1968). It combined careful outcrop mapping and structural measurements with an ambitious structural interpretation. Figure 4 has been taken from their outcrop mapping, as modified by later mapping by Price (1978a), Helgason (1988) and the author's limited observations. Considerable ambiguity exists between rock unit nomenclature for different generations of mapping.

Peatfield and Loudon (1968) differentiated 14 rock units in the vicinity of the Ascot claims. All of these, with the possible exception of units 13 and 14, correspond to the Early Jurassic Nilkitkwa Formation of the Hazelton Group. On the Ascot claims, the Nilkitkwa Formation forms a complex stratigraphy dominated by intermediate to felsic flows and fragmentals, argillaceous and tuffaceous sediments and impure limestone (Figure 4). However, because of strong structural deformation and limited outcrop, the stratigraphic relationships between rock units are not well known. Table 6.1.1 summarizes the characteristics of the rock units, largely based on Peatfield and Louden's (1968) descriptions.

TABLE 6.1.1
LITHOLOGIES

14 **Hornblende diorite:** fine-grained, equigranular, dark grey-green.

13 **Feldspar porphyry:** weakly porphyritic phase of diorite. Pale buff to pinkish.

12 **Purple volcanic conglomerate:** poorly sorted, with rounded, hematitic volcanic pebbles, cobbles and boulders. Thin, discontinuous beds of purple tuff are common.

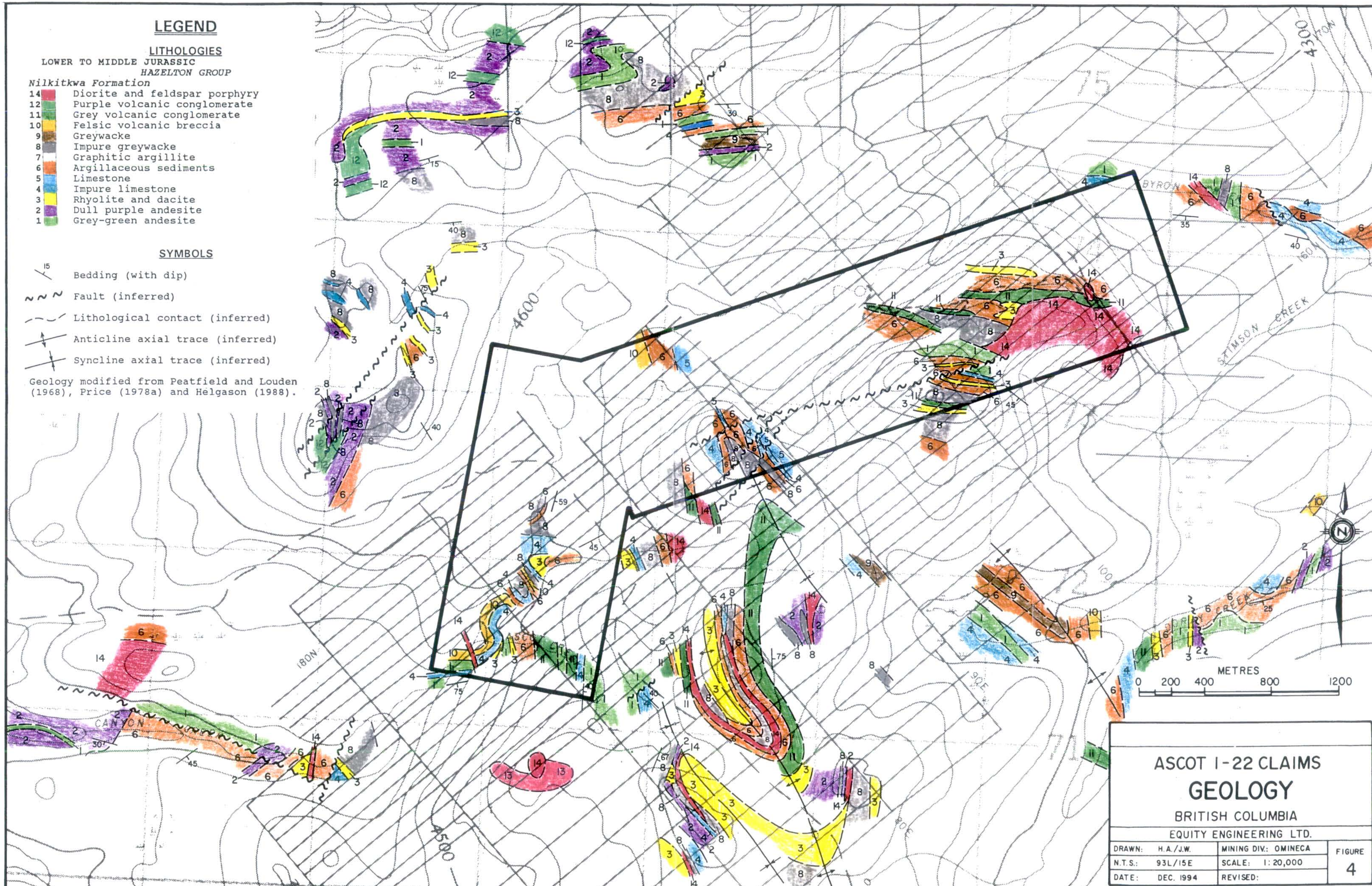
11 **Grey volcanic conglomerate:** poorly sorted aggregate of sub-rounded pebbles of all other rock types. The matrix is typically calcareous; the unit contains thin beds of tuffaceous or silty limestone. (See petrographic description for sample 626976 in Appendix D. It has been tentatively assigned to this unit.)

10 **Felsic volcanic breccia:** large angular fragments of felsic volcanics and lesser sedimentary rocks, set in a light, fine-grained, pyritic matrix with local sphalerite. "Fragments are dacitic or rhyolitic with quartz eyes and veinlets" (Price, 1978b).

9 **Greywacke and arkose:** light grey, clean, well-sorted, with abundant quartz.

8 **Impure greywacke:** poorly sorted sediments, commonly calcareous or argillaceous, composed mainly of angular quartz, feldspar and volcanic grains. Colours vary from light grey through light brown, with some green and purple hues as rocks become more tuffaceous.

7 **Graphitic argillite:** very fine-grained, intensely deformed,


LEGEND
LITHOLOGIES
LOWER TO MIDDLE JURASSIC
HAZELTON GROUP
Nilkitkwa Formation
14 Diorite and feldspar porphyry
12 Purple volcanic conglomerate
11 Grey volcanic conglomerate
10 Felsic volcanic breccia
9 Greywacke
8 Impure greywacke
7 Graphitic argillite
6 Argillaceous sediments
5 Limestone
4 Impure limestone
3 Rhyolite and dacite
2 Dull purple andesite
1 Grey-green andesite
SYMBOLS
Bedding (with dip)
Fault (inferred)
Lithological contact (inferred)
Anticline axial trace (inferred)
Syncline axial trace (inferred)
Geology modified from Peatfield and Louden (1968), Price (1978a) and Helgason (1988).
BYRON
STIMSON CREEK
CANYON
METRES
0 200 400 800 1200
ASCOT I-22 CLAIMS
GEOLOGY
BRITISH COLUMBIA
EQUITY ENGINEERING LTD.
DRAWN: H.A./J.W.
MINING DIV.: OMINECA
N.T.S.: 93L/15E
SCALE: 1:20,000
DATE: DEC. 1994
REVISED:
FIGURE 4

commonly pyritic.

6 **Argillaceous sediments:** black, fissile argillite, limy argillite and argillaceous greywacke. Generally fine-bedded, schistose and highly pyritic. (See petrographic description for sample 10275 in Appendix D.)

5 **Limestone:** pure white, massive, bedded.

4 **Impure limestone:** grey to green, thin argillaceous, tuffaceous or sandy limestone beds within the greywacke and argillite sequences, grading vertically and laterally into argillite and arenite. Shows marked flowage and thickening on the crests of folds. Galena, sphalerite and barite noted along bedding planes and foliations. (See petrographic description for sample 626969 in Appendix D.)

3 **Rhyolite and dacite:** buff to pink, mainly fine-grained to aphanitic, but with local glassy shards and rare quartz-eyes. Both tuffaceous and flow textures were recognized by Peatfield and Loudon (1968). Rhyolitic tuffs are predominantly schistose; local quartz-sericite schists are developed. Pyrite and quartz-siderite veins are common.

2 **Purple andesite:** flows are fine-grained to aphanitic. Tuffs are almost invariably schistose, consisting of <3mm hematite-stained lithic fragments. Calcite is common on planes of schistosity.

1 **Grey-green andesite:** flows are massive, dark green and medium-grained, with abundant epidote, chlorite and local calcite amygdules. Crystal tuffs and fine-grained volcanic conglomerates are widespread.

Lithologies within the Ascot area have been affected by tight folding about southeasterly trending fold axes (Figure 4). Structural measurements reported by Peatfield and Loudon (1968) indicate that the fold axes generally plunge 25° toward 120°, but have been slightly warped by subsequent folding.

6.2 Mineralization

Twenty-one mineral occurrences have been previously reported in the vicinity of the Ascot claims (Figure 5). Three of these were examined during the 1994 exploration program (#8, #17 and #18) and a significant new float occurrence (#17) was discovered. The mineral occurrences can be separated by their host lithology and mineralogy into: a) sphalerite±galena in dacitic or andesitic tuff and breccia (#13, 14, 15, 16, 17, 18); b) sphalerite+galena±barite in impure limestone and calcareous volcanics (#3, 4, 5, 8); c) pyrite+sphalerite in felsic breccia near contact with calcareous volcanics (#6); d) massive pyrite lenses (#2); e) copper mineralization in rhyolite (#19); f) chalcopyrite in diorite (#11), and; g) sphalerite and galena in carbonate±quartz veining (#1, 15, 17, 20) or in sheared diorite (#18). In most cases, stratabound zinc-lead mineralization occurs near the epigenetic mineralization of the last category and these occurrences are thought to be due to tectonic or thermal remobilization. For completeness, all 21 known showings are described below:

LEGEND

SYMBOLS

△ + 1994 rock sample (float, outcrop)

⑦ Mineral occurrence

o—ı Texas Gulf diamond drill hole (1969)

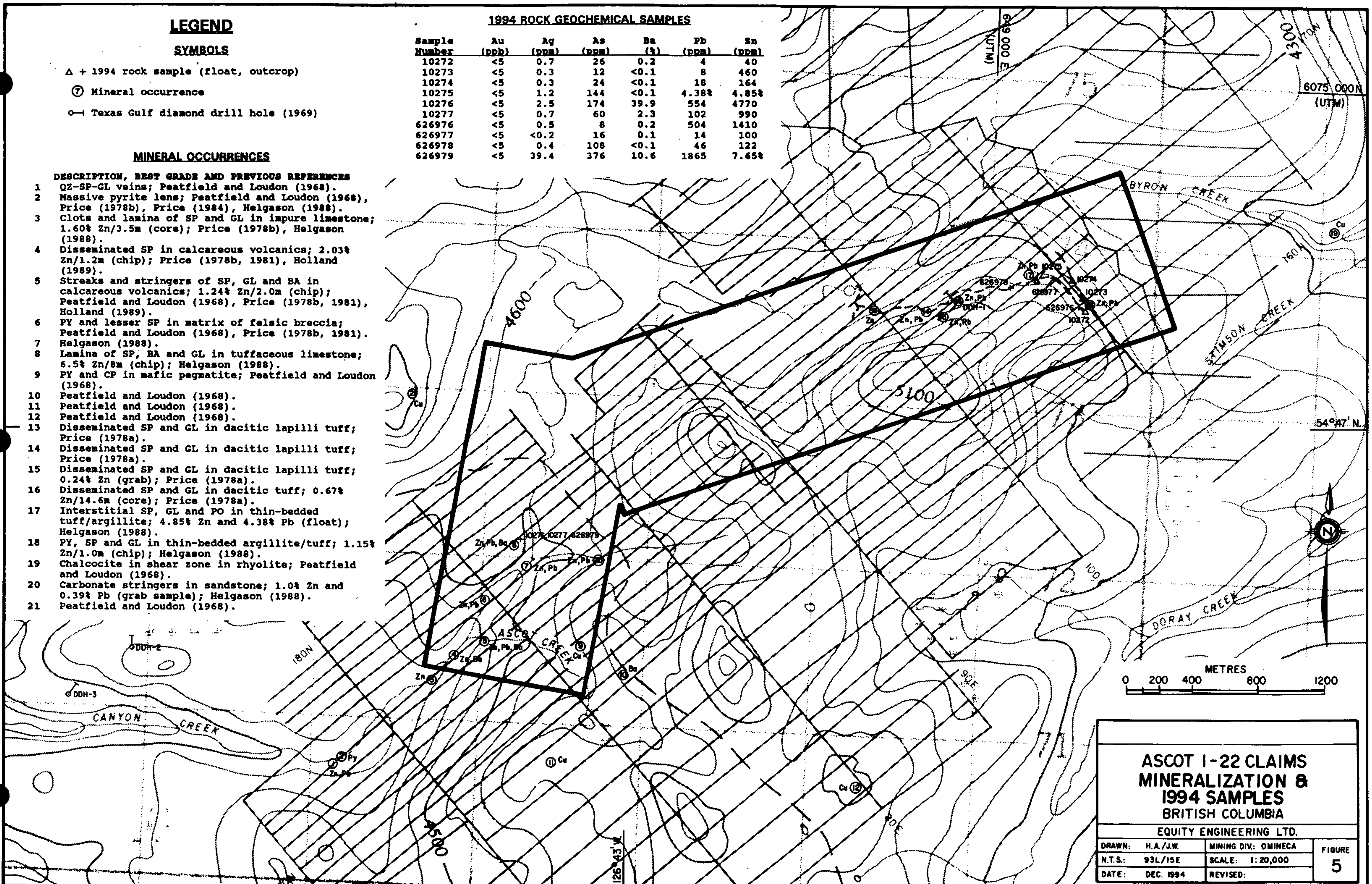
MINERAL OCCURRENCES

DESCRIPTION, BEST GRADE AND PREVIOUS REFERENCES

1 QZ-SP-GL veins; Peatfield and Loudon (1968).
2 Massive pyrite lens; Peatfield and Loudon (1968), Price (1978b), Price (1984), Helgason (1988).
3 Clots and lamina of SP and GL in impure limestone; 1.60% Zn/3.5m (core); Price (1978b), Helgason (1988).
4 Disseminated SP in calcareous volcanics; 2.03% Zn/1.2m (chip); Price (1978b, 1981), Holland (1989).
5 Streaks and stringers of SP, GL and BA in calcareous volcanics; 1.24% Zn/2.0m (chip); Peatfield and Loudon (1968), Price (1978b, 1981), Holland (1989).
6 PY and lesser SP in matrix of felsic breccia; Peatfield and Loudon (1968), Price (1978b, 1981).
7 Helgason (1988).
8 Lamina of SP, BA and GL in tuffaceous limestone; 6.5% Zn/8m (chip); Helgason (1988).
9 PY and CP in mafic pegmatite; Peatfield and Loudon (1968).
10 Peatfield and Loudon (1968).
11 Peatfield and Loudon (1968).
12 Peatfield and Loudon (1968).
13 Disseminated SP and GL in dacitic lapilli tuff; Price (1978a).
14 Disseminated SP and GL in dacitic lapilli tuff; Price (1978a).
15 Disseminated SP and GL in dacitic lapilli tuff; 0.24% Zn (grab); Price (1978a).
16 Disseminated SP and GL in dacitic tuff; 0.67% Zn/14.6m (core); Price (1978a).
17 Interstitial SP, GL and PO in thin-bedded tuff/argillite; 4.85% Zn and 4.38% Pb (float); Helgason (1988).
18 PY, SP and GL in thin-bedded argillite/tuff; 1.15% Zn/1.0m (chip); Helgason (1988).
19 Chalcocite in shear zone in rhyolite; Peatfield and Loudon (1968).
20 Carbonate stringers in sandstone; 1.0% Zn and 0.39% Pb (grab sample); Helgason (1988).
21 Peatfield and Loudon (1968).

1994 ROCK GEOCHEMICAL SAMPLES

Sample Number	Au (ppb)	Ag (ppm)	As (ppm)	Ba (%)	Pb (ppm)	Zn (ppm)
10272	<5	0.7	26	0.2	4	40
10273	<5	0.3	12	<0.1	8	460
10274	<5	0.3	24	<0.1	18	164
10275	<5	1.2	144	<0.1	4.38%	4.85%
10276	<5	2.5	174	39.9	554	4770
10277	<5	0.7	60	2.3	102	990
626976	<5	0.5	8	0.2	504	1410
626977	<5	<0.2	16	0.1	14	100
626978	<5	0.4	108	<0.1	46	122
626979	<5	39.4	376	10.6	1865	7.65%



ASCOT 1-22 CLAIMS
MINERALIZATION & 1994 SAMPLES
BRITISH COLUMBIA

EQUITY ENGINEERING LTD.

DRAWN:	H.A./J.W.	MINING DIV.: OMINECA		FIGURE
N.T.S.:	93L/15E	SCALE: 1:20,000		5
DATE:	DEC. 1994	REVISED:		

a) **Disseminated sphalerite and galena in dacitic or andesitic tuff and breccia**

Occurrence 16: Texas Gulf diamond drill hole DDH-1 (333° azimuth; -60° inclination; 88.1 metres total depth) intersected "greenish grey altered dacite tuff" with "scattered fine brown sphalerite and specks of galena disseminated in matrix" from surface to 14.6 metres (Price, 1978a). Texas Gulf's original sampling data are unavailable, but Price (1978a) collected a sample from the upper 14.6 metres, taking a 1" piece of core from each foot interval. This sample assayed 0.67% zinc and 0.11% lead. Helgason (1988) reported "just west of the drill hole, a dark, graphitic, weakly silicified argillite outcrop with disseminated pyrite, galena and sphalerite was found." His grab sample returned 13,989 ppm Zn and 3553 ppm Pb.

Occurrences 13 and 14: Price (1978a) reported mineralization similar to Occurrence 16 in two separate bands of lapilli tuff located 210 and 480 metres west of hole DDH-1. "Grade at these two latter occurrences will be low, probably less than 1% Pb and Zn yet it is significant that 3 mineralized bands with identical mineralization are present over a possible strike length of 1600 feet, with possible 40 ft. width in each band".

Occurrence 15: Helgason (1988) mapped several outcrops of hornfelsed greywacke, containing minor sphalerite and galena, from 120 to 160 metres west of hole DDH-1. He took two grab samples; the best had 2355 ppm Zn and 872 ppm Pb. The "hornfelsed greywacke" is probably equivalent to Price's middle band of dacitic lapilli tuff, which hosts Occurrence 14 further west.

Occurrence 17: Geostar excavated trench AT87-8 to investigate anomalous zinc-arsenic soil geochemistry on the Ascot 19 claim. Helgason (1988) reported four grab samples from narrow zones of remobilized carbonate, grading up to 16,417 ppm Zn. In 1994, a rounded float boulder was found within this trench, assaying 4.85% Zn and 4.38% Pb in sample 10275 (see polished thin section description; Appendix D). This boulder contained alternating 2-70 millimetre beds of black argillite and coarser, light grey tuff. The tuff contains unaltered plagioclase crystals and glassy volcanic fragments, with abundant intergrown sphalerite, galena and pyrrhotite occurring between grains and finely disseminated within the glassy fragments. No "vein" minerals occur with the sulphides and there is no obvious structural control to mineralization. The trench exposed similar, but not obviously mineralized, thin-bedded sediments; mineralized float sample 10275 is thought to be derived upslope from the trench.

Occurrence 18: Traces of galena (sample 626976; 504 ppm Pb) and chalcopyrite (sample 10272; 296 ppm Cu) were noted by the author within matrix and clasts of andesitic lapilli tuff, 400 metres southeast of Occurrence 17 (see thin section description for sample 626976; Appendix D). Helgason (1988) reported several patches of discontinuous mineralization in this area, grading up to 11,561 ppm Zn and 1118 ppm Pb over 1.0 metre, but considered them to be "small zones of enrichment hosted in shales and siltstones adjacent to diorite dykes". A sheared diorite dyke nearby graded 12,464 ppm Zn and 1468 ppm Pb over 1.9 metres.

b) **Sphalerite, galena and barite in impure limestone and calcareous volcanics**

Occurrence 3: Pale sphalerite and galena occur in clots, lamina and fine specks in impure limestone exposed for 60 metres along Canyon Creek, immediately south of the Ascot claim group. The impure limestone contains fragments of "amygdaloidal andesite and wisps of buff to greenish volcanic ash". Price (1978b) carried out 7.0 metres of packsack drilling in three short holes, reporting 3.5 metres grading 1.6% Zn and 0.3 metres grading 1.46% Zn, with low lead and silver values. No barite assays were carried out.

Occurrence 4: Approximately 200 metres up Canyon Creek from Occurrence 3, "light green limy volcanic rocks....now predominantly chlorite and carbonate, contain greenish disseminated sphalerite, and are cut by a fault zone containing barite and sphalerite" (Price, 1978b). Holland (1989) described this rock unit as a trachyandesite flow, characterized by "the presence of K-feldspar, the absence of mafics and its weak sericite-moderate carbonate alteration", with "large, flow-elongated, grey carbonate-filled amygdules". He reported a 1.2 metre chip sample grading 20,334 ppm Zn.

Occurrence 5: Several Zn±Pb±Ba occurrences were mapped by Holland (1989) from 150 to 240 metres northeast along strike from Occurrence 4 in the same "trachyandesite flow" unit. He noted that "mineralization is found primarily in the vicinity of the contacts between chloritic andesite and non-chloritic trachyandesite. Significant amounts of smithsonite, hydrozincite, and lead, probably as carbonates, occur in fracture fillings and carbonate-(barite?)-rich streaks and stringers. The mineralized zone is poorly defined, but widths up to several metres were observed. Local remobilized barite veins and stringers were also noted". Holland (1989) reported a 2.0 metre chip sample with 12,432 ppm Zn from this type of mineralization. At the northeastern end of Occurrence 5, "pyrite, sphalerite, galena and lesser smithsonite-hydrozincite occur as streaks, irregular blebs and disseminations in small, erratic, lensoidal carbonate-barite cemented breccia zones within carbonatized amygdaloidal trachyandesites. Sulphides occur both in the matrix and within altered breccia fragments" (Holland, 1989). Holland's grab samples from the breccia assayed up to 4.72% Zn and 1.53% Pb, with 15.8 ppm Ag.

Occurrence 8: Geostar excavated two trenches on highly anomalous zinc-lead-silver-arsenic soil geochemistry on the Ascot 3 claim. Helgason (1988) reported 6.5% Zn and 51 g/tonne Ag across a true width of 8 metres (apparent width of 18 metres) from Geostar's trench AT87-14. Helgason did not recognize any barite, apparently misidentifying it as hydrozincite. Although partially slumped, this trench was examined by the author; sample 626979 assayed 7.65% Zn and 10.6% Ba, with 1865 ppm Pb and 39.4 ppm Ag, across a true width of 2.8 metres (apparent width of 4.0 metres), confirming Geostar's results. Thin section analysis (Appendix D) shows this sample to be a fine-grained, micritic, possibly exhalative, limestone containing 5% plagioclase crystals and sparse andesitic lithic clasts. Barite forms 1-10mm seams and lamina, generally parallel to foliation but locally cross-cutting it, and comprising approximately 15% of the rock. In outcrop, fine-grained galena was noted flanking a barite seam and petrographic examination revealed fine-grained sphalerite in a similar position. Sphalerite and an unidentified opaque mineral also occur as closely associated networks, sinuous wisps and small disseminated clumps. Aqua regia digestion does not dissolve barite and the original geochemical analyses of the three 1994 samples from trench AT87-14 returned only 10-920 ppm Ba. Subsequent assaying returned up to 39.9% Ba for these samples.

c) **Pyrite+sphalerite in felsic breccia**

Occurrence 6: Between Occurrences 5 and 8, felsic breccia (Unit 10) is in contact with Price's "limy volcanics" (Peatfield and Loudon's "impure limestone"). "The breccia has a fine matrix which contains pyrite and occasionally sphalerite" (Price, 1978b).

d) **Massive pyrite lenses**

Occurrence 2: Approximately 750 metres southwest of the Ascot claim group, a 30 centimetre thick "lens of massive pyrite has been partially exposed, near the contact of a graphitic argillite and a massive rhyolite....It consists of coarse-grained, euhedral to subhedral pyrite, often in a porous aggregate. Thin folded "wisps" of chlorite-sericite schist occur within the pyrite body" (Peatfield and Loudon, 1968). "Only [weakly?] anomalous values of lead, zinc, silver and gold are reported from samples taken" (Helgason, 1988).

e) **Copper mineralization in rhyolite**

Occurrence 19: "On the lower reaches of Newell [now Byron] Creek, to the east of the map area, a small copper showing occurs in rhyolitic rocks. A weak shear zone contains discontinuous lenses of massive chalcocite up to three inches in width" (Peatfield and Loudon, 1968).

Other copper occurrences were mapped by Peatfield and Loudon (1968) outside the area covered by Figure 5, located within rhyolite units 2,000 metres south of the Ascot 1 claim and 1,500 metres northwest of the Ascot 7 claim.

f) **Chalcopyrite in diorite**

Occurrence 11: The feldspar porphyry phase of the diorite contains a "few small, discontinuous basic pegmatites of larger plagioclase crystals, containing minor amounts of pyrite and chalcopyrite" (Peatfield and Loudon, 1968).

g) **Sphalerite and galena in quartz+carbonate veins or sheared diorite**

Occurrence 1: "A few small quartz veins, containing a little pale sphalerite and, rarely, galena" were described by Peatfield and Loudon (1968) near the massive pyrite lens of Occurrence 2.

Occurrence 15: Price (1978a) found a "large piece of rhyolite float" in this vicinity, containing coarse grains of sphalerite and galena in quartz veinlets.

Occurrences 17 and 18: Described above in category "a".

Occurrence 20: Limited stripping by Geostar of a zinc soil anomaly on the Ascot 4 claim exposed a 7 metre band of "limy/dolomitic sandstone with strong carbonate alteration and minor sphalerite, galena and pyrite. A grab sample of discontinuous, remobilized, carbonate-altered stringer zone" returned values of 10,000 ppm zinc, 3900 ppm lead and 24.6 ppm silver (Helgason, 1988).

Other Occurrences

Occurrence 7: Helgason (1988) mapped zinc-lead mineralization 110 metres southeast of Occurrence 8, but provided no description.

Occurrence 9: Peatfield and Loudon (1968) mapped a copper showing within grey volcanic conglomerate on the Ascot 2 claim.

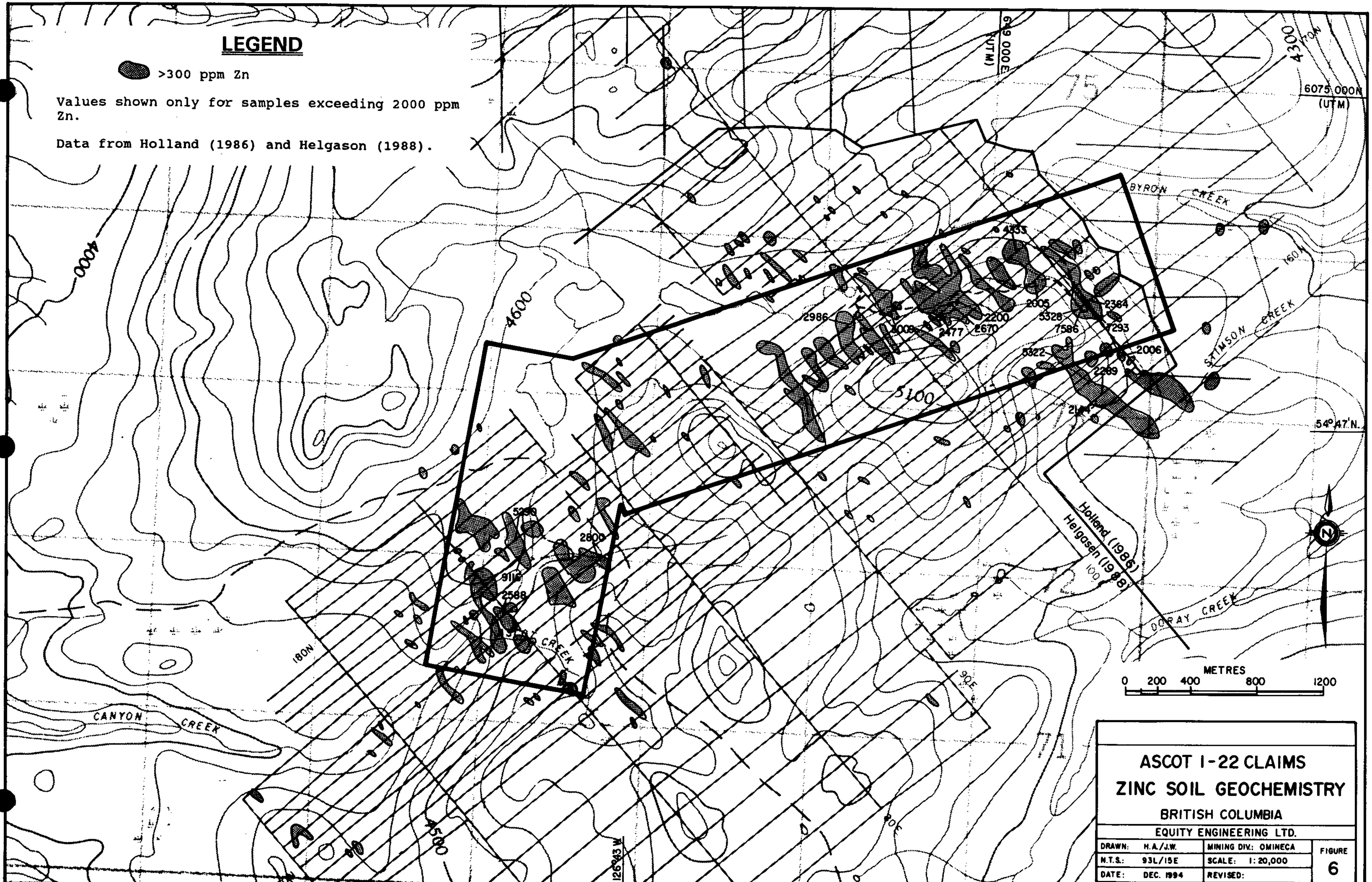
Occurrence 10: Peatfield and Loudon (1968) mapped a barite occurrence a few hundred metres east of the Ascot 2 claim.

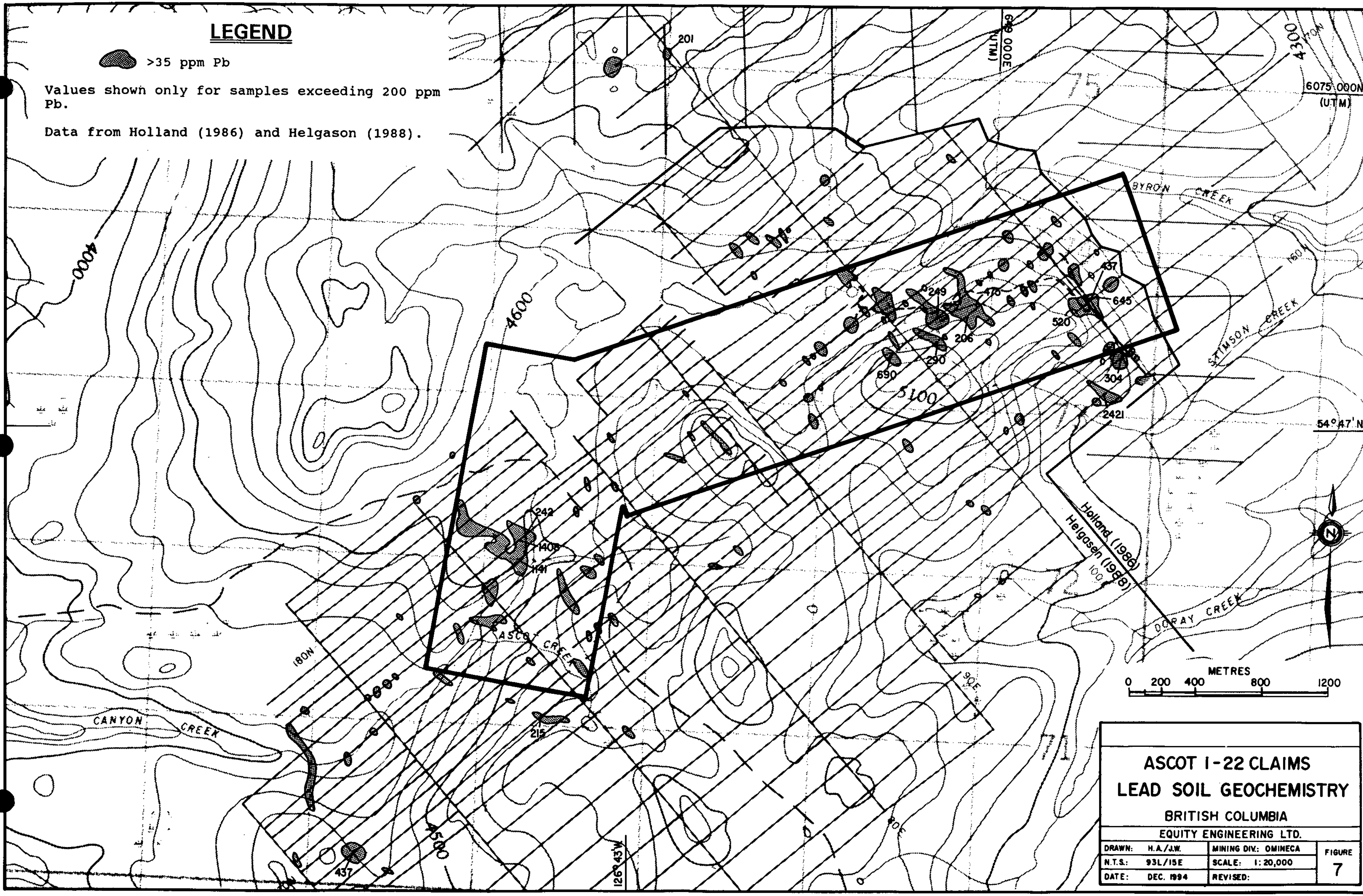
Occurrence 12: Peatfield and Loudon (1968) mapped copper mineralization within impure greywacke.

Occurrence 21: Peatfield and Loudon (1968) noted copper mineralization within impure greywacke on the hill 400 metres west of the Ascot 7 claim.

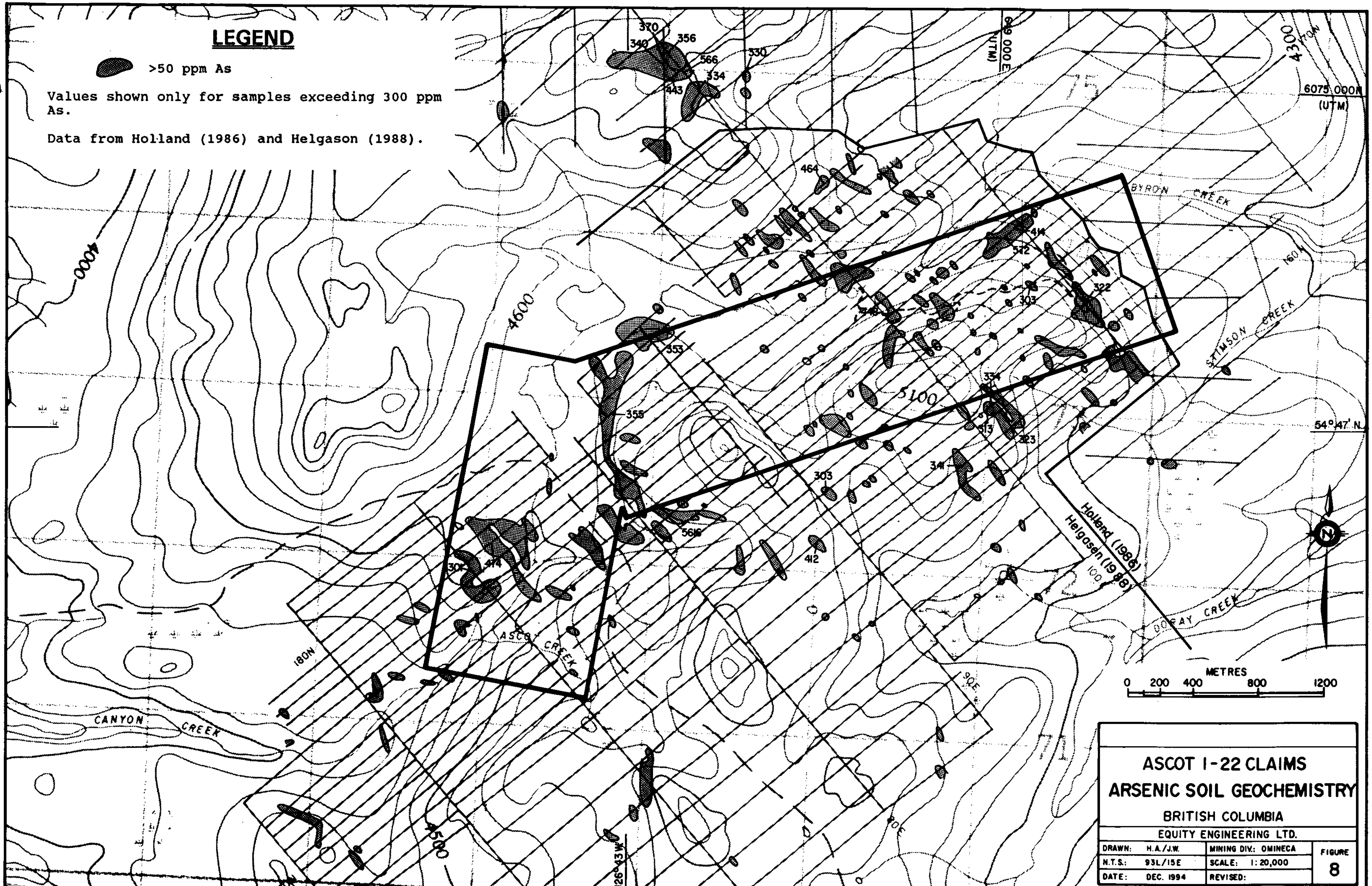
7.0 SOIL GEOCHEMISTRY

Several campaigns of soil geochemical sampling have been carried out on the Ascot property. The early surveys were limited to a few elements or to small areas. In 1985, Noranda collected 313 soil samples at 50 metre intervals on east-west and north-south lines spaced 500 metres apart, extending east and north from the Ascot 21 and 22 claims (Myers and Seel, 1985). Samples were analyzed for Au, Ag, Cu, Pb, Zn and As; none of these exceeded 30 ppb Au. Holland (1986) further defined the Noranda anomalies by re-sampling this area with 1449 samples on crosslines 250 metres


LEGEND
>300 ppm Zn
Values shown only for samples exceeding 2000 ppm Zn.
Data from Holland (1986) and Helgason (1988).
BYRON CREEK
STIMSON CREEK
CANYON CREEK
DORAY CREEK
CREEK
6075 000N (UTM)
669 000E (UTM)
54°47'N.
126°43'W
Holland (1986)
Helgason (1988)
METRES
0 200 400 800 1200
4000
4600
4300
4500
5100
180N
90E
4333
2986
2200
2670
2477
3009
2005
5326
2364
7586
7293
5322
2006
2289
5230
2800
9116
2588
ASCOT 1-22 CLAIMS
ZINC SOIL GEOCHEMISTRY
BRITISH COLUMBIA
EQUITY ENGINEERING LTD.
DRAWN: H.A./J.W.
MINING DIV.: OMINECA
N.T.S.: 93L/15E
SCALE: 1:20,000
DATE: DEC. 1994
REVISED:
FIGURE 6



LEGEND
>35 ppm Pb
Values shown only for samples exceeding 200 ppm Pb.
Data from Holland (1986) and Helgason (1988).
201
649 000E (UTM)
4300
6075 000N (UTM)
4000
4600
5100
4500
BYRON CREEK
STIMSON CREEK
DORAY CREEK
ASCOT CREEK
CANYON CREEK
437
645
520
249
475
206
290
690
304
2421
242
1408
1141
215
437
54°47'N.
126°43'W
180N
90E
Holland (1986)
Helgason (1988)
METRES
0 200 400 800 1200
N
ASCOT 1-22 CLAIMS
LEAD SOIL GEOCHEMISTRY
BRITISH COLUMBIA
EQUITY ENGINEERING LTD.
DRAWN: H.A./J.W.
MINING DIV.: OMINECA
N.T.S.: 93L/15E
SCALE: 1:20,000
DATE: DEC. 1994
REVISED:
FIGURE 7


LEGEND
>50 ppm As
Values shown only for samples exceeding 300 ppm As.
Data from Holland (1986) and Helgason (1988).
ASCOT 1-22 CLAIMS
ARSENIC SOIL GEOCHEMISTRY
BRITISH COLUMBIA
EQUITY ENGINEERING LTD.
DRAWN: H.A./J.W.
MINING DIV.: OMINECA
N.T.S.: 93L/15E
SCALE: 1:20,000
DATE: DEC. 1994
REVISED:
FIGURE 8
METRES
0 200 400 800 1200
BYRON CREEK
STIMSON CREEK
ASCOT CREEK
CANYON CREEK
DORAY CREEK
Holland (1986)
Helgason (1988)
6075 000N (UTM)
54°47' N.
126°43' W.
180N
4000
4600
4500
5100
4300
370
340
356
566
330
334
443
464
414
512
322
303
353
355
334
313
323
341
303
412
5616
474
301

apart, oriented at 050°. Given the low gold values in the Noranda survey, Holland only analyzed his soil samples for Ag, As, Cu, Pb and Zn. In 1987, Geostar extended Holland's grid to the southwest over the current Ascot claims, taking 5,473 soil samples at 25 metre intervals along lines 100 metres apart. Analysis was again limited to Ag, As, Cu, Pb and Zn, with no gold or barium analyses.

Figures 6-8 show soil response for zinc, lead and arsenic, based upon surveys reported by Helgason (1988) and Holland (1986), who included data from Myers and Seel (1985). The following levels, chosen by Helgason (1988), are considered anomalous in the following discussion: 300 ppm Zn, 35 ppm Pb and 50 ppm As. The apparent northwesterly trend of geochemical anomalies on Figures 6-8 does not reflect geology, but is an artifact of contouring values on a grid with unequal sample spacing along lines and between lines. The spotty pattern to the anomalies may reflect pockets of poor geochemical response in areas underlain by local glacial till or poor drainage.

The bulk of anomalous zinc soil geochemistry lies within the Ascot 1-22 claims, forming two main belts separated by the swampy meadows around the chain of lakes (Figure 6). The highest zinc value (9116 ppm) was returned from the Ascot 3 claim; backhoe trenching at this location returned a true width of 8 metres grading 6.5% zinc in Occurrence 8. Anomalous zinc geochemistry extends 200 metres north from here; till appears to cover the meadow further north, masking the soil response. High zinc values are scattered across the Ascot 1-4 claims south of Occurrence 8, associated with several known zinc-lead±barite occurrences.

Anomalous zinc soil geochemistry also forms a broad arc for 2,500 metres across the Ascot 15-22 claims and extends southeasterly for a further 500 metres before terminating in the large swamp between Stimson and Doray Creeks (Figure 6). The northern portion of this arc, with six soil samples above 2000 ppm Zn, follows the general trend of stratigraphy and covers stratiform zinc±lead mineralization in Occurrences 13-17, hosted by dacitic or andesitic tuffs and breccias. The highest values, up to 7586 ppm Zn, are further southeast in the vicinity of Occurrence 18, where trenching exposed scattered zinc-lead mineralization associated with the contact area around a diorite plug. A 300 metre wide break in the zinc soil anomaly overlies the diorite plug, but high values continue southerly from its southern contact. This portion of the zinc soil anomaly, extending southeast from the Ascot 20 claim, returned values up to 5322 ppm Zn, but has not been trenched and no mineralization has been reported.

Lead soil geochemical anomalies (Figure 7) form a very similar pattern to those described above for zinc, although values are an order of magnitude lower. This relationship would be expected, given the common association of lesser galena with sphalerite mineralization on the property.

The distribution of arsenic in the Ascot soils is more complex

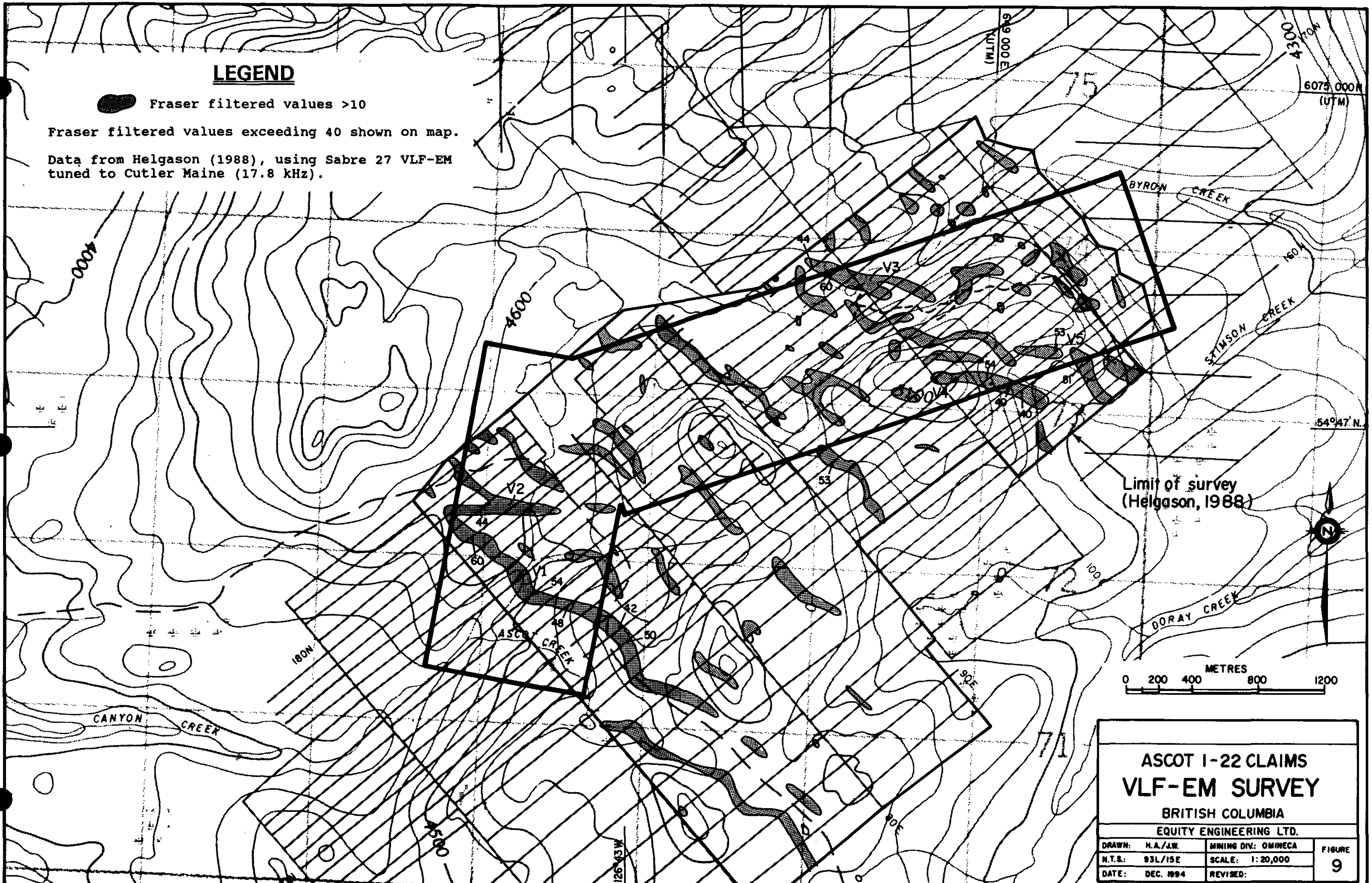
(Figure 8). A triangle of anomalous arsenic, up to 474 ppm, accompanies the high zinc-lead values around Occurrence 8. Reflecting this association in outcrop, sample 626979, from Occurrence 8, returned 376 ppm As with 7.65% Zn. This triangle of anomalous arsenic completely fills in the fold nose defined by VLF-EM conductors V1 and V2 (Section 8.0; Figure 9) A few scattered high arsenic soils values, up to 448 ppm, are also associated with the broad arc of zinc-lead soil anomalies on the Ascot 15-22 claims. However, three areas of anomalous arsenic geochemistry are accompanied by only spotty zinc and lead values; no mineralization has yet been found to explain them. A 1200 metre long anomaly trends northerly through the Ascot 9 and 10 claims, including one sample with 5616 ppm As. A group of arsenic anomalies covers 600 x 800 metres immediately northwest of the Ascot 15-22 zinc-lead soil anomaly and on trend with it. Seven soil samples exceeding 300 ppm As are clustered approximately 1,500 metres north of the Ascot property. No gold analysis was performed on arsenic-bearing samples, with the exception of this last anomaly and several arsenic-rich samples around Occurrence 18.

Silver values are generally low and erratically distributed. The highest values, 5.2 and 6.9 ppm Ag, occur with anomalous zinc, lead and arsenic in the vicinity of Occurrence 8. Copper values are generally low, with only a few samples exceeding 100 ppm. The highest, 641 ppm, is located at Occurrence 18, where chalcopyrite was noted within andesitic lapilli tuff.

8.0 GEOPHYSICS

Texas Gulf carried out an airborne magnetic and electromagnetic survey over the Ascot property in 1969 (Crosby and Hillman, 1969), but lack of topographic reference makes their data unusable. Several ground electromagnetic surveys were subsequently carried out with a variety of techniques over restricted areas. The most useful survey was carried out by Geostar, covering most of the Ascot 1-22 claims and extending to the southeast. Geostar surveyed 137 line-kilometres of their grid with VLF-EM tuned to the Cutler Maine frequency (Helgason, 1988). Figure 9 shows a contoured plan of Fraser filtered values from this survey.

A very strong, well-defined conductor (**V1**) trends southeast for 1,600 metres across the Ascot 2-4 claims and extends a further 900 metres southeasterly off the property. This conductor has no topographic expression and outcrop has only been mapped along its trace in Canyon Creek, where it appears to overlie argillaceous sediments (Unit 6) and felsic breccia (Unit 10). However, its trend parallels stratigraphy and it probably represents a conductive stratigraphic unit, possibly graphitic. At its northwestern end, V1 appears to wrap around and trend easterly (**V2**) for 700 metres across the Ascot 5 claim. A tight fold marked by conductors V1 and V2 would fit with the repetition of stratigraphy in Canyon Creek. Anomalous arsenic, zinc and lead soil geochemistry lies within the fold nose defined by V1 and V2;



LEGEND
Fraser filtered values >10
Fraser filtered values exceeding 40 shown on map.
Data from Helgason (1988), using Sabre 27 VLF-EM tuned to Cutler Maine (17.8 kHz).
Limit of survey (Helgason, 1988)
BYRON CREEK
STIMSON CREEK
DORAY CREEK
ASCOT CREEK
CANYON CREEK
6075 000N (UTM)
649 000 E (UTM)
54°47' N.
126°43' W.
V1
V2
V3
V4
V5
METRES
0 200 400 800 1200
ASCOT 1-22 CLAIMS
VLF-EM SURVEY
BRITISH COLUMBIA
EQUITY ENGINEERING LTD.
DRAWN: H.A./J.W.
N.T.S.: 93L/15E
DATE: DEC. 1994
MINING DIV.: OMINECA
SCALE: 1:20,000
REVISED:
FIGURE 9

Occurrence 8, with abundant barite and 6.5% zinc across eight metres of tuffaceous limestone, also lies within this nose, approximately 150 metres northeast of its southwest limb.

Conductor V3 is well-defined for 800 metres east-west on the Ascot 15 claim, lying parallel to stratigraphy. Texas Gulf drill hole DDH-1, with 14.6 metres grading 0.67% zinc, was collared 150 metres east of the eastern end of conductor V3 and along strike. Soil geochemistry is not anomalous above conductor V3, but no outcrop has been mapped and much of its length is covered by marshy ground around the chain of lakes.

Another strong VLF conductor (V4) trends east for 700 metres from the Ascot 18 claim. Peatfield and Loudon (1968) mapped argillaceous sediments coincident with the western end of V4 and they probably continue along its length. Another strong conductor (V5) lies 250 metres to the north and parallels V4 for 500 metres. The diorite/sediment contact lies somewhere in this area; conductor V5 could reflect it or a second conductive horizon. Unexplained soil geochemical anomalies, with up to 5322 ppm Zn and 2421 ppm Pb, overlie conductor V5.

9.0 DISCUSSION

The Ascot property demonstrates excellent potential for hosting a volcanogenic massive sulphide (VMS) deposit. Approximately 300 kilometres to the northwest, the Eskay Creek gold-rich VMS deposit is hosted at a rhyolite/argillite contact within the Hazelton Group, at a similar stratigraphic level to the Ascot claims. The presence of massive pyrite at the contact between rhyolite and graphitic argillite (Occurrence #2) is encouraging. Coarse felsic breccias, similar to Unit 10, are commonly associated with VMS deposits elsewhere. Two belts of syngenetic zinc+lead±barite occurrences have been reported on the Ascot claims; each of these belts is of sufficient size to host a significant VMS deposit.

On the Ascot 1-4 claims, sphalerite, galena and barite occur within rock unit 4, which varies from tuffaceous limestone (Occurrences #3 and #8) to calcareous volcanic (Occurrences #4 and #5). These showings have been mapped along 1,000 metres of Canyon Creek; with the isoclinal folding in this area, this could represent several thousand metres of poorly-exposed strike length. Petrographic work shows that sphalerite, galena and barite form fine-grained lamina parallel to bedding within the tuffaceous limestone, suggesting a syngenetic origin. A sphalerite-bearing pyritic felsic breccia (Occurrence #6) lies adjacent to the tuffaceous limestone in the middle of these showings and could represent footwall mineralization. It has been reported that the tuffaceous limestone shows flowage and thickening within the crests of folds. If so, increased widths of mineralization could be expected to the northwest of Occurrence #8 (eight metres grading 6.5% Zn) within the fold nose defined by conductors V1 and V2.

On the Ascot 15-22 claims, sphalerite and galena have been noted within dacitic or andesitic tuffs and breccias along a strike length of 1,400 metres (Occurrences #13-18). At the western end, sphalerite was noted within three parallel bands of lapilli tuff; drilling within one of these returned 0.67% zinc and 0.11% lead over 14.6 metres. Near the middle of this belt of occurrences, 1994 float sample 10275 assayed 4.85% zinc and 4.38% lead in a new discovery. It consisted of andesitic tuff with fine-grained sphalerite and galena within glassy volcanic fragments and between fragments; the mineralization appears syngenetic. This arc of zinc-lead mineral occurrences and coincident soil geochemical anomalies is truncated to the southeast by a diorite plug. On the other side of the diorite, 300 metres to the south, strong zinc-lead soil geochemistry coincide with VLF-EM conductor V5 over a distance of 800 metres. Little work has been done in this area and no mineralization has been reported, but it could represent a continuation of the mineralized trend of Occurrences #13-18.

Carbonate or quartz veins near several of the syngenetic zinc+lead±barite occurrences contain galena, sphalerite or barite. These are thought to have been remobilized from the pre-existing syngenetic mineralization. Other zinc-lead showings consist only of quartz or carbonate veining; it seems likely that they also have been remobilized from stratabound mineralization nearby which has not yet been discovered. In particular, quartz veins with sphalerite and galena lie near Occurrence #2, a massive pyrite lens with no base metals, suggesting that zinc and lead may be present within the massive sulphides along strike from the creek exposure.

Several exploration programs have been carried out on the Ascot property since the late 1960's by different operators, increasing knowledge of the extent and styles of mineralization on the property. However, there is a lack of consistency in lithological interpretation, making it difficult to correlate rock units mapped during different campaigns. One example is Peatfield and Loudon's (1968) "impure limestone" (Unit 4), which correlates with Price's (1978b) "limy volcanic", Helgason's (1988) "limy shale and siltstone", Holland's (1989) "carbonate-altered trachyandesite flow" and Harris's "carbonate exhalite" (Appendix D). Careful stratigraphic mapping and petrography should resolve these conflicts and improve our knowledge of the depositional environment. This work will be made somewhat difficult by complex folding and lack of outcrop in key areas.

Only 313 soil samples, taken by Noranda in 1985, were analyzed for gold. These were taken east and north of the areas of current interest. None of the 6,922 soil samples taken subsequently from the Ascot area were analyzed for gold, leaving the possibility of gold-enriched zones open. Barium assays were not performed on any of the soil samples and the presence of barite was not always recognized within mineralized zones. As a key component within VMS systems, and in the Occurrence #3-8 mineralization in particular, barium is a very useful pathfinder; future soil samples should be assayed for it.

Pyrrhotite is intimately associated with syngenetic zinc-lead mineralization at Occurrence #17 and should respond well to magnetic surveys. Such a survey would be very useful in delineating stratigraphy and structure as well as the extent of mineralization similar to Occurrence #17. The VLF-EM survey was successful in tracing some highly conductive lithologies, such as that underlain by conductors V1 and V2 and the argillaceous sediments under V4, but did not extend far enough to the southwest to completely cover the Occurrence #3-8 area. Conductor V3 lies from 150 to 950 metres west along strike from hole DDH-1 (0.67% Zn/14.6m) and could indicate more sulphide-rich mineralization in this direction.

Further exploration on the Ascot property is warranted to test its potential for hosting significant VMS mineralization. Grids should be re-established over the Occurrence #3-8 area, the Occurrence #13-18 area and the conductor V5 area, using the existing cut base lines. Soil samples should be collected at 25 metre intervals along lines 100 metres apart, assayed for barium and analyzed geochemically for gold, silver and base metals. The grid would provide good spatial control for detailed stratigraphic and structural mapping at a scale of 1:2,500 and for a magnetic/ VLF-EM survey. This work, combined with an induced polarization or more sophisticated electromagnetic survey over areas of most interest, should be sufficient to define backhoe trenching and diamond drilling targets.

Respectfully submitted,

Henry J. Awmack, P.Eng.
EQUITY ENGINEERING LTD.

PROFESSIONAL
PROVINCE OF
H. J. AWMACK
BRITISH COLUMBIA
ENGINEER

Vancouver, British Columbia
January, 1995

APPENDIX A

BIBLIOGRAPHY

BIBLIOGRAPHY

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APPENDIX B

STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES
ASCOT 1-22 CLAIMS
September 14-16, 1994

PROFESSIONAL FEES AND WAGES:		
Henry J. Awmack, P. Eng.		
1.5 days @ $400 day	$ 600.00	
Pat Suratt, Prospector		
1.0 day @ $275/day	275.00	$ 875.00
CHEMICAL ANALYSES:		
Rock samples		
(Au, Ba, 32-element ICP)		
10 @ $25.00	$ 250.00	
Assays (Zn±Pb)		
3 @ $6.40	19.20	269.20
EXPENSES:		
Meals	$ 39.51	
Maps and Publications	8.77	
Printing and Reproductions	412.76	
Accommodation	55.00	
Truck Rental	160.00	
Automotive Fuel	43.38	
Courier	14.80	
Petrographic Descriptions	497.00	1,231.22
REPORT:		1,000.00
MANAGEMENT FEES:		
15% on expenses and analyses		225.06
TOTAL:		**$ 3,600.48**

APPENDIX C

ROCK SAMPLE DESCRIPTIONS

MINERALS AND ALTERATION TYPES

AZ	azurite	BA	barite	BI	biotite
BO	bornite	CA	calcite	CB	Fe-carbonate
CC	chalcocite	CL	chlorite	CP	chalcopyrite
CU	native copper	CV	covellite	CY	clay
EP	epidote	FM	ferromolybdite	FP	feldspar
GA	garnet	GE	goethite	GL	galena
GR	graphite	HE	earthy hematite		
HS	specularite	HZ	hydrozincite	JA	jarosite
KF	K-feldspar	MC	malachite	MG	magnetite
MN	Mn-oxides	MO	molybdenite	MR	mariposite
MS	sericite	MT	marcasite	MU	muscovite
NE	neotocite	PO	pyrrhotite	PX	pyroxene
PY	pyrite	QZ	quartz veining	SI	silica
SP	sphalerite	TA	talc	TO	tourmaline
TT	tetrahedrite				

ALTERATION INTENSITIES

m	medium	s	strong	tr	trace
vs	very strong	w	weak		

Property : Ascot 1-22 Claims NTS : 93L/15E Date : September 14, 1994

Sample No. Grid Co-or. 165+10N Type : Float Alteration : None
109+60E Strike Length Exp. : m Metallics : <1%CP, 2-3%PY, trSP
10272 Elevation: 4850 ft Sample Width : 12 cm Secondaries: None
Orientation: / True Width : m Host : Andesitic lapilli tuff

Au (ppb)	Ag (ppm)	Ba (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
<5	0.7	0.2%	296.	4.	40.

Comments : Sedimentary and felsic clasts. Just off cat road - very near outcrop.

Sample No. Grid Co-or. 166+10N Type : Float Alteration : mCB, mQZ
110+20E Strike Length Exp. : ■ Metallics : None
10273 Elevation: 4800 ft Sample Width : m Secondaries: mGE
Orientation: / True Width : m Host : Quartz vein in sediments

Au (ppb)	Ag (ppm)	Ba (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
<5	0.3	<0.1%	11.	8.	460.

Comments : Quartz vein portion of float - no visible sulphides. Carbonate-altered angular clasts.

Sample No. Grid Co-or. 167+20N Type : Float Alteration : sQZ
109+70E Strike Length Exp. : ■ Metallics : trPY
10274 Elevation: 4850 ft Sample Width : 25 cm Secondaries: wGE
Veining : / True Width : ■ Host : Quartz vein in sediments

Au (ppb)	Ag (ppm)	Ba (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
<5	0.3	<0.1%	6.	18.	164.

Comments : Angular float on cat road 191m NW of 10272.

Sample No. Grid Co-or. 169+00N Type : Float Alteration : None
108+60E Strike Length Exp. : m Metallics : 5%GL, 3%PO, 1%PY, 5%SP
10275 Elevation: 4500 ft Sample Width : m Secondaries: None
Orientation: / True Width : m Host : Well-bedded tuff and argillite

Au (ppb)	Ag (ppm)	Ba (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
<5	1.2	<0.1%	69.	4.38%	4.85%

Comments : Occurrence #17. 388m northwest from 10272 in Geostar trench AT87-8. Very fine-grained intergranular sulphides in light grey tuff. Interbedded with 1-2cm black argillite beds.

Sample No. Grid Co-or. 177+00N Type : Select Alteration : sCA
73 +40E Strike Length Exp. : ■ Metallics : <1%PY, 70%BA
10276 Elevation: 1355 ■ Sample Width : m Secondaries: wHZ
Orientation: / True Width : m Host : Tuffaceous limestone

Au (ppb)	Ag (ppm)	Ba (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
<5	2.5	39.9%	11.	554.	4770.

Comments : Occurrence #8. Massive barite in pyritic tuffaceous limestone in Geostar trench AT87-14. Host sediment is tightly folded.

Sample No. Grid Co-or. 177+00N Type : Float Alteration : sCB, sQZ
73 +40E Strike Length Exp. : m Metallics : trPY
10277 Elevation: 1355 m Sample Width : m Secondaries: None
Orientation: / True Width : m Host : Quartz-carbonate vein in tuffaceous limestone

Au (ppb)	Ag (ppm)	Ba (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
<5	0.7	2.3%	9.	102.	990.

Comments : Occurrence #8. Quartz/carbonate vein, at least 30cm wide. Float at edge of Geostar trench AT87-14.

Property : Ascot 1-22 Claims NTS : 93L/15E Date : September 14, 1994

Sample No.	Grid Co-or.		Type :	Grab	Alteration :	wMS	Au	Ag	Ba	Cu	Pb	Zn
		109+50E	Strike Length Exp. :	15 m	Metallics :	trGL, 5%PY	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
626976	Elevation:	1380 m	Sample Width :	2 m	Secondaries:	wGE	<5	0.5	0.2%	83.	504.	1410.
	Bedding :	110 / 82 N	True Width :	1.5 m	Host :	Black andesitic lapilli tuff						

Grid Co-or. for 626976: 166+00N

Comments : Occurrence #18. Matrix supported, weakly bleached, subrounded, 4-20mm andesitic lapilli in black soft matrix. Sparse FP crystal fragments and rare quartz eyes. Galena in pyritic, fine-grained or porphyritic fragments.

Sample No.	Grid Co-or.	168+20N	Type :	Grab	Alteration :	wMS	Au	Ag	Ba	Cu	Pb	Zn
		109+50E	Strike Length Exp. :	2 m	Metallics :	trCP, 5%PY	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
626977	Elevation:	1383 m	Sample Width :	1 m	Secondaries:	None	<5	0.0	0.1%	62.	14.	100.
	Bedding :	125 / 75 SW	True Width :	1 m	Host :	Black andesitic lapilli tuff						

Comments : Cat-disturbed outcrop. Medium-grey. Lapilli generally 2-10mm, with long axes defining bedding. Clasts mainly light-grey, bleached (some with 15% fine-grained pyrite), sparse silicified ones. Trace chalcopyrite in matrix locally.

Sample No.	Grid Co-or.	169+50N	Type :	Grab	Alteration :	wCL, wMS, wSI	Au	Ag	Ba	Cu	Pb	Zn
		107+00E	Strike Length Exp. :	1.5 m	Metallics :	7%PY	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
626978	Elevation:	1408 m	Sample Width :	1.5 m	Secondaries:	wGE	<5	0.4	<0.1%	24.	46.	122.
	Orientation:	/	True Width :	1.5 m	Host :	Lapilli tuff						

Comments : Light to medium green matrix. Medium grey subangular fragments to 2cm (one is 10cm). Clusters of fine-grained pyrite to 8mm in diameter.

Sample No.	Grid Co-or.	177+00N	Type :	Grab	Alteration :	sCA, wCY	Au	Ag	Ba	Cu	Pb	Zn
		73 +40E	Strike Length Exp. :	1 m	Metallics :	trGL, 2%PY, 10%BA	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
626979	Elevation:	1355 m	Sample Width :	4.0 m	Secondaries:	wGE, wHZ, trMN,	<5	39.4	10.6%	24.	1865.	7.65%
	Foliation :	125 / 70 NE	True Width :	2.8 m	Host :	Tuffaceous limestone						

Comments : Occurrence #8. Geostar trench AT87-14 (12-16m). Light grey, foliated parallel to bedding. Finely crystalline barite in 1-10mm seams, roughly parallel to foliation. 2mm seam of fine-grained galena flanking barite seam.

APPENDIX D

PETROGRAPHIC DESCRIPTIONS

(Prepared by Dr. Jeff Harris
of Vancouver Petrographics Ltd.)

Vancouver Petrographics Ltd.

8080 GLOVER ROAD, LANGLEY, B.C. V3A 4P9
PHONE (604) 888-1323 • FAX (604) 888-3642

Report for: Henry Awmack,
Equity Engineering Ltd.,
207 - 675 West Hastings St.,
VANCOUVER, B.C.
V6B 1N2

Job 950001

January 5th, 1995

SAMPLES:

2 thin sections and 1 polished thin section of samples from the Ascot property (Project EQO 94-02) were submitted for petrographic examination. The samples are numbered 626976, 626979 and 10275.

SUMMARY:

Sample 626976 is a fragmental rock (probably a lapilli tuff) composed of vari-sized lithic clasts of porphyritic and amygdaloidal andesites, and disaggregated plagioclase phenocrysts therefrom. Plagioclase (the dominant constituent) appears uniformly fresh throughout. The clasts are cemented by a minimal sub-opaque crypto-crystalline matrix phase, containing sporadic clusters of opaques and traces of probable sphalerite.

Sample 10275 is another fragmental, made up of plagioclase crystals and lithic clasts of cryptocrystalline to glassy andesite. Fine-grained sulfides (dominantly sphalerite and pyrrhotite) occur as intimate disseminations in the glassy lithic clasts, and concentrate as interclast networks. The rock does not appear altered or fractured, and the paragenesis of the sulfides is uncertain. The fine grain size (down to a few microns) and dispersed character of much of the sphalerite may make separation difficult.

Sample 626979 is composed essentially of carbonate. This shows a foliated crypto-fragmental texture, and incorporates scattered discrete clasts of plagioclase and andesite. Microgranular barite occurs as a few thin laminae, and there are concordant concentrations of fine-grained sphalerite. Sphalerite also occurs (along with other sulfides) in more dispersed mode, as sporadic wisps and small clumps following the sinuous, clumpy foliation. Barite and sulfides both appear syngenetic.

Individual descriptions and photomicrographs are attached.

J.F. Harris Ph.D. (929-5867)

SAMPLE 626976 **LAPILLI TUFF**

Estimated mode

Plagioclase	65
Chlorite	20
Carbonate	1
Rutile	4
Opaques	trace
Sub-opaque matrix	10
Limonite) Sphalerite)	trace

This sample is a breccia of close-packed, irregular/sub-rounded clasts of widely varied size. Clasts ranging in size from 0.05 - 15.0mm or more are represented in the sectioned portion

The fragments consist of various andesites and disaggregated phenocrysts therefrom. A number of texturally distinctive lithovariants are represented. Most of these are porphyritic rocks containing phenocrysts of fresh, subhedral plagioclase 0.2 - 2.5mm in size, in a variety of groundmasses. The latter are composed of aggregates of plagioclase, chlorite and rutile granules in various proportions and size ranges. Some show meshwork to sub- trachytic fabrics containing more or less abundant, slender plagioclase laths to 0.1mm or so in size; others are minutely felsitic (grain size 10 - 30 microns); others are prominently amygdaloidal, with rounded/irregular, sub-coalescent amygdules of fibrous/radiate chlorite or, more rarely, carbonate.

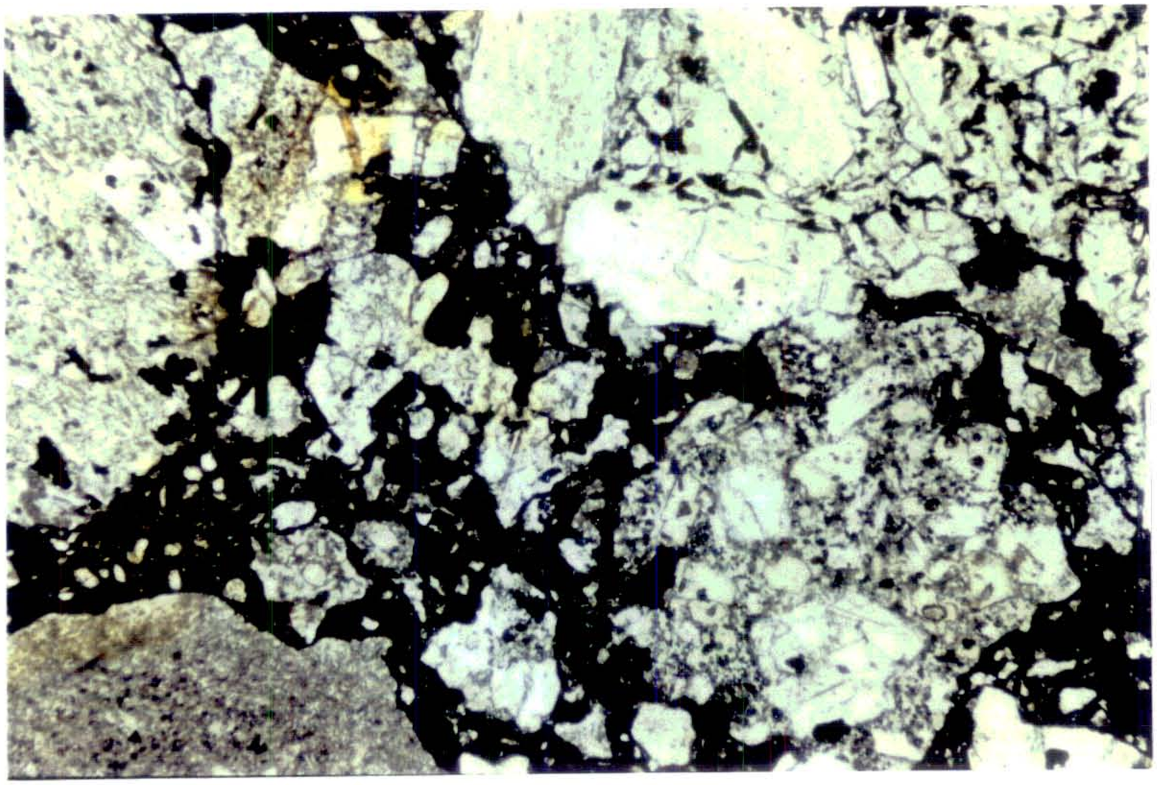
Throughout the rock plagioclase (both phenocrysts and groundmasses) is strikingly fresh, whereas mafics are always totally altered (chloritized).

A few clasts contain disseminated opaques (including probable pyrite). The non-fitting lithic clasts and disaggregated phenocrysts occur in close-packed, random orientation. They are cemented by a minimal matrix phase of indeterminate, dark, sub-opaque, cryptocrystalline material - possibly mainly rutile and Fe oxides. This material intimately permeates the aggregates of tiny clasts which are packed between the larger ones, and forms a tenuous network of coatings around the coarser clasts. Rare, small clumps of translucent brown material (limonite and/or sphalerite?), 50 - 500 microns in size, occur sporadically within the cementing phase.

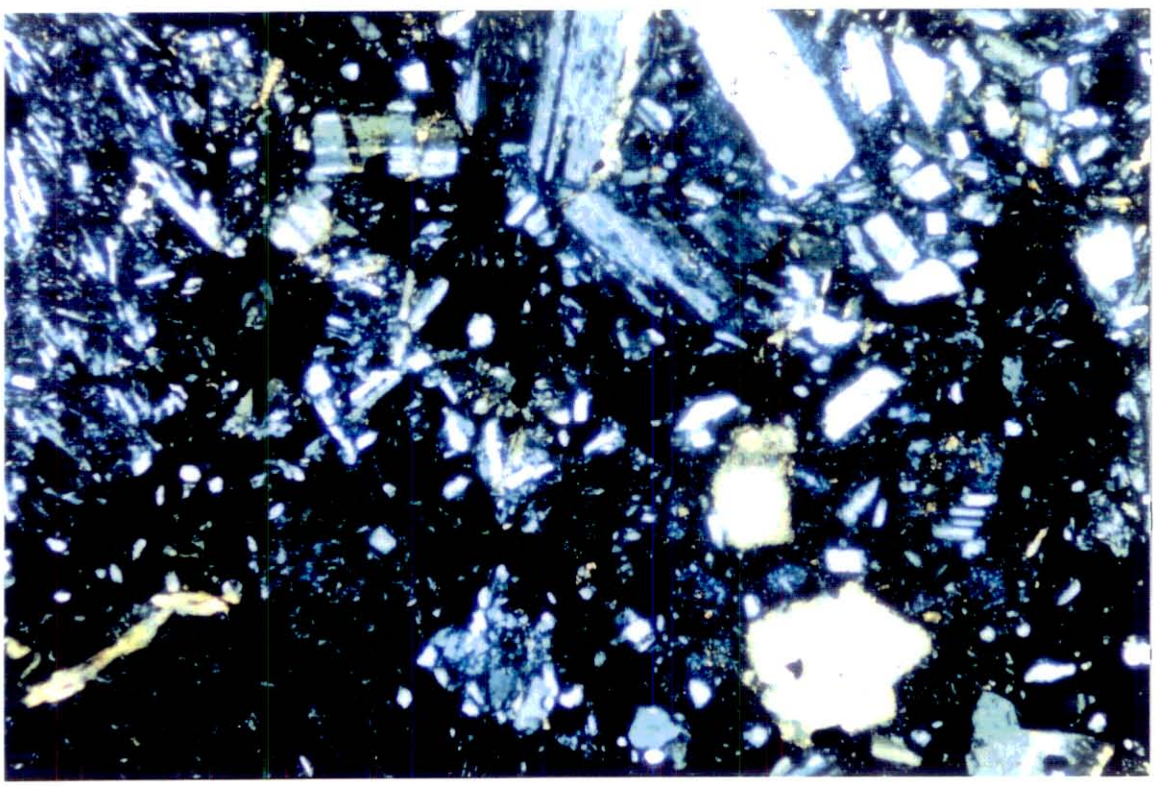
Rare hairline veinlets of carbonate cut a few of the lithic and crystal clasts.

The origin of this fragmental rock is uncertain. It may be a poorly sorted, unbedded pyroclastic (andesite lapilli tuff).

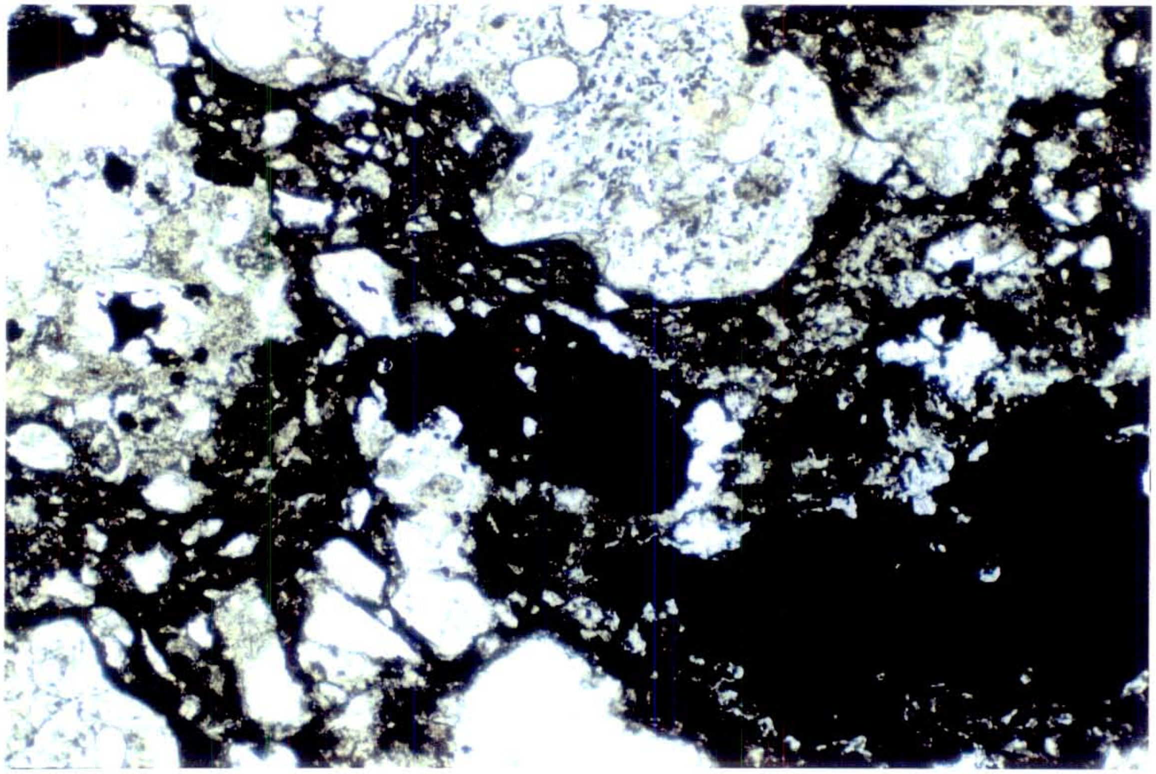
SAMPLE 626976



Neg. 346-4: Transmitted light. Scale 1cm = 170 microns. Typical field, showing vari-sized, vari-textured andesite lithic clasts. That at top right is strongly porphyritic. That at bottom right has chlorite-filled amygdules. That at top left has a microlitic groundmass. That at bottom left is minutely felsitic. Clasts are cemented by an indeterminate sub-opaque matrix phase (dark).



Neg. 346-5: Cross-polarized transmitted light. Same field as 346-4. Shows fresh, well-twinned plagioclase. Clast at bottom right has pseudomorphs or amygdules of carbonate (cream colour) and smaller amygdules of chlorite (bluish).



Neg. 346-6: Transmitted light. Scale 1cm = 85 microns. Clump of probable sulfides (opaques; black) in the dark cementing phase. Intergrown, dark red-brown, sub-translucent areas (e.g; centre, view in bright light) are possible sphalerite.

SAMPLE 10275 SULFIDE-BEARING TUFF

Estimated mode

Plagioclase	50
Sericite	1
Chlorite	6
Carbonate	8
Felsitic/crypto-crystalline material	23
Sphalerite	8
Pyrrhotite	3
Pyrite	1
Galena	1
Chalcopyrite	trace

This is a speckled, non-foliated rock having the macroscopic aspect of a form of wacke.

In thin section it is found to consist of prominent crystal clasts of plagioclase, sometimes with minor associated carbonate, alternating with dark, fine-grained, sub-opaque lithic, volcanic material.

The plagioclase crystals are of subhedral prismatic form, and range in size from 0.1 - 1.0mm (rarely to 1.5mm). They mostly occur as discrete grains, but occasionally form clusters cemented intergranularly by pockets of carbonate.

The plagioclase crystals show mild pervasive flecking by sericite and carbonate and, in a few cases, contain emulsion-like inclusions of chlorite or brown glass.

The other component - which is present in approximately equal abundance to the plagioclase crystals - is in the form of lithic clasts of similar size to the latter. It typically consists of a turbid, cryptocrystalline/altered glassy material, sometimes more or less abundantly speckled with tiny amygdules of chlorite, and sometimes exhibiting typical pumiceous or other vitroclastic textures. Occasionally it is felsitic or feathery-textured, and recognizably composed dominantly of plagioclase. Some fragments show flattening and internal flow textures suggestive of the effects of accumulation and compaction of volcanic ejecta while still soft.

The glassy lithic clasts and the plagioclase crystals occur as a close-packed, randomly-oriented aggregate without a distinct matrix or cementing phase. It is unclear whether the two components are of common origin. Rarely, the crystals appear to have adhering remnants of the glassy matrix, but generally the two phases constitute discrete fragments (see photos).

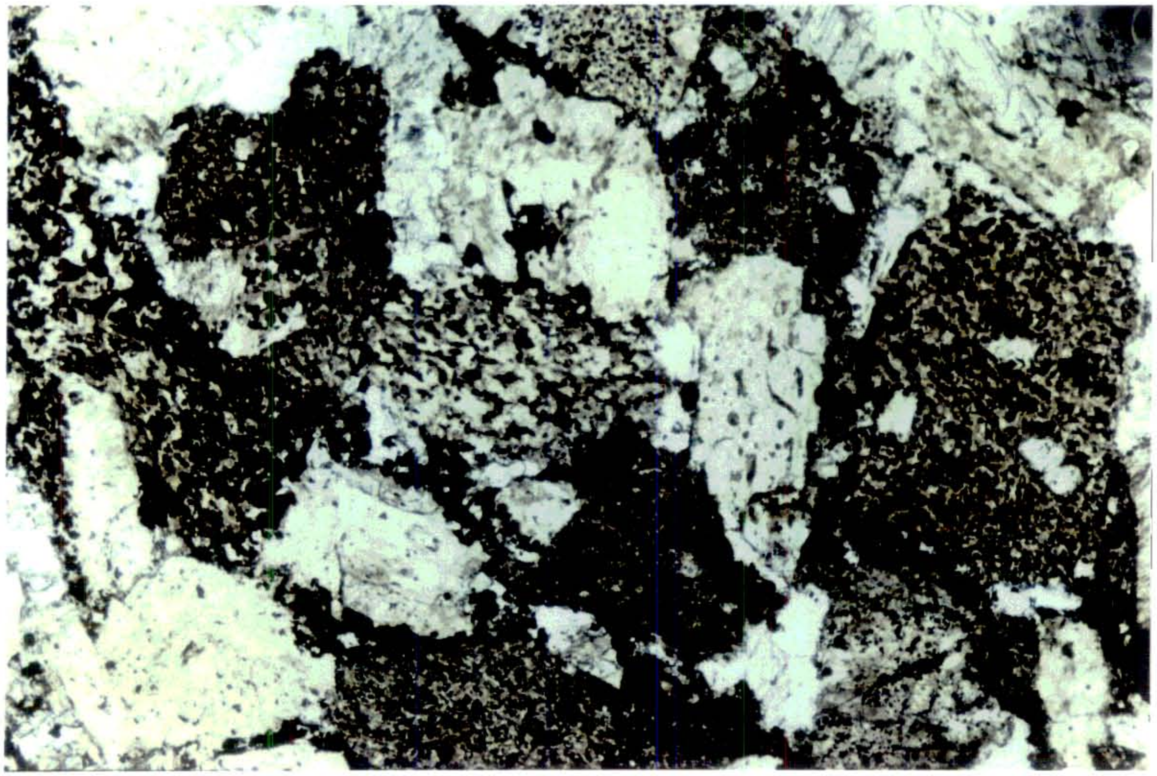
The most remarkable feature of the rock is the occurrence of fine-grained sulfides (dominantly sphalerite) as an even, pervasive impregnation. The sulfides (ragged grains 5 - 50 microns in size)

Sample 10275 cont.

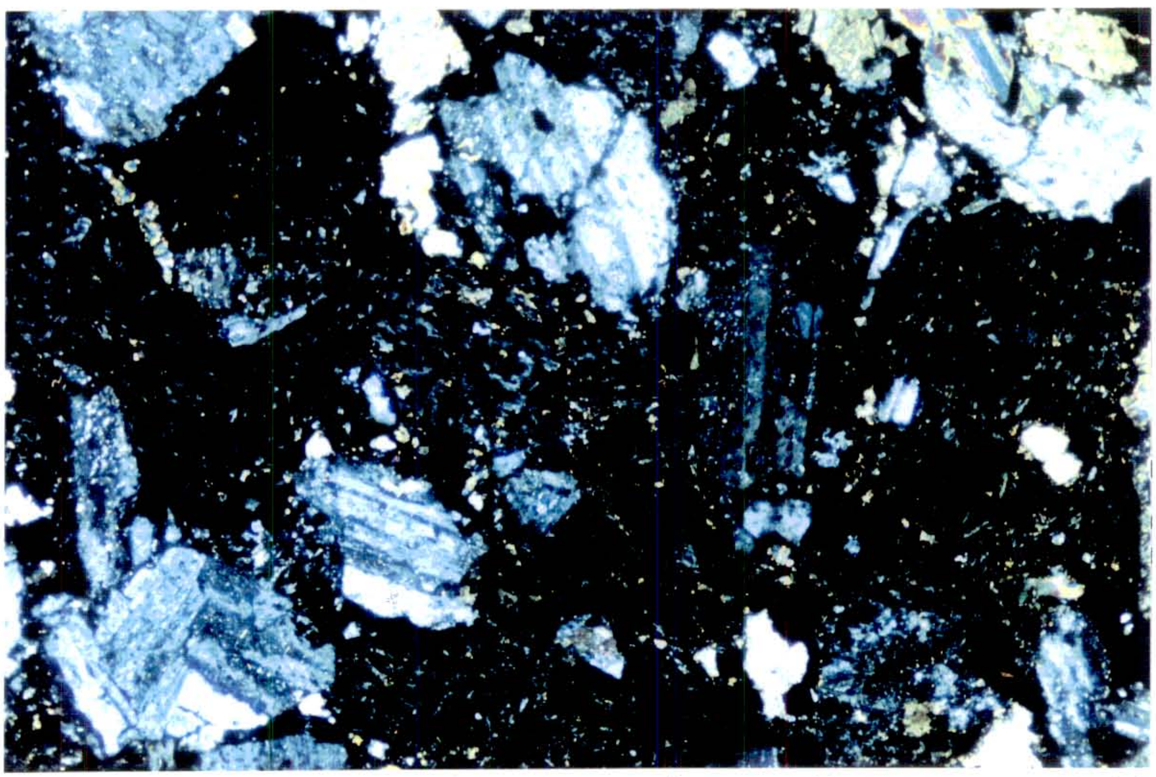
occur as more or less abundant disseminations throughout the volcanic lithic clasts. They also tend to concentrate as interclast networks, outlining plagioclase crystals and delineating the boundaries of individual lithic clasts. They sometimes occur associated with interclast carbonate pockets.

As well as the minute disseminated dustings of sulfides, scattered, pockety segregations up to 100 or 200 microns are present. A few of these are essentially pure sphalerite, but the majority are intimate, fine-grained intergrowths of sphalerite, pyrrhotite and galena. Pyrite and rare chalcopyrite (of similar grain size) are occasional accessories.

The sulfides show no structural control, and apparently have no associated/introduced gangue. Their paragenesis is uncertain. They could be an authigenic component deposited in the microporosity of the altered glass clasts by subsequent circulation of metal-bearing solutions; or the tuff may have accumulated in an exhalative basin of syngenetic sulfide deposition.

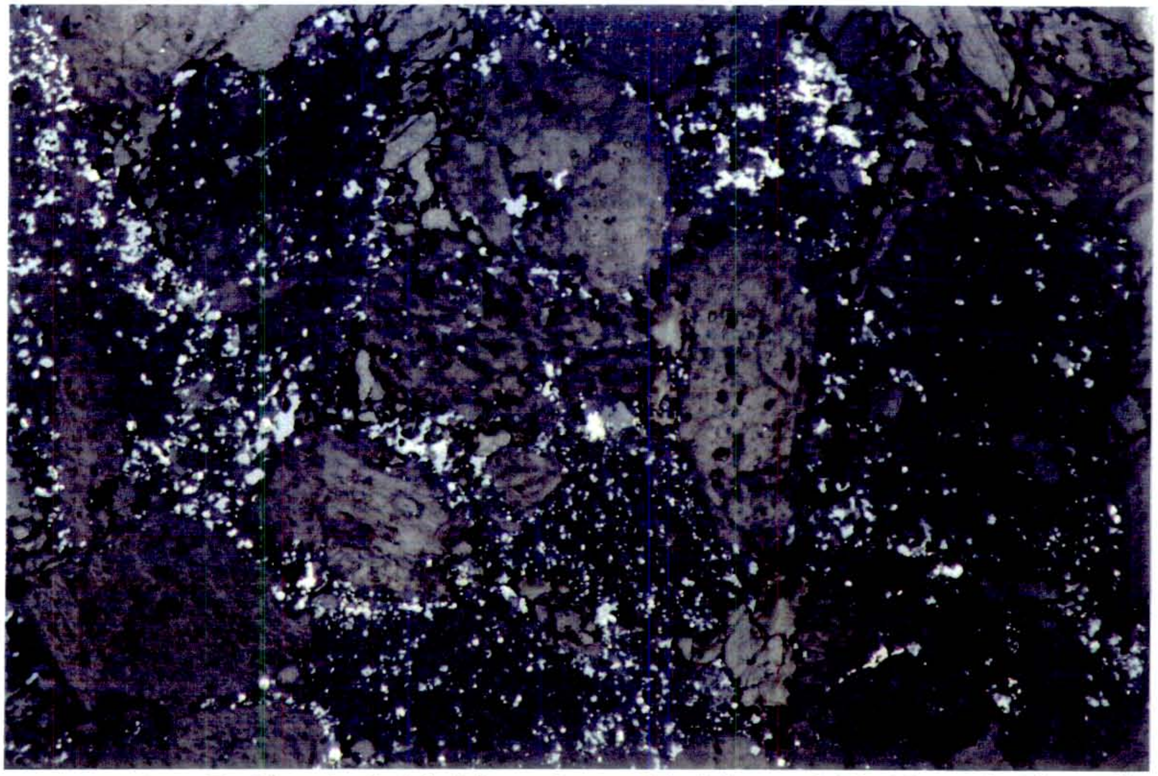


Neg. 346-12: Transmitted light. Scale 1cm = 170 microns. Typical field, showing aggregate of plagioclase crystal clasts (light; prismatic shapes) and lithic clasts of glassy volcanics. Dark speckles in the latter are fine-grained sulfides, which also concentrate as a network of interclast streaks and pockets.

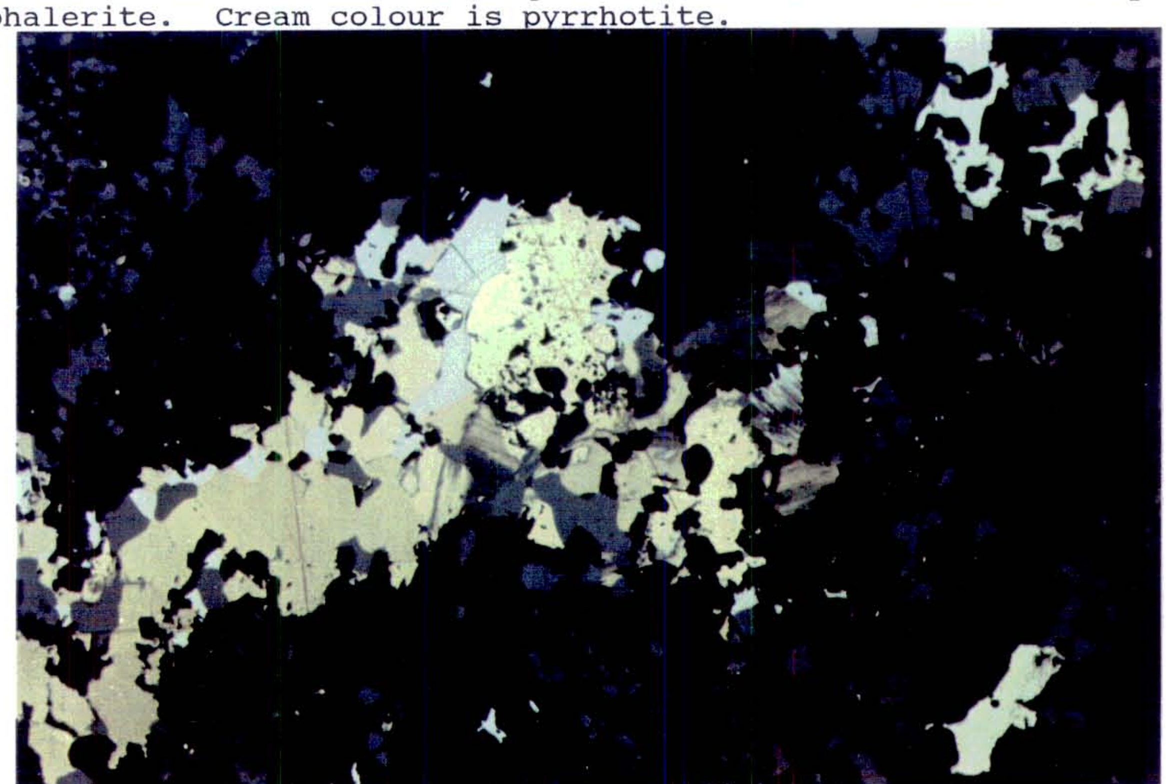


Neg. 346-13: Cross-polarized transmitted light. Same field as 346-12. Shows fresh, well-twinned character of the plagioclase crystal clasts. Lithic clasts (glassy/cryptocrystalline) are sub-isotropic and appear dark. Light pinkish areas (e.g. centre top) are pockets of carbonate peripherally associated with the plagioclase crystals.

<u>**SAMPLE 10275**</u>

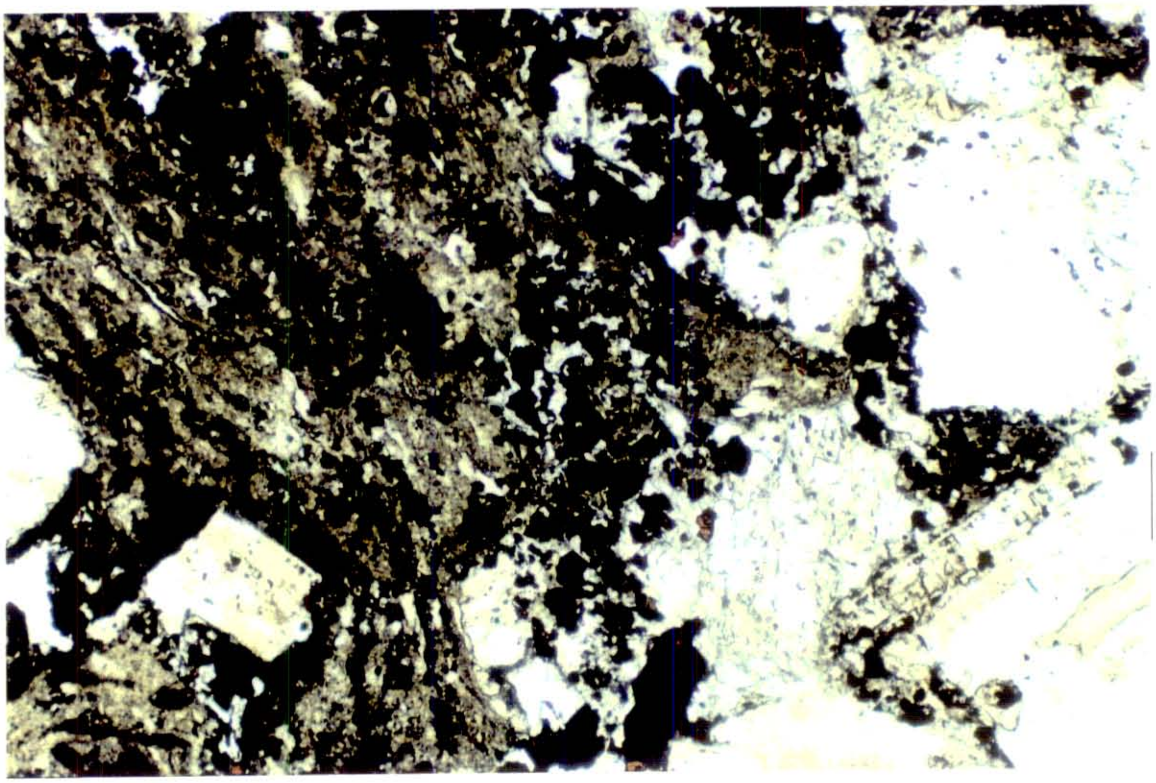


Neg. 346-22: Reflected light. Same field as 346-12 and 13. Shows distribution of sulfides, within and interstitial to the glassy lithic clasts. Note fine grain size of sulfides. Grey is sphalerite. Cream colour is pyrrhotite.

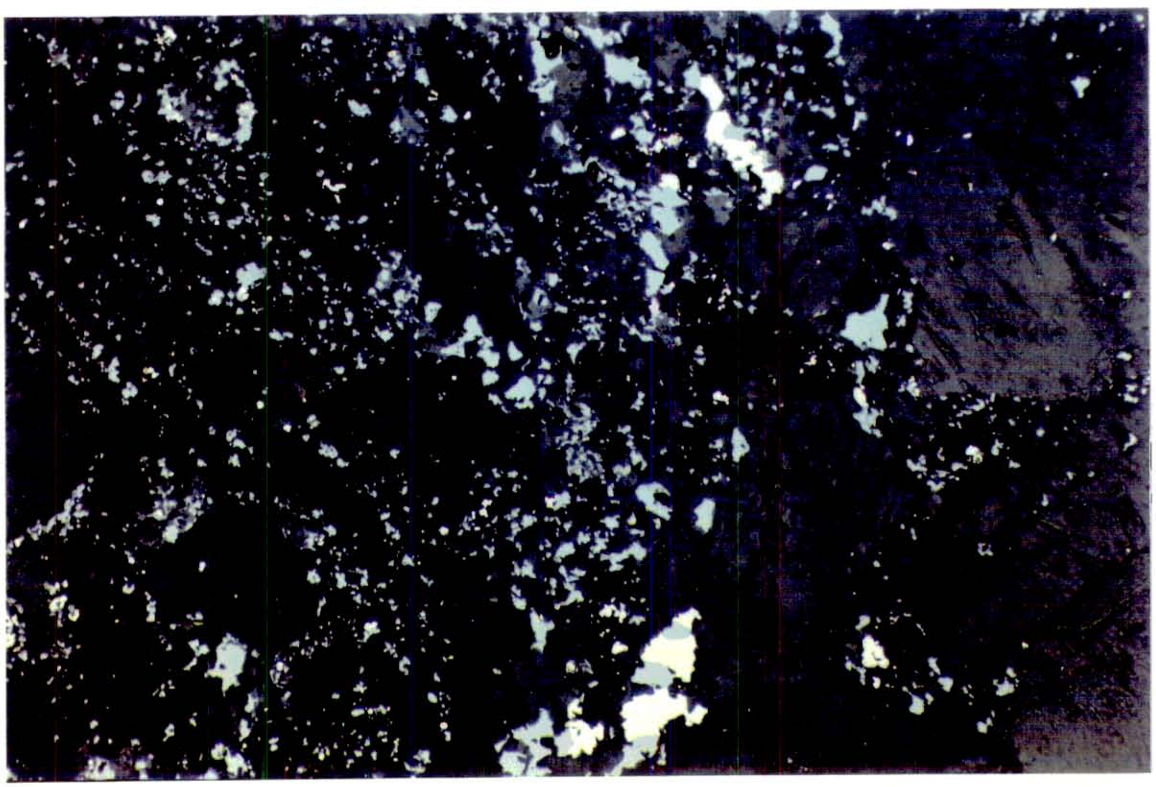


Neg. 346-15: Reflected light. Scale 1cm = 42 microns. Increased magnification to show detail of sulfide intergrowths in poly-mineralic clump. Battleship grey - also as fine-grained disseminations through the glassy volcanic matrix (black background) - is sphalerite. Buff colour (lower left) is pyrrhotite - some grains of which show incipient alteration to Fe oxides (grey shadowy hatching). Lighter cream-coloured area (centre) is pyrite. Adjacent light bluish grey is galena.

<u>SAMPLE 10275</u>



Neg. 346-23: Transmitted light. Scale 1cm = 85 microns. Higher magnification shows mode of occurrence of sulfides (black) as abundant fine-grained disseminations in glassy volcanic clasts (streaky brown, left), and as concentrations at contacts of plagioclase crystal clasts (white) and associated peripheral carbonate.



Neg. 346-24: Reflected light. Same field as 346-23. Clearly shows very small particle size of much of the sulfides. Light grey is sphalerite; cream colour is pyrrhotite. Maximum size of sphalerite segregations in this field is about 50 microns.

SAMPLE 626979 CARBONATE EXHALITE WITH SPHALERITE AND BARITE

Estimated mode

Carbonate	73
Plagioclase	5
Quartz	trace
Chlorite	2
Barite	8
Opaques	4
Sphalerite	8

On the macroscopic scale, this rock exhibits a weak, somewhat irregular/sinuous foliation defined by lamellar concentrations of dark granules and colourless material, in a turbid, speckled matrix.

In thin section the rock is found to be composed predominantly of fine-grained micritic carbonate. This exhibits a distinct fragmental fabric which includes more or less distinct, stumpy, sub-prismatic crystal clasts of plagioclase, 50 - 300 microns in size, and less common, andesitic lithic clasts composed of fine-grained and felsitic plagioclase and diffuse chloritic/dusty, sub-opaque material. These are comparable in size to the plagioclase crystal clasts.

There are also more or less abundant, fragment-like clumps of microgranular carbonate, which possibly represent totally altered feldspar crystals or andesitic lasts. Very rare clasts of quartz are also seen.

The relict and totally carbonated clasts constitute augen in a matrix of minutely micritic carbonate, of grain size 5 - 20 microns, within which a sinuous foliation is defined by discontinuous wisps of micron-size opaque dust.

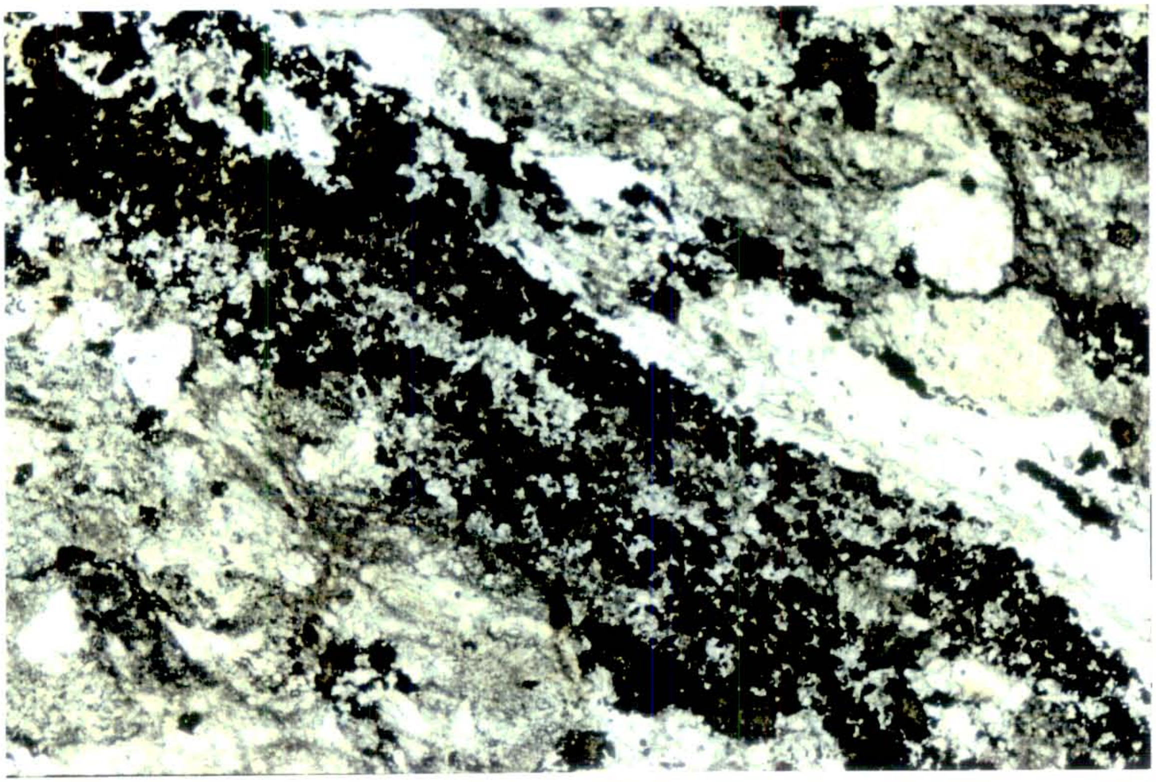
Sphalerite and an opaque phase (unidentifiable without benefit of a polished surface for reflected light observations) occur closely associated, as sinuous wisps, networks, small disseminated clumps, and occasional discrete laminae. The sulfides occur as grains 5 - 50 microns in size, with the sphalerite locally showing coalescence to irregular pockets of up to 300 microns or more.

The laminar segregations of sphalerite (the dark stringers on the macro-scale) are zones, up to 1mm in thickness, in which sphalerite makes up 50-100% of the rock.

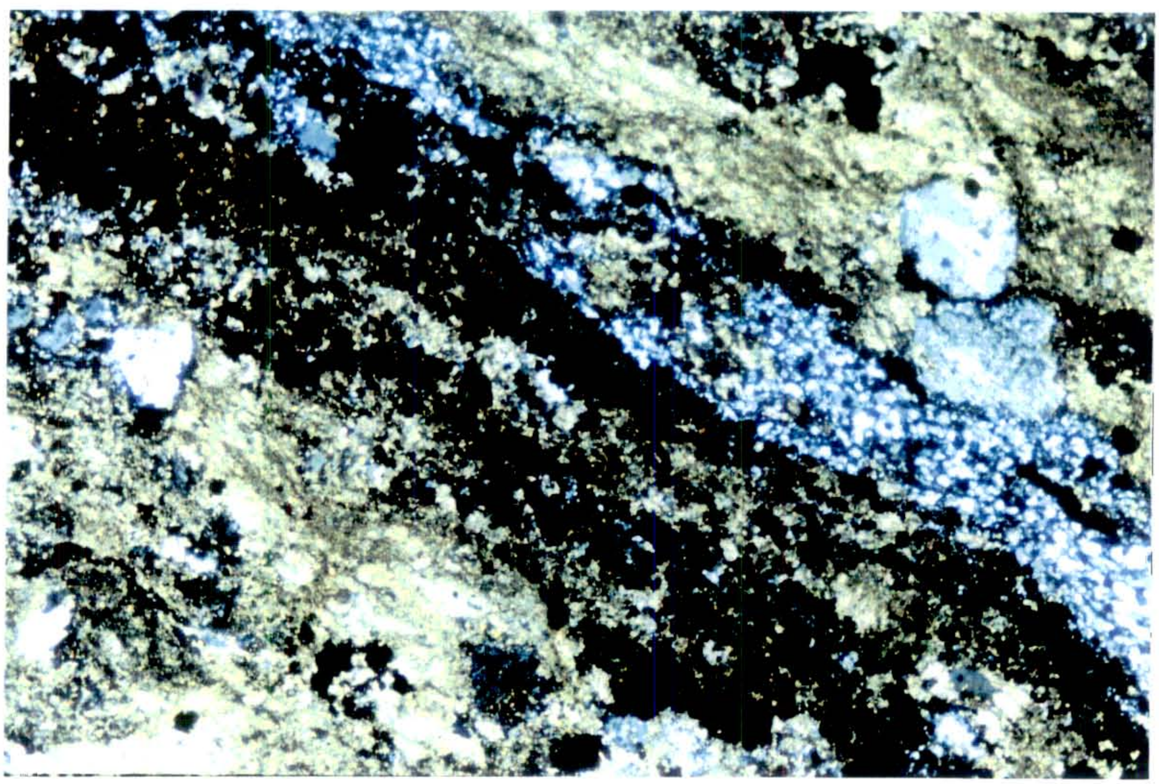
The two colourless laminar threads (up to 1mm in thickness) within the sectioned portion are composed of cherty, microgranular aggregates (mosaics 5 - 30 microns in size) of barite. These incorporate rare, coarser, phenocryst-like, prismatic grains of the same mineral. Opaques and sphalerite are seldom seen within the barite laminae, but often concentrate marginally to them. Traces of barite also occur in dispersed form, as random small flecks and pockets in the rock at large.

Sample 626979 cont.

The origin of this rock is uncertain. It has the appearance of a bedded sequence (chemical sediment) of dominant carbonate, with wispy intercalations of syngenetic barite and sulfides. The scattered plagioclase crystals, and more or less carbonated lithic clasts, presumably represent a minor, contemporaneous tuffaceous contribution to a basin of exhalative chemical deposition.

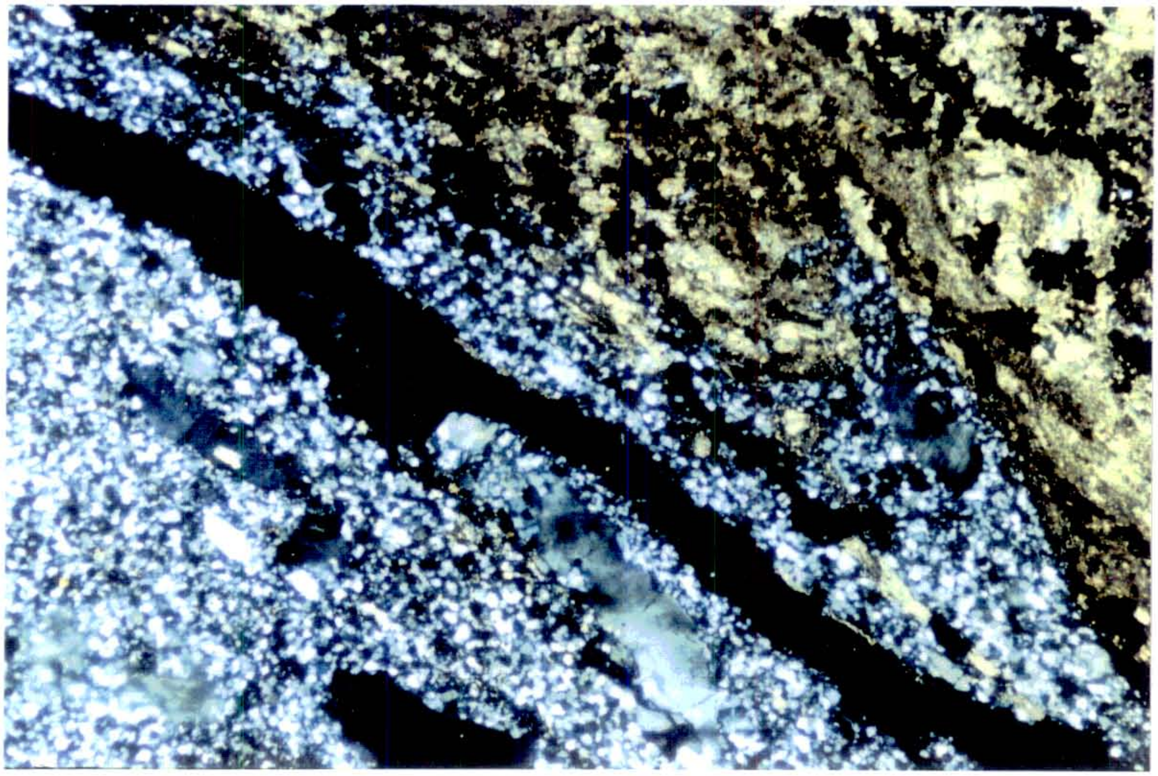


Neg. 346-9: Transmitted light. Scale 1cm = 170 microns. Laminar zone of disseminated fine-grained sulfides (dark, mainly sphalerite) flanking thin lamina of barite (white). Occasional coarser sphalerite clumps (e.g. centre bottom) appear brown, sub-translucent. Carbonate host rock shows straky lenticular fabric and fragments.

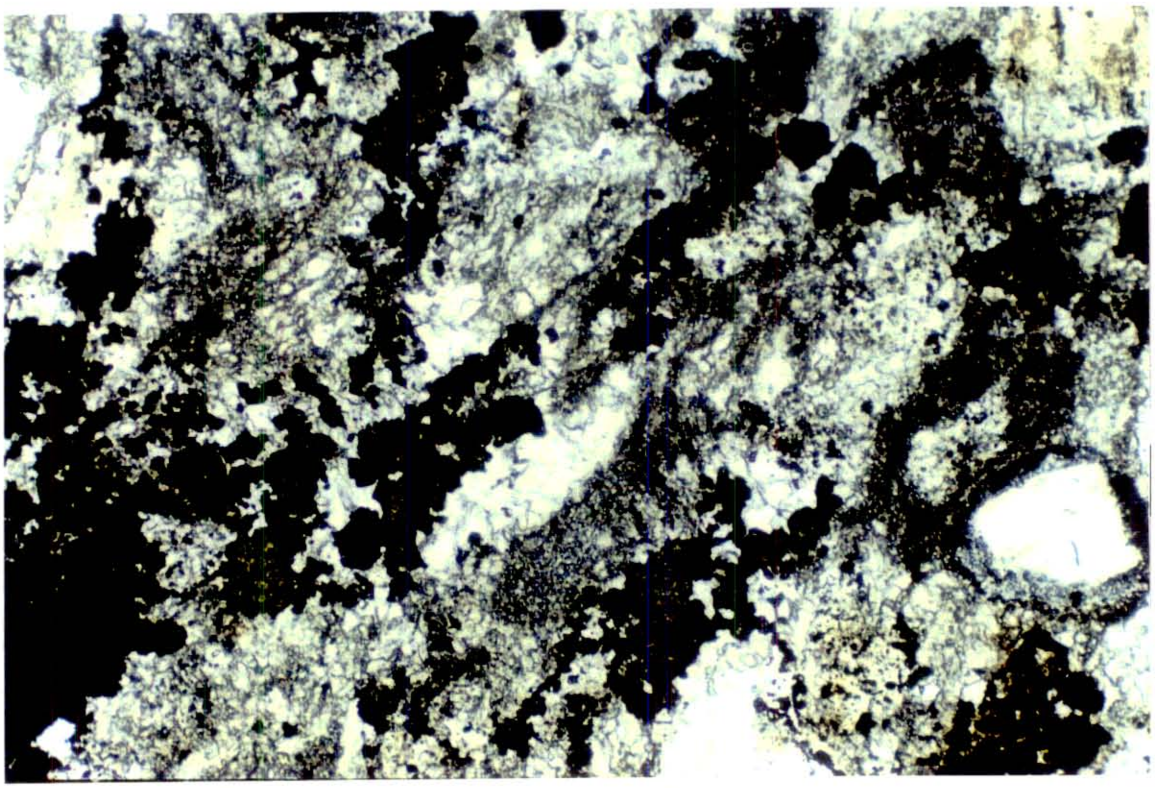


Neg. 346-10: Cross-polarized transmitted light. Same field as 346-9. Shows scattered plagioclase crystal clasts and lithic clasts in the carbonate host.

SAMPLE 626979



Neg. 346-8: Cross-polarized transmitted light. Scale 1cm = 170 microns. Lower left portion of field is part of a band of microgranular barite. Area at upper right is carbonate matrix (tan colour) with disseminated fine-grained sphalerite (black).



Neg. 346-11: Transmitted light. Scale 1cm = 85 microns. Higher magnification, to show distribution of sulfide clumps and wisps in probable interclast relationship. Brownish sub-translucent is sphalerite. Black is probable Fe sulfide and/or galena.

APPENDIX E

ANALYTICAL CERTIFICATES

Chemex Labs Ltd.
Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

A9426505

Comments: ATTN: HENRY AWMACK

CERTIFICATE A9426505

(EIA) - EQUITY ENGINEERING LTD.

Project: ASCOT
P.O. #: EQ094-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 3-OCT-94.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	10	Geochem ring to approx 150 mesh
226	10	0-5 lb crush and split
229	10	ICP - AQ Digestion charge

* NOTE 1:

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	10	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
2118	10	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	200
2119	10	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	10	As ppm: 32 element, soil & rock	ICP-AES	2	10000
2121	10	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	10	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	10	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	10	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	10	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2126	10	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	10	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	10	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	10	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	10	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	10	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	10	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	10	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	10	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	10	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	10	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	10	Na %: 32 element, soil & rock	ICP-AES	0.01	5.00
2138	10	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	10	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	10	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
2141	10	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	10	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	10	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	10	Ti %: 32 element, soil & rock	ICP-AES	0.01	5.00
2145	10	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	10	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	10	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	10	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	10	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000

Chemex Labs Ltd.
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British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

Project : ASCOT
Comments: ATTN: HENRY AWMACK

Certificate Date: 03-OCT-94
Invoice No. : I9426505
P.O. Number : EQ094-02
Account : EIA

CERTIFICATE OF ANALYSIS A9426505

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
10272	205	226	< 5	0.7	3.88	26	110	< 0.5	< 2	0.36	< 0.5	27	23	296	10.85	20	< 1	0.03	< 10	2.58	3020
10273	205	226	< 5	0.3	0.48	12	490	< 0.5	< 2	1.27	2.0	9	171	11	1.86	10	< 1	0.24	20	0.63	785
10274	205	226	< 5	0.3	0.22	24	40	< 0.5	< 2	0.63	2.0	13	52	6	1.02	< 10	< 1	< 0.01	10	0.15	690
10275	205	226	< 5	1.2	1.60	144	70	< 0.5	< 2	1.64	>100.0	19	19	69	3.62	< 10	< 1	0.15	10	0.76	1400
10276	205	226	< 5	2.5	0.68	174	120	< 0.5	2	2.81	34.5	4	9	11	0.73	< 10	1	0.34	< 10	0.04	505
10277	205	226	< 5	0.7	0.16	60	920	< 0.5	2	0.05	4.0	2	27	9	1.33	< 10	< 1	0.09	< 10	0.01	375
626976	205	226	< 5	0.5	3.37	8	160	< 0.5	< 2	1.73	9.0	22	24	83	8.99	10	< 1	0.02	< 10	2.27	2520
626977	205	226	< 5	< 0.2	2.75	16	150	< 0.5	< 2	2.24	< 0.5	21	14	62	6.24	20	< 1	0.03	< 10	2.46	4470
626978	205	226	< 5	0.4	2.15	108	60	< 0.5	< 2	0.53	< 0.5	18	12	24	6.31	10	1	0.02	10	2.17	1740
626979	205	226	< 5	39.4	0.13	376	10	< 0.5	< 2	13.30	>100.0	12	< 1	24	2.33	< 10	5	0.03	< 10	0.09	2820

CERTIFICATION:

Chemex Labs Ltd.
Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

Project: ASCOT
Comments: ATTN: HENRY AWMACK

Page Number :1-B
Total Pages :1
Certificate Date: 03-OCT-94
Invoice No. : I9426505
P.O. Number : EQ094-02
Account : EIA

CERTIFICATE OF ANALYSIS A9426505

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
10272	205	226	1	0.02	15	580	4	< 2	24	7	0.20	< 10	< 10	233	20	40
10273	205	226	4	0.03	11	1040	8	< 2	4	185	0.04	< 10	< 10	36	< 10	460
10274	205	226	< 1	0.07	1	380	18	< 2	6	17	< 0.01	< 10	< 10	8	< 10	164
10275	205	226	150	0.03	10	580	>10000	< 2	10	72	0.22	< 10	< 10	98	10	>10000
10276	205	226	7	0.16	4	200	554	< 2	4	578	0.01	< 10	< 10	36	< 10	4770
10277	205	226	1	< 0.01	2	170	102	< 2	3	16	< 0.01	< 10	< 10	5	< 10	990
626976	205	226	1	0.02	12	630	504	< 2	29	21	0.38	< 10	< 10	239	20	1410
626977	205	226	1	0.03	8	560	14	< 2	25	43	0.09	< 10	< 10	253	10	100
626978	205	226	2	0.05	3	690	46	< 2	21	11	0.10	< 10	< 10	154	10	122
626979	205	226	34	< 0.01	11	710	1865	< 2	9	683	< 0.01	< 10	< 10	25	10	>10000

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

A9428175

Comments: ATTN: HENRY AWMACK

CERTIFICATE A9428175

(EIA) - EQUITY ENGINEERING LTD.

Project: ASCOT
P.O. # : EQ094-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 13-OCT-94.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	2	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
312	1	Pb %: Reverse Aqua-Regia digest	AAS	0.01	100.0
316	2	Zn %: Reverse Aqua-Regia digest	AAS	0.01	100.0

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

Project : ASCOT
Comments: ATTN: HENRY AWMACK

Page Number : 1
Total Pages : 1
Certificate Date: 13-OCT-94
Invoice No. : I9428175
P.O. Number : EQ094-02
Account : EIA

CERTIFICATE OF ANALYSIS A9428175

SAMPLE	PREP CODE		Pb %	Zn %
10275	244	--	4.38	4.85
626979	244	--	-----	7.65

CERTIFICATION: [signature]

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

A9510071

Comments: ATTN: HENRY AWMACK

CERTIFICATE A9510071

(EIA) - EQUITY ENGINEERING LTD.

Project: ASCOT
P.O. # : EQ094-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 16-JAN-95.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	9	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
351	9	Ba %: Carbonate fusion	GRAVIMETRIC	0.1	100.0

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

Project : ASCOT
Comments: ATTN: HENRY AWMACK

Certificate Date: 16-JAN-95
Invoice No. : I9510071
P.O. Number : EQ094-02
Account : EIA

CERTIFICATE OF ANALYSIS A9510071

SAMPLE	PREP CODE		Ba %
10272	244	--	0.2
10273	244	--	< 0.1
10274	244	--	< 0.1
10275	244	--	< 0.1
10277	244	--	2.3
626976	244	--	0.2
626977	244	--	0.1
626978	244	--	< 0.1
626979	244	--	10.6

CERTIFICATION: ____________

Chemex Labs Ltd.
Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

Project : ASCOT
Comments: ATTN: HENRY AWMACK

Certificate Date: 28-NOV-94
Invoice No. : I9431336
P.O. Number :
Account : EIA

CERTIFICATE OF ANALYSIS A9431336

SAMPLE	PREP CODE		Ba %									
10276	244	--	39.9									

CERTIFICATION: [signature]

APPENDIX F

ENGINEER'S CERTIFICATE

ENGINEER'S CERTIFICATE

I, HENRY J. AWMACK, of 12-1348 Nelson Street, Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Consulting Geological Engineer with offices at Suite 207, 675 West Hastings Street, Vancouver, British Columbia.

2. THAT I am a graduate of the University of British Columbia with an honours degree in Geological Engineering.

3. THAT I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia.

4. THAT this report is based on fieldwork carried out by under my direction during September 1994, and on publicly-available reports. Original copies of some maps were graciously supplied by Barry Price. I have examined the property in the field.

DATED at Vancouver, British Columbia, this 26th day of January, 1995.

Henry J. Awmack, P.Eng.

PROFESSIONAL
PROVINCE OF
H. J. AWMACK
BRITISH COLUMBIA
ENGINEER