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## GEOLOGICAL, GEOCHEMICAL AND DIAMOND DRILLING REPORT

**ON THE** 

### **REX MOUNTAIN PROPERTY**

Lillooet Mining Division, British Columbia NTS 92J/16W Latitude 50°52'N Longitude 122°23'W

on behalf of

SPOKANE RESOURCES LTD. Vancouver, B.C.

by

Alex Boronowski, P.Geo., F.G.A.C. #480 - 650 West Georgia Street Vancouver, B.C. V6B 4N9

January 15, 1996

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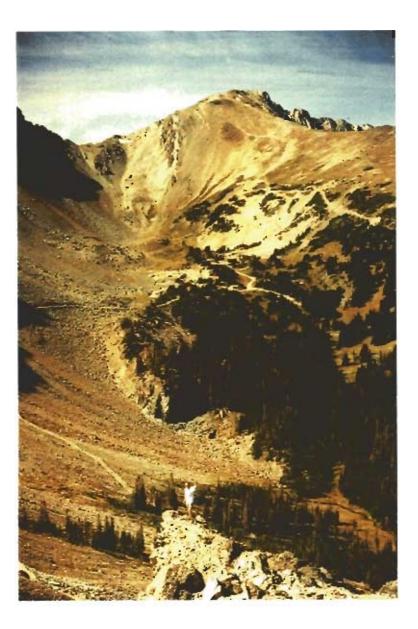
Illustration Generalized listwanitic alteration model which invokes carbonatization of serpentinized ultramafic rocks and the development of gold-bearing veins in and above thrust, normal and/or reverse faults (modified from Busisson and LeBlanc, 1985), taken from C.H. Ash and R.L. Arksey (1990).

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Looking northwest towards the main mineralized trend and showings of the Rex Mountain property on the south facing slope of Christie valley.

#### **SUMMARY**

The Spokane copper-gold property is located in the Shulaps Mountain Range, Lillooet Mining District, British Columbia, 40 kilometres northwest of Lillooet.

Auriferous quartz veins were discovered on the property in 1906. The property was explored up to 1911 and then was inactive until 1983. Between 1983 and 1989 exploration programs on the property included mapping, geophysical surveys, trenching and diamond drilling. In 1994, Spokane Resources Ltd. conducted a systematic exploration program on the property that included diamond drilling and an initial reconnaissance program of mapping, prospecting and geochemistry.

In 1995, Spokane Resources Ltd. conducted an exploration program consisting of 2,531 metres of drilling in 20 holes, an alteration study and geological mapping. A reconnaissance program comprised of geological mapping, prospecting and rock, silt, pan concentrate sampling was conducted on the claims surrounding the main mineralized trend of the Rex Mountain property. Seven additional claims totalling twenty units were staked. Total exploration to date includes 8,959 metres of drilling in 105 holes, 755 metres of trenching and 55 metres of underground development.

The Rex Mountain property's geological setting is complex and comprised predominantly of an obducted oceanic ultramific volcanic and sedimentary assemblage which is highly deformed, sheared, and faulted. The Eocene age, mineralized Mission Ridge Pluton consisting of quartz diorite and granodiorite and the younger barren Rexmount Porphyry have intruded zones of structural weakness within the main mineralized trend of the Rex Mountain property.

The main mineralized trend, which is the centre of copper-gold quartz veins has been

traced from the East Zone to the West Zone over a strike length of approximately 700 metres and tested between 1950 metres and 2225 metres above sea level. The main mineralized trend is believed to represent a deep seated shear zone such as the nearby Marshall Fault. This hypothesised shear zone was the conduit for the silica-sulphide solutions that accompanied the mineralized intrusions and resulted in the deposition of the auriferous quartz vein systems.

Mineralization comprised of chalcopyrite, pyrrhotite, pyrite occurs as disseminations and auriferous quartz veins within the Mission Ridge Pluton. As well, mineralized quartz veins are spatially associated with listwanite, an altered serpentinite, within the main mineralized trend. The altered serpentinite is believed to have reacted as catalyst, neutralizing the silica-sulphide solutions and precipitating gold in quartz within structural traps. Mineralization is concentrated along the hangingwall and footwall contacts within darker shatter textured quartz. The shattered or dendritic-like texture is due to episodic emplacement of silica-sulphide bearing solutions. The darker quartz is believed to contain chlorite and graphite. There is a positive correlation between copper and gold. Silver is an economically important byproduct.

Three types of quartz vein systems have been identified:

- A. Shallowly dipping veins that occupy thrust planes and composition planes.
- B. Steeply and shallowly dipping veins that occupy riedel shears and tension fractures between thrust sheets.
- C. Steeply north dipping veins that occupy the hypothesised shear zone of the main mineralized trend.

Quartz veins are discontinuous along strike and dip, pinch and swell and form pods at the intersection of structures. Locally, in the Upper and Lower Adit area of the West Zone, the

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The main mineralized trend, which is the centre of copper-gold quartz veins has been

further follow-up.

Resource estimate calculations indicate 94,904 tonnes grading 0.232 opt. gold and 1.06% copper for the West Zone and 94,549 tonnes grading 0.268 opt. gold and 0.77% copper for the East Zone. The East and West Zones have a combined resource estimate of 189,453 tonnes grading 0.250 opt. gold and 0.92% copper.

The sub-economic grade and tonnage indicated in the resource estimate is encouraging and demonstrates that the mineralizing event has concentrated a large amount of auriferous quartz veining into a restricted mineralized trend. The questions, whether there is an area containing more continuous high-grade auriferous quartz veining than defined by drilling, and whether there is a porphyry copper-gold deposit which is the source of the mineralization, remain to be answered. The property is a significant deposit and warrants further work consisting of an E.M. geophysical survey with follow-up diamond drilling to answer these questions and determine the potential of the property for hosting an economic deposit.

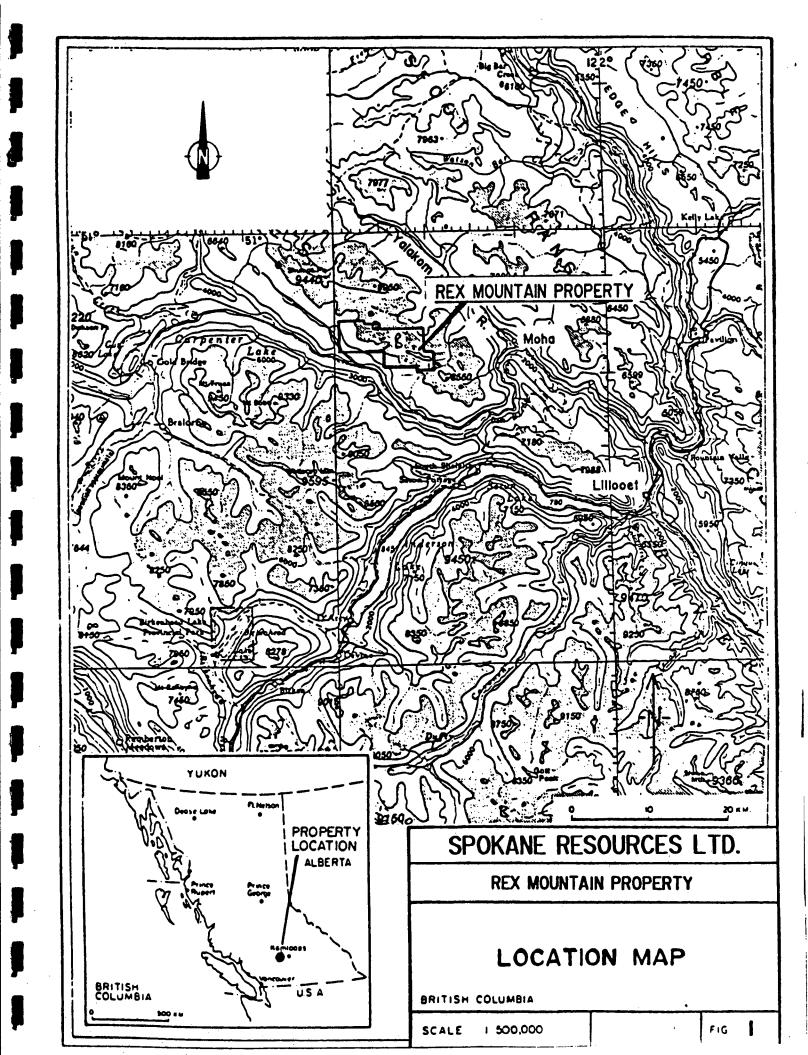
## 1.0 INTRODUCTION

This report of the Rex Mountain property is based on observations recorded by geologists Alex Boronowski and Francis Moyle and geological student Eric Constantinescu in the course of a field exploration program carried out in the summer of 1995. It is supplemented by the study of available reports on prior exploration and by information taken from government geological surveys.

The report presents the exploration history, regional geological and tectonic settings, the reconnaissance exploration program, property structural and alteration data, an interpretation of the diamond drilling program and an economic evaluation of the gold-copper mineralization hosted within quartz vein systems.

#### 2.0 LOCATION AND ACCESS

The Rex Mountain property is located at latitude 50°52'N, longitude 122°23'W, in the Shulaps Mountain Range, Lillooet Mining District, British Columbia. The property is situated 7 km. north of Carpenter Lake and 40 km. northwest of the village of Lillooet. Access is by 30 km. of all weather Bridge River Road from Lillooet to approximately one kilometre west of the Yalakom River bridge. At this point a 20 km. of forestry road branches off of the Bridge River road. The final last 6 km. to the property is via a 4 wheel drive road (Figure 1).



#### 3.0 PHYSIOGRAPHY AND CLIMATE

The topography of the Shulaps Range is characterized by steep sided hills, rugged mountain peaks and forested valleys with numerous clear-cut areas. The highest topographic point is Rex Peak with an elevation of 2,685 meters above sea level. The 1995 drill area lies above the tree line and ranges in elevation from 2,075 to 2,250 meters above sea level.

The area of drilling activity lies on the southern facing, glaciated slope of the Christie valley. All but a few of the peaks in the area have been glaciated. Some of the north facing slopes are covered by glaciers. A large portion of the glacier located in the valley containing the Lisa Dawn and Cub showings is hidden by scree cover. The area is generally rugged with slopes ranging between moderate and steep. Approximately, seventy-five percent of the property is above the tree-line. Vegetation varies from balsam and spruce at lower elevations to stunted lodgepole pine at higher elevations.

Precipitation is generally low in the summer and one can expect a heavy snowfall in the winter. Surface geological work is seldom possible before the middle of June and after the middle of October. During the 1995 season, approximately 12 centimetres of snow fell on August 7, 1995, and remained for a day on the ground.

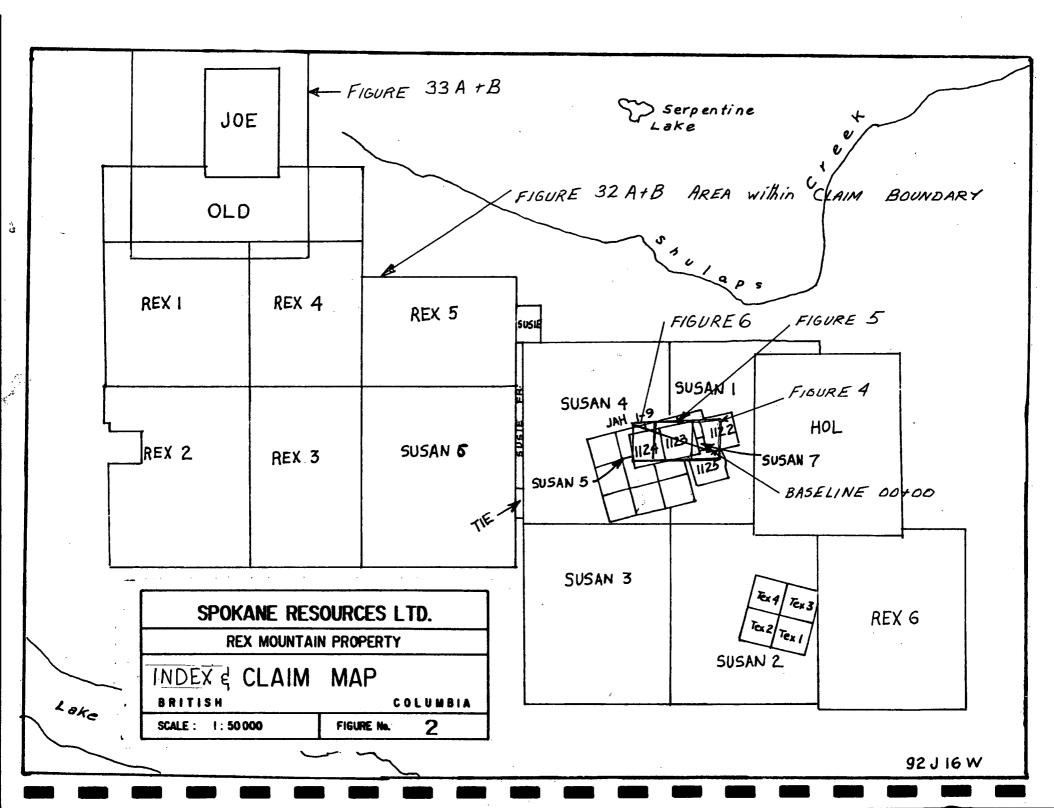
The property straddles the boundary of the Yalakom River watershed to the north and the Bridge River watershed to the south. Rex Mountain property's main mineralized zone lies at the headwaters of Christie Creek, a tributary of Holbrook Creek, which flows north and joins Shulaps Creek, a tributary of Yalakom River.

#### 4.0 <u>TENURE</u>

The property consists of four Crown Grants and 32 contiguous mineral claims covering an area of approximately 5,808 hectares (Figure 2). The claims are situated within NTS Map Sheet 92J/16W of the Lillooet Mining District. The tenure datum is as follows:

	Record	No. of	Expiry	
Claim Name	No.	Units	Year	Owner
Columbia	L1122	1	Crown Grant	John Posnikoff
Shamrock	L1123	1	Crown Grant	John Posnikoff
Goldenstripe	L1124	1	Crown Grant	John Posnikoff
Mascot	L1125	1	Crown Grant	John Posnikoff
JAH 1-8	229482-489	8	Aug. 27, 2001	John Posnikoff
JAH 9 Frac.	229490	1	Aug. 27, 2001	John Posnikoff
Susan 1	228464	20	Dec. 15, 2001	John Posnikoff
Susan 2	228465	20	Dec. 15, 2001	John Posnikoff
Susan 3	228466	20	Dec. 15, 2001	John Posnikoff
Susan 4	228467	20	Dec. 15, 2001	John Posnikoff
Susan 5 Frac.	228543	1	Sep. 23, 2001	John Posnikoff
Susan 6	228542	20	Sep. 23, 2001	John Posnikoff
Susan 7 Frac.	228795	1	Oct. 20, 2001	Spokane Res.
Hol	228787	20	Sep. 12, 2001	Spokane Res.
Tie	320715	6	Sep. 5, 2001	Spokane Res.
Rex 1	329491	16	Jul. 22, 2001	Spokane Res.
Rex 2	329492	20	Jul. 22, 2001	Spokane Res.
Rex 3	329493	15	Jul. 22, 2001	Spokane Res.
Rex 4	329494	12	Jul. 22, 2001	Spokane Res.
Rex 5	329495	12	Jul. 22, 2001	Spokane Res.
Rex 6	329496	20	Jul. 22, 2001	Spokane Res.
Joe	317709	6	May 24, 2001	Spokane Res.
Tex 1-4	338461-464	4	Jul. 17, 2001	Spokane Res.
Old	338456	14	Jul. 21, 2001	Spokane Res.
Susie	338967	1	Aug. 15, 2001	Spokane Res.
Susie Frac.	338968	1	Aug. 15, 2001	Spokane Res.

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By an option agreement dated June 10, 1985, Spokane Resources Ltd. has an option to acquire a 100% interest in all of the above mineral claims and Crown Grants registered in Mr. Posnikoff's name by making \$25,000 payments per year until the option price of \$1,000,000 has been met.

#### 5.0 1995 EXPLORATION PROGRAM

The 1995 exploration program was managed by Hugh C. Morris, Ph.D., P.Eng of Padre Resources Corporation and Gordon Keevil, P.Geo. of Spokane Resources Limited. The program was supervised by Alex J. Boronowski. The author was assisted by Francis Moyle, Geologist, and Eric Constantinescu, Geological Student, and Antony Hill, Field Assistant. The drilling contract was awarded to Cancor Drilling from Courtney, B.C., who employed a Longyear 38 hydraulic drill operated by a four man crew working two 12 hour shifts seven days per week. Helicopter support was provided by Cariboo Chilcotin Helicopters Ltd. of Lillooet, B.C.

Between July 19 and September 20, 1994 a total of 2,531 meters of BQ and NQ diamond drilling in 20 holes were completed. Four holes were abandoned due to loss of drilling tools or circulation, due to faulting and poor ground conditions. Two holes were restarted after encountering problems in the overburden. Better recovery and penetration was attained when switching over to NQ size core and utilizing mud and polymer.

Seven additional claims totalling twenty units were staked. The Tex 1-4 claims were staked to cover a nepherite jade showing. The Old claim of 14 units tied the Joe claims to the Rex claims. The Susie claim and Susie Fraction eliminated a fraction between the Susan 4 and Rex 5 claims.

The Rex Mountain Property's reconnaissance program conducted by Francis Moyle and Eric Constantinescu examined the area peripheral to the main mineralized trend of the Rex Mountain property. The program consisted of geological mapping, rock, silt and pan concentrate sampling and prospecting. A total of 18.9 hours of helicopter support was flown during the program.

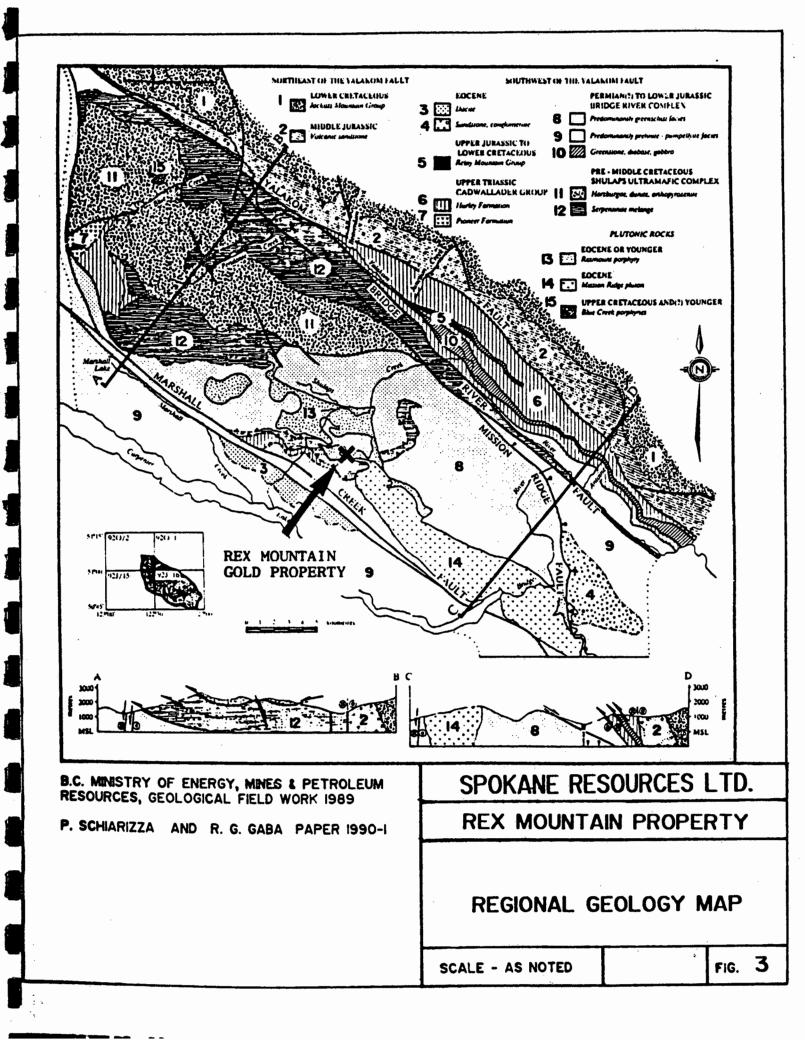
A video log with voice descriptions was made of the 1994 and 1995 drill core. The 1994 core was re-examined in order to classify the types and intensities of alteration and faults. Sections were drawn systematically at 25 metre intervals between 1+00 W and 7+25 W.

The 1995 drill sites were surveyed at the end of the drill program. Geological mapping was conducted within the Christie valley area, which hosts the auriferous quartz veins of the Rex Mountain property.

#### 6.0 <u>HISTORY OF EXPLORATION</u>

The discovery and mining of lode gold in the Bridge River camp in the last decade of the 19th century led to increased prospecting activity in the general area and resulted in the discovery of a number of gold, copper, mercury and jade prospects. G. Holbrook from Missouri discovered gold in quartz veins on the property around 1906. In the period 1910-1911, the claims were held by Dr. C. Christie of Lillooet. During this time two adits were driven along the quartz vein. The lower adit consisting of 49 meters and the upper adit of 6 meters. In 1983-1984, Asarco Exploration conducted brief geological, geophysical and geochemical evaluation of the claims. In 1985, Stryder Exploration performed a minor program of Winkie drilling. In 1986, International Enexco Limited built an access road to the property, rehabilitated and mapped old showings and drilled seven holes totalling 300 meters. In 1987, MacNeill International Industries Ltd. undertook 426 line miles of airborne magnetic and VLF-EM geophysical surveys in the property area. Twelve trenches were completed for a total length of 395 meters. In 1988, MacNeill drilled twelve diamond drill holes totalling 968 meters. In 1989, MacNeill completed 2,062 meters of diamond drilling, 7.45 kilometres of induced polarization survey and performed 360 meters of trenching. Padre Resources Corporation managed the 1994 exploration program for the Spokane-Enexco joint venture. This program consisted of staking six additional claims, an initial reconnaissance program of prospecting and geochemistry and 2,551 m. of diamond drilling in 26 holes. During the 1995 program an additional 7 claims were staked, a geological and geochemical reconnaissance program was conducted on the peripheral claims and adjoining areas, and a total of 2,531 m. of diamond drilling was completed in 20 holes.

Exploration work on the property to date totals 8,959 m. of diamond drilling in 105 holes, 755 meters of trenching and 55 metres of underground developement.



#### 7.0 <u>REGIONAL GEOLOGY</u>

The property is located on the eastern flank of the Coast Crystalline Plutonic Complex, a major intrusive region of the Canadian Cordillera bounded by the Intermontane Belt on the east and the Insular Belt on the west.

The regional geology comprises a package of highly deformed lithological units structurally enclosed between two major northwesterly striking dextral fault structures - the Yalakom Fault on the east and the Marshall Creek Fault on the west (Figure 3). The area has a complex history of mid-Cretaceous to mid-Tertiary deformation and intrusion that was superimposed on an earlier deformational history that in part included subduction-related deformation and metamorphism of the Bridge River Complex (Schiarizza et al., 1990). Three major tectonostratigraphic assemblages occur within the area of interest. Generally, the Cadwallader Group is overlain by a thrust package of Bridge River Complex which is overlain by a thrust package of the Shulaps Ultramafic Complex as shown and mapped by Schiarizza et al., (1990). Locally, this sequence is complicated by thrust sheets of Bridge River Complex underlying the Cadwallader Group and overlying serpentinite melange.

#### 7.1 Shulaps Ultramafic Complex

The oldest rock unit in the Shulaps Range is the pre - middle Cretaceous age Shulaps Ultramafic Complex which is interpreted as dismembered ophiolite structurally stacked by thrust faulting. Foliation is parallel or sub-parallel to thrust planes or composition planes. Sedimentary inclusions and adjacent metasediments often have bedding parallel to the foliation within the serpentinite. The complex is a serpentinite melange unit that represents ancient oceanic floor composed of serpentinite derived from ultramafic cumulates with knockers of ultramafic rocks, gabbro, diorite, pillowed and massive greenstone, chert, phyllite, limestone, sandstone and conglomerate (Schiarizza et al., 1990).

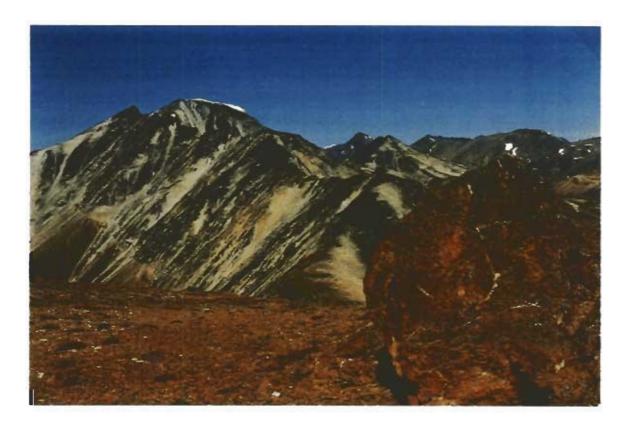


Photo 2 Orange-brown weathering quartz-carbonate altered serpentinite.

## 7.2 Bridge River Complex

The predominantly oceanic rocks of the Permian (?) to Jurassic Bridge River Group consist of ribbon chert, argillite, pillowed to massive greenstone, with lesser amounts of limestone, gabbro, diabase, chert, volcanic greywacke, pebble conglomerate and serpentinite. The Bridge River Group rocks have undergone metamorphism to prehnite-pumpellyite grade. Locally, the most common rock types are phyllite (siltstone), chert, argillite, schist and minor limestone.

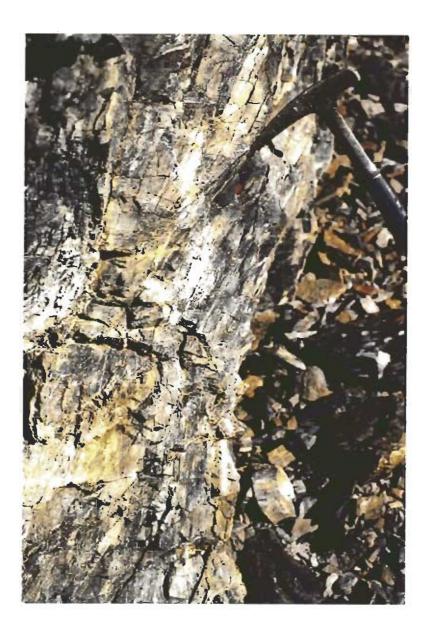
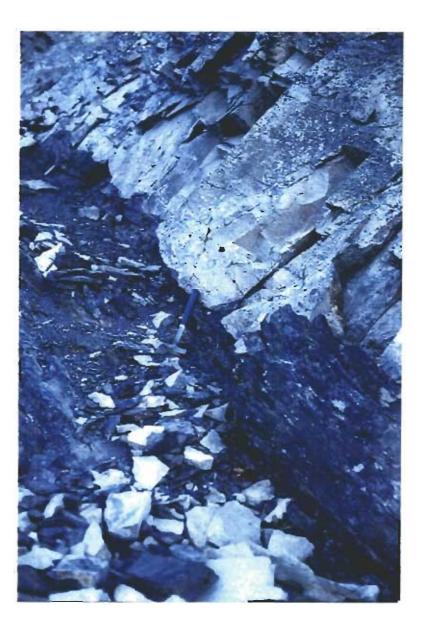
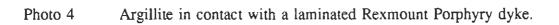


Photo 3 Fractured, laminated (105/58N) chert on north ridge of Christie valley





#### 7.3 Cadwallader Group

The arc-derived volcanic and sedimentary rocks of the Upper Triassic age Caldwallader Group occurs on the east side of the area and includes the Hurley Formation represented by sandstone, calcarenite and shale with lesser amounts of limestone-volcanic conglomerate and volcanic sandstone with minor greenstone and greenstone breccia. The Caldwallader Group is in fault contact with the Shulaps Ultramafic Complex and Bridge River Group.

#### 7.4 <u>Tertiary Volcanics and Sediments</u>

The youngest rocks in the area are volcanic and sedimentary assemblage of Eocene age. These rocks occur on the southwest part of the property, north of Carpenter Lake, and in the southeast part of the region near Mission Ridge. The volcanic-sedimentary assemblage north of Carpenter Lake consists of porphyritic dacite and volcanic breccia and minor amounts of conglomerate, sandstone, shale and lignite.

#### 7.5 Intrusive Rocks - Mission Ridge Pluton & Rexmount Porphyry

Intrusive rocks in the region are the Mission Ridge Pluton and the Rexmount Porphyry of Tertiary age that extend in a northwest direction parallel to the regional fabric.

The Mission Ridge Pluton consists predominantly of coarse grained equigranular granodiorite formed synkinematically with the deformation of the belt. On the basis of field relationship and mineral association in the vein system on the Rex Mountain property, it is believed that the gold-copper mineralization is genetically and spatially related to the pluton. The granodiorite has intruded zones of structural weaknesses such as faults, thrust planes, and contacts between units to form dykes, sills and larger bodies. The granodiorite contains pyrite, pyrrhotite and chalcopyrite as disseminations and within quartz veins and veinlets along joint planes. The Rexmount Porphyry is a light grey weathering rock consisting of phenocrysts of plagioclase, hornblende, biotite and quartz set in a fine grained or aphanitic felsic groundmass. The crosscutting relationships indicate that the unit is younger than the Mission Ridge Pluton. The porphyry on the Rex Mountain property occurs as dykes, sills and small stocks that display thin chilled margins and locally contain inclusions of mineralized quartz vein material. The porphyry, which is thought to be the intrusive equivalent of the dacite volcanics, occasionally contains laminations of epidote-chlorite parallel to the contact. Whether this is an alteration or a flow layering is not known.



Photo 5 Sulphide bearing quartz veinlets along joint planes within the granodiorite/diorite.

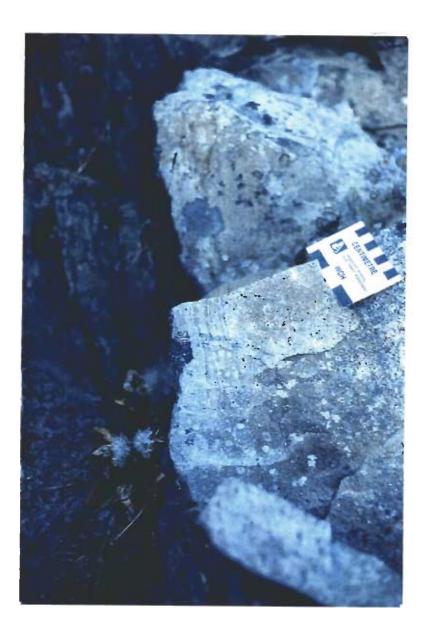


Photo 6 Rexmount Porphyry sill. Chlorite-epidote laminations (305/40N) parallel to contact with footwall siltstone.

#### 7.6 Mineral Occurrences

The famous Bridge River lode mining camp located in the southwest part of the region produced 4,178,363 ounces of gold from the Bralorne, Pioneer, Wayside and Minto deposits in the period between 1899 and 1978.

The most important gold occurrences in the property area are high sulphide auriferous veins associated with the Mission Ridge pluton. These include Rex Mountain, Broken Hill, King and Rhodes. Mineral association in the veins consists of native gold, chalcopyrite, native bismuth, pyrrhotite, pyrite, arsenopyrite, sphalerite and scheelite (Gaba and Schiarizza, 1990).

On the southeast part of the Rex Mountain property, two Mo-Cu-Au prospects known as Cub and Lisa Dawn, classified as porphyry occurrences by government geologists, were briefly investigated in 1989. The mineralization occurs in a silicified mylonitic zone along the eastern fringes of the Mission Ridge pluton. The highest values in grab samples from silicified granodiorite on the Cub prospect were 0.062 oz/ton Au, 0.50% Cu and 0.32% Mo. The best intersection from three short holes returned 0.024 oz/ton Au over 2 meters and intermittent intervals of weak to moderately anomalous gold with only minor copper and molybdenum. Several anomalous gold, copper and molybdenum values were obtained from samples collected on the Lisa Dawn prospect (Perry, 1990).



Photo 7 The Cub access road leading to the Cub - Lisa Dawn showings.

Numerous altered ultramafic bodies have been explored for chromite, nepherite jade, magnesite and chrysotile. A nepherite jade showing is covered by the Tex 1-4 claims. Cinnabar occurring as disseminations and veinlets are associated with deep seated faults.

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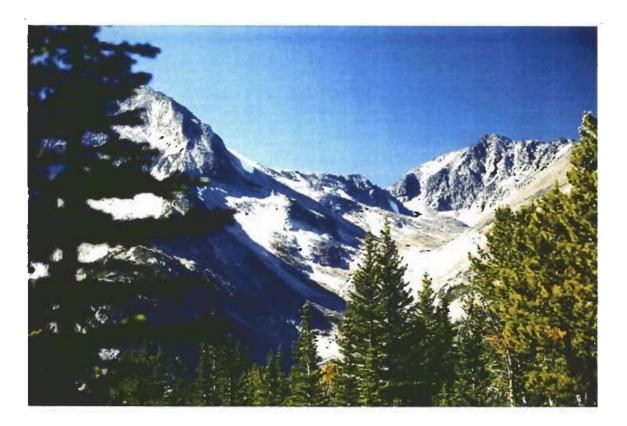


Photo 8 The access road to the nepherite jade showing of the Tex 1-4 claims.

## 8.0 PROPERTY GEOLOGY

The geology of the main mineralized zone (East and West Zones) containing the auriferous quartz veins are shown on geological plans, Figures 4-6. The geology of the peripheral area, which was the subject of a reconnaissance program, are shown on Figures 32-33.

The main mineralized zone trends approximately 290° - 300° and has been traced from the bottom of Christie valley in the vicinity of 1+00W to 7+50W on the south facing slope of Christie valley. The outcrop exposure along this trend is from 1% in the valley to less than 10% on the southern facing slope. Interpreting surface geology and drill results is difficult owing to the poor outcrop coverage. Therefore, detail mapping outside of the main mineralized trend was conducted to assist with interpreting and understanding the structural setting and quartz vein systems that could be expected within the main mineralized trend.

Auriferous quartz veins within the main mineralized trend are exposed in the following areas from west to east: Trench 1 and 2, Trench 3, Upper Adit, Trench 5 and 6, and Trench 7. Outcrops of serpentinized rocks of the Shulaps Ultramafic complex are dominant on the south facing slope of Christie valley and along the baseline. West of the baseline is underlain predominantly by Rexmount Porphyry, Bridge River metagreywacke and argillite and Mission Ridge granodiorite.

Briefly, the present setting is series of southerly directed thrust sheets of serpentinite melange, interbedded argillites and Bridge River Complex metasediments. The geological history of the property is complex and involves deposition of sediments and arc-derived volcanics within an oceanic environment. These oceanic volcanic and sedimentary units have been deformed and faulted by forces resulting from subduction and the northeastward accretion of the units. Structural features developed over this extended period of tectonic activity (pre-Permian to Tertiary) include dextral faults such as the west-northwesterly trending (300°) Marshall Creek and Yalakom Faults, transfer zones of northerly trending faults and southerly directed thrusts of dismembered Shulaps Ophiolite Complex (serpentinite melange). During the Eocene period the Mission Ridge Pluton, consisting of mineralized quartz diorite and granodiorite, intruded a west-northwesterly trending zone of structural weakness similar to the Marshall Creek and Yalakom faults. Shortly after this episode the Rexmount Porphyry intruded this zone of structural weakness. The zone of structural weakness is hypothesised to represent a shear zone which is coincident with main mineralized trend of the Spokane property.

The Mission Ridge Pluton and auriferous quartz veins are genetically related and spatially

related to the hypothesised shear and listwanites (altered serpentinites) of the main mineralized trend. A detail description of the property's quartz vein systems, alteration, mineralization and structure are presented in the following section 9.0 Economic Geology.



Photo 9 Looking east-southeast along the mineralized trend (290°-300°) from approximately 00+00. Outcrop from right to left - granodiorite, dark coloured metagreywacke, and light coloured Rexmount Porphyry adjacent to the road. Note, the porphyry occupies a thrust plane.

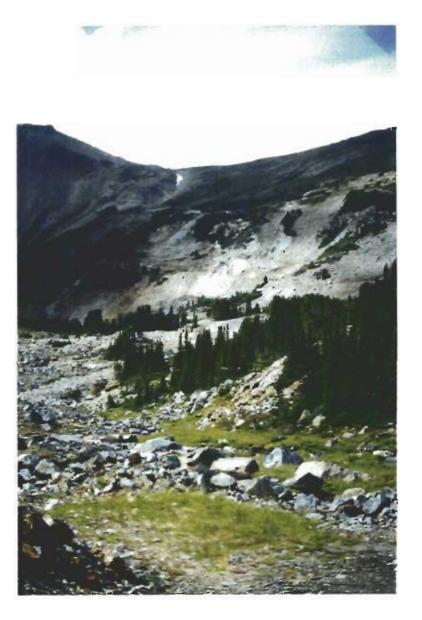


Photo 10 Looking west-northwest along the mineralized trend (290°-300°) from approximately 00+00/20S. The serpentinite outcrop immediately to the northwest is the location of a shaft containing a massive sulphide lens (20% pyrite, pyrrhotite, magnetite, and chalcopyrite.

#### 9.0 ECONOMIC GEOLOGY

#### 9.1 <u>Vein Systems</u>

The mineralized Mission Ridge Pluton and the younger Rexmount Porphyry have intruded zones of weakness such as faults, thrusts (planar shears) and related riedel shears, displacement shears and tension fractures. The Mission Ridge Pluton a mineralized quartz diorite to granodiorite is an elongated west-northwesterly trending body which parallels the direction of the nearby Marshall Fault. The west-northwestern surface terminus of the intrusive body occurs within the main mineralized trend of the Rex Mountain property. As well, the bulk of the Rexmount Porphyry occurs to the west-northwest of Spokane's main mineralized trend.

Mineralization comprised of pyrite, pyrrhotite and chalcopyrite occurs as disseminations and auriferous quartz veins, veinlets and along fractures within the Mission Ridge Pluton. Silica-sulphide fluids occupy the intruding margin of the mineralized granodiorite are believed to be the source of the auriferous quartz veins located within the main mineralized trend. The author has examined several similar stocks along the eastern flank of the Coast Crystalline Complex where similar elevated base and precious metal values occur along apophysis and contacts of the intrusive. In summary, the area underlain by the Rex Mountain property's main mineralized trend is the locus of auriferous quartz veins for the following reasons:

- A shear zone developed along a west-northwesterly trending (290° 300°) zone of weakness. This hypothesised shear zone is believed to represent a deep seated shear or fault zone similar to the nearby Marshall Fault.
- 2. This hypothesised shear zone became a conduit along which the mineralized intrusion and accompanying silica-sulphide fluids invaded the locally deformed and faulted serpentinite and sediments.
- 3. The silica-sulphide fluids which occupied the intruding margin of the mineralized

quartz diorite to granodiorite formed auriferous quartz veins within structurally prepared and chemically favourable host rocks.

- 4. The serpentinite is altered to listwanite by the silica-sulphide solutions. The listwanite is believed to have reacted as a catalyst and neutralized the silica-sulphide solutions and precipitated gold in quartz within structural traps.
- 5. Listwanite is associated spatially with auriferous quartz veins along the main mineralized trend. More detail regarding listwanites and the spatial association with gold lode deposits is contained in this report within sections 9.2 Structure and 9.3 Alteration.

To date, the auriferous quartz vein systems recognized on the property are as follows:

- 1. Shallowly dipping veins occupying thrust fault planes and composition plane.
- 2. Steeply and shallowly dipping veins occupying riedel shears, displacement shears and tension fractures between thrust sheets.
- Steeply north dipping veins occupying the hypothesised shear zone of the main mineralized trend.

The best developement of vertical quartz veins occurs in the area between the Upper and Lower adits of the West Zone. The best developement of shallowly dipping veins occurs in the vicinity of Trenches 5, 6 and 7 of the East Zone. All of the quartz vein systems are discontinuous along strike and dip. Pods of auriferous quartz veining occur at the intersection of open structures. The three quartz vein systems can occur within proximity of each other, which explains how quartz veins, veinlets and strings can vary in attitude from 15° to-core-axis (TCA) to 45°TCA to 75°TCA over short distances within the drill core.

As mentioned, auriferous quartz veins are developed best in structurally prepared and chemically favourable rocks such as serpentinites. Argillites and other metasediments are poor hosts and vein systems often terminate at the contact with metasediments.

The following illustration taken from C.H. Ash and R.L. Arksey (1990) and the accompanying two photos show the positions of the different auriferous quartz vein systems within thrust sheets of serpentinite and listwanite.

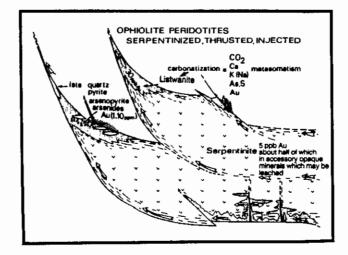


Figure 3-2-2. Generalized listwanitic alteration model which invokes carbonatization of serpentinized ultramafic rocks and the development of gold-bearing veins in and above thrust, normal and/or reverse faults (modified from Buisson and LeBlanc, 1985).

Illustration

Generalized listwanitic alteration model which invokes carbonatization of serpentinized ultramafic rocks and the development of gold-bearing veins in and above thrust, normal and/or reverse faults (modified from Busisson and LeBlanc, 1985), taken from C.H. Ash and R.L. Arksey (1990).

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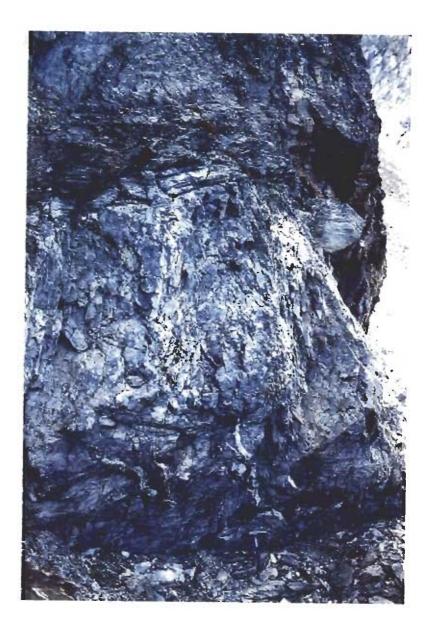


Photo 11 Sheared aphanitic dyke containing shallowly dipping quartz veinlets and pods along the shear plane, vertical pods and veins (tension fractures) within the sheared dyke and discontinuous pods/gashes (riedel shears) along the thrust planes. Overlain by quartzite.

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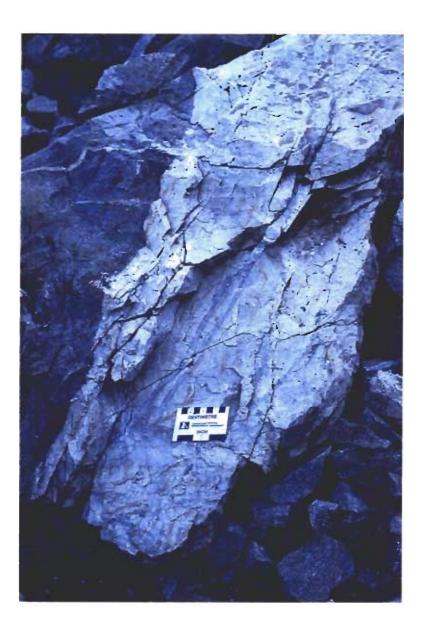


Photo 12 Aphanitic dyke hosted in a granodiorite. The aphanitic dyke contains quartz veinlets parallel to the contact, acute angle with the contact (riedel shears) and as pods at the intersection of riedel shears and shallowly dipping veins.

## 9.2 <u>Structure</u>

As discussed in section 9.1 Vein Systems, the developement of the quartz vein systems is dependent upon the rock being structurally prepared. Openings within the host rock along thrusts (shears), faults, riedel shears, displacement shears and tension fractures became suitable traps for precipitating the silica-sulphide fluids and forming quartz vein systems. These silica-sulphide fluids were contained within or along the intruding margin of the mineralized Mission Ridge Pluton.

The Mission Ridge Pluton, which is elongated in the west-northwesterly direction and parallels the Marshall Fault and Spokane's main mineralized trend (290° - 300°), occupies a hypothesised steep northerly dipping shear zone. This hypothesised shear zone cuts across and sub-parallels the northerly dipping series of thrusted serpentinites underlying the main mineralized trend. It is believed that in the vicinity of the West Zone, the hypothesised shear zone and a steeply dipping serpentinite thrust sheet are sub-parallel to each another. This combination of structures and favourable host rock being parallel to one another explains why the steeply north dipping quartz vein system is well developed and continuous in the vicinity of the Upper and Lower Adits of the West Zone. As well, the West Zone contains intense levels of silicification, carbonatization, sericitization and listwanite alteration.

Quartz vein systems are folded (flexures) which indicates deformation occurred during the emplacement of the younger Rexmount Porphyry.

Large pods of quartz occur at the intersection of shears and cross faults, such as at Trench 3 above the Upper Adit. In Trench 3 (photo 23), the main mineralized trend intersects a fault plane 355/55°E, with slickenside plunging 22° to the north. It is not known if the quartz vein was emplaced along the cross fault or the quartz vein was dragged along the fault or a combination of emplacement and faulting occurred. Similar cross faulting may have occurred in the Trench 5 & 6 area, where slickenside plunge 34° towards 335°. This may explain why a large volume of quartz occurs within the trench but does not extend far below the surface. Veinlets and stringers within the granodiorite parallel the main mineralized trend and other prominent structural planes

within the main mineralized trend.

The hypothesised shear and main mineralized trend may extend to the ridge of the south facing slope within an area of intensely silicified and fractured (285/58°) chert. Barren quartz veinlets occur parallel to the main mineralized trend and to fracturing 030/67°E within the chert.

Faults identified within the 1994 and 1995 core were classified as weak, moderate or strong faults based upon recovery of 90%, >60%, <60% As well, a fault with abundant clay gouge, sand and small clasts would be considered a strong fault even though the apparent recovery exceeded 60 percent.

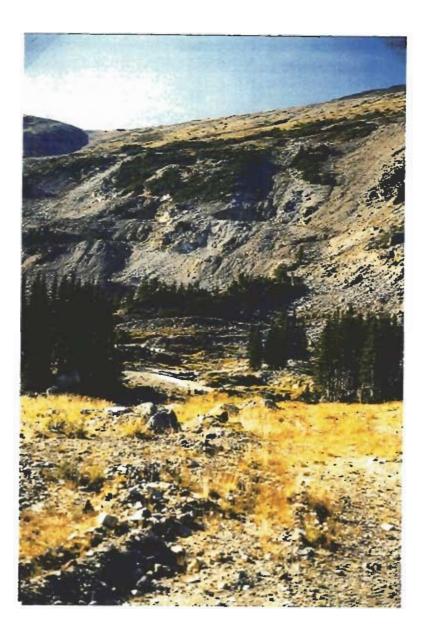


Photo 13 Looking 290° along the main mineralized trend from the East Zone towards the Lower and Upper Adits area.



Photo 14 An opening created along a reactivated thrust plane. Shallowly dipping veins would occupy similar structures. Note the jointing perpendicular to and at an acute angle to the thrust plane.

## 9.3 Alteration

The 1994 and 1995 core was logged for alteration types and intensities of alteration. Since this is a qualitative approach, the boundaries are often blurred and in such case the alteration may be defined as weak to moderate (w~m) etc.. Particular attention was given to silicification, carbonatization (dolomite development) and listwanite alteration. Alteration studies have proven to be valuable exploration tools in high-grade low tonnage listwanite associated gold lode deposits.

#### A. Silicification

Silicification was generally most intense in the vicinity of mineralized granodiorite and quartz vein systems. Intensity of silicification varied considerably over short distances owing to the presence and number of structures per metre. Structures such as fractures are altered preferentially. However, a zone of intense silicification represents a mappable volume of rock which contains predominantly intense alteration, such as found in the Upper and Lower Adits area. Zones of intense silicification occur within the core of the hypothesised shear and main mineralized trend and are usually bounded above and below by thrust fault planes.

## B. Listwanite

Listwanitic alteration is a hydrothermal alteration of serpentinite. The mineral assemblage changes with the intensity of alteration as follows:

1. serpentinite (contains magnetite when fresh).

2. talc-carbonate (magnetite being destroyed).

3. talc-carbonate-silicification (stringers, veinlets).

4. talc-carbonate-silicification (stringer, veinlets, veins, pervasive silicification)-mariposite.

Listwanite is easily identified by its strong foliation and light greenish colour on fresh surface due to carbonate and mariposite alteration. Listwanite is developed in zones of structural weakness such as faults. Silica-sulphide fluids and the granodiorite have utilized these zones of structural weakness as conduits. The fluids encounter the serpentinite and chemically alter the serpentinite to listwanite. The accompanying alteration and chemical reaction causes the silica-sulphide fluids to become neutralized and the gold and copper precipitate within the quartz veins. There appears to be a spatial relationship between auriferous quartz vein lode deposits and listwanite. Inclusions and bands of listwanite occur within the auriferous quartz vein systems.

## C. Carbonatization

Dolomite fracture fillings and dolomitization of country rock were identified and intensity of alteration recorded. Carbonatization, as mentioned above, occurs predominantly within the serpentinite bodies that are altered to listwanite.

#### D. Magnetite

Magnetite is destroyed during carbonatization. Therefore, a quantitative estimate of weak, moderate or intense magnetic susceptibility of serpentinite is related to the degree of carbonatization of the serpentinite.

#### E. Chloritization

Chloritization is ubiquitous owing to the degree of metamorphism and therefore has limited value as an exploration tool.

## 9.4 Geophysics

The property has been tested by VLF-EM, Magnetometer and I.P. surveys between lines 0+00 and 1100 West. S. Visser's 1989 report, "Induced Polarization, VLF-EM and Magnetometer Interpretation on the Rex Mountain property", summarized the results of these surveys.

Briefly, nine separate sub-parallel I.P. anomalies were defined. Refer to Figures 4 and 5 for the locations of Anomalies A,B,C,D,F,I and J. Of particular interest is anomaly C, which parallels the hypothesised shear and main mineralized trend and is almost coincident with a VLF-EM anomaly. Anomaly C demonstrates high resistivity and chargeability believed to represent disseminated sulphides within a silicious bedrock (Visser 1989). This anomaly has been drill tested over its entire length and at depth in the 500 West area as recommended in Visser's report.

Anomaly J, which is similar to anomaly C, has not been test in the 350 West area to a depth of 150 to 200 metres as recommended in Visser's report. This target warrants testing since it mirrors the C anomaly located to the south.

Anomaly B, which is similar to anomaly C, is located close to surface. On surface the area is underlain by serpentinites. If drilling results from Anomaly J are encouraging, then Anomaly B may warrant follow-up drilling.

Anomalies A and D indicate high chargeability and low resistivity believed to be due to graphite in metasediments. Anomaly A may represent graphite in metasediments and/or another auriferous quartz vein system at depth or a porphyry copper-gold system. Anomaly A's response is strong between 350W and 700W in the area directly north of the West Zone's Anomaly C. It is possible that the north dipping West Zone may be related to Anomaly A at depth.

A magnetic high occurs between Anomalies C and A from 300W to 550 West. The magnetic response indicates northerly dipping (35°) stratigraphy. This response is believed to represent an unaltered serpentinite thrust sheet.

The VLF-EM anomaly which is coincident with Anomaly C is believed to represent a conductive fault or shear. This conductive fault or shear is identified as the hypothesised shear of the main mineralized trend. A resurvey of the area using a more sophisticated EM technique may be warranted.

During carbonatization and silicification of serpentinites and the accompanying mineralizing event, the serpentinites are altered to listwanite and the magnetite is destroyed. Therefore, resistivity, chargeability and magnetics are useful exploration tools for discovering auriferous quartz veins. However, this exploration method works best when the serpentinites and adjacent stratigraphy are vertically dipping. A series of shallowly dipping serpentinite thrust sheets such as occurring on the Rex Mountain property may contain an unaltered serpentinite sheet overlying a listwanite sheet. Therefore, the geophysical response from the unaltered serpentinite sheet would mask the underlying listwanite sheet.

## 9.5 <u>Mineralization</u>

The following two photos from drill hole 95-2 show the nature of the mineralogy within the auriferous quartz vein system.



Photo 15 DDH 95-2; 68.5m. - 73.7m. Serpentinite; 73.7m. - 76.8m. Rexmount Porphyry; 76.8m. - 80.1m. Serpentinite with minor Granodiorite dykes; 78.0m. - 78.2m. Fault; 80.1m. - 95.0m. (14.9 metres) Quartz Vein, greyish-white to bluish-grey bands 70° TCA, pyrrhotite, pyrite, chalcopyrite. Listwanite inclusions. (refer to log for detail).

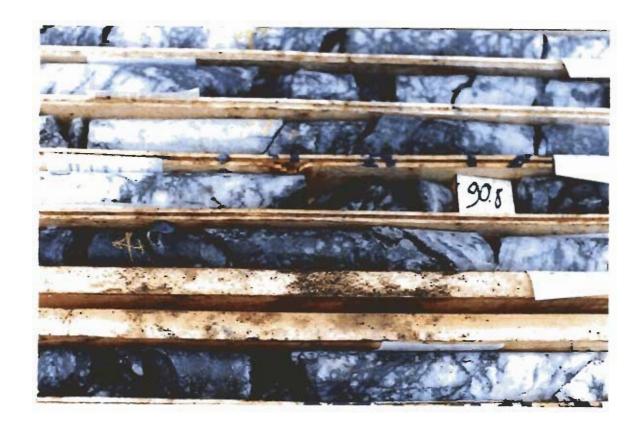


Photo 16 DDH 95-2; close up of mineralization in the vicinity of 90.8 metres. The bluish-grey shattered quartz (dendritic like) areas occur along the hangingwall and footwall section of a vein and contain the highest percentage of sulphides and gold values.

The mineral association in quartz veins includes pyrrhotite, pyrite, chalcopyrite, sphalerite, valleriite, bismuth telluride, native gold, native bismuth and electrum. Elevated values for other elements such as bismuth and tungsten have been observed but are not consistent indicators of gold mineralization. Generally, copper continues to be the best pathfinder for gold mineralization and occurs in a ratio of 1094:1 as shown in the Scatter Diagram of Appendix IV or 1193:1 as calculated from the significant intersections of Table I, Drilling Summary of Significant Intersections. Silver, a minor byproduct is economically important. The sulphides and gold bearing minerals occur predominantly in grey (greyish-white to bluish-grey) quartz along the footwall and hangingwall

contacts. These darker quartz areas have a shattered (dendritic-like) texture which is probably due to episodic emplacement of silica-sulphide bearing solutions. The darker quartz is believed to contain chlorite and graphite, which originates from the serpentinite and sediments contained within the thrust sheets. The highest percentage of sulphides are always associated with inclusions of/or adjacent to listwanites and granodiorite. Pyrrhotite and chalcopyrite are in the form of coarse grain intergrowths with strained quartz, but locally occur as fine grained disseminations. Higher sulphide concentrations appear to be discrete bodies and may represent approximately 25% of the entire quartz mass. The remaining 75% of the vein volume is white quartz that is weakly mineralized or barren.

Minor constituents including pyrite, sphalerite, valleriite, native bismuth, bismuth telluride, electrum and native gold were confirmed by scanning electron microprobe (SEM) grain analysis. Gold was seen as rare, tiny specks 2 to 20 microns in size, alone or associated with bismuth minerals in both pyrrhotite and chalcopyrite (Harris, 1994).

As mentioned, above and in previous sections, the quartz veins are within or adjacent to the Mission Ridge Pluton and serpentinite. In particular, the highest gold grades and quantity of sulphides occur in quartz veins within listwanite or quartz veins containing inclusions or laminations of listwanite. Disseminated pyrite, pyrrhotite and chalcopyrite occur within the granodiorite. Diamond Drill Hole (DDH) 95-13 is an example of a hole containing disseminated mineralization and auriferous quartz veins. The Rexmount Porphyry has intruded the same structural weaknesses utilized by the granodiorite and silica-sulphide fluids which formed the quartz veins. Therefore, the Rexmount Porphyry has often destroyed the quartz vein and may contain fragments of quartz vein. The Rexmount Porphyry within DDH 95-12 contains such quartz fragments. The mineralized granodiorite within this drill hole contains quartz veins, quartz fragments, quartz breccia.

Very few veins, veinlets or stringers occur within the chemically and structurally unfavourable metasediments of the Bridge River Group.

Minor massive sulphide veins were mapped on surface in the shaft at 00+50W and in DDHs

89-119 and 95-19. The massive sulphide intersection within DDH 95-19 assayed 0.301 opt.Au. and 1.72% Cu. across 0.3 metres.

## 9.6 Diamond Drilling

The objective of the drilling program was to test the continuity of mineralization westward, determine the dip of the auriferous quartz vein system and calculated drill indicated ore reserves. A total of 2,531 metres of BQ and NQ size core was drill in 20 holes. Four holes were abandoned and DDHs 95-1 and 95-3 were restarted after only penetrating 10.67 m. and 29.57 m. of overburden. Owing to the poor ground conditions, it is recommended that a minimum NQ size core be drilled and that conditioners be utilized while drilling.

A 1995 Diamond Drill Summary is contained in Appendix I and detail Drill Logs and a Legend are contained in Appendix II. The following Table I summarises, by section, the most significant intersections obtained to date on the Rex Mountain property. Figures 4 & 5 show the drill hole collars and horizontal projections of the holes on plan. Figures 7 through 31 show the vertical sections from 1+00W to 7+25W at 25 metre intervals. These sections contain rock types, alteration, structure and analytical results and incorporate plotting modifications to reflect changes to holes that were relogged in 1995. The legend in Appendix II contains abbreviations and symbols utilized while logging and drafting sections. Inputting data into a computer geological database would speed plotting drill holes on section and permit more flexibility with interpreting data than the present manual method allows.

Select mineralized quartz veins and core were split and analyzed for Cu, Fe, As, Bi and As by ICP methods and for Au and Ag by fire assay. Core is stored on the property. Analytical data including sample preparation and analytical procedures are presented in Appendix III.

The following table summarises, by section, the most significant intersections obtained on the Rex Mountain property.

<u>Hole #</u>	Section	<u>Length (m)</u>	<u>Au (oz/ton)</u>	<u>Cu (%)</u>
89-116	1+25 W	0.78	0.426	0.59
89-3	1+75 W	3.99	0.371	0.32
89-6	1+75 W	0.67	0.258	4.42
89-6	1+75 W	2.28	0.254	1.36
89-120	1+75 W	2.90	0.124	0.08
89-121	1+75 W	4.13	0.067	0.06
89-121	1+75 W	2.09	0.602	0.80
88-8	1+75 W	1.93	0.432	0.03
88-8	1+75 W	8.43	0.351	0.39
88-8	1+75 W	0.61	0.298	2.78
88-8	1+75 W	2.43	0.114	1.23
89-4	2+00 W	1.73	0.220	0.13
89-124	2+00 W	1.19	0.162	0.34
89-124	2+00 W	1.20	0.111	0.11
89-125	2+00 W	0.90	0.335	0.26
89-123	2+25 W	7.00	0.155	0.02
89-126	2+25 W	0.88	0.209	0.24
94-22	2+75 W	3.12	0.124	0.48
94-20	2+75 W	1.99	0.178	0.87
				0.07
94-9	3+00 W	1.13	0.210	0.57
94-9	3+00 W	3.14	0.395	1.12
94-1	3+25 W	3.25	0.533	1.61
94-3	3+25 W	1.66	0.137	0.61
94-3	3+25 W	3.80	0.183	1.13
94-3	3+25 W	1.85	0.449	0.52
89-108	3+50 W	0.55	0.640	1.15
89-131	3+50 W	2.00	0.686	0.85
89-136	3+50 W	2.66	0.144	0.02
89-136	3+50 W	6.09	0.348	0.70
89-136	3+50 W	13.18	0.257	1.26

# Table I. Drilling Summary - Significant Intersections

			40	
89-186	3+50 W	0.95	0.120	0.57
89-137	3+50 W	8.72	0.128	0.24
04.4	2 175 117	2.24	0.250	1.50
94-4 04-5	3+75 W	2.24	0.359	
94-5	3+75 W	1.63	0.370	3.65
94-6	3+75 W	2.96	0.361	0.93
94-6	3+75 W	2.46	0.122	0.25
94-31	3+75 W	0.85	0.097	0.32
88-2	3+75 W	0.91	0.102	0.00
94-16	4+00 W	3.98	0.055	0.62
94-16	4+00 W	1.35	0.374	0.95
94-16	4+00 W	0.71	0.176	0.13
94-17	4+00 W	1.52	0.079	1.43
94-18	4+00 W	6.28	0.800	2.45
95-16	4+00 W	1.90	0.070	0.93
94-19	4+25 W	4.42	0.086	0.51
94-15	4+50 W	8.33	0.268	0.63
94-13 94-27	4+50 W	a.33 2.00	0.086	1.02
94-27	4+30 W	2.00	0.080	1.02
94-8	4+75 W	6.52	0.218	0.68
Lower Adi	it			
86-4	5+00 W	2.44	0.171	1.17
86-4	5+00 W	1.52	0.149	1.85
86-5	5+00 W	1.53	0.120	0.87
89-103	5+00 W	9.92	0.120	0.44
89-104	5+00 W	12.73	0.210	0.37
89-104	5+00 W	9.57	0.017	0.45
89-105	5+00 W	3.48	0.792	3.12
88-5	5+00 W	7.57	0.090	0.74
88-6	5+00 W	3.45	0.160	0.80
88-10	5+00 W	6.96	0.400	1.44
88-10	5+00 W	10.77	0.270	0.49
95-3	5+00 W	13.0	0.060	0.65
95-4	5+00 W	3.0	0.645	3.07
94-13	5+25 W	7.66	0.315	1.80
94-13	5+25 W	2.56	0.145	0.70
94-13	5+25 W	2.00	0.149	1.68
94-13	5+25 W	2.00	0.168	0.91
<b>88-</b> 6	5+25 W	4.95	0.134	0.74
00-V		1.75	0.131	0.74

89-103	5+25 W	5.76	0.027	1.23
95-1	5+25 W	7.50	0.055	0.58
95-2	5+25 W	14.9	0.103	1.14
95-9	5+50 W	2.6	0.008	1.06
95-9	5+50 W	12.4	0.030	0.42
95-10	5+50 W	3.1	· 0.018	0.19
95-10	5+50 W	1.0	0.120	0.39
Upper Adit				
95-7	5+75 W	1.0	0.083	2.27
95-7	5+75 W	1.7	0.165	0.99
95-11	6+00 W	1.0	0.328	0.14
95-12	6+00 W	1.5	0.123	1.60
95-12	6+00 W	1.0	0.071	0.70
95-13	6+50 W	7.7	0.013	0.16

The above intersections do not represent true thickness of the quartz vein intercepted. The average intersection grades 0.242 opt. gold and 0.99% copper, which represents a Cu:Au ratio of 1193:1.

Although all drilling to date has been plotted and presented on sections, only those sections containing 1995 drilling information and other select sections are discussed in the following subsections.

A. Section 5+25 West (Figure 24)

Diamond Drill Hole 95-1 tested the down dip extension of the 32.92 metre quartz vein system intersected in DDH 94-13. An 8.2 metre thick quartz vein was intersected in DDH 95-1 at 61.1 metres. The intersection appears to be the down dip continuation of the steeply dipping quartz vein system encountered in 94-13. Therefore, the probable thickness of the vein system between the two drill holes is approximately 8.0 metres and the apparent dip is approximately 70°north. The vein assayed 0.055/0.58 (opt.Au. / %.Cu.) over 7.5 metres. Both intersections contain inclusions of intensely silicified serpentinite and listwanite.

In 95-1 at 78.3 m. occurs a 1.3 m. intersection that assayed 0.002/0.06 and correlates with a 5.76 m intersection assaying 0.027/1.23 in 89-103 and a 2.97 m intersection grading 0.168/0.91 in 94-13. DDH 89-103 was drilled oblique to the strike and 94-13 was a vertical hole. This explains the large apparent thicknesses of the intersections and suggests that the true thickness is probably 1.3 metres. Of interest are the large variations in Cu:Au ratios for DDH 95-1, 94-13, 89-103. The Cu:Au 11,051:1 for 89-103 is abnormally high for copper or abnormally low for gold. Probably, the gold value is too low and a 0.17 to 0.20 opt.Au. value would be more realistic since the two other holes agree more closely with the calculated Cu:Au ratio of 1193:1 obtained from the Drill Summary of Significant Intersections, Table I.

In DDH 95-2 at 80.1 metres a 14.9 metre thick quartz vein containing listwanite inclusions was intersected. The quartz vein contains a higher percentage of sulphides and more competent quartz than 95-1. The 14.9 m. intersection graded 0.103/1.14, within which is a 2.4 m. intersection assaying 0.124/1.93 along the hangingwall contact and a 2.0 m. intersection assaying 0.276/1.49 along the footwall contact. The intersection correlates well with the previously mentioned intersections in 89-103, 94-13, 95-1. The intersections in 95-2 are associated with listwanite and intense silicification.

The intersected quartz veins were not found on surface due to scree cover or at depth in 94-14 because this drill hole is located north of the hypothesised shear zone and contains unfavourable metasedimentary host rocks. The Lower Adit quartz vein may correlate down dip with the quartz breccia intersected in 94-14. DDH 94-24, the most southerly hole on section, contain quartz stringers which may represent the up dip extension of the quartz veining.

In summary the following observations were made:

2.

 Two continuous north dipping (70°) auriferous quartz veins were intersected. The upper 8.0 m. thick vein correlates with the vein explored by the Lower Adit.

Alteration comprised of silicification and listwanite are most intense along structures

which host the auriferous quartz veins.

- The projection of the Upper Adit on this section lies along a thrust fault containing listwanite and intense carbonatization.
- 4. The geology is complex and stratigraphy can not be extrapolated over short distances.
- 5. The structural geology is complex as shown in 94-13, which contains fault contacts at 20°,35°,50°, and 67 degrees to core axis. These fault contacts reflect shear related structures and the dip of the thrust sheet. The dip of the thrust plane flattens with depth.
- 6. The mineralized vein system is continuous from surface at 2150 m. to a depth of approximately 2050 metres.
- 7. Sufficient drill data is available for a resource estimate and to conclude that the vein system dips steeply to the north.

## B. Sections 4+75 and 5+00 West (Figure 22 and 23)

DDHs 95-3 and 95-4 were collared on Section 4+75 and directed to intersect the main mineralized quartz vein systems on Section 5+00W.

DDH 95-3 intersected a 13.0 m. thick quartz vein at 76.6 m. which assayed 0.060/0.60. Contained within this intersection along the hangingwall contact is a 2.0 m. section that graded 0.205/0.56. The intersection can be extrapolated up dip to the Lower Adit. The 13.0 m. intersection within DDH 95-3 was tested down dip by 95-4. This drill hole intersected a 3.0 m. quartz vein assaying 0.645/3.07. This quartz system shows structural continuity, intense silicification and listwanite alteration. The mineralized structure thins and the dip flattens with depth.

In DDH 95-3 at 51.82 m. occurs a 1.18 m. low-grade intercept which is believed to correlate with the high-grade intersections in 89-103 to 105 and the down dip projection of the Upper Adit quartz vein system.

In summary, these sections indicate the following:

- 1. Sufficient drill data is available for a resource estimate and to conclude that the vein system dips steeply to the north.
- 2. The quartz vein system thins down dip and the structure flattens as occurring on the previous section.
- 3. Auriferous quartz veins, faults, intense silicification and listwanite alteration occur within the mineralized zone.
- 4. The overburden to bedrock contact shows a marked depression on Section 4+75W and on adjoining sections. This recessive area may represent the surface expression of the hypothesised shear (290° 300°), which parallels the main mineralized trend.

## C. Sections 5+50 and 5+75 West (Figures 25 and 26)

DDHs 95-5 to 10 were collared on section 5+75W. DDHs 95-5 and 6 were abandoned due to poor ground conditions, not utilizing mud and drilling BQ size core. As well, the holes were directed at an oblique angle to the hypothesised shear and main mineralized trend which increased the amount of the fault material intersected in core and which related in increased drill problems. Drilling mud, polymer and NQ size core were utilized in the remainder of holes.

DDH 95-5 intersected a 0.15 m. quartz breccia in the vicinity of the Upper Adit which assayed 0.497/0.40.

DDH 95-7 intersected a broad mineralized zone consisting of quartz veins within granodiorite and serpentinite. This broad mineralized zone contains intense silicification, carbonatization, and listwanite alteration. The auriferous quartz vein system appears to be the westward extension of the Lower Adit mineralization. Two economically interesting intersections were encountered along the hangingwall and footwall, which assayed 0.083/2.27 across 1.0 m. and 0.165/0.99 across 1.7 m., respectively.

DDH 95-8 which tested the down dip extension of the mineralization in 95-7, encountered intensely silicified argillite and granodiorite. It is believed that the argillite is not a favourable host rock for auriferous quartz veins and that the dip of the structure is flattening at depth. Fractures and foliations are predominantly 60° and 10° TCA, which would concur with a flat lying thrust plane and related shear structures of the flat lying thrust plane.

DDH 95-9 and 10 were drilled on Section 5+50W. DDH 95-9 intersected a 1.4 m. thick low-grade quartz vein which correlates with the down dip extension of the Upper Adit. At 103.9 m. a 0.5 m. thick quartz vein assaying 0.656/2.4 was intersected. This intersection occurs along the hangingwall contact of a quartz vein system that extends from 103.9 m. to 132.8 metres. This hangingwall vein is immediately down dip of the Lower Adit quartz vein system. The quartz system is associated with granodiorite and serpentinite. The lower 12.4 m. of the system assayed 0.03/0.42 and the footwall contact contains a 0.3 m. sample assaying 0.109/2.42.

DDH 95-10 tested the down dip extension of the mineralization encountered in 95-9. The extension of the Upper Adit quartz vein was not encountered and the extension of the Lower Adit mineralization appears to have been displaced by the Rexmount Porphyry. At 142.8 m. a 2.6 m. thick quartz vein was intersected that graded 0.003/0.15. This vein is located along the footwall contact of the Rexmount Porphyry and may represent the displaced down dip extension of the Lower Adit quartz vein system. The lower portion of the drill hole contains metasediment, porphyry, and two quartz veins. The upper one a 147.8 m. depth assayed 0.018/0.19 across 3.1 m. and the lower one at 166.6 m. assayed 0.12/0.39 across 1.0 metre. These two veins may represent a riedel shear such as the vein encountered in Trench 1 and 2.

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In summary the sections indicated the following:

- 1. The north dipping Lower and Upper Adit quartz vein systems extend westward but were cut off down dip by the Rexmount Porphyry and metasedimentary rocks.
- 2. A zone of intense alteration can be trace down dip of the quartz vein mineralization even though quartz veins were not encountered at depth.
- 3. The quantity of Rexmount Porphyry appears to be increasing westward and has disrupted the continuity of the quartz vein systems.

#### D. Section 6+00 West (Figure 27)

DDH 95-11 intersected an intensely silicified granodiorite/shear zone between 32.3 m. and 36.4 m., which is believed to represent the westward extension of the Upper Adit quartz vein system. This granodiorite/shear zone can be trace down dip to an intersection in DDH 95-12 at 38.3 m. depth. The intensely sheared and altered granodiorite contains disseminated pyrite and chalcopyrite. DDH 95-11 intersected at 43.3 m. a 0.5 m. quartz vein which assayed 0.014/0.15. This vein is the first of three veins representing the westward extension of the Lower Adit quartz vein system. At 46.3 m. occurs a 4.1 m. thick vein assaying 0.002/0.2 and at 53.0 m. occurs a 9.2 m. thick vein assaying 0.058/0.27. The lower quartz vein contains a 1.0 m. interval which assayed 0.328/0.14. The stratigraphic and structural package containing the Lower Adit quartz vein system is moderately to intensely silicified and contains conspicuously less serpentinite than the sections eastward.

DDH 95-12 tested the down dip extension of the main mineralized trend containing the Upper and Lower Adits quartz vein systems from 95-11. An intensely silicified granodiorite with minor quartz breccia, veinlets, stringers and weakly altered serpentinite were encountered where the extrapolated down dip extension was expected. Numerous narrow intervals containing pods or disseminations of pyrite and chalcopyrite yielded elevated copper and gold values. Beneath

the extrapolated occurrence of the main mineralized trend are predominantly argillites and minor serpentinite. At 130.0 m. the hole intersected a moderate to intense fault containing mineralized quartz and altered serpentinite fragments which assayed 0.123/1.6 over 1.5 metres. Beneath this fault zone occur four separate quartz veins. The two most significant intersections are 1.7 m. grading 0.031/.89 and 1.0 m. assaying 0.071/.79. The latter occurs at the bottom of the hole where the hole was abandoned due to drilling problems. The four quartz veins beneath the previously mentioned fault appear to be approximately 30° TCA. It is possible that these intersections may represent a quartz vein system which appears on the geological map as a quartz vein dipping 65°N at 6+25W and 32°S at 6+00W. These two surface exposures of quartz veins were not found in the field and are believed to be covered by scree.

- The main mineralized trend containing the Lower and Upper Adits can be traced westward to section 6+00W. However, the down dip extension on the section is represented by numerous narrow mineralized pods, disseminations, quartz veinlets and stringers containing elevated copper and gold values.
- 2. The section shows considerably less serpentinite (listwanite) than the sections to the east. This favourable host rock is normally present in areas of high-grade mineralization.
- 3. The section contains three quartz vein systems.
  - 1. The steeply dipping quartz veins within the hypothesised shear of the main mineralized trend.
  - 2. The shallowly dipping veins along thrust planes and foliation directions.
  - The steeply dipping quartz veins located immediately above or below the thrust planes.
- 4. The main mineralized trend contains the most intense alteration on the section, but the alteration is less intense than the sections eastward.

## E. Section 6+50 West (Figure 29)

DDH 95-13 intersected the main mineralized trend. A 0.4 m. quartz vein intersection grading 0.101/0.84 is believed to be the Upper Adit vein system. The Lower Adit vein system of the main mineralized trend was intersected at 54.1 m. depth where a 7.7 m. thick quartz vein assayed 0.013/0.16. The hole was abandoned due to drilling problems at 96.0 m in altered serpentinite.

DDH 95-14 is believed to have intersected the main mineralized trend. The Upper Adit vein system is represented by a quartz veinlet in a listwanite. The quartz veinlet is narrow and contains low-grade copper and gold values. The Lower Adit vein system is believed to be within an intensely silicified granodiorite containing minor disseminations of chalcopyrite. Intensely silicified argillite containing granodiorite dykes and fracture filling of sulphides occur at depth. This zone of elevated copper-gold values is believed to represent the westward extension of the mineralization contained in the bottom of 95-12.

In summary, the section indicates the following:

- 1. The main mineralized trend containing the Upper and Lower Adit quartz vein systems can be traced westward to Section 6+50W, but the quartz veins systems are not well defined at depth. Intensely silicified granodiorite containing disseminated sulphides and fracture fillings of sulphides are believed to represent the down dip extension of the quartz vein systems. The intensely silicified and mineralized granodiorite contains anomalous copper-gold values.
- 2. The amount and grade of mineralization appears to be decreasing westward.
- Listwanite is associated with the mineralized zones containing elevated copper-gold values. Listwanite is less abundant than farther eastward.

4. The argillite appears to be a less favourable host for quartz vein systems.

F. Section 7+00 West (Figure 30)

DDH 95-15 did not intersect the thick quartz vein of Trench 1, which is believed to represent the westward extension of the Lower Adit quartz vein system. However, 95-15 did intersect intensely silicified granodiorite with chalcopyrite along fractures and beneath this unit occurs a fault bounded listwanite zone. Quartz fragments occur along the hangingwall fault contact and quartz breccia fragments occur along the footwall fault contact. These two fault contact zones contain elevated copper-gold values and are believed to represent the down dip extension of the quartz vein in Trench 1.

In summary the drill hole indicates that the mineralized structure is becoming weaker westward and down dip. Copper-gold values are decreasing westward and down dip.

#### G. Sections 4+25 to 4+75 West (Figures 20 to 22)

These sections show a depression at the overburden to bedrock contact in the vicinity where the north dipping hypothesised shear is expected to occur. This depression spans several sections and lies along the main mineralized trend.

Small and large angles to core axis were measured for fault planes, quartz stringers and veins. The existence of small and large angles to core axis of similar structures over short core distances suggests that the structures are related. For example, DDH 94-15 on section 4+50W contains an 8.33 m. intersection that graded 0.268/0.63. The quartz vein and interbedded listwanite is located below a strong fault with measured dips at 31° and 52° TCA. The quartz vein(s) located beneath the fault show contacts of 12°, 48° and 37° to core axis. The core axis measurements of the fault and quartz vein(s) indicate steeply dipping and shallowly dipping structures. In fact, as discussed in the section 9.2 Structure, the two quartz vein systems are probably structurally related and coexist. In either case the veins between 4+25W and 4+75W are not continuous along strike or dip and therefore have limited potential for large tonnage in these sections.

H. Section 4+00 West (Figures 19)

DDH 95-16 was designed to test the high-grade intersections of 94-16 and 18 and determine the dip of the quartz vein systems. The drill hole is collared in a thrust sheet containing serpentinite and granodiorite. The granodiorite contains mineralized quartz veins and veinlets which dip either shallowly to the south or vertically. As well, the granodiorite contains disseminations of chalcopyrite. A 0.7 m. thick quartz vein at 27.3 m. depth does not appear to occur in 94-16 located within 7 metres to the south, which would suggest that the vein dips vertically. Another 1.9 m. thick quartz vein at 38.7 m. depth indicates a 45° TCA. contact which would indicate a flat lying or vertically dipping vein. This vein graded 0.070/0.93 over its 1.9 m. thickness. If this vein is steeply dipping to the north, then it may be the up dip correlation of the 6.28 m, intersection in 94-18 that assaved 0.800/2.45. If this is the case, then the vein system is cut off down dip of the 94-18 intersection by the thrust fault or the quartz vein system is not developed in the argillite at depth within DDH 95-17. A barren quartz vein (veinlet) at 55.0 m. depth in 95-16 is believed to correlate with the 0.57 m. thick guartz vein in 94-18, which assayed 0.127/0.73. If this is the case, then the vein is south dipping and a nugget effect occurs. At 64.8 m. depth in 95-16 occurs a 0.3 m. thick quartz vein containing pyrrhotite, pyrite and chalcopyrite. If the structure is south dipping, then the grade and thickness of the quartz vein changes dramatically between 95-16 and the 6.28 m. high-grade intersection in 94-18. Therefore a steeply north dipping scenario is more likely for the quartz vein system, hypothesised shear and main mineralized trend.

DDH 95-17 intersected a serpentinite thrust sheet with an argillite package on the hangingwall and footwall sides of the thrust planes. The serpentinite melange is altered but absent of quartz veining. It is believed that the serpentinite melange lies outside (north) of the hypothesised shear and main mineral trend (290° - 300°). Beneath, the serpentinite melange occurs intensely silicified argillite containing fractures filled with pyrrhotite, pyrite and chalcopyrite, quartz stringers and veinlet. This zone appears to lie along the axis of the hypothesised shear and main mineral trend.

In summary the section indicates the following:

- The hypothesised shear and main mineral trend (290° 300°) extends eastward and dips to the north. The shear zone has a maximum mineralized width of 50 metres. Outside of this zone the quartz veining occurs sporadically and contains low-grade copper and gold values.
- 2. The high-grade copper-gold mineralization is contained within the narrow hypothesised shear and within the serpentinite thrust sheet.
- 3. Structural measurements indicate that the quartz vein systems and faults occur together as shallowly dipping and steeply dipping structures.
- 4. The vein systems occur in tension fractures, riedel shears, displacement shears and thrusts faults within a stratigraphic package of serpentinite to listwanite.
- 5. Argillite is not a favourable host rock for quartz vein systems.
  - I. Section 3+25 West (Figure 16)

DDH 95-18 tested the theory of a north dipping shear trending 290° - 300 degrees No quartz vein systems were intersected at depth and therefore it would have to be concluded that the quartz vein systems are predominantly dipping shallowly to the south or the quartz vein system does not extend down dip to the north in this area. Either way, the quartz veins intersected in 94-1 through 3 are not continuous between drill holes. Therefore, the quartz veins form pods and are discontinuous along strike and dip.

Another possibility is that the quartz veins occupy north-south cross cutting structures. Such a cross cutting structure occurring in Trench 3. These cross cutting structures do not persist far along strike or dip. The alignment of mineralization from 1+00W to 7+00W along a 290° - 300° trend suggests strongly that a shear of metallogenic importance lies within the main mineralized trend.

1.

J. Section 3+00 West (Figure 15)

This section correlates well with the interpretation discussed on section 3+25W. The best mineralized intersection occurs in 94-9 along the hypothesised shear zone beneath a slight flexure along the granodiorite to serpentinite thrust sheet. The quartz vein system is not as well developed and contains lower-grade copper and gold down dip within 94-11. This hole is believed to be close to the southern boundary of the hypothesised shear zone.

Quartz veins in 94-10 and 11, along the upper thrust fault, indicate shallow dips to the north. Argillite bedding planes within 94-12 parallel the thrust plane. Quartz vein contacts suggest that vertically dipping veins are related to tension fractures developed adjacent to the thrust plane.

The granodiorite adjacent to the thrust faults contains quartz stockwork with trace amounts of chalcopyrite.

K. Section 2+00 West (Figure 11)

DDH 95-19 was designed to explain the nature of the quartz vein system intersected in 88-8 on section 1+75W. DDH 95-19 appears to have been drilled down a serpentinite thrust slice. The lower thrust contact separates the footwall argillite from the serpentinite sheet and the upper thrust contact separates the hangingwall chert from the serpentinite sheet. DDH 95-19 intersected numerous thin quartz veinlets with measured contacts at 0°, 45° and 85° TCA., with the predominant direction being 45° to core axis. Therefore, the most likely scenario would be that the quartz veinlets are shallowly dipping to the south and represent tension fractures between the thrust (shears) faults.

The quartz veins and veinlets contain low-grade copper and gold values. The best intersection occurs within a listwanite zone which assayed 0.145/0.12 over 0.5 m. thickness. This intersection is believed to correlate up dip to the north with a 0.9 m. thick intersection in 89-125 grading 0.335/0.26.

In DDH 95-19, a 0.3 m. thick massive sulphide lens at 51.8 m. occurs between a 1.4 m. thick quartz vein and a serpentinite. Massive sulphide lenses occur in the shaft area and in 89-119 on section 1+50W. The 0.3 m. thick massive sulphide lens assayed 0.301/1.72.

#### L. Section 1+75 West (Figure 10)

DDH 95-20 showed that the southerly dipping quartz vein system intersected in 88-8 does not extend up dip to 95-20 and that the quartz vein system does not dip steeply to the north. The numerous narrow quartz veins encountered in 88-8 may be folded tightly, as shown on section, and not intersect 95-20. The geometry of the near surface quartz vein intersections within 89-120, 89-121, 89-1,89-2, and 88-8 suggest a folded vein. The nearby Trench 7 (Flat Lying Vein) has been fold and is described in the following section 9.8 East Zone. Drilling results on sections 2+25W and 2+50W suggest that folding of the veins has occurred.

As noted the mineralized intersections on this section are generally thin and contain low-grade copper and gold values. The potential of the area for hosting mineable reserves at depth does not appear to be good. However, the folded vein is close to surface and contains economically interesting grades. Therefore, a future drill program should consider drilling at least one deep northerly directed hole to test the south dipping quartz vein system and shallow holes to define the flat lying vein near surface.

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## 9.7 <u>Resource Estimate</u>

Gold deposits that are associated with listwanites are generally of high-grade and low-tonnage with erratic distribution of gold.

Geological investigations of the Rex Mountain property have shown that the geological setting is complex. The 1995 program has contributed to the understanding of these complex systems of quartz veins, structures and rock types. However, the geometry of the deposit is still not understood sufficiently to conduct a drill indicated reserve on any portion of the property.

The property is best understood in the western portion of the property where drilling has indicated that a north dipping shear zone hosts two northerly steeply dipping quartz vein systems. These two quartz vein systems have been explored in the past by the Lower and Upper Adits.

Diamond drilling from 4+00W to 7+00W has shown that the Lower Adit quartz vein system is continuous over the entire 300 metres of strike length. The highest copper and gold values and the greatest concentration of quartz veining occurs on sections 5+00W and 5+25W. Drilling east of 4+00W has shown that the mineralized trend and coincident hypothesised north dipping shear zone continues to the shaft area at 0+50 West. However, the quartz vein systems are less concentrated and more erratic in distribution within the mineralized trend. As well, there appears to be more south dipping veins and less north steeply dipping veins. This is probably a function of the hypothesised north dipping shear decreasing in intensity to the east and west of the 5+00 to 5+25 West area.

Quartz veins pinch and swell, are pod-like and discontinuous along strike and dip in the western and eastern portions of the main mineralized trend. However, as mentioned above, the western portion of the property appears to contain a concentration of auriferous quartz veining, favourable host rock and alteration and well developed continuous structures for hosting the quartz vein systems. The following resource estimates have been prepared for the West Zone (Sections 4+00W to 6+00W) and the East Zone (1+25W to 3+75W). Detail and brief descriptions of each section are contained in Appendix V, Resource Estimate Calculations.

A specific gravity of 2.65 tonnes per cubic metre where utilized. The true thickness of the intersection was estimated and/or an intersection was diluted to 1.5 metre, which is considered to be a minimum mining width. A maximum area of influence of 25 square metres was assigned to an intersection ie., a strike and dip length 12.5 metres on each side of an intersection. If another drill hole intersection occurs within the 12.5 metres, then the point halfway between the two intersections was considered the boundary of the area of influence. A rough draft of the longitudinal section did not indicate mineralized shoots nor was it utilized for the resource estimate in determining the area of influence. The geological setting and nature of the mineralization is not fully understood but the apparent mineralized trend (290° - 300°) of the Rex Mountain property suggests that the continuity along strike is more well developed than along the dip.

SECTION	TONNES	GOLD	COPPER
4+00W	8281	0.574	1.90
4+50W	4969	0.268	0.63
4+75W	3313	0.218	0.68
5+00W	36107	0.224	0.95
5+25W	31966	0.169	1.14
5+50W	2484	0.219	0.80
5+75W	5300	0.113	1.23
6+00W	2484	0.219	0.09
TOTAL	94,904 Tonnes	0.232 opt. Au.	1.06% Cu.

The West Zone contains a resource estimate of 94,904 tonnes grading 0.232 opt.gold and 1.06% copper. The calculated Cu:Au ratio of 1333:1 is consistent with ratios calculated in Table I, Drilling Summary - Significant Intersections Cu:Au 1193:1 and Appendix IV, Scatter Diagram Cu:Au 1094:1.

SECTION	TONNES	GOLD	COPPER
1+25W	497	0.220	0.31
1+75W	22662	0.276	0.86
2+00W	7157	0.151	0.21
2+25W	2982	0.126	0.03
2+50W	2961	0.167	0.04
2+75W	4968	0.182	0.72
3+00W	6625	0.299	0.84
3+25W	16066	0.331	0.61
3+50W	21108	0.256	0.74
3+75W	9523	0.363	1.81
TOTAL	94,549 Tonnes	0.268 opt. Au.	0.77% Cu.

## Table III Resource Estimate - East Zone

The East Zone contains a resource estimate of 95,549 tonnes grading 0.268 opt.gold and 0.77% copper. The calculated Cu:Au ratio of 838:1 is not consistent with the ratios calculated in Table I, Drill Summary - Significant Intersections Cu:Au 1193:1 or Appendix IV, Scatter Diagram Cu:Au 1094:1. The copper grade has decreased and the gold grade has increased eastward. Whether this represents a mineral zonation outward from a copper rich core in the West Zone is not known.

A combined, East and West Zones, resource of 189,453 tonnes grading 0.250 opt. gold and 0.092% copper has been estimated.

The tonnage and grade of the resource estimate does not support an underground exploration program. It should be noted that the ground conditions are poor and that underground developement would have to contend with dilution and ground stabilization problems. The resource estimate does demonstrate that the mineralizing event has concentrated a large amount of auriferous quartz veining into a fairly restricted mineralized trend. The questions, whether there is an area containing more continuous quartz veining than defined by drilling along the main mineralized trend, and whether there is a porphyry copper-gold deposit which is the source of the mineralization, remain to be answered. The property is a significant deposit and warrants further work to answer these questions and determine the potential of the property for hosting an economic deposit.

## 9.8 <u>The East Zone</u>

The East Zone (east of 4+00W) is situated along a hypothesised shear trending 290° -300° and dipping steeply to the north. However, the quartz vein systems developed within this shear occupy predominantly south dipping tension fractures and riedel shears and fault thrust planes. The reason that a quartz vein system is not developed along the hypothesised shear is because the shearing was not as intense and as well developed as in the western portion of the property.

The geological setting of the East Zone is complex and the lack of outcrop has made the task of interpreting diamond drill result difficult. Trenches 5 and 6 on Section 2+25W and Trench 7 in the 1+25W to 1+50W area are the only exposures of auriferous quartz veins available for examination in the East Zone.

The following photos of the Trench 6 on Section 2+25W shows a north dipping quartz vein with two blocks to the right of the vein which have moved northward due to faulting and/or glaciation. On section the vein dips northward 60° (320/60°N laminations) and then flattens towards DDH 89-126. Note, that the quartz vein was not intersected in the drill holes to the south which is further evidence that the vein dips northward.

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Photo 17 Looking westward at Trench 6. On the right are the two quartz vein blocks which have slid off of the north dipping quartz vein.



Photo 18 Looking westward at Trench 6. A slightly closer view of the outcrop and a better angle to show the north dipping laminations and dip plane.

Drilling results on Section 1+25W indicate a broad folding of the quartz vein. Trench 7 located between Section 1+25W and 1+50W contains a broadly folded vein, which plunges 21° towards 330°.

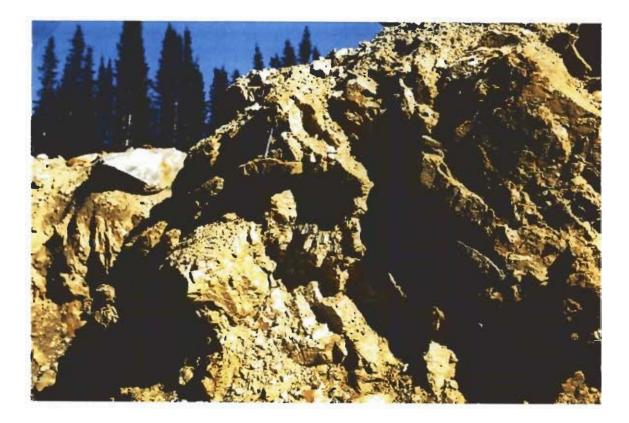


Photo 19 Looking northeast into Trench 7. The pen lies on the top of a broadly folded quartz lamination plunging 21° towards 330°.

The quartz vein systems of the East Zone pinch and swell and are discontinuous along strike and dip. A resource estimate of the economically significant intersections within the East Zone indicates 94,549 tonnes of auriferous quartz veining grading 0.268 opt.Au and 0.77% Cu. Refer to Appendix V, Resource Estimate Calculations and the above section 9.7 Resource Estimate for more detail.

The increase in gold content and decrease in copper content from the West Zone to the East Zone may represent a mineral zonation.

### 9.9 <u>The West Zone</u>

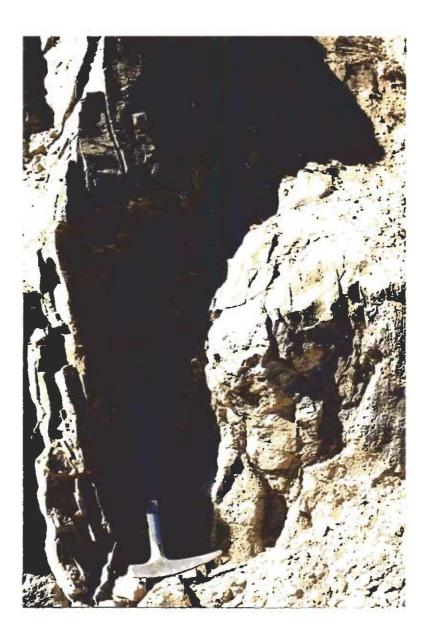
The West Zone (west of 4+00W) is situated along a hypothesised shear trending 290° - 300° and dipping steeply to the north. The quartz vein systems are most strongly developed on Sections 5+00W and 5+25W, where the north dipping quartz vein systems are parallel to the hypothesised shear and steeply dipping serpentinite thrust sheets. Refer 9.0 Economic Geology for more detail.

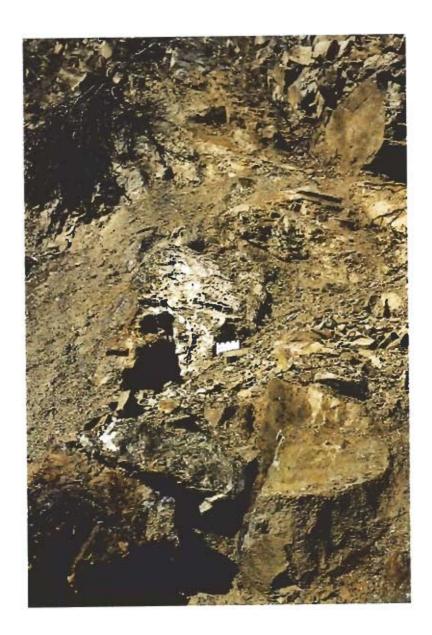
The geological setting of the West Zone is complex and the lack of outcrops has hindered interpreting and correlating surface geology with drill core information. Scree covers the portal entrances of the Upper and Lower Adits. Quartz vein exposures in the Upper Adit area indicates a narrow quartz vein system dipping 62° northward. The following photos show the general nature of this quartz vein system.

Photo 20,21,22

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Looking westward in the Upper Adit area. Sheared quartz vein, serpentinite and listwanite. Fracturing parallel to the north dipping shear zone trending  $290^{\circ}$  -  $300^{\circ}$ .







The following photo taken at Trench 3 shows the quartz vein occupying a cross fault trending 355/55°E. The vein system along the main mineralized trend is slightly folded but the overall trend is 290°.



Photo 23 Looking west in the Trench 3 area. The shovel rests on a 355/55°E cross fault plane with slickenside plunging 22° towards 355°.

The following photograph shows a barren north dipping quartz vein located north of the hypothesised north dipping shear and main mineralized trend.

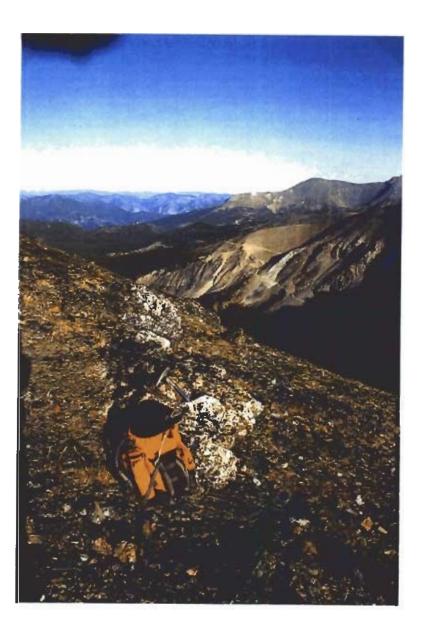


Photo 22 Barren north dipping quartz vein at 9+00 West.

The quartz vein systems of the West Zone pinch and swell but are fairly continuous along strike and dip. A resource estimate of the economically significant intersections within the West Zone indicates 94,904 tonnes of auriferous quartz veining grading 0.232 opt.Au and 1.06% Cu. Refer to Appendix V, Resource Estimate Calculations and the above section 9.7 Resource Estimate for more detail.

The increase in copper content and slight decrease in gold content from the East Zone to the West Zone may represent a mineral zonation.

# 9.10 <u>Reconnaissance Exploration</u>

The following section was written by Francis Moyle and edited by the author.

A helicopter supported reconnaissance program consisting of mapping, prospecting and geochemical sampling was conducted from four camps within a 10 km. radius of Spokane's main mineralized zone. Target areas were chosen based upon follow up of last year's initial reconnaissance program, airphoto analysis, geological surveys and previous exploration programs conducted in the area. Particular attention, focused on airphoto linear associated with serpentinite bodies. As well, the investigation focused on geological settings which demonstrated a similar features to Spokane's main mineralized zone, such as serpentinite melanges intruded by the Mission Ridge Pluton and the Rexmount Porphyry. This combination is believed to be the major control of the economic mineralization on the Rex Mountain property and Rex Mountain Property.

The program involved two geologists, Francis Moyle and Eric Constantinescu, between July 17 and Sept 6, 1995. The following section of the report is based upon the geologist's field notes and an activities report written by Francis Moyle. A total of 122 rock samples, 28 silts and 6 pan concentrates were collected and analyzed for 32 elements by ICP and gold by atomic absorption. Sample descriptions from surface lithogeochemical sampling are presented in Appendix VI and results are plotted on Figures 32 a,b and 33 a,b of the report.

# A. Regional Reconnaissance Geology.

Regionally, the area of interest lies along the eastern flank of the Coast Crystalline Complex. Regional mapping by Schiarizza et. al. (1989 and 1990), have separated the rock units into several tectonostratigraphic assemblages, which include the following:

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Pre-mid Cretaceous age Shulaps Ophiolite Complex, which consists of obducted oceanic ophiolite assemblages. The Serpentinite Melange is locally altered to listwanite, which consists of a talc-chlorite-dolomite-quartz-mariposite-schist. Also within the ophiolite complex are pillowed and massive greenstone, chert, phyllite, limestone, sandstone (quartzite) and conglomerate.

Permian to lower Jurassic age Bridge River complex, which consists of light-dark grey phyllite, quartz phyllite, calcareous phyllite, metachert, green chloritic schist, marble, biotite quartz schist, and serpentinite with minor chert, argillite, greenstone and limestone.

Upper Triassic age Cadwallader Group consisting of metamorphosed island arc derived volcanic and sedimentary rocks. The Hurley formation occurs predominantly and consists of thin to thick bedded sandstone, calcarenite and shale, with lesser amounts of limestone-volcanic conglomerate and volcanic sandstone, minor greenstone and breccia.

Locally, these assemblages are intruded by Eocene or younger aged hornblende biotite-quartz Rexmount Porphyry and quartz diorite to granodiorite Mission Ridge Pluton.

The dominant structural trend is northwesterly with a northeast dip. Folded and faulted sedimentary and volcanic strata are intruded by late Mesozoic and Tertiary age hypabbysal intrusive.

# B. Area 1, Jones Creek.

Area 1, Jones Creek, was a follow-up of anomalous values collected during the 1994 reconnaissance program. In particular, 94-38 (a talus float sample) 3227 ppb Au & 482 ppm Cu and 94-43 (float) 4282 ppb Au & 50 ppm Cu were investigated to determine their origin. The investigating geologists determined that the results were missplotted and that the anomalous values originated from quartz-carbonate veins within inaccessible cliffs in the adjoining eastern drainage. A stream sediment sample (WE001) and rock sample (147734) collected upstream of the anomalous float samples assayed 270/76 and 61/69 (Au ppb/Cu ppm), respectively. The sample sites are underlain

by serpentinite. The altered serpentinite may have contributed to the anomalous results. The highest results from the 1995 sampling were derived from the ridge northwest of the fly camp, Figure 32 a,b. Sample 147724 and 147727 with 89/7 were taken from a quartzite and quartz vein very close to a shear zone within the serpentinite host.

The general structural setting of the area is thrust sheets of the Bridge River Complex overlying the Serpentinite Melange which overlies the Hurley Formation. The anomalous results occur with the Serpentinite Melange at the thrust contact and related shears. All structures dip to the north at approximately 60°. On the East Fork of Jones Creek (1994 anomalous area) the serpentinite is moderately to intensely altered adjacent to the thrust contact between the Serpentinite Melange and the Hurley Formation. The investigating geologists concluded that owing to the isolated nature and small size of the mineralized showing that the potential of the area for hosting an economic deposit is not good. Any future investigations following up the 1994 cliff showing should utilize climbing gear when sampling the showing.

## C. Area 2, Hog Creek.

Area 2, Hog Creek, was a follow-up of a geochemically anomalous float boulder discovered on the banks of the creek. The sample, 94-17 assayed 190/776 (Au ppb/Cu ppm). Also, the area contains old workings which were explored around 1925. The area is underlain by two thrust sheets consisting of Serpentinite Melange thrust over the Bridge River Complex. Both units have been intruded by the Rexmount Porphyry. Granodiorite dykes and quartz veins occur with the Bridge River Complex. The highest value obtained during the 1995 program, sample 111851 27/36 occurs in a quartz vein within the granodiorite. The quartz veins discovered were narrow and discontinuous and relatively of low grade and therefore the area has limited potential for hosting an economic deposit.

D. Area 3, Fell Creek.

Area 3, Fell Creek, was designed to examine the contact between the Mission Ridge

granodiorite and the serpentinite for mineralized showings. As well, the northwest drainage of Bighorn Creek was silt sampled. A narrow discontinuous quartz vein within the Bridge River chlorite schist approximately 2 metres from an isolated pod of serpentinite assayed 220/34 ppb Au/ ppm Cu (Sample 111869). Above this vein on the ridge occurs another similar vein in a schist which assayed 220/34 (Sample 111869). The size of the veins and results do not warrant follow up. The area is underlain by a Serpentinite Melange Unit which was thrust over by the Bridge River complex and then intruded by the Mission Ridge Pluton and the Rexmount Porphyry. Above the Bighorn Creek valley the Hurley formation pinches out and the Bridge River Complex and the Serpentinite Melange Unit are in contact. A jadeite mine (showing) occurs within the area and is covered by the Tex 1-4 claims. No follow up is warranted.

## E. Area 4, Southeast fork of Hog Creek.

The purpose of investigating this area was to locate the old working on the Hog Creek and to examine the area to the southeast of the showings. The showings occur as a small discontinuous quartz vein within the Bridge River Schist. The highest value within the area was obtained from sample 100851 which assayed 27/36 ppb Au/ppm Cu. This sample was collected from quartz veins within a granodiorite dyke. The area is underlain by the Bridge River Complex which has been intruded by the Rexmount Porphyry. As well, granodiorite dykes occur within the Complex. No follow up is warranted.

## F. Area 5, Holbrook Creek.

The purpose of this traverse was to sample the serpentinite-granodiorite contact. Sample 100906 and 100907 which assayed 400/49 and 510/61 ppb Au/ppm Cu contained the highest values obtained from a quartzite unit located between the Serpentinite Melange Unit and Mission Ridge Pluton. Sample 111865 a large rusty, intensely silicified quartz phyllite float bolder in the middle of the valley assayed 45/216. This area is underlain by the Bridge River Complex which has been thrust over the Serpentinite Melange Unit and then intruded by the Mission Ridge Granodiorite to the north and the Rexmount Porphyry to the south. Mineralization occurs along the serpentinite and granodiorite contact. The greatest potential of the area for hosting economic mineralization occurs along the granodiorite-serpentinite contact. However, this contact is largely covered by overburden and therefore would be best tested by a geophysical survey.

# 10.0 <u>CONCLUSIONS</u>

The 1995 exploration program in conjunction with previous programs leads to the following conclusions:

- The mineralized Mission Ridge Pluton consisting of quartz diorite and granodiorite and the younger barren Rexmount Porphyry have intruded zones of structural weakness within the main mineralized trend.
- 2. The main mineralized trend 290° 300°, which is the locus of auriferous quartz veins has been traced from the East Zone to the West Zone over a strike length of approximately 700 metres and tested between 1950 metres and 2225 metres above sea level.
- 3. Mineralization comprised of chalcopyrite, pyrrhotite, and pyrite occurs as disseminations and auriferous quartz veins within the Mission Ridge Pluton. As well, mineralized quartz veins are spatially associated with altered serpentinite within the main mineralized trend. Silica-sulphide fluids occupying the intruding margin of the mineralized granodiorite are believed to be the source of the auriferous quartz veins located within the main mineralized trend.
- 4. The main mineralized trend is believed to represent a deep seated shear zone such as the nearby Marshall Fault. This hypothesised shear zone became a conduit along which the mineralized intrusion and accompanying silica-sulphide solutions invaded the locally deformed and faulted serpentinites and metasediments.

The property has undergone a complex history of deformation, faulting, shearing and thrusting, which has structurally prepared the chemically favourable serpentinites to be suitable hosts for ascending silica-sulphide fluids and intrusions.

6. The serpentinite is altered to listwanite by the silica-sulphide solutions. The listwanite is believed to have reacted as a catalyst, neutralizing the silica-sulphide solutions and precipitating gold in quartz within structural traps.

7. Three types of quartz vein systems have been identified:

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- A. Shallowly dipping veins that occupy thrust planes and composition planes.
- B. Steeply and shallowly dipping veins that occupy riedel shears, displacement shears and tension fractures between thrust sheets.
- C. Steeply north dipping veins that occupy the hypothesised shear zone of the main mineralized trend.
- 8. Quartz veins are discontinuous along strike and dip, pinch and swell and form pods at the intersection of structures. Locally, in the Adit area the quartz vein systems anastomose to approximately 38 metres thickness and are continuous over several sections of strike length.
- 9. Quartz Veins are folded and offset suggesting that deformation and faulting occurred during emplacement of the Rexmount Porphyry.
- High-grade copper and gold mineralization are associated with zones of intense silicification and listwanite alteration. Listwanite occurs adjacent to and as inclusions within auriferous quartz veins.

11. Alteration studies can be utilized as an exploration tool and assist with geophysical

interpretations. Intensely silicified and carbonatized serpentinites and listwanites are associated with mineralized zones. During carbonatization and silicification of serpentinite the magnetite within the serpentinite is destroyed. Therefore, an I.P. chargeability and resistivity geophysical response is related to the intensity of alteration and sulphide content of the stratigraphy. Magnetic susceptibility varies according to the intensity of carbonatization and listwanite alteration of serpentinite.

An I.P. and coincident VLF-EM anomaly parallels the hypothesised shear and main mineralized trend. The I.P. anomaly demonstrates high resistivity and chargeability believed to represent disseminated sulphides within silicious bedrock. The VLF-EM anomaly represents a conductive fault or shear which has been identified as the hypothesised shear of the main mineralized trend. A resurvey of the mineralized trend using a more sophisticated EM technique may be warranted.

- 13. Mineralization consisting predominantly of pyrite, pyrrhotite and chalcopyrite are concentrated along the hangingwall and footwall contacts within darker shatter textured quartz. The shattered or dendritic-like texture is due to episodic emplacement of silica-sulphide solutions. The darker quartz is believed to contain chlorite and graphite.
- 14. The copper to gold ratios for the West Zone and East Zone are 13331:1 and 838:1, respectively. There is a positive correlation between copper and gold. Silver is an economically important byproduct.
- 15. The West Zone is comprised of two continuous north dipping quartz vein systems occupying the hypothesised shear along the main mineralized trend. The quartz vein systems can be traced along strike from the Upper and Lower Adit area but are not as well developed outside of the adit area. The change is believed due to the decreasing intensity of shearing outside of the adit area. As well, the veins thin at depth due to the dip of the structural controls flattening with depth and the presence of argillite, which is not a structurally and chemically favourable host for quartz

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veins. As well, westward the Rexmount Porphyry has frequently destroyed or displaced the quartz vein systems.

- 16. The East Zone consists of shallowly and steeply dipping quartz veins located along riedel shears and tension fractures directions between thrust sheets. Predominantly, the quartz veins dip shallowly to the south and occur within the hypothesised shear zone of the main mineralized trend. The axis of the hypothesised shear is often located along a depression in the bedrock to overburden contact.
- 17. Resource estimate calculations indicate 94,904 tonnes grading 0.232 opt. gold and
  1.06% copper for the West Zone and 94,549 tonnes grading 0.268 opt. gold and
  0.77% copper for the East Zone. A combined resource estimate 189,453 tonnes
  grading 0.250 opt. gold and 0.92% copper is indicated for the West and East Zones.
- 18. A preliminary metallurgical test utilizing conventional methods of recovery (no cyanide extraction) recovered 99.4% for copper, 84.8% for gold, 74.9% for iron and 78.9% bismuth.

19. The geological history and nature of the auriferous quartz vein systems is complex and not fully understood. The property continues to have the potential of hosting an auriferous quartz vein deposit and/or a porphyry copper-gold deposit.

## 11.0 <u>RECOMMENDATIONS</u>

The sub-economic grade and tonnage indicated in the Resource Estimate is encouraging and demonstrates that the mineralizing event has concentrated a large amount of auriferous quartz veining into a fairly restricted mineralized trend. The following program is recommended to determine the existence of a high-grade auriferous quartz vein deposit and/or a porphyry copper-gold deposit.

A sophisticated EM survey is recommended over the following areas:

- The area between the Adits and Anomaly A. Anomaly A, an I.P. response located north of the main mineralized trend was defined during the 1989 geophysical survey. This anomaly has not been tested by drilling and may represent a lode deposit and/or porphyry copper-gold deposit at depth.
- Anomaly J is located north of and parallel to the main mineralized trend. The anomaly, which was defined during the 1989 I.P. survey indicates a geophysical response at 150 to 200 metres beneath the surface along section 3+50 West.
- Anomaly B located north of Anomaly J has a similar geophyical response to Anomaly J and the main mineralized trend.
- 4. If the follow-up drilling program is successful, then the EM survey should be extended over the entire main mineralized trend.

A follow-up diamond drilling program is recommend to test the I.P. Anomalies and any subsequently discovered EM anomalies.

# **ITEMIZED COST STATEMENT**

# **Personnel**

Alex	Boronowski, Project Geologist		
	June 1-30 22 days @ \$350/day	7,700.00	
	July 1-31 23 days @ \$350/day	8,050.00	
	August 1-31 27 days @ \$350/day	9,450.00	
	September 1-30 29 days @ \$350/day	10,150.00	
	October 1-31 11 days @ \$350/day	3,850.00	
Franc	is Moyle, Geologist		
	July 5-31 27 days @ \$175/day	4,725.00	
	August 1-31 30 days @ \$175/day	5,250.00	
	September 1-21 21 days @ \$175/day	3,675.00	
Eric (	Constantinescu, Student Geologist		
	July 5-31 27 days @ \$125/day	3,375.00	
	August 1-31 31 days @ \$125/day	3,875.00	
	September 1-4 4 days @ \$125/day		
Antho	ony Hill, Field Assistant		
	June 30 1 day @ \$100/day	100.00	
	July 1-31 31 days @ \$100/day	3,100.00	
	August 1-31 31 days @ \$100/day	3,100.00	
	September 1-3 3 days @ \$100/day	300.00	
•	Morris, Consultant		
Padre	Resources Inc.	10 100 00	
	May 15, 1995 - December 20, 1995	10,488.00	
Gorde	on Keevel, Supervisor		
Copp	er Star Management Ltd.,		
	July 31, 1995 - December 1, 1995	12,782.00	
	Total Costs - Administration and Salarie	es	\$ 90,470.00
Diam	ond Drilling		
	20 BQ & NQ size holes, 2531 metres of	f drilling	\$224,957.00

# Room and Board

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# Analytical Cost

267 samples (analyzed for Cu,Fe,As,Bi,W by Au,Ag by FA) @ \$24.67/sample.	ICP,	
	\$6,587.00	
160 samples (analyzed for 30 element ICP, Mo,Cu,Pb,Zn,Ag,Ni,Co,Mn,Fe,As,U,A Bi,V,Ca,P,La,Cr,Mg,Ba,Ti,B,Al,Na,K, Au by acid leach 10 gram @ \$23.18/s	W, and	
	\$3,709.00	
Total Costs - Analytical Cost		\$10,296.00
Equipment Rental		
Sperry-Sun downhole survey instrument July - Sept. rental Core Splitter	\$5,132.00	
July - Sept. rental @ \$92/month	\$276.00	
Total Costs - Equipment Rental		\$ 5,408.00
Truck Rental		
Cana 4 wheel drive truck June 1 - Oct 1		\$ 3,023.00
<b>Communications</b>		
Dept. of Communications Ironwood - radio rentals Ironwood - radio rentals B.C. Tel - radio phone Canada Wide Communication	71.00 1450.00 90.00 311.00 64.20	
Total Costs - Communication Equipm	ent	\$ 1,986.00
Surveying		
Bartell and Fiedrick		\$ 1,619.00
Field Supplies		\$ 3,000.00

# Post-Field

Report Preparation & Writing	
Dec. 1/95 - Jan. 16/96	
20 days @ \$350/day	7,000.00
Nov. 1-30 1.5 days	525.00
Vancal reproduction costs	1,535.00
Dave Phillips - drafting	2,800.00

Total Costs - Post-Field

\$11,860.00

# TOTAL COSTS:

# <u>\$375,068.00</u>

# STATEMENT OF QUALIFICATIONS

I, ALEXANDER J. BORONOWSKI, of NORTH VANCOUVER, in the Province of British Columbia, do hereby certify that:

- 1) I am a graduate of the Faculty of Science, University of British Columbia 1970, with a B.Sc. degree in Geology.
- 2) I have been a practising geologist in North America, Mexico, and Europe since 1970.
- 3) I am a Fellow of the Geological Association of Canada and a Professional Geologist registered in the Province of British Columbia.
- 4) I am presently under contract to Spokane Resources Ltd. of #480 650 West Georgia Street, Vancouver, British Columbia.
- 5) I do not own or expect to receive any interest (direct, indirect or contingent) in the property described herein nor in the securities of Spokane Resources Ltd., in respect of services rendered in the preparation of this report or work completed on the property.
- 6) I consent to and authorize the use of the attached report and my name in the Company's Statement of Material Facts or other public document.

Dated at Vancouver, B.C. this <u>15th</u> day of January, 1996.

Respectfully submitted, ESSIO ROVINCE BORONOWS UTISH SCIEN

A.J. Boronowski, P.Geo., F.G.A.C

#### **BIBLIOGRAPHY**

#### Ash, C.H., Arksey R.L. (1989).

The Listwanite Lode Gold Association in British Columbia. B.C. Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork 1989, Paper 1990-1.

# Brewer, L.C., 1987

Geophysical Report on Airborne Magnetic and VLF-EM Surveys by Columbia Airborne Geophysics Services

#### Brewer, L. and Bishop S., 1988

Assessment Report on Trenching and Rock Sampling

# Gaba, R.G. (1989).

Stockwork Molybdenite in the Mission Ridge Pluton: A New Exploration Target In the Bridge River Mining Camp (92J/16). B.C. Min. of Energy, Mines and Petroleum Resources, Geol. Fieldwork 1989, Paper 1990-1.

## Gaba, R. and Schiarizza, P., 1990

Mineral Potential of the Yalakom River Area, British Columbia Geological Survey Branch, Open File 1990-10

#### Harris, J., 1994

Petrographic and Mineralogical Report - Rex Mountain Property

## He, Y.B., 1994

Scoping Flotation Test - Rex Mountain Property

## Hogan, J.W., 1993

Geological Report on Spokane Gold Properties

#### Manning, L.J., 1993

Discussion of Geological Report by J.W. Hogan on the Spokane Gold Properties dated 3 May, 1993

#### Perry, J.H. (1990)

Summary Report on 1989 Exploration - The Lisa Dawn claim Group (Cub Prospect) Spokane Property, 92J/16W for MacNeill International Industries Ltd., British Columbia Assessment Report.

#### Pollack, T. (1983).

Geological and Geochemical Report, Roch Property, 92J/16W; for Utah Mines Ltd., British Columbia Assessment Report 11758.

Saunders, C., 1986 Spokane Gold Property

Schiarizza, P., Gaba, R.G., Glover, J.K., Garver, J.I. (1989)
Geology and Mineral Occurrences of the Tyaughton Creek Area (920/2, 92J/15,92J/16),
B.C. Min. of Energy, Mines and Petroleum Resources, Geological Fieldwork 1988. Paper 1989-1.

- Schiarizza, P., Gaba, R.G., Coleman, M. and Garver, J.I. (1990)
   Geology and Mineral Occurrences of the Yalakom River Area (92J/15, 16 and 92O/1,2);
   B.C. Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork 1989, Paper 1990-1.
- Scott, A., 1989 Induced Polarization and Resistivity Surveys

Solkoski, L.R., 1986 Report on Geology and Diamond Drilling

Ven Huizen, G., 1988 Interim Drilling Report

Ven Huizen, G., 1989 Drilling Report

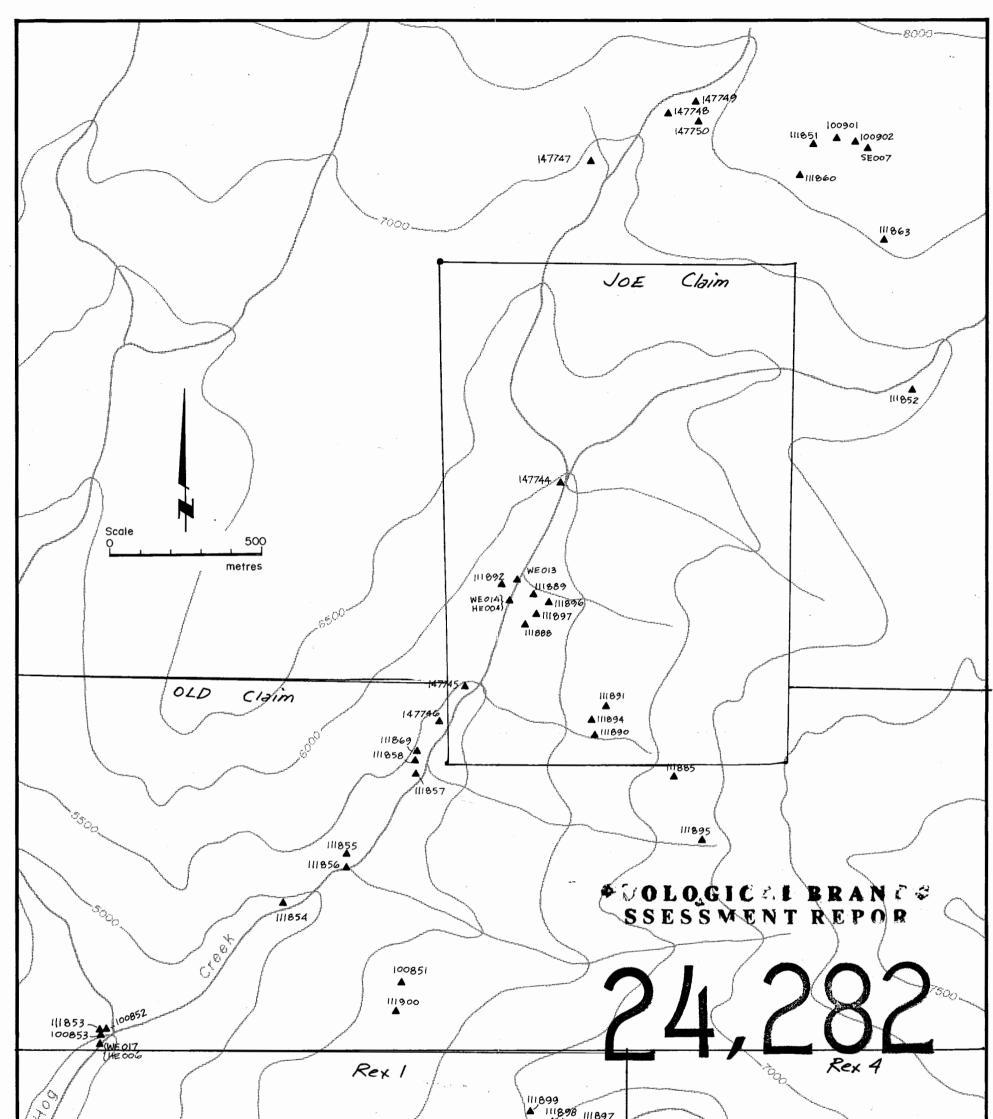
Visser, S., 1989 Interpretation of Induced Polarization, VLF-EM and Magnetometer Surveys

Westerman, C.J., 1986 The Spokane Gold Property

Westerman, C.J., 1988 Summary Report - Spokane Gold Property

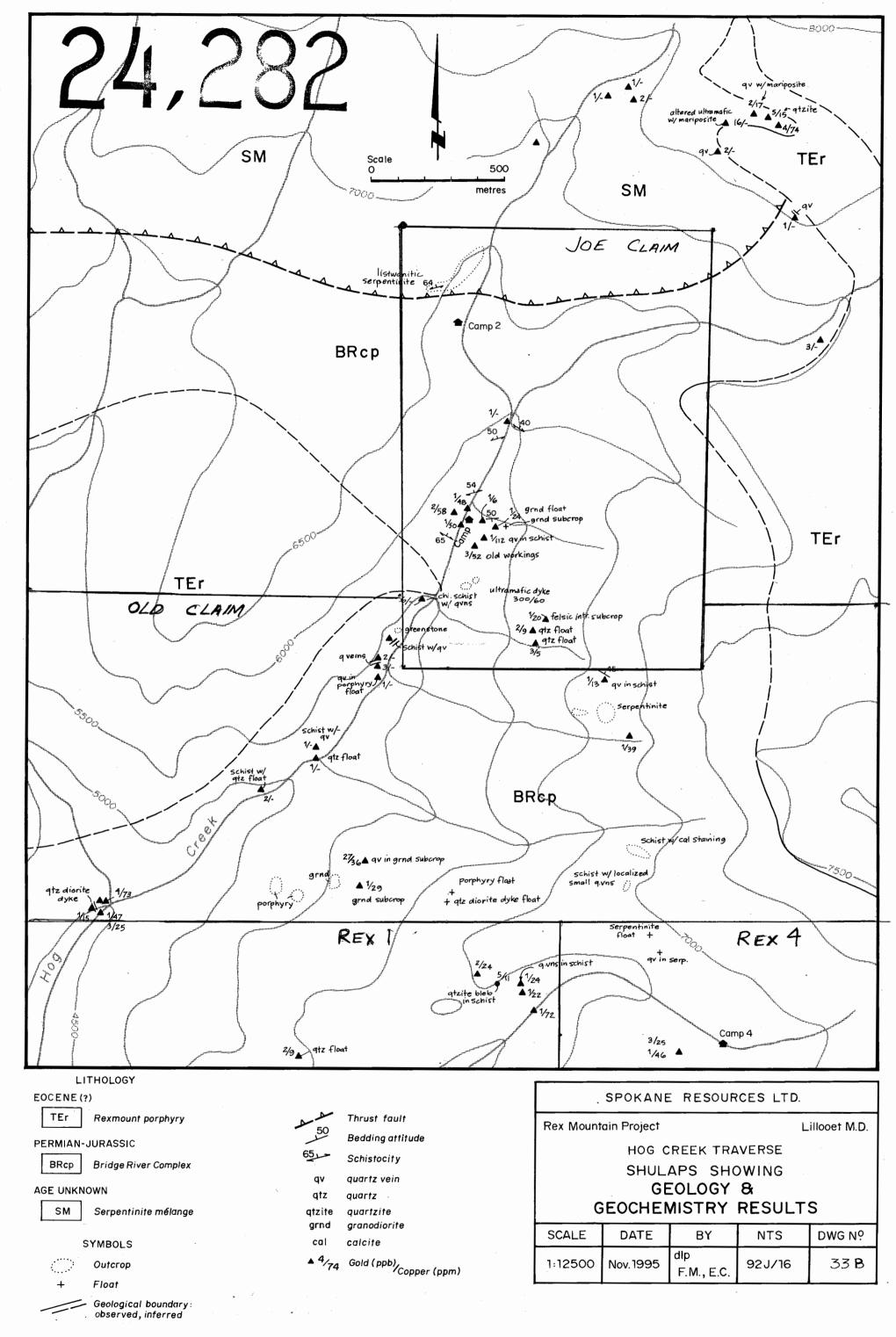
## Wilson, G., 1982

Introduction to Small-scale Geological Structures

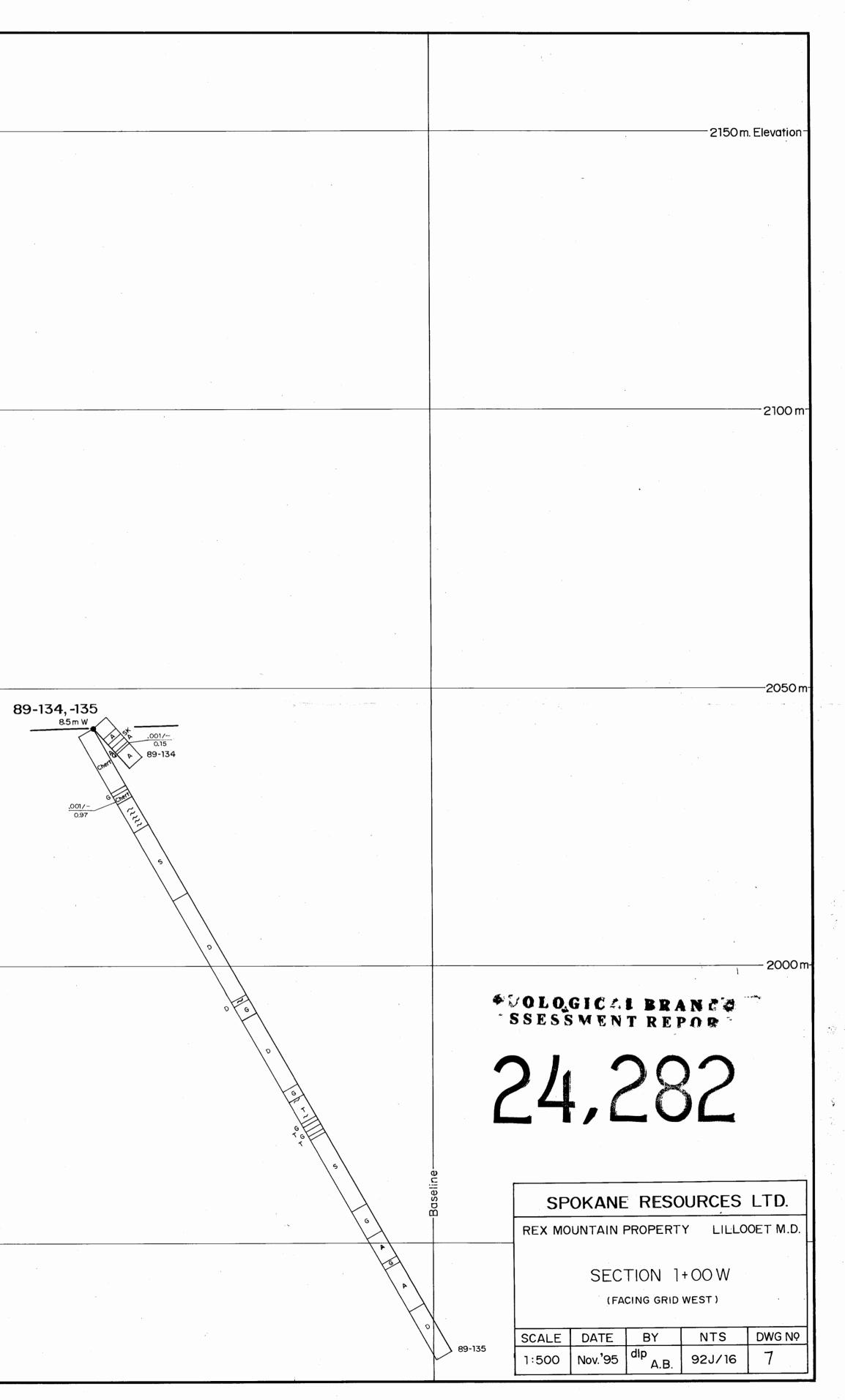


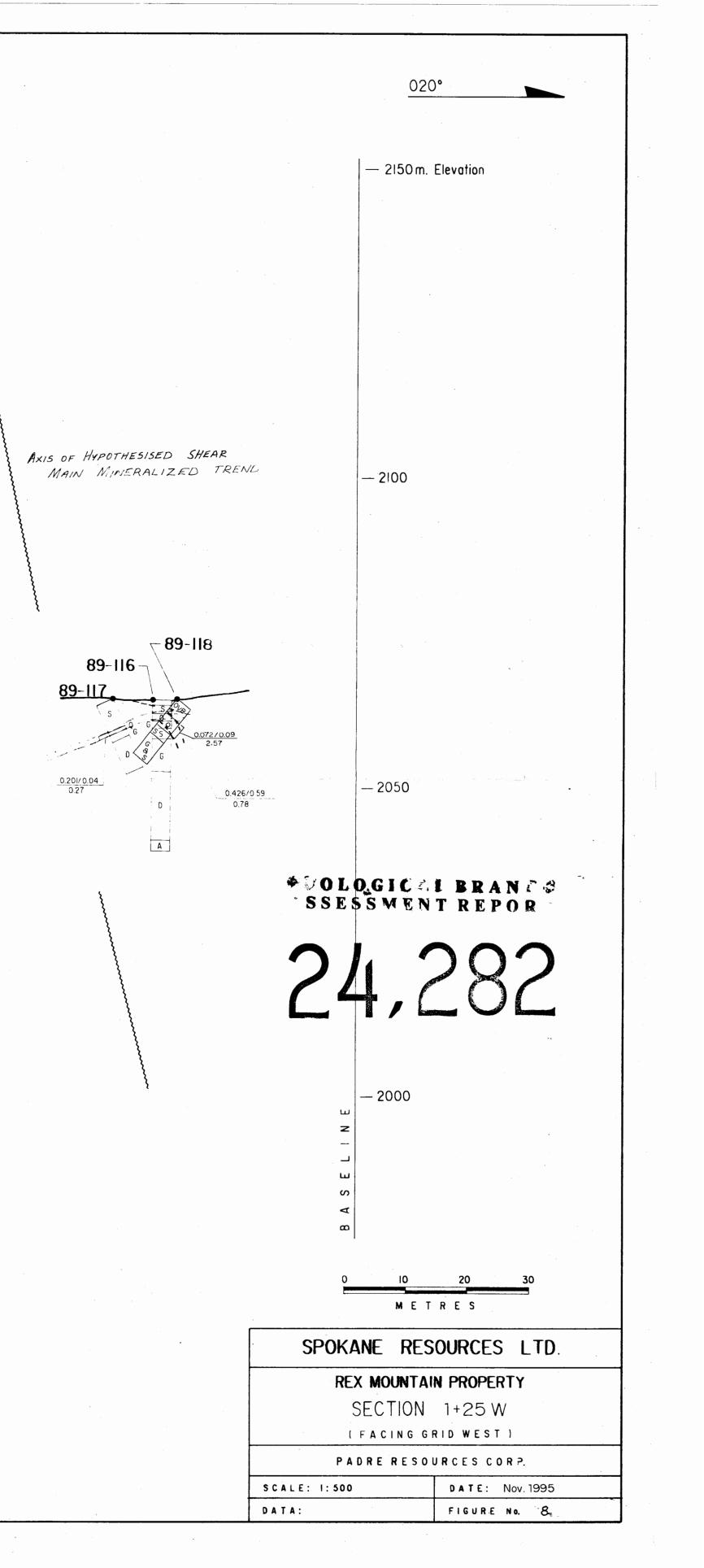
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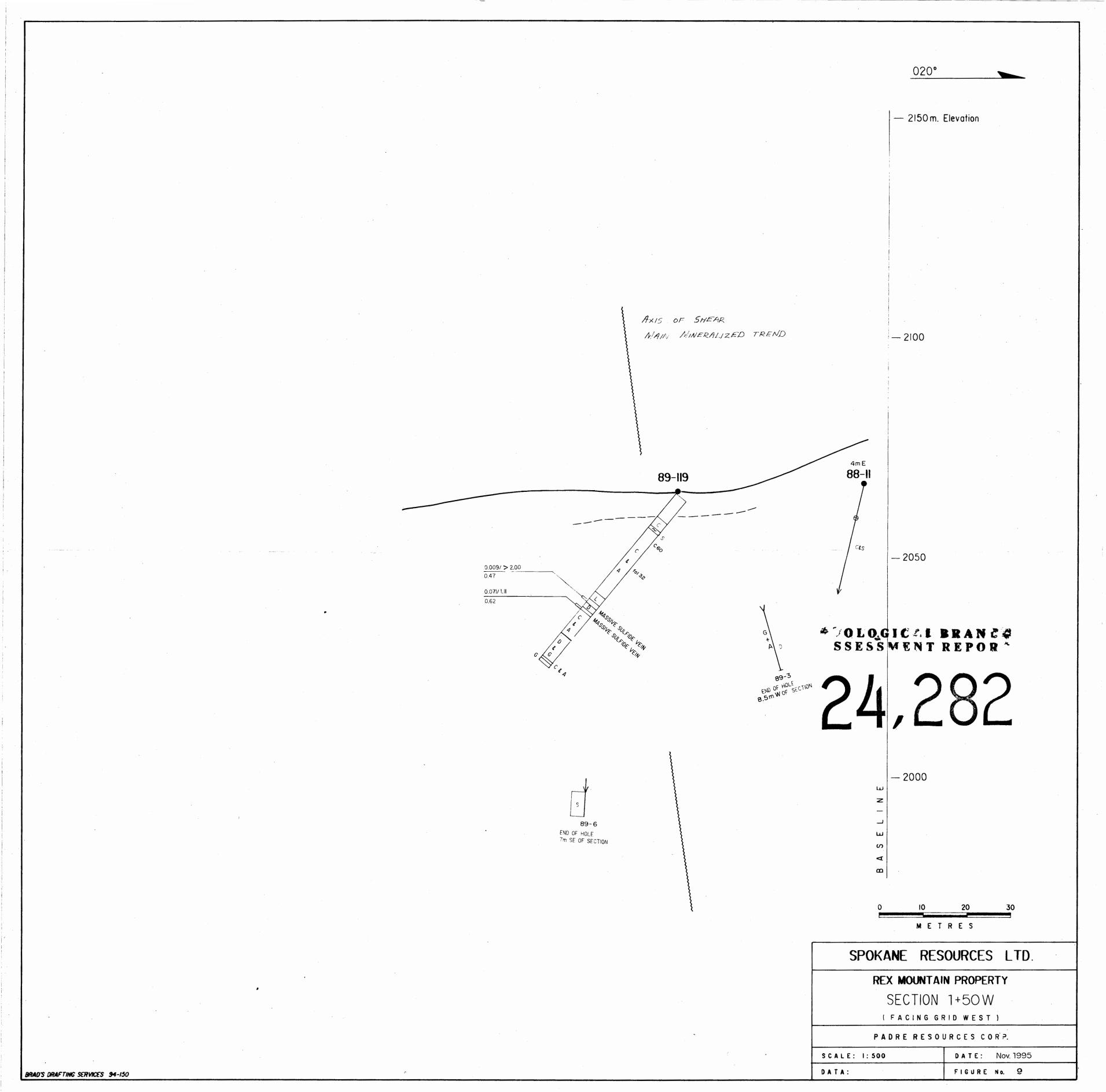
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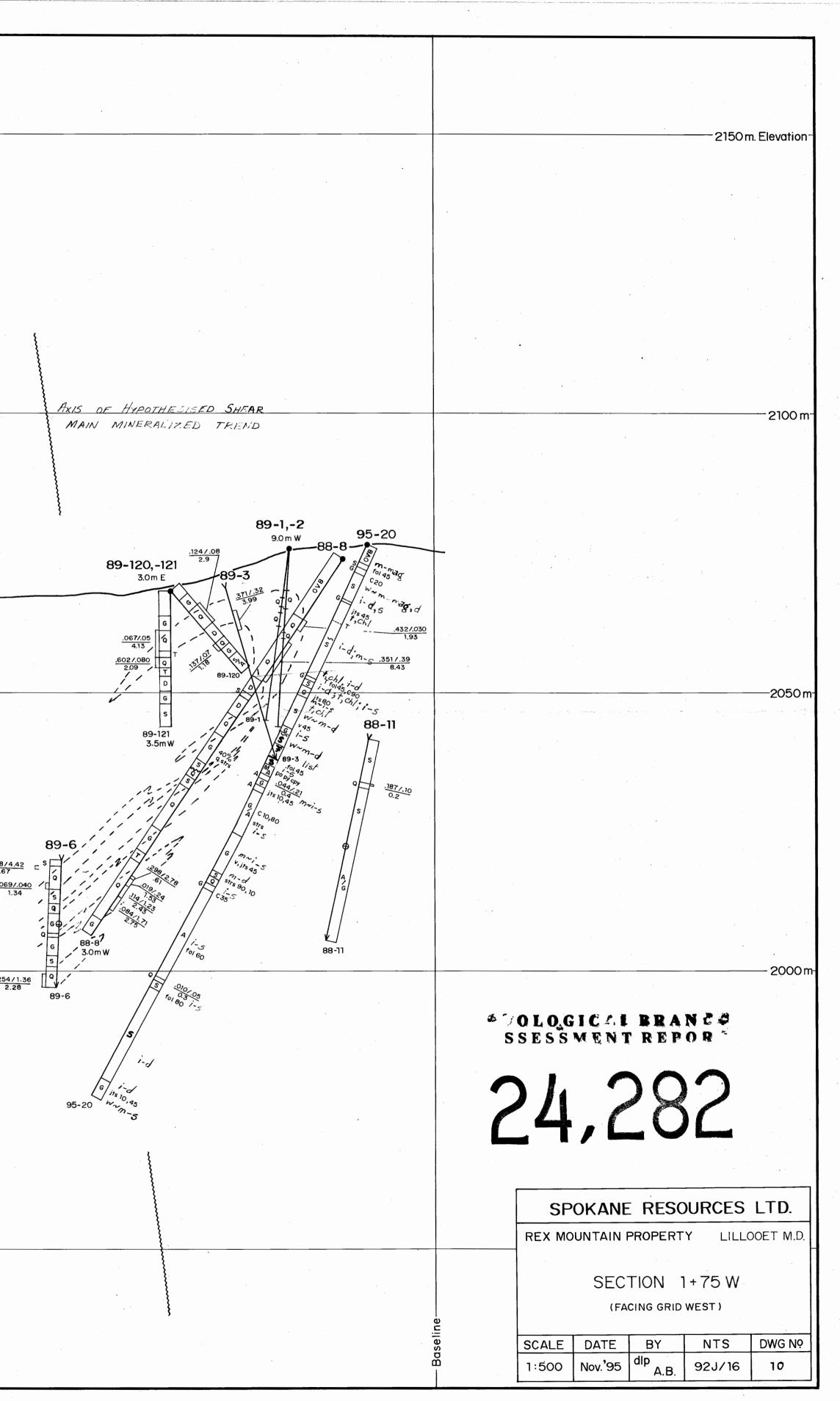
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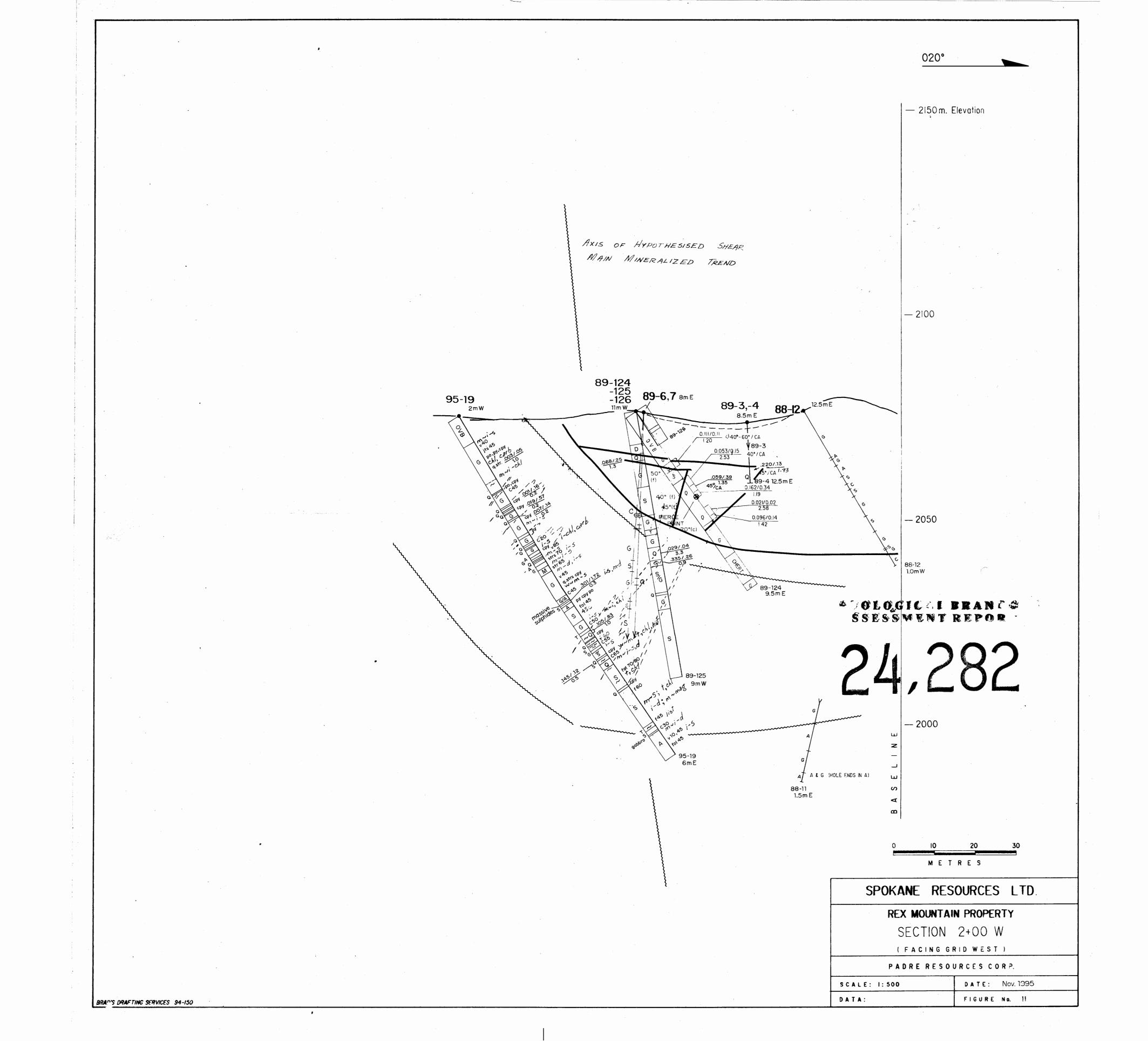


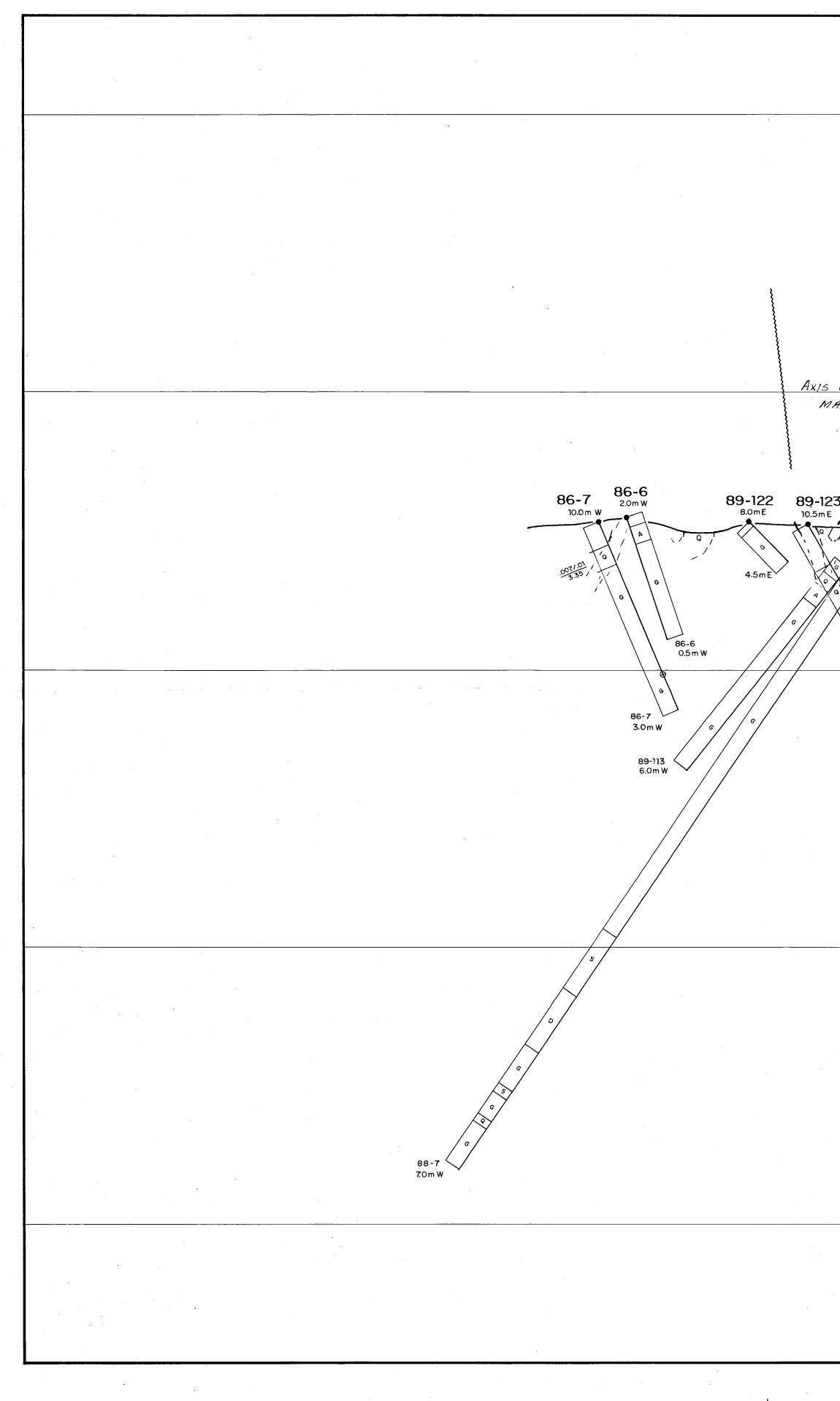


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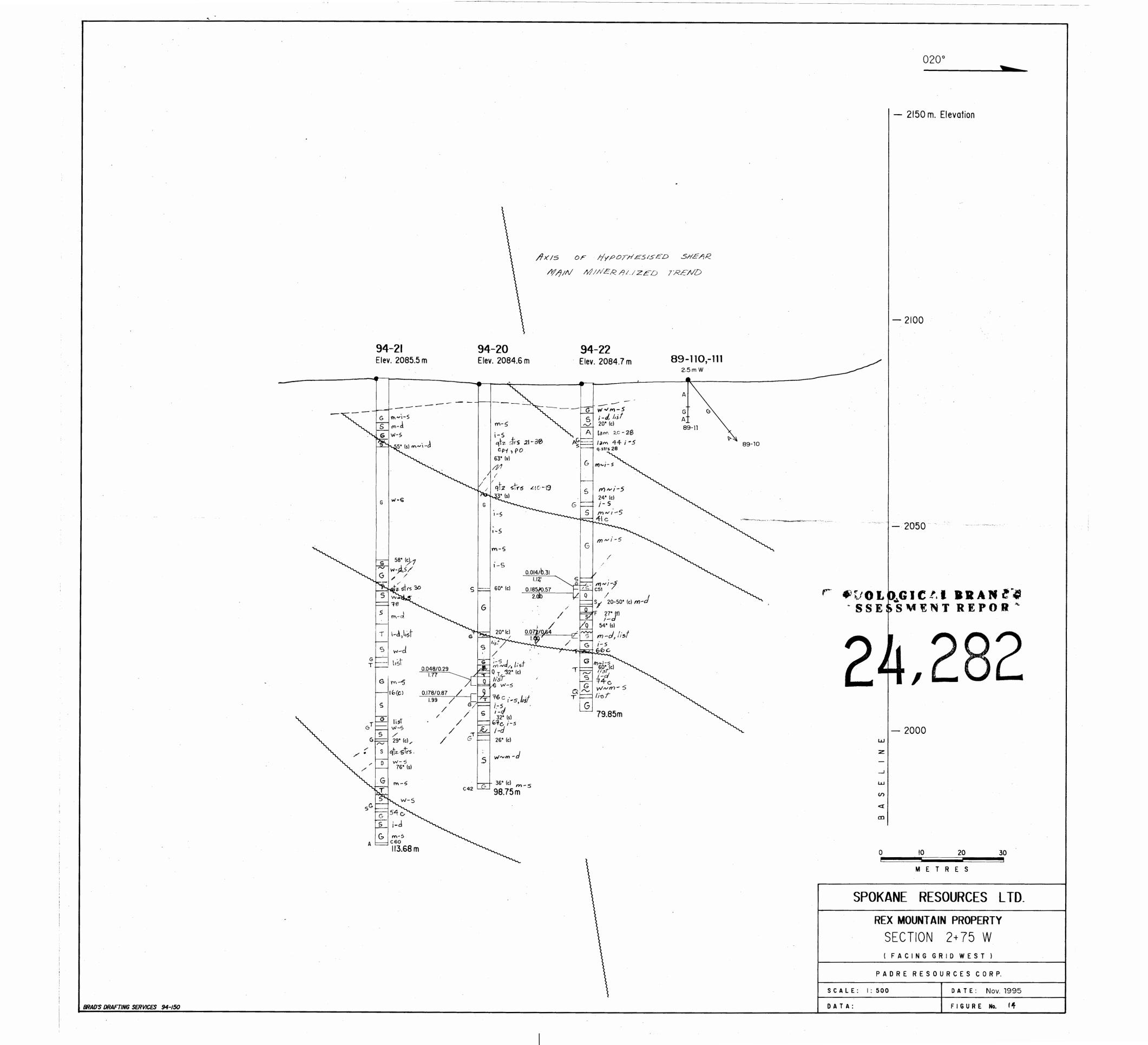
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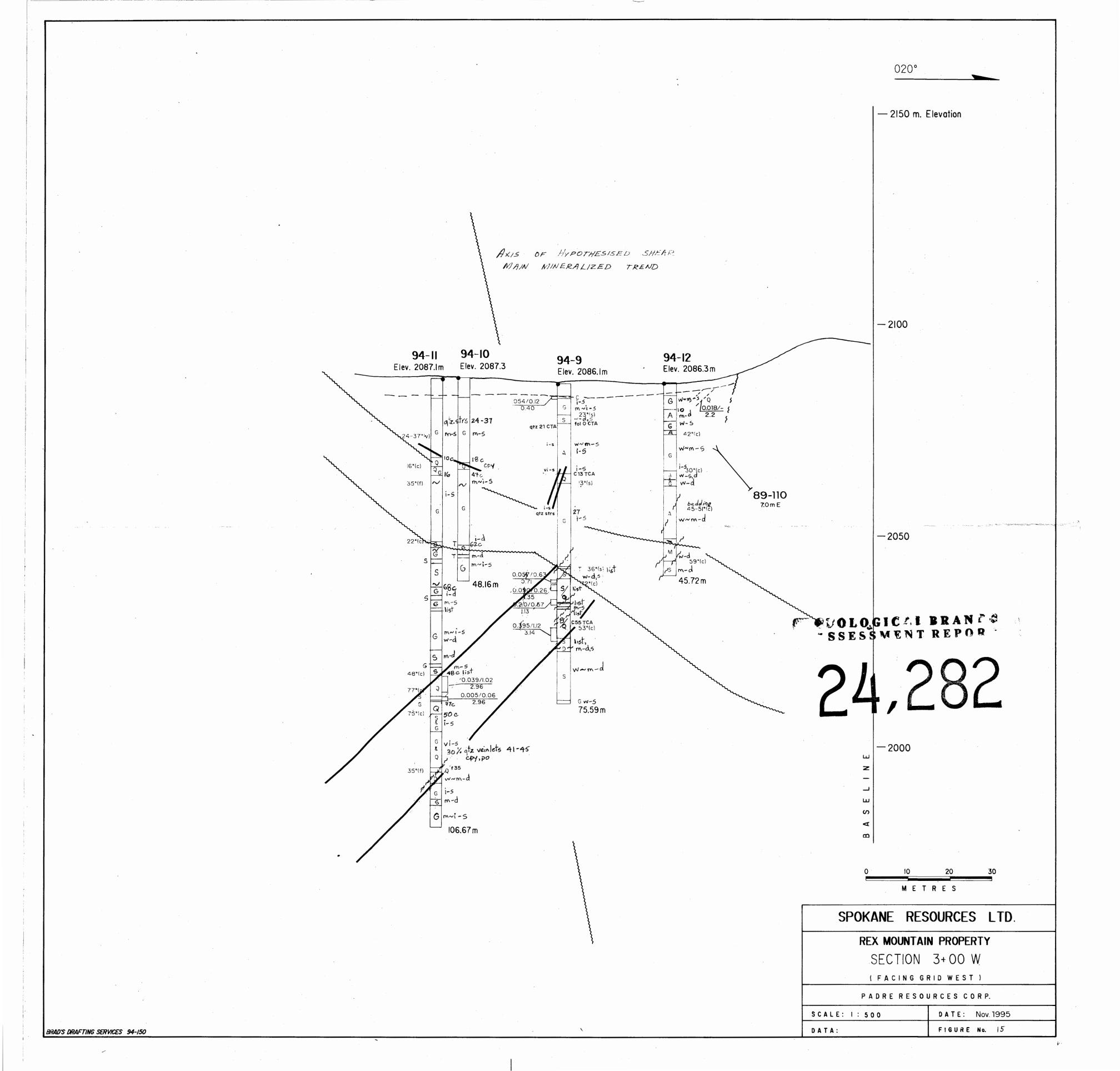


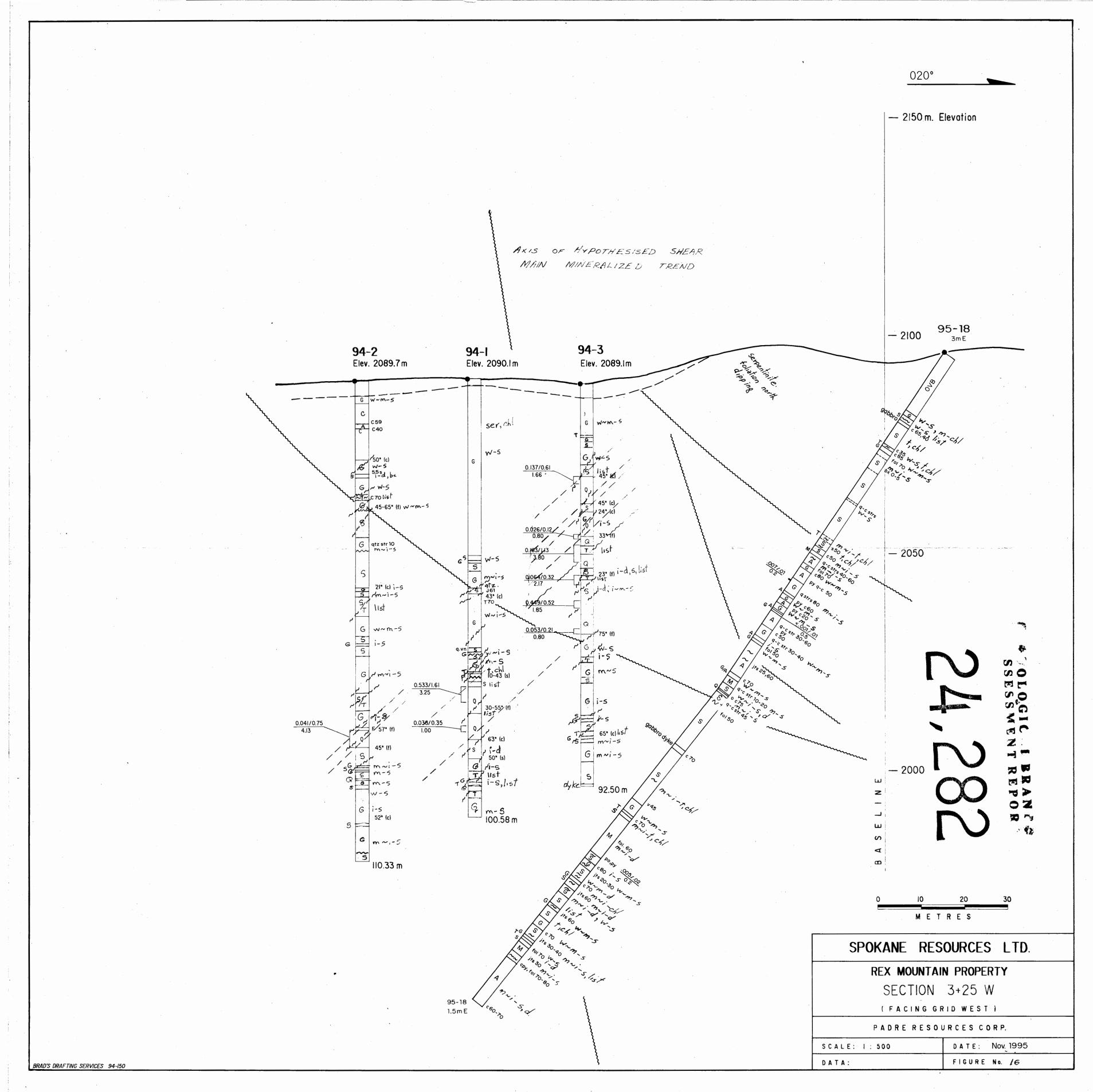


	2150 m. Elevation-
V MINERALIZED TREND	2100 m
top of hole not logged in detail 88-7	
12.5 m W	
Blocks	
88-11	
$\frac{1}{155/.02}$	
S S S	
6 89-125 6.5mE 85mE	-2050 m-
6.5mE 8.5mE	
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	COLOGICAL BRANCS SSESSMENT REPOR 24,282 SPOKANE RESOURCES LTD. REX MOUNTAIN PROPERTY LILLOOET M.D.
	<ul> <li>COLOGICAL BRANCS</li> <li>SSESSMENT REPOR</li> <li>24,282</li> <li>SPOKANE RESOURCES LTD.</li> </ul>
	SECTION 2+25 W

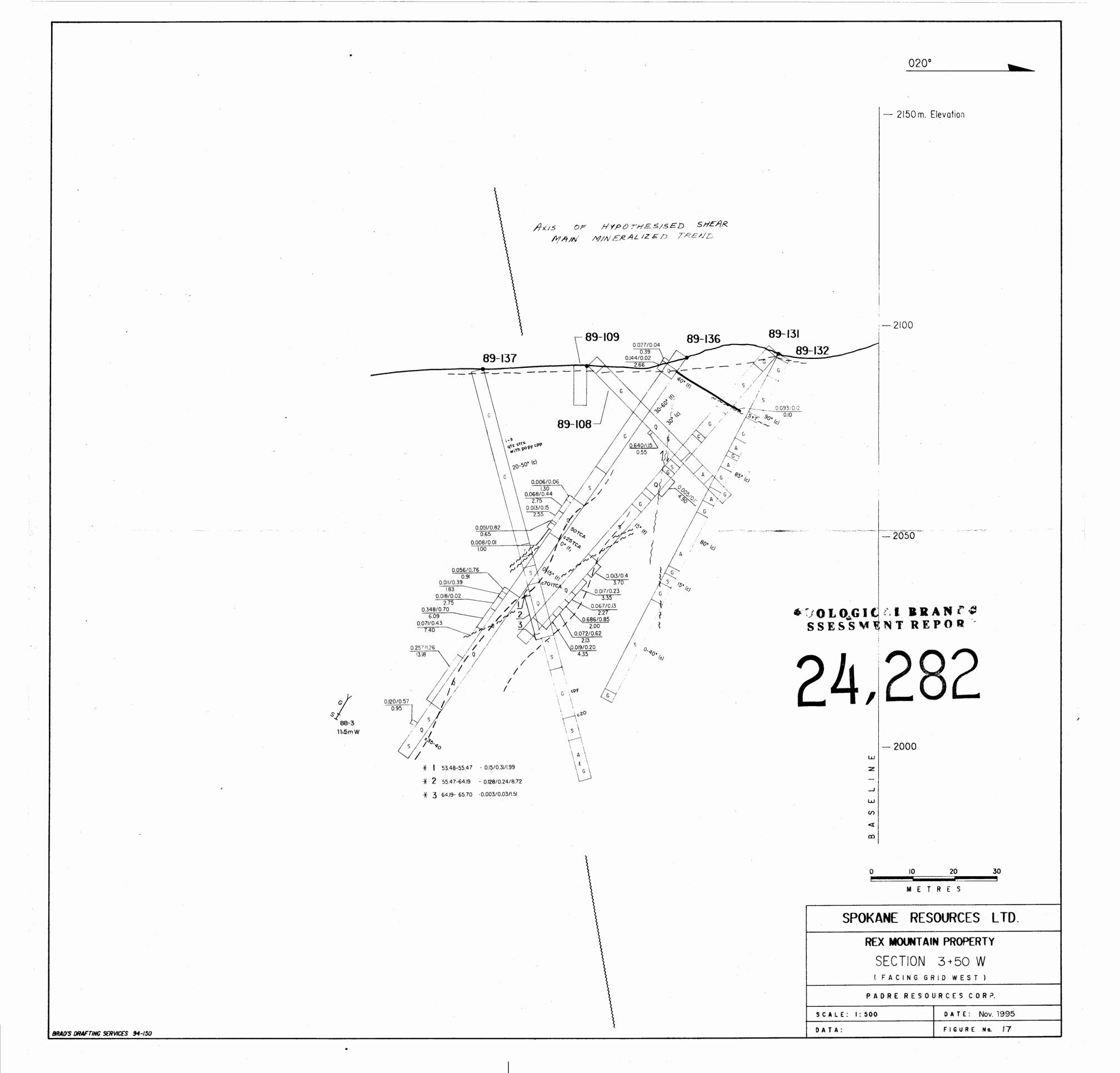




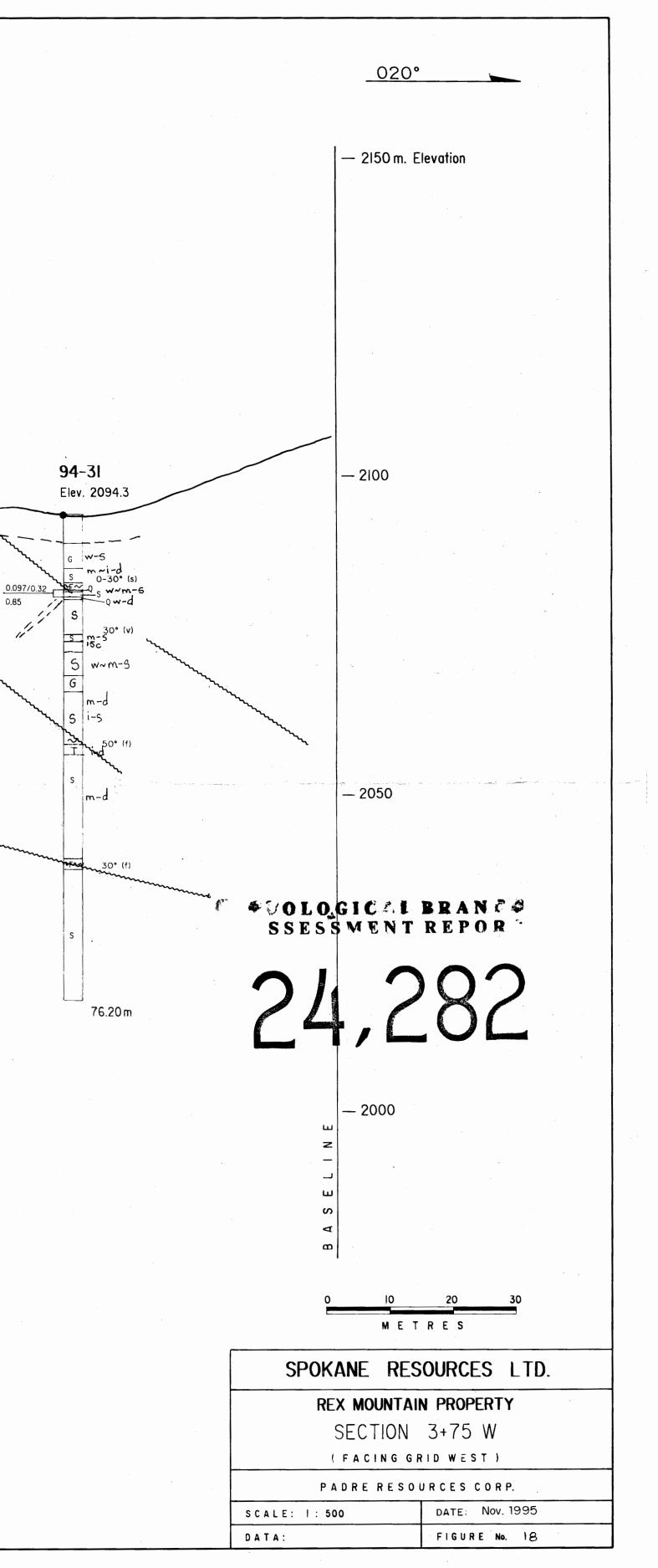


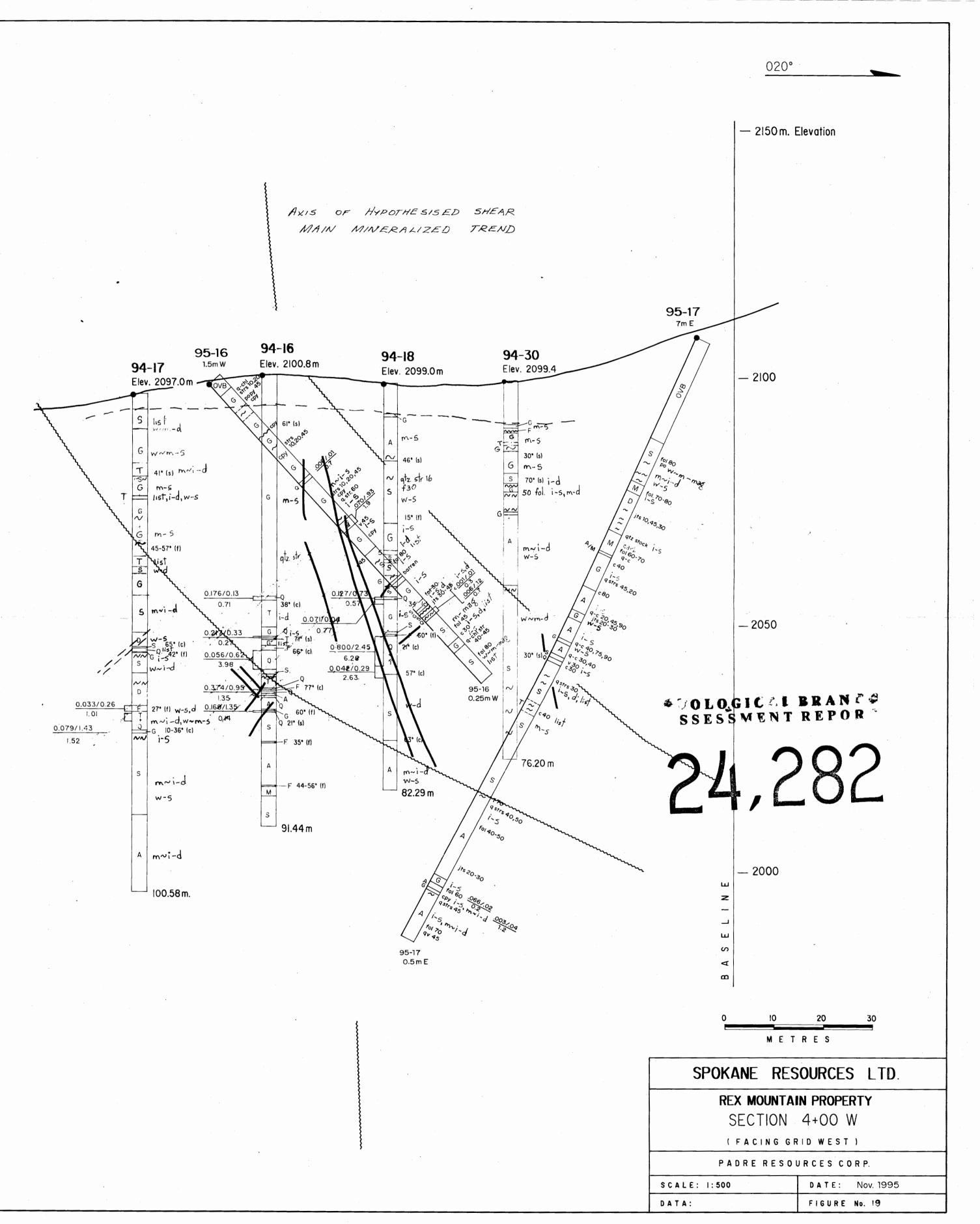


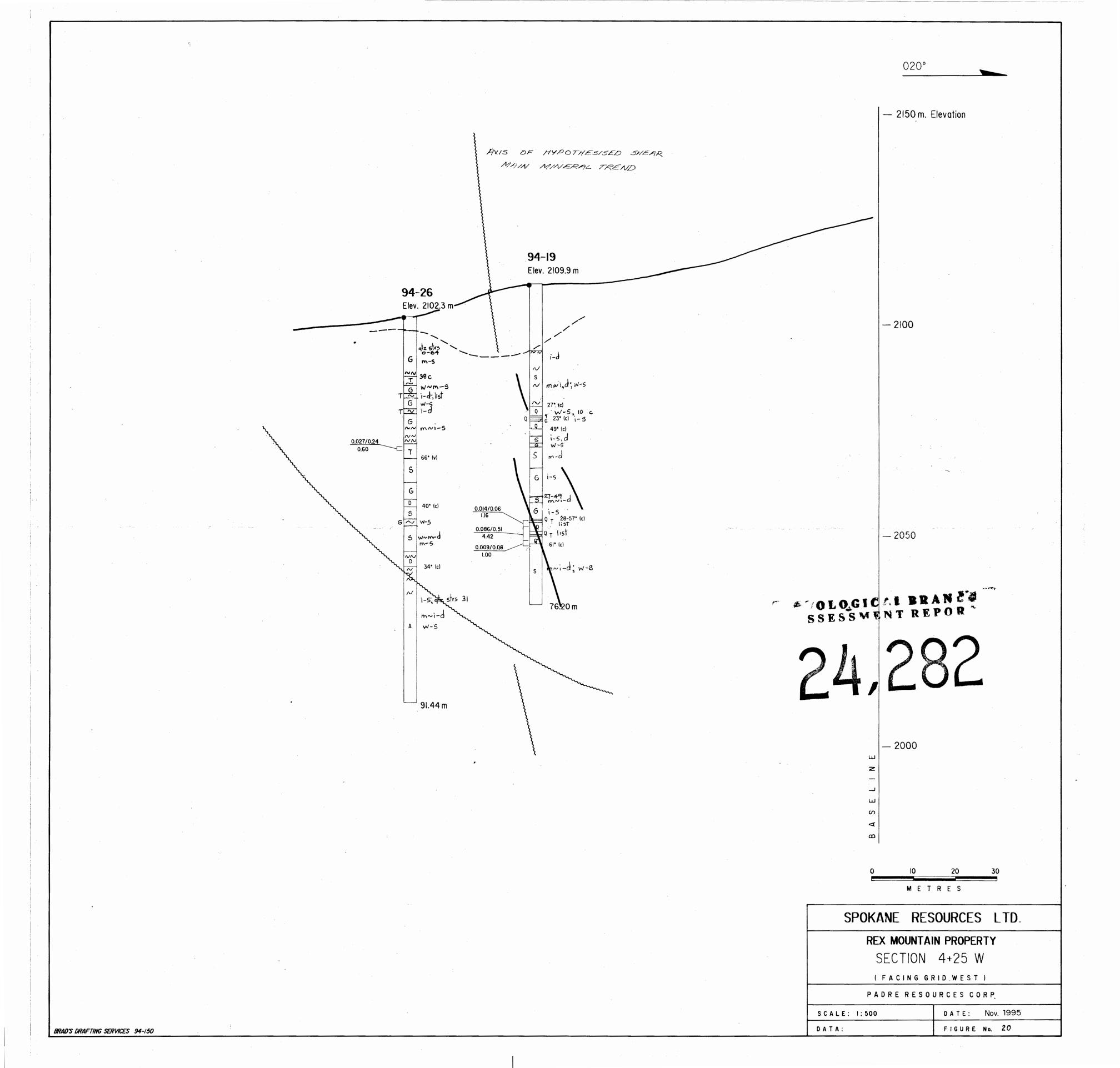
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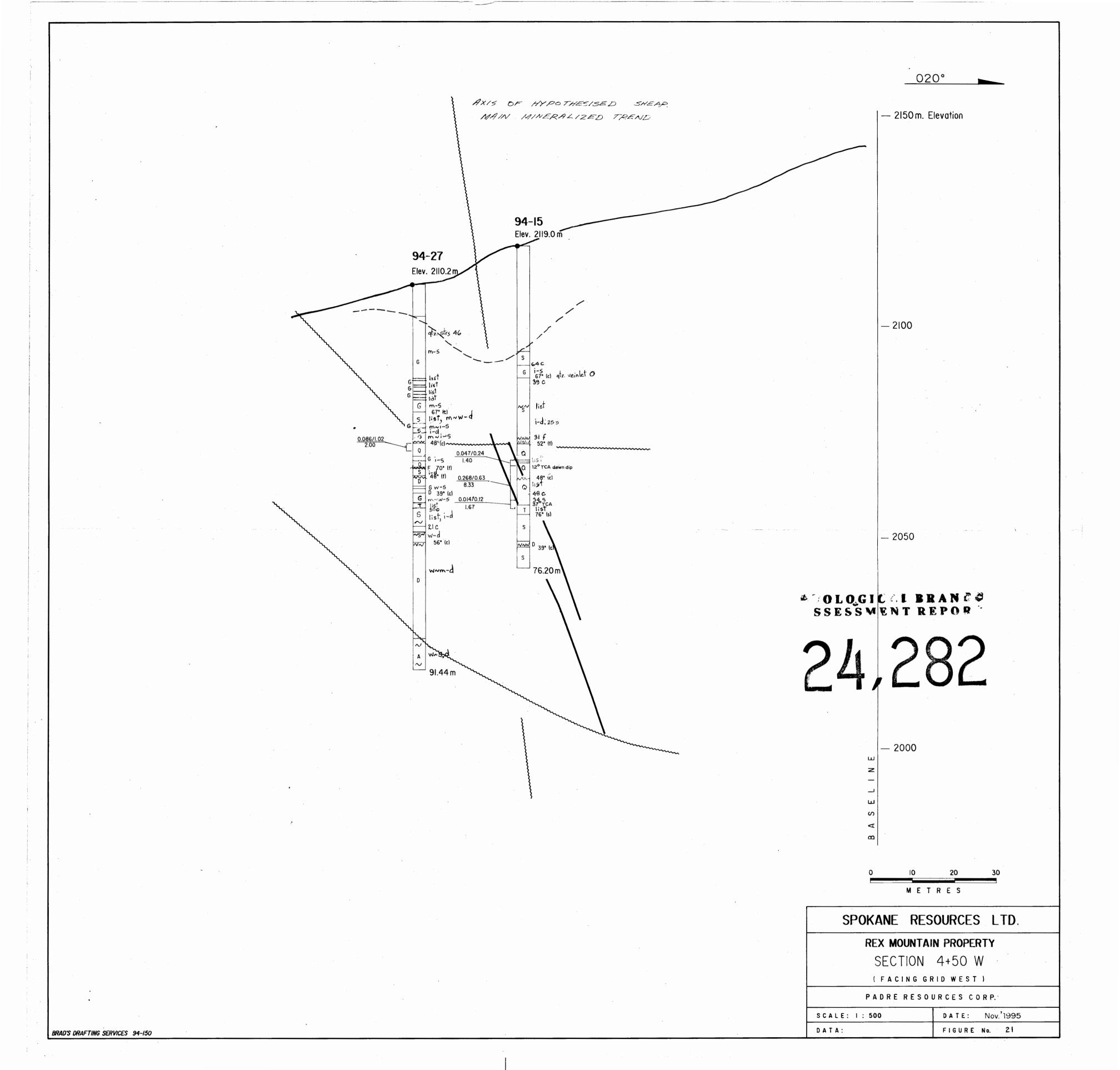


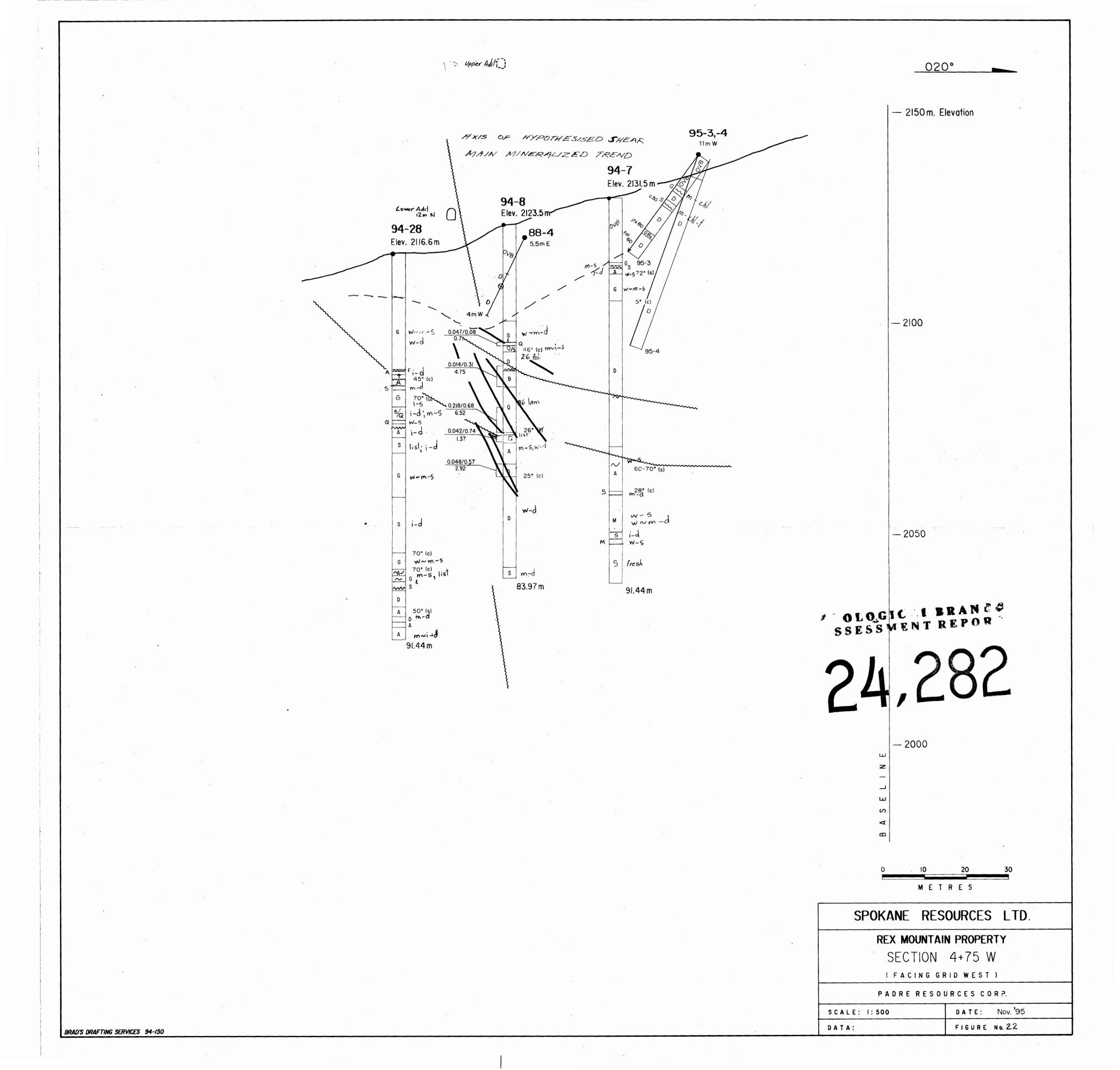
AXIS OF HYPOTHESISED SHEAR MAIN MINERALIZED TREND 94-4 88-2,-3 Elev. 2097.4 m Tr 89-19 **94-**5 11.25m W 94-6 El. 2094-2 m Elev. 2095.4 m OVB/OVB! 49° 8c) S i-d G w~m−s 49° (v) m-g S G 43° (c) m~1-5 m-5 m-dia G 35° (s) m~1-5 5 i-d 24° (v 6 6 m-5 5° BC) 5 Wr m-d G W-5 5 m-5, i-gran.N Q 5 7**0°** (s) G mvi-5 mains s w~m-d 26° (f) 51° (c) 5 m~i-d 5 m~i-d 5 m~i-d 5 11 G w~m-5 0.122/0.25 www.d72 2.46 16 m-5 F 45° 5 T 1-48. 0.049/1.47 Q F II 18° (c) 9° (c) .057/-0.33 361/0,93 G 2.96 G m-5 64° (f) 47° (s) 0.034/0.02 .1027-0.91 S i-d <u>.072/-</u> 0.73 ₩-5° (c) w-s,d w-S G 0.370/3.65 24° (s) SE 88-2 7mW <u>0.018/0.64</u> .51 T i-d m-s 3.35 ,074/.35 S i-d 77° (s) 2.51 88-3 A m-d, S list 47° (c) 91.44 m 54° (s) **28° (**c) T G m-5 i-d 100.27 m Δ G = m-5 8° (s) 121.15 m

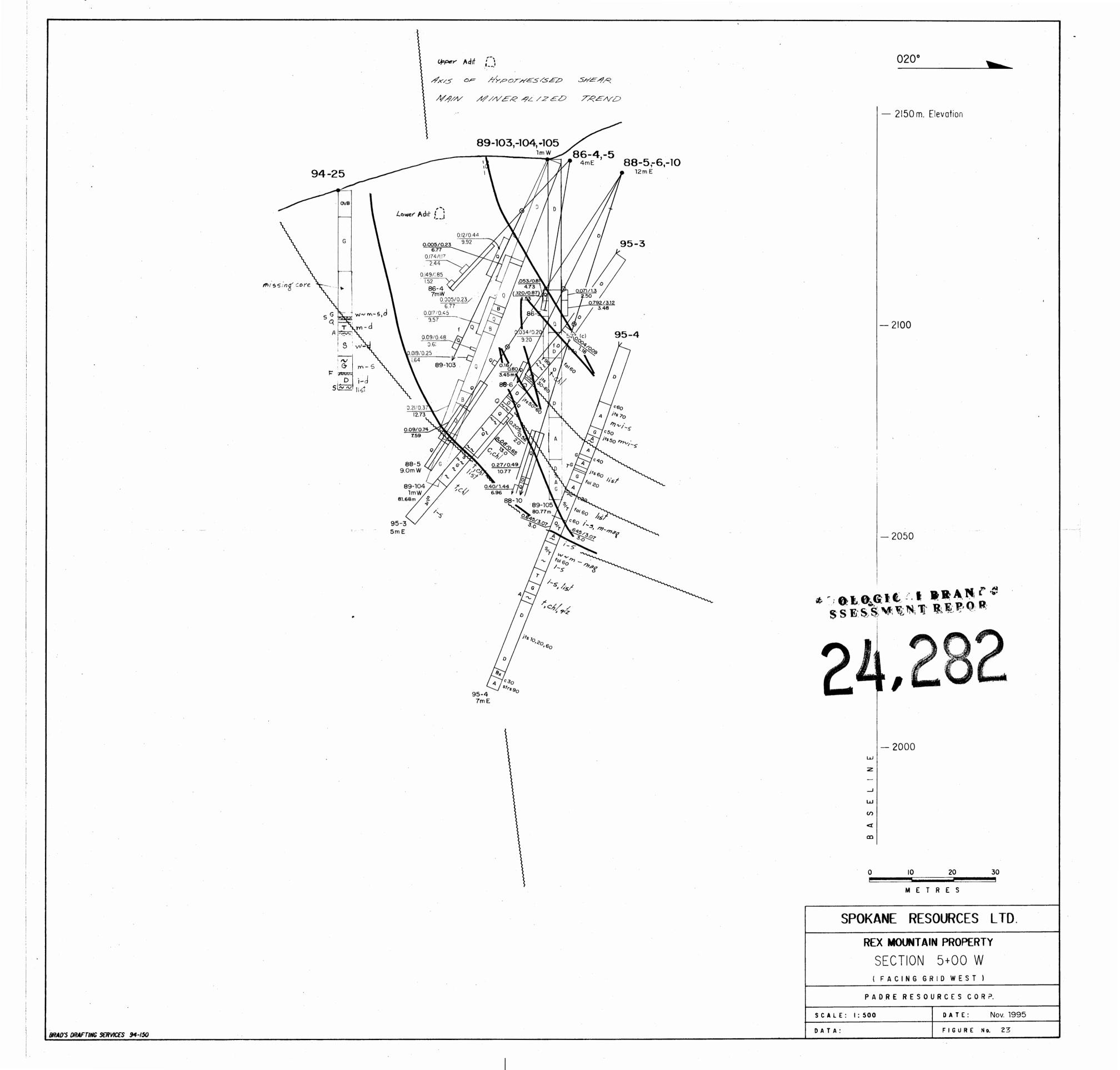


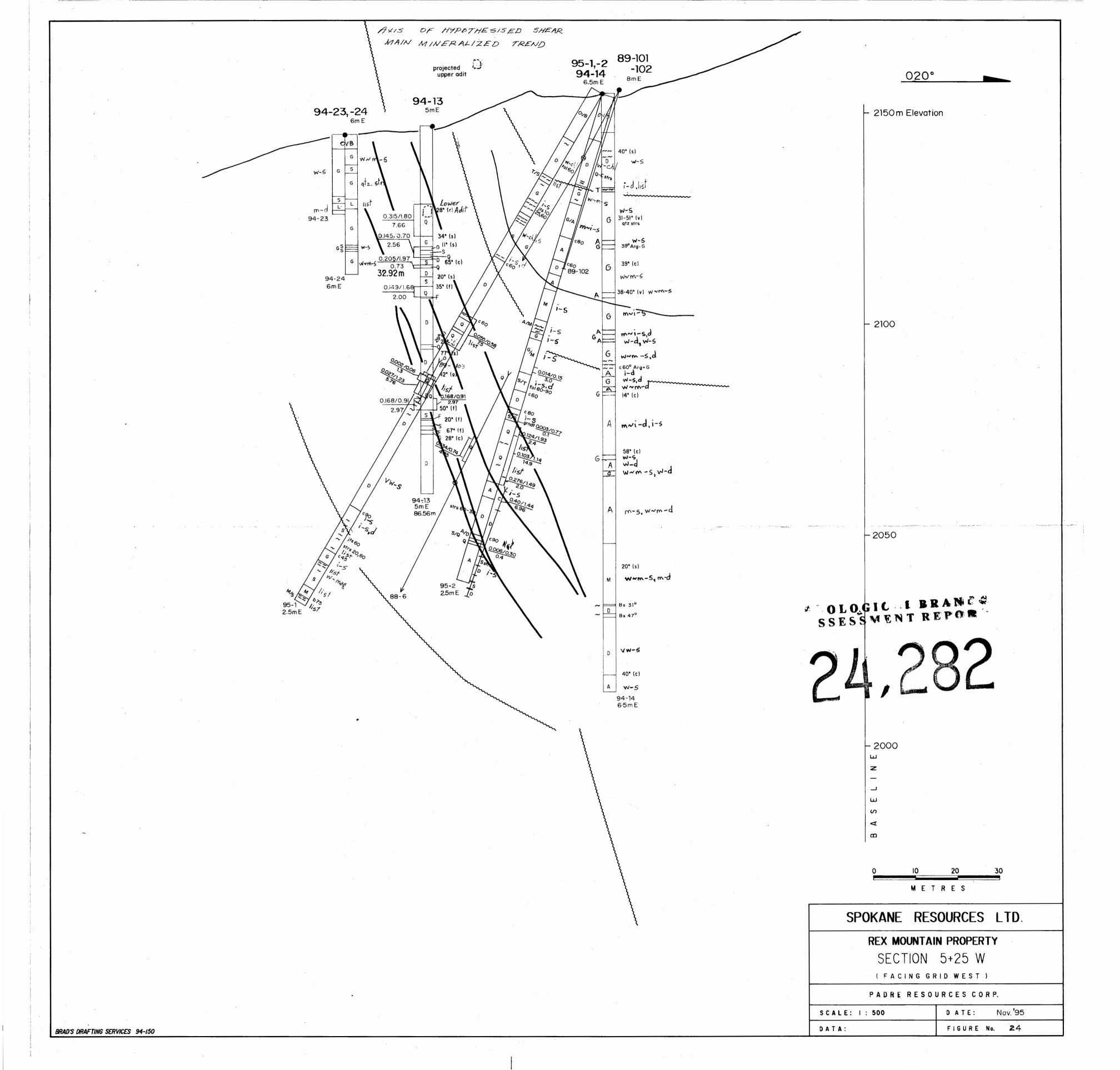


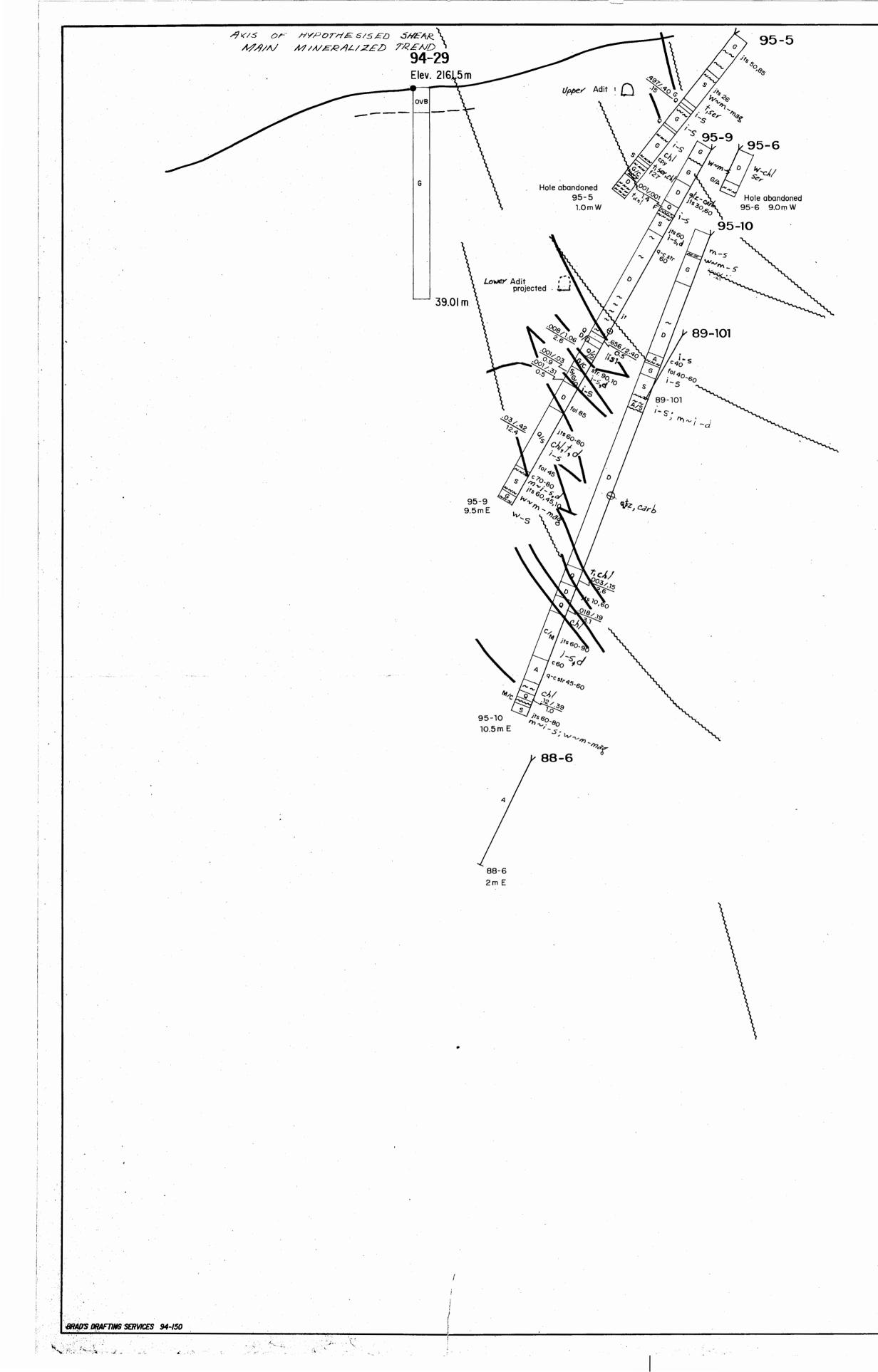


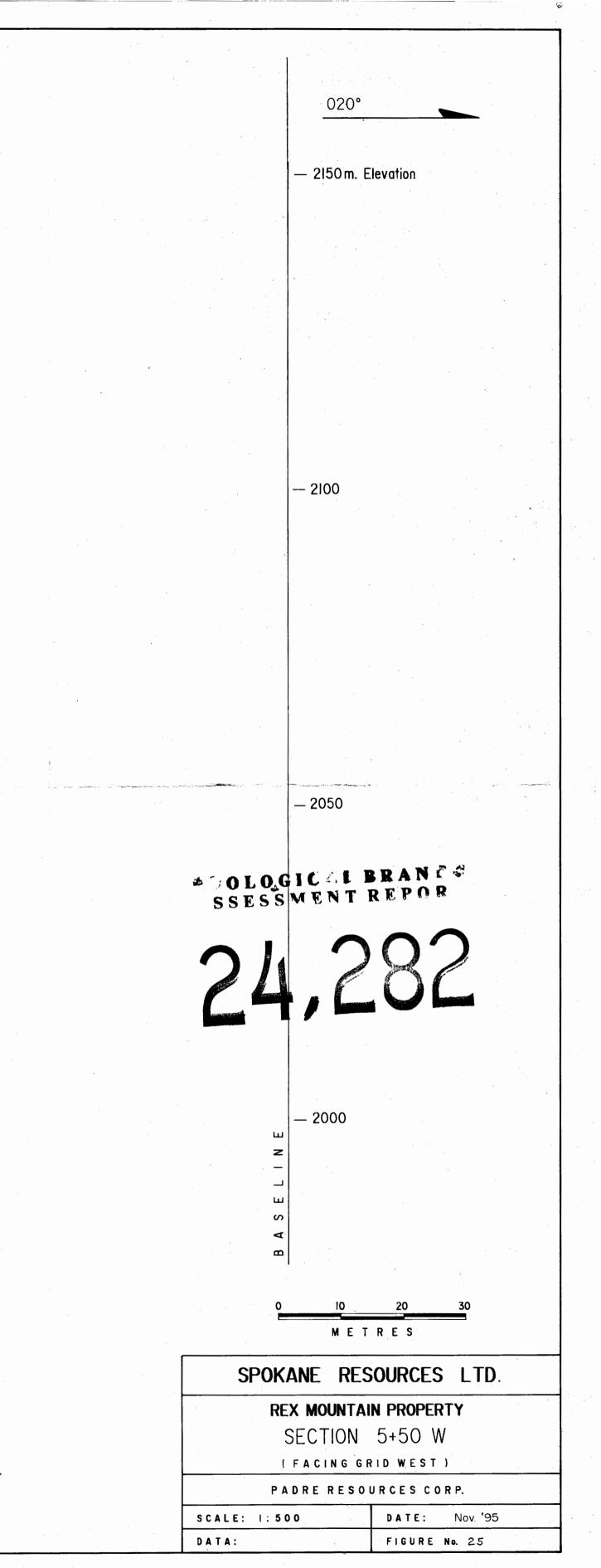


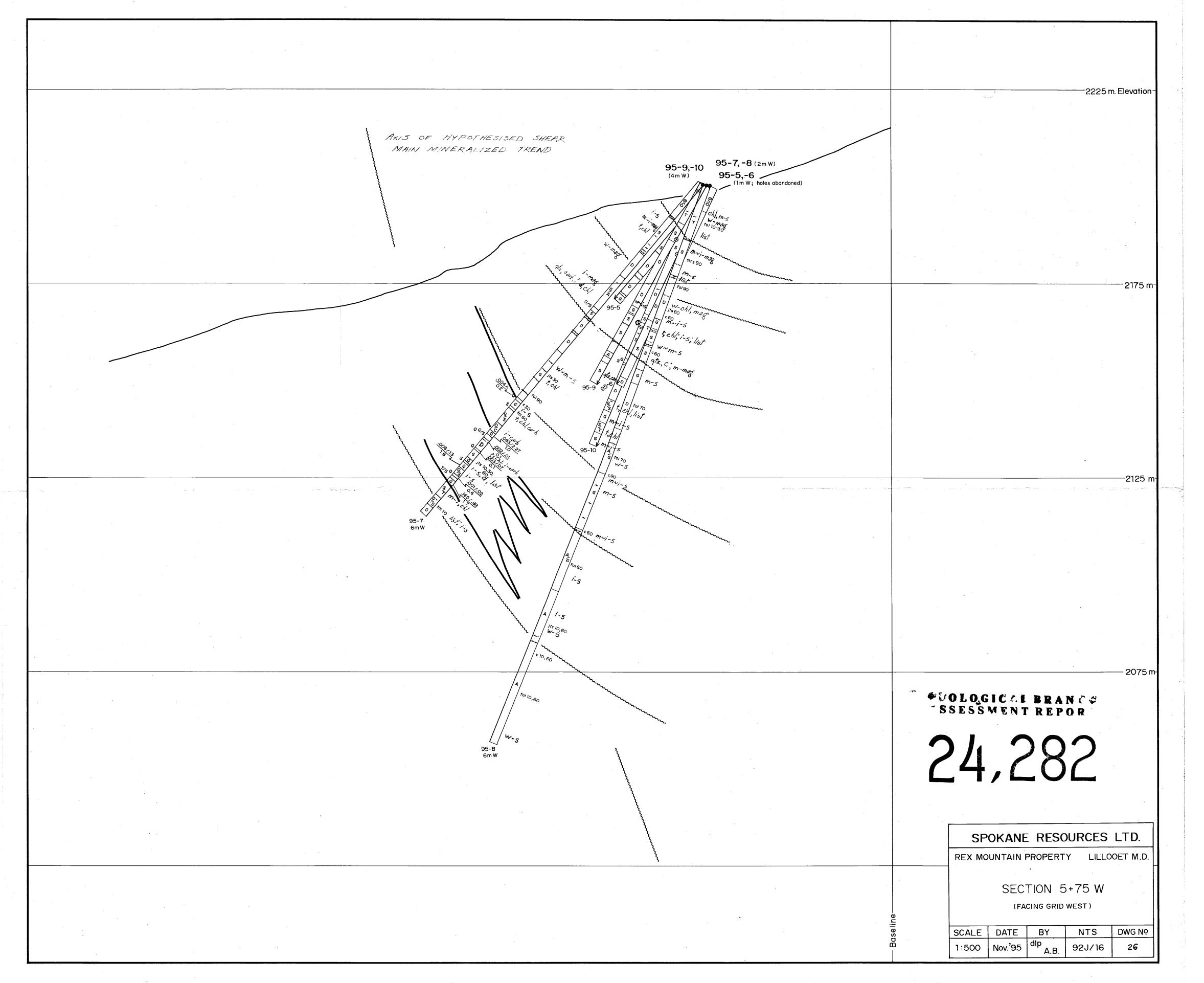


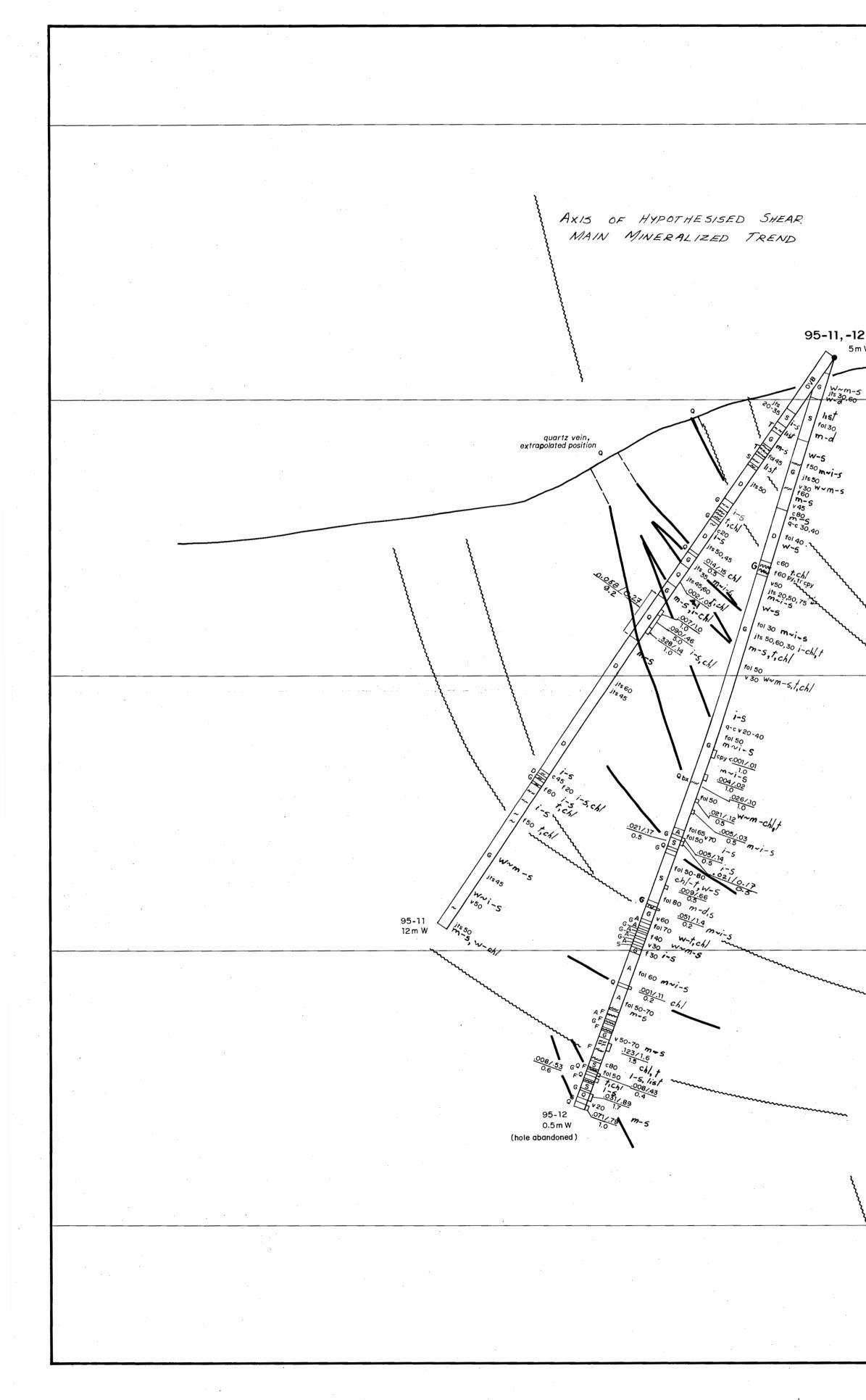




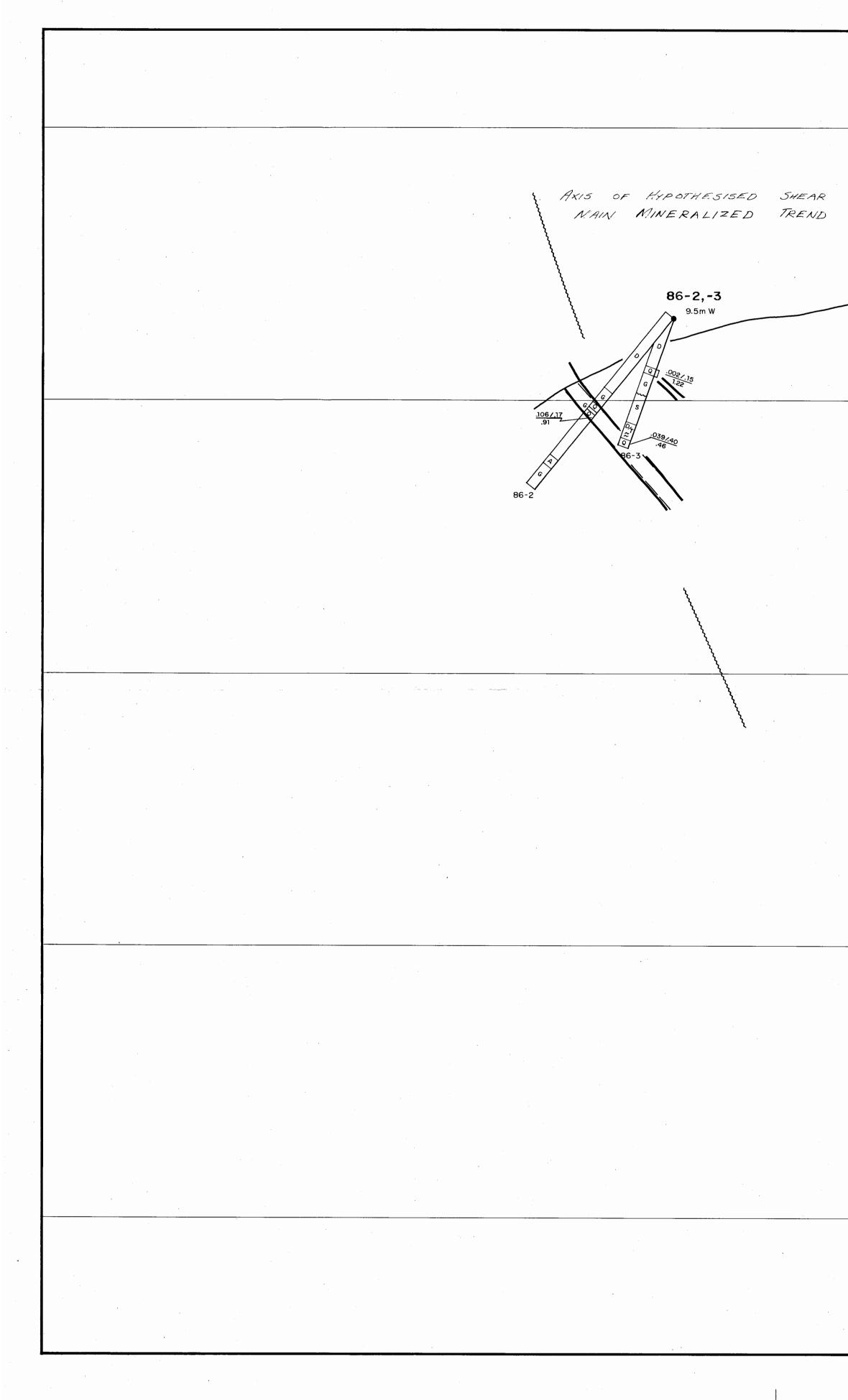




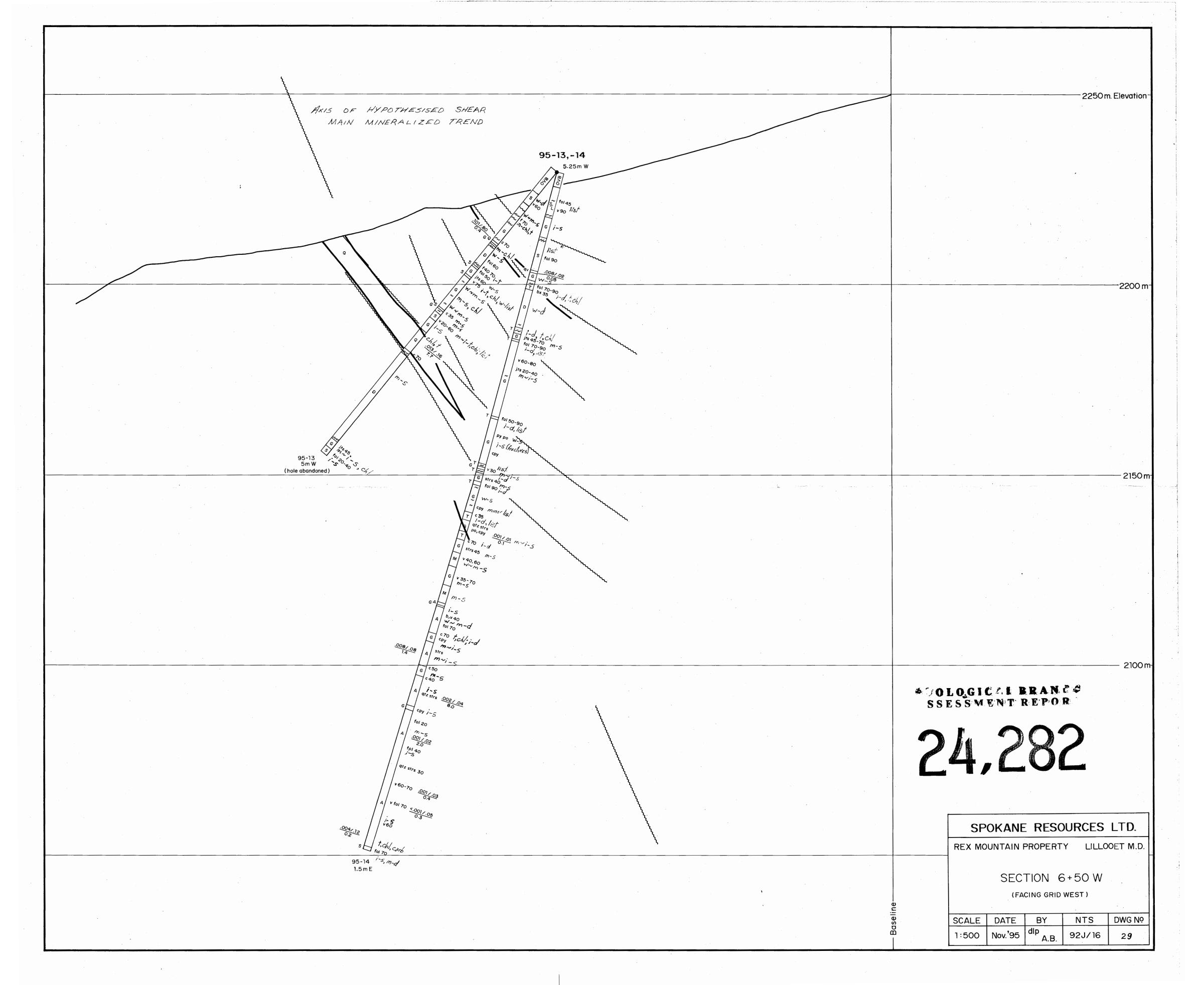


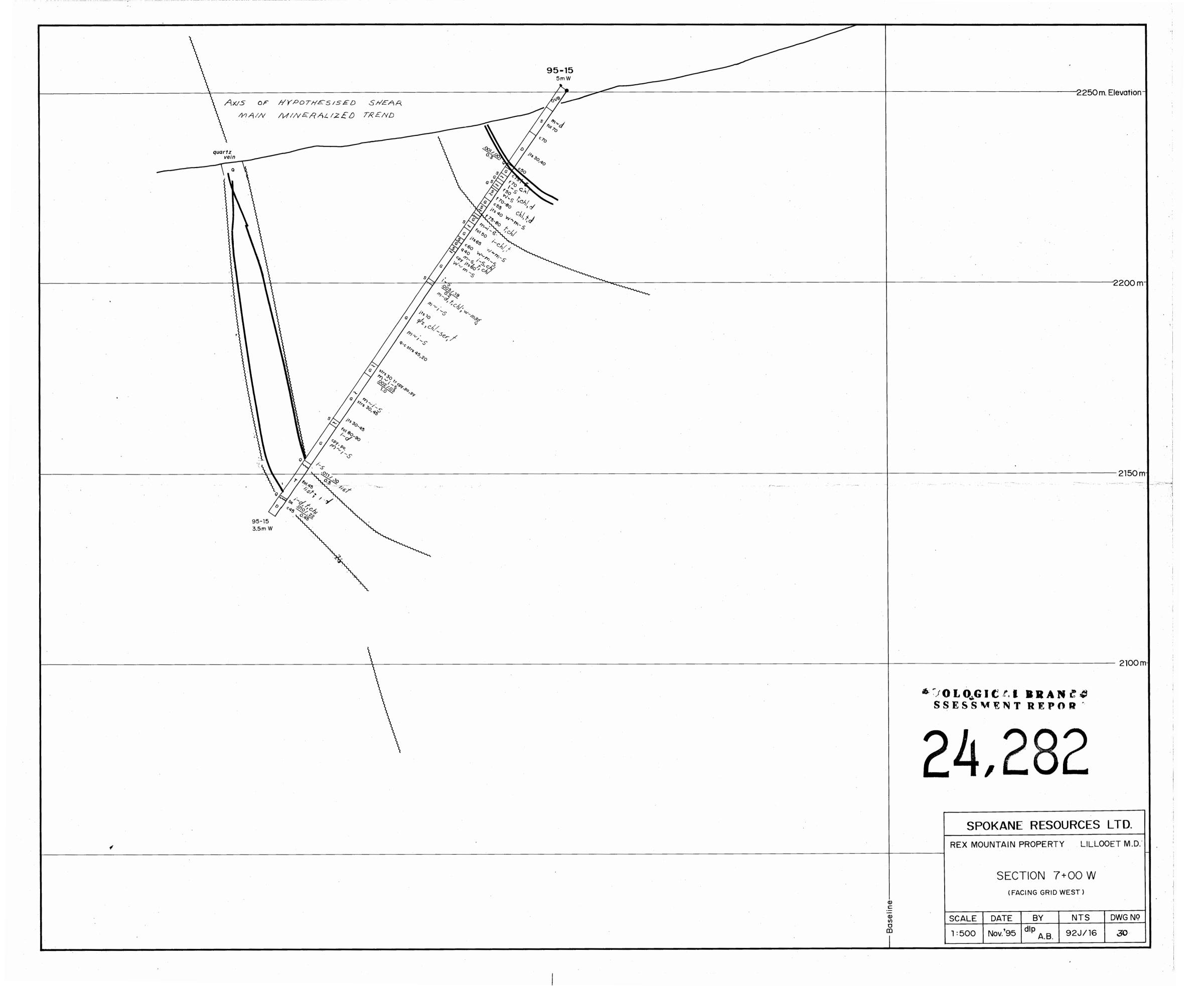


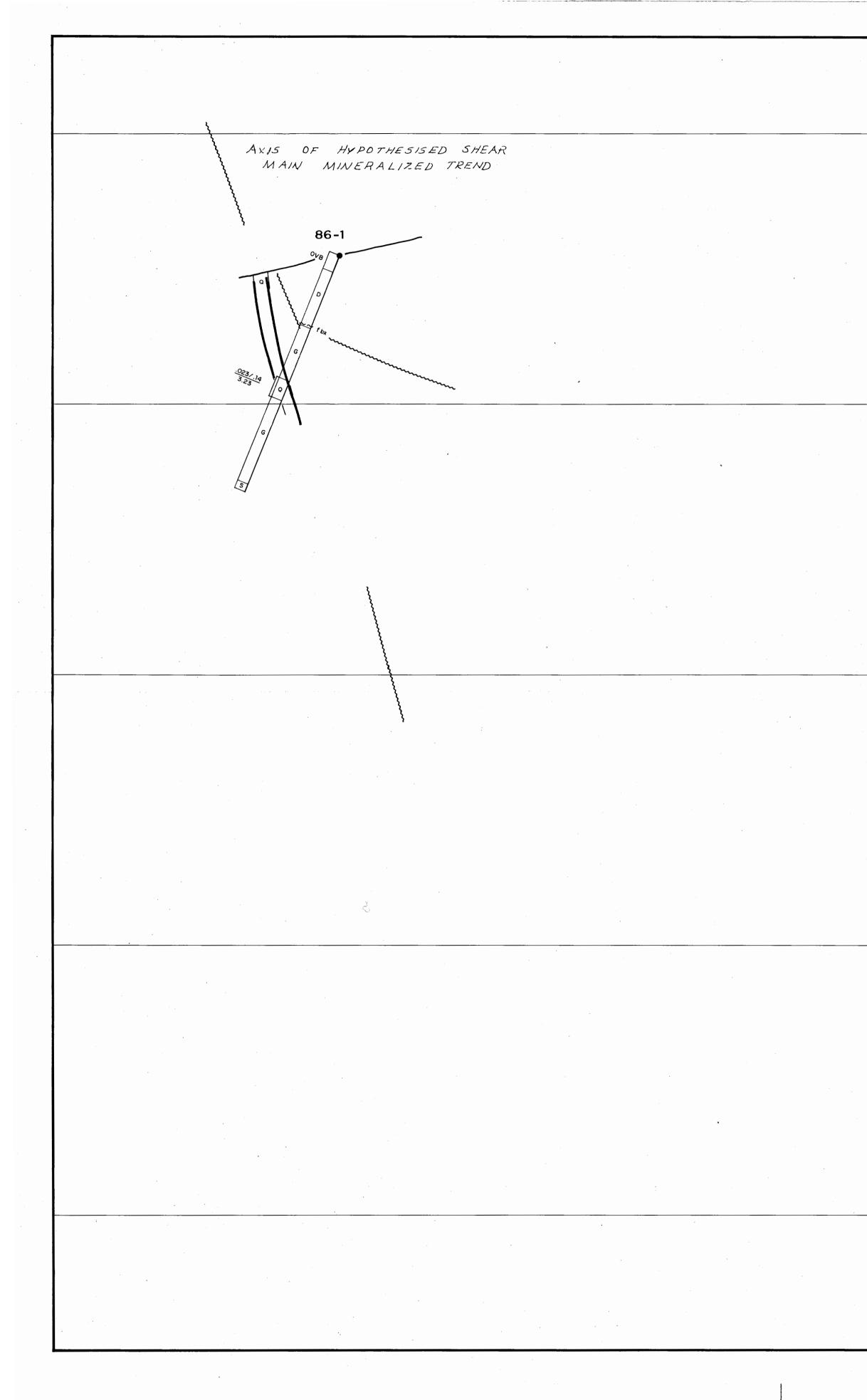
2250m. Elevation-	· · · · ·
2200 m <sup>-</sup>	
	Δ
	A A A A A A A A A A A A A A A A A A A
2150m	
2100 m	•
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SPOKANE RESOURCES LTD.	
REX MOUNTAIN PROPERTY LILLOOET M.D.	
SECTION 6+00 W	
(FACING GRID WEST)	
SCALE DATE BY NTS DWG NO 1:500 Nov '95 dlp = 92.1/16 27	
1:500 Nov.'95 dlp A.B. 92J/16 27	



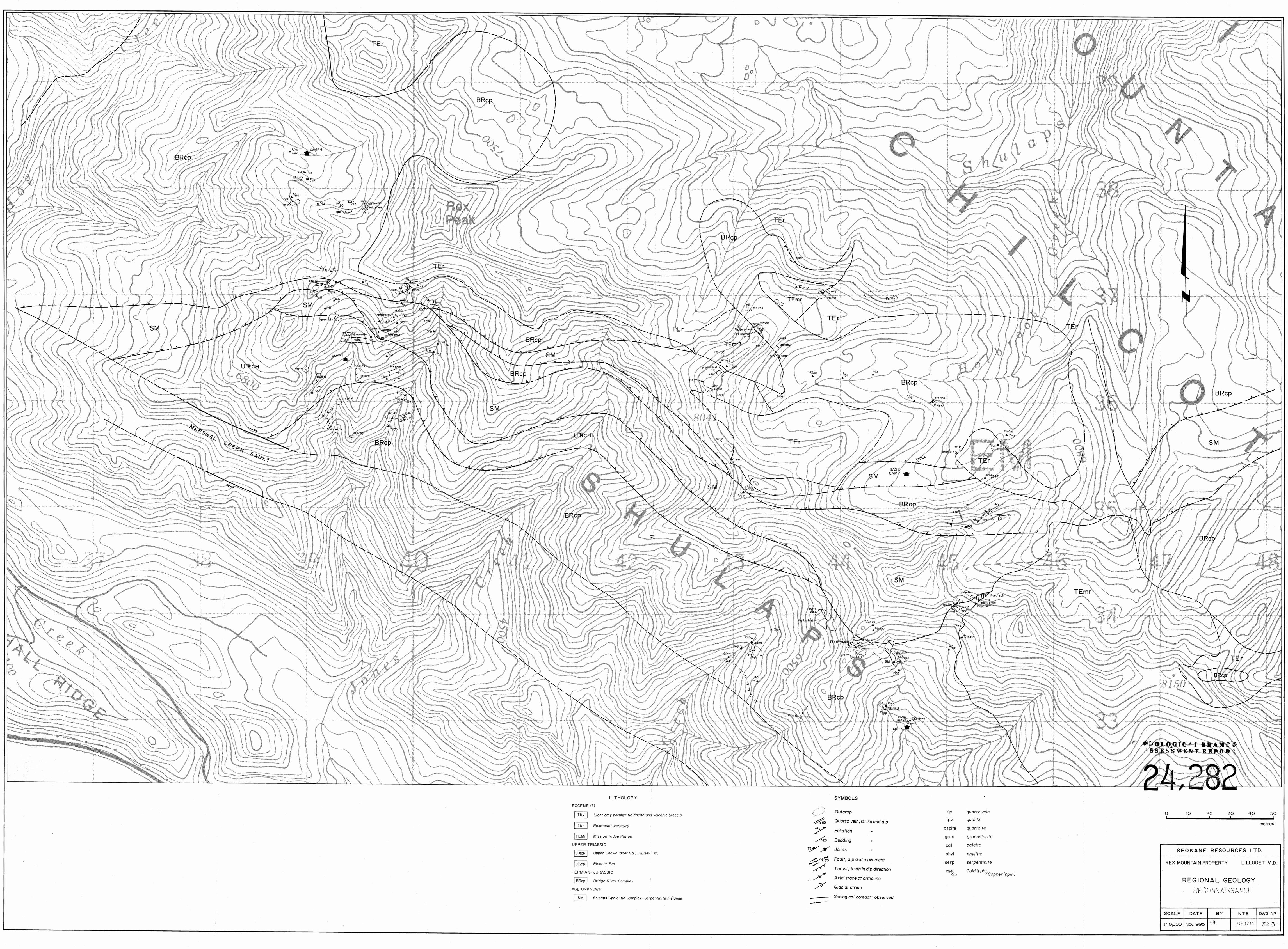
	2250 m. Elevation-
	2200 m-
میں ہوتا ہے۔ پیچسپی در ایر ایر کا ایک ایک ایک کرنے کر ایک ایک ایک ایک ایک کر ایک کر ایک کر ایک کر ایک کر ایک کر کر ایک کر ای ایک کر ایک کر	2150m-
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	SECTION 6+25 W (FACING GRID WEST)
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	1:500 Nov.'95 dlp A.B. 92J/16 28





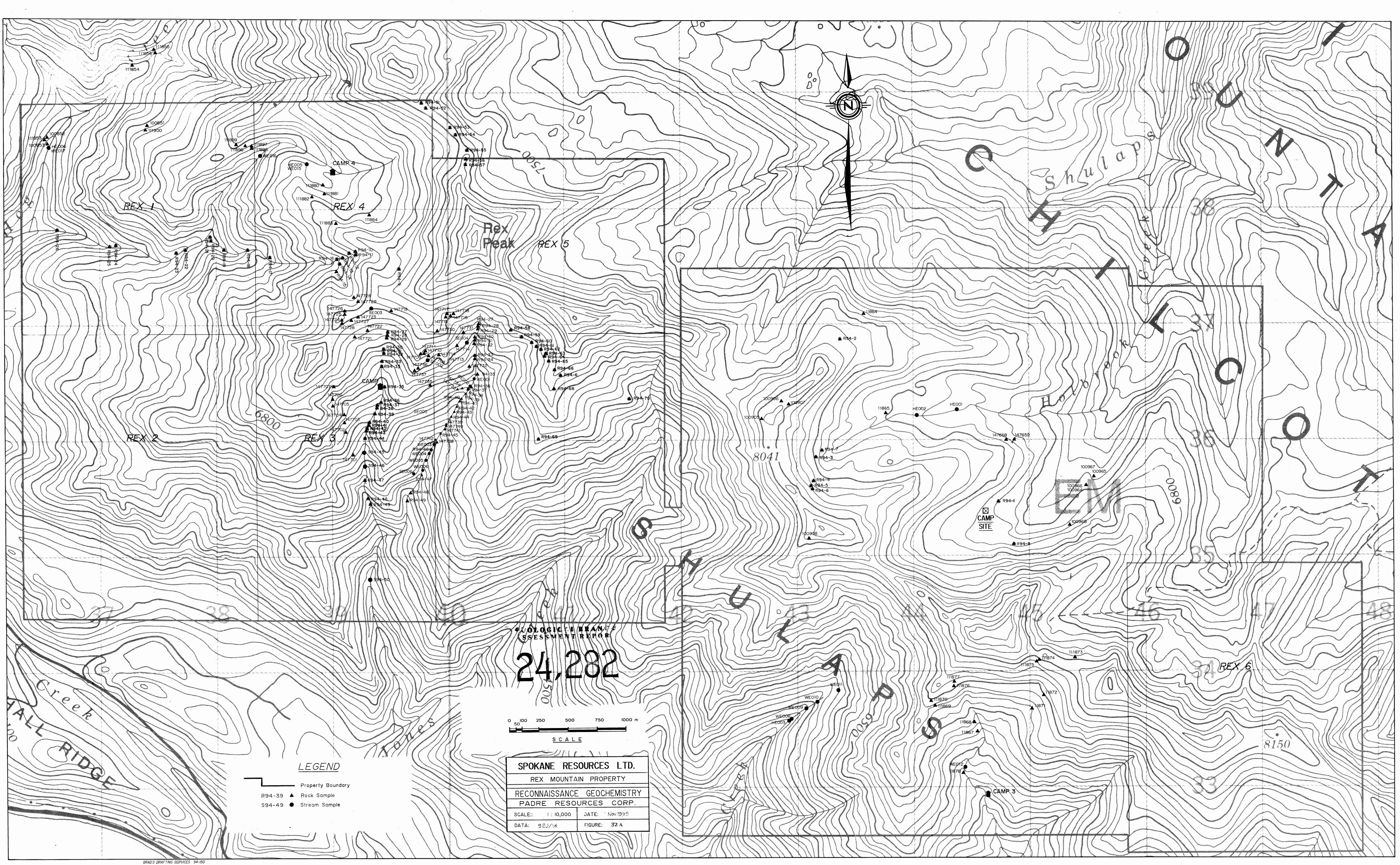


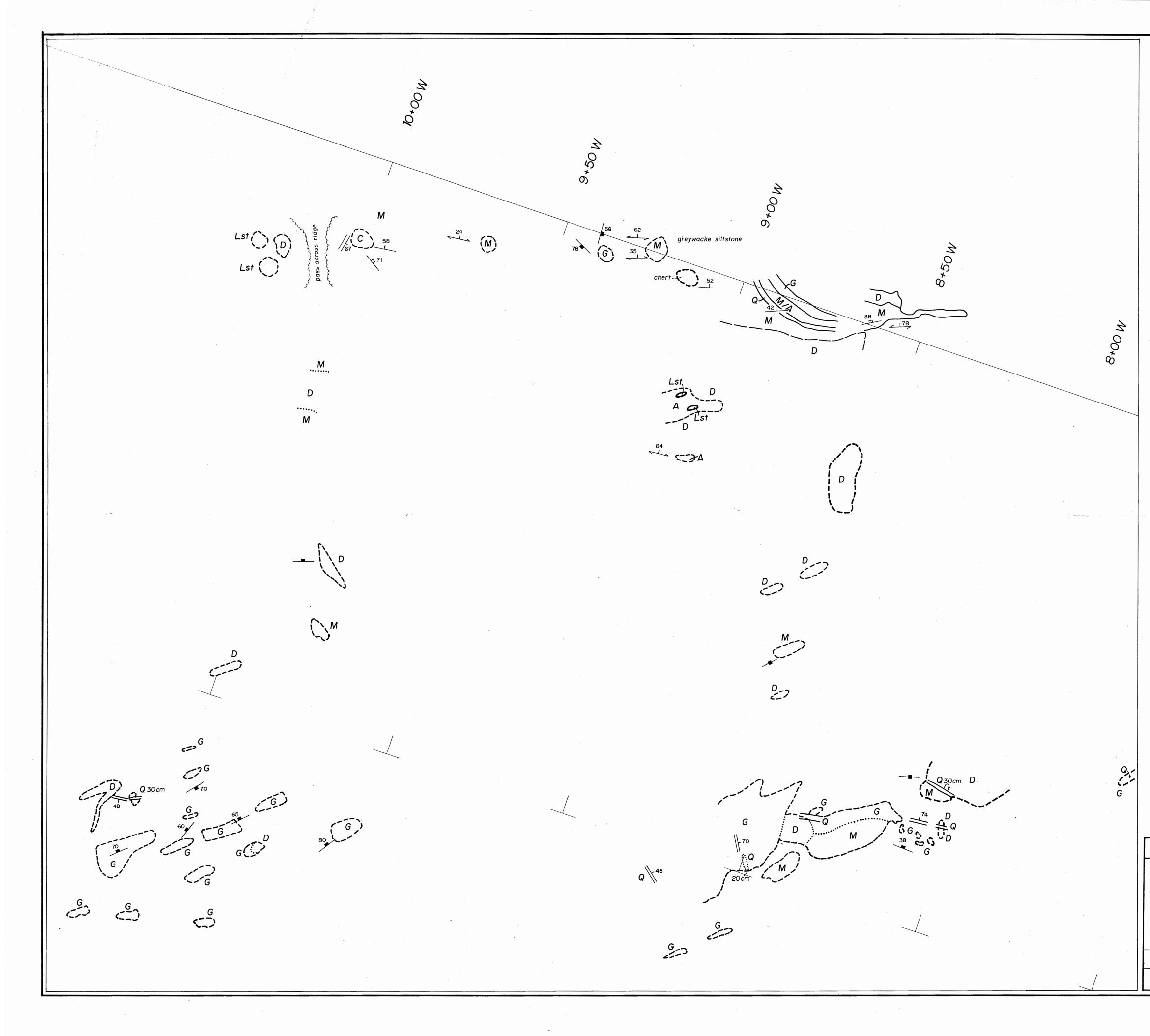
	· · ·	
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		2250 m. Elevatio
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	ngatgen – son setti sont santa sannasi norma. S	na an a
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		REX MOUNTAIN PROPERTY LILLOOET M.D
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		(FACING GRID WEST)
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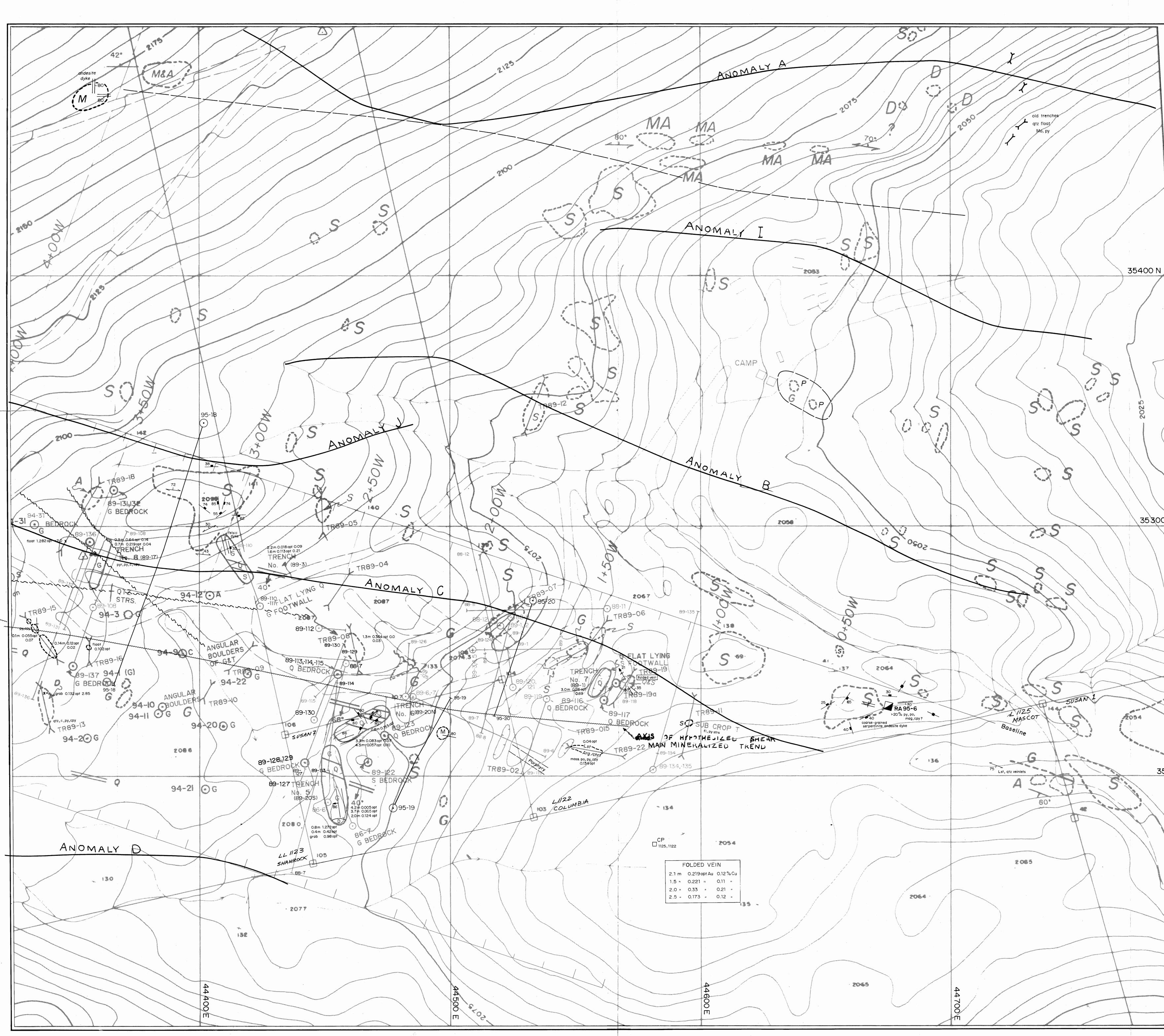
EOCENE (	?)
TEv	Light grey porphyritic dacite ar
TEr	Rexmount porphyry
TEMr	Mission Ridge Pluton
JPPER TR	RIASSIC
иЋсн	Upper Cadwallader Gp., Hurley
uTecp	Pioneer Fm.
PERMIAN-	JURASSIC
BRcp	Bridge River Complex
GE UNKN	IOWN
SM	Shulaps Ophiolitic Complex : Se

Outcrop	qv	quartz ve
Quartz vein, strike and dip	qtz	quartz
Foliation •	qtzite	quartzite
Bedding "	grnd	granodio
•	cal	calcite
Joints "	phyl	phyllite
Fault, dip and movement	serp	serpentin
Thrust, teeth in dip direction	285, 64	Gold (ppb.
Axial trace of anticline	64	
Glacial striae		
Geological coníact: observed		

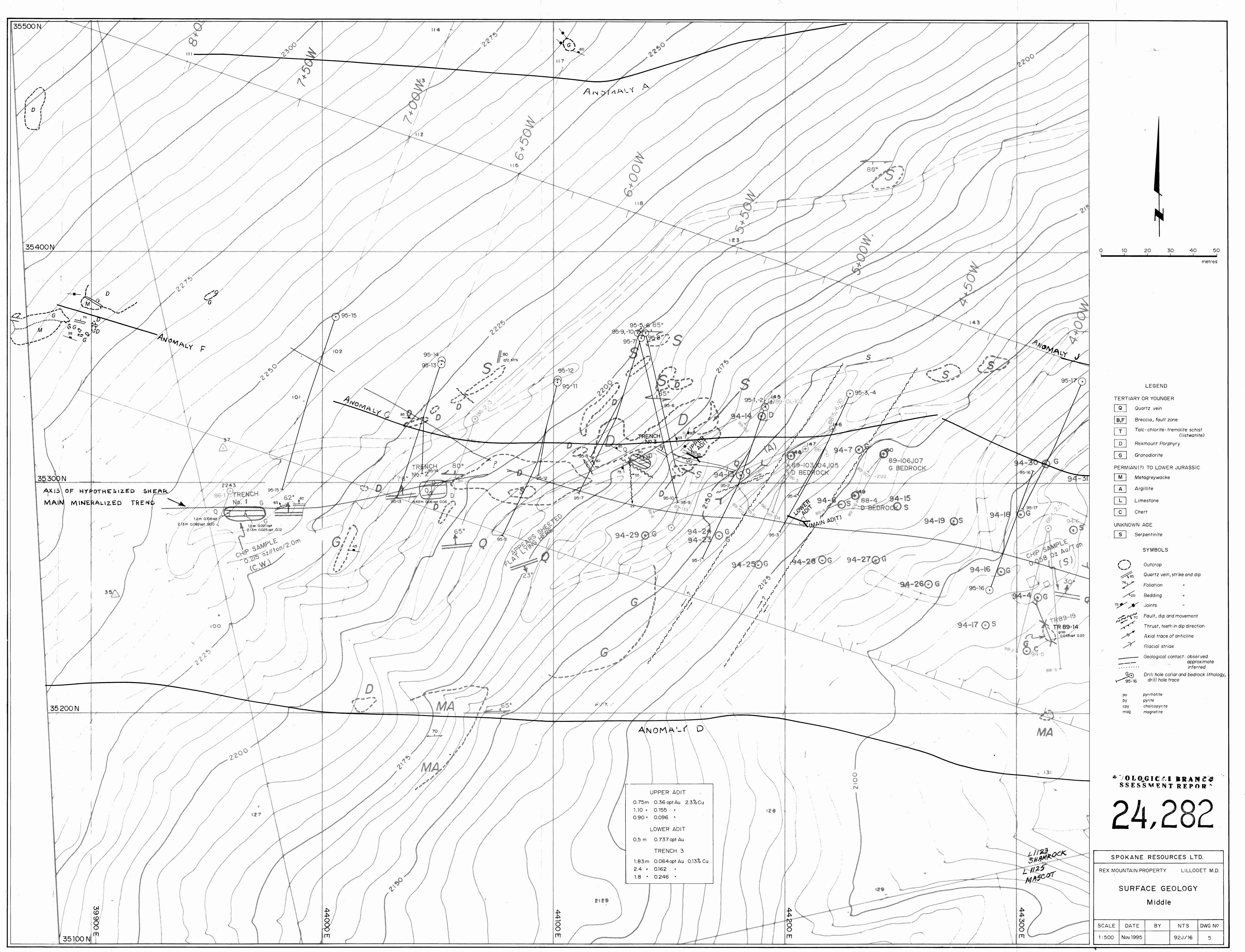




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	24		28	2	
0	10	20 3	30 40	50	
Q B,F T D G PERM M A L C	IARY OR YO Quartz V Breccia, Talc-chlo Rexmour Granodio IAN (?) TO Metagrey Argillite Limestor Chert	rein fault zone prite-tremo nt Porphyry rite LOWER JU wacke	(listwanite)	metres	
S	Serpentii SYM	nite BOLS			
	Folia 20 Beda Joint 70 Fault Thru Axia Glac Geolo Drill	tz vein, stri tion ing s , dip and m st, teeth in c trace of ar ial striae ogical conía	ovement dip direction nticline ct: observed approxim inferred	ate	
		pyrrhotite pyrite chalcopyrite magnetite	9		
SF	POKANE	RESOU	RCES LI	TD.	
	OUNTAIN PE			OET M.D.	
SCALE	DATE	BY	NTS	DWG Nº	
1:500	Nov. 1995		92J/16	6	



	0 10 20 30 40 50	
	metres	
	LEGEND	
	C Quartz vein	
	<ul> <li>B,F Breccia, fault zone</li> <li>T Talc-chlorite-tremolite schist (listwanite)</li> </ul>	
	D Rexmount Porphyry	
	G Granodiorite PERMIAN(?) TO LOWER JURASSIC	
ON.	M Metagreywacke	
	L Limestone	
	C Chert UNKNOWN AGE	
	S Serpentinite	
	SYMBOLS Outcrop	
	Quartz vein, strike and dip	
	Foliation Foliation	
	Joints " Joints " Fault, dip and movement	
	Thrust, teeth in dip direction Axial trace of anticline	
Č –	Glacial striae Geological coníact: observed	
	approximate  Go Drill hole collar and bedrock lithology,	
~ 2051 ·	95-16 drill hole trace	
35200 N	po pyrrhotite py pyrite cpy chalcopyrite mag magnetite	
	SSESSMENT REPORT	
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	24, COC	
	SPOKANE RESOURCES LTD.	
	SURFACE GEOLOGY	
	East	
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	SCALE         DATE         BY         NTS         DWG N9           1:500         Nov.1995         92J/16         4	



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