

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORTS

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**GEOCHEMICAL
ASSESSMENT REPORT**

**ON THE
IRON RANGE PROPERTY
BLUES 13-24 MINERAL CLAIMS
CRESTON AREA**

FORT STEELE and NELSON MINING DIVISION, B.C.

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,677

NTS: 82F/01W
LATITUDE: 49° 04' North
LONGITUDE: 116° 21' West
OWNER: Kenneth Linton Daughtry
OPERATOR: Discovery Consultants
AUTHORS: T.H. Carpenter, P.Geol.
D. Duba, Geologist
DATE: November 28, 1996

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INTRODUCTION

The Iron Range project area straddles the north-south trending, steeply dipping Iron Range Fault which extends over a distance of some 25 km from Iron Range Mountain to the north to Mount Thompson to the south of Highway #3.

The project area is located 10 km east of Creston, B.C. Historically the area was explored for iron-oxide mineralization, the most recent exploration for Fe-oxide being carried out in the 1950's by Cominco.

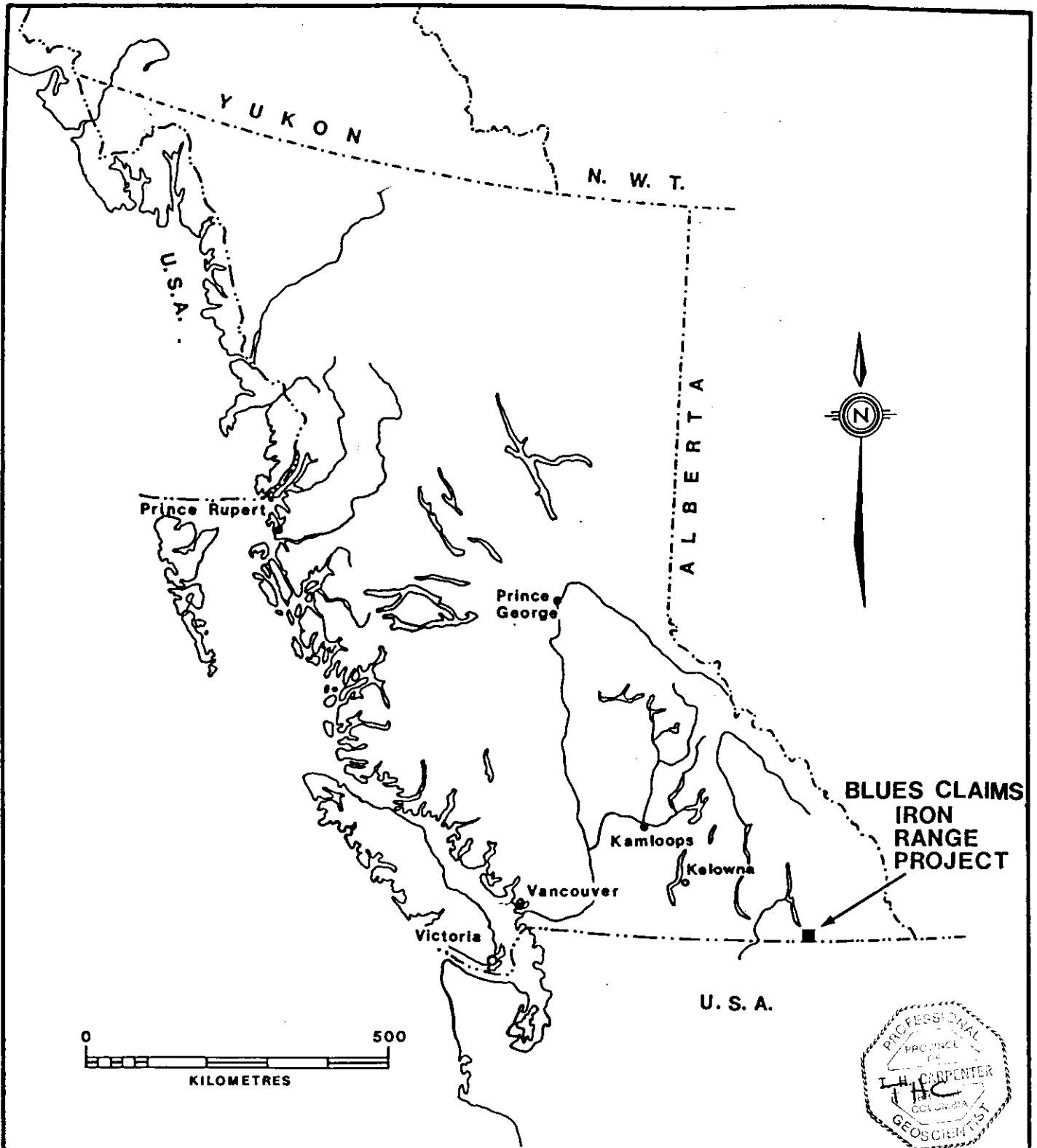
Exploration was carried out on the project area in 1995 and 1996 to assess the potential of the area for hosting an Olympic Dam-type iron oxide (copper-uranium-gold-silver-REE) deposit. In 1995 prospecting, combined with lithogeochemical and stream sediment surveys were used to explore for gold and base metal mineralization associated with the Proterozoic middle Aldridge Formation rocks. Areas of interest defined by this program were subsequently staked.

The 1996 program in the northern part of the project area comprised the staking of 20 claims over the area of anomalous gold and base metals in stream sediments, prospecting, and the collection of contour soil samples over anomalous drainages. At the south end of the project area additional stream sediment surveys were carried out over prospective areas.

LOCATION AND ACCESS

The Iron Range project area is located in NTS 82F/01W and 08W and ranges from latitude 49°17'N, longitude 116°25'W to latitude 49°03'N, longitude 116°21'W, 10 km east of Creston, B.C. (Figure 1).

Access can be gained off Highway #3 at McConnel via the Goat River and Hall Creek Forest Service roads to the north end of the area, via the Arrow Creek road at Arrow Creek to the central part of the property and via the Little Moyie River Forest Service Road at Goatfell to the south end of the project area.



DISCOVERY Consultants

DIA MET MINERALS LTD.

IRON RANGE PROJECT
BLUES CLAIMS

LOCATION MAP

DATE: May / 1996

PROJECT: 399

SCALE: As Shown

N.T.S.: 82F/1,8

M.D. NELSON

FIGURE: 1

TOPOGRAPHY

The project area comprises the ridge of Iron Range Mountain to the north of Highway #3 to the area of Mount Thompson to the south of Highway #3.

The flanks of Iron Range Mountain are steep. Elevations range from 2200' (670 m) on the Goat River to in excess of 7000' (2134 m) on Mount Thompson.

PROPERTY

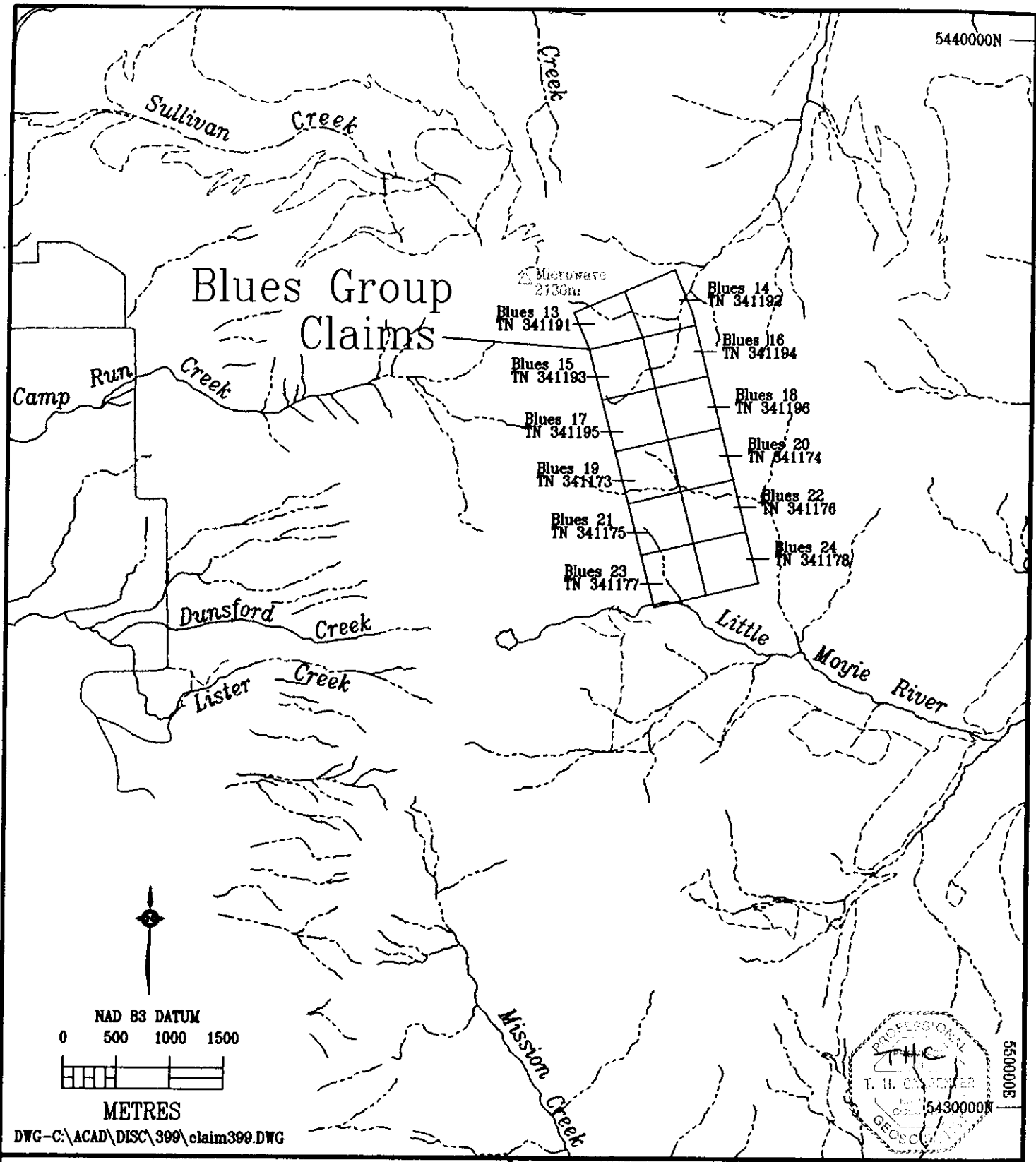
The property comprises one hundred crown granted and two post claims as listed below. Claims pertinent to this report are shown on Figure 2.

<u>Claim Name</u>	<u>Record No.</u>	<u>Owner of Record</u>	<u>Anniversary Date</u>
Agnes	L 5790	C.P. Rail System	N/A
American Flag	L 5767	C.P. Rail System	N/A
American Flag Fr.	L 5770	C.P. Rail System	N/A
Atlantic	L 5785	C.P. Rail System	N/A
Blues #13	341191	K.L. Daughtry	October 8, 1997
Blues #14	341192	K.L. Daughtry	October 8, 1997
Blues #15	341193	K.L. Daughtry	October 18, 1997
Blues #16	341194	K.L. Daughtry	October 18, 1997
Blues 17	341195	K.L. Daughtry	October 18, 1997
Blues 18	341196	K.L. Daughtry	October 18, 1997
Blues 19	341173	K.L. Daughtry	October 18, 1997
Blues 20	341174	K.L. Daughtry	October 18, 1997
Blues 21	341175	K.L. Daughtry	October 18, 1997
Blues 22	341176	K.L. Daughtry	October 18, 1997
Blues 23	341177	K.L. Daughtry	October 18, 1997
Blues 24	341178	K.L. Daughtry	October 18, 1997
Bob Cat	L 9719	K.L. Daughtry	N/A
Bon Ton	L 9720	K.L. Daughtry	N/A
Canada	L 5791	C.P. Rail System	N/A
Cracker Jack	L 5778	C.P. Rail System	N/A
Cracker Jack Fr.	L 5781	C.P. Rail System	N/A
Creston	L 5766	C.P. Rail System	N/A
Creston Fraction	L 5839	C.P. Rail System	N/A
Cymric	L 5780	C.P. Rail System	N/A
Cynic	L 5779	C.P. Rail System	N/A
Cynic Fraction	L 5782	C.P. Rail System	N/A
Czar Fr.	L 5833	K.L. Daughtry	N/A
Dakota	L 5783	C.P. Rail System	N/A
Golden Cap	L 5544	K.L. Daughtry	N/A
Golden Crown	L 5543	K.L. Daughtry	N/A
Idaho	L 5784	K.L. Daughtry	N/A
Jazz #1	341244	K.L. Daughtry	October 10, 1998
Jazz #2	341245	K.L. Daughtry	October 10, 1998
Jazz 3	341246	K.L. Daughtry	October 10, 1998
Jazz 4	341247	K.L. Daughtry	October 12, 1998
Jazz 5	341248	K.L. Daughtry	October 12, 1998
Jazz 6	341249	K.L. Daughtry	October 12, 1998
Jazz 7	341250	K.L. Daughtry	October 12, 1998
Jazz 8	341251	K.L. Daughtry	October 12, 1998

<u>Claim Name</u>	<u>Record No.</u>	<u>Owner of Record</u>	<u>Anniversary Date</u>
Jazz 9	341252	K.L. Daughtry	October 13, 1998
Jazz 10	341253	K.L. Daughtry	October 13, 1998
Jazz 11	341254	K.L. Daughtry	October 13, 1998
Jazz 12	341255	K.L. Daughtry	October 14, 1998
Jazz 13	341256	K.L. Daughtry	October 14, 1998
Jazz 14	341257	K.L. Daughtry	October 14, 1998
Jazz 15	341258	K.L. Daughtry	October 14, 1998
Jazz 16	341259	K.L. Daughtry	October 14, 1998
Jazz 17	341260	K.L. Daughtry	October 14, 1998
Jazz 18	341261	K.L. Daughtry	October 14, 1998
Jazz 20	341263	K.L. Daughtry	October 14, 1998
Jazz 21	341264	K.L. Daughtry	October 15, 1998
Jazz 22	341265	K.L. Daughtry	October 15, 1998
Jazz 23	341266	K.L. Daughtry	October 15, 1998
Jazz 24	341267	K.L. Daughtry	October 15, 1998
Jazz 25	341268	K.L. Daughtry	October 15, 1998
Jazz 26	341269	K.L. Daughtry	October 15, 1998
Jolly Boy	L 9718	K.L. Daughtry	N/A
Keepsake	L 5774	C.P. Rail System	N/A
La Grande	L 5776	C.P. Rail System	N/A
Maple Leaf	L 5772	C.P. Rail System	N/A
Montreal	L 5793	C.P. Rail System	N/A
Montreal Fraction	L 5835	C.P. Rail System	N/A
Niagara	L 12535	K.L. Daughtry	N/A
O Ray	L 5768	C.P. Rail System	N/A
Old Glory	L 5787	C.P. Rail System	N/A
Osborne	L 5795	C.P. Rail System	N/A
Pacific	L 5786	C.P. Rail System	N/A
Rambler	L 5838	K.L. Daughtry	N/A
Rattler	L 5837	K.L. Daughtry	N/A
Rhodesia	L 5775	C.P. Rail System	N/A
Scotland	L 5794	C.P. Rail System	N/A
Scotland Fraction	L 5840	C.P. Rail System	N/A
Snow Cap	L 5777	C.P. Rail System	N/A
Toronto	L 5792	C.P. Rail System	N/A
Union Jack	L 5765	C.P. Rail System	N/A
Union Jack Fraction	L 5769	C.P. Rail System	N/A
Vermillion	L 9723	K.L. Daughtry	N/A
X Ray	L 5771	C.P. Rail System	N/A
X Ray Fraction	L 5773	C.P. Rail System	N/A
Rock 1	351445	K.L. Daughtry	September 30, 1997
Rock 2	351465	K.L. Daughtry	September 30, 1997
Rock 3	354466	K.L. Daughtry	September 30, 1997
Rock 4	351467	K.L. Daughtry	September 30, 1997
Rock 5	351468	K.L. Daughtry	September 30, 1997
Rock 6	351469	K.L. Daughtry	September 30, 1997
Rock 7	351470	K.L. Daughtry	September 30, 1997
Rock 8	351471	K.L. Daughtry	September 30, 1997

<u>Claim Name</u>	<u>Record No.</u>	<u>Owner of Record</u>	<u>Anniversary Date</u>
Rock 9	351472	K.L. Daughtry	October 1, 1997
Rock 10	351473	K.L. Daughtry	October 1, 1997
Folk 1	351474	K.L. Daughtry	October 1, 1997
Folk 2	351475	K.L. Daughtry	October 1, 1997
Folk 3	351476	K.L. Daughtry	October 1, 1997
Folk 4	351477	K.L. Daughtry	October 1, 1997
Folk 5	351478	K.L. Daughtry	October 1, 1997
Folk 6	351479	K.L. Daughtry	October 3, 1997
Folk 7	351480	K.L. Daughtry	October 3, 1997
Folk 8	351481	K.L. Daughtry	October 3, 1997
Folk 9	351482	K.L. Daughtry	October 3, 1997
Folk 10	351483	K.L. Daughtry	October 3, 1997

5440000N



DWG-C:\ACAD\DISC\399\claim399.DWG

DISCOVERY Consultants

DIA MET MINERALS LTD.

BLUES CLAIMS

Claim Location Map

HISTORY

Earliest reported work on the Iron Range area was carried out in 1897 and comprised staking of quartz-hematite-magnetite mineralization. Over the next five years several shafts, adits and trenches were completed.

Between 1919 and 1925 only sporadic work was carried out in the area.

In 1957 Consolidated Mining and Smelting (Cominco) re-opened an access road to the summit of Iron Range Mountain and exposed the main mineralized zone over a 6 km length along the north part of Iron Range Mountain.

REGIONAL GEOLOGY

Lithology

The Iron Range area is underlain predominantly by sedimentary rocks of the middle Aldridge Formation which form part of the Proterozoic Purcell Supergroup. Rocks of the Purcell Supergroup have been folded into a large anticlinorium which is a broad north plunging structure covered by rocks of the Purcell Supergroup and flanked by late Proterozoic Windermere rocks and lower Paleozoic platformal sediments.

In the Iron Range area, the middle Aldridge Formation forms the cover of the Goat River anticline which dips gently north to northwest. The middle Aldridge Formation comprises interbedded grey quartz-wacke and laminated siltstone intruded by regionally extensive meta-gabbro sills known as the Moyie sills. Rare, dark green mafic dykes with abundant xenoliths/phenocrysts? intrude older rocks in the northern part of the project area.

Structure

The dominant structural feature in the area is the steeply dipping, north-south trending Iron Range Fault. It extends over a distance of 25 kms and is marked by a prominent strong aeromagnetic anomaly along Iron Range Mountain. Several parallel faults occur to the east and northeast of the Iron Range Fault.

The Iron Range iron-oxide deposit is contained within the widest segment of the fault zone.

The main deformation event produced brittle effects in

sedimentary rocks and ductile deformation/shearing parallel to the strike of the iron oxide deposit in gabbroic sills.

Alteration

Several alteration types are associated with the Iron Range iron oxide deposit. These are as follows:

1. Sericitization. Is widespread, especially in sedimentary rocks and extends outwards from the fault zone for about 500 to 1000 metres (Stinson and Brown, 1994).
2. Albitization. Affects both sedimentary and gabbroic rocks in the fault zone. These are typically strongly brecciated and bleached due primarily to the presence of abundant albite. Locally original textures of host rocks are completely obliterated and replaced by albite (i.e. albitite).
3. Silicification. Is typically localized and commonly occurs in the form of discrete quartz veining (hematite-quartz \pm magnetite breccia). Some pervasive silicification of sedimentary and gabbroic rocks is also observed.
4. Chloritization. Gabbro bodies are strongly foliated and extensively chloritized.
5. Hematization. Pervasive hematization occurs throughout the mineralized zone.

In the southern part of the project area in the vicinity of Mount Thompson, outcrops are fairly scarce in the vicinity of the

projected Iron Range Fault. The rare rock exposures and angular float reveal similar types of alteration as observed in the northern part of Iron Range Mountain. Middle Aldridge sediments have undergone various degrees of brecciation with associated silicification and/or albitization near the Iron Range fault.

MINERALIZATION

The mineralized zone consists of discontinuous lenses of massive hematite, and lesser magnetite, from 0.5 to 5 metres wide separated by a wider zone of brecciated, silicified and/or albitized or chloritized host rocks with fragments supported by a matrix of granular hematite ± white quartz. The abundance of hematite matrix in the breccia varies from 30 to 80%. Two phases of quartz veining recognized by Stinson and Brown (1994) are: early, grey quartz with up to 10% granular hematite and younger white quartz which locally contains minor, coarsely crystalline hematite (± magnetite) and chips of massive fine grained hematite. Early grey quartz-hematite veins have locally well developed cataclastic textures which have been interpreted to represent the emplacement of mineralization synchronous with movement across the Iron Range Fault (Stinson and Brown, 1994).

A style of mineralization observed in angular float only in the Mount Thompson area shows a similarity to mineralization from Iron Range Mountain. It consists of hematite-quartz ± magnetite breccia. Rare chalcopyrite is associated with hematite-quartz breccia.

WORK COMPLETED

The 1996 work program on the Iron Range project area comprised soil sampling along contour lines and compass lines and limited rock and stream sediment sampling.

The soil sampling was carried out in the northern part of the property, largely in the vicinity of the Jazz claims and is covered in a separate report.

Stream sediment sampling, comprising the collection of 11 silt and 2 heavy mineral samples, was carried out at the south end of the property, on and in the vicinity of the Blues claims, at the headwaters of the Little Moyie River. One rock sample was also collected in the area.

1.0 Heavy Mineral Stream Sediment Sampling

a) Program Parameters

Heavy mineral drainage sampling entails the sampling of gravels, sands and silts from creek beds. The material is sieved in the field until approximately 10 kg of -20 mesh material is obtained. The sample is then shipped to C.F. Minerals Ltd. of Kelowna for heavy mineral separation. Fractions are produced according to grain size, specific gravity and magnetic susceptibilities.

Based on the results of previous analysis of the various fractions it was determined that the best results are contained in the -35+60 IP/HP fractions for base metal and silver values

and in the -100 HN fraction for gold values.

The -35+60 IP/HP fractions comprise the <35 mesh, >60 mesh intermediate (specific gravity of 2.7 to 3.27 g/cc) to heavy (specific gravity >3.27 g/cc) paramagnetic minerals.

Paramagnetic (P) minerals include garnets, hornblende and epidote. The IP + HP fractions commonly contain secondary zinc and lead minerals.

The -100 HN fraction (<100 mesh, >3.2 specific gravity, non-magnetic) includes native gold, pyrite and many base metal sulphides as well as accessory minerals such as zircon.

Two heavy mineral samples were collected near the south end of the Blues claims.

The -100 HN fractions from these samples were sent to Becquerel Laboratories Inc. in Mississauga, Ontario for non-destructive analysis by neutron activation of copper, lead and zinc, followed by ICP analysis upon "cooling".

Analytical results are listed in Appendix 1.

b) Program Results

Maximum values of 560 ppm copper, 207 ppm lead and 354 zinc were obtained in the heavy mineral sampling. These results are shown on Figures 4, 5 and 6 and are not significantly anomalous.

2.0 Silt Sampling

a) Program Parameters

A total of eleven silt samples was collected at the headwaters of the Little Moyie River on and in the vicinity of

the south end of the Blues claims.

These samples, comprising silt and mud, were collected from active drainages on the property, placed in kraft sample bags and shipped to Inchcape Testing Services in North Vancouver, B.C. for analysis. At Inchcape the samples were dried, sieved to -80 mesh and analyzed for Au (30 g - F.A. and A.A) and 34 other elements by ICP analysis.

Analytical results are listed in Appendix 1.

b) Program Results

No significant base metal anomalies were noted in the silt analyses. Maximum values of 120 ppm, 33 ppm and 26 ppm were obtained for Zn, Pb and Cu respectively (Figures 4, 5, 6). These values are similar to those obtained in previous silt samples collected at the north end of the project area.

No anomalous values in gold were obtained in the silt samples (Figure 7).

The single rock sample analyzed, 399TC-16 was collected at the IRM 028 sample site. Maximum values obtained in the sample were 88 ppm Zn and 35 ppm Cu.

A sample description is contained in Appendix 1.

CONCLUSIONS and RECOMMENDATIONS

Silt and heavy mineral stream sediment sampling at the south end of the Iron Range project area have failed to detect base and precious metal values associated with Olympic Dam style mineralization.

Given the lack of encouragement in the latest phase of exploration, no further work is warranted at this time.

Respectfully submitted,
DISCOVERY CONSULTANTS

T.H. Carpenter, P.Geo.



D. Duba, Geologist

Vernon, B.C.

November 28, 1996

REFERENCES

- Brown, D.A. and Stinson, P., 1995, Geologic Mapping of the Yahk Map Area, Southeastern British Columbia (82F/1): An update; in Geological Fieldwork 1994, Grant, B. and Newell, J.M., Editors; B.C. Ministry of Energy, Mines, and Petroleum Resources, Paper 1995-1.
- Duba, D., 1996, Progress Report on the Iron Range Project, Creston Area, B.C. for Dia Met Minerals Ltd.
- Reeve, J.S., Cross, K.C., Smith, R.N, and Oreskes, N. 1990, The Olympic Dam Copper-Uranium-Gold-Silver Deposit, South Australia; in Geology of Mineral Deposits of Australia and Papua New Guinea, Hughes, F., Editor; Australian Institute of Mining and Metallurgy, Monograph 14, pages 1009-1035.
- Stinson, P. and Brown, D.A., 1995, Iron Range Deposits, southeastern British Columbia (82F/1); in Geological Fieldwork 1994, Grant, B. and Newell, J.M. Editors, B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 1995-1, p. 127-134.

STATEMENT OF COSTS

1.	Professional Services		
	T. Carpenter		
	Field - 1 days @ \$450/day	\$450.00	
	Report Writing - 1 day @ \$450/day	<u>450.00</u>	\$ 900.00
2.	Field Personnel		
	Silt Sampling		
	D. Orme		
	0.5 day @ \$171.20/day	85.60	
	J. Kenner		
	0.5 day \$171.20/day	<u>85.60</u>	171.20
3.	Geochem		
	a) Preparation		
	6 silt @ \$3.70/sample	22.20	
	1 heavy mineral @ \$129.00	129.00	
	b) Analyses		
	30 g gold + 34 element geochem ICP		
	6 silt @ \$16/sample	96.00	
	34 element geochem ICP		
	1 HM @ \$8.15	<u>8.15</u>	255.35
4.	Drafting		75.00
5.	Data compilation, secretarial		50.00
6.	Field supplies, equipment		18.29
7.	Printing, Data processing etc.		40.00
8.	Lodging and Meals		<u>123.45</u>
			1633.29
9.	Transport (4x4 truck)		
	\$175		<u>175.00</u>
			\$ 1808.29
		gst	<u>126.58</u>
		Total	<u>\$ 1934.87</u>

STATEMENT OF QUALIFICATIONS

I, THOMAS H. CARPENTER of 3902 14th Street, Vernon, B.C.,
V1T 3V2, DO HEREBY CERTIFY that:

1. I am a consulting geologist in mineral exploration associated with Discovery Consultants, Vernon, B.C.
2. I have been practising my profession for 23 years.
3. I am a graduate of the Memorial University of Newfoundland with a Bachelor of Science degree in geology.
4. I am a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia.
5. This report is based upon knowledge of the Iron Range property gained from field work and supervision.
6. I hold no interest either directly or indirectly in the Iron Range property.

T.H. Carpenter, P.Geo.

A circular stamp is partially visible behind the signature. The signature is written in black ink and reads "T.H. Carpenter". The stamp appears to be a professional seal or registration mark, but its details are obscured by the signature and the low resolution of the scan.

Vernon, B.C.
November 28, 1996

STATEMENT OF QUALIFICATIONS

I, DARIA DUBA, of R.R. #1, S.4, C.1, Naramata, B.C. VOH 1N0,
DO HEREBY CERTIFY that:

1. I am a consulting geologist in mineral exploration associated with Discovery Consultants, Vernon, B.C.
2. I am a 1978 graduate of Concordia University with a Bachelor of Science degree in geology.
3. I am a 1982 graduate of McGill University with a Master of Science degree in geology.
4. I have been practising my profession since graduation.
5. This report is based upon knowledge of the Iron Range property gained from research and field work.
6. I hold no interest either directly or indirectly in the Iron Range property.

D. Duba, M.Sc.

Vernon, B.C.
November 28, 1996

APPENDIX 1

ROCK SAMPLE DESCRIPTION AND ANALYTICAL RESULTS

Blues Claims - Rock Sample Description

399-TC-016

Rusty weathering rock at IRM-028 sample site. Fine grained and dark grey in fresh surface with black 1 mm phenos. Sulphides occur as bands to 2-3mm thick. Rock of indeterminate composition.

Project 399

Iron Range

file: 399Rock_96

Rock Sample Analyses (ICP)
1996

Reference : v96-01824.0

Sample ID	Au30 ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Fe %	Mn ppm
399TC 16	<5	<0.2	35	10	88	0.3	2	<5	<5	<5	19	8	35	3.36		404

Iron Range

Rock Sample Analyses (part 2)

Sample ID	Ba ppm	V ppm	Sr ppm	Y ppm	La ppm	Te ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %	K %	Ga ppm	Li ppm	Ti %
399TC 16	116	20	8	14	21	<10	<20	<20	1.85	1.12	0.15	0.03	1.13	5	18	0.16

Iron Range

Rock Sample Analyses (part 3)

Sample ID	Ta ppm	Sc ppm	Nb ppm	Zr ppm
399TC 16	<10	<5	<1	4

APPENDIX 2

SILT AND HEAVY MINERAL SAMPLE ANALYSES

Project 399

Iron Range

file: 399ISM_06.wk1

Silt Sample Analyses (ICP)

Blues Claims

1996

Reference : v96-01819.0

NB: Is = Insufficient Sample

Sample ID	Au30 ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm
399IRM-065	Is	<0.2	26	31	98	0.8	2	6	<5	<5	15	10	17	2.72	1091
399IRM-066	<5	1.1	24	33	82	0.8	12	10	<5	<5	13	8	34	2.08	600
399IRM-067	<5	<0.2	16	19	76	0.4	2	<5	<5	<5	12	10	17	2.00	766
399IRM-068	<5	<0.2	15	17	72	<0.2	<1	<5	<5	<5	12	9	15	1.92	637
399IRM-069	<5	<0.2	14	14	75	0.4	1	<5	<5	<5	11	8	15	1.95	642
399IRM-070	<5	<0.2	15	19	72	0.2	1	<5	<5	<5	11	7	12	1.72	347
399IRM-071	<5	<0.2	15	13	67	<0.2	<1	<5	<5	<5	11	6	12	1.69	279
399IRM-072	<5	<0.2	16	15	67	0.4	2	<5	<5	7	11	8	14	1.65	644
399IRM-073	<5	<0.2	18	21	120	0.4	2	<5	<5	<5	13	10	16	1.95	1073
399IRM-074	<5	<0.2	16	17	89	0.5	<1	<5	<5	<5	11	6	13	1.52	365
399IRM-075	<5	<0.2	15	17	82	0.5	1	<5	<5	<5	10	7	13	1.61	520

Duplicates:~~~~~
399IRM-067 5

Iron Range

Silt Sample Analyses (part 2)

Sample ID	Ba ppm	V ppm	Sr ppm	Y ppm	La ppm	Te ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %	K %	Ga ppm	Li ppm	Ti %
399IRM-065	82	25	44	35	51	<10	<20	<20	2.02	0.52	0.49	0.02	0.12	8	13	0.05
399IRM-066	63	22	54	47	61	<10	<20	<20	1.75	0.66	0.53	0.02	0.19	5	13	0.06
399IRM-067	55	21	23	18	28	<10	<20	<20	1.55	0.59	0.23	0.01	0.17	5	10	0.06
399IRM-068	56	19	17	15	24	<10	<20	<20	1.43	0.61	0.16	0.01	0.17	5	10	0.06
399IRM-069	62	18	22	15	24	<10	<20	<20	1.40	0.60	0.20	0.01	0.19	5	11	0.06
399IRM-070	53	12	19	15	27	<10	<20	<20	1.36	0.39	0.18	0.01	0.24	5	10	0.06
399IRM-071	47	15	12	12	24	<10	<20	<20	1.28	0.41	0.13	<0.01	0.21	4	9	0.06
399IRM-072	65	14	28	19	31	<10	<20	<20	1.38	0.40	0.36	0.01	0.18	8	11	0.04
399IRM-073	75	22	19	17	29	<10	<20	<20	1.70	0.45	0.37	0.01	0.17	10	11	0.05
399IRM-074	65	18	19	16	28	<10	<20	<20	1.56	0.41	0.25	0.01	0.18	5	10	0.05
399IRM-075	58	19	15	14	25	<10	<20	<20	1.56	0.42	0.18	0.01	0.17	6	10	0.05

Duplicates:

~~~~~  
399IRM-067

**Iron Range****Silt Sample Analyses (part 3)**

=====

| Sample ID  | Ta<br>ppm | Sc<br>ppm | Nb<br>ppm | Zr<br>ppm |
|------------|-----------|-----------|-----------|-----------|
| 399IRM-065 | <10       | <5        | 1         | 2         |
| 399IRM-066 | <10       | <5        | 1         | <1        |
| 399IRM-067 | <10       | <5        | 1         | <1        |
| 399IRM-068 | <10       | <5        | 1         | 1         |
| 399IRM-069 | <10       | <5        | 2         | 1         |
| 399IRM-070 | <10       | <5        | 2         | 2         |
| 399IRM-071 | <10       | <5        | 1         | 1         |
| 399IRM-072 | <10       | <5        | 1         | 1         |
| 399IRM-073 | <10       | <5        | 1         | 2         |
| 399IRM-074 | <10       | <5        | 2         | 1         |
| 399IRM-075 | <10       | <5        | 1         | 2         |

*Duplicates:*

-----  
399IRM-067

Project 399

## Iron Range

No: 300181\_06.wk1

Heavy Mineral Stream Sediment Sample Analyses (ICP)  
1996

Reference : v962162.0

| Sample ID | Ag<br>ppm | Cu<br>ppm | Pb<br>ppm | Zn<br>ppm | Cd<br>ppm | Mo<br>ppm | As<br>ppm | Sb<br>ppm | Bi<br>ppm | Ni<br>ppm | Co<br>ppm | Cr<br>ppm | Fe<br>% | Mn<br>ppm | Ba<br>ppm | V<br>ppm |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|-----------|-----------|----------|
| IRM028    | 0.6       | 205       | 207       | 354       | 2.1       | <1        | 376       | 21        | 22        | 124       | 97        | 36        | >10.00  | 1196      | 65        | 57       |
| IRM029    | 1.3       | 560       | 204       | 325       | 1.5       | 9         | 429       | 58        | 44        | 337       | 230       | 160       | >10.00  | 1023      | 23        | 95       |

## Iron Range

## Heavy Mineral Stream Sediment Sample Analyses (part 2)

| Sample ID | Sr<br>ppm | Y<br>ppm | La<br>ppm | Te<br>ppm | Sn<br>ppm | W<br>ppm | Al<br>% | Mg<br>% | Ca<br>% | Na<br>% | K<br>% | Ga<br>ppm | Li<br>ppm | Tl<br>% | Ta<br>ppm | Sc<br>ppm |
|-----------|-----------|----------|-----------|-----------|-----------|----------|---------|---------|---------|---------|--------|-----------|-----------|---------|-----------|-----------|
| IRM028    | 13        | 64       | 96        | 30        | <20       | <20      | 0.78    | 0.07    | 0.07    | <0.01   | 0.04   | 15        | 4         | 0.03    | <10       | <5        |
| IRM029    | 15        | 76       | 56        | 27        | 31        | <20      | 0.93    | 0.16    | 0.14    | 0.02    | 0.05   | <2        | 6         | 0.08    | <10       | 6         |

## Iron Range

## Heavy Mineral Stream Sediment Sample Analyses (part 3)

| Sample ID | Nb<br>ppm | Zr<br>ppm |
|-----------|-----------|-----------|
| IRM028    | <1        | 3         |
| IRM029    | 5         | 3         |



## **APPENDIX 3**

### **ANALYTICAL PROCEDURES**

# ANALYTICAL PROCEDURES

## Geochemical Analysis

by Bondar-Clegg :

| ELEMENT         |            | LOWER<br>DETECTION LIMIT | EXTRACTION                     | METHOD                        |
|-----------------|------------|--------------------------|--------------------------------|-------------------------------|
| Au              | Gold       | 5 ppb                    | fire-assay                     | atomic absorption             |
| Ag              | Silver     | 0.2 ppm                  | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Al*             | Aluminium  | 0.01 %                   | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| As              | Arsenic    | 5 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Ba*             | Barium     | 5 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Bi              | Bismuth    | 5 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Ca*             | Calcium    | 0.01 %                   | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Cd              | Cadmium    | 1 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Co*             | Cobalt     | 1 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Cr*             | Chromium   | 1 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Cu              | Copper     | 1 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Fe*             | Iron       | 0.01 %                   | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Ga              | Gallium    | 2 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Hg <sub>m</sub> | Mercury    | 10 ppb                   | HNO <sub>3</sub> -HCl leach    | cold vapour atomic absorption |
| K*              | Potassium  | 0.01 %                   | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| La*             | Lanthanum  | 1 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Li              | Lithium    | 1 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Mg*             | Magnesium  | 0.01 %                   | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Mn*             | Manganese  | 0.01 %                   | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Mo*             | Molybdenum | 1 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Na*             | Sodium     | 0.01 %                   | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Nb              | Niobium    | 1 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Ni*             | Nickel     | 1 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Pb              | Lead       | 2 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Sb*             | Antimony   | 5 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Sc              | Scandium   | 5 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Sn*             | Tin        | 20 ppm                   | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Sr*             | Strontium  | 1 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Ta              | Tantalum   | 10 ppm                   | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Te*             | Tellurium  | 10 ppm                   | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Ti              | Titanium   | 0.01 %                   | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| V*              | Vanadium   | 1 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| W*              | Tungsten   | 20 ppm                   | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Y               | Yttrium    | 1 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Zn              | Zinc       | 1 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |
| Zr              | Zirconium  | 1 ppm                    | HNO <sub>3</sub> -HCl hot extr | ind. coupled plasma           |

• Please note: certain mineral forms of those elements above marked with an asterisk will not be soluble in the HNO<sub>3</sub>/HCl extraction. The ICP data will be low biased.

• Please note: Hg will only be analysed upon request.

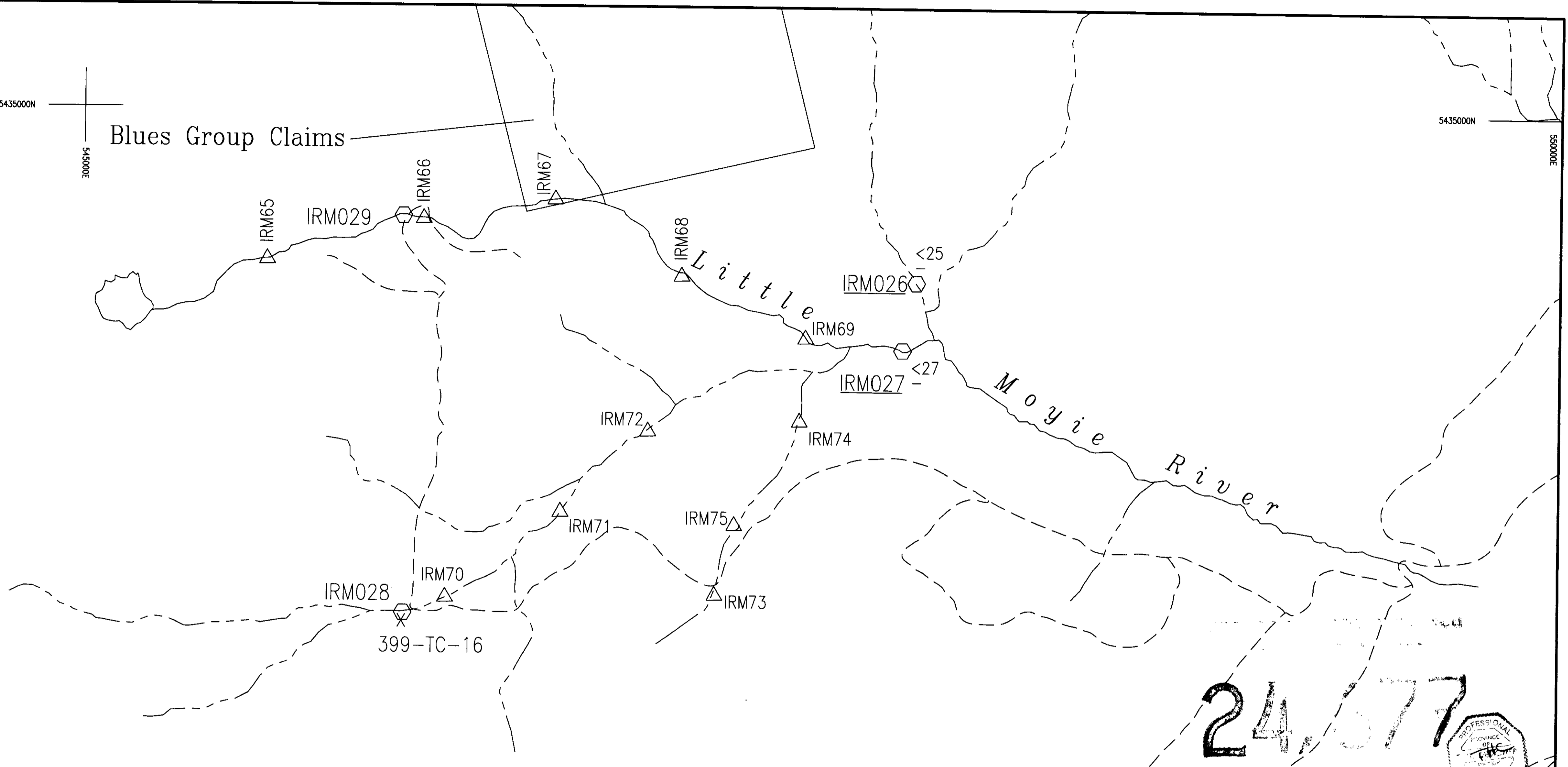
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550000E

Blues Group Claims

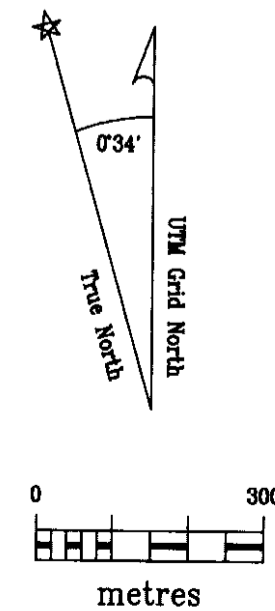
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24,577

**LEGEND**

- IRM027 Historical heavy mineral sample
- 25 Historical ppb gold in heavy mineral sample
- 5 Historical ppb gold in silt sample
- Indicates <5 ppb Au
- IRM079 Silt sample location
- IRM029 Heavy mineral sample location
- 399-TC-16 Rock sample location

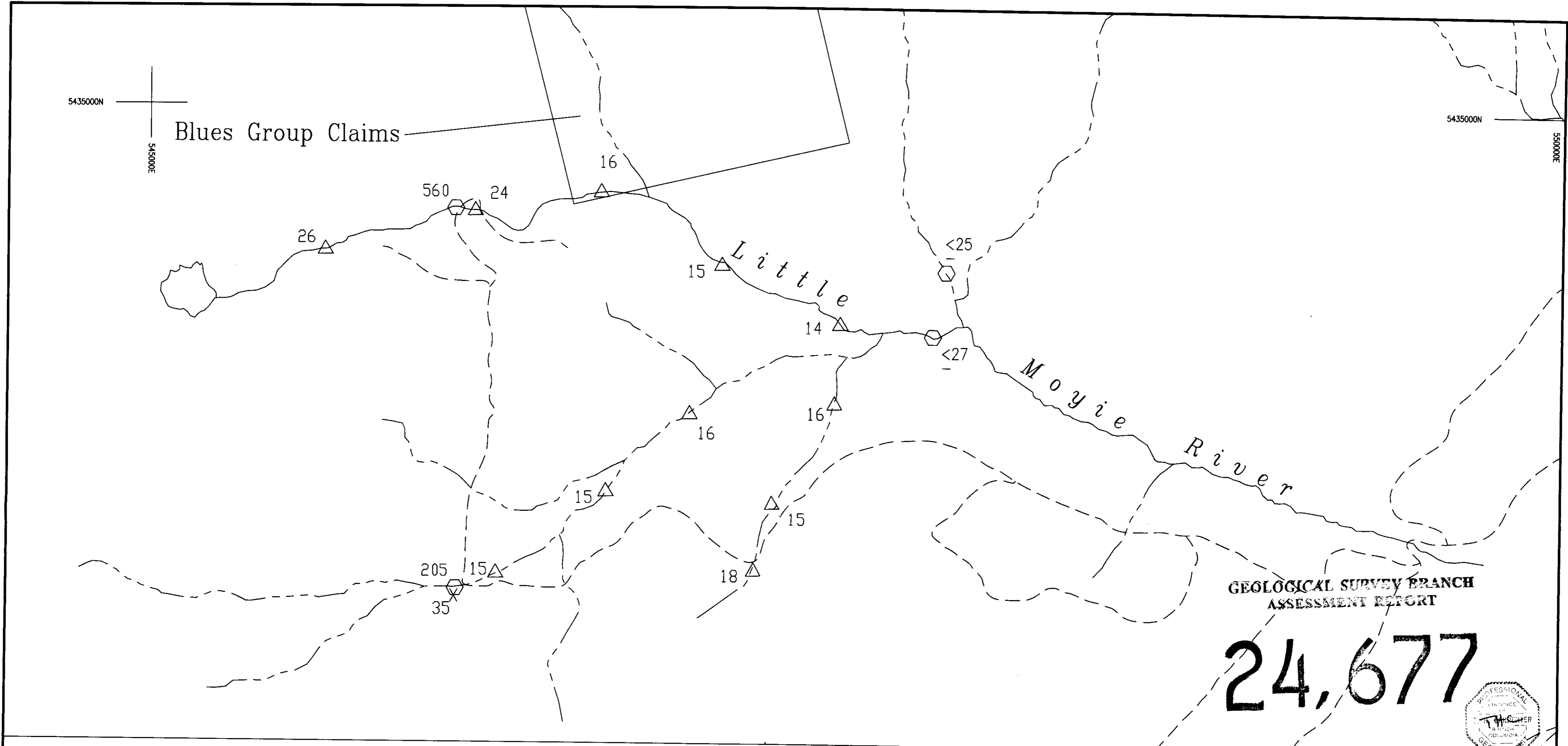


**DISCOVERY** Consultants

DIA MET MINERALS LTD.

Iron Range Project  
Blues Claims  
Stream Sediment Sampling  
Sample Location Map

|                   |                    |                                 |           |
|-------------------|--------------------|---------------------------------|-----------|
| Location: Creston |                    | Mining Jurisdiction: Ft. Steele |           |
| Datum: NAD83      | Map Ref.: 82/F01W  | Scale: 1:10000                  | UTM: 11   |
| Project: 399      | Date: Dec. 18/1996 | Drawn By: RM                    | Figure: 3 |



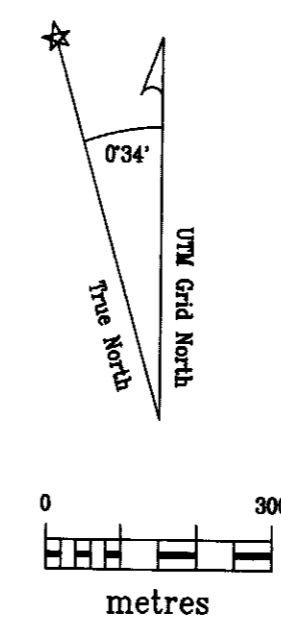
GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT

**24,677**



**LEGEND**

- Historical heavy mineral sample
- 25 Historical ppb gold in heavy mineral sample
- 5 Historical ppb gold in silt sample
- Indicates <5 ppb Au
- Silt sample location
- 65 Values shown in ppm copper
- Heavy mineral sample location
- 125 Values shown in ppm copper
- Rock sample location
- 125 Values shown in ppm copper



**DISCOVERY** Consultants

DIA MET MINERALS LTD.

Iron Range Project  
Blues Claims  
Stream Sediment Sampling  
Copper Values

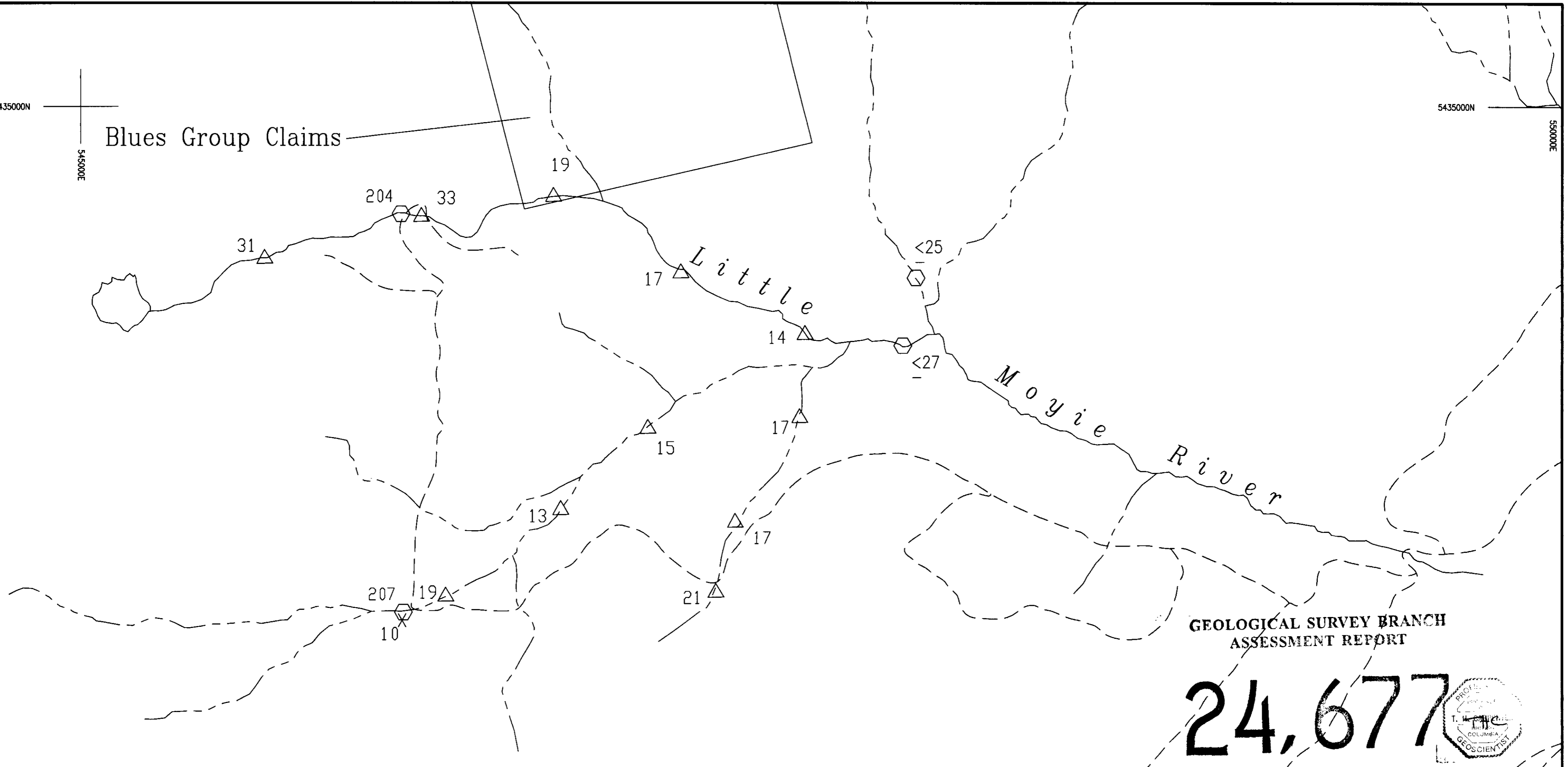
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|-------------------|--------------------|---------------------------------|-----------|
| Location: Creston |                    | Mining Jurisdiction: Ft. Steele |           |
| Datum: NAD83      | Map Ref.: 82/F01W  | Scale: 1:10000                  | UTM: 11   |
| Project: 399      | Date: Dec. 18/1996 | Drawn By: RM                    | Figure: 4 |

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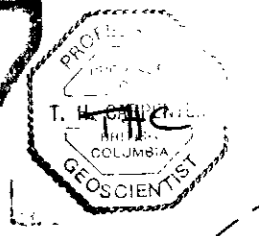
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Blues Group Claims







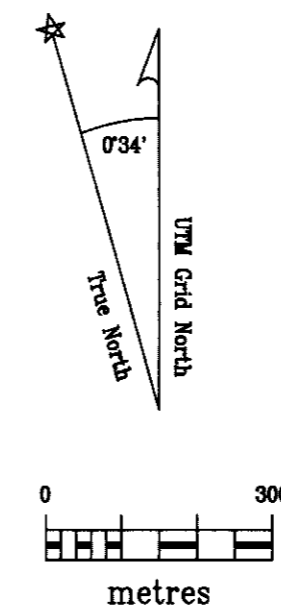
GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT

24,677



**LEGEND**

-  Historical heavy mineral sample
- 25 Historical ppb gold in heavy mineral sample
- 5 Historical ppb gold in silt sample
- Indicates <5 ppb Au
-  Silt sample location
- 85 Values shown in ppm lead
-  Heavy mineral sample location
- 256 Values shown in ppm lead
-  Rock sample location
- 152 Values shown in ppm lead



**DISCOVERY** Consultants

DIA MET MINERALS LTD.

Iron Range Project  
Blues Claims  
Stream Sediment Sampling  
Lead Values

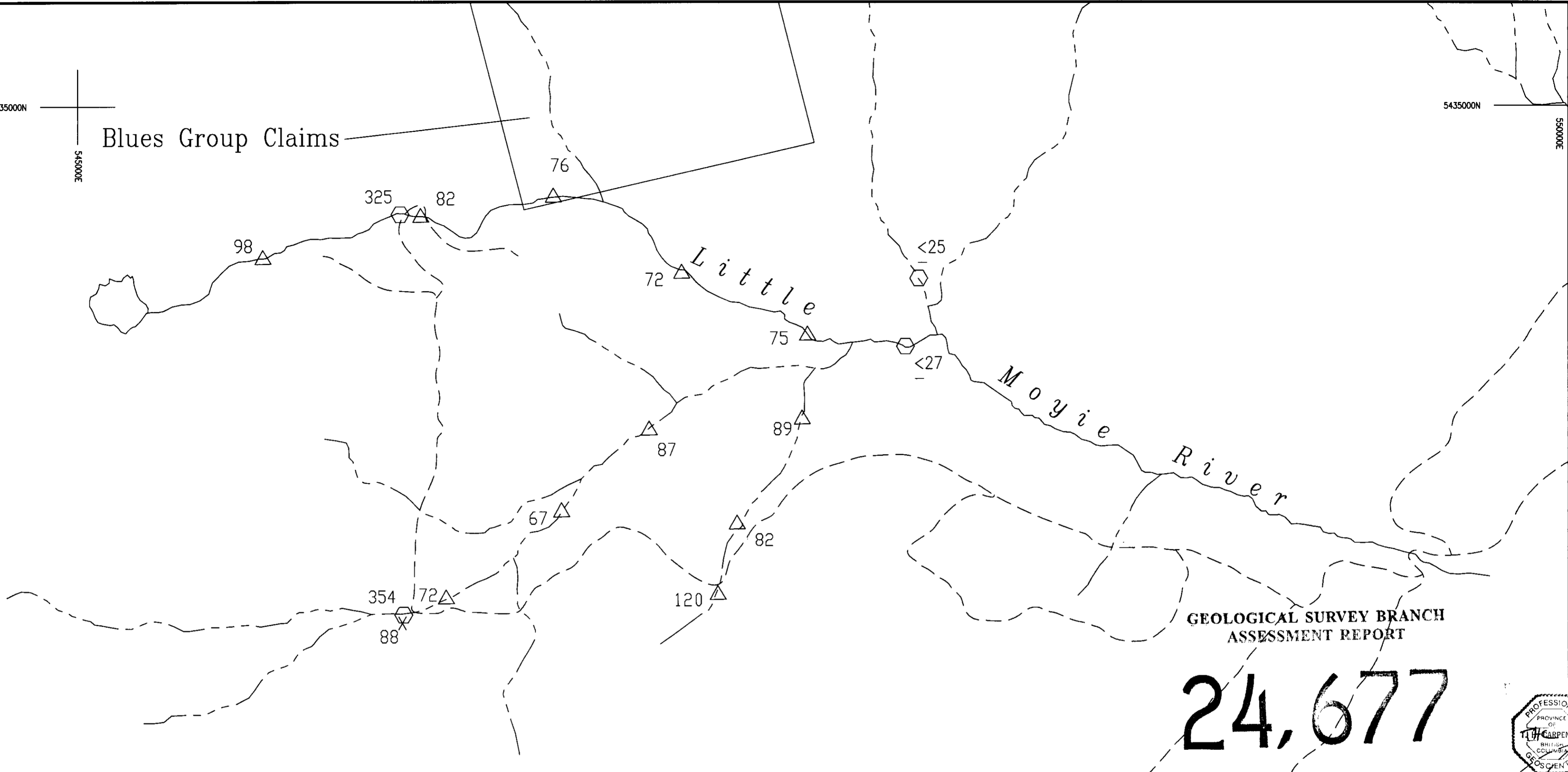
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|-------------------|--------------------|---------------------------------|-----------|
| Location: Creston |                    | Mining Jurisdiction: Ft. Steele |           |
| Datum: NAD83      | Map Ref.: 82/F01W  | Scale: 1:10000                  | UTM: 11   |
| Project: 399      | Date: Dec. 18/1996 | Drawn By: RM                    | Figure: 5 |

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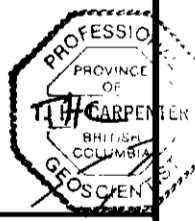
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Blues Group Claims







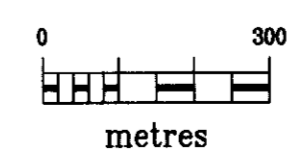
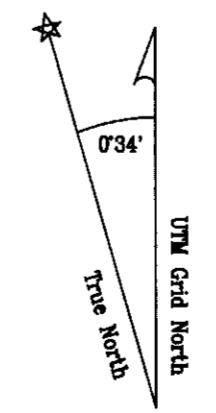
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ASSESSMENT REPORT

24,677



**LEGEND**

-  Historical heavy mineral sample
- 25 Historical ppb gold in heavy mineral sample
- 5 Historical ppb gold in silt sample
- Indicates <5 ppb Au
-  Silt sample location
- 105 Values shown in ppm zinc
-  Heavy mineral sample location
- 451 Values shown in ppm zinc
-  Rock sample location
- 185 Values shown in ppm zinc



**DISCOVERY** Consultants

DIA MET MINERALS LTD.

Iron Range Project  
Blues Claims  
Stream Sediment Sampling  
Zinc Values

|                   |                    |                                 |           |
|-------------------|--------------------|---------------------------------|-----------|
| Location: Creston |                    | Mining Jurisdiction: Ft. Steele |           |
| Datum: NAD83      | Map Ref.: 82/F01W  | Scale: 1:10000                  | UTM: 11   |
| Project: 399      | Date: Dec. 18/1996 | Drawn By: RM                    | Figure: 6 |

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Blues Group Claims

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Is

<25

Little

<27





Moyie River

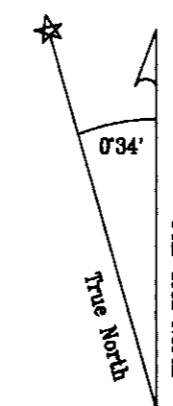
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ASSESSMENT REPORT

24,677

**LEGEND**

-  Historical heavy mineral sample
- 25 Historical ppb gold in heavy mineral sample
- 5 Historical ppb gold in silt sample
- Indicates <5 ppb Au
-  Silt sample location
- 20 Values shown in ppb gold
-  Heavy mineral sample location
- na Indicates not analysed for gold
-  Rock sample location
- 25 Values shown in ppm gold



**DISCOVERY** Consultants

DIA MET MINERALS LTD.

Iron Range Project  
Blues Claims  
Stream Sediment Sampling  
Gold Values

|           |         |                      |              |
|-----------|---------|----------------------|--------------|
| Location: | Creston | Mining Jurisdiction: | Ft. Steele   |
| Datum:    | NAD83   | Map Ref.:            | 82/F01W      |
| Scale:    | 1:10000 | UTM:                 | 11           |
| Project:  | 399     | Date:                | Dec. 18/1996 |
| Drawn By: | RM      | Figure:              | 7            |