Van Schroets Feb. 1/00

Geological Report and Proposed Diamond Drill Program

886028

on the

Afton and Pothook Mineral Zones

NTS: 92-I-10E and 92-I-9W Kamloops District B.C., Canada

For:

DRC Resources Corporation

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<u>By</u>:

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November 10th, 1999

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Introduction and Summary:

At production start-up in 1978 Afton Mine's open-pit reserves were estimated at 34 million tons of 1% copper, 0.016 ounce/ton (0.58 gram/tonne) gold, and 0.12 ounce/ton (4.2 gram/tonne) silver. From 1978 to '88, 24 million tons were mined from surface to 280 metres depth recovering 450 million pounds of copper and 400,000 ounces gold (Ref: B.C. Minfile Report, page 39). These figures based on Afton Mines Ltd. reports indicate that 10 million tons of estimated open-pit "reserves" were not mined, although surface stripping at the southwest extension had begun before abandonment in 1987.

A total of two drill holes in 1973 and 5 in 1980 tested the 90 metre thick coppergold body beneath the final pit-floor. The longest mineralized intersection was drill-hole number 1973-32 which averaged 2.5% copper and 0.031 ounce/ton gold over 200 metres from just above to 170 metres below the final pit-floor. The 2.5% copper grade is two and a half times higher than the 1% mine grade. Afton's 1980 Annual Report (Page 2) stated:

"Five deep diamond drill holes were drilled to test the continuity of the ore zone beneath the open pit. As a result of these holes and two holes drilled in 1973, underground reserves have been calculated at 6,500,000 tons grading 1.55% copper, 0.047 ounces gold and 0.20 ounces silver. The deepest hole penetrated the zone 2,000 feet below surface or 1,100 feet below the final pit. The ore zone is open at depth."

The gross value of this resource suggested by drilling is estimated to be \$US260 million based on November 5th, 1999 spot metal prices (US \$0.80/pound copper, \$290/oz gold, \$5.00/oz silver).

Afton's published copper-gold intersections for the 7 drill-holes were averaged but not divided into higher and lower grade intervals. However significant highergrade sections were intersected in drill holes through the mined-out open-pit. For example on Section 18, DDH 73-3 assayed 3.3% Cu over 85 meters including 5.6% Cu over 32 meters (170% more than the average), and DDH 73-26 assayed 1.65% Cu over 163 metres including 2% Cu over the upper 80 metres. (Figure 5). This trend may continue to depth resulting in higher grades in the upper hanging wall portion of the mineral zone.

Gold and silver grades increase with depth. Mine Manager Mike Lipkewich (1982) reported "Gold grades mined by underground would be 3 times those obtained at present, while silver would be twice that of the open pit." (Northern Miner, Oct. 14, 1982. Page 2).

A 2-phase \$674,000 diamond-drill program is recommended to test for additional open-pit resources, and to expand the underground tonnage and grade from the inferred 6.5 million tons of 1.55% copper and 0.047 oz/ton gold. It will also be necessary to determine the grade and size of possible higher-grade gold zones such as one intersected by 1980 drill-hole 80-4 which averaged 0.1 ounce/ton gold over 70 metres.

The potential to substantially increase the 6.5 million tons is realistic considering the drill-hole information available to date confirms the deposit is open to depth.

In 1987-88 at the Pothook pit 500 metres east south-east of the Afton ore body 2.4 million tons containing 0.35% copper and 0.025 oz/t (0.78 g/t) gold was mined. Three drill holes below the 75 metre deep pit-floor show the mineralized zone continues for at least 80 metres down-dip with an average 30 metre width containing 0.4% copper and .01 oz/ton gold. The zone is open at depth.

Location and Access:

The Afton property is located within NTS mapsheet 92-I-10E, beside the Trans-Canada Highway 350 kms (220 miles) north-east of Vancouver and 10 kms (6 miles) west of Kamloops. Access off the main highway is by mine-site roads. Electrical power from Kamloops links to the mine sub-station. A water pipeline exists from Kamloops Lake; a natural gas pipeline crosses the site. (Figures 1 +3).

Semi-arid conditions exist throughout the broad valley with sagebrush and sparse groves of widely spaced pine trees. Precipitation is minor with light winter snow and infrequent spring and fall rain. The mill-site elevation is 700 metres.

Property and Ownership:

The Afton Property consists of four 4-post mineral claims (43 units) and seven 2post mineral claims recorded September and October, 1999 (Figure 2). All claims are held under option by DRC Resources Corp. from Westridge Enterprises Ltd. (John Kruzick) and Indogold Development Ltd. The claims were staked after Mining Leases 1029 and 1030 covering the Afton Pit were relinquished. The status of the mineral claims was checked through the Vancouver Mining Recorder's Office and a visit to the property showed that the staking confirmed with the provisions of the Mineral Act.





Claim Name	Claim Type	Record Number	Record Date
Afton 1	4 – post	372023	Sept 22, 1999
Afton 2	4 – post	372024	Sept 23, 1999
Afton 3	4 – post	372025	Sept 22, 1999
Afton 4	4 – post	372026	Sept 24, 1999
Afton 5	2 – post	372641	Oct 3, 1999
Afton 6	2 – post	372642	Oct 3, 1999
Afton 7	2 – post	372643	Oct 3, 1999
Afton 8	2 – post	372644	Oct 3, 1999
Afton 9	2 – post	372645	Oct 3, 1999
Afton 10	2 - post	372646	Oct 3, 1999
Afton 11	2 – post	372647	Oct 3, 1999

History and Development:

(1) Afton Open-Pit: (Figure 5)

From 1968 to 1973 hundreds of percussion and diamond drill holes were drilled to test the mineral zone within the area of the planned open-pit. Also 2 holes were drilled to intersect the mineral zone below the planned open-pit as shown below and on Figure 5: (Ref: Afton Mines Ltd. 1973 drill-hole assay summaries)

1973 - 32: 2.5% Cu, 0.031 oz/t (0.96 g/tonne) Au, 0.23 oz/t (7.2 g/tonne) Ag 250 m (150 m true width)

0.6% Cu, (Au and Ag not available)

(also) 28 m (23 m true width) (directly below the above 250 m intersection)

1973 - 47: <u>1.52% Cu, 0.041 oz/t (1.28 g/tonne) Au, 0.20 oz/t (6.25 g/tonne) Ag</u> 181 m (140 m true width)

In 1980 five diamond drill-holes were drilled by Afton Mines Limited perpendicular (at 90 degrees or east to west) to the 1973 holes which had been drilled from south to north. The reason for this was to give a more 3-dimensional picture of the mineral zone. The five holes intersected the zone from 300 to 600 metres below surface, however the exact locations of the intersections are not known. The holes are:

1980 - 1	<u>1.73% Cu, 0.018 oz/t (0.56 g/tonne) Au, 0.14 oz/t (4.3 g/tonne) Ag</u>
	95 m (62 m true width)

1980 - 2	1.9% Cu, 0.02 oz/t (0.62 g/tonne) Au, 0.20 oz/t (6.25 g/tonne)Ag
	170 m (80 m true width)

1980 - 5 <u>1.24% Cu, 0.048 oz/t (1.5 g/tonne) Au, 0.20 oz/t (6.25 g/tonne) Ag</u> 55 m (15 m true width)

No further drilling was reported beneath the current open-pit. In 1981 Afton Mines Ltd. (in References) published a drill-indicated resource figure of 6.5 million tons averaging 1.55% copper, 0.047 ounces/ton (1.5 g/tonne) gold, and 0.2 ounces/ton (6 grams/tonne) silver. The open-pit was shut-down in 1988 but environmental clean-up is still progressing under the direction of Afton Operating Company.

(2) Pothook Open-Pit: (Figure 10)

The Pothook contains a low-grade resource which can be better investigated at depth after the main Afton deposit program is established.

For 11 months from July, 1987 to May, 1988, 2.4 million tons of ore grading 0.35% copper and 0.025 ounces/ton (0.78 g/tonne) gold were mined and milled from a 90 metre (290 foot) deep open-pit (Communication with the Teck Corp. Minesite Exploration Geologist G. Evans in June, 1999). The overall strip-ratio was 1.9:1. Gold production was 60,000 ounces.

During 1986 in-fill drilling, 3 holes intersected the steeply south-east dipping mineralized zone beneath the open-pit floor (Figure 10):

86-13	<u>0.3% Cu, 0.008 oz/t (0.25 g/t) Au</u> 62 m	(starting 20 metres above pit-floor)
86-21	<u>0.4% Cu, 0.01 oz/t (0.3 g/t) Au</u> 25 m	(starting 30 metres below pit-floor)
86-20	<u>0.5% Cu, 0.013 oz/t (0.4 g/t) Au</u> 40 m	(starting 45 metres below pit-floor)





General Geology (After Carr, J.M. 1976):

Within the 35 km long Iron Mask Batholith, the Afton and Pothook mineral zones are located at the northwestern end of the 18 km long Iron Mask Pluton composed of diorites and gabbros of Upper Triassic age (197 m.y.). The pluton was emplaced in Upper Triassic strata of the Nicola Group composed of andesitic and basaltic flows, breccias, tuffs, mudstones, argillites, and limestones.

Local Geology and Mineralization (After Carr, J.M. 1976): (A) Afton: (Figures 3 and 9):

In the Afton Mine area within and adjacent to the Iron Mask Pluton minor copper occurrences and hydrothermal magnetite occur as disseminations and veinlets.

As defined by a 0.25% copper cutoff grade, the tabular-shaped Afton mineral body lies within shattered and fractured diorite-porphyry plutonic rocks. The body strikes north 70 degrees east with an average dip of 55 to 70 degrees south. It is 520 metres long, 90 metres in average width, and at least 600 metres deep.

The upper 200 metres on the east side and 400 metres on the west side is supergene ore defined by metallic copper commonly accompanied by chalcocite and cuprite. The lower hypogene zone is characterized by bornite and chalcopyrite and is of higher copper and gold grade than the overlying supergene zone, perhaps due to leaching of the upper material.

The Afton ore-body plunges to the southwest underneath massive Nicola Group volcanic rocks which mark the western boundary in the open-pit. The copper and gold grade increases down dip to the west beneath the pit-bottom as the hypogene zone is encountered beneath the pit bottom, according to Afton 1973 and 1980 diamond-drill records.

(B) Pothook:

Located 750 metres east south-east of the Afton ore-zone, the Pothook 40 metre wide mineral zone lies at the contact between the northwest striking Nicola Volcanics and the overlying Pothook diorite. The mineral-zone strikes parallel to this contact at 295 degrees and dips steeply south as delineated with open-pit mining. (Figure 3)

Near the center of the open-pit three drill-holes intersected the Pothook mineral zone beneath the pit-floor with the grade averaging 0.4% copper and 0.01 oz/ton (.3 gram/tonne) gold (Figure 10). Investigation of this resource will follow the initial Afton investigation and may coincide with later Afton exploration.

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Resources - Afton: (Figure 5)

Afton's open-pit reserves when production started in 1978 were estimated at 34 million tons of 1% copper, 0.016 ounces/ton (0.58 grams/tonne) gold, and 0.12 ounces/ton (4.2 grams/tonne) silver. From 1978 to 1988, 24 million tons were mined down to the 280 metre level (Ref: B.C. Minfile Report, 92-I, page 39). These figures indicate that 10 million tons of originally estimated open-pit reserves were not mined probably partly due to rock competency problems in the upper Supergene zone as well as relatively low metal prices.

Seven drill holes (2 in 1973 and 5 in 1980) tested the 90 metre thick copper-gold body beneath the final open-pit floor. Afton's 1980 Annual Report stated:

"Five deep diamond drill holes were drilled to test the continuity of the ore zone beneath the open pit. As a result of these holes and two holes drilled in 1973, underground reserves have been calculated at 6,500,000 tons grading 1.55% copper, 0.047 ounces gold and 0.20 ounces silver. The deepest hole penetrated the zone 2,000 feet below surface or 1,100 feet below the final pit. The ore zone is open at depth." (President Hallbauer Report to Shareholders)

The gross value of this resource is estimated to be \$US260 million based on November 5th, 1999 spot metal prices (US \$0.80/pound copper, \$290/oz gold, \$5.00/oz silver).

Gold and silver grades increase with depth. Mine Manager M. Lipkewich in 1982 reported "Gold grades mined by underground would be 3 times those obtained at present, while silver would be twice that of the open pit." In the same article chief mine engineer D. Stewart reported "... the orebody widens and deepens westward." (Northern Miner, Oct. 14, 1982).

Afton's published copper-gold intersections for the 7 drill-holes were averaged and not divided into higher and lower grade intervals. However significant highergrade sections were intersected in drill holes through the mined-out open-pit. For example on Section 18, DDH 73-3 assayed 3.3% Cu over 85 metres including 5.6% Cu over 32 metres, and DDH 73-26 assayed 1.65% Cu over 163 metres including 2% Cu over the upper 80 metres. (Figure 5). This trend where the hanging wall is higher grade may continue to depth. (Figure 5).

Resources - Pothook: (Figure 10)

The Pothook mineral zone is considerably lower copper grade than the Afton mineral zone. It has no defined resource below the mined open pit although 3 drill holes beneath the pit-floor suggest a low-grade resource may be present.





Conclusions: (A) Afton:

Drill and mining results show the Afton mineral zone's width and grade increases from east to west. Gold and copper grades increase at depth within the primary hypogene zone with diamond drill hole 80-4 below the pit-floor intersecting 0.1 oz/t gold over 70 metres.

The 1973 and 1980 diamond drilling program tested the mineral zone beneath the pit-floor for 200 metres along strike and 300 metres in depth. Widths were interpreted to increase from east to west with true widths varying up to 150 metres and averaging 80 metres. The longest intersection was 1973-32 which averaged 2.5% copper and 0.031 ounce/ton gold over 200 metres from just above to 170 metres below the final pit-floor. The 2.5% copper grade is two and a half times higher than the 1% mine grade. The zone is open to depth and along strike.

The potential to outline a 10 to 20 million ton resource is realistic given the fact that 24 million tons were mined from surface to 300 metres vertical depth (at 1% copper, 0.02 oz/t gold), while another 300 metres vertical depth of the mineral zone (averaging 1.55% copper, 0.047 oz/t) were intersected below the pit floor. Afton Mine's estimate of 6.5 million tons was based on 7 drill holes. This figure should be increased with further drilling along strike and to depth. Using different strike lengths with constant widths and depths, the potential tonnage can be estimated as follows:

<u>Length</u>	<u>Width and Depth</u>	<u>Tonnage</u>
(metres)	(metres)	(2.7 tons/cubic metre @ 2,000 pounds/cu. m)
100	80 X 300	6.5 mil
200	80 X 300	13 mil
300	80 X 300	19.5 mil

If the mineral zone already drill tested to 600 metres below surface continues to 900 metres below surface the resource could double for each of these estimates.

(B) Pothook: (Figure 10)

At Pothook 2.4 million tons were mined to 75 metres depth. Near the centre of the open-pit 3 drill-holes intersected the mineral zone from the pit-floor to 70 metres below averaging 0.4% copper and 0.01 ozs/ton (0.3 grams/tonne) gold. (Figure 9).

The 3 drill-holes show the mineral zone continues beneath the pit floor for at least another 70 metres and it is open to depth. (Reference: B.C. Energy and Mines Assessment Report 15713, December, 1986.)

Recommendations:

Afton: (Figures 6 and 7)

At Afton a 2-phase diamond drill program is recommended to test the continuity of the mineralized zone along strike and to depth beneath the currently drilled resource, and to confirm higher-grade copper-gold zones intersected in drilling.

The objective of the diamond drill program will be as follows:

- (1) To further define the copper-gold zone intersected by the seven Afton drill holes,
- (2) To increase the tonnage of the copper-gold zone by additional drilling along strike and to depth, and
- (3) Determine the size and grade of the zone below the current drill-limit of 300 metres below the pit-floor (600 metres below surface).

Pothook: (Figure 10)

Although access to the bottom of the Pothook Open-Pit appear to be easier than access to the bottom of the Afton Pit, the Pothook grades are considerably lower than Afton and therefore the Afton project should be given priority.

After the 2-Phase Afton project is complete, the Pothook mineral zone should be assessed to determine if drilling is warranted to explore for continuation of the mineral zone to depth and along strike. With current metal prices the mineral zone does not appear to be economically viable.

The Pothook 2-Phase drill program is included in this report to be assessed when the Afton 2-Phase drill program is complete.



Feb. 1/00

Schedule A3 Land Title Map









DRC Resources Corporation Afton: Cross-Section Geology J.J. McDougall, P.Eng.

Copy of: <u>Afton: A Supergene Deposit</u> Carr, J.M. and Reed, A.J. (1976) In C.I.M. Spec. Vol 15, 1978. Pp. 381.



Cost Estimate: Proposed Afton Diamond Drill Program:

Afton Phase 1:

Geology and supervision	\$	8,000
NQ diamond drilling (all inclusive)		-
2,000 metres X \$100/metre	\$ 2	200,000
Helicopter - \$800/hour X 15 hours		·
(possible use for drilling from bench in pit)	\$	12,000
Accomodation and meals		·
50 man/days X \$80/manday	\$	4,000
Transportation	\$	5,000
Maps and Reports	\$	2,000
Insurance, WCB, licences, fees and permits	\$	5,000
Assays	\$	8,000
Subtotal	\$:	244,000
Contingency @ 10%	\$	24,000
Total Phase 1 Afton	\$:	268,000

Afton Phase 2: (Dependent on positive phase 1 results)

Geology and supervision	\$ 10,000
NQ diamond drilling (all inclusive)	
3,000 metres X \$100/metre	\$ 300,000
Helicopter - \$800/hour X 20 hours	\$ 16,000
Accomodation and meals	-
60 man/days X \$80/manday	\$ 4,800
Transportation	\$ 5,000
Maps and Reports	\$ 3,000
Insurance, WCB, licences, fees and permits	\$ 5,000
Assays and preliminary metallurgical studies	\$ 25,000
Subtotal	\$ 368,800
Contingency @ 10%	\$ 37,200
Total Phase 2 Afton	\$ 406,000
Total Afton Phase 1 and 2	\$ 674,000

(Continued investigation will require further in-fill drilling plus metallurgical, rock mechanic, and environmental studies based on Phase 1 and 2 results.)

<u>Cost Estimate: Pothook Diamond Drill Program:</u> <u>Pothook Phase 1</u>:

Total Phase 1 Pothook	\$ 77,000
Contingency @ 10%	\$ 7,000
Subtotal	\$ 70,600
Assays	\$ 3,000
Insurance, WCB, licences, fees and permits	\$ 1,000
Maps and Reports	\$ 1,000
Transportation	\$ 2,000
Beds and meals - 20 mai./days X \$80/manday	\$ 1,600
600 metres X \$100/metre	\$ 60,000
NQ diamond drilling (all inclusive)	
Geology and supervision	\$ 2,000

Pothook Phase 2: Dependent on positive phase 1 results

Geology and supervision	\$ 2,000
NQ diamond drilling (all inclusive)	
1,000 metres X \$100/metre	\$ 100,000
Beds and meals - 25 man/days X \$80/manday	\$ 2,000
Transportation	\$ 2,000
Maps and Reports	\$ 1,000
Insurance, WCB, licences, fees and permits	\$ 1,000
Assays	\$ <u>3,000</u>
Subtotal	\$ 111,000
Contingency @ 10%	\$ 11,000
Total Phase 2 Pothook	\$ 122,000

Total Pothook Phase 1 and 2

<u>\$ 199,000</u>

(Continued investigation will require further drilling plus metallurgical, rock mechanic, and environmental studies based on Phase 1 and 2 results.)

Total Afton and Pothook - Phases 1 and 2

<u>\$ 873,900</u>

Respectively submitted,

gel fing. James J. McDougall, P. Eng. November 10, 1999

Certificate of Qualifications:

I, James J. McDougall, do hereby certify that:

- 1. I am a consulting geologist with a business office at 7720 Sunnydene Road, Richmond, B.C. V6Y 1H1, and I am President of J.J. McDougall & Associates, Consulting Geologists.
- 2. I am a graduate in geology of the University of British Columbia (M.Sc.-1954).
- 3. I am a Registered Professional Engineer (Geological) in good standing with the Association of Professional Engineers of the Province of British Columbia, Canada.
- 4. I have practiced my profession as a geologist for forty-seven years.
- 5. The information, opinions, and recommendations in the attached report are based on studies of the available literature on the area required by DRC Resources Corporation, and on visits to the properties during November, 1999. A previous site visit was completed in September, 1980.
- 6. I own no interest in the securities or the mineral claim holdings of DRC Resources Corporation nor do I expect to obtain any such interest.
- 7. This report may be used for any prospectus, statement of material facts, or press releases pertaining to the current program of DRC Resources Corporation at the Afton (B.C.) minesite.

Dated at Vancouver, B.C. this 10th day of November, 1999.

References:

<u>Afton: A Supergene Deposit</u>. Carr, J.M, and Reed, A.J. In Porphyry Deposits of the Canadian Cordillera. Special Volume 15-1976. Pp. 376-387.

<u>Afton, Afton Mine, Pothook</u>. In B.C. Government Minfile Report number 92-I-NE, Number 23. Pp. 32-39.

Afton Mine: Local Geology and Distribution of Minerals. In <u>Evolution of the Iron</u> <u>Mask Batholith and It's Associated Copper Mineralization</u>. Kwong, Y., B.C. Gov't Bull. 77, 1987. Pp. 7-21.

Afton Mines Annual Report 1980. Afton Mines Ltd. Mining Report, by Hallbauer, R.E., President. December 22, 1980.

Afton Mines Vertical Air Photo of the Afton-Pothook area. Exposed September, 1988

Diamond Drilling Report on the Pothook Zone. Lorne Bond, Senior Geologist, Afton Operating Corp. December, 1986. B.C. Energy and Mines Assessment Report 15713.

Geology of the Pothook Alkalic Copper-Gold Porphyry Deposit. Clifford Stanley, Mineral Deposit Research Unit, U.B.C. In Geological Fieldwork 1993, Paper 1994-1. Pp. 275-283.

Company communication with Alan Reed, former Afton Mines Ltd. 1972 to 1984 mine-site Geologist. August to October, 1999.

Company communication with Mike Cathro and Bruce Madu. B.C. Energy and Mines Geologists, Kamloops. July to October, 1999. Office phone: 1-250-828-4566.