ACCESS & DRILL PAD CONSTRUCTION
AND
GEOLOGIC INTERPRETATION OF CRYSTALLINE BASEMENT

ICE PROPERTY - DIAMOND EXPLORATION
ELKFORD DISTRICT, SOUTHEAST BRITISH COLUMBIA
FORT STEELE MINING DIVISION

NTS 82G/14E & 15W & 82J/2W & 3E
Latitude: 50° 05'N
Longitude: 114°58' W
UTM Co-ordinates: 5549000 N - 644000 E

Owners: Standard Mining Corporation (formerly Quest International Resources Corp.)
and Skeena Resources Limited

Operator: SKEENA RESOURCES LIMITED
Ste. 406, 675 West Hastings Street
Vancouver, British Columbia V6B 1N2

Report By
J. R. Allan, P.Geol.
Skeena Resources Limited

June 1, 2001

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INTRODUCTION

This report briefly describes two separate undertakings during the past twelve months.

1.) Road access into the Crossing Creek Kimberlite was rehabilitated and a drill access trail was constructed into the nearby BONUS Kimberlite pipe. The surficial expression of the Bonus Pipe, an open grassy meadow with the occasional, stunted balsam fir, was trenched to subcrop and leveled to construct a drill pad and an adjacent helicopter landing pad. This work is in preparation for a proposed core-drilling program scheduled for August, 2001.

2.) As part of a continuing investigation into the regional geologic setting of the kimberlite pipes within the ICE Claims property, Mr. R. E. Chisholm, P. Geol., of Taiga Consultants Ltd. was retained to investigate the literature (including unpublished data and personal communications with scientists at the Institute of Sedimentary and Petroleum Geology in Calgary) pertaining to the geophysics and geochronology of the underlying crystalline basement. The entirety of his report, entitled "Ice Claims – Lithospheric Characteristics" and dated March 05, 2001 is included as Appendix I.

LOCATION & ACCESS

The mineral claims comprising the Ice Property are located immediately west of the Elk River and north and south of the town of Elkford in the Fort Steele Mining Division on mapsheets 82G/14E & 15W and 82J/2W & 3E. The property is centered about UTM coordinates 5549000N and 644000E.

Access to the claims is available to the eastern portion of the property by logging roads from Elkford, and throughout the eastern part of the property via a series of 4 x 4 trails.

Road access to the eastern property boundary is 32 km north along Highway 43 from the town of Sparwood. The nearest major centre is the city of Fernie, 30 km south of Sparwood on Highway No. 3 (cf. Index Map, overpage).

PHYSIOGRAPHY & CLIMATE

Topography in the claim area is rugged with relief in the order of 1,100 metres, from 1,565 metres ASL on the Elk River, to +2,600 metres ASL along the western property boundary. Cliffs in excess of 100 metres are common with cirques and hanging valleys evident throughout the region. Outcrop is locally abundant at upper elevations, but thick glacial deposits and talus cover are extensive at lower elevations. Drainages are generally immature V-shaped valleys. Forest cover is complete at lower elevations, becoming thinner and smaller at upper elevations. Coniferous trees, including spruce pine, balsam, and larch are the dominant type of vegetative cover evident at all elevations whereas subordinate deciduous trees, poplar and cottonwood, are present only at lower elevations. Underbrush consists of willows and alders together with assorted berry-bearing bushes. Commercial logging activity, often in the form of clear-cutting, is widespread.

The claims are located in the Main Ranges of the Rocky Mountains and as such are subject to heavy snowfall during the winter months. Average annual precipitation is approximately 90 cm, of which 30% is in the form of snow. Snow pack is likely present from late October through to late June. Most rain during the field season occurs from June to mid-July, with a relatively dry period from then to late September.

CLAIM STATUS

The Ice Property of the Ice, New Ice, Gem, Pipe, Gen and Kimberlite claims, totalling 325 units (approximately 100 square km) as set out overpage.

Ice Property - Fort Steele Mining Division - Cliam Status Current To May 30, 2001

Claim Name	Units	Tenure Number	Owner Number	Map Number	Work Recorded To	Tag Number
ICE 1	1	311076	133205 100%	082G096	20020629	643886M
ICE 2	1	311077	133205 100%	082G096	20020629	643887M
ICE 3	1	311078	133205 100%	082G096	20020629	643888M
ICE 4	1	311079	133205 100%	082G096	20020629	643889M
ICE 5	1	311080	133205 100%	082G096	20020629	643890M
ICE 6	1	311081	133205 100%	082G096	20020629	643891M
ICE 7	1	311082	133205 100%	082J006	20020629	643892M
ICE 8	1	311083	133205 100%	082J006	20020629	643893M
ICE 9	1	311084	133205 100%	082G096	20020707	643854M
ICE 10	1	311085	133205 100%	082G096	20020707	643855M
ICE 11	1	311086	133205 100%	082G096	20020707	643856M
ICE 23	15	371818	124845 100%	082J006	20020905	234595
ICE 34	10	371819	124845 100%	082J006	20020906	234596
ICE 37	20	371820	124845 100%	082J016	20020904	234594
GEM 1	1	310504	133205 100%	082J006	20020618	647901M
GEM 2	1	310505	133205 100%	082J006	20020618	647902M
GEM 3	1	310506	133205 100%	082J006	20020618	647903M
GEM 4	1	310507	133205 100%	082J006	20020618	647904M
PIPE 1	1	310508	133205 100%	082J016	20020620	647905M
PIPE 2	1	310509	133205 100%	082J016	20020620	647906M
PIPE 3	1	310510	133205 100%	082J016	20020620	647907M
PIPE 4	1	310511	133205 100%	082J016	20020618	647908M
PIPE 5	1	310512	133205 100%	082J016	20020618	647909M
PIPE 6	1	310513	133205 100%	082J016	20020618	647910M
PIPE 7	1	310514	133205 100%	082J016	20020618	647911M
PIPE 8	1	310515	133205 100%	082J016	20020618	647912M
PIPE 9	1	310516	133205 100%	082J016	20020618	647913M
PIPE 10	1	310517	133205 100%	082J016	20020618	647914M
PIPE 11	1	310518	133205 100%	082J016	20020618	647915M
PIPE 12	1	310519	133205 100%	082J016	20020618	647916M
PIPE 13	1	310520	133205 100%	082J016	20020618	647917M
PIPE 14	1	310521	133205 100%	082J016	20020618	647918M
PIPE 15	1	310522	133205 100%	082J016	20020618	647919M
GTEN 1	1	310523	133205 100%	082J006	20020620	647920M
GTEN 2	1	310524	133205 100%	082J006	20020620	647921M
GTEN 3	1	310525	133205 100%	082J006	20020620	647922M
GTEN 4	1	310526	133205 100%	082J006	20020620	647923M
GTEN 5	1	310527	133205 100%	082J006	20020619	647924M
GTEN 6	1	310528	133205 100%	082J006	20020619	647925M
GTEN 7	1	310529	133205 100%	082J006	20020619	647926M

Ice Property - Fort Steele Mining Division - Claim Status Current To May 30, 2001

Claim Name	Units	Tenure Number	Owner Number	Map Number	Work Recorded To	Tag Number
GTEN 8	1	310530	133205 100%	082J006	20020619	647927M
GTEN 9	1	310531	133205 100%	082J006	20020619	647928M
GTEN 10	1	310532	133205 100%	082J006	20020619	647929M
GTEN 11	1	310533	133205 100%	082J006	20020619	647930M
GTEN 12	1	310534	133205 100%	082J006	20020619	647931M
GTEN 13	1	310535	133205 100%	082J006	20020619	647932M
GTEN 14	1	310536	133205 100%	082J006	20020619	647933M
GTEN 15	1	310537	133205 100%	082J006	20020619	647934M
GTEN 16	1	310538	133205 100%	082J006	20020619	647935M
GTEN 17	1	310539	133205 100%	082J006	20020619	647936M
GTEN 18	1	310540	133205 100%	082J006	20020619	647937M
GTEN 19	1	310541	133205 100%	082J006	20020619	647938M
GTEN 20	1	310542	133205 100%	082J006	20020619	647939M
NEW ICE 12	20	377574	124845 100%	082J006	20010602	234526
NEW ICE 13	18	377569	124845 100%	082J006	20010602	234528
NEW ICE 13B	4	377582	124845 100%	082J006	20010602	234529
NEW ICE 14	16	377577	124845 100%	082G096	20010603	223425
NEW ICE 15	18	377570	124845 100%	082J006	20010602	234527
NEW ICE 16	18	377571	124845 100%	082J006	20010602	223424
NEW ICE 17	20	377572	124845 100%	082J006	20010531	239285
NEW ICE 18	20	377573	124845 100%	082J006	20010531	239286
NEW ICE 19	5	377580	124845 100%	082J006	20010531	239287
NEW ICE 21	18	377581	124845 100%	082J006	20010531	239284
NEW ICE 25	20	377579	124845 100%	082J016	20010528	239283
NEW ICE 32	1	377583	124845 100%	082J016	20010531	686626M
NEW ICE 33	1	377584	124845 100%	082J016	20010531	686627M
NEW ICE 34	1	377585	124845 100%	082J016	20010531	686628M
NEW ICE 36	18	377578	124845 100%	082J016	20010529	239282
NEW ICE 38	12	377575	124845 100%	082G095	20010602	234530
NEW ICE 39	20	377576	124845 100%	082G096	20010603	223423
	325					

Note 133205 = Quest International, 124845 = Skeena Resources

3.0 REGIONAL GEOLOGY (cf. Fig. 2)

The following description has been excerpted from a private company report entitled "Geological Summary Report, Ice Property" prepared for Skeena Resources Limited by Douglas Anderson, P.Eng., dated May 28, 1999.

The Ice Claims are within the part of the Rockies characterized by southwest-dipping thrust faults and associated folding and overfolding. The region is underlain by predominantly Cambrian to Permian carbonate and clastic sedimentary rocks. There are the intrusions of the RMAB with other known igneous rocks in the same belt including the Bull River amygdaloid and the White River diabasic sill complex with breccia dykes. More regionally, alkalic igneous rocks include the Devonian Ice River complex in Yoho National Park and the Late Cretaceous Crowsnest volcanics and Howell Creek intrusive rocks from the Crowsnest and Flathead areas respectively.

The diatremes of the Elkford area intrude sedimentary rocks which are part of the Rocky Mountain Fold and Thrust Belt where southwest-dipping, upwardly concave thrust faults and associated folds developed during the late Mesozoic Columbian orogeny. The underlying Proterozoic rocks, the Paleozoic platformal sequence of shallow marine carbonate and mature clastic rocks and a younger wedge of terrigenous clastic rocks were thrust to the northeast up the flank of the craton (Price and Mountjoy, 1970; Price, 1981).

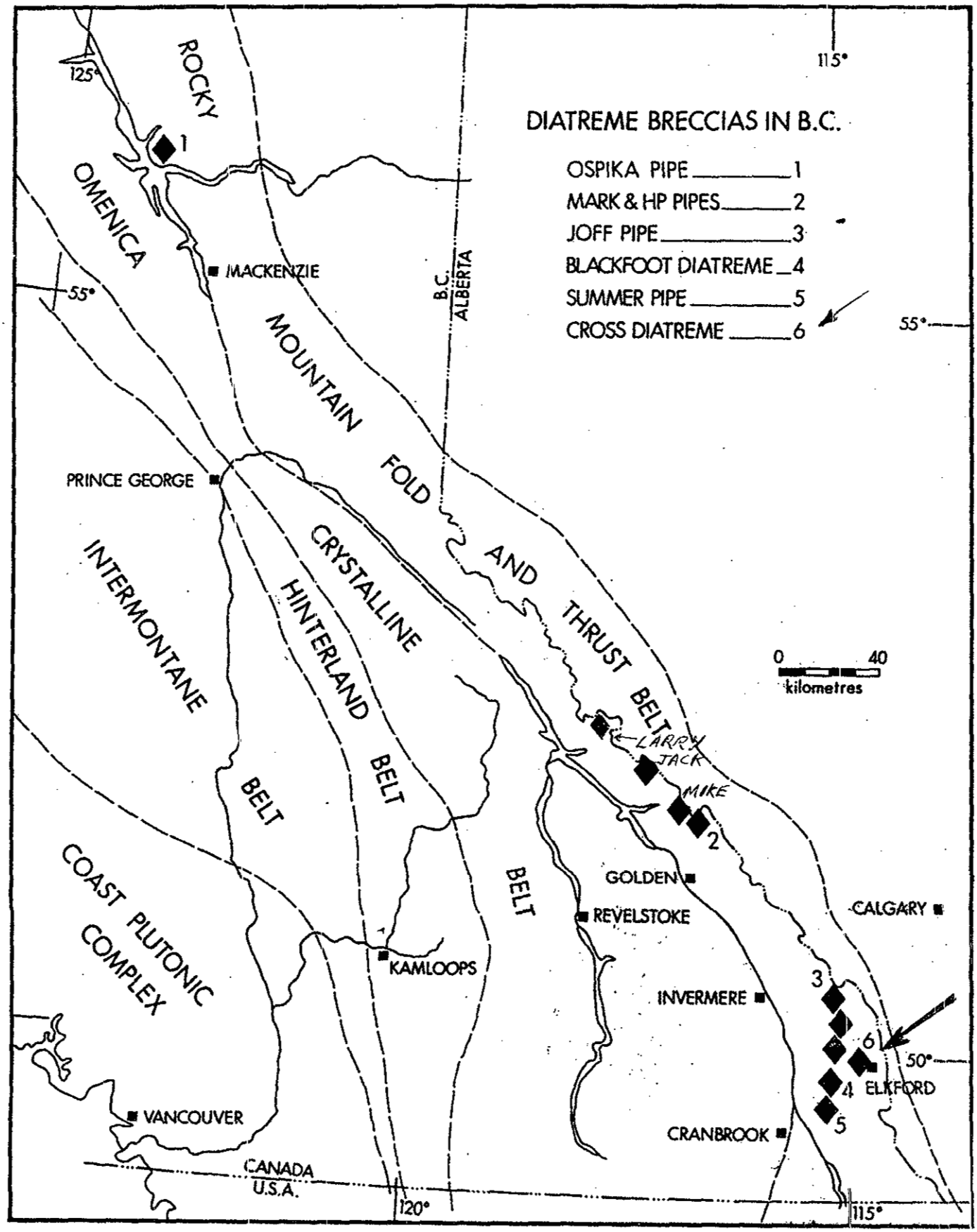
3.10 Stratigraphy

The lowest rocks in the vicinity of the Ice property are the Middle and/or Upper Devonian through Mississippian sequences on the west which include the dark grey limestones and dolomitic limestone of the Palliser Formation and the black shale and cherty limestones/argillaceous limestones of the Exshaw and andBanff Formations. Rocks occurring on the claims in ascending stratigraphic order are:

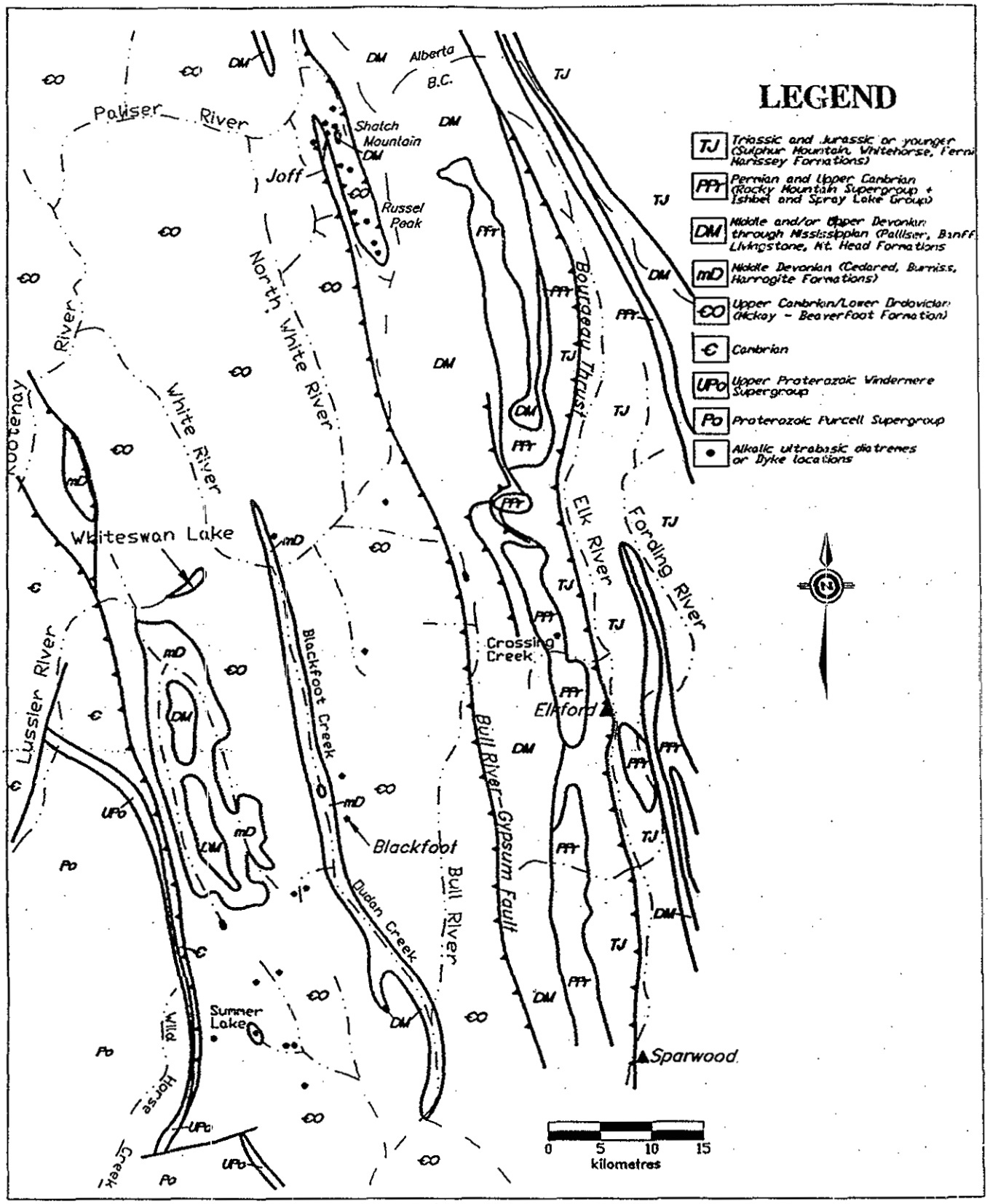
3.11 Lower Carboniferous

Rundle Group

The group has been sub-divided into the basal Livingstone, Mt.Head, and uppermost Etherington formations which comprise over 760 metres of predominantly carbonate lithologies. In general, the rocks are crystalline grey limestone weathering white or grey. They are commonly crinoidal, coralline and fetid. Light-colored chert is conspicuous in parts of the sequence. There are thin-bedded dark, cherty limestones particularly in the lower part of the formation. The top of the sequence is recognized by the presence of green and red shales and two beds of sandstone a foot thick in crystalline limestone within the Etherington.



Distribution of Diatreme Breccias in British Columbia.



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General Geology
Elkford Area

Scale: As Depicted	Drawn by R. Pighin (99)
Map Reference:	

FIGURE 2

3.12 Upper Carboniferous and Permian
Rocky Mountain Supergroup

This sequence is 240 to 300 metres in thickness, tentatively divided into three formations: the Tunnel Mountain, Kananaskis, and Ishbel Formations. Included are: quartzitic, dolomitic, and calcareous sandstone; dark grey sandstone; silty dolomite; cherty dolomite and chert. Tunnel Mountain is cliff forming siltstones and sandstones with carbonate content decreasing up section. The uppermost 125 metres is commonly a coarse, cross-bedded sandstone. The Kananaskis is present on the east as light grey silty dolomites with chert breccias together with nodular and bedded cherts. The Permian Ishbel consists of a possible regolithic chert member overlying dark cherty phosphatic, thin bedded siltstones. A phosphatic conglomerate separates the two units. At Crossing Creek, the Upper and Lower Ishbel are separated by an erosional surface representing over 700 feet of Middle Ishbel. Lower Ishbel is a recessive weathering 45 metres of dark grey to black, argillaceous, poorly sorted, thin bedded quartzitic siltstones which alternate rhythmically with black, platy, silty shales and occasional dolomite. There are intraformational siltstone conglomerates recurring through the sequence usually at bedding surfaces. The Upper Ishbel consists mainly of massive black, blue-grey or white chert with subordinate patches and lenses of sandstone and silicified carbonate with chert breccias and quartz veins common.

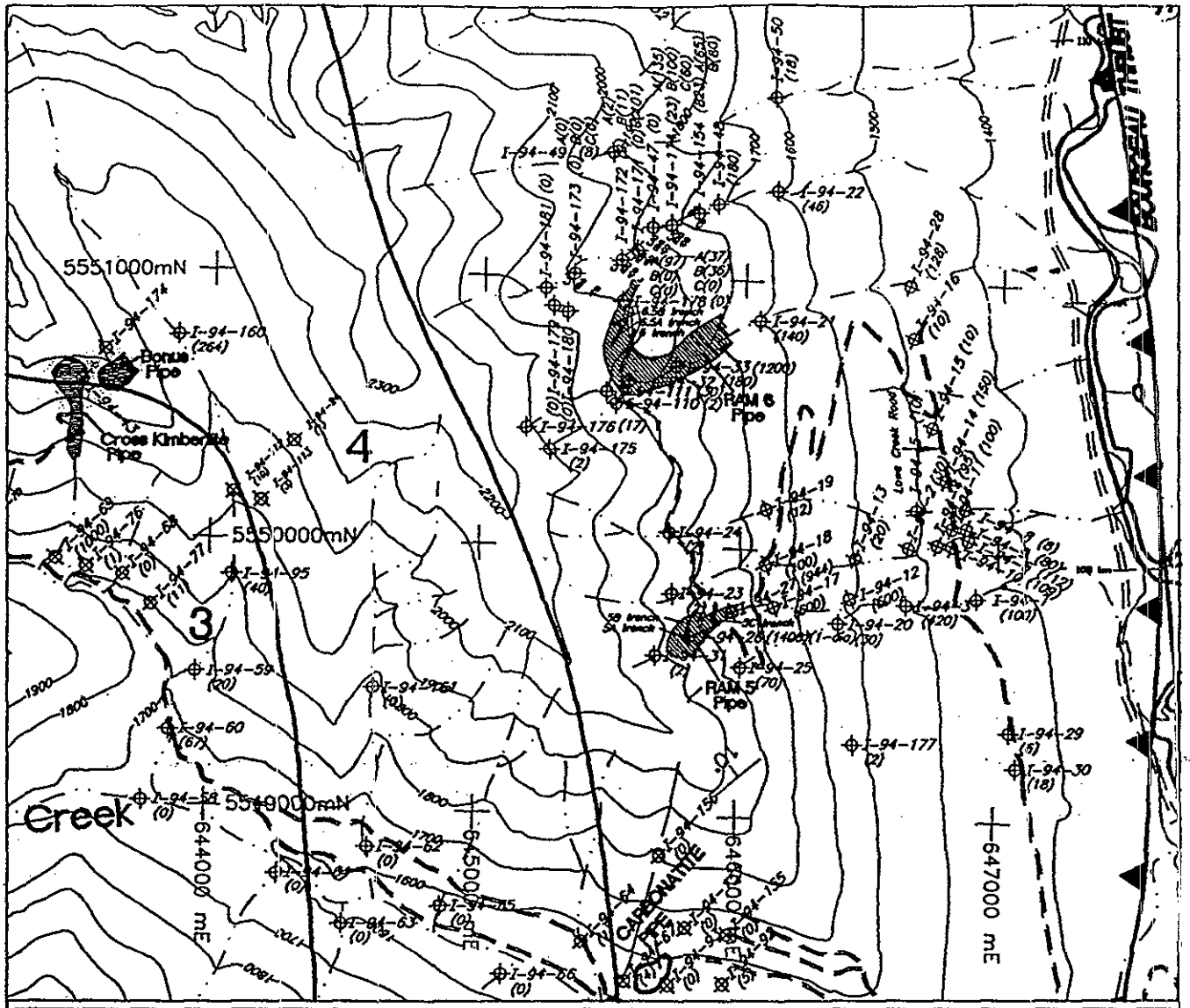
3.13 Triassic
Spray River Group

Between 360 to 450 metres thick, this sequence overlies an unconformity with the Rocky Mountain Group. Undivided portions are described as dark grey, silty shale and dolomitic or sideritic, argillaceous limestone. At some locales, the Spray River Group is divided into the Whitehorse Formation and the underlying Sulphur Mountain Formation. The lower Sulphur Mountain is calcareous and dolomitic siltstone and sandstone; silty limestone and dolomite; and lesser shale. The Whitehorse Formation is calcareous and dolomitic sandstone and siltstone with minor sandy, quartzose dolomite and limestone intervals; limestone; and some solution collapse breccias.

3.20 Structure

The structural picture in the region is complex, typical of the Rocky Mountain fold and thrust belt. Folding is throughout and generally asymmetrical and variable in magnitude. Faults are common as dip-slip thrust faults. Overall the structural grain is north-south, interpreted as resulting from local east-west compression rather than the southwest-northeast directed compression indicated for the Rocky Mountains generally.

The Ice property occurs in the hangingwall to the east verging Bourgeau Thrust which occupies the west side of the Elk River valley. There are smaller scale splay thrusts and widespread overturned anticlines and synclines in the hangingwall rocks. The splays exhibit transition into east verging, overturned folds. The folds and splay thrusts appear to have an en echelon relationship to one another as variations in the amount of deformation are accomodated by folding or in more extreme cases, faults. There is a change in the structural expression of the folds in the hangingwall of the uppermost splay thrust, from overturned folds to the east in the immediate hangingwall of the Bourgeau Thrust to an upright fold style farther west.



LEGEND

6 *Jurrassic Fernie Group: grey, brownish grey, and black shale, siltstone and sandstone; limestone: glauconitic sandstone and shale.*

5 *Triassic Spray River Formation: dark grey silty shale, siltstone, and shale; light grey dolomitic or sideritic argillaceous siltstone*

4 *Pennsylvanian and Permian Rocky Mountain Formation: light grey quarzitic, dolomitic, and calcareous sandstone; dark grey sandstone; dolomite; cherty dolomite; cher*

3 *Mississippian Rundle Group (15–17) Etherington Formation: light grey limestone; cherty limestone; and calcarenitic limestone; dolomite; cherty dolomite; green and red shale; siltstone; breccia; anhydrite.*

THRUST FAULT

GEOLOGICAL CONTACT

I-94-160 (264) Stream or Soil sample location/number, Pyrope Garnets (# indicated) in Stream/Soil sample

0 500 1000 1500 2000
metres

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Known Kimberlite Pipes

Scale: 1:25000 | Drawn by R. Pighin (99)

Map Reference:

Last Update (Y/M/D):

CAD Filename:

FIGURE: 3

3.30 Economic Geology

Alkaline intrusive diatremes, dykes and sills have been documented in the north-south trending Rocky Mountain Alkaline Belt (RMAB). They are currently in two fields, the Golden cluster from 50 to 90 kilometres north of Golden consisting of dykes and pipe-like bodies, totalling fourteen occurrences. These alkaline intrusions have been classified as lamprophyres, kimberlites or lamproites. Microdiamonds have been recovered from heavy mineral separates from this area. The second field or belt is the Bull/White/Elk river cluster including the Crossing, Joff, and Elkford pipes. The majority of the more than 45 occurrences are classified as lamprophyres or basaltic diatremes. However, the Cross has long been identified as a kimberlite and the more recent recognition of the adjacent Bonus pipe and three diatremes some two kilometers to the east on the west flank of the Elk valley has extended the field. These appear to be kimberlites as well and macro-diamonds have been recovered from bulk samples of the three eastern pipes (discussed later).

4.00 History of Exploration for the Ice Property and Area

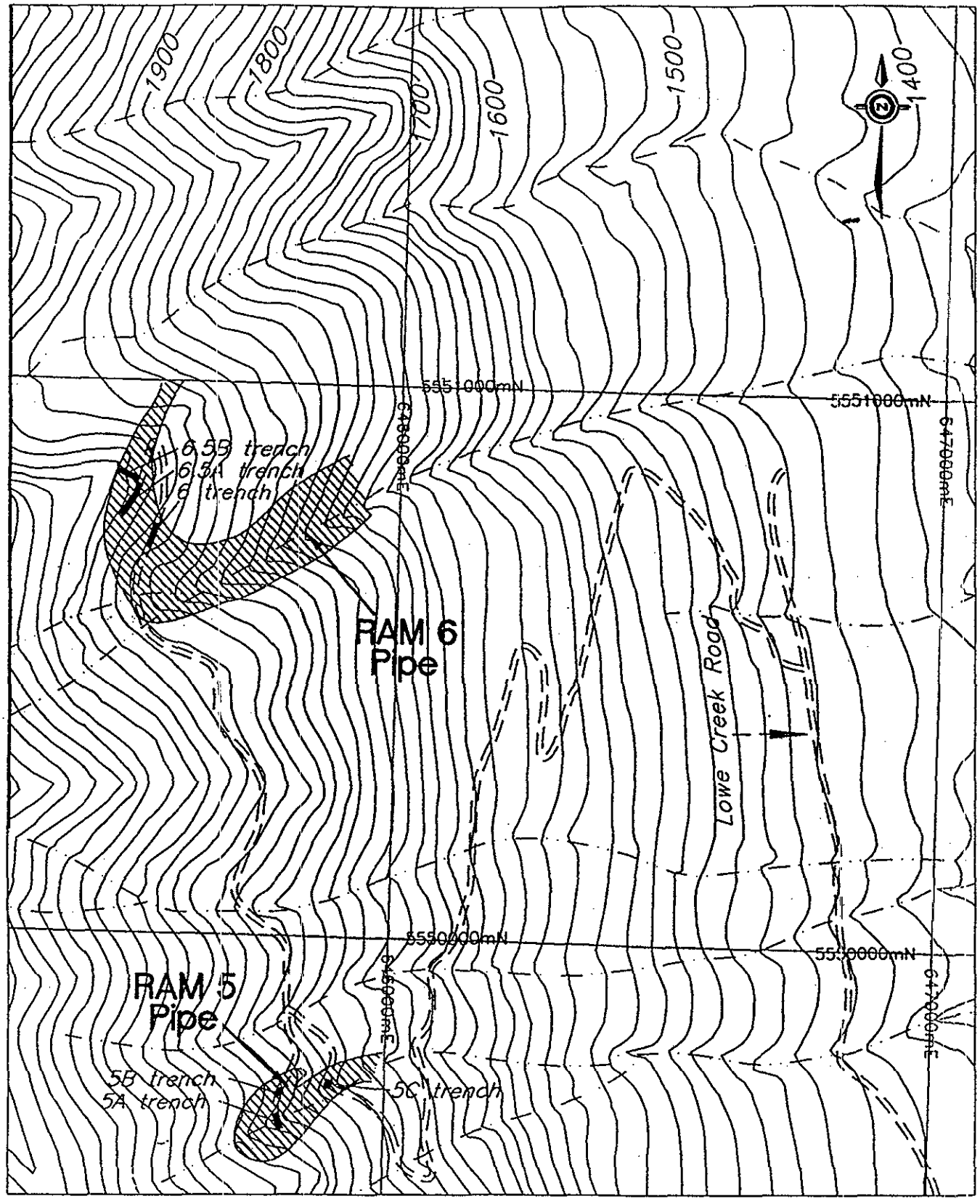
The exploration history with respect to diamond potential in the region starts with a 1957 recognition by Hovdebo of the Crossing Creek diatreme while employed as a field worker by California Standard. In 1976, a Cominco field party recognized the same feature and tentatively identified it as a kimberlite pipe. This initiated a large exploration program in the 1977 to 1980 period with drainage sampling for indicator minerals which along with visual detection from the air discovered some 40 diatremes and dykes in the Bull/White/Palliser rivers region. Some on the ground pursuit of these alkalic, ultramafic occurrences was completed as well.

The Cross diatreme and area became the focus and in 1980 Petra Gem Explorations and partners explored the Crossing kimberlite area and located more indicator minerals indicative of additional diatreme sources.

During the 1987 to 1990 period, CF Minerals Ltd. and partners along with Dia-Met Minerals Ltd. working north of Golden, B.C. discovered diatremes and dykes in a second cluster. Subsequent work documented micro-diamonds in heavy mineral separates from drainages and drill core. The multiple occurrences have been shown to be kimberlites, lamproites, or lamprophyres.

The Island-Arc and JV property covers the original Crossing pipe and the previously located indicator mineral anomalies of pyrope garnet and nickel soil anomalies. These include the Gem, Gten, and Pipe claims. In 1993, the owners undertook a field program of sampling the sands and gravels of the creek searching for placer diamond content. Panned concentrates were visually examined with a binocular microscope.

Consolidated Ramrod Gold Corp. began an independent evaluation of the above claims and the Ice claim block in spring, 1993. Soil samples were taken from the Ice, Gten, and Pipe claims exploring for additional kimberlite and/or ultramafic occurrences. Chromium and nickel were selected as ultramafic pathfinders because of the low background values in the host sedimentary lithologies. Also, a program of stream sediment sampling collected 72 samples covering an area of about 110 square kilometres. The samples were comprised of –10 mesh concentrate ranging between 20 and 30 kg. These samples were processed by labs in Vancouver for kimberlite indicator minerals with selected grains chemically analyzed by electron microprobe at the University of British Columbia.



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0 125 250 375 500
metres

ICE PROPERTY

Geology Map
Ram 5&6

Scale: 1:10000	Drawn by R. Pighin (99)
Map Reference:	

Last Update (Y/M/D):

CAD Filename:

FIGURE 4

In 1994, M.E. McCallum of Colorado State University examined the results for these 72 samples and reported that chemically confirmed kimberlite indicator minerals are recognized in at least 19 field samples from the Ice claims. Peridotitic garnets were noted as well as chrome diopside, ilmenite, and abundant chromite but no oxide mineral analyses were done. The presence of G9 pyrope garnets was described as very encouraging, indicating the likelihood of additional kimberlite occurrences in the area. Additional heavy mineral sampling was undertaken in 1994. Orientation work found that samples ½ cubic yard in size gave the most reliable results for streams and closely spaced ¼ yard soil samples were necessary.Each sample was processed through a 12' by 4" sluice box equipped with two cross riffles and two longitudinal riffles. The concentrate was then sieved through a 10 mesh standard sieve and panned by hand to produce a heavy mineral concentrate. Examined by binocular microscope, grains of pyrope garnet, chromite and ilmenite were picked by hand and sent to the Colorado State University research laboratory for micro-probe analysis.

This work successfully located four new kimberlite diatremes in the Elkford/Crossing creek area. The heavy mineral survey also found evidence to suggest there are more undiscovered diatreme bodies.

During the early, small scale sampling of the new diatremes called the Ram 5, Ram 6 and 6.5 the following ensued. A one-half yard sample of material was taken from the Ram 5 for heavy mineral separation by using a slice box/visual microscope inspection approach. One macro diamond was recovered during the process. A one-half yard sample was taken from each of the Bonus and Ram 6 diatremes during the same period. Macro diamond tests were to be done on each sample by Saskatchewan Research. However, it appears that the samples were mixed prior to testing, so a macro diamond recovered cannot be sourced to an individual pipe.

In 1996, an exploration program was launched which was designed to test the new pipes (Ram 5, Ram 6, and Ram 6.5) located on the west flank of the Elk River valley. It was hoped to get more information on the quality and size of diamonds. A 4-wheel drive road was constructed from the Elk river valley bottom, a total of about four kilometres. About 30 tons of surface material from each of the three pipes was collected from trenches and shipped to Fort Collins, Colorado for milling and diamond testing. This work was supervised by and reported on by M.E. McCallum of Colorado State University.

McCallum's report describes the samples and results as follows. Sample material processed included: 35 tons from the Ram 5 pipe (three batches from three trenches); 15 tons from the Ram 6 pipe (single batch from one trench); and 40 tons from the Ram 6.5 pipe (two batches from two trenches). It is important to note that material from all the sites was highly diluted by host rock shale, limestone, and clay-rich alteration products, much apparently from upslope. Weathered kimberlite products comprised less than 10% of any sample. The highest concentration of kimberlitic heavy minerals was recovered from the Ram 6.5 samples. A total of six diamonds were recovered from the processed samples:
Ram 5, Trench A – Stone 1 was ~0.185ct, ~4x3x2mm, a clear flattened elongate tetrahexahedron, no inclusions, good quality. Stone 2 ~0.045ct, ~3.5x2.0x1.0mm
clear, 50% of stone missing due to breakage, no inclusions, good quality.
Ram 5, Trench B – Stone 1 was ~0.025ct, ~1.75x1.5x1.0mm, clear, no inclusions, good quality.
Ram 6.5, Trenches A and B - ~0.015 to 0.02 ct in size, all ~ 2.0x1.0mm, 3 poor quality stones of grey or pale brown, abundant tiny inclusions.

McCallum says the number of stones from 90 tons appears discouraging but the very high dilution of the samples renders the results less than definitive regarding grade and quality of stones. Actually the Ram 5 is encouraging, getting three good quality stones from 35 tons of material of which 90% is probably nonkimberlitic. Kimberlite indicator minerals are abundant in concentrate recovered from all three pipe samples. Significantly appreciable numbers of small xenoliths of mantle peridotite and eclogite are present. McCallum has not completed additional chem work or evaluation of the xenoliths.

In the fall of 1998, hand-selected material totalling about 400 kilograms was collected from the Ram 5 (100kg), Ram 6 (100kg), and Bonus (200 kg) trenches. It was anticpated this material would eventually be used for micro-diamond tests.

5.00 PROPERTY GEOLOGY (see Figures 3 & 4)

5.10 Cross Kimberlite Pipe

The Cross kimberlite is located on the north side of Crossing Creek, 8 kilometres northwest of the town of Elkford in southeastern B.C. It is exposed on a steep south facing slope at an elevation of 2200 m. A crude estimate of plan size is 2.4 Ha.

The diatreme intrudes sediments of the Permian Ishmel Group which are mostly close to flat-lying. There is no regional fault system at Cross but the eastern flank of the Cordillera has been the locus of repeated alkaline igneous activity since Devonian time (Currie, 1976). The alkaline diatremes west of the Cross pipe are aligned parallel to the western edge of the Alberta arch (Ziegler, 1969) and probably mark the location of a normal fault system in the Precambrian basement, active during Devonian rifting. It is probable that this normal fault affected the Alberta arch during the Permian and provided the channelway for the Cross kimberlite.

The xenoliths and xenocrysts within the diatreme are serpentinized ultrabasic xenoliths with spinel peridotites dominant over garnet peridotites. Spinel xenocrysts are common, garnet xenocrysts less so.

The age of the Cross pipe has best been determined by Grieve (1982) and confirmed by Smith et al (1988) as 240 to 250 Ma. These are Rb-Sr ages on phlogopite separates. This Upper Permian age is pre-Columbian orogen. This implies the pipe and other diatremes in the area may be dismembered at depth. Surface occurrences of kimberlite in the area may not reflect their true position at the time of emplacement inasmuch as large lateral displacements may have occurred in thrust sheets (Smith et al, 1988).

A bulk sample was investigated by Scott-Smith in 1988 from a sample collected by Dr. J. Pell on the talus slopes below the diatreme. The rock is composed of two generations of olivine in a groundmass composed of phlogopite, spinel, carbonate, and serpentine. It was classified as a hypabyssal facies opaque mineral (spinel)-rich phlogopite kimberlite. The rock has a distinctly inequigranular texture and conspicuous minerals are olivine and phlogopite. The olivine is totally pseudomorphed by pale green serpentine. Rare altered macrocrysts which are not olivine or phlogopite may be pyroxene.The groundmass is mostly spinel along with phlogopite, carbonate, serpentine with significant chlorite.

5.20 Bonus Kimberlite Pipe

Located about 100 metres east of the Cross pipe this diatreme remains poorly known. It is exposed in one small hand dug pit and therefore it's size is unknown. Data on indicator minerals from heavy mineral concentrates is reported later.

5.30 Ram 5 Pipe

The Ram 5 diatreme is about 2.5 kilometres east-southeast of the Cross Pipe on the western flank of the Elk River valley. The dimensions of the Ram 5 are not well defined but it is a minium of 325 metres long by 125 metres wide. The size is difficult to predict based on small hand dug pits and three backhoe trenches.

The pipe intrudes Sulphur Mountain formation of the Spray River group. The geology after Price et al suggests Ram 5 intrudes an overturned anticlinal limb in mixed calcareous and dolomitic siltstone and sandstone and silty limestone and dolomite.

The trenches contain mostly slide rock of glacial till and clay with only 5% true kimberlite. The weathered kimberlite consists of abundant phlogopite, chromite, and ilmenite with scattered pyrope garnets and chrome diopside, scattered peridotite and eclogite xenoliths in a dark green, soft mud matrix. Data on indicator minerals is presented in a later section of this report.

5.40 Ram 6 (6.5) Pipe

The Ram 6 and 6.5 pipes were originally thought to be two separate pipes but recent work suggest these two pipes may in fact form one large boomerang-shaped pipe. It occurs about two kilometres east of the Cross and one kilometre north of the Ram 5. The dimensions of this irregular shape are not defined sufficiently but are estimated as a minimum of 800 metres in length by 125 metres wide. Again this is based on limited exposures.

The diatreme intrudes Sulphur Mountain formation along the axis of an overturned anticline as for Ram 5. Data on indicator minerals is presented in a later section of this report.

ROAD ACCESS, TRENCHING, DRILL PAD CONSTRUCTION

Access to the Bonus Pipe is via an all-season gravel logging road 5.5 km due north from Elkford (from the Gas Mini Mart) to the Crossing Creek turn-off, west for 7.3 km on the seasonally accessible "Crossing Creek Forestry Road" to the Cross Kimberlite turn-off and then 2.0 km northward on a dozer trail. This last portion had been constructed by Cominco during their bulk sampling program of the Cross Pipe in the late 1970's.

During the period November 8 to 18, 2000 the 'Crossing Creek road' was partially re-graded with a Caterpillar 330 back-hoe. The trail surface had de-graded and the banks sloughed over the past 5 years to the state that access had been restricted to ATVs or snowmobiles [photos #1 and 2]. The last two kilometers to the Cross Pipe were widened from 2.0 metres to 4.0 metres [photos #3 and 4]. 500 metres of new 4.0 metre wide 'back-hoe trail' were then constructed from the end of the dozer trail at the east-central portion of the Cross Pipe eastward switch-backing up the predominantly outcrop ridge above the Cross Pipe [map 1 and photos #5 and 6].

The inferred centre of the Bonus Pipe was machine excavated down to fresh subcrop and a leveled drill pad of approximately 25 metres EW x 20 metres NS was constructed. On the up-slope north side of the trench, overburden was approximately 4.0 metres thick. Approximately 500 cubic metres of 'cut' and 500 cubic metres of 'fill' were undertaken in the construction of the drill pad. The centre of the pad is now exposed fresh kimberlite subcrop [photo #7].

Hand excavated trenches on the Bonus Pipe in 1998 effectively only sampled dis-aggregated, weathered, frost-heaved material.

The Caterpillar 330 back-hoe and low-bed truck were provided by Fred Sowchuck Trucking Ltd. of Fernie, B.C.; the ATV and a 4x4 truck by SuperGroup Holdings of Cranbrook; and the construction and trenching were supervised by the writer.

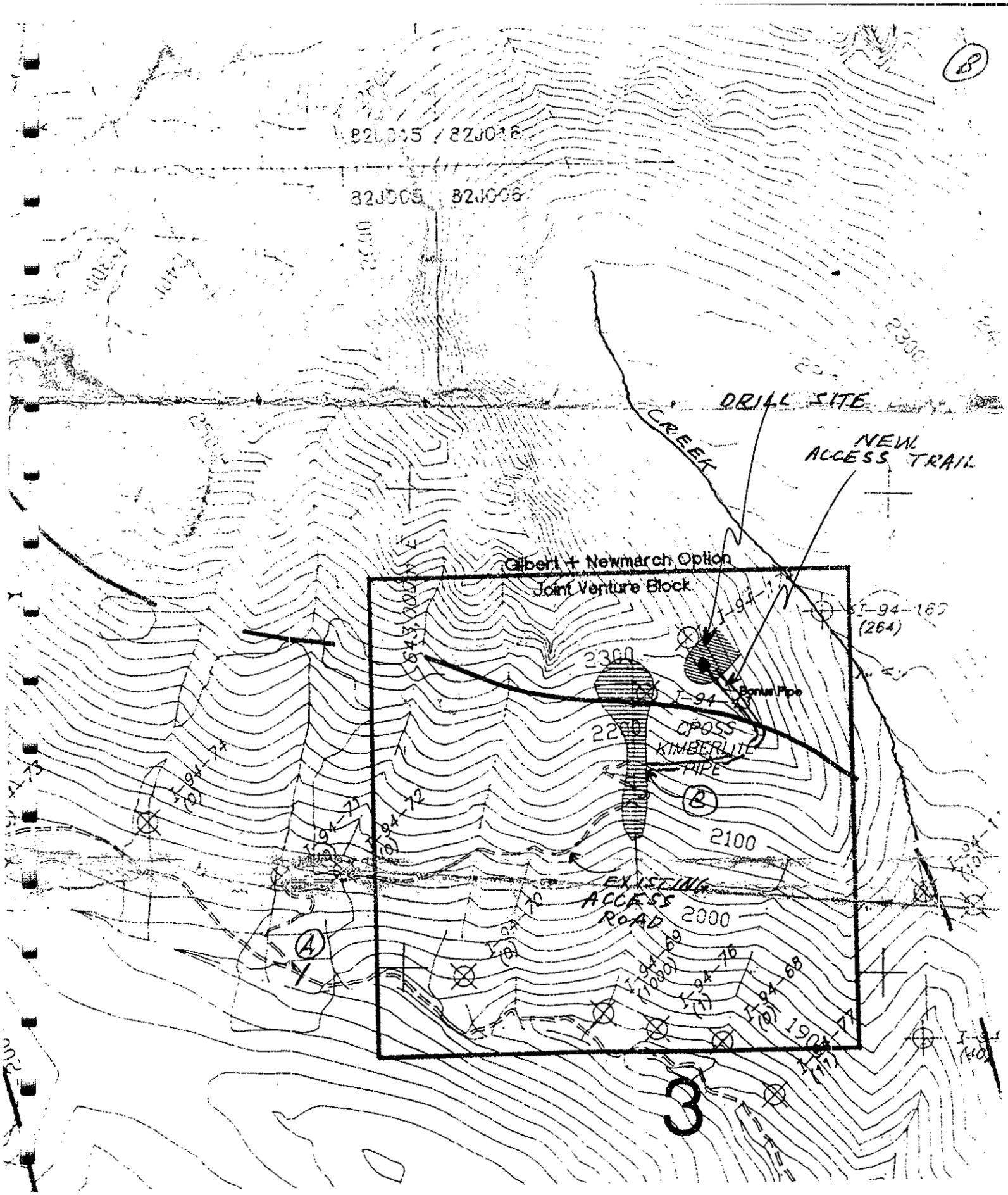
Geological Investigation - Crystalline Basement Interpretation

Mr. Robin Chisholm, P.Geo. of Taiga Consultants Ltd., Calgary was retained to review the literature and investigate unpublished sources for references to a lithologic and geophysical interpretation of the crystalline basement rock underlying the Ice Claims project. The entirety of his report is included here as Appendix I.

Conclusion and Recommendations

The subcrop of the weathered expression of the Bonus Pipe has been exposed and a pad prepared for the proposed core drilling program, scheduled to commence in early August, 2001.

From R. E. Chisholm's report on the interpretation of the underlying basement, "indirect evidence supports the conclusion that the Ice Property diatremes were intruded into an archon ....of Archean age. ..... In addition....the project area is located in close proximity to the Vulcan Low Domain, which has been interpreted to be a major crustal feature. The author believes that this makes the Elkford area prospective on a broad scale for the discovery of additional kimberlitic intrusions...."

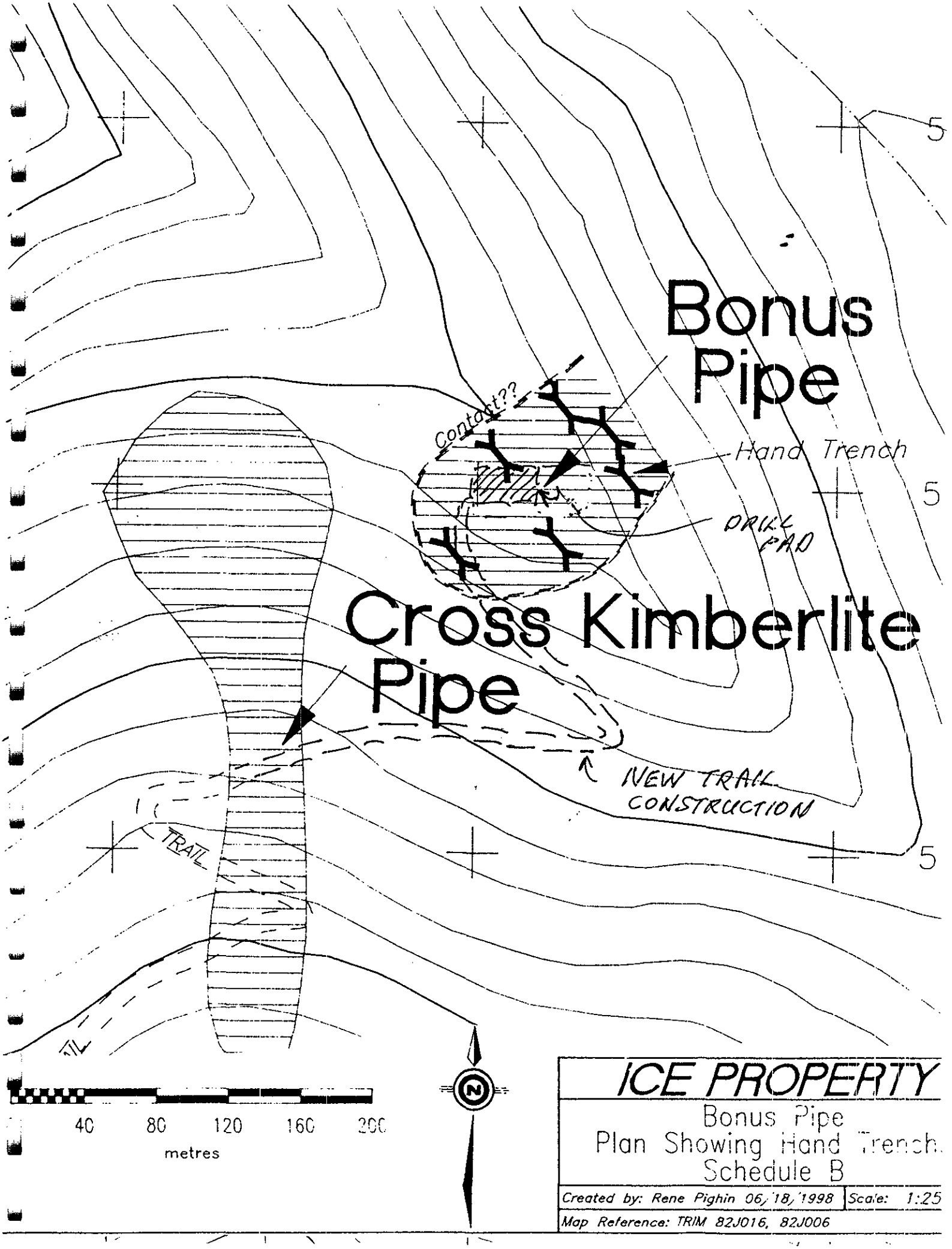


(A) → (B) REHABILITED NOV, 2000

(B) → DRILL PAD, NEW ACCESS TRAIL, NOV, 2000

MAP 1

1:10,000 SCALE



ICE PROPERTY

Bonus Pipe
Plan Showing Hand Trench
Schedule B

Created by: Rene Pighin 06/18/1998 | Scale: 1:25

Map Reference: TRIM 82J016, 82J006

SKEENA RESOURCES LIMITED

STATEMENT OF EXPENDITURES
Period June 18, 2000 – May 31, 2000
(Exclusive of GST)

ICE PROPERTY, ELKFORD, BC
FORT STEELE MINING DIVISION

Work performed on GEM 1-4 Claims, inclusive (#310504-310507)

1. Access Road rehabilitation, road construction, trenching, drill pad construction

Fred Sowchuck Trucking Ltd. (Caterpillar 330 Back-hoe + service truck, fuel, mob, demob) Nov. 20/00 Inv. #00-095	$ 8,192.50
SuperGroup Holdings Ltd. (4x4 truck, trailer, ATV rental) Nov. 30/00	2,271.50
SuperGroup Holdings Ltd. (communications, reproductions, freight) July 31/00	897.60
Cold Stream Exploration Ltd. (J. R. Allan, P.Geol., 7 days @ $500/day) Dec. 30/00, #2000-1 3,500.00	
J. R. Allan – travel expenses, room & board, fuel, disposable supplies Nov. 20/00	1,995.29
Sub-Total	**$16,856.89**

2. Geological Investigation of crystalline basement rocks

Coldstream Exploration Ltd. (J. R. Allan, P.Geol.) 4 days @ $500/day July 31/00	2,000.00
Taiga Consultants Ltd. (R.R. Chisholm, P.Geo.) May 31/01, #2-01-046	1,758.75
Sub-Total	**3,758.75**
TOTAL	**$20,615.64**

J.R. Allan, P.Geol.

STATEMENT OF QUALIFICATION

I, James Rupert Allan, of 8915 Lochside Drive, Sidney, British Columbia, do hereby certify that:

1. I am a graduate of the University of Alberta in Geology (1969) and have practiced my profession continuously since graduation.

2. I am a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of Alberta, and I am a Fellow of the Geological Association of Canada.

3. I am the author of the report entitled "Access and Drill Pad Construction and Geologic Interpretation of Crystalline Basement", Ice Property, Diamond Exploration, written on behalf of Skeena Resources Limited and dated June 1, 2001. I personally supervised the work reported therein.

4. I am president of and own a share position in Skeena Resources Limited.

Dated at Vancouver, British Columbia, this 1st day of June, 2001.

J. R. Allan, P.Geol.

#1

#2

Crossing Creek Forestry Road

#3 Looking North

#4 Looking North-West

Rehabilitation of Access Trail from Crossing Creek Road to the Cross Kimberlite

#5 #6

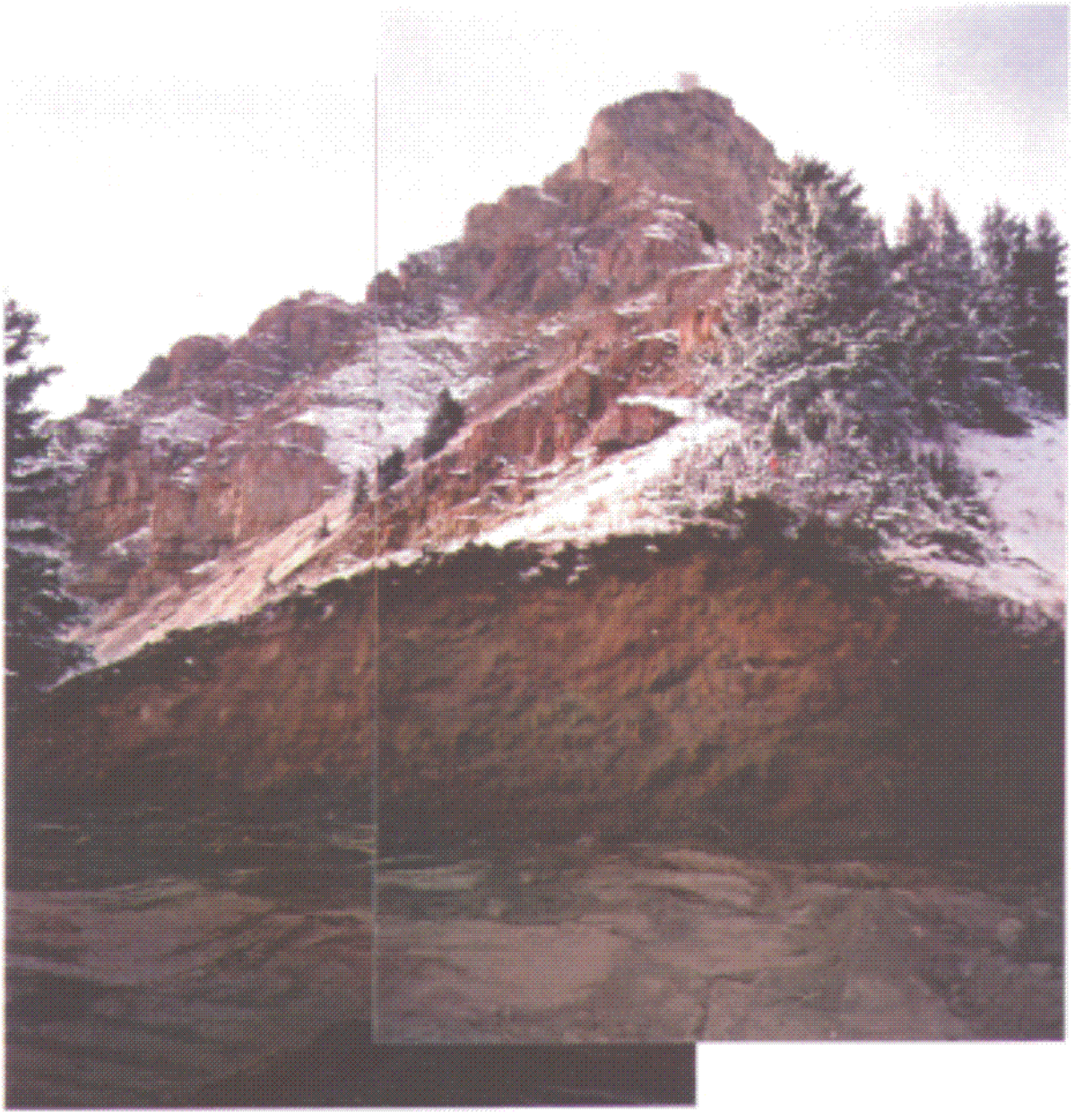
Looking North-East

Construction of new trail from the Cross Pipe to the Bonus Pipe

Looking
South-East

**#7 Open grass meadow –
Surficial expression of the weathered 'Bonus' Pipe**

#8 Looking North



#9 Trenched Bonus Pipe Looking North

APPENDIX I

ICE CLAIMS
LITHOSPHERIC CHARACTERISTICS

Ice Property
Elkford District, Southeast British Columbia
Fort Steele Mining Division
NTS 82G/14E & 15W , 82J/2W & 3E
Latitude 50°05' N, Longitude 114°58' W
UTM Coordinates 5549000N – 644000E

March 05, 2001

on behalf of project operator
SKEENA RESOURCES LIMITED
and
Quest International Resources Corp.

by
Robin E. Chisholm, B.Sc. , P.Geol

TAIGA CONSULTANTS LTD.
#301, 1000 - 8th Avenue S.W.
Calgary, Alberta T2P 3M7
Canada

Ice Claims: Lithospheric Characteristics

Introduction

At the request of Rupert Allan, President of Skeena Resources Limited, Taiga Consultants Limited was asked to research the published database in regard to the nature of the basement rocks underlying Skeena's Ice claims in order to assess the diamond potential of the property. The property contains three recently discovered diamondiferous kimberlite pipes which, represent the first such occurrence of this sort and that indicate a reassessment of the diamond potential of south-east British Columbia is merited.

The evaluation of the diamond potential of a particular diamond field hinges on the identification a number of crustal and lithospheric characteristics. The application of "Clifford's Rule" suggests that economically viable primary diamond deposits must be underlain by Archean cratons called archons. Exceptions (such as Argylle) exist to this rule however as a rule of thumb this selection criterion works reasonably well. In addition to this, it is assumed that the thickest portions of Archean lithosphere maintain a cool keel that promote preservation of diamonds in their stability field during transport to the surface. Prospective areas with such keels are therefore called "mantle-root friendly" A more detailed review of the current theories regarding the emplacement of diamonds can be found in Helmstaedt (1993).

Discussion

The Ice Claims are located within the Rocky Mountain Alkaline Belt (RMAB), a loose term encompassing a province of Paleozoic aged alkalic intrusions into the Rocky Mountain Foreland (Pell 1986 & 1987). The RMAB contains a large number (14, 25, 40 depending on literature source) of diatreme intrusions of which at least three are known to contain diamonds (Allan 2001). The southern sector of the RMAB in the Elkford/Bull River area, within which the property lies, is geologically mapped (Minfile map 082J) as being underlain by Jurassic to Cretaceous aged rocks of the Kootenay and Nikanassin Formations. The property is located 62 km east of the Rocky Mountain Trench in south-eastern British Columbia (Figures 1,2). Helmstaedt et al (1988) indicates that the adjacent Cross kimberlite is hosted by Permian aged sediments of the Spray Lake-Ishbel Groups and the intrusive has a Rb-Sr date of 245Ma ie. Lower Triassic by the current time scale. He concluded that the intrusion predated the northeast transport of the Bourgeau Thrust sheet in which it is located. The Ice Claims may be situated in a similar stratigraphic position to the Cross kimberlite due to their close proximity, only two km to the east.

The basement in southern Alberta, and Southeastern BC region has been extensively studied in detail by the Lithoprobe Alberta Basement Transect coordinated by the GSC. The conclusions of these studies have been detailed and summarized in a series of Lithoprobe reports within recent years. These reports bring together aeromagnetic, magnetotelluric, seismic and isotopic data from basement cores to map the basement rocks according to tectono-staratigraphic and age divisions.

It can be seen in Figures 3,4,5 that the Ice Claims fall within the Archean aged Hearne Province and more specifically within the Matzhiwin High Domain (MH) (Ross 1997) immediately north of the Vulcan Low Domain (VL). The Matzhiwin High is characterized by a bulbous magnetic high which strikes east-northeast across southern BC and Alberta and has been interpreted as a magmatic belt (Ross et al 1991). Superimposed on the MH is a NE striking aeromagnetic fabric thought to be evidence of penetrative deformation (Ross 1995) with evidence of lineations interpreted (Ross 1995) to be structural features such as fault zones. There appears to be also a weak south dipping structural component within the MH that is cut off to the south by the Vulcan Low. The VL is considered to be a major south dipping suture or shear zone related to the Trans-Hudson Orogenic belt to the east. The basement stratigraphy within the larger region is truncated to the west by the Rocky Mountain Trench (RMT), although basement is known to underlie the Paleozoic sediments to the east of the RMT.

There is limited isotopic data available that can give a solid age date to the basement rocks of the Matzihwin High Domain. A single basement core date (Figure 3, Villeneuve et al 1993) in central Alberta, within the MH, gives a 2.59 Ma age from a hornblende-biotite granitoid. When the author asked Dr.Gerald Ross of the Geological Survey Canada for his opinion on whether an age date for central Alberta within the MH could be extrapolated west to the Elkford area, he replied that he thought it could (Gerald Ross personal communication February 28,01). Other, indirect approaches have been made to date the basement in the BC portion of the MH. These studies have included age dating of zircons within the Elkford diatremes (Parrish and Reichenbach 1991) and dating detrital zircons and monazite within basal arkosic units (Windermere SuperGroup) believed to be derived from the basement (Ross 1995). The results of these studies have been inconclusive giving Paleoproterozoic ages, thought (Ross 1995) to be "reflecting the effects of younger reactivation during Trans-Hudson collisions.

There is only very poor quality data available in regard to assessing the crustal and lithospheric thickness in the Elkford area. Ross (personal communication) indicated that he felt that the crust in this area is approximately 50km thick however he indicated that the available data does not give any reliable idea as to the thickness of the underlying lithosphere.

Helmstaedt (1993) described the Cross diatreme of the Elkford area as having been emplaced "during normal faulting of older basement prior to its involvement in orogenic events" (page 56) ie. the intrusions crosscut bedding in the host sedimentary rocks at a high angle.

A question to be addressed during discussion of the quality of the lithosphere under the Elkford field is "how much transport of the Bourgeau thrust sheet is there in relation to the underlying basement" ie. is the thrust sheet and associated diatremes still above its original basement? The answers to these questions are not easily arrived at.

Figure 2 from Pell (1997) is a section across the Rocky Mountain Foreland that shows the structural location of the RMAB diatremes in relation to the known thrust faults underlying Elkford, however it says little about the underlying lithosphere. Pell (1987) tried to assess the question of the prospectiveness of BC for diamonds and concluded that the "probability of British Columbia diatremes containing diamonds is low" because the location of the Cross kimberlite, the most easterly diatreme, is on the craton margin. This was however when the Cross kimberlite was the only known such intrusion in BC, was known to be barren of diamonds and before the basement structure in the region was known. This was also before diamonds were discovered at the RAM 5, RAM 6 and Bonus kimberlite pipes (Allan 2001) within the Ice Claims. Allen (2001) also reports that sampling returned a number of macro-diamonds. It should be noted that the current understanding of the tectonic setting in relation to the basement is in a state of flux in Southern BC and previously made conclusions in regard to the basement must be assumed to be somewhat suspect today.

The foregoing suggests that the only reasonable manner of assessing the quality of the former lithosphere underlying the Elkford Field is by indirect means ie. to examine indicator mineral chemistry. The fact that there are G-9 and G-10 garnets as well as un-resorbed macro-diamonds in the pipes presents a prima facie case for a mantle root friendly lithosphere of the right type at the moment of pipe intrusion.

Figures 6 and 7 show in cartoon fashion the current concept of the basement in southern Alberta where the thick Hearne Province lithospheric mantle is surrounded by younger and thinner structural domains. It seems reasonable that this model could be extended westward to the extension of the Hearne Domain under the Elkford area.

The presence of the Vulcan Low (Figure 3) in close proximity to the Elkford area can be seen to have a beneficial effect in regard to the prospectiveness of the Elkford field. It is clear that many of the most productive fields in the world are also located adjacent to major crustal features. There is probably a moderately strong positive causal relationship between the two. Examples include the Saskatchewan kimberlites adjacent to the Tabbernor Fault and its splays, the Sassandra fault in Cote d'Ivoire and Guinea (Aredor and Seguela fields), the Sengalo-Malian fault in northern Mali (Kenieba diamond field) and along fractures systems in Botswana (Orapa).

The Vulcan Low coincides with a gravity low and has also been mapped by seismic reflection data. There is little basement core data from the VL however a single Archean age core with a Paleoproterozoic overprint suggests that the low itself is a Paleo-Proterozoic aged structure and Ross 1995 felt that it was a fundamental crustal boundary.

A structure of such large magnitude in such close proximity to the Elkford field must be seen as auspicious in regard to the region being prospective for diamonds.

While Helmstaedt (1993) felt that there was no clear relationship between the emplacement of diamondiferous kimberlites and structure, the author holds a different opinion. It is clear that the presence of a major crustal break in close proximity to a diamond field suggests, that a mantle tapping structure would facilitate the transport of diamondiferous diatremes to the surface especially along related structural splays and fractures.

Conclusion

It can be concluded that while it is currently not possible to age date the underlying crust below the Ice property, indirect evidence points to a favourable Archean age. At the same time there is no direct, geophysical, conclusive evidence that can identify the thickness of the underlying lithosphere. The answer to this question is further obscured by the fact that the known kimberlitic diatremes are structurally transported from their point of intrusion above the original Triassic lithosphere. Indirect evidence in the form of G-9 and G-10 garnets as well as unresorbed macro-diamonds conclusively demonstrates that the ancient lithosphere at the time of intrusion was of the mantle friendly type. In general, indirect evidence supports the conclusion that the Ice Property diatremes were intruded into an archon in accordance with Clifford's Rule and so is most likely prospective for the discovery of economic diamond deposits.

In addition to the foregoing conclusion, the project area is located in close proximity to the Vulcan Low Domain, which has been interpreted to be a major crustal feature. The author believes that this makes the Elkford area prospective on a broad scale for the discovery of additional kimberlitic intrusions in a manner similar to many well known diamond fields.

Respectfully submitted
Robin E. Chisholm, B.Sc, P.Geol
Taiga Consultants Ltd
March 05,2001

CERTIFICATE - Robin E. Chisholm

I, Robin E. Chisholm, of 15 Roseview Drive NW in the City of Calgary in the Province of Alberta, do hereby certify that:

1 I am a Consulting Geologist with the firm of Taiga Consultants Ltd. with offices at Suite 301, 1000 - 8th Avenue SW, Calgary, Alberta.

2. I am a graduate of Carleton University, B.Sc. (Hons.) Geology (1977), and I have practised my profession continuously since graduation.

3. I am a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of Alberta; and I am a Fellow of the Geological Association of Canada.

4. I am the author of the report entitled " Ice Claims, Lithospheric Characteristics, dated March 05, 2001. I have not visited the properties mentioned in the report.

5. I own a minor shareholding in Skeena Resources Limited and do not expect to receive any interest (direct, indirect, or contingent) in the property described herein nor in the securities of or any related companies in respect of services rendered in the preparation of this report.

6. I hereby give my permission for the use of this report in a prospectus, in its complete and unedited form. Written permission of the author is required before publication of any excerpt or summary.

DATED at Calgary, Alberta, this 25 day of May, A.D. 2001.

Respectfully submitted,

PROFESSIONAL GEOLOGIST ROBIN E. CHISHOLM ALBERTA

Robin E. Chisholm, B.Sc., P.Geol., F.GAC

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Additional reading

Canadian Journal of Earth Science, Vol 28, Number 8, August 1991 "Precambrian basement of the Canadian Cordillera: isotopic insights", special edition.

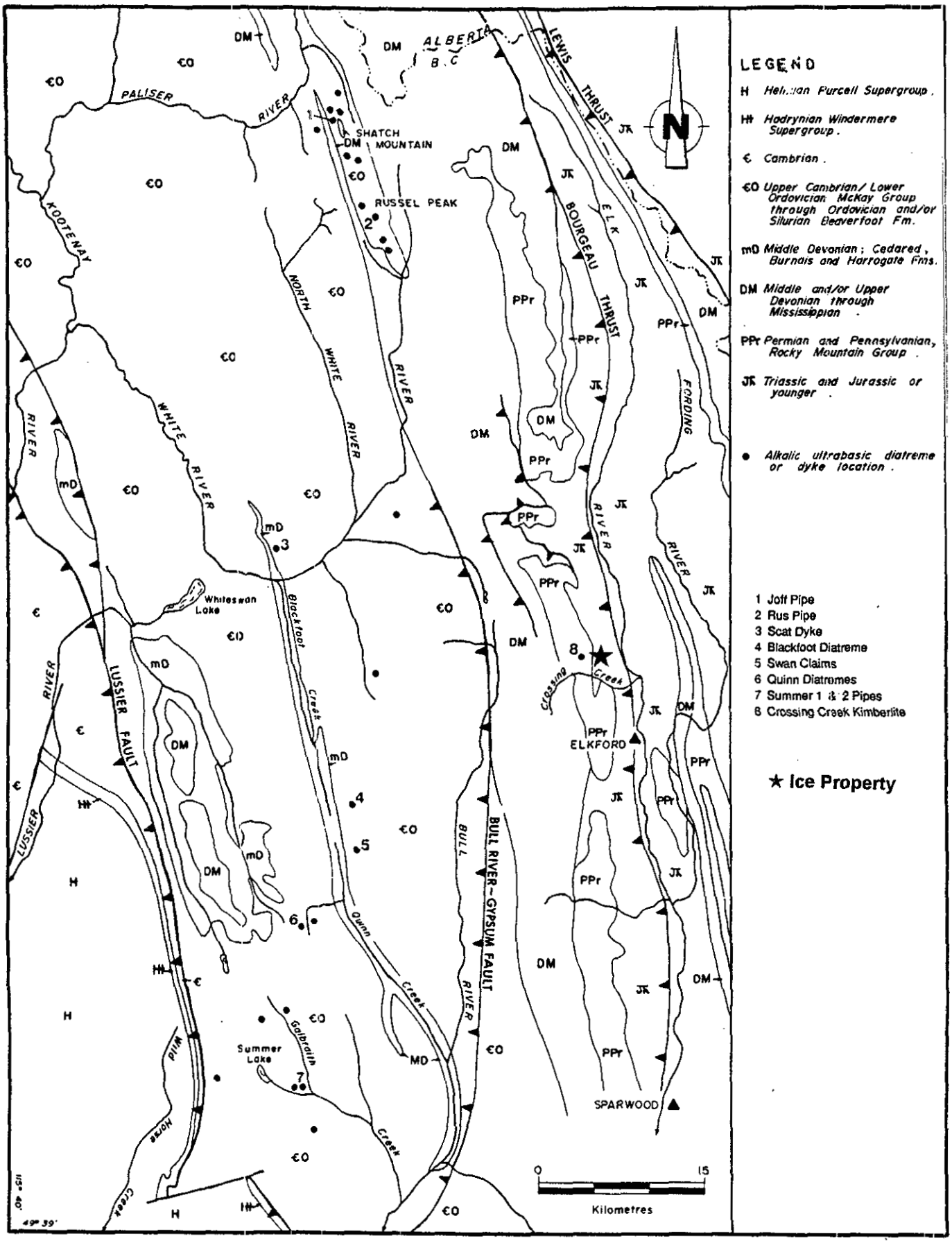
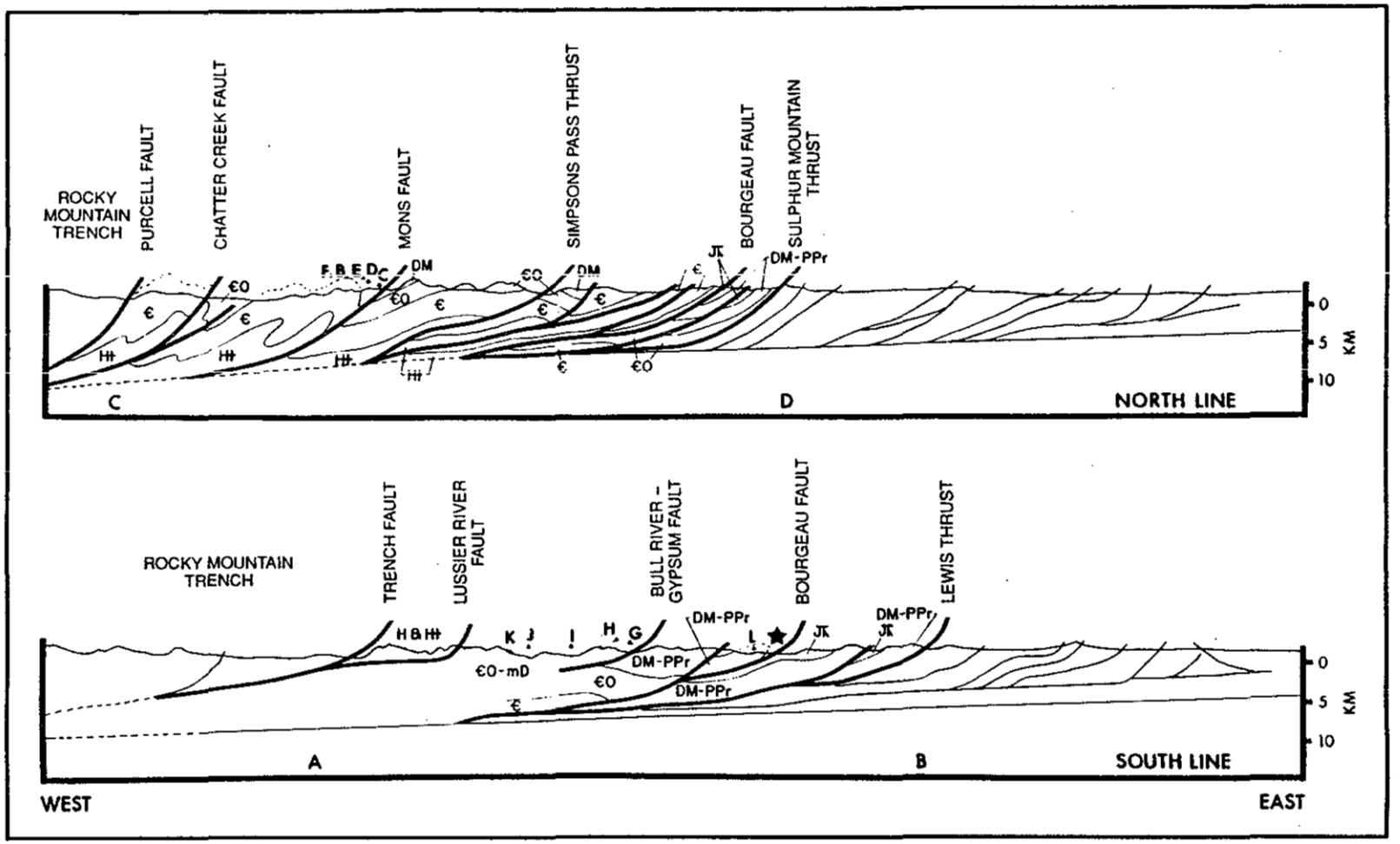


Figure 1. General geology and diatreme locations in the Bull River - White River area. Geology modified from Leech (1960, 1979) and Price (1981).

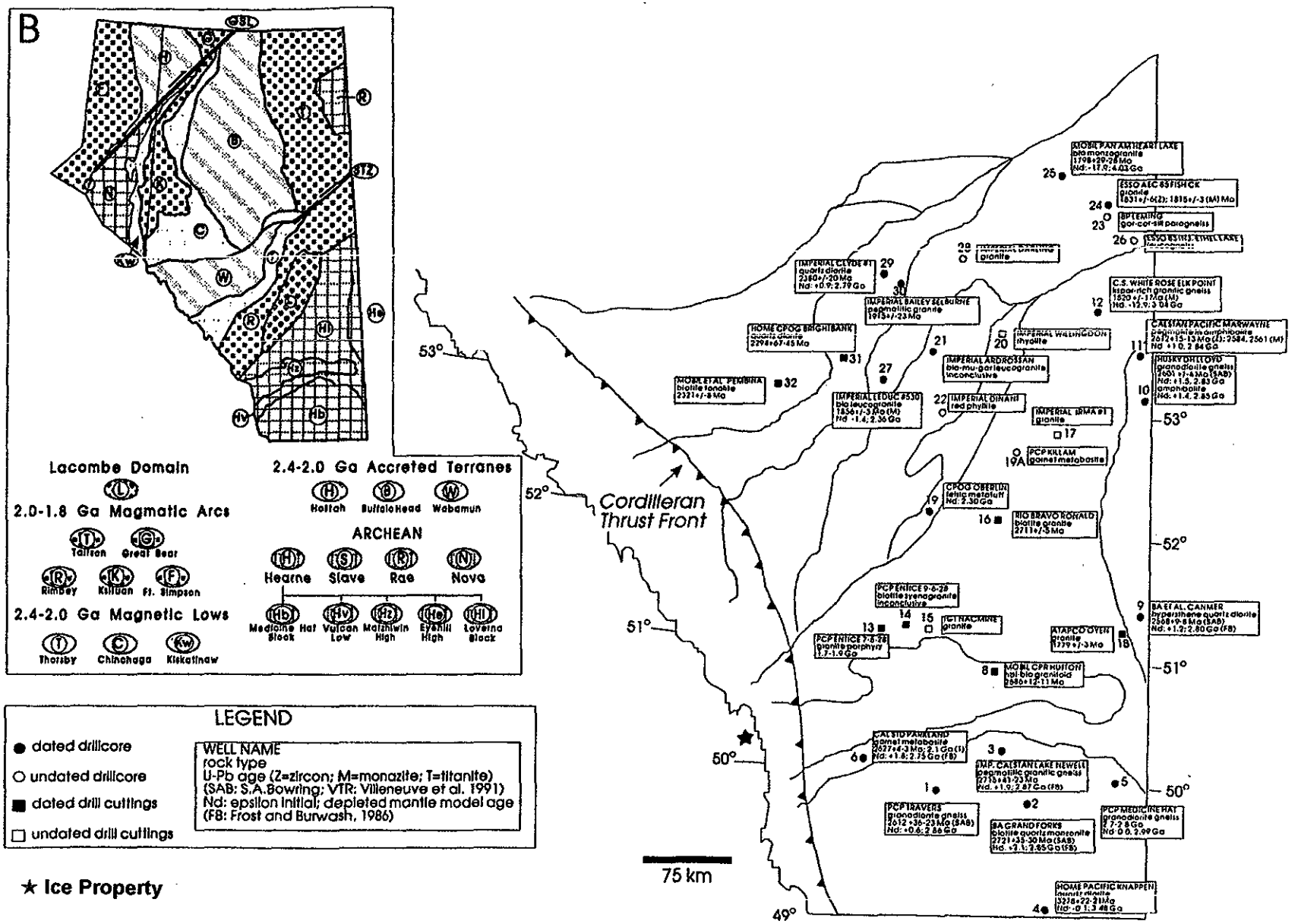
From Pell (1987)



From Pell (1987)

Figure 2 . Structural position of diatremes. B - Bush River; C - Lens Mountain; D - Mons Creek; E - Valenciennes River; F - HP pipe; G - Shatch Mountain; H - Russell Peak; I -Blackfoot; J - Quinn Creek; K - Summer; L - Crossing Creek. Geology modified from Wheeler (1963), Wheeler *et al.* (1972), Leech (1979), Price (1981).

★ Ice Property



From Villeneuve et. al. (1993)

Figure 3 . Summary map of the domain boundaries as mapped by this study. The domain boundaries are based upon the combination of aeromagnetic and gravity potential fields and U-Pb geochronology of material recovered from crystalline basement by hydrocarbon exploration wells. GSL = Great Slave Lake shear zone; STZ = Snowbird Tectonic Zone.

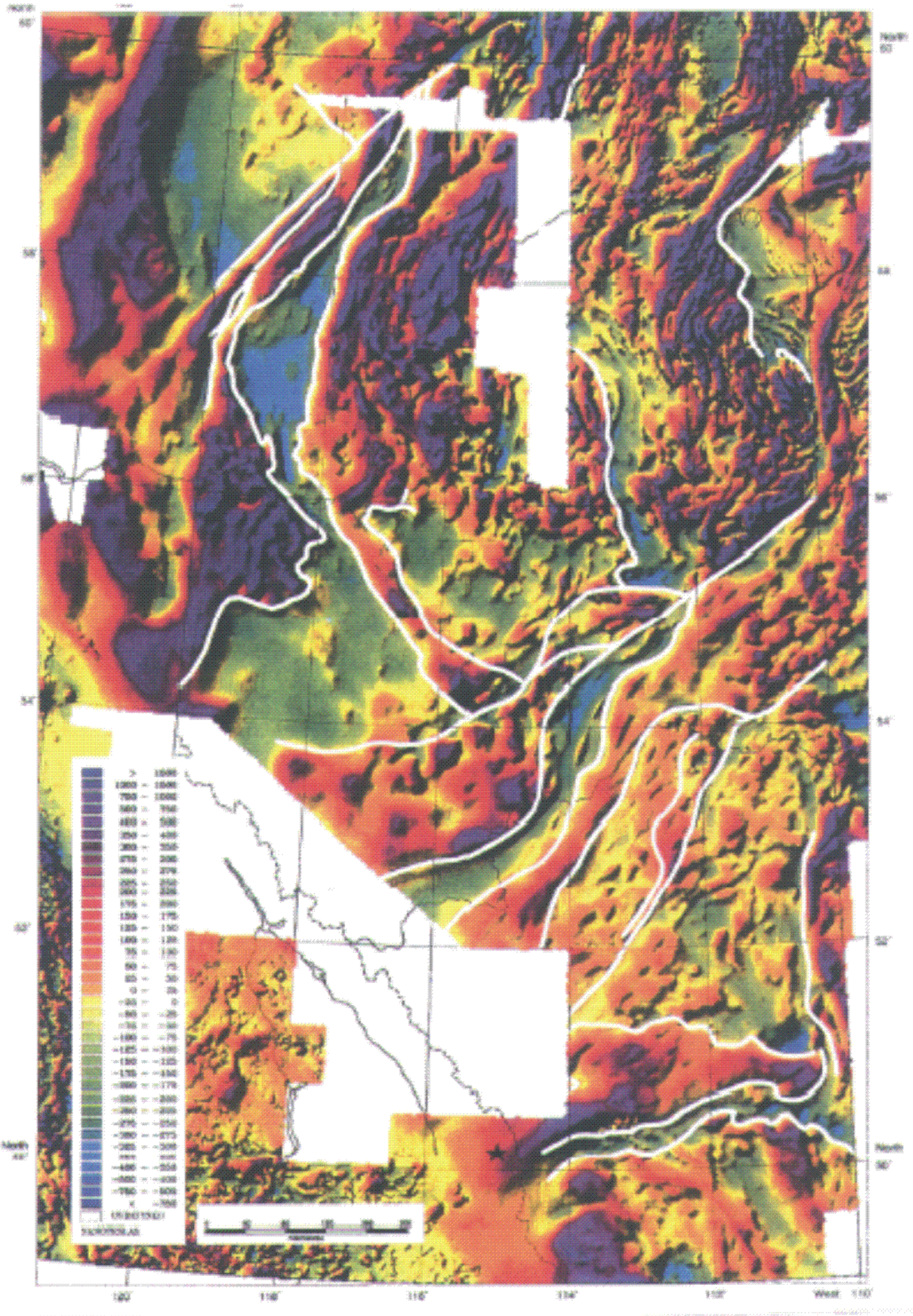
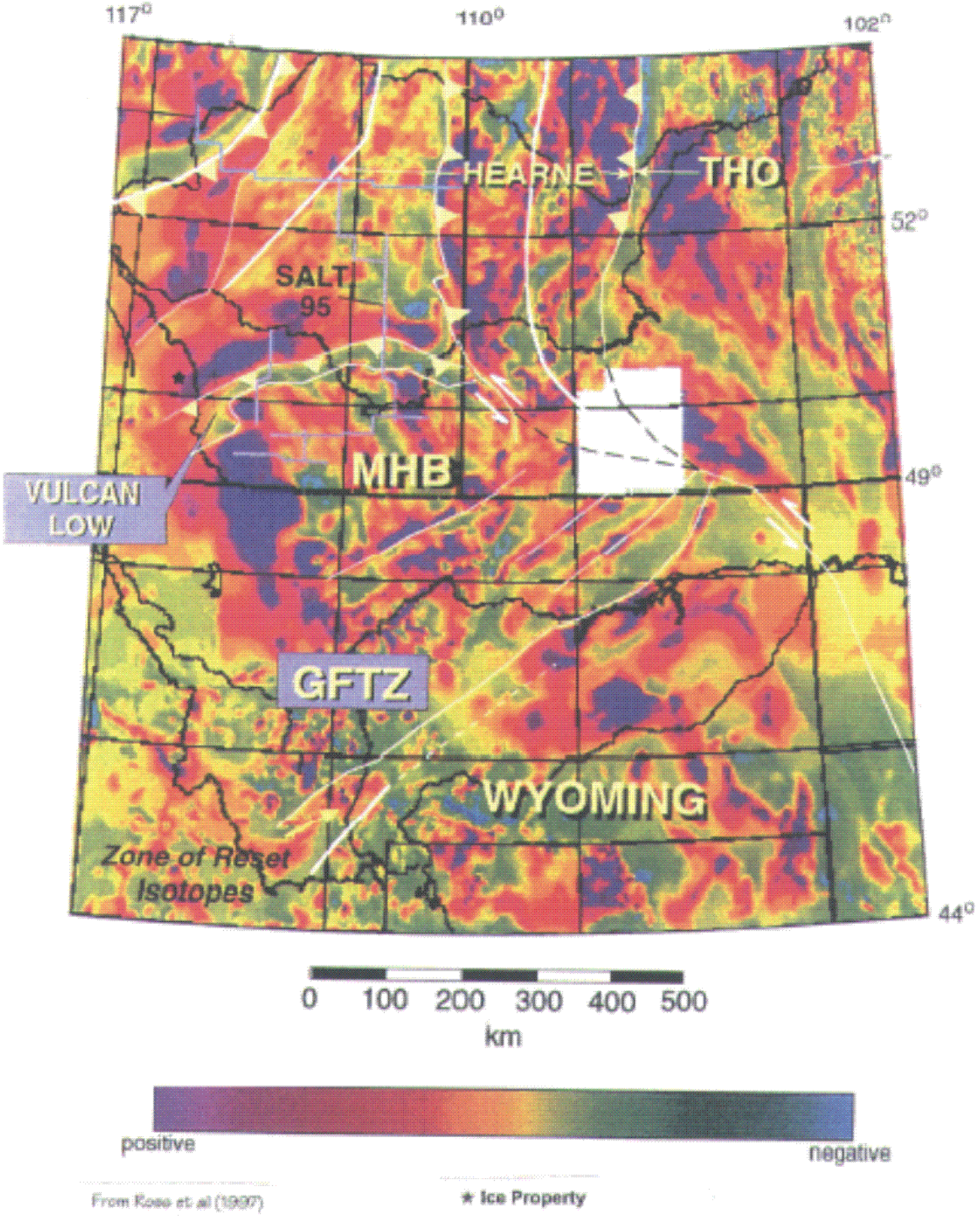


Figure 4

From Villeneuve et. al. (1993)


117°
110°
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HEARNE
THO
SALT
95
MHB
VULCAN
LOW
GFTZ
WYOMING
Zone of Reset
Isotopes
0 100 200 300 400 500
km
positive
negative
From Rose et al (1997)
★ Ice Property

Figure 5

Figure 4 Shaded relief map of aeromagnetic anomalies covering the Province of Alberta and the adjacent exposed portions of the Canadian Shield to the north and east. Some information from proprietary oil industry sources is not shown, but is used in the delineation of the domain boundaries in the regions of no data. Domain boundaries are overlaid for reference. Sun inclination= 40°, declination= 315°, vertical exaggeration= 100. Lambert conformal projection with central meridian at 114°W, standard parallels at 50.00° and 59° 10.00'.

Figure 5 : Composite aeromagnetic anomaly map covering northern Montana, southeastern Alberta and southwestern Saskatchewan. The white area is the eastern half of the maple Creek survey which is presently being acquired through a GSC-Industry-Lithoprobe consortium. The western half of the Maple Creek survey area was acquired in 1996 through this same consortium and provides new data for the southwesternmost corner of Saskatchewan. The CAT 1992 and SALT 1995 lines are shown. The white lines correspond to domain boundaries with trhust polarities shown if known. Note the apparent truncation of the GFTZ (Great Falls Tectonic Zone) fabric by the southern TransHudson Orogen (THO) and the apparent confluence of the Eyehill High-Vulcan Low into the fabrics of southern THO. The bold solid line within the Hearne corresponds to the approximate axis of the Hearne structural culmination across which the vergence flips. The left lateral (sinistral) shear sense along the western edge of the THO is derived from studies of the exposed shield (Hajnal et al., 1995).

Figure 6 : Schematic figure of the tectonic setting of the Hearne Province ca. 1.8 Ga. This true scale NW to SE cross-section shows schematically the consequences of including the lithospheric mantle as part of the collisional process. It is likely that the lithospheric mantle of the Hearne Province was substantially modified either through mechanical coupling between it and underriding plates (Thorsby and western TransHudson) and/or as a consequence of delamination associated with lithospheric thickening (Platt and England, 1994). The penetrative strain recorded in the Hearne can be explained as a consequence of the combined effects of high heat flow associated with delamination as well as high in-plane stress due to strong plate coupling across buoyant subduction zones (see for example England and Wortel, 1980).

Figure 7 : Schematic and simplified cross sections across sutures within the Canadian Shield (B and C) in comparison with a model suture (A) and the Vulcan Low (D). The gravity signature of the model suture contains a gravity low subparallel to the suture marking the zone of thickened lower crust (shaded) and the boundary between slightly higher density crust in the hanging wall of the suture zone (from Karner and Watts, 1983). Similar crustal geometries have been proposed on the basis of potential field profiles for the Slave-Churchill and Grenville-Superior boundaries (from Gibb et al., 1983). Modeling of the Vulcan Low (Medicine Hat-Hearne boundary) using geometries derived from seismic profiles is presently underway.