

1025
24 p.
WESTERN DISTRICT

COMINCO LTD.

EXPLORATION

DIAMOND DRILLING REPORT

VINE PROPERTY

VINE 54, 56 AND 58 CLAIMS

FORT STEELE MINING DIVISION, B.C.

CRANBROOK AREA

FILMED

N.T.S. 82G/5

- ASSESSMENT REPORT
GEOLOGICAL BRANCH
ASSESSMENT REPORT

LAT: 49°26'N

LONG: 115°50'W

17,899

OWNER

COMINCO LTD.

KOOTENAY EXPLORATION
1051 INDUSTRIAL ROAD #2,
CRANBROOK, B.C.
VIC 4K7

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PAID
OCT 14 1988
M.R.# \$
VANCOUVER, B.C.

Work Performed During May and June, 1988

Report by: A.S. Hagen
Submitted: September, 1988

TABLE OF CONTENTS

	Page
1.00 INTRODUCTION	
1.10 Location and Access	1 /
1.20 Property Definition	1
1.30 Topography and Vegetation	1
2.00 DIAMOND DRILL HOLES V87-1E AND V87-2E	
2.10 DDH V87-1E	1 /
2.20 DDH V87-2E	2 /
3.00 CONCLUSIONS	
3.10 DDH V87-1E	3
3.20 DDH V87-2E	3
EXHIBIT "A" - Statement of Expenditures - DDH V87-1E .	5 /
EXHIBIT "B" - Statement of Expenditures - DDH V87-2E .	6
AFFIDAVIT	7 /
STATEMENT OF QUALIFICATIONS	8 /
DRILL LOGS	Attached /
PLATE 1 Map - Vine Claims + Drillhole Locations . .	Pocket /

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

DIAMOND DRILLING REPORT

VINE 54, 56 & 58 CLAIMS

FORT STEELE M.D.

A.S. Hagen

September, 1988

1.00 INTRODUCTION

1.10 Location and Access

The Vine property lies within the Fort Steele Mining Division. The claims are located immediately south of Cranbrook, B.C., centered at latitude 49° 26' N and longitude 115° 50' W.

Access to the property is by way of good gravel roads from highway 3/95 and from the south area of the municipality of Cranbrook.

1.20 Property Definition

The Vine property consists of 38 mineral claims totalling 491 units and one reverted crown grant (Grey Eagle - Lot 8915). All claims are 100% owned by Cominco Ltd.

1.30 Topography and Vegetation

The Vine claims are located on moderately hilly terrain. Vegetation consists predominantly of lodgepole pine, Douglas fir and larch. A large portion of the area containing lodgepole pine has recently been logged due to an infestation of pine beetles.

2.00 DIAMOND DRILL HOLES V87-1E AND V87-2E

2.10 DDH V87-1E

Drillhole V87-1E is an extension of hole V87-1 collared July, 1987 and suspended August, 1987 at 555.49 meters (ref. Vine 54, 56 and 58 Diamond Drilling Assessment Report by A.S. Hagen, October, 1987).

Drillhole V87-1 was re-entered May 3, 1988 and triconing begun to clear and condition the hole for resumption of coring. After considerable expenditure of time and materials required to clear the hole due to badly fractured ground and resultant cave down the hole, the depth to bottom was reached on May 15, 1988. Difficulties experienced clearing the hole included stuck and broken rod strings requiring tapping for recovery and bit deviation

from the hole at 398.5 m requiring the re-drilling of 155.2 m to about original depth. Core logging of V87-1E starts at 553.7 m. The hole was completed May 27, 1988 at 938.4 meters.

Middle Aldridge sediments, intensely fractured and crushed in part, were cored from 553.7 m to a fault contact at 873.2 m. The rock cored is composed predominantly of medium and thick quartzitic wackes and quartzwackes of turbidite origin alternating with thinner zones of more argillaceous distal turbidites and inter turbidite type, thinly laminated to thin bedded sediments.

Below the fault, intersected from 873.2 - 877.1 m, the lithology to 931 m is thinner bedded and more argillaceous overall compared to stratigraphy above the fault. Medium and thick bedded quartzwacke and quartzitic wacke beds were cored from 931 m to end of hole.

Chlorite and biotite alteration is common throughout V87-1E.

Moderate to intense fracturing with occasional very thin intervals of breccia and gouge occur throughout. Fracturing occurs most commonly from parallel to 20° to core. Bedding parallel breccia and gouge features indicate lateral or thrust-type movements. Fe, Zn and Pb mineralization in minor amounts occurs in association with fracturing in part.

No mineralization of economic significance was intersected in drillhole V87-1E.

2.20 DDH V87-2E

Drillhole V87-2E is an extension of hole V87-2 collared July 23, 1987 and suspended July 25, 1987 at 105.8 meters.

Drilling of V87-2E commenced May 30, 1988 at 105.8 meters. The rock cored to 877.2 meters is typical Middle Aldridge type sediment composed predominantly of medium and thick bedded quartzitic wackes and quartzwackes of turbidite origin. Alternating with the above, more proximal type turbidites, are intervals of more argillaceous, distal turbidites and inter turbidite type sediments ranging from thinly laminated to medium bedded. Some fracturing and faulting, considered of minor significance, was encountered in this sequence. Bedding parallel slickensides noted occasionally are indicative of more lateral or thrust type movement. The rock is biotitized and lightly chloritized throughout this stratigraphic interval. From 877.2 m to 906.5 m the beds are disrupted with slump and/or slough-type features well displayed. Immediately underlying this sequence, to 907.45 m is a mudstone containing wispy, thin lenses of more silty sediment. Below this interval to 916.3 m the rock is predominantly thinly laminated wacke displaying truncation, slump and/or fold features with slickensides along some fracture planes. Core in this interval is moderately to badly broken. There is a distinct lithology change from 916.3 m to end of the hole at 977.7 meters. Rock is more Fe

rich, commonly containing specks of pyrite particularly at bed bases. Overall, grain sizes are finer and beds thinner than typical Middle Aldridge sediment types as above 906.5 meters. Sediments are also more biotitic giving a distinctive purplish brown colouration to much of the rock in this bottom interval.

No mineralization of economic significance was intersected in drillhole V87-2E.

3.00 CONCLUSIONS

3.10 DDH V87-1E

The drilling of hole V87-1E cored sediments entirely of the Aldridge Formation. The rocks are well fractured, intensely in part, and contain only minor amounts of Pb and Zn mineralization which occurs in association with the fracturing.

No mineralization of economic significance is indicated within the stratigraphy tested.

3.20 DDH V87-2E

With exception of a gabbro intrusion intersected from 626.8 - 630.2 meters, sediments entirely of the Aldridge Formation were cored in drillhole V87-2E. Only very minor amounts of fracture related Pb and Zn mineralization were encountered in the rocks.

No mineralization of economic significance is indicated within the stratigraphy tested.

Report by: *A.S. Hagen*
A.S. HAGEN
Geologist III

Endorsed by: *D. Anderson*
D. ANDERSON, P.Eng
Senior Geologist

Approved by: *John Hamilton*
J.M. HAMILTON, P.Eng
Manager, Exploration
Western Canada


Distribution: Mining Recorder (2 Copies) 
Western District, Exploration
Kootenay Exploration

EXHIBIT "A"STATEMENT OF EXPENDITURES

DIAMOND DRILLING - VINE 56 and 58 CLAIMS
 DIAMOND DRILLHOLE V87-1E
 FORT STEELE MINING DIVISION

INDIRECT

Salaries

A.S. Hagen	Supervision, Core logging, Report writing 30 days @ \$225/day	\$ 6,750.00
F.M. Colonna	Core labelling, Hauling + Storage/ Site Clean-up 5 days @ \$ 75/day	375.00
H.C. Schultze	Core labelling, Hauling + Storage 4 days @ \$140/day	560.00

Mobilization/Demobilization

Connors Drilling Ltd., Kamloops, B.C.	5,123.54
D+B Boggs Contracting, Cranbrook, B.C.	1,328.00
H+E Rotvold Trucking Ltd., Cranbrook, B.C.	61.00
Wright Contracting, Cranbrook, B.C.	825.00

Transportation

One 4X4 truck	25 days @ \$40/day	1,000.00
One 4X4 truck	5 days @ \$40/day	200.00

Other Associated Costs

Supplies: Core boxes, drill additives	10,337.00
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DIRECT

Connors Drilling Ltd. 2007 W. Trans Canada Highway, Kamloops, B.C. V1S 1S7	<u>101,940.37</u>
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Total Drilling Cost - V87-1E = \$128,499.91

* Note: Drillhole on boundary of Vine 56 & 58 claims - expenditures split between two groups, Vine 87-1 and Vine 87-2.



A.S. HAGEN
 Geologist

EXHIBIT "B"STATEMENT OF EXPENDITURES

DIAMOND DRILLING - VINE 54
 DIAMOND DRILLHOLE V87-2E
 FORT STEELE MINING DIVISION

INDIRECT

Salaries

A.S. Hagen	Supervision, Core logging, Report writing	30 days @ \$225/day	\$ 6,750.00
G.R. Colombo	Core labelling, hauling + storage/ Site Clean-up	7 days @ \$ 75/day	525.00
F.M. Colonna	Core labelling, hauling + storage/ Site Clean-up	7 days @ \$ 75/day	525.00

Mobilization/Demobilization

Cominco Ltd, Kimberley, B.C.	495.00
H+E Rotvold Trucking Ltd., Cranbrook, B.C.	823.50
Wright Contracting, Cranbrook, B.C.	1,950.00

Transportation

One 4X4 truck	25 days @ \$40/day	1,000.00
One 4X4 truck	7 days @ \$40/day	280.00

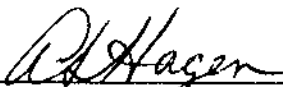
Other Associated Costs

A. Hummel Contracting Ltd., Cranbrook, B.C.		
Dig water holes		125.00
Sandor Rental Equipment Ltd., Cranbrook, B.C.		
Water Pump + Hose rental		402.80
Supplies: Core boxes, Drill additives		10,337.00

DIRECT

Connors Drilling Ltd. 2007 W. Trans Canada Highway, Kamloops, B.C. V1S 1S7		<u>95,350.00</u>
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Total Drilling Cost - V87-2E = \$118,563.30




A.S. HAGEN
 Geologist

IN THE MATTER OF THE
B.C. MINERAL ACT
AND
IN THE MATTER OF A DIAMOND DRILL PROGRAM
CARRIED OUT ON THE VINE 54, 56 AND 58 CLAIMS
CRANBROOK AREA
in the Fort Steele Mining Division of
the Province of British Columbia
More Particularly N.T.S. 82G/5

A F F I D A V I T

I, A.S. HAGEN, of the City of Kimberley, in the Province of British Columbia, make Oath and say:

1. That I am employed as a Geologist by Cominco Ltd. and as such, have a personal knowledge of the facts to which I hereinafter depose:
2. That annexed hereto and marked as Exhibit "A" and Exhibit "B" to this my Affidavit are true copies of expenditures incurred on a Diamond Drill program, on the Vine 54, 56 and 58 Mineral Claims.
3. That the said expenditures were incurred between the 1st day of May, 1988 and the 20th day of June, 1988 for the purpose of mineral exploration.


A.S. HAGEN
GEOLOGIST

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

STATEMENT OF QUALIFICATIONS

A.S. HAGEN has personally conducted many types of mineral exploration work for Cominco Ltd. over the last twenty-one years.

I consider him well qualified to prepare this report.


D. ANDERSON, P.Eng.
Senior Geologist

Drill Hole Record

Property	VINE	District	Western/Ft. Steele M.D.	Hole No.	V87-2E
Commenced	May 30, 1988	Location	Vine 54 Mineral Claim Tests at	See Page	15
Completed	June 18, 1988	Core Size	HQ + NQ	Corr. Dip	" " "
Co-ordinates	Lat. 49° 27' N	Long.	115° 47' W	True Brg.	" " "
Objective	Test for Pb/Zn mineralization in Aldridge Fm.			% Recov.	95%
				Date	June, 1988

Claim	VINE 54
T Brg.	---
Collar Dip	90°
Elev.	1067 m
Length	977.7 m
Hole No.	V87-2E

Footage	Description	Analysis
From	To	
	Extension of drill hole V87-2, suspended 1987 - start drilling at 105.8 m.	
105.8 - 121.9	Quartzwackes, quartzitic wackes and wackes, medium and thick bedded, occasional thin bed. Intervals up to 1 m of more argillaceous, distal turbidite and inter turbidite type deposition. Chloritized sediments. Bedding 80 - 85° to core.	
121.9 - 142.8	Similar to lithology to preceding interval with segments of dark and light grey, thinly laminated and laminated, wacky sediment varying in thickness from 2 to 70 cm. Bedding 82° to core.	
142.8 - 161.3	Quartzwackes, quartzitic wackes (predominantly) and wackes, medium and thick bedded, chloritized sediments. Some amalgamated beds. Usual intervals of distal and inter turbidite type wackes, subwackes and argillites in laminated to medium bedded range. Bedding 80 - 85° to core.	
161.3 - 183.5	Wackes, subwackes and argillites, thinly laminated to medium bedded, chloritized sediments. Few beds in quartzwacke range in this interval. Predominantly typical distal turbidite and inter turbidite type deposition. Bedding 80 - 85° to core.	
183.5 - 207.3	Quartzwacke and quartzitic wackes, medium and thick bedded, chloritized sediments. Some amalgamated beds. Change from quartzite to argillaceous tops commonly abrupt. Current and/or slump (disrupted) sediment near bottom of this interval (minor). Bedding 85° to core.	
207.3 - 221.8	Wackes, subwackes and argillites, thinly laminated to medium bedded chloritized sediments predominantly. Some intercalated medium/thick quartzwacke/quartzitic wacke beds. Numerous segments of thinly laminated/laminated wackes. Bedding 85° to core.	

11407

Drill Hole Record

Property	VINE	District	Western/Ft. Steele M.D.	Hole No.	V87-2E
Commenced		Location		Tests at	
Completed		Core Size		Corr. Dip	
Co-ordinates				True Brg.	
Objective				% Recov.	
				Date	

Claim	VINE 54
T Brg.	---
Collar Dip	90°
Elev.	1067 m
Length	977.7 m
Hole No.	V87-2E

Footage	Description	Analysis
From	To	
221.8 - 241.5	Quartzwackes, quartzitic wackes and wackes, medium and thick bedded, chloritized sediments. Some intervals of less than 1 m of distal and inter turbidite type deposition, wackes, subwackes and argillites. Erratic jointing causes moderately broken core, slickensides common along joint planes. Some quartz filled fractures up to 5 cm, 10 - 20° to core (minor). Bedding 80 - 85° to core.	
241.5 - 244.8	Wackes, subwackes and argillites, very thin bedded to medium bedded, chloritized sediments. Bedding 80 - 85° to core.	
244.8 - 282.1	Quartzwackes, quartzitic wackes and wackes, medium and thick bedded, chloritized sediments. Usual intervals of up to 1 m of distal and inter turbidite type sediments, thinly laminated to medium bedded. Some segments of erratic fracturing with brecciated sediments in part (esp. 254.9 m). Bedding parallel slickensides occasionally near top of this interval, in more argillaceous zones. Bedding 85° to core.	
282.1 - 283.0	Wacke, subwacke and argillite, thinly laminated to thin bedded chloritized sediments. Bedding 85° to core.	
283.0 - 309.0	Quartzwackes, quartzitic wackes and wackes, medium and thick bedded, chloritized sediment. Beds commonly change abruptly from quartzite to massive, thin argillaceous tops. Minor amount of distal and inter turbidite type deposition. Bedding 80 - 85° to core.	
309.0 - 310.0	Wackes, subwackes and argillites, thinly laminated to very thin bedded, chloritized sediments. Well fractured in part, some slickensides along bedding parallel planes. Minor Pb and Zn fracture mineralization.	

11406

Drill Hole Record



Property	VINE	District	Western/Ft. Steele M.D.	Hole No.	V87-2E
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. V87-2E Sheet 3
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From	To	Description	Analysis		
310.0	315.2	Quartzwackes, quartzitic wackes and wackes, similar to 283.0 - 309.0 m.			
315.2	326.0	Quartzwackes, quartzitic wackes and wackes, medium and thick bedded chloritized sediments, occasional beds in thin range. Some distal and inter turbidite type deposition. Abrupt change in beds from quartzite to thin argillaceous bed tops common. Several thinly laminated dark grey and laminated light grey intervals from 7 cm to 18 cm in width. Slickensides along bedding planes common. Core moderately broken in part. Bedding 75 - 80° to core.			
326.0	333.0	Quartzwackes, quartzitic wackes and wackes, medium and thick bedded, chloritized sediments. Usual turbidite sequence with some distal and inter turbidite type deposition. Crushing and slickensides indicate movement along bedding planes in more argillaceous type sediments. Moderately broken core in part.			
333.0	341.2	Quartzitic wackes and wackes, thin and medium bedded, chloritized sediments. One, thick quartzwacke bed at 335.7 m. Minor amount of inter turbidite type sediment. Bedding 80 - 85° to core.			
341.2	349.7	Quartzwackes, quartzitic wackes, medium and thick bedded, chloritized sediments, minimal distal and inter turbidite type deposition. Bottom 1 m of this interval is steep dipping quartz vein with chlorite and biotite. Occasional slickensides along bedding planes.			
349.7	360.1	Quartzitic wackes and wackes, thin and medium bedded, chloritized sediments. Moderately broken core with slickensided bedding planes common. Top 1 m of this interval is dark grey thinly laminated and light grey laminated wacke. Bedding 60 - 80° to core.			
360.1	373.5	Quartzwackes and quartzitic wacke, medium and thick bedded, chloritized sediments. Very minor amount of distal and inter turbidite type deposition.			

Drill Hole Record



Property	VINE	District	Western/Ft. Steele M.D.	Hole No.	V87-2E
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. V87-2E Sheet 4
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From	To	Description	Analysis		
373.5	375.3	Wackes, subwackes and argillites, thin and medium bedded, chloritized sediments. Interval contains a 25 cm segment of light grey, laminated, calcareous sediment. Bedding 85° to core.			
375.3	379.8	Quartzwackes, quartzitic wackes and wackes, medium and thick bedded, some thin beds at 379.0 m, chloritized as in previous intervals. Argillaceous bed tops commonly massive mudstone.			
379.8	382.3	Quartzitic wackes and wackes, thin and medium bedded, chloritized sediments. Massive mudstone type argillaceous bed tops commonly make up 30 to 50% of each bed (more distal type turbidites). Bedding 80 - 85° to core.			
382.3	390.5	Quartzwackes, quartzitic wackes and wackes. Lithology similar to 375.3 - 379.8 m. Some distal and inter turbidite type deposition.			
390.5	393.4	Quartzitic wackes, wackes, subwackes and argillites, thinly laminated to medium bedded, chloritized sediments. Typically more distal type turbidites, minor inter turbidite type deposition. Bedding 80 - 85° to core.			
393.4	410.4	Quartzitic wackes, wackes, subwackes and argillites, thinly laminated to medium bedded sediments predominate. Similar to immediately previous interval, however, with six intercalated, medium/light grey, coarse to medium grained graded quartzwackes in thick to very thick range. Bases of quartzwackes occur at 397.0 m (thick), 399.2 m (thick), 404.6 m (thick), 405.0 m (thick), 407.9 m (very thick), 408.0 m (thick) and 410.4 m (very thick). Bedding 80 - 85 to core. Some alternating dark and light grey, banded wacke beds from 4 to 12 cm thick in upper half of this zone.			

Drill Hole Record



Property	VINE	District	Western/Ft. Steele M.D.	Hole No.	Y87-2E
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

From	To	Description
418.4	416.8	Quartzitic wackes, wackes, subwackes and argillites. Similar lithology to 390.5 - 393.4 m. Bedding 80 - 85° to core.
416.8	428.0	Quartzitic wackes, wackes, subwackes and argillites. Similar lithology to immediately above, however, with abundant segments of alternating dark and light grey, banded wackes beds. Bedding to core 80 - 85° to core.
428.0	437.8	Quartzwackes and quartzitic wackes, medium and thick bedded, chloritized sediments. Predominantly quartzites with minor distal and inter turbidite type sediments. Bedding 85° to core.
437.8	440.9	Quartzitic wackes and wackes, thin and medium bedded, chloritized sediments. Minor distal and inter turbidite type deposition.
440.9	453.1	Quartzwackes and quartzitic wackes, medium and thick bedded, chloritized sediments. Similar lithology to 428.0 - 437.8 m etc.
453.1	456.4	Wackes, subwackes and argillites, thinly laminated to medium bedded, chloritized sediments, rare medium bedded, quartzitic wacke. Predominantly more distal and inter turbidite type deposition. Bedding 85° to core.
456.4	463.3	Quartzwackes and quartzitic wackes, medium and thick bedded sediments. Similar to 440.9 - 453.1 m etc.
463.3	464.0	Fault zone, broken core with gouge in part. Quartz and calcite filled fractures in well shattered core fragments. Break indicated to be from parallel to 10° to core.

Claim	
T Brg.	
Collar Dip	
Elev.	
Length	
Hole No. Y87-2E Sheet 5	

Drill Hole Record



Property	VINE	District	Western/Ft. Steele M.D.	Hole No.	Y87-2E
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

From	To	Description
464.0	509.5	Quartzwackes and quartzitic wackes, medium and thick bedded, chloritized sediments. Minor distal and inter turbidite type deposition. Some tight fracturing from parallel to 30° to core causes broken core part. Slickensides along some fracture planes including some parallel to bedding. Occasional shattered rock with minor gouge in part, minor movement indicated. Bedding parallel breaks indicate some lateral movement along bedding planes (e.g. 491.5 + 495.1 m). Bedding 80 - 85° to core.
509.5	512.0	Wackes, subwackes and argillites, thinly laminated to thin bedded, chloritized sediments. Usual distal and inter turbidite type deposition. Minor fracturing parallel to 20° to core.
512.0	522.6	Quartzwackes and quartzitic wackes, medium and thick bedded, chloritized sediments. Similar type deposition to 464.0 - 509.5 m etc. Bedding 80 - 85° to core.
522.6	525.9	Wackes, subwackes and argillites, very thin bedded to medium bedded, chloritized sediments. Similar to 509.5 - 512.0 m etc.
525.9	534.5	Quartzwackes and quartzitic wackes, medium and thick bedded, chloritized sediments. Predominant fracturing parallel to 20° to core, some bedding parallel movements indicated with slickensiding parallel to bedding. Bedding 80 - 85° to core.
534.5	537.2	Quartzitic wackes, wackes, subwackes and argillites, very thin bedded to medium bedded sediments. Interval of more distal turbidites with some inter turbidite type deposition.
537.2	539.3	Quartzwackes and quartzitic wackes, medium and thick bedded, chloritized sediments. Similar to 525.9 - 534.5 m etc.

Claim	
T Brg.	
Collar Dip	
Elev.	
Length	
Hole No. Y87-2E Sheet 6	

Drill Hole Record



Property	VINE	District	Western/Ft. Steele M.D.	Hole No.	V87-2E
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

From	To	Description
644.8	673.8	Quartzwackes and quartzitic wackes, medium and thick bedded, chloritized sediments. Some thin intervals (less than 1 m) of usual distal and inter turbidite type deposition. Prominent fracturing from parallel to 30° to core with occasional, thin gouge and slickensides. Other breaks bedding and near bedding parallel with slickensides common along planes. Bedding plane movement indicated by brecciated rock in part (e.g. 664.6 m - 20 cm).
673.8	674.0	Fault, brecciated sediment in gouge along plane 10 - 15° to core.
674.0	684.4	Wackes, subwackes and argillites, thinly laminated to medium bedded, chloritized sediments. Interval contains a few medium quartzitic wackes and one thick (60 cm), intensely calcareous quartzite (base 680.8 m). Predominantly more distal and inter turbidite type deposition. A 3 cm healed, breccia, bedding parallel at 679.2 m indicating bedding parallel movement. Occasional erratic, slickensided fracture planes. Bedding 85 - 90° to core.
684.4	690.1	Quartzwackes and quartzitic wackes, medium bedded, chloritized sediment. Very minor amount of distal and inter turbidite type deposition.
690.1	694.7	Predominantly wackes, subwackes and argillites, thinly laminated to medium bedded, chloritized sediment. More distal and inter turbidite type deposition. Interval contains two quartzwacke beds in medium range. Some calcareous segments as in previous stratigraphy. Bedding 85 - 90° to core.
694.7	714.3	Quartzwackes and quartzitic wackes, medium (predominant) and thick bedded, chloritized sediments. Intervals (less than 1 m) of distal and inter turbidite type sediment common, ranging from thinly laminated to medium beds of wackes, subwackes and argillites. Bedding 85 - 90° to core.

Claim	
T Brg.	
Collar Dip	
Elev.	
Length	

Hole No. V87-2E Sheet: 9

Drill Hole Record



Property	VINE	District	Western/Ft. Steele M.D.	Hole No.	V87-2E
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

From	To	Description
714.3	716.5	Wackes, subwackes and argillites, thinly laminated to medium bedded, chloritized sediment. Usual distal and inter turbidite type lithologies. One light grey, 5 cm thick calcitic quartzwacke at 714.9 m.
716.5	722.3	Quartzwackes and quartzitic wackes, medium and thick (rare thin) bedded, chloritized sediments. Very minor amount of distal and inter turbidite type deposition.
722.3	737.5	Quartzwackes, quartzitic wackes and wackes, thin, medium and thick bedded, chloritized sediments. One 15 cm, light grey, calcitic quartzwacke at 733.5 m. Interval contains some alternating light and dark grey, thinly laminated in part, wacke beds up to a few cm thick. Bedding 85 - 90° to core.
737.5	751.6	Quartzitic wackes, wackes, subwackes and argillites, thinly laminated to medium bedded sediments. This interval is similar lithologically to Lower Aldridge type sediments, being less quartzitic overall and containing an abundance of disseminated pyrite. Light grey, argillaceous beds in very thin/thin bedded range also common as in Lower Aldridge stratigraphy. However, interval is part of Middle Aldridge. Bedding 85 - 90 to core.
751.6	755.3	Quartzwackes and quartzitic wackes, medium and thick bedded, chloritized sediment. Fracturing from parallel to 25° to core causes broken core in part, quartz veins up to 3 cm along some fracture planes.
755.3	761.3	Wackes, subwackes and argillites, thinly laminated to medium bedded, chloritized sediment. Mostly distal and inter turbidite type deposition. Interval contains a few thin to thick bedded quartzwackes and quartzitic wackes, some are very calcareous. Beds commonly contain disseminated Fe flecks.

Claim	
T Brg.	
Collar Dip	
Elev.	
Length	

H1-007

Drill Hole Record



Property	VINE	District	western/Ft. Steele M.D.	Hole No.	V87-2E
Commenced		Location		Tests at	
Completed		Core Size		Corr. Dip	
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

% Meterage		Description	Analysis				
From	To		Claim	T. Brg.	Collar Dip	Elev.	Length
761.3	780.1	Quartzwackes and quartzitic wackes, thick bedded sediments, amalgamated beds in part.					
780.1	781.4	Fault, gouge and brecciated sediment. Upper contact 15° to core.					
781.4	784.3	Lithology similar to 761.3 - 780.1 m.					
784.3	788.3	Fault zone. Broken core, intensely fractured and sheared with slickensides along planes 15° to core. Shattered quartz vein at base.					
788.3	792.7	Lithology similar to 781.4 - 784.3 m.					
792.7	798.6	Quartzitic wackes, wackes, subwackes and argillites, thinly laminated to medium bedded, chloritized sediment. More distal and inter turbidite type deposition. Broken core with gouge (15 - 20 cm) at 797.3 m indicates movement close to bedding parallel. Bedding 85° to core.					
798.6	805.5	Quartzwackes and quartzitic wackes, medium and thick bedded (rare thin bed), chloritized sediment. Quartz veining up to 30° to core in middle this interval, broken core (vuggy quartz in part).					
805.5	811.4	Quartzitic wackes, wackes, subwackes and argillites, thinly laminated to medium bedded, chloritized sediments with occasional medium to thick quartzwacke bed. This interval predominantly more distal and inter turbidite type deposition, calcareous in part. Bedding 80 - 85° to core.					
811.4	816.1	Quartzwackes and quartzitic wackes, medium and thick bedded, chloritized sediments. Very minor amount of distal and inter turbidite type deposition.					

911-449

Drill Hole Record



Property	VINE	District	Western/Ft. Steele M.D.	Hole No.	V87-2E
Commenced		Location		Tests at	
Completed		Core Size		Corr. Dip	
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

% Meterage		Description	Analysis				
From	To		Claim	T. Brg.	Collar Dip	Elev.	Length
816.1	819.5	Wackes, subwackes and argillites, thinly laminated to medium bedded, chloritized sediments. Predominantly distal and inter turbidite type deposition. Interval contains 4 quartzwackes in medium and thick bedded range, one of which at 819.2 m displays laminated features and is very calcareous. Rip up clasts in some turbidites. Other calcareous zones common throughout this interval, particularly in thinly laminated segments. Bedding 80 - 85° to core.					
819.5	830.2	Quartzwackes and quartzitic wackes, medium and thick bedded, chloritized sediments. Very minor amount of distal and inter turbidite type deposition.					
830.2	832.9	Wackes, subwackes and argillites, thinly laminated to thin bedded, chloritized sediments. Similar to 816.1 - 819.5 m interval with one medium bedded quartzitic wacke. Bedding 80 - 85° to core.					
832.9	841.4	Wackes, subwackes and argillites, thinly laminated to medium bedded chloritized sediments. Usual distal and inter turbidite type deposition with numerous intercalated quartzwacke and quartzitic wacke turbidites in medium (predominant) and thick range. Blump type features at 835.4 m. Tight fracturing 15° to 20° to core with minor offsets and brecciation at 835.7 m and 840.3 m. Bedding 80 - 85° to core.					
841.4	849.2	Quartzwackes and quartzitic wackes, medium and thick bedded, chloritized sediments. Minor amount of more distal and inter turbidite type deposition.					
849.2	855.4	Wackes, subwackes and argillites, thinly laminated to medium bedded, chloritized sediment. Distal and inter turbidite type deposition with a few intercalated medium and thick bedded quartzwackes and quartzitic wackes. Bedding 80 - 85° to core.					
855.4	855.7	Fault, gouge and brecciated sediments. Contact indicated to be 35° to core on footwall.					

Hole No. V87-2E Sheet 17

911-449

Scale
Cover Pad
& Dip

Drill Hole Record



Property	VINE	District	Western/Ft. Steele M.D.	Hole No.	V87-2E
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. V87-2E Sheet 13
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Meters		Description	Analysis
From	To		
855.7	877.2	Quartzwackes and quartzitic wackes, medium and thick, rare thin bedded, chloritized sediment. Predominantly beds in thick range, minor amount of distal and inter turbidite type deposition. Occasional calcareous segment within turbidites.	
877.2	906.5	Disrupted, chloritized beds throughout this interval composed of quartzwackes, quartzitic wackes and wackes in the thin to medium bedded range with about an equal amount of wackes, subwackes and argillites in the thinly laminated (very minor) to medium bedded range. Slump and/or slough type features well displayed throughout. Some subwacke/argillite (muds) up to 1.2 m in thickness. Turbidites vary from predominantly quartzite with thin mud tops to predominantly mudstone with thin quartzite bases. Some calcareous segments in quartzites. Mineralization is minor throughout, consisting of pyrite, pyrrhotite, chalcopyrite and sphalerite occurring as small, disseminated blebs, very thin lenses and fracture type. Bedding 75° to 80° to core.	
906.5	907.45	Subwacke/argillite (mudstone) medium grey, very fine grained sediment with sporadic, light grey, slightly silty, often wispy, thin lenses and/or laminations. Most light grey material concentrated near base. Minor pyrite mineralization scattered throughout, most in association with coarser grained, lighter grey material. Slump-like features in bottom 0.5 m.	
907.45	916.3	Wacke, predominantly thinly laminated with two intercalated segments (1 m and 0.5 m) of quartzitic wacke. True bed thicknesses not clear due to disrupted and folded nature of interval. Rock throughout is well fractured with erratic, quartz/calcite healed fractures in part. Thin gouge along bedding at 908.4 m. Slickensided fracture planes common. Core is moderate to badly broken. Thin laminates at top of this interval truncate against overlying mudstone. Slickensided fracture plane 80° to core at this contact. Two similar contacts 10 and 12 cm below. Mineralization very minor, consisting of scattered pyrite with occasional (rare) speck of sphalerite.	

Scale
Cover Pad
& Dip

Drill Hole Record



Property	VINE	District	Western/Ft. Steele M.D.	Hole No.	V87-2E
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. V87-2E Sheet 14
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Meters		Description	Analysis
From	To		
916.3	977.7	Distinct lithology change. Rock more iron rich (pyrite speckles common), contacts are sharp and more even parallel, colouration predominantly medium/light grey and purplish/brown, grain sizes finer and bed thicknesses thinner overall than stratigraphy above 906.5 m. Deposition ranges from thinly laminated to medium bedded. Thinly laminated beds are abundant and commonly very calcareous. Bed range in hardness from quartzwacke to argillite. Changes from medium/light grey sediment (usually very soft rock) to purplish/brown sediment (usually very hard rock) is always abrupt. Rare, thick quartzitic wacke bed to 932.3 m similar to stratigraphy above 906.5 m. Brecciated core with gouge in part, 921.6 - 922.2 m. Similar break (approx. 20 cm) at 934.7 m, top 30° to core. Brecciated segment 976.1 - 976.5 m, top parallel to 20° to core, base 30° to core. Bedding variable from 65° to 80° to core with local fold (bedding 45° to core) at 953 m. Drag fold (bedding plane movement indicated) at 943.4 m. Bedding to core varies from 65° to 80° to core for most part.	

**** END OF HOLE DDH V87-2E ****

Drill Hole Record



Property	VINE	District	Western/Ft. Steele M.O.	Hole No.	VB7-2E
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	T. Brg.	Collar Dip	Elev.	Length

Footage	Description
From	To

DDH VB7-2E SPERRY SUN TESTS

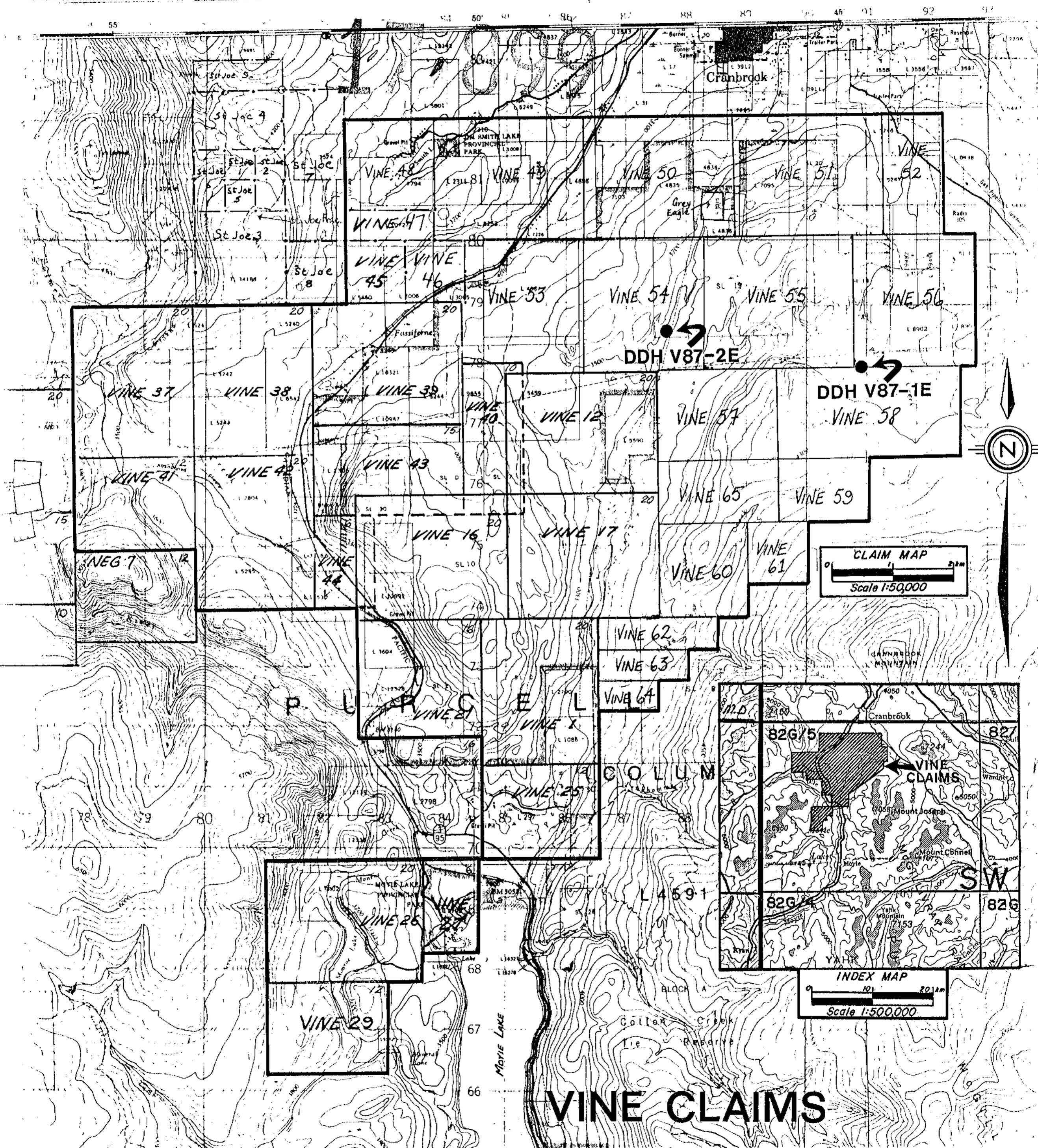
DEPTH	AZIM	DIP
Collar	--	-90.0°
525' (160.0 m)	090°	-88.2°
1018' (310.4 m)	153°	-87.7°
1524' (464.6 m)	159°	-86.4°
2300' (701.2 m)	167°	-85.8°
3200' (975.6 m)	172°	-85.4°

EXTRAPOLATION (Imperial Meas.)

Footage	Length	Azim	Dip	Sin	Cos	Vert. Comp.	Horiz. Comp.
0.0 - 262.5'	262.5'	--	-90.0°	1	0	262.5'	0
262.5 - 771.5'	509.0'	090°	-88.2°	.9995	.0314	508.7'	16.0'
771.5 - 1271.0'	499.5'	153°	-87.7°	.9992	.0401	499.1'	20.0'
1271.0 - 1912.0'	641.0'	159°	-86.4°	.9980	.0628	639.7'	40.3'
1912.0 - 2750.0'	838.0'	167°	-85.8°	.9973	.0732	835.7'	61.3'
2750.0 - 3207.0'	457.0'	172°	-85.4°	.9968	.0802	455.5'	36.7'
	<u>3207.0'</u>					<u>3201.2'</u>	<u>174.3'</u>

EXTRAPOLATION - METERIC

Meterage	Length	Azim	Dip	Sin	Cos	Vert. Comp.	Horiz. Comp.
0.0 - 80.0	80.0 m	--	-90.0°	1	0	80.0 m	0
80.0 - 235.2	155.2 m	090°	-88.2°	.9995	.0314	155.1 m	4.9 m
235.2 - 387.5	152.3 m	153°	-87.7°	.9992	.0401	152.2 m	6.1 m
387.5 - 582.9	195.4 m	159°	-86.4°	.9980	.0628	195.0 m	12.3 m
582.9 - 838.4	255.5 m	167°	-85.8°	.9973	.0732	254.8 m	18.7 m
838.4 - 977.7	139.3 m	172°	-85.4°	.9968	.0802	138.9 m	11.2 m
	<u>977.7 m</u>					<u>976.0 m</u>	<u>53.2 m</u>



VINE CLAIMS