

FERNIE

86-947-15471



Province of British Columbia

Ministry of Energy, Mines and Petroleum Resources

ASSESSMENT REPORT  
TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S)  
DRILLING

TOTAL COST  
\$55,622.00

AUTHOR(S) Alfred R. Allen

SIGNATURE(S) *Alfred R. Allen*

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED November 6/86 YEAR OF WORK 1985

PROPERTY NAME(S)  
BULL RIVER MINE

COMMODITIES PRESENT Cu, Ag, Au

S.E.C. MINERAL INVENTORY NUMBER(S), IF KNOWN 82G/NE 82G/NW-2

MINING DIVISION Fort Steele NTS

LATITUDE 49°30.1' LONGITUDE 115°22.7'

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property. Examples: TAX 1-4 FIRE 2 (2 units), PHOENIX (Lot 1706), Mineral Lease M 123, Mining or Certified Mining Lease ML 12 (claims involved):

Steeple 11 (20 units), Steeple 12 (20 units), Steeple 13 (20 units), Steeple 14 (20 units)

M69 (L 14729), (L14730), (L 14739)

OWNER(S)  
R.H. Stanfield

MAILING ADDRESS  
350 - 4723 1st Street S.W.  
Calgary, Alberta T2G 0A1

OPERATOR(S) (that is, Company paying for the work)

(1) as above (2)

MAILING ADDRESS  
same - as above

SUMMARY GEOLOGY (lithology, age, structure, <sup>Proterozoic</sup> <sup>Formation</sup> generalization, size, and attitude):

Near the Bull River Mine Aldridge quartzite, argillaceous quartzite and argillite <sup>occurs with</sup> minor local folding and faulting <sup>intruded by</sup> dioritic dikes and granodiorite intrusives. Quartz-calcite-siderite veins are mineralized with chalcopyrite, pyrite, pyrrhotite, and locally galena.

REFERENCES TO PREVIOUS WORK

CONTENTS

SUB-RECORDER  
RECEIVED  
FEB - 3 1987  
M.R. # ..... 1 \$.....  
VANCOUVER, B.C.

TITLE PAGE AND SUMMARY

A. INTRODUCTION ..... 1.

B. LOCATION ..... 1.

C. PROPERTY ..... 1.

D. PHYSIOGRAPHY ..... 2.

E. PREVIOUS WORK ..... 2.

F. GEOLOGY ..... 2.

G. THEORY ..... 3.

H. OBJECT OF DRILLING PROGRAMME..... 4.

I. ROTARY AND CORE DRILLING ..... 4.

J. DRILLING RESULTS ..... 5.

K. DISCUSSION ..... 6.

L. SUMMARY ..... 7.

M. REFERENCES ..... 8.

COSTS STATEMENT #1 ..... 9.

COSTS STATEMENT #2 ..... 10.

CERTIFICATE

MAPS:

1. Location
2. Claims & Topography
3. Claims & Drill Holes: Steeples 12 & M69
4. Topography, Pits, Drill Holes, S1-S4 & C1

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**GEOLOGICAL BRANCH**  
**ASSESSMENT REPORT**

15,471

FILMED

A. INTRODUCTION

A rotary drilling programme was conducted near the Bull River mine, on the south central area of the Steeples 12 mineral claim and M69. Detailed information was acquired, where necessary, from short cored sections of the holes.

The character and depth of overburden was determined as well as bedrock information. Cuttings and core is stored at the Stanfield camp.

B. LOCATION

The seven drill holes are located in the Fort Steele Mining Division, on the north side of the Bull River about seven kilometres up river from the town of Bull River, and 43 kilometres by highway east of Cranbrook at N. Latitude  $49^{\circ}-30'$  and west Longitude  $115^{\circ}-23'$ .

C. PROPERTY

The property includes the following:

Group 1-A

Steeples 11(361), Steeples 12(362), Steeples 13(363)

Steeples 14(364)

and M69 overlying the southwesterly area of Steeples 11 claim.



PROPERTY  
LOCATION

R.H. Stanfield		
LOCATION MAP		
SCALE: 1" = 136 MIs.		
Drawn by	Date	Allen Geological Engineering Ltd.
Checked by	Org no.	
ARA	1	

#### D. PHYSIOGRAPHY

The area of drilling is located adjacent to the Bull River Mine, on the north side of the Bull River, about 945 metres above sea level.

Tributary creeks head in the upper levels of the Steeples 13 and 14 claims, the largest of which is Burntbridge Creek which flows south across Steeples 11 into the Bull River close to the mine open pits.

From the Bull River the gradient is steep to the north and peaks at 2,640 metres near the north boundary of Steeples 14.

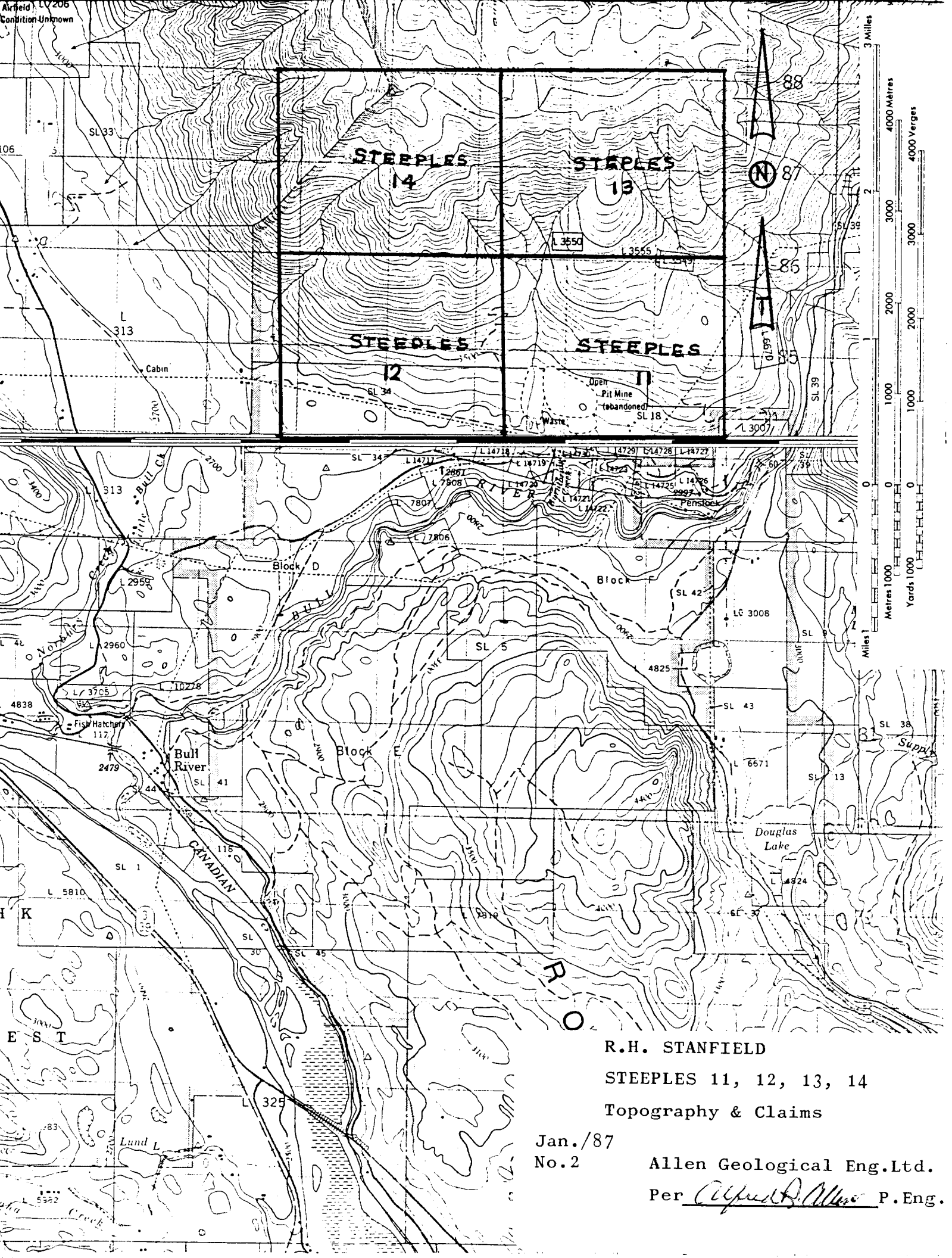
#### E. PREVIOUS WORK

Leech, G.B.,	G.S.C.	Paper 58-10,	1958
"	"	Paper 66-14,	pp 307-329, 1966
"	"	Bulletin Canadian Petroleum Geol. C10,	pp 396-407, 1962
International Geological Congress Field Excurions			
A15 - C15,			1972
Allen, A.R., Property Reports 1967 - 1986.			

#### G. GEOLOGY

The seven holes drilled on the east and west of the Bull River mine workings are all located within the Upper Aldridge formation, estimated to be 610 metres thick.

The lower strata are composed of medium-to-thick quartzite , with thin interbeds of argillite and argillaceous quartzite.



R.H. STANFIELD  
 STEEPLES 11, 12, 13, 14  
 Topography & Claims  
 Jan./87  
 No.2  
 Allen Geological Eng.Ltd.  
 Per Alfred D. Allen P.Eng.

Pyrite amounts to about 3% of these beds. The Creston formation overlies the Aldridge and is composed of greenish-grey siltstone, overlain by medium-to thick-bedded green, white, purple and brown fine-grained quartzite.

East-west striking quartz veins dip southerly within Middle Upper Aldridge strata.

Chalcopyrite, along with pyrite, pyrrhetite, some galena and traces of phalerite occur along with calcite, siderite, epidote and other minor gangue minerals within the quartz veins.

Recoverable values include copper, silver and gold.

Meta-diorite dikes parallel the quartz veins and contain chalcopyrite, galena and pyrite.

#### G. THEORY

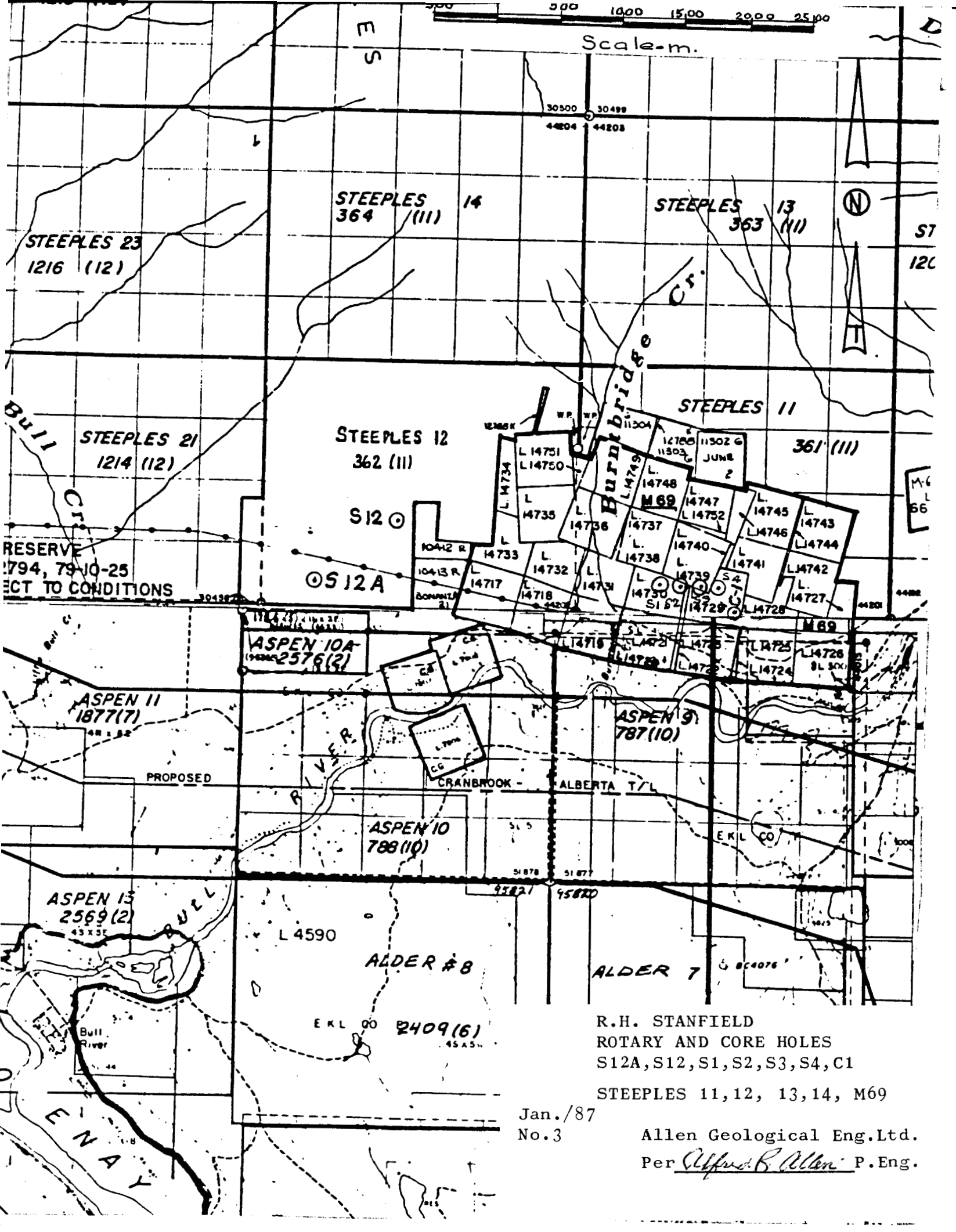
The mineralized Bull River mine veins strike east-west and dip south.

Holes 12 and 12A were drilled approximately 3,000 metres west from the mine workings to check the overburden depth and bedrock strata.

Holes S1 to S4 are located between the mill and the number one open pit, and north of the underground ore reserves, near the metadiorite dikes and two intersecting fault zones.

Hole C1 is located east of the ore zones and 60 metres south of the millsite.

These holes were drilled to test the possible vein extensions from the No 1 and No 2 open pits and partially developed third mineralized zone.



Scale - m.

STEEPLES 14  
364 (11)

STEEPLES 13  
363 (11)

STEEPLES 23  
1216 (12)

STEEPLES 21  
1214 (12)

STEEPLES 12  
362 (11)

STEEPLES 11  
361 (11)

ASPEN 10A  
1822 2576 (2)

ASPEN 11  
1877 (7)

ASPEN 9  
787 (10)

ASPEN 10  
788 (10)

ASPEN 13  
2569 (2)

ALDER #8

ALDER 7

EKL 00 2409 (6)

R.H. STANFIELD  
ROTARY AND CORE HOLES  
S12A, S12, S1, S2, S3, S4, C1

STEEPLES 11, 12, 13, 14, M69

Jan./87  
No. 3

Allen Geological Eng. Ltd.  
Per Alfred B. Allen P. Eng.



#### H. OBJECT OF THE DRILLING PROGRAMME

Two holes are located on the Steeples 12 claim. Overburden depth and condition were noted and Aldridge bedrock penetrated.

Five holes located east of pit #1 and partially outlined third ore zone were drilled to test the possible extension of same.

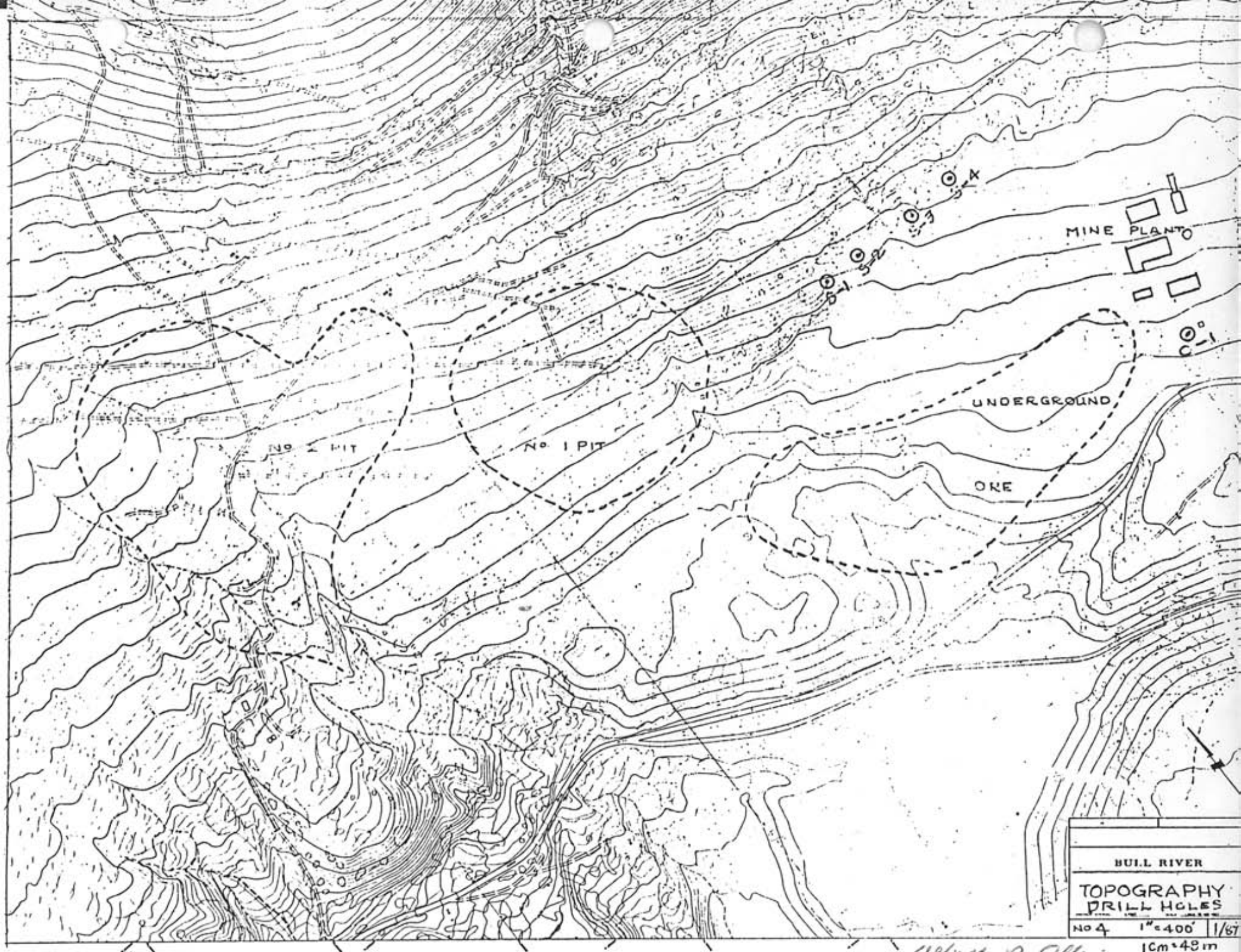
#### I. ROTARY AND CORE DRILLING

The writer examined the property December 19-21, 1985 and examined the cuttings and core which is now stored at the Stanfield camp.

Equipment and crew were contracted to drill the seven holes.

1. I.R. Cyclone Rotary air-mud TH-60 drill rig
1. Five-ton water truck
1. Compressor mounted on International S-230 truck
1. Three axle 30-foot rods trailer
1. G.M.C. Cyclone transporter
1. Ford 3-Ton 4 x 4 truck

Three man crew, and accessory supplies and equipment.



*Alfred R. Allen*

J. DRILLING RESULTSA. STEEPLES 11-14 CLAIMS

<u>Hole</u>	<u>Direction</u>	<u>Depth-m</u>	<u>Log-m</u>
S 12A	Vertical	76m	Overburden
S 12	"	86m	0-80 overburden 80-86 argillite
		<u>Total drilled</u>	<u>162m</u>

B. M69

<u>HOLE</u>	<u>Direction</u>	<u>Depth-m</u>	<u>Log-m</u>
S1	Vertical	6m	Overburden
S2	"	6m	"
S3	"	6m	"
S4	"	38m	0-20 " 20-38 Aldridge argillite
C1	"	<u>128m</u>	Aldridge argillite
		<u>Total drilled</u>	<u>184m</u>

Cored	0.3m	at 18m Aldridge argillite
"	0.4m	at 89m " "
"	0.3m	at 104m " "

All cuttings Aldridge argillite with minor  
argillaceous quartzite

*Alfred B. Allen*

### K.DISCUSSION

Seven holes were drilled to provide stratigraphic data on the easterly and westerly extensions of the Bull River mine orebodies preparatory to planning detailed exploratory programmes at these locations.

Two holes were drilled on the southwesterly Steeples 12 mineral claim. The area has a deep overburden cover, but it is east of the Bull River fault and hole S12 penetrated typical Upper Aldridge argillite.

In order to test the easterly extension of the Bull River mineralized veins, holes S 1-4 and C 1 were located east of the open pits. Holes S4 and C1 penetrated middle upper Aldridge argillite.

L. SUMMARY

Seven vertical rotary holes have been drilled on the westerly and easterly sides of the Bull River mine. Mineralized quartz veins, mined from two open pits strike east-west and dip south, within Upper Aldridge argillite and argillaceous quartzite.

A third similar ore zone has been partially outlined 90 metres southwesterly from the #1 pit.

Two holes are located west of the #2 pit in an area masked by deep overburden.

Hole S-12A was completed to a depth of 76 metres but did not reach bedrock.

Hole S-12 was drilled to a depth of 86 metres and penetrated Upper Aldridge bedrock.

Closer to the mine workings, on the eastern side of the #1 pit and unmined ore zones, five holes were drilled. Two of which penetrated Aldridge argillite with quartz stringers and blebs and finely disseminated pyrite and pyrrhotite.

The drill results will be useful when planning additional exploratory work westerly and easterly from the Bull River mine workings.

*Alfred R. Allen*

M. REFERENCES

- Leech G.B., Fernie Map Area, West Half,  
G.S.C. Paper 58-10, Map 20, 1958
- Leech G.B., International Geological Congress  
Twenty-fourth Session, Canada 1972
- Leech G.B., T CIMM V LX11 pp 154-174  
Southern Rocky Mountain Trench
- Allen, A.R., The Bull River Copper-Silver-Gold Mine  
June 7, 1976
- Chiang, M.C.1 Placid Oil Company, Reports, 1973-1976
- Allen, A.R., R.H. Stanfield, Rotary Drilling  
Bull River 1985

\* \* \* \* \*

BULL RIVER MINERAL CORPORATIONCOSTS STATEMENT #1ROTARY DRILLING REPORT Steeples 11-14 ClaimsR.H. STANFIELDBy: CONTRACT

Nov.10/85 - Jan 30/86

LOCATION: Steeples 12 ClaimLENGTH: S 12 A 76m

S 12 86m

DIRECTION: VerticalDRILLING COST: 162m @\$147/m \$23,814.00EQUIPMENT:I.R. T-H-60 Cyclone Drill  
and auxiliary equipment  
Water Truck - 5 ton  
Float-track, Drill stem  
2 pick-up trucksCREW:Don Murray, driller, Strathmore, Alberta  
Duane Bochek " " "  
Jim Jessey, helper, Langton, "For Stanfield:R. Borglund, Galloway B.C. foreman  
4 days @ \$120/day 480.00  
Truck: 3/4 ton 4x4 @ \$50/day 200.00  
Accommodation, 5men, 4days@\$60/day 1,200.00  
Alfred R. Allen Consulting and  
Reports 500.00TOTAL COSTS: \$26,194.00

Assessment Recorded - Cranbrook. Nov.6/86 \$16,000.00

To P.A.C. \$10,194.00*Alfred R. Allen*

BULL RIVER MINERAL CORPORATIONCOSTS STATEMENT #2ROTARY DRILLING REPORTM69R.H. STANFIELDBy; CONTRACT

Nov 10/85 - Jan 30/86

LOCATION:

M 69, 950 m A.S.L.

LENGTH:

S1 - 6m, S2-6m, S3-6m, S4-38m, C1-128m

DIRECTION:

All vertical note: C1 -3 cased

DRILLING COST:

184m @ \$147/m

\$27,048.00

EQUIPMENT:

I.R. T-H-60 Clclone Drill  
 and auxiliary equipment  
 Water truck - 5 ton  
 Float-truck, Drill Stem  
 2 Pick-up Trucks

CREW:

Don Murray, Driller, Strathmore, Alberta  
 Duane Bocek ; " " "  
 Jim Jessey, helper, Langton, "

For Stanfield:

R. Borglund, Galloway, B.C. Foreman  
 4 days @ \$120/day 480.00  
 Truck: 3/4ton 4x4 @\$50/day 200.00  
 Accommodation, 5 men 4 days  
 @\$60/day 1,200.00  
 Alfred R. Allen, Consulting &  
 Reporting 500.00

TOTAL COSTS:To P.A.C.

\$29,428.00

*Alfred R. Allen*



702 - 2025 Bellevue Avenue  
West Vancouver, B.C.  
V7V 1B9

CERTIFICATE

January 31, 1987.

I, Alfred R. Allen, certify that:

I am a graduate of the University of British Columbia and hold the following degrees therefrom:

BASc Geological Engineering 1939

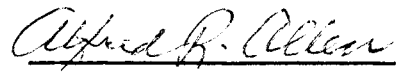
MASc Geological Engineering 1941

I am a Life Member of the Association of Professional Engineers of the Province of British Columbia.

I have practised my profession for the past forty years.

I hold no interest in the properties or securities of R.H. Stanfield, or affiliates thereof, nor do I expect to receive any directly or indirectly.

The report on the Rotary and Core drilling programme on the Steeples 12, and M69, Fort Steele M.D., B.C., is based on an examination of the Bull River property by the writer December 19-21, 1985.



Alfred R. Allen, P.Eng.