QUINSAM DRILL HOLE COORDINATES

DRILL HOLE #	U.T.M. NORTH	U.T.M. EAST	EL. A.S.L.	MINE NORTH	MINE EAST
ECHO-007	5,532,921.5	323,827.9	322.2	101,295.4	99,946.7
1976					
76-001	5,535,321.2	321,539.2	317.9	104,572.0	100,457.3
76-002	5,535,079.4	321,353.6	322.2	104,572.0	100,152.4
76-003	5,533,974.4	322,042.5	322.3	103,352.8	99,695.2
76-004	5,534,280.9	321,893.5	317.9	103,657.6	99,847.6
76-005	5,533,804.6	322,273.3	332.7	103,066.3	99,700.9
76-006	5,533,510.6	322,647.1	338.6	102,590.8	99,695.3
76-008	5,533,078.8	323,276.3	318.8	101,828.8	99,735.7
76-009	5,532,740.2	323,409.6	326.1	101,524.0	99,542.8
76-010	5,532,555.6	323,648.2	321.9	101,219.2	99,544.0
76-011	5,535,571.4	320,962.8	320.7	105,181.6	100,304.9
76-012 (7S)	5,531,989.0	324,629.9	330.7	100,091.5	99,695.1
76-012 (3N)	5,535,162.7	320,649.2	330.4	105,181.6	99,789.7
76-013	5,535,433.3	320,856.8	331.9	105,181.6	100,130.8
76-014	5,535,156.4	320,644.3	329.2	105,181.6	99,781.7
76-015	5,534,843.1	321,172.3	328.6	104,572.0	99,854.6
76-016	5,534,732.6	321,087.5	330.1	104,572.0	99,715.3
76-017	5,535,433.8	321,625.6	309.4	104,572.0	100,599.2
76-018	5,534,973.7	321,272.5	323.7	104,572.0	100,019.2
76-019	5,535,209.7	321,453.6	322.2	104,572.0	100,316.7
76-020	5,534,439.0	321,438.6	319.1	104,114.7	99,696.1
76-021	5,534,677.7	321,621.7	312.1	104,114.8	99,997.0
76-022	5,534,923.4	321,810.2	307.2	104,114.8	100,306.6
76-023	5,534,234.0	321,857.5	316.1	103,657.6	99,788.5
76-024	5,534,401.8	321,986.3	321.3	103,657.6	100,000.0
76-025	5,533,857.9	321,953.1	318.5	103,352.8	99,548.3
76-026	5,534,089.3	322,130.7	311.2	103,352.8	99,840.0
76-027	5,533,423.7	322,004.2	325.5	103,048.0	99,234.9
76-028	5,533,673.3	322,195.7	334.4	103,048.0	99,549.5
76-029	5,533,898.4	322,368.4	325.8	103,048.0	99,833.3
76-030	5,533,389.6	322,554.3	346.0	102,590.8	99,542.8
76-031	5,533,633.9	322,741.7	328.6	102,590.8	99,850.7
76-032	5,532,927.7	323,160.3	301.0	101,828.8	99,545.2
76-033	5,533,078.8	323,276.3	320.0	101,828.8	99,735.7
76-034	5,533,167.6	323,344.4	318.8	101,828.8	99,847.6
76-035	5,533,288.5	323,437.2	310.9	101,828.8	100,000.0
76-036	5,532,619.3	323,307.9	328.6	101,524.0	99,390.4
76-037	5,532,832.1	323,471.2	320.0	101,524.0	99,658.6
76-038	5,532,982.0	323,586.2	321.6	101,524.0	99,847.6
76-039	5,532,497.4	323,598.5	321.6	101,219.2	99,470.6
76-040	5,532,675.6	323,735.2	319.4	101,219.2	99,695.2
76-041	5,532,796.5	323,828.0	326.7	101,219.2	99,847.6
76-042	5,537,277.3	320,927.1	289.0	106,248.4	101,636.5
76-043	5,537,034.5	320,740.8	289.6	106,248.4	101,330.5
76-044	5,536,277.0	320,543.8	321.3	105,943.5	100,609.6
76-045	5,536,760.7	320,914.9	314.2	105,943.6	101,219.2
76-046	5,536,520.3	320,730.4	301.4	105,943.6	100,916.2
76-047	5,536,501.9	321,100.5	316.4	105,638.8	101,126.9
76-048	5,536,302.1	320,947.2	308.5	105,638.8	100,875.1
76-049	5,536,069.0	320,768.3	324.3	105,638.8	100,581.2
76-050	5,535,689.4	321,053.3	313.0	105,181.6	100,453.6
1977					
77-001	5,537,392.1	321,158.9	304.2	106,134.4	101,868.7
77-002	5,536,370.9	321,524.4	306.6	105,222.7	101,281.0
77-003	5,536,820.9	321,818.2	283.2	105,263.6	101,816.9
77-004	5,536,841.9	322,426.7	266.7	104,793.6	102,204.0
77-005	5,531,907.7	323,016.1	322.8	101,322.3	98,648.2
77-006	5,531,951.1	323,179.3	331.9	101,219.2	98,782.0

QUINSAM DRILL HOLE COORDINATES

DRILL HOLE #	U.T.M. NORTH	U.T.M. EAST	EL. A.S.L.	MINE NORTH	MINE EAST
77-007	5,531,692.3	323,072.5	336.5	101,146.4	98,511.7
77-008	5,531,742.6	322,827.2	341.7	101,371.6	98,402.2
77-009	5,531,643.8	323,135.7	338.0	101,066.7	98,511.7
77-010	5,531,548.7	322,870.6	347.5	101,219.2	98,274.8
77-011	5,531,560.5	322,687.5	345.9	101,371.6	98,172.7
77-012	5,531,203.3	322,989.7	349.0	100,914.4	98,073.3
77-013	5,532,214.9	323,381.8	317.9	101,219.2	99,114.6
77-014	5,531,680.2	322,779.4	343.5	101,371.6	98,323.6
77-015	5,531,442.8	322,813.9	347.8	101,199.7	98,156.3
77-016	5,531,186.2	322,400.3	349.3	101,371.6	97,700.9
77-017	5,531,437.2	322,592.9	348.7	101,371.6	98,017.3
77-018	5,531,480.5	323,202.4	340.8	100,914.4	98,422.7
77-019	5,531,330.0	322,510.7	347.2	101,371.6	97,882.2
77-020	5,531,409.5	323,482.2	347.8	100,649.2	98,536.7
77-021	5,530,964.7	323,085.9	368.2	100,692.8	97,942.6
77-022	5,532,368.6	323,883.9	317.0	100,914.4	99,542.2
77-023	5,531,360.5	323,110.3	361.2	100,914.4	98,271.4
77-024	5,532,428.8	324,314.2	312.7	100,609.7	99,851.9
77-025	5,530,968.3	322,233.1	354.5	101,371.6	97,426.3
77-026	5,530,862.9	322,152.2	363.9	101,371.6	97,293.4
77-027	5,530,865.1	322,357.1	359.4	101,210.4	97,419.9
77-028	5,531,298.8	322,294.6	347.8	101,524.0	97,725.9
77-029	5,531,385.3	322,168.8	337.7	101,676.5	97,718.0
77-030	5,531,504.7	322,260.5	335.3	101,676.4	97,868.5
77-031	5,531,884.2	322,770.3	328.9	101,503.0	98,479.9
77-032	5,531,347.0	322,139.5	333.1	101,676.4	97,669.7
77-033	5,530,713.2	322,037.3	352.3	101,371.6	97,104.7
77-034	5,531,078.6	322,317.7	355.1	101,371.6	97,565.3
77-047	5,530,752.2	321,960.5	353.9	101,456.3	97,088.9
77-048	5,530,567.0	322,239.8	358.1	101,122.0	97,112.0
77-049	5,530,559.2	322,250.0	358.1	101,109.2	97,112.0
77-050	5,532,656.5	324,911.6	292.0	100,274.3	100,396.2
77-051	5,530,501.5	322,191.1	359.7	101,120.8	97,030.4
77-052	5,531,241.0	322,826.5	359.4	101,066.8	98,003.9
77-053	5,532,544.2	324,414.7	313.9	100,600.2	100,004.6
77-054	5,532,239.7	324,602.4	307.8	100,265.9	99,877.3
77-055	5,531,453.5	322,989.6	321.3	101,066.8	98,271.7
77-056	5,530,615.0	322,538.3	369.4	100,914.4	97,331.8
77-057	5,530,706.8	322,416.6	360.3	101,066.8	97,330.5
77-058	5,530,625.1	322,353.9	359.7	101,066.8	97,227.5
77-059	5,530,698.2	322,293.6	358.4	101,159.2	97,248.8
77-060	5,530,931.0	322,012.4	342.3	101,524.0	97,262.3
77-061	5,531,182.7	322,205.5	334.7	101,524.0	97,579.6
77-062	5,531,645.3	322,560.5	342.3	101,524.0	98,162.7
77-063	5,531,446.0	323,361.5	347.2	100,767.2	98,492.2
77-064	5,531,777.3	322,661.8	331.0	101,524.0	98,329.1
77-065	5,530,985.8	322,438.6	359.4	101,219.2	97,565.3
77-066	5,531,331.3	323,280.1	358.1	100,761.9	98,351.6
77-067	5,534,170.8	323,043.8	300.2	102,678.0	100,460.5
77-068	5,531,633.3	323,646.6	343.8	100,655.0	98,814.3
77-069	5,534,101.9	322,908.8	299.9	102,743.1	100,323.7
77-071	5,530,575.9	322,124.1	351.1	101,219.2	97,048.6
77-076	5,533,070.4	322,261.3	314.6	102,628.9	99,111.2
77-078	5,533,276.2	322,467.3	343.5	102,590.8	99,399.8
77-079	5,533,162.3	322,379.9	327.4	102,590.8	99,256.3
77-080	5,533,548.3	322,099.7	330.1	103,048.0	99,391.9
77-081	5,533,121.7	322,668.7	341.7	102,336.9	99,399.9
77-083	5,533,214.1	322,548.3	345.9	102,488.7	99,399.9
77-084	5,533,326.9	322,408.2	343.8	102,668.5	99,404.1

QUINSAM DRILL HOLE COORDINATES

DRILL HOLE #	U.T.M. NORTH	U.T.M. EAST	EL. A.S.L.	MINE NORTH	MINE EAST
77-086	5,534,589.3	321,747.9	311.5	103,960.9	100,003.6
1978					
78-001	5,533,184.4	322,580.4	346.9	102,445.1	99,395.9
78-002	5,533,439.4	322,496.4	344.7	102,667.0	99,547.0
78-003	5,533,283.6	322,184.4	344.1	102,819.7	99,233.5
78-004	5,533,205.4	322,418.3	335.9	102,586.5	99,313.8
78-005	5,533,533.5	322,375.8	340.5	102,820.0	99,548.3
78-006	5,533,300.1	322,292.0	342.9	102,744.4	99,312.1
78-007	5,533,415.0	322,274.9	342.3	102,827.9	99,392.8
78-008	5,533,369.0	322,346.4	345.0	102,743.2	99,399.9
78-009	5,533,426.5	322,388.6	342.9	102,744.7	99,471.2
78-010	5,533,820.4	321,995.4	322.8	103,296.4	99,544.3
78-011	5,533,560.0	322,206.7	337.4	102,970.3	99,466.3
78-012	5,533,676.6	322,296.5	336.8	102,970.0	99,613.5
78-013	5,533,635.5	322,358.0	336.5	102,896.2	99,618.4
78-014	5,533,800.8	322,391.0	327.7	102,970.6	99,769.6
78-015	5,533,327.6	322,124.4	330.1	102,894.1	99,231.9
78-016	5,533,758.5	322,443.6	328.6	102,903.2	99,768.0
78-017	5,533,303.6	322,105.2	329.2	102,894.7	99,201.1
78-018	5,533,438.0	322,111.2	332.5	102,971.8	99,311.4
78-019	5,533,196.3	322,307.6	330.1	102,668.8	99,239.2
78-020	5,533,309.7	322,782.2	336.5	102,361.3	99,618.1
78-021	5,533,397.4	322,168.7	338.0	102,901.4	99,314.2
78-022	5,533,194.7	322,689.7	345.0	102,364.7	99,470.6
78-023	5,533,284.1	322,569.7	347.5	102,514.3	99,468.4
78-024	5,533,184.3	322,493.5	341.7	102,514.0	99,342.9
78-025	5,533,378.7	322,063.4	330.4	102,973.6	99,235.3
78-026	5,533,661.3	322,474.6	333.5	102,819.4	99,709.8
78-027	5,533,549.8	322,481.3	340.8	102,746.2	99,625.4
78-028	5,533,212.1	322,899.8	312.4	102,208.6	99,612.3
78-029	5,533,327.8	322,985.9	296.6	102,210.7	99,756.5
78-030	5,533,203.1	322,798.4	328.3	102,283.6	99,543.4
78-031	5,533,308.3	322,877.6	317.0	102,284.8	99,675.1
78-032	5,533,113.6	322,921.1	293.5	102,131.8	99,547.1
78-033	5,533,168.7	322,964.9	297.2	102,130.5	99,617.5
78-034	5,533,434.1	322,971.0	296.9	102,287.3	99,831.7
78-035	5,533,745.8	321,965.5	319.7	103,274.7	99,466.9
78-036	5,533,291.7	322,677.0	346.3	102,433.8	99,539.8
78-037	5,533,782.5	322,088.9	327.7	103,199.2	99,571.2
78-038	5,533,883.2	322,172.5	329.2	103,194.2	99,701.9
78-039	5,533,329.1	322,501.0	346.3	102,596.2	99,462.3
78-040	5,534,004.4	322,263.1	316.7	103,196.1	99,853.2
78-041	5,533,591.3	322,058.2	329.2	103,107.1	99,400.8
78-042	5,533,674.9	322,772.8	324.9	102,591.1	99,902.1
78-043	5,533,677.5	321,980.3	316.4	103,221.4	99,421.7
78-044	5,533,659.4	322,070.5	330.1	103,138.8	99,462.3
78-045	5,533,776.0	322,160.4	333.1	103,138.5	99,609.5
78-046	5,533,906.8	322,253.4	326.7	103,144.3	99,769.9
78-047	5,534,194.1	322,032.0	311.8	103,494.9	99,863.1
78-048	5,533,938.2	321,914.1	314.9	103,432.6	99,588.3
78-049	5,533,509.7	322,267.6	341.4	102,891.3	99,463.5
78-050	5,533,865.2	322,056.3	322.5	103,275.4	99,616.9
78-051	5,534,091.1	322,042.2	312.1	103,424.1	99,787.6
78-052	5,533,992.9	322,156.2	313.6	103,273.9	99,779.0
78-053	5,533,097.8	322,812.5	302.7	102,208.3	99,468.4
78-054	5,534,177.0	322,098.5	311.8	103,431.7	99,890.0
78-055	5,534,049.8	321,916.7	309.1	103,498.5	99,678.4
78-056	5,534,155.8	321,901.3	308.5	103,575.3	99,753.1
78-057	5,534,072.5	321,817.6	309.1	103,591.0	99,636.1

QUINSAM DRILL HOLE COORDINATES

DRILL HOLE #	U.T.M. NORTH	U.T.M. EAST	EL. A.S.L.	MINE NORTH	MINE EAST
78-058	5,535,052.0	321,140.9	329.2	104,724.1	100,001.2
78-059	5,534,087.5	321,746.2	308.2	103,656.7	99,604.5
78-060	5,534,147.7	321,800.2	306.9	103,650.5	99,685.1
78-061	5,534,123.5	321,962.5	309.4	103,507.0	99,764.7
78-062	5,535,058.0	321,430.6	318.2	104,497.9	100,182.3
78-063	5,534,954.3	321,356.4	320.3	104,493.7	100,054.9
78-064	5,535,160.4	321,125.8	329.8	104,802.1	100,078.0
78-065	5,535,272.1	321,214.5	328.0	104,799.7	100,220.6
78-066	5,535,392.8	321,303.7	321.0	104,802.4	100,370.7
78-067	5,535,288.6	321,313.2	324.0	104,731.4	100,293.8
78-068	5,535,533.2	321,416.0	312.4	104,798.8	100,550.4
78-069	5,535,227.4	320,988.5	332.5	104,951.8	100,047.6
78-070	5,535,380.3	321,103.1	330.4	104,953.9	100,238.7
78-071	5,535,263.1	321,119.6	332.2	104,869.5	100,155.7
78-072	5,534,814.7	321,253.9	324.9	104,490.0	99,881.7
78-073	5,534,300.0	322,005.8	318.2	103,580.1	99,931.1
78-074	5,534,044.3	321,707.3	312.1	103,661.3	99,546.6
78-075	5,534,849.9	321,460.3	319.4	104,347.7	100,035.3
78-076	5,534,947.4	321,541.6	314.9	104,342.5	100,162.2
78-077	5,534,767.6	322,173.2	323.7	103,732.0	100,404.0
78-078	5,535,012.0	321,205.1	326.7	104,648.8	100,008.6
78-079	5,535,474.5	321,079.0	326.1	105,030.4	100,298.7
78-080	5,535,124.4	321,289.8	322.5	104,650.0	100,149.3
78-081	5,535,048.9	321,631.1	312.4	104,333.3	100,297.2
78-082	5,535,247.0	321,380.0	323.1	104,653.1	100,301.5
78-083	5,535,395.2	321,501.8	315.5	104,646.7	100,493.2
78-084	5,535,476.0	321,184.2	322.5	104,947.9	100,364.0
78-085	5,534,863.1	321,659.5	312.1	104,197.7	100,167.1
78-086	5,535,119.1	320,904.3	329.5	104,952.7	99,910.4
78-087	5,535,057.7	320,857.1	328.9	104,952.7	99,833.0
78-088	5,535,037.4	321,036.7	328.9	104,797.9	99,926.2
78-089	5,534,973.4	320,988.4	312.4	104,797.2	99,846.0
78-090	5,535,157.2	321,502.5	319.4	104,501.3	100,304.8
78-091	5,534,730.2	321,564.1	313.6	104,192.5	100,003.5
78-092	5,535,329.2	320,781.2	333.8	105,178.2	100,002.2
78-093	5,534,985.4	321,764.4	306.3	104,188.9	100,327.9
78-094	5,534,785.2	320,929.3	334.1	104,729.6	99,660.7
78-095	5,534,873.7	321,286.1	323.1	104,500.4	99,948.2
78-096	5,535,221.6	320,893.8	333.5	105,023.4	99,985.3
78-097	5,535,280.1	321,598.7	315.8	104,499.8	100,460.9
78-098	5,535,183.0	321,738.2	312.4	104,330.0	100,468.8
78-099	5,534,761.3	321,203.3	327.1	104,497.6	99,808.6
78-100	5,535,432.4	321,926.5	300.2	104,332.4	100,781.2
78-101	5,535,305.9	321,827.9	310.0	104,333.6	100,620.9
78-102	5,534,867.1	320,996.3	330.4	104,726.3	99,766.5
78-103	5,534,930.7	320,759.3	330.4	104,953.0	99,672.7
78-104	5,534,934.5	321,433.8	316.7	104,420.2	100,086.3
78-105	5,534,857.5	321,093.5	328.9	104,643.3	99,818.1
78-106	5,535,076.2	321,826.4	307.2	104,195.0	100,437.7
78-107	5,534,795.5	320,823.8	333.8	104,819.5	99,604.7
78-108	5,534,850.0	320,902.9	332.2	104,789.9	99,696.1
78-109	5,535,155.3	321,606.6	312.4	104,417.5	100,366.7
78-110	5,535,410.9	320,748.2	331.9	105,254.1	100,046.9
78-111	5,534,753.3	321,392.0	321.0	104,343.1	99,917.1
78-112	5,535,070.4	321,723.3	308.8	104,273.3	100,370.4
78-113	5,534,669.0	321,347.6	321.3	104,327.0	99,823.2
78-114	5,535,538.6	320,746.6	321.0	105,333.1	100,147.2
78-115	5,535,553.4	320,854.0	321.6	105,256.9	100,224.3
78-116	5,535,675.4	320,945.4	315.8	105,258.7	100,376.8

QUINSAM DRILL HOLE COORDINATES

DRILL HOLE #	U.T.M. NORTH	U.T.M. EAST	EL. A.S.L.	MINE NORTH	MINE EAST
78-117	5,535,532.5	320,639.8	322.2	105,414.2	100,077.4
78-118	5,535,304.8	320,559.2	328.0	105,339.5	99,847.7
78-119	5,535,318.3	320,487.0	321.0	105,405.0	99,814.4
78-120	5,535,694.3	320,767.4	320.6	105,411.4	100,283.4
78-121	5,535,318.5	320,676.9	331.6	105,254.5	99,930.2
78-122	5,535,747.1	320,808.3	323.4	105,411.1	100,350.2
78-123	5,535,451.5	320,966.8	329.8	105,105.4	100,212.2
78-124	5,535,137.3	320,730.3	327.1	105,101.8	99,818.9
78-125	5,535,420.5	320,555.0	328.0	105,413.3	99,936.9
78-126	5,535,363.2	320,503.0	325.8	105,419.6	99,859.8
78-127	5,535,949.7	321,248.8	313.6	105,185.0	100,779.1
78-128	5,534,867.3	321,775.2	308.2	104,108.4	100,240.8
78-129	5,535,220.4	320,793.3	333.5	105,102.4	99,923.2
78-130	5,535,683.1	320,467.6	328.3	105,642.5	100,092.0
78-131	5,535,637.3	320,636.0	321.9	105,481.0	100,158.2
78-132	5,535,570.9	321,058.5	319.7	105,105.4	100,362.7
78-133	5,535,757.4	320,717.8	326.7	105,489.2	100,303.3
78-134	5,535,015.3	320,918.4	328.3	104,878.3	99,836.6
78-135	5,535,989.7	320,895.7	321.9	105,489.5	100,595.9
78-136	5,536,014.7	321,007.9	318.8	105,415.7	100,684.0
78-137	5,535,879.4	320,914.8	321.3	105,407.2	100,520.0
78-138	5,535,531.8	320,546.7	322.2	105,487.6	100,020.1
78-139	5,535,824.1	320,575.8	326.1	105,642.5	100,269.8
78-140	5,535,424.6	320,642.3	328.3	105,346.5	99,993.3
78-141	5,535,801.6	321,141.3	313.0	105,180.1	100,596.2
78-142	5,535,333.4	320,878.9	334.4	105,103.3	100,065.0
78-143	5,533,046.9	323,146.1	299.0	101,912.6	99,631.1
78-144	5,533,159.1	323,243.3	304.8	101,903.8	99,779.3
78-145	5,533,255.5	323,597.8	312.7	101,681.3	100,071.6
78-146	5,533,029.5	323,426.7	324.9	101,679.4	99,788.2
78-147	5,534,718.8	321,455.0	318.5	104,272.1	99,928.1
78-148	5,533,268.8	323,332.1	305.4	101,900.2	99,920.4
78-149	5,532,791.0	323,249.4	322.2	101,674.9	99,491.0
78-150	5,532,627.9	323,410.9	329.2	101,447.5	99,459.9
78-151	5,532,743.7	323,499.8	321.3	101,447.5	99,605.9
78-152	5,532,998.8	323,692.5	319.7	101,449.9	99,925.6
78-153	5,532,935.1	323,346.9	320.0	101,685.3	99,664.7
78-154	5,532,636.6	323,606.2	317.9	101,297.8	99,585.7
78-155	5,532,554.0	323,546.3	320.6	101,295.1	99,483.7
78-156	5,532,397.3	323,512.5	305.7	101,226.5	99,338.8
78-157	5,532,509.7	323,322.1	331.0	101,446.0	99,312.1
78-158	5,532,877.7	323,609.5	320.3	101,442.0	99,779.0
78-159	5,533,076.8	323,941.3	325.8	101,300.0	100,139.0
78-160	5,532,526.0	323,809.1	326.1	101,069.5	99,621.5
78-161	5,532,356.7	323,680.7	318.5	101,068.3	99,409.0
78-162	5,533,432.0	324,215.4	304.8	101,298.7	100,587.6
78-163	5,533,130.9	323,506.4	321.9	101,677.9	99,917.1
78-164	5,533,077.0	323,755.9	321.3	101,447.2	100,026.3
78-165	5,532,792.4	323,732.7	320.6	101,292.3	99,786.3
78-166	5,532,894.5	324,092.3	329.2	101,069.2	100,086.3
78-167	5,532,807.8	323,080.2	298.4	101,819.4	99,401.3
78-168	5,532,435.7	323,552.7	312.1	101,218.0	99,393.8
78-169	5,532,098.6	323,482.7	328.3	101,068.3	99,083.7
78-170	5,532,909.7	323,046.6	294.4	101,908.1	99,461.7
78-171	5,531,983.2	323,380.3	332.5	101,079.3	98,929.8
78-172	5,532,457.4	323,477.9	317.3	101,290.5	99,365.5
78-173	5,532,064.0	323,267.5	323.1	101,218.0	98,925.3
78-174	5,531,769.1	323,046.6	334.7	101,213.7	98,556.8
78-175	5,532,773.9	323,618.6	323.7	101,371.6	99,702.2

QUINSAM DRILL HOLE COORDINATES

DRILL HOLE #	U.T.M. NORTH	U.T.M. EAST	EL. A.S.L.	MINE NORTH	MINE EAST
78-176	5,532,231.9	323,578.4	331.6	101,073.5	99,247.7
78-177	5,532,865.4	323,689.2	319.4	101,371.3	99,817.8
78-178	5,531,877.8	323,132.7	332.5	101,211.6	98,695.5
78-179	5,530,739.9	321,865.8	353.3	101,524.0	97,021.5
78-180	5,530,819.4	321,924.4	349.3	101,525.9	97,120.2
78-181	5,530,600.2	322,045.9	352.7	101,296.0	97,020.3
78-182	5,530,639.8	322,074.4	351.7	101,297.5	97,069.1
78-183	5,530,620.3	322,174.3	352.0	101,206.4	97,114.4
78-184	5,530,675.5	322,215.1	356.9	101,207.6	97,183.0
78-185	5,530,548.6	322,195.7	357.2	101,145.8	97,070.5
78-186	5,532,429.3	323,355.3	325.2	101,370.7	99,268.5
78-187	5,530,760.3	322,378.9	359.1	101,129.3	97,350.0
78-188	5,530,855.4	322,452.3	360.3	101,129.0	97,470.2
78-189	5,530,732.5	322,262.0	358.1	101,205.1	97,256.8
78-190	5,532,657.1	323,529.0	326.1	101,371.6	99,555.0
78-191	5,530,961.2	322,319.5	355.1	101,298.7	97,473.2
78-192	5,530,797.9	322,408.1	359.7	101,129.0	97,397.6
78-193	5,530,802.3	322,204.1	364.5	101,293.6	97,276.9
78-194	5,530,891.8	322,073.4	353.6	101,451.7	97,268.4
78-195	5,531,084.9	322,415.1	357.2	101,298.2	97,629.6
78-196	5,531,049.7	322,202.6	346.9	101,445.4	97,472.3
78-197	5,532,410.8	323,530.5	309.7	101,220.4	99,360.5
78-198	5,530,852.0	322,234.5	363.0	101,299.7	97,334.9
78-199	5,531,301.5	322,396.6	349.6	101,444.7	97,790.2
78-200	5,533,009.9	323,796.2	321.3	101,374.4	99,997.6
78-201	5,531,042.0	322,101.0	327.1	101,521.3	97,404.3
78-202	5,530,931.4	322,118.0	357.5	101,440.5	97,326.9
78-203	5,532,779.0	323,425.8	321.3	101,527.7	99,588.9
78-204	5,531,404.8	322,378.7	349.6	101,521.8	97,861.2
78-205	5,531,518.2	322,460.3	344.4	101,526.1	98,000.9
78-206	5,531,345.8	322,242.3	342.3	101,594.1	97,731.4
78-207	5,531,596.6	322,346.0	336.2	101,664.5	97,993.5
78-208	5,531,204.3	322,503.7	353.9	101,300.6	97,778.2
78-209	5,532,578.2	323,673.9	321.0	101,208.6	99,580.6
78-210	5,533,448.0	323,464.6	304.8	101,904.1	100,143.3
78-211	5,530,928.3	322,499.0	360.9	101,136.3	97,556.4
78-212	5,531,060.1	322,603.2	363.0	101,133.9	97,724.4
78-213	5,531,426.6	322,499.1	349.6	101,439.6	97,951.8
78-214	5,531,919.9	323,348.2	338.6	101,066.2	98,860.1
78-215	5,531,169.9	322,296.8	342.6	101,443.8	97,625.0
78-216	5,531,630.9	323,216.0	332.5	100,995.2	98,550.3
78-217	5,531,508.0	323,129.0	349.6	100,989.4	98,399.8
78-218	5,531,360.0	323,587.1	347.2	100,535.9	98,561.3
78-219	5,531,460.3	323,678.7	345.6	100,524.2	98,696.6
78-220	5,531,700.3	323,273.9	331.3	100,991.5	98,640.6
78-221	5,531,238.3	323,496.4	359.1	100,533.7	98,409.5
78-222	5,531,524.1	323,723.8	338.3	100,527.3	98,774.7
78-223	5,531,447.5	323,082.6	356.9	100,989.4	98,323.6
78-224	5,531,531.7	323,438.0	343.5	100,758.7	98,606.8
78-225	5,531,479.5	323,402.9	342.3	100,754.7	98,544.0
78-226	5,531,806.3	323,258.4	331.6	101,068.3	98,715.3
78-227	5,531,822.3	323,092.8	325.5	101,209.4	98,627.2
78-228	5,531,298.4	323,543.3	354.5	100,533.1	98,485.8
78-229	5,531,879.5	323,408.3	337.1	100,994.0	98,864.6
78-230	5,531,131.1	323,606.6	357.2	100,381.0	98,391.6
78-231	5,531,743.5	323,217.5	330.4	101,062.5	98,640.6
78-232	5,532,538.5	323,730.7	326.7	101,139.4	99,583.7
78-233	5,532,696.1	323,841.7	326.7	101,147.2	99,776.3
78-234	5,532,640.5	323,762.5	328.3	101,176.2	99,684.0

QUINSAM DRILL HOLE COORDINATES

DRILL HOLE #	U.T.M. NORTH	U.T.M. EAST	EL. A.S.L.	MINE NORTH	MINE EAST
78-235	5,532,742.6	323,686.4	319.4	101,298.7	99,718.6
78-236	5,533,617.0	323,496.7	291.1	101,981.5	100,296.9
78-237	5,532,375.4	323,605.2	312.7	101,139.6	99,377.9
78-238	5,532,591.7	323,790.0	329.2	101,124.7	99,662.0
78-239	5,532,511.9	323,649.6	326.7	101,187.5	99,513.2
78-240	5,532,412.5	323,674.0	314.6	101,107.6	99,449.2
78-241	5,532,366.1	323,418.6	306.3	101,282.0	99,256.9
78-242	5,531,217.6	323,869.4	350.5	100,225.2	98,620.2
78-243	5,532,465.8	323,666.1	315.5	101,146.3	99,486.7
78-244	5,531,342.7	323,965.7	349.6	100,225.0	98,778.1
78-245	5,531,315.3	323,754.5	351.1	100,375.8	98,627.7
78-246	5,531,433.6	323,834.2	344.1	100,384.6	98,770.1
78-247	5,531,176.6	323,638.5	354.2	100,383.4	98,447.1
78-248	5,532,286.0	323,533.5	319.1	101,142.1	99,263.3
78-249	5,531,055.7	323,740.9	354.2	100,228.6	98,413.5
78-250	5,532,398.7	323,331.5	304.8	101,371.0	99,229.8
78-251	5,530,950.5	323,658.2	357.5	100,230.2	98,279.7
78-252	5,531,121.3	323,402.0	364.2	100,537.4	98,259.2
78-253	5,530,880.5	324,000.3	359.7	99,916.1	98,432.4
78-254	5,531,287.4	323,915.6	349.0	100,231.0	98,703.7
78-255	5,531,109.1	323,781.5	349.3	100,228.9	98,480.6
78-256	5,531,077.5	323,569.3	356.3	100,378.0	98,326.3
78-257	5,531,026.9	323,528.6	360.3	100,379.5	98,261.4
78-258	5,531,166.8	323,826.9	354.2	100,228.0	98,554.0
78-259	5,531,006.4	323,896.3	352.7	100,075.3	98,469.0
78-260	5,531,069.8	323,940.3	355.1	100,079.0	98,546.1
78-261	5,531,130.9	323,986.9	354.2	100,079.2	98,622.9
78-262	5,531,188.1	324,034.5	354.8	100,076.3	98,697.3
78-263	5,530,889.7	323,802.5	363.9	100,078.7	98,319.3
78-264	5,531,249.8	324,079.2	356.6	100,078.4	98,773.4
78-265	5,531,042.0	324,113.8	359.4	99,924.4	98,629.7
78-266	5,531,099.8	324,158.1	363.3	99,924.4	98,702.5
78-267	5,530,945.4	323,847.6	362.1	100,076.8	98,391.0
78-268	5,530,808.1	323,940.4	369.1	99,919.6	98,338.5
78-269	5,530,676.3	323,834.8	359.7	99,923.1	98,169.7
78-270	5,530,764.6	323,712.3	362.7	100,074.1	98,165.2
78-271	5,530,896.7	323,613.1	367.3	100,233.2	98,209.6
78-272	5,531,252.5	323,353.3	364.5	100,655.9	98,333.7
78-273	5,530,959.3	323,477.5	364.5	100,378.9	98,176.7
78-274	5,530,910.9	323,440.0	366.7	100,379.2	98,115.5
78-275	5,531,317.0	323,400.4	354.5	100,657.8	98,413.5
78-276	5,531,594.8	323,962.1	345.0	100,381.3	98,975.9
78-277	5,531,480.2	323,532.2	348.4	100,652.6	98,623.2
78-278	5,531,701.8	324,048.0	335.0	100,378.3	99,113.1
78-279	5,531,528.3	323,569.1	349.0	100,652.6	98,683.9
78-280	5,531,297.9	324,300.9	358.8	99,931.8	98,946.6
78-281	5,530,658.2	324,016.0	363.9	99,768.4	98,265.6
78-282	5,530,950.8	324,240.6	363.9	99,768.3	98,634.5
78-283	5,530,760.4	324,093.2	363.0	99,769.3	98,393.7
78-284	5,531,065.6	324,324.4	361.2	99,771.7	98,776.6
78-285	5,531,024.8	324,488.6	349.6	99,616.6	98,844.2
78-286	5,530,845.6	324,157.5	362.4	99,770.2	98,500.4
78-287	5,532,382.6	324,979.2	256.0	100,053.9	100,220.0
78-288	5,532,534.3	324,822.1	315.2	100,270.9	100,244.8
78-289	5,532,478.1	324,764.7	308.2	100,282.3	100,165.2
78-290	5,532,794.4	324,845.7	298.1	100,410.5	100,465.5
78-291	5,533,029.8	324,816.2	290.8	100,577.3	100,634.3
78-292	5,532,873.5	324,693.5	304.8	100,579.4	100,435.6
78-293	5,532,761.8	324,606.3	311.8	100,580.6	100,293.9

QUINSAM DRILL HOLE COORDINATES

DRILL HOLE #	U.T.M. NORTH	U.T.M. EAST	EL. A.S.L.	MINE NORTH	MINE EAST
78-294	5,532,516.6	324,999.4	289.0	100,119.5	100,338.7
78-295	5,532,658.8	324,524.2	303.6	100,583.1	100,162.2
78-296	5,532,812.2	324,646.1	307.2	100,579.7	100,358.1
78-297	5,533,778.0	324,574.6	302.1	101,224.4	101,080.8
78-298	5,533,142.7	324,900.5	273.1	100,579.1	100,775.2
78-299	5,532,590.4	324,873.2	305.4	100,264.5	100,320.4
78-300	5,533,123.0	324,653.3	294.4	100,763.2	100,609.0
78-301	5,532,651.1	324,753.4	309.1	100,396.5	100,295.6
78-302	5,533,180.0	324,696.6	291.1	100,763.6	100,680.6
78-303	5,533,063.4	324,605.7	302.1	100,764.7	100,532.8
78-304	5,532,714.7	324,797.2	296.0	100,400.5	100,372.7
78-305	5,533,157.7	324,496.3	303.3	100,908.9	100,541.0
78-306	5,534,166.4	324,428.9	301.8	101,576.4	101,300.2
78-307	5,533,214.1	324,531.5	300.5	100,915.3	100,607.2
78-308	5,533,278.3	324,581.5	295.4	100,914.7	100,688.5
78-309	5,533,979.8	324,488.9	300.8	101,415.2	101,188.7
78-310	5,533,403.9	324,488.5	292.0	101,065.0	100,731.6
78-311	5,533,638.3	324,470.9	301.8	101,221.6	100,906.8
78-312	5,533,467.9	324,537.6	291.7	101,065.0	100,812.2
78-313	5,533,554.4	324,590.2	295.0	101,075.9	100,912.9
78-314	5,533,869.8	324,398.0	310.9	101,420.4	101,046.1
78-315	5,533,363.9	324,450.5	299.0	101,070.8	100,676.7
78-316	5,533,525.6	324,392.9	296.3	101,214.9	100,769.9
78-317	5,533,641.4	324,190.9	301.8	101,445.7	100,738.8
78-318	5,533,927.7	324,440.2	308.8	101,422.2	101,117.7
78-319	5,534,299.3	324,227.8	296.9	101,816.9	101,283.2
78-320	5,534,035.2	324,302.1	316.7	101,597.2	101,118.9
78-321	5,534,222.8	324,186.7	298.7	101,802.9	101,197.5
78-322	5,534,302.7	323,841.2	291.7	102,125.7	101,050.6
78-323	5,534,747.7	324,694.8	197.8	101,719.4	101,923.3
78-324	5,533,992.3	324,493.6	303.3	101,419.1	101,201.5
78-325	5,534,811.9	324,079.4	235.0	102,246.7	101,599.6
78-326	5,534,406.5	323,701.1	288.6	102,300.0	101,047.7
1979					
79-001	5,535,434.6	321,626.2	306.9	104,572.0	100,600.2
79-002	5,535,434.7	321,338.1	318.8	104,800.6	100,424.9
79-003	5,535,686.5	321,051.1	313.9	105,181.6	100,449.9
79-004	5,535,667.0	320,748.0	321.0	105,410.2	100,249.9
79-005	5,535,468.7	320,595.8	324.9	105,410.2	100,000.0
79-006	5,535,620.1	321,384.4	310.9	104,876.8	100,600.2
79-007	5,532,923.6	323,157.2	316.4	101,828.8	99,540.1
79-008	5,534,885.1	321,684.8	310.6	104,191.0	100,199.9
79-009	5,532,787.0	323,244.5	322.2	101,676.4	99,484.9
79-010	5,532,871.0	323,981.2	328.0	101,143.0	100,000.0
79-011	5,533,010.2	323,799.9	321.3	101,371.6	100,000.0
79-012	5,531,647.1	322,369.8	336.2	101,676.4	98,048.0
79-013	5,532,513.7	324,994.1	289.0	100,121.9	100,333.1
79-014	5,533,518.8	324,382.3	296.3	101,219.2	100,758.1
79-015	5,532,716.3	324,787.2	296.0	100,409.4	100,367.9
79-016	5,533,810.3	324,317.8	311.8	101,447.8	100,950.1
79-017	5,533,267.5	324,573.6	312.7	100,914.4	100,675.2
79-018	5,534,076.3	324,329.1	313.9	101,600.8	101,168.0
79-019	5,533,395.8	324,480.0	292.0	101,066.8	100,720.0
79-020	5,534,287.5	324,338.2	300.5	101,722.1	101,341.1
79-021	5,533,721.7	324,269.0	309.7	101,432.6	100,850.1
79-022	5,534,208.8	324,176.0	296.3	101,802.9	101,179.9
79-023	5,534,571.2	324,229.3	274.9	101,981.2	101,499.9
79-024	5,534,491.9	324,168.5	282.2	101,981.2	101,399.9
79-025	5,534,412.6	324,107.6	285.0	101,981.2	101,300.0

QUINSAM DRILL HOLE COORDINATES

DRILL HOLE #	U.T.M. NORTH	U.T.M. EAST	EL. A.S.L.	MINE NORTH	MINE EAST
79-026	5,533,721.2	324,407.3	313.9	101,322.6	100,933.9
79-027	5,534,496.1	323,998.8	281.0	102,118.4	101,300.0
79-028	5,531,635.1	322,552.7	344.7	101,524.0	98,149.9
79-029	5,534,584.4	324,066.5	274.3	102,118.4	101,411.2
79-030	5,531,397.2	322,370.1	349.6	101,524.0	97,850.0
79-031	5,534,335.7	324,048.6	288.3	101,981.2	101,203.0
79-032	5,531,919.9	323,348.2	338.6	101,066.2	98,860.1
79-033	5,533,942.7	324,227.3	304.2	101,600.2	101,000.0
79-034	5,531,544.4	323,328.3	362.7	100,853.4	98,550.1
79-035	5,533,790.8	324,014.7	302.1	101,676.4	100,750.1
79-036	5,531,415.4	323,824.8	346.3	100,381.0	98,750.0
79-037	5,531,256.8	323,703.1	352.7	100,381.0	98,550.0
79-039	5,531,503.1	323,456.3	348.4	100,726.7	98,595.2
1980					
80-045	5,535,755.2	323,151.5	241.7	103,557.1	101,783.1
80-046	5,535,347.9	323,707.3	204.8	102,868.2	101,798.3
80-049	5,534,862.3	324,260.6	239.0	102,133.6	101,749.9
1982					
82-001	5,534,851.6	321,274.9	323.1	104,495.8	99,923.8
82-002	5,535,037.2	321,033.1	328.9	104,800.6	99,923.8
82-003	5,535,436.4	320,763.1	331.9	105,257.8	100,076.2
82-004	5,531,296.4	322,638.6	355.4	101,249.6	97,933.4
82-005	5,530,870.4	322,350.1	359.4	101,219.2	97,419.8
82-006	5,530,756.5	321,955.3	353.9	101,463.1	97,089.1
82-007	5,531,303.4	322,394.2	349.6	101,447.8	97,790.2
1983					
83-001	5,533,503.8	322,067.5	327.9	103,046.5	99,337.0
83-002	5,533,455.4	322,033.5	327.7	103,044.0	99,277.9
83-003	5,533,637.5	322,016.0	322.7	103,168.7	99,411.7
83-004	5,533,805.3	321,953.5	321.0	103,320.5	99,506.8
83-005	5,533,779.4	321,996.3	323.1	103,270.8	99,512.3
83-006	5,533,714.7	322,013.5	322.5	103,217.7	99,471.5
83-007	5,533,601.7	322,006.6	319.6	103,154.4	99,377.6
83-008	5,533,528.0	322,007.0	322.8	103,109.2	99,319.4
83-009	5,533,562.5	322,034.2	324.1	103,108.6	99,363.3
83-010	5,533,888.6	321,932.1	317.6	103,388.2	99,559.9
1992					
92-001	5,534,227.7	322,021.7	313.3	103,523.5	99,883.4
92-002	5,534,054.4	322,049.6	311.0	103,395.9	99,762.9
92-003	5,534,318.5	322,196.2	315.9	103,440.3	100,061.7
92-004	5,534,220.2	322,242.8	311.7	103,343.5	100,012.1
92-005	5,534,115.3	322,260.5	312.0	103,265.6	99,939.6
92-006	5,534,223.7	322,407.2	310.2	103,215.2	100,115.0
92-007	5,533,896.5	322,428.1	321.9	102,999.5	99,868.1
92-008	5,533,845.7	322,303.0	328.6	103,067.8	99,751.6
92-009	5,533,957.4	322,226.2	321.4	103,196.7	99,793.5
92-010	5,534,005.6	322,426.3	310.9	103,067.3	99,953.5
92-011	5,534,327.8	322,415.7	316.5	103,271.9	100,202.7
92-012	5,534,113.2	322,048.0	311.1	103,432.9	99,808.6
92-013	5,534,370.5	322,418.4	318.5	103,295.7	100,238.2
92-014	5,534,449.1	322,427.8	323.3	103,336.1	100,306.3
92-015	5,530,870.2	322,064.6	352.8	101,445.6	97,245.9
92-016	5,530,749.8	322,223.9	358.0	101,245.9	97,247.3
92-017	5,533,767.4	322,659.2	320.9	102,737.5	99,906.4
92-018	5,533,865.7	322,735.6	311.2	102,736.8	100,030.8
92-019	5,533,754.7	322,833.0	313.6	102,591.9	100,002.1
92-020	5,533,929.3	322,956.3	292.7	102,600.4	100,215.7
92-021	5,534,419.2	322,788.5	320.0	103,031.7	100,502.2
92-022	5,534,393.4	323,146.9	301.5	102,731.7	100,699.9

QUINSAM DRILL HOLE COORDINATES

DRILL HOLE #	U.T.M. NORTH	U.T.M. EAST	EL. A.S.L.	MINE NORTH	MINE EAST
92-023	5,534,130.7	322,339.9	308.9	103,212.0	100,000.2
92-024	5,534,265.4	322,747.9	309.2	102,970.3	100,355.4
92-025	5,534,691.9	322,441.5	329.6	103,473.1	100,507.3
92-026	5,533,299.4	324,393.1	304.0	101,077.0	100,590.6
92-027	5,533,156.8	324,423.2	304.2	100,966.4	100,495.8
92-028	5,533,048.0	324,451.2	309.0	100,877.9	100,426.5
92-029	5,532,953.3	324,472.2	311.1	100,803.6	100,364.2
92-030	5,532,816.3	324,500.1	308.7	100,698.1	100,272.5
92-031	5,532,471.3	324,647.7	300.5	100,370.9	100,088.6
92-031A	5,532,470.5	324,643.1	300.9	100,374.1	100,085.2
92-032	5,532,376.8	324,691.3	303.4	100,278.8	100,040.2
92-033	5,532,385.8	324,587.2	305.1	100,366.9	99,983.9
92-034	5,532,392.3	324,199.5	335.9	100,678.4	99,753.1
92-035	5,532,389.6	324,049.7	336.2	100,795.6	99,659.8
92-036	5,532,071.1	324,468.0	328.6	100,269.9	99,661.7
92-037	5,532,401.0	324,327.1	326.7	100,582.5	99,837.7
92-038	5,532,488.3	324,768.5	306.1	100,285.5	100,175.6
92-039	5,532,518.6	324,888.4	305.5	100,208.8	100,272.7
92-040	5,532,674.7	324,799.9	300.5	100,374.0	100,342.6
92-041	5,532,559.3	324,958.7	296.2	100,177.8	100,347.8
92-042	5,534,192.5	322,496.9	304.6	103,125.1	100,144.8
92-043	5,534,202.9	322,545.3	305.4	103,093.0	100,182.5
92-044	5,534,251.9	322,550.2	308.7	103,119.0	100,224.4
92-045	5,534,318.9	322,550.8	313.2	103,159.3	100,277.9
92-046	5,534,359.4	322,552.2	317.0	103,182.8	100,310.9
1994					
94-001	5,535,659.1	322,090.2	301.2	104,340.6	101,060.8
94-002	5,534,967.6	322,411.1	304.0	103,665.0	100,707.5
94-003	5,534,977.8	322,805.8	283.1	103,358.1	100,955.9
94-004	5,534,558.3	321,939.9	319.0	103,789.7	100,095.9
94-005	5,534,769.1	321,896.0	306.2	103,952.8	100,236.4
94-006	5,534,668.3	321,925.2	314.2	103,868.3	100,174.3
94-007	5,534,409.1	321,811.8	320.2	103,800.5	99,899.6
94-008	5,531,248.6	322,579.7	354.5	101,267.3	97,859.7
94-009	5,531,330.2	322,691.5	353.5	101,228.2	97,992.5
94-010	5,531,294.2	322,565.5	351.5	101,306.3	97,887.2
94-011	5,531,263.9	322,470.8	351.1	101,363.0	97,805.5
94-012	5,531,391.0	322,566.3	349.7	101,364.6	97,964.5
94-013	5,531,344.8	322,604.2	348.5	101,306.4	97,950.9
94-014	5,531,226.6	322,480.6	352.6	101,332.5	97,781.9
94-015	5,531,272.8	322,536.9	352.2	101,315.9	97,852.8
94-016	5,534,571.0	322,847.6	322.9	103,077.3	100,658.6
94-017	5,534,648.5	322,605.9	327.0	103,316.2	100,572.9
94-018	5,534,517.4	322,601.8	324.0	103,239.6	100,466.4
94-019	5,534,570.4	322,437.5	323.7	103,402.3	100,408.5
94-020	5,534,246.9	322,917.6	305.7	102,824.4	100,444.1

QUINSAM COAL PROJECT

ALL HOLES

HOLE NUMBER	CORED	PIT NUMBER	NORTHING (m)	EASTING (m)	COLLAR (m)	TILL (m)	No. 4 SEAM DEPTH	No. 4 SEAM THICK	No. 3 SEAM DEPTH	No. 3 SEAM THICK	No. 3 RIDER DEPTH	No. 3 RIDER THICK	No. 2 SEAM DEPTH	No. 2 SEAM THICK	No. 2 RIDER DEPTH	No. 2 RIDER THICK	No. 1 RIDER DEPTH	No. 1 RIDER THICK	PARTING DEPTH	PARTING THICK	No. 1 SEAM DEPTH	No. 1 SEAM THICK	No. 1 BASAL DEPTH	No. 1 BASAL THICK	BASEMENT DEPTH	TOTAL DEPTH
J-92-001	Y	2N	103,523.5	99,883.4	312.7	4.4							30.9	0.5			58.6	0.6	59.2	1.6	60.9	3.1	63.9	0.8		70.5
J-92-002	Y	2N	103,395.9	99,762.9	310.8	4.4							15.8	0.4			37.9	0.6	38.4	1.0	39.5	4.0	43.4	0.4	53.2	77.0
J-92-003	Y	2N	103,440.3	100,061.8	315.9	4.4							51.4	0.9			71.4	0.7	72.2	2.0	74.3	3.4				83.5
J-92-004	Y	2N	103,343.6	100,012.0	311.7	4.8							49.3	0.4			69.5	0.5	69.9	1.8	71.7	4.0			81.0	84.0
J-92-005	Y	2N	103,265.7	99,939.7	312.0	5.7							42.8	0.5			64.2	0.6	64.7	1.5	66.2	4.3				78.4
J-92-006	Y	2N	103,215.2	100,115.0	309.5	10.5							59.6	0.4							83.3	2.8			91.3	94.6
J-92-007	Y	2N	102,999.4	99,868.1	321.9	2.3							41.3	0.4			67.8	0.5	68.2	0.9	69.1	3.2				79.7
J-92-008	Y	2N	103,067.8	99,751.7	328.6	2.6							33.1	0.5			58.5	0.5	59.0	0.6	59.5	3.3				72.3
J-92-009	Y	2N	103,195.7	99,793.5	321.3	2.5							30.1	0.7			52.3	0.3	52.7	1.0	53.7	3.4				64.1
J-92-010	Y	2N	103,067.3	99,953.6	310.9	3.5							39.6	0.5			65.6	0.4	65.9	0.6	66.6	3.5				76.7
J-92-011	Y	2N	103,271.9	100,202.7	315.4	13.6							65.9	0.4			90.0	0.7	90.7	2.3	93.0	3.0				101.2
J-92-012	Y	2N	103,432.9	99,808.6	310.9	5.5							26.1	0.4			51.2	0.5	51.7	1.4	53.1	4.1				63.7
U-92-013	Y	2N	103,295.8	100,238.2	317.7	11.4							70.5	0.5			95.8	0.6	96.3	0.6	96.9	3.4				106.0
U-92-014	Y	2N	103,336.2	100,306.3	322.7	7.0							80.3	0.4			101.9	0.5	102.4	6.1	108.5	3.5				116.3
J-92-017	Y	2N	102,737.5	99,606.3	320.9	2.8							51.0	0.7			79.1	0.5	79.6	0.6	80.2	3.2				86.2
U-92-018	Y	2N	102,736.8	100,030.9	311.2	5.9							59.2	0.6			80.5	0.7	81.2	0.7	81.8	2.6	84.4	1.5		90.0
U-92-019	Y	2N	102,592.0	100,002.1	313.6	18.4							56.9	0.4			81.9	0.6	82.5	0.5	83.0	1.9	85.9	0.4		93.2
U-92-020	Y	2N	102,600.3	100,215.6	292.7	17.7							60.4	0.4			82.9	0.8	83.6	1.0	84.6	2.2	87.8	0.4		93.9
U-92-021	Y	2N	103,031.7	100,502.2	320.0	24.0			66.5	5.8			107.2	0.4			120.8	0.5	129.3	3.6	132.9	3.5				141.5
U-92-022	Y	2N	102,731.7	100,699.0	301.5	6.0			76.6	4.7			111.7	0.5											124.7	134.4
U-92-023	Y	2N	103,212.0	100,008.2	308.9	6.0							48.5	0.5			72.4	0.5							82.6	84.5
U-92-024	Y	2N	102,970.4	100,355.5	309.2	6.3			32.9	6.9			81.4	0.4			107.5	0.6	108.1	2.2	110.3	4.0				118.6
U-92-025	Y	2N	103,473.0	100,507.3	329.6	15.2							99.6	0.4			108.2	0.5	108.7	20.0	128.7	3.0				136.7
U-92-026	Y	242	101,077.0	100,590.6	304.0	17.7			49.6	5.5																58.0
U-92-027	N	242	100,966.4	100,495.8	304.2	18			73.6	6.0																87.0
U-92-028	Y	242	100,878.0	100,426.5	309.0	25.6			94.7	6.3																104.0
U-92-029	Y	242	100,803.6	100,364.2	311.1	11.2			99.6	5.5																107.5
U-92-030	Y	242	100,698.1	100,272.5	308.7	6.6			98.6	5.9																110.0
U-92-031	Y	242	100,371.0	100,088.6	300.5	-			-	-																-
U-92-031A	Y	242	100,374.1	100,085.2	300.9	2			77.6	6.4																88.0
U-92-032	Y	242	100,278.6	100,040.2	303.4				74.2	5.5																132.0
U-92-033	Y	242	100,366.8	99,984.0	305.1	1.8			132.8	3.5																166.0
U-92-034	Y	242	100,678.4	99,753.1	336.0	0.3			141.5	4.4																153.0
U-92-035	Y	242	100,795.7	99,659.7	336.2	2.7			133.3	4.1																142.0
U-92-036	Y	242	100,269.9	99,661.8	328.6				108.9	4.0																172.0
U-92-037	Y	242	100,582.5	99,837.7	326.7				146.8	4.3																158.5
U-92-038	Y	242	100,285.4	100,175.6	306.1				93.5	1.9																101.0
U-92-039	Y	242	100,208.8	100,272.6	305.5				82.2	3.7																91.0
U-92-040	Y	242	100,374.1	100,342.6	300.5	8.4			61.7	4.2																70.0
U-92-041	Y	242	100,177.8	100,347.8	296.2				50.6	6.4																73.0
U-92-042	Y	2N	103,125.1	100,144.8	304.6	15.4							61.8	1.0			82.8	0.6	83.3	1.8	85.1	3.2	88.5	1.7		93.0
U-92-043	Y	2N	103,093.0	100,182.5	305.4	2.0							65.1	0.4			86.8	0.5	87.2	1.9	89.1	2.5				97.0
U-92-044	Y	2N	103,119.0	100,224.4	308.7	6.6							66.7	0.3			90.1	0.5	90.6	2.1	92.7	3.7				101.0
U-92-045	Y	2N	103,159.2	100,277.9	313.2	5.5							76.9	0.3			100.2	0.5	100.7	2.6	103.3	3.2				113.0
U-92-046	Y	2N	103,182.8	100,310.9	317.0	12.8							82.7	0.3			107.0	0.6	107.6	1.0	108.5	3.9				116.0

ESSO RESOURCES

CANADIAN OCCIDENTAL PETROLEUM LIMITED

CANDEL OIL LIMITED

WELDWOOD

POWER LAKE MINERALS

OPEN 07/82

Proposed Coal Lease

3N

2N

4S

2S3

Freehold Coal Rights

Coal Licence

U.T.M. Co-ordinates (Typical)

5620000mN

540000mE

1000 0 1000 2000 3000 4000 5000

METRES

Figure 2

Brinco MINING LIMITED

2090 - 1055 WEST HASTINGS ST., VANCOUVER, B.C. V6E 3V3
(604) 688-2511 TELEX 04-508664

PROJECT: QUINSAM COAL LIMITED

LOCATION: CAMPBELL RIVER, BRITISH COLUMBIA

TITLE: FREEHOLD AND COAL LICENCES HELD — QUINSAM

#815

DRAWN BY: e.j.d.	DATE: 07-		
DRAFTED BY: e.j.d.	DATE: 07-06-82	APPROVED BY:	DATE:
SECTION:		PROJECT No. 1-555	
SCALE: 1: 50,000	DWG. No. 060I-0010		REV:

DRWG. No.	REFERENCE	No.	DATE	REVISIONS	BY	ISSUED FOR ABOVE PURPOSE	REV.	DATE	APP'D
	NTS 92F/13, 92F/14								

MEMORANDUM

TO Dr. J.T. Fyles,
Associate Deputy Minister,
Mineral Resources Branch.

FROM THE DEPARTMENT OF MINES AND PETROLEUM RESOURCES

VICTORIA, B.C., November 4, 1974

WHEN REPLYING PLEASE REFER TO FILE No.

Re: "Report on Reserves & Mining Costs of the Comox Coalfield, Vancouver Island" by C.R. Saunders, P.Eng., H.O. Howey, P.Eng., and Dr. D.D. Campbell, P.Eng. (Preliminary draft).

I have read this report with interest. My principal reaction to it is that I think the authors are considerably underestimating the difficulties of establishing a large underground mining operation in the Comox-Cumberland coalfield. Although the authors say that their estimates are preliminary ones, I think the difficulties should also be recognized and pointed out even at this preliminary stage.

The authors propose that a mine, designed to produce 2,200,000 tons per year (7,333 tons per day) could be developed in the most thoroughly explored area of the T'sable River coal measures. The proposed method of mining is based on "conventional continuous miners, shuttle cars, roof bolters, breaker feeders, conveyor belts" and etc.

Continuous miner systems are designed to operate best in relatively flat-lying strata, undisturbed by faults and other structural irregularities, and with a reasonably competent roof or hangingwall above the coal seam. Few of these conditions are likely to occur in the T'sable River coalfield. In the proven part of the coalfield the thickness of the coal zone varies from 5 to 16.7 feet, and even with our present very limited knowledge three faults are shown on the plan as intersecting the area. In the old mine fairly close timbering was necessary; to what extent this could be replaced by roof bolting only is a question that only can be answered by practical research. If considerable faulting was present some methods of support other than bolting would certainly seem to be necessary.

In order to produce 7,000 tons per day, as many as ten continuous miners would be required. Under ideal conditions a single machine has produced up to 2,000 tons a day on three shifts, but in this Province in the East Kootenays production has I believe rarely exceeded 900 tons a day on two-shifts under conditions somewhat more favourable than those likely to be experienced at T'sable River. In order to deploy 10 machines, extremely extensive development work would be necessary. Another point to be borne in mind is that continuous miners are designed to cut in coal. One wonders how they would perform in a 'coal zone' in which a 3-foot band of fairly tough shale or 'bone' occurred?

In the old T'sable River mine two quite serious outbreaks of spontaneous combustion occurred, each time during the extraction of coal pillars close to faults. In each case it was necessary to seal off part of the workings. To what extent is this liable to recur in this coalfield, and what provisions ought to be made for leaving coal in place in the vicinity of faults?

[redacted]

I would suggest that answers should be sought to all of these questions before a decision is made to invest in an underground mining project on a scale vastly larger than was attempted in the T'sable River area in 1948 to 1967. An intensive drilling programme would of course be required to give a very precise picture of the structures and attitude of the seam. Some programme of research and development, preferably including some trial mining would be desirable, with a full investigation of alternative methods and systems, with studies of what is being done in other countries in similar conditions, if these exist.

These operational studies should be undertaken under the supervision of a reputable consultant with actual operating experience in underground coal mining, who is in a position to appreciate the problems in establishing a successful large underground coal mining operation.

The Grande Cache project of McIntyre Porcupine Mines Ltd. is an example of a major coal mining project which was embarked upon without a full appreciation of what kind of difficulties and problems would be encountered. The results, as you know, have been disastrous for the company. I would not like to see B.C. Hydro get into a similar situation, and this can be prevented by a clear recognition of the possible problems right from the start.

A.R.C. James

A.R.C. James, P.Eng.,
Senior Inspector of Mines.

ARCJ:sl

[redacted]

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INTRODUCTION

A two phase exploration drill and core program was conducted by Hillsborough Resources Ltd. on their newly acquired Quinsam Coal Property. The Quinsam Coal property is located 28 km. west of Campbell River, B. C. (see Figure 1). Land status of the Quinsam Coal and surrounding properties is shown on Figure 2. Phase 1 of the exploration program was carried out during March and April 1992 and followed up by a second phase in September and October of 1992. Phase 1 and 2 are outlined below.

PHASE 1

The exploration work was designed to provide the following:

1. Determine the structural regime of a major deformed zone near the existing 2N open pit.

2. Provide additional coal quality information on the existing in-situ underground coal reserves, with special emphasis on the mineral analysis of clean coal ash and calcium oxide content of same.

3. Confirm earlier probable coal reserves down the dip from the existing underground operation in the 2N area by infill drilling,thus shifting these reserves in to the proven category.

A total of 25 holes were drilled, 23 of which were drilled in the 2N area and 2 which were located in the Pit 2S area which is scheduled for open pit mining in 1992. Total meterage of the program is 2,204 metres, broken down as follows:

- 206 metres of casing work in unconsolidated till.

- 1362 meters of rotary downhole hammer drilling above corepoint.

- 636 metres of coring through the coal seam and its surrounding roof and floor rock. Some holes were completely cored to provide more detailed geologic data on the structurally complex areas.

PHASE 2

The exploration work was designed to provide the following:

1. Determine the structural setting and mineability of the No. 3 seam in the 7S/BK 242 area.

2. Provide additional coal quality information on the existing in-situ underground coal reserves of the No.3 seam in the 7S/BK 242 area with special emphasis on the mineral analysis of clean coal ash and calcium oxide content of same.

3. Provide additional structural information on the deformed zone outlined in the phase 1 drill program.

Drilling was divided into the 7S/BK 242 & 2N areas. The 7S/BK 242 area was drilled with 16 core/rotary holes for a total of 1813 metres. Of this 94.3 metres of casing work was completed in overlying unconsolidated surficial deposits while 1365.2 metres of hammer drilling and 353.5 metres of coring was completed in bedrock.

The 2N area was drilled with 5 core/rotary holes for a total of 520.0 metres. Of this total, 44.3 metres of casing, 383.7 metres of rotary/hammer drilling and 92.0 metres of coring was completed.

A tabulation of pertinent drillhole data is illustrated in Table 1 and a Master Hole List, Table 2, is included on Page 25 and in the Appendix Section.

All holes were geophysically logged to confirm core recoveries and provide additional information on structure, seam thicknesses and thickness of associated dirt bands.

Drill holes were plotted on plan and on sections and the geology of the areas under investigation was interpreted and drawn on section.

Total all-inclusive cost of the program, including all laboratory work and geologic supervision was approximately $ 500,000.00. An itemized cost statement is included in the report. This included the cementing of all drillholes as specified in the Mines Act.

TABLE 1.

1992 Exploration Drilling Summary

Total Casing	344.6 metres
Total Rotary Drilling	3110.9 metres
Total Core Drilling	1081.5 metres
Total program	4537.0 metres

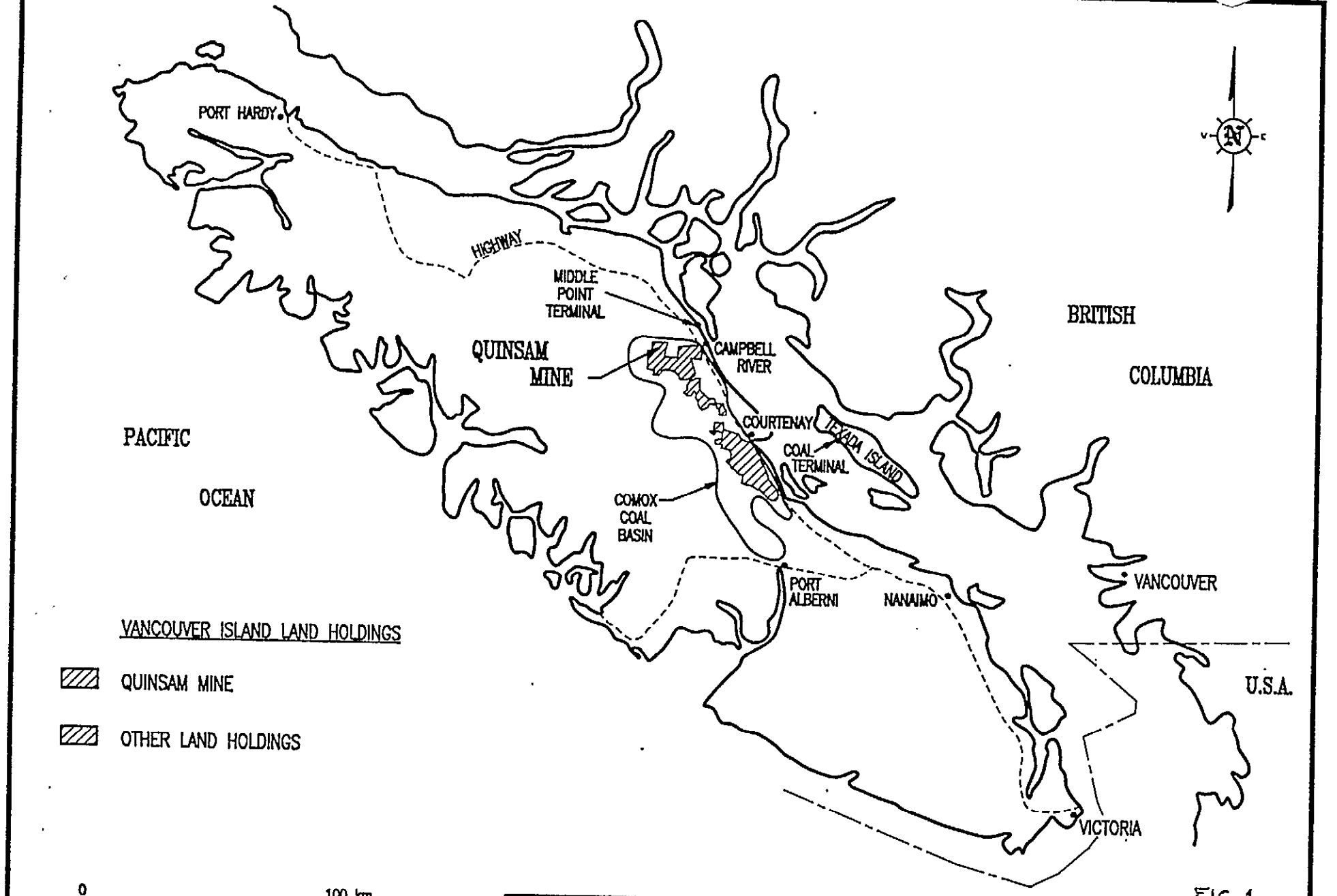


FIG. 1

SCALE: AS SHOWN	DATE	BRINCO COAL CORPORATION QUINSAM MINE VANCOUVER ISLAND LAND HOLDINGS	HILLSBOROUGH RESOURCES LTD. BRAMPTON, ONTARIO CANADA
DESIGNED:			DWG. NO. 91-BC-6
DRAWN: E.P.	SEPT 9/91		REV.
CHECKED:			
APPROVED:			

QUINSAM COAL

1992 EXPLORATION REPORT

CONFIDENTIAL

BRINCO COAL MINING CORPORATION

QUINSAM COAL MINE
P.O. BOX 938
CAMPBELL RIVER, B.C.
V9W-6Y4

N.T.S. 92F

Latitude: 49° - 55' NORTH
Longitude: 125° - 27' WEST

February 20, 1993.

BY: S. Gardner
J. Lehtinen

#820

DESCRIPTION OF THE PROGRAM

i) EQUIPMENT USED

Drilling and Coring Equipment

Hi-Rate Drilling (1985) Ltd. of Stettler, Alberta provided a truck-mounted Ingersoll-Rand Cyclone TH-55 Rotary Drill equipped with a Mission downhole hammer for rotary work and a Christiansen wireline core string of PQ size (3 inch core). The drill can use mud circulation for overburden casing work or air circulation for rotary drilling and coring. The air package includes a 750 cfm/250 psi compressor driven off the truck engine. Support equipment includes a bed truck which handles a pipe crib and 1000 gallon portable water tank. Mud tanks and other miscellaneous equipment are transported in the pipe crib. A one-ton crew cab tows a 20 foot doghouse/tool crib trailer.

Geophysical Equipment

For Phase 1, BPB instruments of Red Deer, Alberta provided a portable geophysical logging unit mounted on a one-ton 4X4 truck. This unit logged all holes with a gamma-density-resistance-caliper log suite. In addition, a dipmeter survey was run on all holes.

For the second phase of the program Electrolog Services Inc. of Calgary, Alberta provided a similar logging unit which provided a similar suite of geophysical logs, with the exception of the dipmeter survey.

Site Preparation Equipment

K & D Contracting of Campbell River, B.C. provided a Cat 215 excavator for most site preparation and roadbuilding work. Graders and bulldozers from the Quinsam Mine also provided assistance in road building and upgrading.

ii) METHODOLOGY

The drilling crew begins by drilling an 8 ⅝ inch hole with mud circulation through the glacial till overburden and setting seven inch threaded casing to bedrock. In holes where the till is less than 10 metres thick, the downhole hammer can sometimes be used to drill ahead of the casing.

Once casing is set, air rotary drilling is started with a 6 ½ inch Mission downhole percussion hammer. This is continued down to a predesignated corepoint. In some holes where structural information is important, most of the horizon above the coal seams, as well as the seam itself, would be cored.

Once corepoint is reached, the crew would retrieve the downhole hammer and drillstring and run in the 6 inch diameter core string with the outer core barrel and bit at the bottom. The bit is a diamond faced modified step-toothed bit used for soft formation work. When the core tools reach hole bottom, the inner core barrel is run down through the centre of the core string on a wireline cable. The inner barrel is a split tube type, or it can be run with a plastic liner insert to contain the core. The driller prefers the split tube without the plastic liner. This method also provides a slightly larger diameter core. When a 3 meter section of core is cut, the inner barrel is then retrieved by the sand line, laid out on stands and opened up. The core is then measured and slid out into marked core boxes. Two inner barrels are used simultaneously. When one is being opened up, the other is being run into the hole. An average 60 meter hole is completed in about 1.5 shifts (11 hour shifts).

After about twelve holes were completed, the geophysical unit was mobilized and began to log the holes. This unit can log about four holes per day, although processing and log production tend to take a bit longer. Only two holes out of the total program were bridged off so that the logging tools could not reach total depth. Even after washing one of these holes out with the drill, it could still not be logged to the bottom of the coal seam.

All holes were geophysically logged using gamma ray, resistance, density and caliper instruments while holes drilled during Phase 1 were logged with an additional dipmeter survey. Core recovered was physically logged noting recovery, lithology, alteration, physical and mineralogical properties of the units as well as structural properties.

Drill hole collars were surveyed from control points carried into the area from the existing mine grid. Drill holes are referenced to mine grid northing and easting and elevation above sea level.

After the logging operation, the drill was then re-established on each location to cement and complete the holes. Cement was purchased by 560 bag semi-trailer loads. The drill used its mud circulation equipment to mix the cement and pump it down through the drill pipe to total depth. The drill pipe was then removed from the hole and a top plug was pumped in to replace the volume taken up by the pipe. Bentonite at a ratio of 5% was added to the concrete to reduce shrinkage during curing. A total of 1960 bags (40kg each) of Type 50 cement and 96 bags of bentonite were used to complete 44 drilled and

geophysically logged holes plus an additional 2 incomplete holes which had to be abandoned due to technical problems encountered during drilling. Two holes located in Pit 2S were not cemented.

N 102 999.449
E 99 868.12
El 321.85m

HOLE# 92-007
Scale 1:50

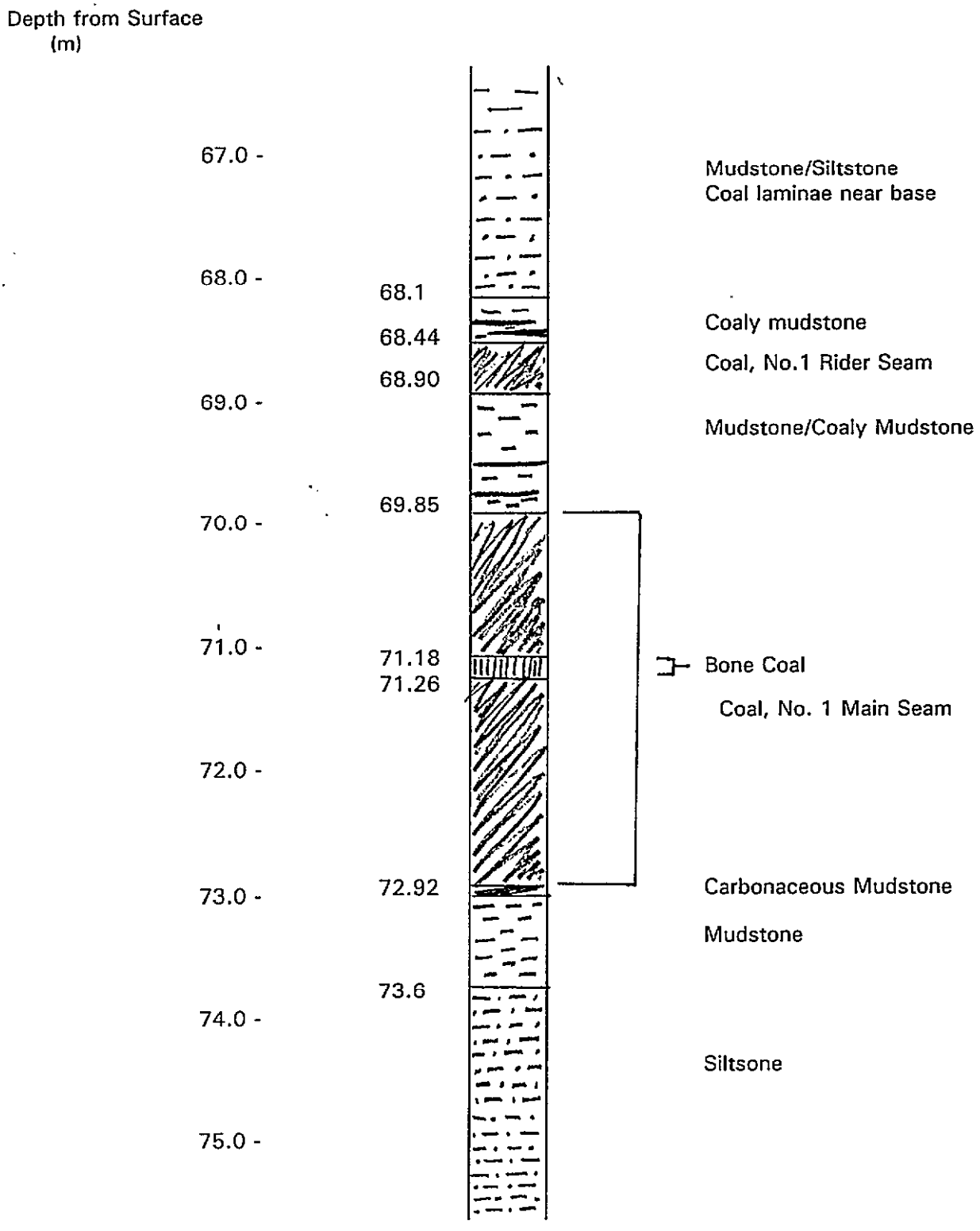


Figure 3. Typical Stratigraphic Section, No. 1 Seam Interval
2N Area

GEOLOGY

i) Stratigraphy

The Comox Formation of the Upper Cretaceous Nanaimo Group contains four recognizable coal seams over a total section of 100 m in the Middle Quinsam Lake area. The main seam, or No. 1 Seam as it is called, is positioned very close to the base of the formation, 3 to 10 meters above the top of the basal conglomerate member which overlies the volcanic basement rock. The No. 1 seam is generally 2.4 to 3.6 meters thick. It is characterized as a hard, blocky coal with well-developed cleat surfaces. The floor is soft, with up to .5 meters of mudstone. The roof consists of mudstone and coaly shale of varying thickness (minimum .4 meters) above which is located a thin coal seam termed the No. 1 Rider Seam. This Rider Seam is .4 to .6 meter thick, hard and contains ash of 18 to 25% and 3 to 6% sulphur. The stratigraphy immediately surrounding the No. 1 Seam is illustrated in Figure 3.

The No. 2 Seam is located approximately 25 meters above the No. 1 seam. It varies in thickness from .2 meters to 1.2 meters.

The No. 3 Seam is located approximately 45 meters above the No. 2 Seam (70 meters above the No. 1 Seam). It is 2 to 10 meters in thickness, but contains a number of rock partings within the interval in most areas. In some areas however, the seam is consolidated to a more uniform 3 meter thickness, with a notable absence of rock partings. In these areas, it becomes economically significant.

The No. 4 Seam is a thin seam that splits away from the No. 3 seam in some areas. In other areas, it does not exist. This seam is not economically recoverable by underground methods due to its thin nature.

ii) Depositional Environment and Coal Seam Distribution

In the Middle Quinsam Mining Block, the main No. 1 Seam has been formed in a semi-confined marginal continental swamp such as is found today in Florida's Everglades. At the time of coal seam genesis, the shore line was located some distance to the north and east of Middle Quinsam Lake over a strike length of approximately 6 km by about 3 m wide. The westerly boundary is an erosional edge where the seam approaches existing ground surface. To the east, the seam again approaches the surface to form a dish-shaped syncline. It is not known whether the seam is continuous through the centre of the "dish". Recent drilling has shown that the No. 1 seam does disappear in a down-dip direction on the west side of the Quinsam river. The extent of this pinch out can not be confirmed without further exploration. The No. 1 Seam equivalent is found in some old drill holes near Highway 28, approximately 8 km northeast of the Middle Quinsam area. While it is possible that this is a down-dip extension of the 2N - 3N area, it is more likely that a second isolated swamp environment located here has generated an equivalent coal seam.

After the No. 1 Seam was formed, the depositional environment was altered when the shore line migrated to the west. About the time of

No. 2 Seam deposition, an abrupt change in the environment occurred as the shore line regressed and a deltaic sequence of medium to coarse grained sands were laid down. During three closely timed intervals of quiescence, the No. 3 Seam was generated in this river delta environment possibly in back barrier lagoons (Kenyon,1990). The distribution of the No. 3 Seam is very limited due to the higher energy and frequently changing conditions associated with a river delta.

The following field examination of the highwall section by C. Cathyl-Bickford describes the character of the beds above the No. 1 Seam and places the stratigraphy according to the present day nomenclature.

iii) Geological Field Notes: Quinsam Outlier: 1988

Work by C. Gwyneth Cathyl-Bickford, FGAC
Georgia L. Hoffman, P. Geol.

SECTION OF THE COMOX FORMATION AT QUINSAM MINE (Pit 2N)

Section of the highwall above the No.1 Coal bed, east of water pump site, about 1/2 way to the shoulder of the active pit; at grid line 103,110 N:

DUNSMUIR MEMBER:

5.0 ft	Sandstone - very coarse-grained, granitic; scattered grit of chert, quartz, dark volcanic rock or argillite, abrupt base with mudstone rip-ups. Spec. x2A.	86.6 ft.
5.5 ft.	Sandstone - coarse-grained, granitic, clean, medium-bedded, light grey, orange-weathering, possible trace glauconite, mudstone rip-ups at base; erosional.	81.6 ft.

CUMBERLAND MEMBER:

1.5 FT.	Mudstone - dark grey and compact at top, rusty-weathering, becoming dark green to black below, with large sand-filled burrows a few coaly streaks, sandy glauconitic in basal 0.3 ft. Spec. x2B, representing both grey and glauconitic phases.	76.1 ft.
	-----Roof of Quinsam No. 2 coal bed-------	
1.1 ft.	COAL - dull and bright, weathered, soft. Sample x2C.	74.6 ft.
0.2 ft.	Mudstone - brown, rusty-weathering.	73.5 ft.
0.5 ft.	COAL - dull banded, weathered, soft.	73.3 ft.
	-----Floor of Quinsam No. 2 coal bed-------	
0.7 ft.	Mudstone - brownish-grey, soft; a seatearth	72.8 ft.
2.6 ft.	Mudstone- dark brown to black, carbonaceous, with coaly streaks.	72.1 ft.
6.0 ft.	Mudstone - light brownish-grey silty, with tiny plant fragments.	69.5 ft.
3.0 ft.	Mudstone - dark brown to black, red-brown-weathering	63.5 ft.
20.0 ft.	Sandstone - very fine-grained, silty, grey, gradational base. Inaccessible in cliff.	60.5 ft.
25.5 ft.	Siltstone - grey, sandy, notably clean, essentially a micro-sandstone; with occasional lighter-weathering, resistant ribs, perhaps sandstone bands?	40.5 ft.

	Abundant shell debris, of pelecypods,turritellid gastropods, small arthropods. Ferruginous concretions are concentrated in discrete bands. Most contain plant fragments, but some contain shell debris. When fresh, the basal siltstone appears to be otherwise massive, but weathered blocks on the pit floor are flaggy-weathering.	
0.75 ft.	Mudstone - dark brown, carbonaceous, with abundant thin bright coal bands and white and yellow sulphate bloom.	15.0 ft.
	-------Roof of Quinsam No.1 Rider coal bed-------	
1.55 ft.	COAL - bright banded, platy, with abundant sulphate bloom.	14.25 ft.
	-------Floor of Quinsam No. 1 Rider coal bed------	
1.2 ft.	Mudstone - brownish-grey, abundant plant debris. Weak and cloddy.	12.7 ft.
	-------Roof of Quinsam No. 1 coal bed------	
1.1 ft.	COAL - bright banded.	11.5 ft.
0.55 ft.	COAL - bright, with abundant pyrite and contorted calcite veinlets.	10.4 ft.
1.35 ft.	COAL - dull and bright.	9.85 ft.
0.05 ft.	Mudstone - black, coaly, hard, with white specks; light-weathering; 'bone.'	8.5 ft.
1.65 ft.	COAL - bright banded.	8.45 ft.
.05 ft.	Mudstone - coaly, as above.	6.8 ft.
1.65 ft.	COAL - bright banded, blocky	6.75 ft.
0.05 ft.	Mudstone - coaly, as above	5.05 ft.
1.45 ft.	COAL - bright banded	5.0 ft.
0.15 ft.	Mudstone - chocolate brown, coaly,intensely sheared and wet.	
3.4 ft.	COAL - bright banded.	3.4 ft.
	-------Floor of Quinsam No. 1 coal bed-------	
0.3 ft.	Mudstone - as at x1; soft and slippery.	
> 0.1 ft.	Mudstone, silty, harder, with abundant plant stems and Metasequoia fronds.	

Attitude at pit floor: 156/6 NE. Appears to become steeper further to east in the active pit.

iv) Description of the Cored Intervals

The following is a description of the lower members of the Upper Cretaceous Nanaimo Group as they occur in the middle Quinsam Mining Block, as examined in the cores of the 2N area:

UPPER CRETACEOUS NANAIMO GROUP

COMOX FORMATION

Benson Member

The conglomerate which unconformably overlies the Jurassic to Triassic Vancouver Group rocks is a localized basal conglomerate. The conglomerate is composed of pebble to boulder sized clasts of chlorite and epidote altered volcanics, minor sedimentary clasts and very rare granitic clasts cemented with calcite. Coarse grained sandstone lenses and beds are interbedded in the basal conglomerate. The conglomerate rapidly fines upward into sandstone, siltstone and mudstone.

Cumberland Member

Above the Benson Member conglomerate lies an approximately 37 metre thick, fine grained, interbedded mudstone and siltstone sequence which includes the No. 1 seam. A medium red-brown mottled mud and siltstone unit occasionally occurs within the fine grained sediments between the basal conglomerate and the No. 1 seam. These red, oxidized sediments suggest sub-aerial exposure of this discontinuous unit.

The No. 1 seam is generally 3 to 4 metres thick, of clean coal and occasionally with a gradational carbonaceous mudstone base up to 0.5m thick. A mudstone unit varying from 0.5m to 20.0m separates the overlying, approximately 0.5m thick, No. 1 Rider seam from the No. 1 seam.

The sequence above the No. 1 Rider seam is composed of medium green-grey mudstone and siltstone. Lighter coloured mottling is due to the abundance of concretions throughout the interval. Discontinuous lenses of sandstone and carbonaceous mudstone occur throughout. On the weathered surface the unit is friable and incompetent, while the numerous ironstone concretions weather rusty-brown in high relief.

At the top of the mudstone - siltstone unit occurs a fining upward sequence which is culminated by the No. 2 seam. This seam is highly variable in thickness, possibly due to erosion of the upper portion of the seam in the changing environment. The coal bearing strata is approximately 2.0m thick with the seam generally being 0.40m thick.

Dunsmuir Member

Overlying the No. 2 seam is a sequence of sandstone up to 106 metres thick. The sandstone is composed dominantly of feldspar clasts, with lesser black and green chert, quartz and minor epidote. Thin beds, less than 1 - 2 metres, of pebbly or silty sand occur irregularly throughout. Shell fragments and bio-turbated sandstone occur within numerous beds. The sandstone varies from massive to well bedded. Weathering of the basal 10 m results in rusty orange-brown, "knobby" outcrop. The rust colour is derived from oxidization of fine disseminated pyrite in the sandstone, while the knobby outcrop is due to concretions up to 2 m in diameter which occur throughout the sandstone.

Within the sandstone sequence occurs the No. 3 seam, which is irregular and dirty. The coal bearing strata are up to 8.9 metres thick, comprised of dirty coal, mudstone and sandstone. The No. 3 seam occurs 60-70 metres above the No. 1 seam.

PHASE 2

The 7S/BK 242 area was examined during Phase 2 of the exploration program The late Cretaceous Nanaimo Group, Comox Formation was examined in drill core. A brief description follows.

A thick sandstone unit encountered in Phase 2 drilling of the 7S/Bk 242 area belongs to the Dunsmuir Member. The Dunsmuir Member occurs above the No. 2 coal seam as described by Kenyon et al 1991. The interval from the No. 2 to No. 3 seams is dominantly comprised of sandstones interrupted by minor siltstones and mudstones with rare coalified material. The sandstones of the Dunsmuir Member comprise a monotonous succession overlying the No.3 Seam and extend almost uninterrupted up to 145m above the seam as indicated in drill hole 92-037. The sandstones are light grey, medium to coarse grained, display weak cross and planar bedding or are commonly massive. Clast composition is dominantly feldspar and quartz, occurring in sub-equal amounts, with rare mafic volcanic clasts. Very minor dark grey mudstone and siltstone with minor carbonaceous material interrupt the sandstone sequence.

Description of the No. 3 Seam

The No.3 coal seam was intersected in two distinct zones which overlie each other due to thrust faulting. The upper plate of the thrust fault has been drilled by a number of holes and the nature of the seam can be determined from numerous geophysical logs. The No.3 seam in holes 92-026 to 92-033 varies up to 6.4 metres in overall width and is interrupted by numerous persistent sandstone and minor siltstone/mudstone partings up to 1.5 to 2.0 metres thick. A ratio of coal to the partings by volume appear in the order of 1:1.1. The coal is bright, blocky and banded with minor pyrite and calcite along cleat surfaces and in very minor fractures. The roof of the seam is a strong, medium to coarse grained sandstone, occasionally with a minor silty mudstone between the top of the No.3 seam and overlying sandstone. The floor of the seam is more variable between a sandstone, or more commonly a mudstone grading, downward into siltstone and finally sandstone. The No.3 seam intersected in the lower thrust plate is distinctly different from the upper intersection. The coal is similar in being blocky, bright and banded, but is considerably cleaner with less partings. Clean coal up to 4.1

metres was encountered in Hole 92-035. The seam appears to thin away from this central hole location. Partings in the lower intersections of the No. 3 seam are dominantly mudstone/siltstone while minor pyrite and calcite occur on cleat surfaces and in rare fractures. The roof appears to be consistently sandstone with carbonaceous inclusions proximal to the seam, while the floor is mudstone/siltstone underlain by sandstone. The seam thins and becomes increasingly dirty to the south-southwest and to the east.

v) Structural Geology

2N AREA

As a result of the exploration, a structurally complex area to the north of the existing open pit has been defined. It can be described as a grabenlike structure bounded by a series of sub-parallel faults with displacements varying from 3 to 8 metres. The structure is caused from tensional stresses propagated in a north to south orientation. These tensional stresses result in two groups of faults. The primary group run west to east and can be traced on the surface. The secondary group are more minor in displacement and generally parallel the formation strike, which is north to south. The secondary group are bounded by the primary faults within the confines of the structural zone. However, they also occur randomly through the 2N area, as is evidenced in the existing underground mine. They do not generally propagate to surface, and can disappear along strike or disperse into a series of very minor slips within the immediate coal interval.

The 6 to 8 metre thick stratigraphic section encompassing the main No.1 Seam is the weakest part of the whole column. It provides a plane of slippage for the high angle fracturing to move on. The very competent basal conglomerate member a short interval below the No. 1 Seam provides resistance to the faulting. The fault planes which parallel the formation strike therefore trend off to a lower angle through the coal interval, thereby creating barren zones up to 20 metres wide on the downthrown side of the faults. Those faults which cut across the formation strike generally tend to remain at a steep angle where they intersect the coal zone and the associated barren zone is narrow.

The structural zone in question is evidenced on surface by a low elongate swamp which collects runoff from the two adjacent upland areas. The fault zones, being tensional and open in nature, act as conduits for surface water which percolates through the very thin gravelly till layer and enters the groundwater regime through the secondary porosity offered by the fault zones. The amounts of flow through the faults would vary according to the seasons. During the winter and spring periods, significant flows could be expected to occur within the coal measures in contact with these major fault structures.

Secondary faulting within the confines of the 100 metre wide structural zone may be intense. Even with the recent additional drilling, the small 1 to 3 metre displacements which the secondary faults display as well as their irregularity, make exact interpretations difficult. Where the structure contours on the plan bend and tighten as they approach a fault line, small step faults can be expected to occur. These faults will parallel the strike of the major fault and occur on the updip side.

The faults will be spaced from 10 to 30 metres apart and will result in only minor displacements of .3 to .5 metres. These can not be mapped on the present scale. The intensity of faulting shown on the accompanying plan is based on the frequency and amount of faulting encountered during mining operations in the north-west end of the open pit, on information derived from the underground mine at the south end of the area and combined with the latest corehole information which indicates a continuation of the structural regime down the dip.

7S/BK 242 AREA

As a result of the 1992 drill program the structure of the 7S/BK 242 area was reinterpreted. The monoclinal north-east dipping succession of Nanaimo group rocks, which unconformably overly an irregular surface of basement rocks, is segmented by faulting. A regional compressional fault known as the Boundary Fault (Kenyon et al 1991) forms the east boundary of the Quinsam coalfield and is the east boundary of the study area. To the north and west the Long Lake fault, previously interpreted as a dextral tear fault is re-interpreted as being a reverse fault dipping to the north. Evidence of seam duplication in Holes 76-40 and 78-209 provide support for this fault orientation. The net result with either type of fault is a relative uplift of the north side of the fault. Fault splays from the Long Lake fault occur between drill holes along Section 35+00 with uplift on the northwest side.

Thrust faulting within the Nanaimo Group rocks occurs in the east section of the study area. Seam duplication in holes 92-32, 92-33, 92-38, 77-54 and to a lesser extent 77-53 provide evidence of thrust faulting. North of the Long Lake fault the No.3 seam is duplicated in Hole 78-319 and suggests the thrust fault is present at a higher elevation, consistent with the interpretation of the reverse movement on the Long Lake fault. This thrust fault is likely related to the same or similar episode of faulting that produced the Boundary fault as the direction of vergence of the thrust is consistent with the orientation of the Boundary Fault and its reverse movement.

RESULTS of 1992 EXPLORATION

The Phase 1 drilling in the 2N area investigated a major fault zone on the north side of the 2N area. The drill program was designed to provide three geologic cross-sections perpendicular to the fault zone. These cross-sections were placed roughly 100 metres apart. SECTION 'A' cuts across the structural zone just behind the existing highwall of the 2N pit and is the closest of the three to the pit outcrop. Information from the open pit mining was incorporated into this section. Section 'C', which is located roughly 100 metres to the south-east of Section 'A', can be categorized as the best example of the overall structure across the zone of deformation. SECTION 'D', which is the furthest downdip, shows general continuity of the graben model, with some widening of the general structure. This is also evidenced from air-photo interpretations of the surface traces of the fault zones. Drill information and interpretation of the fault zone suggest a fault zone comprised of a series of horst and graben fault segments within the zone.

The second phase of drilling conducted along the axis of the proposed declines was designed to test the interpretation of the geological structure of the proposed decline area and to provide increased stuctural detail in advance of underground development. Detailed drilling of this area confirmed the basic faulted structure of the area and also provided more detail of the complex nature of the block faulting.

The No. 1 seam is uniform and continuous immediately down the dip of the existing underground workings, as evidenced by Section 85+00 and 90+00. These sections indicate only two minor faults of 3 metres displacement or less. The sections have proven the No. 1 Seam a total of 850 metres (2,790 ft.) past the maximum current location of the Underground Main Development Roads straight down the dip. From outcrop, the No.1 Seam has a total downdip length of 1,300 metres (4,264 ft.). At its furthest downdip extent on this section, the No. 1 Seam horizon is replaced by the green basal conglomerate of the Benson Member of the Comox formation (see Hole 92-022). Further drilling is required in this area to determine if this is a localized phenomenon, or if it represents a more widespread pattern of non-deposition.

Phase 2 exploration focused primarily in the 7S/BK 242 area and to a lesser extent in the 2N area. The 7S/BK 242 area was drilled to better define the No. 3 seam and determine the structural setting and quality of the seam. The program was expanded to aid in the interpretation of the structure of the area. In total 1813 metres of drilling in 16 holes was completed.

As a result of the 1992 drill program a coal reserve for the basal intersection of the No.3 seam was calculated. (see coal reserves). The upper intersection of the No.3 seam was determined to be too dirty for underground mining and a reserve figure was not calculated. Although numerous drill holes intersected the upper thrust plate, No.3 seam in the 7S/BK 242 area, few drill holes have intersected the No.3 seam in both the upper and lower plate of the thrust fault prior to the 1992 drill program. All drill holes into the thrust fault's basal plate, No.3 seam intersected underground mineable widths of clean

coal. With this result it would require a substantial amount of drilling to check the continuity of the lower plate No.3 seam in the 7S/BK 242 area as depth to coal is 100 to 150 metres below surface. In addition little drilling has been completed south-west of the 7S/BK 242 area toward the 4S area leaving the reserves unproven.

All 1992 drill holes are located on plan and on cross sections, included in Appendix Figures 1 - 11. The geology of the areas under investigation was interpreted and drawn on section. A revised structure contour map of the top of the No. 1 seam proximal to the existing and proposed mining areas was produced with the new drill hole data to facilitate future underground development and mining.

The programs provided additional coal quality information, seam composition and coal reserve information on the No.'s 1 and 3 seam in the 2N and 7S/BK 242 areas.

QUINSAM COAL PROJECT

ALL HOLES

OLE MBER	CORED	PIT NUMBER	NORTHING (m)	EASTING (m)	COLLAR (m)	TILL (m)	No. 4 SEAM DEPTH	No. 4 SEAM THICK	No. 3 SEAM DEPTH	No. 3 SEAM THICK	No. 3 RIDER DEPTH	No. 3 RIDER THICK	No. 2 SEAM DEPTH	No. 2 SEAM THICK	No. 2 RIDER DEPTH	No. 2 RIDER THICK	No. 1 RIDER DEPTH	No. 1 RIDER THICK	PARTING DEPTH	PARTING THICK	No. 1 SEAM DEPTH	No. 1 SEAM THICK	No. 1 BASAL DEPTH	No. 1 BASAL THICK	BASEMENT DEPTH	TOTAL DEPTH
2-001	Y	2N	103,523.5	99,883.4	312.7	4.4							30.9	0.5			58.6	0.6	59.2	1.6	60.9	3.1	63.9	0.8		70.5
2-002	Y	2N	103,395.9	99,762.9	310.8	4.4							15.8	0.4			37.9	0.6	38.4	1.0	39.5	4.0	43.4	0.4	53.2	77.0
2-003	Y	2N	103,440.3	100,061.8	315.9	4.4							51.4	0.9			71.4	0.7	72.2	2.0	74.3	3.4				83.5
2-004	Y	2N	103,343.6	100,012.0	311.7	4.8							49.3	0.4			69.5	0.5	69.9	1.8	71.7	4.0			81.0	84.0
2-005	Y	2N	103,265.7	99,939.7	312.0	5.7							42.8	0.5			64.2	0.6	64.7	1.5	66.2	4.3				78.4
2-006	Y	2N	103,215.2	100,115.0	309.5	10.5							59.6	0.4							83.3	2.8			91.3	94.6
2-007	Y	2N	102,999.4	99,868.1	321.9	2.3							41.3	0.4			67.8	0.5	68.2	0.9	69.1	3.2				79.7
2-008	Y	2N	103,067.8	99,751.7	328.6	2.6							33.1	0.5			58.5	0.5	59.0	0.6	59.5	3.3				72.3
2-009	Y	2N	103,195.7	99,793.5	321.3	2.5							30.1	0.7			52.3	0.3	52.7	1.0	53.7	3.4				64.1
2-010	Y	2N	103,067.3	99,953.6	310.9	3.5							39.6	0.5			65.6	0.4	65.9	0.6	66.6	3.5				76.7
2-011	Y	2N	103,271.9	100,202.7	315.4	13.6							65.9	0.4			90.0	0.7	90.7	2.3	93.0	3.0				101.2
2-012	Y	2N	103,432.9	99,808.6	310.9	5.5							26.1	0.4			51.2	0.5	51.7	1.4	53.1	4.1				63.7
2-013	Y	2N	103,295.8	100,238.2	317.7	11.4							70.5	0.5			95.8	0.6	96.3	0.6	96.9	3.4				106.0
2-014	Y	2N	103,336.2	100,306.3	322.7	7.0							80.3	0.4			101.9	0.5	102.4	6.1	108.5	3.5				116.3
2-017	Y	2N	102,737.5	99,906.3	320.9	2.8							51.0	0.7			79.1	0.5	79.6	0.6	80.2	3.2				86.2
2-018	Y	2N	102,736.8	100,030.9	311.2	5.9							59.2	0.6			80.5	0.7	81.2	0.7	81.8	2.6	84.4	1.5		90.0
2-019	Y	2N	102,592.0	100,002.1	313.6	18.4							56.9	0.4			81.9	0.6	82.5	0.5	83.0	1.9	85.9	0.4		93.2
2-020	Y	2N	102,600.3	100,215.6	292.7	17.7							60.4	0.4			82.9	0.8	83.6	1.0	84.6	2.2	87.8	0.4		93.9
2-021	Y	2N	103,031.7	100,502.2	320.0	24.0			66.5	5.8			107.2	0.4			120.8	0.5	129.3	3.6	132.9	3.5				141.5
2-022	Y	2N	102,731.7	100,699.0	301.5	6.0			76.6	4.7			111.7	0.5											124.7	134.4
2-023	Y	2N	103,212.0	100,008.2	308.9	6.0							48.5	0.5			72.4	0.5							82.8	84.5
2-024	Y	2N	102,970.4	100,355.5	309.2	6.3			32.9	8.9			81.4	0.4			107.5	0.6	108.1	2.2	110.3	4.0				118.6
2-025	Y	2N	103,473.0	100,507.3	329.6	15.2							99.6	0.4			108.2	0.5	108.7	20.0	128.7	3.0				136.7
2-026	Y	242	101,077.0	100,590.6	304.0	17.7			49.6	5.5																58.0
2-027	N	242	100,966.4	100,495.8	304.2	18			73.6	6.0																87.0
2-028	Y	242	100,878.0	100,426.5	309.0	25.6			94.7	6.3																104.0
2-029	Y	242	100,803.6	100,364.2	311.1	11.2			99.6	5.5																107.5
2-030	Y	242	100,698.1	100,272.5	308.7	6.6			98.6	5.9																110.0
2-031	Y	242	100,371.0	100,088.5	300.5	-			-	-																-
2-031A	Y	242	100,374.1	100,085.2	300.9	2			77.6	6.4																88.0
2-032	Y	242	100,278.8	100,040.2	303.4				74.2	5.5																132.0
2-033	Y	242	100,366.8	99,984.0	305.1	1.8			132.8	3.5																166.0
2-034	Y	242	100,678.4	99,753.1	336.0	0.3			141.5	4.4																153.0
2-035	Y	242	100,795.7	99,659.7	336.2	2.7			133.3	4.1																142.0
2-036	Y	242	100,269.9	99,661.8	328.6				108.9	4.0																172.0
2-037	Y	242	100,582.5	99,837.7	326.7				146.8	4.3																158.5
2-038	Y	242	100,285.4	100,175.6	306.1				93.5	1.9																101.0
2-039	Y	242	100,208.8	100,272.6	305.5				82.2	3.7																91.0
2-040	Y	242	100,374.1	100,342.6	300.5	8.4			61.7	4.2																70.0
2-041	Y	242	100,177.8	100,347.8	296.2				50.6	6.4																73.0
2-042	Y	2N	103,125.1	100,144.8	304.6	15.4							61.8	1.0			82.8	0.6	83.3	1.8	85.1	3.2	88.5	1.7		93.0
2-043	Y	2N	103,093.0	100,182.5	305.4	2.0							65.1	0.4			86.8	0.5	87.2	1.9	89.1	2.5				97.0
2-044	Y	2N	103,119.0	100,224.4	308.7	8.6							66.7	0.3			90.1	0.5	90.6	2.1	92.7	3.7				101.0
2-045	Y	2N	103,159.2	100,277.9	313.2	5.5							76.9	0.3			100.2	0.5	100.7	2.6	103.3	3.2				113.0
2-046	Y	2N	103,182.8	100,310.9	317.0	12.8							82.7	0.3			107.0	0.6	107.6	1.0	108.5	3.9				116.0

TABLE 2 : MASTER DRILLHOLE LIST

COAL RESERVES

Upon completion of Phase 2 drilling and geological interpretation of the results, calculation of the coal reserves of the No. 3 seam was undertaken. The No.3 seam where drilled during the 1978 and 1979 program, as well as a number of holes drilled during Phase 2 of the 1992 program intersected the seam in what is interpreted as the upper plate of a shallow angle thrust fault. Deeper drilling to the unconformity displayed a repetition of the No. 3 seam. Calculation of coal reserves deals solely with the lower plate of the thrust fault.

The study block, (see Appendix Figure 8.) is structurally bounded on the north by a reverse fault with approximately 40 meters displacement. The eastern boundary was arbitrarily picked approximately 100 metres east of hole 92-32 which displayed duplication of the No.3 seam. The extent of the No.3 seam (lower plate), and faulted seam duplication to the east is unknown but would not extend beyond the prominent "Boundary Fault" on the east. Elsewhere a minimum seam width of 1.83 m (6 ft.) determined the boundary of the reserve block.

Proven reserves were calculated using a 150 metre radius of investigation around the drillholes. Probable reserves utilized a 300 metre radius of investigation.

Three blocks "A","B", and "C" had sufficient density of drilling to calculate proven reserves. An average seam width was calculated from all the drillhole data, using only mineable widths and clean coal. This average width was used for the entire block, while the area was determined by means of a planimeter. The volume of coal was simply calculated using area and average seam width, and did not take into account the dip of the seam. The tonnage was determined using a tonnage factor of 1.4 tonnes per cubic metre of coal.

Blocks "D" and "E" were combined probable and possible coal reserves. Incomplete 300 metre radii of investigation required these reserves to be combined into two categories. Calculation of reserves followed the same procedure as proven reserves. The average seam width for block "D" used the arithmetic average of Blocks "A" and"B", while Block "E" used the arithmetic average of Blocks "A", "B" and "C" as an average seam width.

Combined reserves - 5,867,906 tonnes.

It should be noted that seam continuity between the northern Proven Reserve blocks "A" and "B" and proven Block "C" may be interrupted by faulting. The horizontal distance between the closest two holes, 78-278 and 92-36 is 560 metres. Infill drilling is required to prove reserves in the sandwiched Probable/Possible reserve block.

METHANE TESTING

Methane testing of the No. 3 seam in the 7S/BK 242 area and the No. 1 seam in the 2N area was conducted in cooperation with the Ministry of Energy Mines and Petroleum Resources (M.E.M.P.R.), Coal Division, of the Province of British Columbia. A preliminary report titled "Coalbed Methane Desorption Techniques and Desorption Results From the Quinsam Coal Mine" authored by Barry Ryan (M.E.M.P.R.) is based on Mr. Ryan's recovery of core samples from the No. 3 and No. 1 seams at the Quinsam Mine and laboratory testing of desorption volumes over time.

The No. 3 seam was recovered from Hole 92-034 between 141.5 to 145.85 metres depth. The depth of the coal seams sampled was determined from geophysical logs of the drill holes. Samples of the cored interval were recovered by M.E.M.P.R. and tested by M.E.M.P.R. and CANMET. Recovery and testing of the No. 1 seam from Hole 92-046 in the interval from 108.5 to 112.41 was conducted by M.E.M.P.R.
All results recorded in the preliminary report are based on M.E.M.P.R. work and do not include any CANMET data.

Desorption testing of the coal was conducted using the U.S. Bureau of Mines method with an additional method to determine lost gas from the time the coal was cored to the time the coal was sealed in the testing canister. The desorption data, canister sample data and coal quality results were reported and the adsorption capacity of the coal was predicted.

Interpretation of the data determined the rank of Quinsam coal to be low and the adsorption capacity of the coals is probably greater than the cumulative gas generated by it. The methane generation models indicate very little or no methane generation at the VM content of the Quinsam coals. The Quinsam coal samples are undersaturated with respect to adsorption capacity and much of the gas adsorbed on the samples may be scavenged from elsewhere. Seam No. 3 samples contain between 40-70% of the maximum possible adsorbed gas, and seam No.1 contains 50-70% of maximum adsorbed gas. It was determined that samples with increased quantity of crushed coal contained most of the gas and desorbed quickest. Mr. Ryan suggests this relationship may be useful in rating the coals for their safety when mined underground.

From the preliminary report Mr. Ryan suggests the coalbed methane resource potential of the Quinsam coals is limited due to the low rank of the coal, shallow burial depth and the apparent undersaturation of the coal.

Mr. Ryan concludes that the Quinsam coals do not contain high concentrations of methane and are therefore a poor resource potential. Desorbable methane is higher in the footwall coal and may be due to the footwall coal being more crushed which also correlates with faster methane drainage of the footwall coal. Ventilation requirements for underground mining based on methane release should not pose a problem and it is unlikely that methane drainage holes are required.

COAL QUALITY SECTION

SAMPLING AND ANALYTICAL METHODS

Phase 1. (No. 1 Seam Horizon)

Drill core was logged and described prior to sampling. Sampling of the seam was performed on individual units within the seam section (i.e. No. 1 Rider, Parting, No. 1 Main Seam). Individual samples were then composited to reflect a mineable unit. The following rules were established to approximate underground mining methods:

a) If the parting between the No. 1 Rider Seam and the No. 1 Main Seam exceeds 0.75 metres, the lower 0.10 metres of parting will be included as dilution and combined with the No. 1 Seam to provide an "as-mined" representative sample.

b) If the parting between the No. 1 Rider Seam and the No. 1 Main Seam is 0.75 metres or less, the Rider Seam, Parting and Main Seam will be composited to make an "as-mined" representative sample.

c) 0.10 metres of floor dilution will be included in all samples in order to further simulate the mining situation.

Individual samples were analysed for Residual Moisture, Ash and Total Sulphur.

Composite samples were split. A standard Proximate Analysis, Sulphur determination and Calorific Value were performed on one composite split. The second split was screened into 3 size fractions: 1) 3/8 in. X 6 M., 2) 6 M. X 60 M., 3) 60 M. X 0. The screen sizes were determined in consultation with the Coal Preparation Plant operating personnel and represent the existing screen classifications in use at the Plant (i.e. the pre-wet screen and the product sieve bend.)

Each screen size was analysed for Residual Moisture, Ash, Sulphur and Calorific Value.

Following the screen sizing, Float/Sink tests were performed on each screen size fraction at separating Specific Gravities of 1.4, 1.5 and 1.6. The normal separation gravity used at the Coal Prep Plant is 1.5.

Standard Proximate Analyses and Total Sulphur tests were performed on each float fraction.

The sized float fractions were then combined to represent a product (not including the 60 X 0 which is not recovered in the plant) and a full range of tests were performed at the 1.5 S. G. cutpoint. These include a Proximate, Sulphur, Free Swelling Index, Hardgrove Determination, Ash Fusion Temperatures and 10 Element Mineral Analysis of Ash. The results are given in Appendix "A".

Phase 2. (No. 3 Seam, Pit 7S, Block 242)

Drill core was logged and described prior to sampling. Sampling of the seam was performed on individual units within the seam section. As the No. 3 Seam Section is quite different in character to the No. 1 Seam, the rules governing composite sampling and combining of sample increments were altered. In instances where small partings were present within the seam section, they were separately sampled and analysed. Due to the hard, competent nature of both the roof and the floor material and the thickness of the coal seam, no roof and floor dilution samples were introduced in to the overall composite sample.

Dilution samples were analysed separately for ash and Specific Gravity. If the Specific Gravity was greater than 1.9, the sample was analysed for Total Sulphur, Ash Fusion, Ash Analysis and Calorific Value. If the Specific Gravity of the sample was less than 1.9, it was screened at 0.15 mm. Float/sink tests at 1.7 S.G. were run on the +0.15 mm. material. The float and sink fractions were analysed for Ash and Total Sulphur.

Individual raw coal samples were analysed for Residual Moisture, Ash and Sulphur prior to compositing.

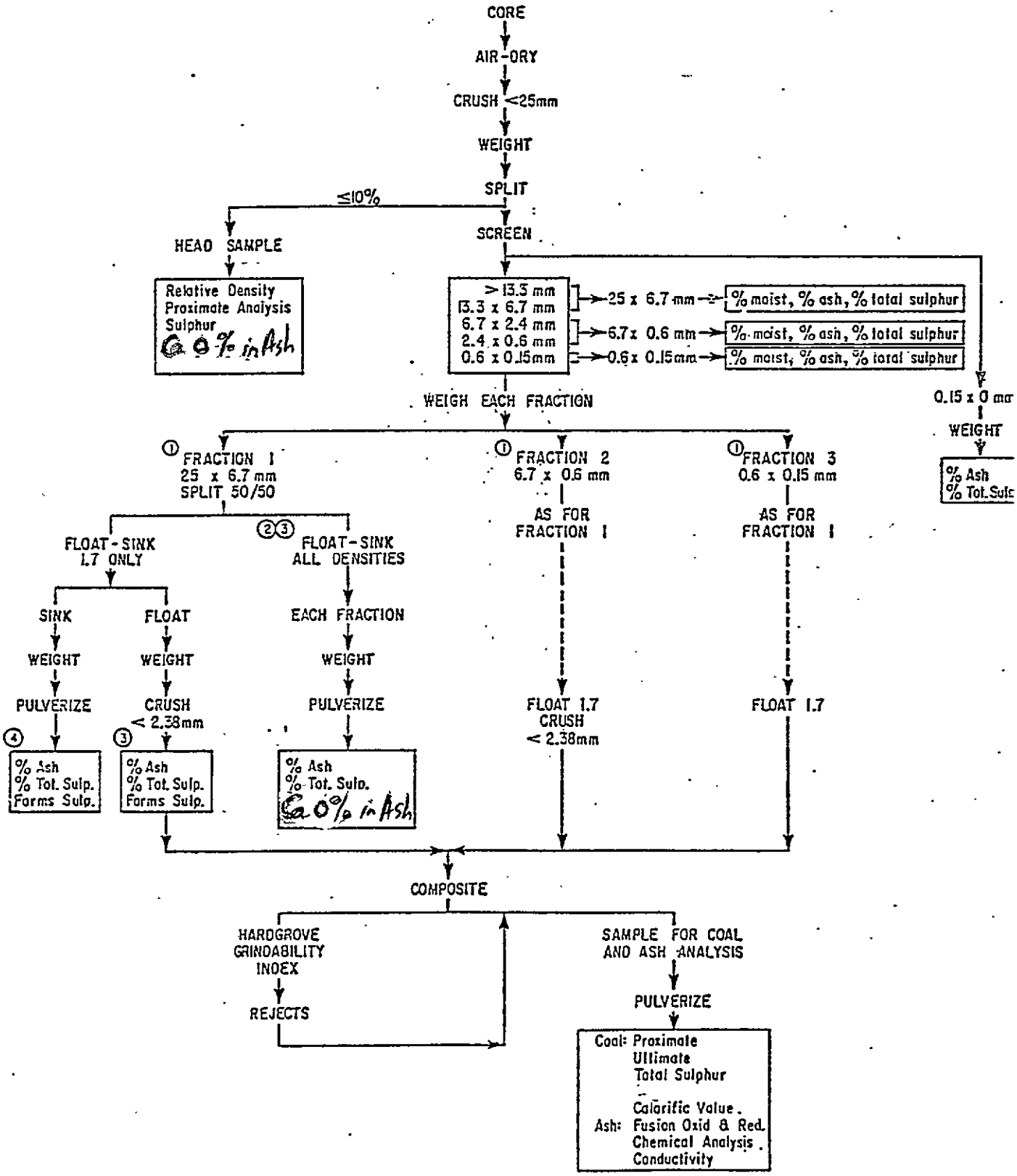
Composite samples were split and a composite head sample was analysed for Residual Moisture, Ash and Sulphur. The remaining sample was screened into 4 size fractions: 1) 25 X 6.7 mm, 2) 6.7 X 0.6 mm, 3) 0.6 X 0.15 mm, 4) 0.15 mm X 0. Each screen size fraction was analysed for Moisture, Ash and Sulphur.

Screened fractions were then weighed and independent float/sink testing was done for each. Separating Specific Gravities included 1.3, 1.5, 1.7 and 1.9. A split of the 25 X 6.7 mm fraction was taken and separated at the 1.7 S.G. cutpoint. Both the Float and Sink fractions of this sample were analysed for Ash% and Forms of Sulphur. Results are discussed in the Coal Quality Section. After Float/Sink Testing, the split samples were re-combined to make a composite sample which was analysed for Hardgrove Grindability and a complete Proximate and Ultimate Analysis. Fusion Temperatures of the Ash and Chemical Analysis of the Ash were also completed. Figures 4 and 5 illustrates the range of analytical work which was completed on the Phase 2. Exploration Program.

The analytical data allow the correct predictions to be made on expected yields based on Float/Sink testing and quality of the coal product, in particular sulphur contents. The following section on coal quality discusses results of the data generated from the analytical work.

Flowsheet 1.
FIGURE 4.

TEST AND ANALYTICAL PROCEDURES FOR DRILL CORE SAMPLES OF 75mm



NOTE 1: For samples too small, the split may be omitted and the separation made at 1.7 only (75mm core samples only).

NOTE 2: 75mm core diameter, Float-Sink densities 1.3, 1.5, 1.7 and 1.9

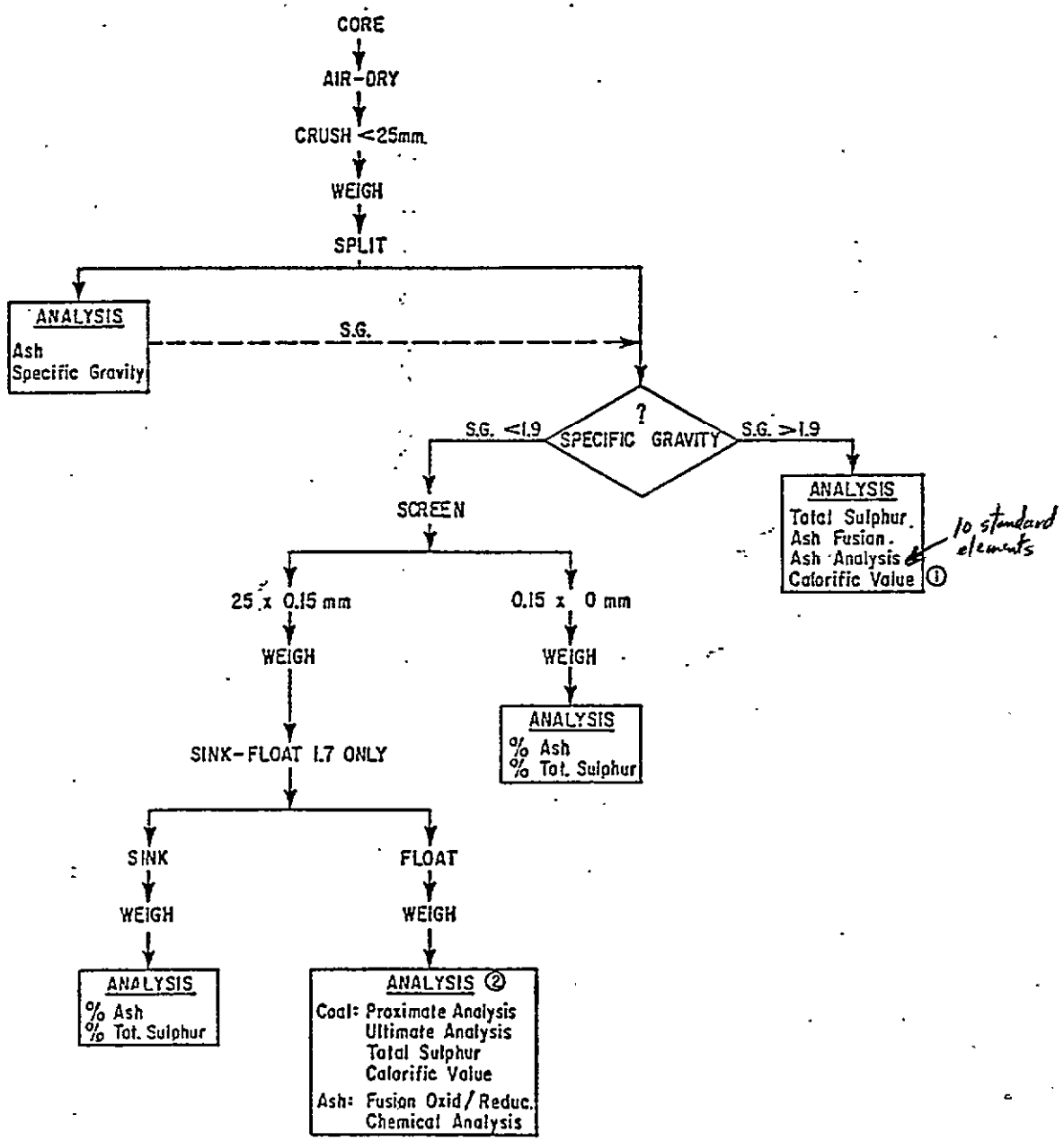
NOTE 3: 150mm core diameter, Float-Sink densities 1.30, 1.35, 1.40, 1.45, 1.50, 1.55, 1.60, 1.65, 1.70, 1.90

NOTE 4: These analyses may be delayed until after the composites and final detailed analyses for clean coal and ash have been completed.

Flowsheet 2.

FIGURE 5

TEST AND ANALYTICAL PROCEDURES FOR DRILL CORE AND BULK SAMPLE ROOF, FLOOR AND IN-SEAM PARTING COMPONENTS AND RIDER SEAM COMPONENTS



NOTE: Moisture determination of all samples will be required to express results on a dry basis.

① Calorific Value, only if Ash is <60%

② Sample permitting, if not do as if specific gravity >1.9

COAL QUALITY

NO. 1 SEAM, 2N AREA
Raw Coal Quality

The No. 1 Seam and its constituent horizons (Rider Seam, Parting and Main Seam) exhibits some quality variations across the 2N Area, however, general trends established in past exploration have been confirmed:

1) the No. 1 Rider Seam averages 3% Sulphur and is variable in in-situ ash contents, ranging from as low as 10.7 % in hole 92-18 to 24.1 % in hole 78-45. The average in-situ ash content is less than 20%.

2) the No. 1 Main Seam averages 0.5% Sulphur and ranges from 8.5% to 12.2% in-situ ash, with the average at approximately 10.5%. The fluctuation in ash is a result of thinning and thickening of two bone coal bands which are located in the lower half of the seam. The thickness of these bands ranges from 2 to 5 cm. There is no established trend to this thickening and thinning.

The basal section of the No.1 Main Seam exhibits wide variation: in some areas, thin beds of carbonaceous mudstone and coal are found. In general, these beds are not economic to recover; however, in some specific locations, the coal beds predominate and recovery becomes worthwhile.

3) the parting between the No. 1 Rider seam and the No. 1 Main Seam consists of a carbonaceous mudstone and siltstone. Where the parting increases in thickness to greater than 0.6 metres, it becomes less coaly and more silty. This parting material averages 75% ash and the sulphur content varies between 0.5% and 2.5%.

Hole QU-92-18C can be considered to be a representative hole from the program which falls within the area to be mined in 1993. Figure 6. is a representation of the coal seam horizon and raw coal analytical data from each increment. It also shows the composite sample data.

In this particular instance, the parting was demonstrated to be less than the 0.75 m. critical thickness, indicating that all three increments should be combined (rider seam, parting and main seam). to make an "As-Mined" composite. It is important to note that, if the actual mining of the seam could be controlled so that only 10 cm. of out-of-seam dilution was taken, the run-of-mine ash content delivered to the wash plant would be 26%. Also, if the full seam section were taken, the CaO% of the ash in coal reporting to the plant would approximate 11%.

In contrast to QU-92-18C, Hole QU-92-07C (Figure 7.) intersected 0.88 metres of parting. Therefore, the rider seam and parting were not included in the "As-Mined" composite sample. In this example, if 10

HOLE Nº QU-92-018c

RAW COMPOSITE SAMPLE
(air Dried Basis) %

CLEAN COAL @ 1.5 S.G.
SIZE RANGE 3/8" × 60 M

Scale
1:50

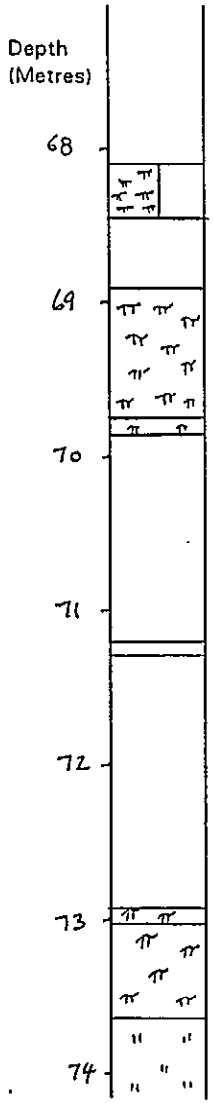
	Sample Thickness (metres)	% Ash (A.D)	% S (A.D)	R.M.	Ash	V.M.	F.C.	S.	CaO % in Ash	Yield %	R.M. %	Ash %	Sulphur %	Calorific Value	CaO % in Ash
No. 1 Rider	0.27	10.74	2.66												
Parting (Upper)	0.32	78.50	1.07												
Parting (Lower)	0.14	60.26	0.42												
No. 1 Seam	4.23	8.94	0.36												
				3.27	26.08	-	-	0.50	11.86	69.12	2.50	5.49	0.54	7339	19.46
Floor Dilution	0.10	78.48	0.08												

FIGURE 6.

HOLE Nº 92-007C

RAW COMPOSITE SAMPLE
(air Dried Basis) %

CLEAN COAL @ 1.5 S.G.
SIZE RANGE 3/8" x 60M



Scale
1:50

Sample Thickness (metres)	% Ash (A.D)	% S (A.D)	R.M.	Ash	V.M.	F.C.	S.	CaO % in Ash	Yield %	R.M. %	Ash %	Sulphur %	Calorific Value	CaO % in Ash
.10	82.04	0.31												
3.07	9.85	0.38	3.26	17.51	34.59	44.64	0.35	16.59	76.85	3.02	5.80	0.36	7248	22.23
.10	74.79	0.10												

FIGURE 7.

cm. of parting dilution (immediate roof) and 10 cm. of floor dilution is cut with the coal, the run-of-mine ash delivered to the wash plant would be 17.5% and the CaO% of the ash would be 16.59%.

If the parting cannot be supported during the mining sequence, the theoretical ash content of the run-of-mine coal, at the location of Hole 92-07C, for example, would be 28.07%.

Clean Coal Quality

Calcium Oxide in Ash

On a clean coal basis, Hole 92-18C reports CaO% in ash levels of 19.46% on 5.49% total clean coal ash. Hole 92-07C reports CaO% of 22.23% on 5.8% ash. The decrease in CaO levels in Hole 92-18C as compared to Hole 92-07C can be attributed to the influence of the No. 1 Rider Seam on the overall coal product. While the Rider seam increases the overall clean coal sulphur levels to between 0.8 and 1%, it reduces the overall CaO level in the ash by as much as 3 to 5%.

A prediction between product ash levels and CaO% in ash has been developed based on exploration results and testwork from a bulk sample at the Canmet Devon Research Facility. Table 3. illustrates this, based on the current operation of the Coal Preparation Plant and the practice of by-passing 6mm Minus raw coal to make the desired product ash level.

Yields

The indicated yields for the Float/Sink testwork are based on the current flowsheet at the Coal Preparation Plant. The 60 Mesh Minus fraction, representing 3.5% to 6% of the total feed, is proportionally split, depending on the quality of the run-of-mine coal, and reports either to the wash plant, where it is lost to tailings, or directly to product, where it would impact the overall CaO% of the coal ash. A significant concentration of the high CaO% material is removed from the product through the loss of this material when it is washed.

Although the S.G. of 1.5 was chosen as the Specific Gravity for most of the clean coal testwork because the Preparation Plant separates at 1.5, indicated yields of the low 70% range are not indicative of the actual yield out of the plant. This is due to operating inefficiencies in the plant circuit. The 1.5 Separating Specific Gravity represents the Theoretical Yield and at this separating gravity, the coal is cleaned down to a 5 or 6 % ash content, with many of the impurities removed. At a 6% ash level, the CaO% of ash is concentrated to levels in the 19 to 27 % range, with the average being 22.4%. This indicates that most of the High CaO material is present in the coal rather than the out-of-seam material. Through the inefficiencies of the operating plant and physical factors, the amount of mis-placed material included with the product is typically of low CaO "out-of-seam" material, which has the overall effect of reducing the CaO content of the coal ash while bringing the overall product ash content up from the 5 to 6% range to the 11 to 12.5% range.

TABLE 3.: SIMULATED CaO CONTENT OF CLEAN COAL PRODUCT FROM CORED HOLE DATA

	WASHPLANT RAW FEED					WASHPLANT PRODUCT					UNWASHED FINES			CLEAN COAL PRODUCT		
HOLE NO.	3/8 X 6M SCREEN	ASH A	6M X 60M SCREEN B	ASH B	WT ASH	ASH % CaO	ASH %	MASS % CaO	NEW ASH %	ASH % CaO	ASH %	CaO ASH	MASS CaO	PROD ASH	PROD MASS CaO	ASH CaO
1	42.4	13.7	51.3	13.15	13.39887	22.24	4.59	1.020816	10	10.20816	13.7	36.04	4.93748	10.74	1.804148	16.79840
2	59.3	9.92	35.3	12.23	10.78197	19.8	5.39	1.06722	10	10.6722	12.37	45.03	5.570211	10.474	1.967818	18.78764
3	62.5	18.08	33.3	15.32	17.12062	20.28	5.7	1.15596	10	11.5596	17.89	36.68	6.562052	11.578	2.237178	19.32266
4	59.4	17.08	35.7	13.24	15.63848	23.82	5.82	1.386324	10	13.86324	18.51	43.97	8.138847	11.702	2.736828	23.38769
5	60.4	19.01	34.7	16.33	18.03212	29.18	5.47	1.596146	10	15.96146	19.01	42.41	8.062141	11.802	2.889345	24.48182
6	57.3	22.95	37.5	20.68	22.05205	24.36	5.67	1.381212	10	13.81212	18.64	32.97	6.145608	11.728	2.334091	19.90186
7	56.2	18.7	37.9	19.11	18.86513	22.23	5.98	1.329354	10	13.29354	18.1	27.78	5.02818	11.62	2.069119	17.80653
14	60.1	17.09	35	15.02	16.32817	24.24	6.33	1.534392	10	15.34392	18.37	40.6	7.45822	11.674	2.719157	23.29242
16*	57.1	22.49	37.4	16.35	20.05996	17.71	6.43	1.138753	10	11.38753	19.73	40.24	7.742052	11.946	2.456412	20.56775
20	55.8	16.09	38.5	23.26	19.01730	22.36	5.17	1.156012	10	11.56012	19.46	25.07	4.878622	11.892	1.900534	15.98161
21	56.6	24.73	37.4	18.42	22.21942	24.28	5.71	1.386388	10	13.86388	19.73	29.08	5.737484	11.946	2.256607	18.89006
24	58.4	18.31	36.3	13.82	16.58891	19.96	6.02	1.201592	10	12.01592	18.08	43.44	7.853952	11.616	2.532064	21.79807
18	62.7	24.65	32.9	22.09	23.76899	19.46	5.63	1.095598	10	10.95598	26.96	29.29	7.896584	13.392	2.455795	18.33777
25	54.8	21.02	38.7	18.21	19.85693	20.84	5.79	1.206636	10	12.06636	19.08	35.18	6.712344	11.816	2.307777	19.53095

* NOTE: Hole 92–16 located in Pit 2S Surface Mine.

** NOTE: CaO Content of Unwashed Fines is Compared to Canmet Test Unwashed Fines.

COAL QUALITY, NO. 3 SEAM, Phase 2.

The No. 3 Seam in the area of 7S, Block 242 to 6S exhibits a wide range of quality variations, in particular with respect to the amount of in-seam dilution represented as rock and dirt bands. The higher ash resulting from the incorporation of these dirt bands into the overall coal seam unit in some locations renders the seam uneconomic to recover. However, for the central area of deposition of the No. 3 Seam (between Lot 242 and 6S), the partings disappear and a clean coal section of 3 to 5 metres total thickness is found. Most of the analytical work done in the Phase 2. program originates in this central area of deposition.

Raw Coal Quality

Holes QU-92-35, QU-92-37, QU-92-39, and QU-92-40 represent the area of the No. 3 Seam suitable for mining (see section on Coal Reserves). The raw coal quality is shown on Figures 8 to 11. It should be noted that the raw sulphur contents vary from 1.51% in Hole 92-39 to 3.66% in Hole 92-37. Hole 92-35 shows 0.54 metres of 4.22% Sulphur at the top of the seam. This section is separated from the lower 3.48 metres of coal by 0.10 metres of parting.

Raw coal ash contents for these four holes varies from 12.15% in Hole 92-35 to 25.1% in Hole 92-39.

Raw coal CaO levels are extremely variable, ranging from 6.1% in Hole 92-39 to 35.9% in Hole 92-35.

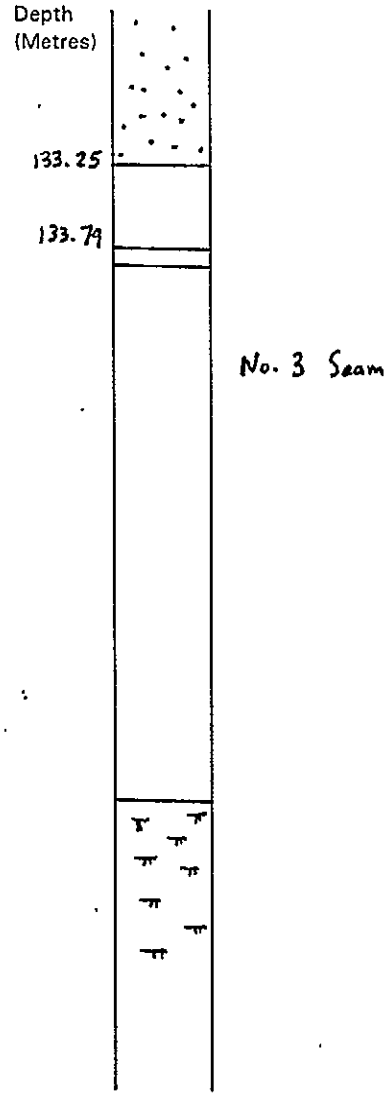
Clean Coal Quality

Clean coal yields at a 1.7 S.G. cut are all over 70%, with some holes such as Hole 92-35 over 90%. Washing characteristics of the No. 3 Seam indicate that the coal in general has good separation characteristics, with very little near-gravity material (middlings).

Clean coal CaO levels are variable. Hole 92-39 indicates that the CaO level does not increase significantly during the washing process (about 6% in both raw and clean).

The Total Sulphur content is high in both raw and clean coal. The reason for this is evident in the Sulphur Analysis, which indicates that, for holes where the Total Sulphur in the product exceeds 1 %, the amount of organic sulphur is an average of 64% of the total. Organic sulphur is not normally liberated during the washing process. For this reason, sulphur contents from any No. 3 Seam production will be high. The best chance for minimizing the impact of sulphur in No. 3 Seam product would be to selectively mine the seam section, leaving the higher sulphur intervals either on the roof or the floor of the working section.

HOLE Nº 92-035



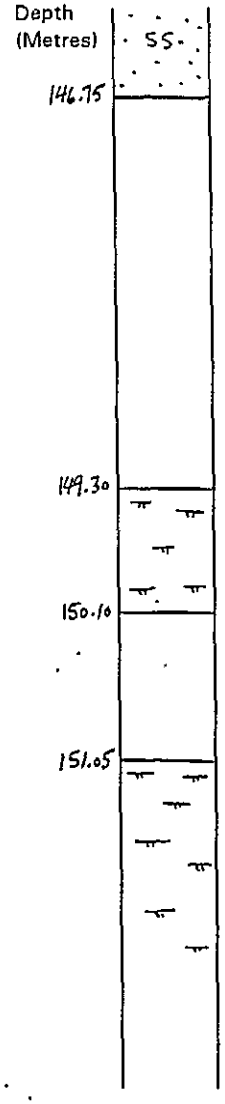
RAW COMPOSITE SAMPLE
(air Dried Basis) %

CLEAN COAL @ 1.7 S.G.
SIZE RANGE 32mm X 100m

Sample Thickness (metres)	% Ash (A.D)	% S (A.D)	R.M.	Ash	V.M.	F.C.	S.	CaO % in Ash	Yield %	R.M. %	Ash %	Sulphur %	Calorific Value	CaO % in Ash
0.54	11.07	4.22	2.57	11.07	41.07	45.29	4.22	44.53						
0.10	53.34	3.13												
			2.73	12.15	37.52	46.50	2.72	35.90	91.88	1.31	6.80	2.39	-	23.37
3.48	11.13	2.47	2.79	11.13	38.05	48.03	2.47	35.60						

FIGURE 8.

HOLE Nº 92-037



Scale
1:50

RAW COMPOSITE SAMPLE
(air Dried Basis) %

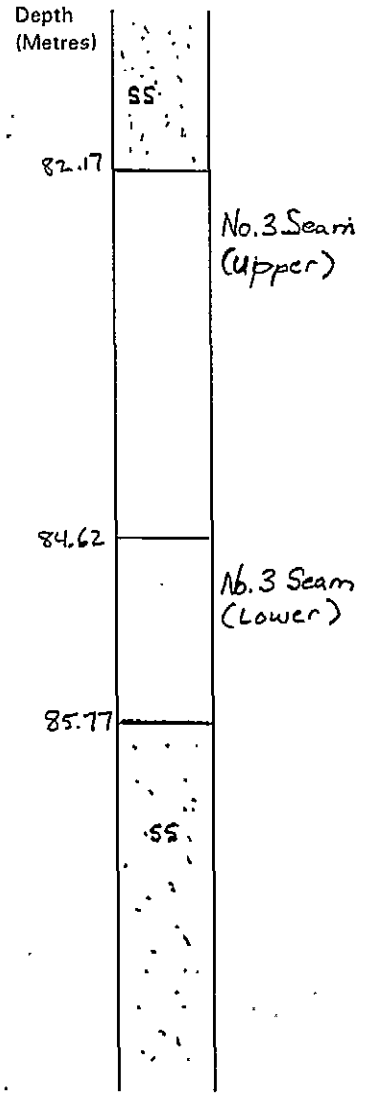
CLEAN COAL @ 1.7 S.G.
SIZE RANGE 32mm X 100m

Sample Thickness (metres)	% Ash (A.D)	% S (A.D)	R.M.	Ash	V.M.	F.C.	S.	CaO % in Ash	Yield %	R.M. %	Ash %	Sulphur %	Calorific Value	CaO % in Ash
2.55	13.25	3.66	2.95	13.25	36.94	46.86	3.66	13.19						
			4.79	26.53	-	-	-	7.16						
0.80	37.62	10.29												
0.95	12.43	3.00	5.49	12.43	34.90	47.18	3.00	20.96						
									79.78	1.72	10.59	3.20	-	15.58*

* These values calculated by mathematical combination based on sample thickness.

FIGURE 9.

HOLE Nº 92-039



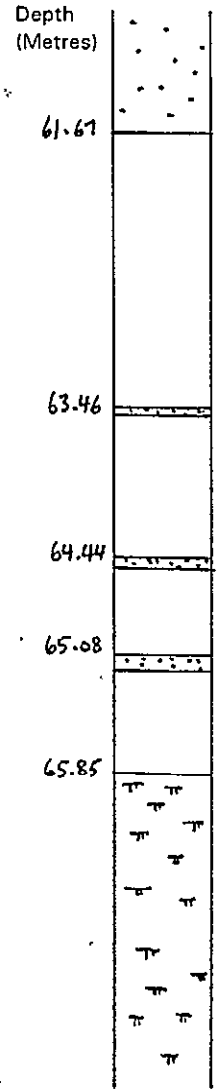
RAW COMPOSITE SAMPLE
(air Dried Basis) %

CLEAN COAL @ 1.7 S.G.
SIZE RANGE 32mm X 100M

Sample Thickness (metres)	% Ash (A.D)	% S (A.D)	R.M.	Ash	V.M.	F.C.	S.	CaO % in Ash	Yield %	R.M. %	Ash %	Sulphur %	Calorific Value	CaO % in Ash
2.45	18.54	1.51												
1.15	39.06	1.29												
			3.45	25.10	30.30	41.16	1.44	6.10	77.56	1.78	14.55	1.22	6556	6.29

FIGURE 10.

HOLE Nº 92-040



RAW COMPOSITE SAMPLE
(air Dried Basis) %

CLEAN COAL @ 1.7 S.G.
SIZE RANGE 32mm X 100M

	Sample Thickness (metres)	% Ash (A.D)	% S (A.D)	R.M.	Ash	V.M.	F.C.	S.	CaO % in Ash	Yield %	R.M. %	Ash %	Sulphur %	Calorific Value	CaO % in Ash
No. 3 Seam (Upper)	1.79	12.33	1.86	4.01	12.33	35.27	48.39	1.86	23.29						
	0.04	81.51	0.13												
				3.72	18.88	37.38	44.01	1.23	17.28 *	89.48	1.78	10.11	1.15	-	10.96
No. 3 Seam (Lower)	0.94	15.46	0.58	4.10	15.46	33.42	47.02	0.58	16.31						
	0.08	71.69	1.07												
	0.56	14.41	0.88	3.73	14.41	34.27	47.59	0.88	20.52						
	0.10	85.87	0.15												
	0.67	24.87	1.01	3.27	24.87	32.34	39.52	1.01	5.59						

* Mathematical Average

FIGURE 11.

COST STATEMENT

1992 EXPLORATION PROGRAM

PHASE 1

1. Drilling and coring operations	115,000
2. Geophysical logging	15,000
3. Laboratory Analysis	21,000
4. Supervision (Contract Geologist)	12,000
5. Hole Completion and Cementing	23,600
6. Casing, Core boxes, Supplies	5,300
7. Drill Site Preparation	7,100
8. Mobilization-demobilization	26,000
9 Freight and Miscellaneous	5,000
Sub-total....	230,000
G.S.T. 7% ..	16,100
TOTAL....	$ 246,100

OR $ 111.66 per metre

PHASE 2 : No detailed cost structure is currently available; total Phase 2 cost is $ 250,000.00

STATEMENT OF QUALIFICATIONS

I, James J. Lehtinen, of Comox, British Columbia, hereby certify that:

1) I am a geologist residing at 2247 April Place, Comox, British Columbia.

2) I received a Bachelor of Science Degree from the Faculty of Geology of the University of British Columbia, Vancouver, British Columbia (1984).

3) I am a registered Professional Geoscientist in the Province of British Columbia.

4) I am a Fellow of the Geological Association of Canada.

5) I am a co-author of this report, which is based on field work supervised by myself,in 1992 under the direct supervision of S. Gardner, Mine Manager, Quinsam Coal.

Dated at Campbell River, British Columbia
this 6th day of March, 1993.

J. Lehtinen

J.J. Lehtinen, P.Geo.

STATEMENT OF QUALIFICATIONS

I, Stephen L. Gardner, of 208 Carnegie St., Campbell River, British Columbia, hereby confirm that I am a registered Professional Geologist (Alberta Association of Professional Engineers, Geologists and Geophysicists) and that I have been practicing my profession for 15 years. I received a 4 yr. Bachelor of Science Specializing in Geology from the University of Alberta in 1975.

Signed,

Stephen L. Gardner, P. Geol.

REFERENCES

Bickford, C.G.C. and Kenyon, C. (1988): Coalfield Geology of Eastern Vancouver Island (N.T.S. 92F); British Columbia Ministry of Energy Mines and Petroleum Resources, in Geological Fieldwork 1987, Paper 1988-1 pages 441 - 450.

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APPENDIX A

COAL QUALITY INFORMATION

APPENDIX A. COAL QUALITY INFORMATION

SAMPLE INVENTORY, 1992 EXPLORATION PROGRAM

HOLE NUMBER		SAMPLE NUMBER	INTERVAL (Metres)	THICKNESS (Metres)	DESCRIPTION	RAW COAL ANALYTICAL RESULTS R.M.%	A.D. ASH%	A.D. S %	COMPOSITE SAMPLE INCREMENTS		RAW COMPOSITE HEAD SAMPLES R. M.%	A.D. ASH%	A.D. S%	CaO % in Ash 3/8" X 60M	60M X 0	(Combined) 3/8" x 0
92-001		1	58.09 – 58.72	0.63	NO. 1 RIDER	2.51	18.47	3.55								
	2	2	58.72 – 60.17	1.45	PARTING											
		3	60.17 – 63.80	3.63	NO. 1 SEAM	3.1	11.62	0.7	5	3	3.37	13.24	0.66	28.02	36.04	28.53
		4	63.80 – 64.10	0.3	FLOOR DILUTION	2.19	51.5	0.37		4						
92-002		5	37.67 – 38.21	0.54	NO. 1 RIDER	2.99	15.91	2.98								
	2	6	38.21 – 39.20	0.99	PARTING											
		7	39.20 – 43.15	3.95	NO. 1 SEAM	4.05	10.14	0.32	5	7	4.06	11.8	0.26	23.92	45.03	25.06
		8	43.15 – 43.25	0.1	FLOOR DILUTION	1.82	52.96	0.16		8						
92-003		9	SAVED		NO. 1 RIDER											
		10	74.29 – 74.39	0.1	ROOF DILUTION	1.63	84.15	0.1		10						
	2	11	74.39 – 77.68	3.29	NO. 1 SEAM	3.96	9.86	0.37	6	11	3.58	17.25	0.32	13.37	35.68	14.35
		12	77.68 – 77.78	0.1	FLOOR DILUTION	1.84	65.3	0.13		12						
92-004		13	SAVED		NO. 1 RIDER											
		14	70.98 – 71.08	0.1	ROOF DILUTION	1.82	83.42	0.1		14						
	2	15	71.08 – 75.50	4.42	NO. 1 SEAM	4.26	9.91	0.31	6	15	3.87	17.79	0.26	13.39	43.97	14.89
		16	75.50 – 75.60	0.1	FLOOR DILUTION	1.34	82.98	0.06		16						
92-005		17	SAVED		NO. 1 RIDER											
		18	66.74 – 66.84	0.1	ROOF DILUTION	1.82	81.67	0.13		18						
	2	19	66.84 – 71.04	4.2	NO. 1 SEAM	3.83	8.52	0.34	6	19	3.38	18.37	0.28	16.18	42.41	17.47
		20	71.04 – 71.14	0.1	FLOOR DILUTION	1.7	77.07	0.1		20						
92-006		21	SAVED		NO. 1 RIDER											
		22	82.00 – 82.10	0.1	ROOF DILUTION	1.36	82.37	0.1		22						
	2	23	82.10 – 85.00	2.9	NO. 1 SEAM	3.62	9.01	0.36	6	23	3.24	18.04	0.34	14.53	32.97	15.49
		24	85.00 – 85.10	0.1	FLOOR DILUTION	1.37	81.66	0.3		24						
92-007		25	SAVED		NO. 1 RIDER											
		26	69.75 – 69.85	0.1	ROOF DILUTION	1.65	82.04	0.31		26						
	2	27	69.85 – 72.92	3.07	NO. 1 SEAM	3.57	9.85	0.38	6	27	3.26	17.51	0.35	15.89	27.78	16.59
		28	72.92 – 73.02	0.1	FLOOR DILUTION	1.76	74.79	0.1		28						
92-014		36	108.52 – 108.62	0.1	ROOF DILUTION	1.96	82.26	0.1		36						
	1	37	108.62 – 112.10	3.48	NO. 1 SEAM	3.91	10.48	0.28	6	37	3.49	17.73	0.26	13.65	40.6	14.97
		38	112.10 – 112.20	0.1	FLOOR DILUTION	2.34	57.41	0.13		38						
92-015		39	14.00 – 14.26	0.2	ROOF DILUTION	1.36	66.7	6.66								
		40	14.26 – 15.06	0.8	NO. 1 SEAM	2.96	17.82	1.86								
	4	41	15.06 – 16.50	1.44	NO. 1 SEAM	3.66	8.17	0.85	5							
		42	16.50 – 18.53	2.03	NO. 1 BASAL	2.09	51.24	0.36								
		43	18.53 – 19.50	0.97	NO. 1 BASAL	3.18	15.33	0.54								

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SAMPLE INVENTORY, 1992 EXPLORATION PROGRAM

HOLE NUMBER	SAMPLE NUMBER	INTERVAL (Metres)	THICKNESS (Metres)	DESCRIPTION	RAW COAL ANALYTICAL RESULTS R.M.%	A.D. ASH%	A.D. S %		COMPOSITE SAMPLE INCREMENTS	RAW HEAD COMPOSITE SAMPLES R. M.%	A.D. ASH%	A.D. S%	CaO % in Ash 3/8" X 60M	60M X 0	(Combined) 3/8" x 0
92-016	3	44 10.65 – 10.81	0.16	NO. 1 SEAM	2.57	22.95	2.93		44						
		45 10.81 – 10.88	0.07	PARTING	1.21	81.8	4.78	8	45	3.07	19.12	1.37	13.18	39.24	14.61
		46 10.88 – 14.00	3.12	NO. 1 SEAM	3.5	13.55	0.77		46						
		47 14.00 – 15.43	1.43	NO. 1 BASAL	2.83	29.56	0.78		47						
92-020	1	48 84.40 – 84.50	0.1	ROOF DILUTION	2.17	82.91	0.05		48						
		49 84.50 – 86.40	1.9	NO. 1 SEAM	4.2	9.24	0.33	6	49	3.41	18.8	0.26	17.65	25.07	18.07
		50 86.40 – 86.50	0.1	FLOOR DILUTION	1.6	79.83	0.1		50						
92-021	1	51 132.37 – 132.47	0.1	ROOF DILUTION	1.92	80.61	0.1		51						
		52 132.47 – 136.00	3.53	NO. 1 SEAM	4.33	12.12	0.3	6	52	3.68	19	0.26	12.321	29.08	13.33
		53 136.00 – 136.10	0.1	FLOOR DILUTION	1.58	82.62	0.1		53						
92-024	1	54 109.00 – 109.10	0.1	ROOF DILUTION	1.77	84.67	0.11		54						
		55 109.10 – 112.65	3.55	NO. 1 SEAM	4.36	9.29	0.34	6	55	3.74	17.4	0.27	14.95	43.44	16.46
		56 112.65 – 112.75	0.1	FLOOR DILUTION	2.29	71.05	0.13		56						
92-018	2	57 80.90 – 81.17	0.27	NO. 1 RIDER	3.38	10.74	2.66		57						
		58 81.17 – 81.49	0.32	PARTING	1.87	78.5	1.07		58						
		59 81.49 – 81.63	0.14	ROOF DILUTION	2.39	60.26	0.42	10	59	3.27	26.08	0.5	11.06	29.29	11.85
		60 81.63 – 85.86	4.23	NO. 1 SEAM	4.13	8.94	0.36		60						
		61 85.86 – 85.96	0.1	FLOOR DILUTION	1.58	78.48	0.08		61						
92-022	4	62 76.77 – 77.54	0.77	NO. 3A SEAM	2.92	15.23	3	4							
		63 77.54 – 77.84	0.3	NO. 3B SEAM	1.49	70.8	12.94								
		64 77.84 – 78.52	0.68	NO. 3C SEAM	2.88	20.39	3.94								
		65 78.52 – 80.50	1.98	SAVED											
		66 80.50 – 81.12	0.62	NO. 3E SEAM	2.96	17.17	3.89								
92-025	1	67 127.83 – 127.93	0.1	ROOF DILUTION	1.84	85.16	0.16		67						
		68 127.93 – 130.98	3.05	N0. 1 SEAM	3.76	11.41	0.26	6	68	3.3	18.45	0.2	12.9	35.18	14.35
		69 130.98 – 131.08	0.1	FLOOR DILUTION	1.85	61.25	0.13		69						

APPENDIX A COAL QUALITY INFORMATION

SAMPLE INVENTORY, 1992 EXPLORATION PROGRAM

HOLE NUMBER	SAMPLE NUMBER	INTERVAL (Metres)	THICKNESS (Metres)	DESCRIPTION	RAW COAL ANALYTICAL RESULTS R.M.%	A.D. ASH%	A.D. S %	COMPOSITE SAMPLE INCREMENTS	RAW HEAD SAMPLES R. M.%	A.D. ASH%	A.D. S%	CaO % in Ash 3/8" X	60M X	(Combined) 3/8" x
92-026	70	49.93 – 50.02	0.09	ROOF DILUTION										
	71	50.02 – 50.19	0.17	NO.3 SEAM –	Samples 70 to 81 saved									
	72	50.19 – 50.25	0.06	PARTING										
	73	50.25 – 50.37	0.12	NO.3 SEAM –										
7	73	50.60 – 51.15	0.55	NO.3 SEAM –				13						
	74	51.15 – 51.20	0.05	PARTING										
	75	51.20 – 51.27	0.07	NO.3 SEAM –										
	76	51.27 – 51.30	0.03	PARTING										
	77	51.49 – 51.95	0.46	NO.3 SEAM –										
	78	51.95 – 52.13	0.18	PARTING										
	79	52.36 – 52.70	0.32	NO.3 SEAM –										
	80	52.70 – 52.79	0.09	PARTING										
	81	57.79 – 53.09	0.3	NO.3 SEAM –										
92-037	82	146.75 – 149.30	2.55	UPPER NO.3 SEAM	2.95	13.25	3.66	4	82	2.95	13.25	3.66		
2	83	149.30 – 150.10	0.8	PARTING										
	84	150.10 – 151.05	0.95	LOWER NO.3 SEAM	5.49	12.43	3		84	5.49	12.43	3		
92-035	85	133.25 – 133.79	0.54	UPPER NO.3 SEAM	2.57	11.07	4.22	4	85	2.57	11.07	4.22		
2	86	133.79 – 133.89	0.1	PARTING										
	87	133.89 – 137.37	3.48	LOWER NO.3 SEAM	2.79	11.13	2.47		87	2.79	11.13	2.47		
92-041	88	50.56 – 50.81	0.25	UPPER NO.3 SEAM	SAMPLES 88–91 SAVED									
3	89	50.81 – 51.03	0.22	PARTING				4						
	90	51.28 – 56.33	5.05	NO.3 SEAM										
	91	56.33 – 56.81	0.48	LOWER NO.3 SEAM										
92-040	92	61.67 – 63.46	1.79	UPPER NO.3 SEAM	4.01	12.33	1.86		92	4.01	12.33	1.86		
	93	63.46 – 63.50	0.04	PARTING										
	94	63.50 – 64.44	0.94	NO.3 SEAM	4.1	15.46	0.58	8	94	4.1	15.46	0.58		
4	95	64.44 – 64.52	0.08	PARTING										
	96	64.52 – 65.08	0.56	NO.3 SEAM	3.73	14.41	0.88		96	3.73	14.41	0.88		
	97	65.08 – 65.18	0.1	PARTING										
	98	65.18 – 65.85	0.67	LOWER NO.3 SEAM	3.27	24.87	1.01		98	3.27	24.87	1.01		
92-039	99	82.17 – 84.62	2.45	UPPER NO.3 SEAM	3.79	18.54	1.51	4	99	3.79	18.54	1.51		
2	100	84.62 – 85.77	1.15	LOWER NO.3 SEAM	2.71	39.06	1.29		100	2.71	39.06	1.29		
92-044	101	92.68 – 96.06	3.38	NO.1 SEAM	4.31	11.19	0.32	2	101	4.31	11.19	0.32		
1														

APPENDIX A COAL QUALITY INFORMATION

HOLE NUMBER	SAMPLE NUMBER	INTERVAL (Metres)	THICKNESS (Metres)	DESCRIPTION	COMPOSITE SAMPLE INCREMENTS	R.M.%	A.D. ASH%	A.D. S%	CaO % in Ash	ASH FUSION, DEG. F.	INITIAL	SOFT.	HEMISP.	FINAL
		SAMPLE INVENTORY, 1992 EXPLORATION PROGRAM			COMPOSITE CLEAN COAL ANALYTICAL RESULTS AT 1.5 S. G.									
92-001	1	58.09 – 58.72	0.63	NO. 1 RIDER										
	2	58.72 – 60.17	1.45	PARTING										
	3	60.17 – 63.80	3.63	NO. 1 SEAM	3	3.56	4.43	0.54	22.24	REDUCING	2255	2306	2318	2358
	4	63.80 – 64.10	0.3	FLOOR DILUTION	4					OXIDIZING	2310	2332	2355	2470
92-002	5	37.67 – 38.21	0.54	NO. 1 RIDER										
	6	38.21 – 39.20	0.99	PARTING						REDUCING	2366	2425	2438	2470
	7	39.20 – 43.15	3.95	NO. 1 SEAM	7	4.25	5.16	0.27	19.8	OXIDIZING	2482	2500	2508	2530
	8	43.15 – 43.25	0.1	FLOOR DILUTION	8									
92-003	9	SAVED		NO. 1 RIDER										
	10	74.29 – 74.39	0.1	ROOF DILUTION	10									
	11	74.39 – 77.68	3.29	NO. 1 SEAM	11	2.94	5.53	0.32	20.28	REDUCING	2298	2385	2432	2466
	12	77.68 – 77.78	0.1	FLOOR DILUTION	12					OXIDIZING	2428	2455	2467	2491
92-004	13	SAVED		NO. 1 RIDER										
	14	70.98 – 71.08	0.1	ROOF DILUTION	14									
	15	71.08 – 75.50	4.42	NO. 1 SEAM	15	3.29	5.63	0.27	23.02	REDUCING	2264	2305	2314	2559
	16	75.50 – 75.60	0.1	FLOOR DILUTION	16					OXIDIZING	2335	2370	2382	2475
92-005	17	SAVED		NO. 1 RIDER										
	18	66.74 – 66.84	0.1	ROOF DILUTION	18									
	19	66.84 – 71.04	4.2	NO. 1 SEAM	19	3.05	5.31	0.28	29.18	REDUCING	2365	2423	2435	2465
	20	71.04 – 71.14	0.1	FLOOR DILUTION	20					OXIDIZING	2380	2441	2467	2483
92-006	21	SAVED		NO. 1 RIDER										
	22	82.00 – 82.10	0.1	ROOF DILUTION	22									
	23	82.10 – 85.00	2.9	NO. 1 SEAM	23	2.8	5.52	0.28	24.36	REDUCING	2278	2288	2292	2325
	24	85.00 – 85.10	0.1	FLOOR DILUTION	24					OXIDIZING	2338	2356	2366	2444
92-007	25	SAVED		NO. 1 RIDER										
	26	69.75 – 69.85	0.1	ROOF DILUTION	26									
	27	69.85 – 72.92	3.07	NO. 1 SEAM	27	3.02	5.8	0.36	22.23	REDUCING	2282	2315	2322	2370
	28	72.92 – 73.02	0.1	FLOOR DILUTION	28					OXIDIZING	2321	2335	2346	2390
92-014	36	108.52 – 108.62	0.1	ROOF DILUTION	36									
	37	108.62 – 112.10	3.48	NO. 1 SEAM	37	2.79	6.15	0.25	24.24	REDUCING	2261	2308	2327	2354
	38	112.10 – 112.20	0.1	FLOOR DILUTION	38					OXIDIZING	2313	2325	2336	2380
92-015	39	14.00 – 14.26	0.2	ROOF DILUTION										
	40	14.26 – 15.06	0.8	NO. 1 SEAM										
	41	15.06 – 16.50	1.44	NO. 1 SEAM										
	42	16.50 – 18.53	2.03	NO. 1 BASAL										
	43	18.53 – 19.50	0.97	NO. 1 BASAL										

APPENDIX A. COAL QUALITY INFORMATION

SAMPLE INVENTORY, 1992 EXPLORATION PROGRAM

COMPOSITE CLEAN COAL ANALYTICAL RESULTS AT 1.5 S. G.

HOLE NUMBER	SAMPLE NUMBER	INTERVAL (Metres)	THICKNESS (Metres)	DESCRIPTION	COMPOSITE SAMPLE INCREMENTS	R.M.%	A.D. ASH%	A.D. S%	CaO % in Ash	ASH FUSION, DEG. F.	INITIAL	SOFT.	HEMISP.	FINAL
92–016	44	10.65 – 10.81	0.16	NO. 1 SEAM	44									
	45	10.81 – 10.88	0.07	PARTING	45	2.52	6.27	0.63	17.71	REDUCING	2540	2578	2600	2632
	46	10.88 – 14.00	3.12	NO. 1 SEAM	46					OXIDIZING	2606	2624	2643	2668
	47	14.00 – 15.43	1.43	NO. 1 BASAL	47									
92–020	48	84.40 – 84.50	0.1	ROOF DILUTION	48									
	49	84.50 – 86.40	1.9	NO. 1 SEAM	49	2.85	5.02	0.27	22.36	REDUCING	2260	2310	2349	2371
	50	86.40 – 86.50	0.1	FLOOR DILUTION	50					OXIDIZING	2320	2340	2390	2425
92–021	51	132.37 – 132.47	0.1	ROOF DILUTION	51									
	52	132.47 – 136.00	3.53	NO. 1 SEAM	52	3.55	5.51	0.26	24.28	REDUCING	2259	2303	2334	2377
	53	136.00 – 136.10	0.1	FLOOR DILUTION	53					OXIDIZING	2337	2360	2375	2412
92–024	54	109.00 – 109.10	0.1	ROOF DILUTION	54									
	55	109.10 – 112.65	3.55	NO. 1 SEAM	55	3.47	5.81	0.26	19.96	REDUCING	2369	2433	2517	2605
	56	112.65 – 112.75	0.1	FLOOR DILUTION	56					OXIDIZING	2518	2535	2576	2617
92–018	57	80.90 – 81.17	0.27	NO. 1 RIDER	57									
	58	81.17 – 81.49	0.32	PARTING	58									
	59	81.49 – 81.63	0.14	ROOF DILUTION	59	2.5	5.49	0.54	19.46	REDUCING	2254	2316	2430	2526
	60	81.63 – 85.86	4.23	NO. 1 SEAM	60					OXIDIZING	2410	2432	2488	2554
	61	85.86 – 85.96	0.1	FLOOR DILUTION	61									
92–022	62	76.77 – 77.54	0.77	NO. 3A SEAM										
	63	77.54 – 77.84	0.3	NO. 3B SEAM										
	64	77.84 – 78.52	0.68	NO. 3C SEAM										
	65	78.52 – 80.50	1.98	SAVED										
	66	80.50 – 81.12	0.62	NO. 3E SEAM										
92–025	67	127.83 – 127.93	0.1	ROOF DILUTION	67									
	68	127.93 – 130.98	3.05	No. 1 SEAM	68	2.3	5.66	0.26	20.84	REDUCING	2325	2384	2460	2534
	69	130.98 – 131.08	0.1	FLOOR DILUTION	69					OXIDIZING	2455	2481	2495	2582

APPENDIX A. COAL QUALITY INFORMATION

SAMPLE INVENTORY, 1992 EXPLORATION PROGRAM

HOLE NUMBER	SAMPLE NUMBER	INTERVAL (Metres)	THICKNESS (Metres)	DESCRIPTION	COMPOSITE SAMPLE INCREMENTS	COMPOSITE CLEAN COAL ANALYTICAL RESULTS AT 1.7 S. G. A.D. ASH%	A.D. S%	CaO % in	ASH FUSION, DEG. F.				
92-026	70	49.93 – 50.02	0.09	ROOF DILUTION									
	71	50.02 – 50.19	0.17	NO.3 SEAM									
	72	50.19 – 50.25	0.06	PARTING									
	73	50.25 – 50.37	0.12	NO.3 SEAM									
	73	50.60 – 51.15	0.55	NO.3 SEAM									
	74	51.15 – 51.20	0.05	PARTING									
	75	51.20 – 51.27	0.07	NO.3 SEAM									
	76	51.27 – 51.30	0.03	PARTING									
	77	51.49 – 51.95	0.46	NO.3 SEAM									
	78	51.95 – 52.13	0.18	PARTING									
	79	52.36 – 52.70	0.32	NO.3 SEAM									
	80	52.70 – 52.79	0.09	PARTING									
	81	57.79 – 53.09	0.3	NO.3 SEAM									
92-037	82	146.75 – 149.30	2.55	UPPER NO.3 SEAM	82	9.27	2.63	18.05	REDUCING	2243	2348	2427	2454
	83	149.30 – 150.10	0.8	PARTING					OXIDIZING	2447	2465	2555	2564
	84	150.10 – 151.05	0.95	LOWER NO.3 SEAM	84			dilution	Red.	2082	2146	2394	2424
									OXID.	2527	2556	2571	2587
92-035	85	133.25 – 133.79	0.54	UPPER NO.3 SEAM	85	6.82	2.4	20.3	REDUCING	2188	2237	2269	2305
	86	133.79 – 133.89	0.1	PARTING					OXIDIZING	2317	2341	2352	2366
	87	133.89 – 137.37	3.48	LOWER NO.3 SEAM	87								
92-041	88	50.56 – 50.81	0.25	UPPER NO.3 SEAM									
	89	50.81 – 51.03	0.22	PARTING									
	90	51.28 – 56.33	5.05	NO.3 SEAM									
	91	56.33 – 56.81	0.48	LOWER NO.3 SEAM									
92-040	92	61.67 – 63.46	1.79	UPPER NO.3 SEAM	92	11.19	1.12	10.71	REDUCING	2452	2468	2501	2522
	93	63.46 – 63.50	0.04	PARTING					OXIDIZING	2588	2611	2627	2654
	94	63.50 – 64.44	0.94	NO.3 SEAM	94								
	95	64.44 – 64.52	0.08	PARTING									
	96	64.52 – 65.08	0.56	NO.3 SEAM	96								
	97	65.08 – 65.18	0.1	PARTING									
	98	65.18 – 65.85	0.67	LOWER NO.3 SEAM	98								
92-039	99	82.17 – 84.62	2.45	UPPER NO.3 SEAM	99	14.55	1.22	6.29	REDUCING	2589	2635	2685	2700
	100	84.62 – 85.77	1.15	LOWER NO.3 SEAM	100				OXIDIZING	2665	2680	2700	2721
92-044	101	92.68 – 96.06	3.38	NO.1 SEAM	101	7.06	0.29	27.11	REDUCING	2294	2337	2368	2434
									OXIDIZING	2341	2360	2392	2443

Chemex Labs Ltd.

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212 Brooksbank Ave.
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Telex: 04-352597
Fax: (604) 984-0218

To: Brinco Coal Corporation
P.O. Box 938
Campbell River, BC
V9W 6Y4

Attn: Mr. Stephen Gardner

1992 QUINSAM COAL COMPOSITING

Components		Drill Hole No.	Composite ID
Tag No.	Seg. No.		
121464 121465	3 4	QU 92-01	01-A
121468 121469	7 8	QU 92-02	02-B
121471 121472 121473	10 11 12	QU 92-03	03-C
121475 121476 121477	14 15 16	QU 92-04	04-D
121479 121480 121481	18 19 20	QU 92-05	05-E
121483 121484 121485	22 23 24	QU 92-06	06-F
121487	26 27 28	QU 92-07	07-G
121497 121498 121499	36 37 38	QU 92-14	14-H

Components		Drill Hole No.	Composite ID
Tag No.	Seg. No.		
146956 146957 146958 146959	44 45 46 47	QU 92-16	16-I
146960 146961 146962	48 49 50	QU 92-20	20-K
146963 146964 146965	51 52 53	QU 92-21	21-L
146966 146967 146968	54 55 56	QU 92-24	24-M
146969 146970 146971 146972 146973	57 58 59 60 61	QU 92-18	18-N
146979	67 68 69	QU 92-25	25-P

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Campbell River, BC
V9W 6Y4

Certificate No.: A9213983
Invoice No.: I9280308
Date: May 14, 1992

1992 QUINSAM EXPLORATION PROGRAM
INDIVIDUAL CORE SAMPLES

QU-92	Weight g Rec'd a.d.	R.M. %	Ash % a.d.	Ash % dry	% Sulphur	
					a.d.	dry
01-1	3,125	2.51	18.47	18.95	3.55	3.64
01-3	8,311	3.10	11.62	11.99	0.70	0.72
01-4	980	2.19	51.50	52.65	0.37	0.38
02-5	3,413	2.99	15.91	16.40	2.98	3.07
02-7	21,570	4.05	10.14	10.57	0.32	0.33
02-8	601	1.82	52.96	53.94	0.16	0.16
03-10	1,122	1.63	84.15	85.54	0.10	0.10
03-11	18,646	3.96	9.86	10.27	0.37	0.39
03-12	1,066	1.84	65.30	66.52	0.13	0.13
04-14	1,085	1.82	83.42	84.97	0.10	0.10
04-15	19,720	4.26	9.91	10.35	0.31	0.32
04-16	1,023	1.34	82.98	84.11	0.06	0.06
05-18	1,202	1.82	81.67	83.18	0.13	0.13
05-19	21,499	3.83	8.52	8.86	0.34	0.35
05-20	1,538	1.70	77.07	78.40	0.10	0.10
06-22	1,464	1.36	82.37	83.51	0.10	0.10
06-23	14,946	3.62	9.01	9.55	0.36	0.38
06-24	1,076	1.37	81.66	82.79	0.30	0.30

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1992 QUINSAM EXPLORATION PROGRAM
INDIVIDUAL CORE SAMPLES

QU-92	Weight g Rec'd a.d.	R.M. %	Ash % a.d.	Ash % dry	% Sulphur	
					a.d.	dry
07-26	1,109	1.65	82.04	83.42	0.31	0.32
07-27	17,950	3.57	9.85	10.21	0.38	0.39
07-28	1,641	1.76	74.79	76.13	0.10	0.10
14-36	1,115	1.96	82.26	83.90	0.10	0.10
14-37	15,426	3.91	10.48	10.91	0.28	0.29
14-38	804	2.34	57.41	58.79	0.13	0.13
15-39	1,343	1.36	66.70	67.62	6.66	6.75
15-40	3,352	2.96	17.82	18.36	1.86	1.92
15-41	5,988	3.66	8.17	8.48	0.85	0.88
15-42	10,905	2.09	51.24	52.33	0.36	0.37
15-43	4,028	3.18	15.33	15.83	0.54	0.56
16-44	733	2.57	22.95	23.55	2.93	3.01
16-45	567	1.21	81.80	82.80	4.78	4.84
16-46	14,494	3.50	13.55	14.05	0.77	0.80
16-47	713	2.83	29.56	30.42	0.78	0.80
20-48	965	2.17	82.91	84.75	0.05	0.05
20-49	11,806	4.20	9.24	9.64	0.33	0.34
20-50	860	1.60	79.83	81.13	0.10	0.10
21-51	1,017	1.92	80.61	82.19	0.10	0.10
21-52	18,449	4.33	12.12	12.67	0.30	0.31
21-53	1,230	1.58	82.62	83.95	0.10	0.10

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To: Brinco Coal Corporation
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Campbell River, BC
V9W 6Y4

Certificate No.: A9213983
Invoice No.: I9280308
Date: May 14, 1992

1992 QUINSAM EXPLORATION PROGRAM
INDIVIDUAL CORE SAMPLES

QU-92	Weight g Rec'd a.d.	R.M. %	Ash % a.d.	Ash % dry	% Sulphur	
					a.d.	dry
24-54	885	1.77	84.67	86.20	0.11	0.11
24-55	14,498	4.36	9.29	9.71	0.34	0.36
24-56	1,085	2.29	71.05	72.72	0.13	0.13
18-57	1,555	3.38	10.74	11.11	2.66	2.75
18-58	3,076	1.87	78.50	79.99	1.07	0.11
18-59	1,705	2.39	60.26	61.74	0.42	0.43
18-60	14,767	4.13	8.94	9.32	0.36	0.38
18-61	821	1.58	78.48	79.74	0.08	0.08
22-62	4,810	2.92	15.23	15.68	3.00	3.10
22-63	2,993	1.49	70.80	71.87	12.94	13.14
22-64	4,400	2.88	20.39	20.99	3.94	4.06
22-66	3,841	2.96	17.17	17.69	3.89	4.01
25-67	1,079	1.84	85.16	86.76	0.16	0.16
25-68	18,175	3.76	11.41	11.86	0.26	0.27
25-69	1,412	1.85	61.25	62.41	0.13	0.13

L. Lakosil

Certified by:

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TO: BRINCO COAL **Attn: Mr. Stephen Gardner**
P.O. Box 938
Campbell River,B.C.
V9W 6Y4

Certificate:A9213995
Invoice No.:I9280323
P.O. No.:9100004

Re: Composite Head Samples Before Screening

No.	Qu 92 Drill Hole	Composite	Basis	R.M %	ASH %	V.M. %	F.C.%	Sulphur %
1	-01	A	A.D.	3.37	13.24	36.30	47.09	0.66
			Dry		13.70	37.56	48.74	0.69
2	-02	B	A.D.	4.06	11.80	35.64	48.50	0.26
			Dry		12.30	37.15	50.55	0.27
3	-03	C	A.D.	3.58	17.25	34.66	44.51	0.32
			Dry		17.89	35.94	46.17	0.33
4	-04	D	A.D.	3.87	17.79	33.94	44.40	0.26
			Dry		18.50	35.31	46.19	0.28
5	-05	E	A.D.	3.39	18.37	34.79	43.45	0.28
			Dry		19.01	36.01	44.98	0.29
6	-06	F	A.D.	3.24	18.04	35.61	43.11	0.34
			Dry		18.64	36.80	44.56	0.35
7	-07	G	A.D.	3.26	17.51	34.59	44.64	0.35
			Dry		18.10	35.76	46.14	0.37
8	-14	H	A.D.	3.49	17.73	34.35	44.43	0.26
			Dry		18.37	35.60	46.03	0.27
9	-16	I	A.D.	3.07	19.12	33.47	44.34	1.37
			Dry		19.72	34.52	45.76	1.41
10	-20	K	A.D.	3.41	18.80	34.29	43.50	0.26
			Dry		19.47	35.50	45.03	0.27
11	-21	L	A.D.	3.68	19.00	34.08	43.24	0.26
			Dry		19.72	35.38	44.90	0.27
12	-24	M	A.D.	3.74	17.40	34.67	44.19	0.27
			Dry		18.07	36.02	45.91	0.28
13	-18	N	A.D.	3.27	26.08	33.10	37.55	0.50
			Dry		26.96	34.22	38.82	0.52
14	-25	P	A.D.	3.30	18.45	35.11	43.14	0.20
			Dry		19.08	36.31	44.61	0.21

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212 Brooksbank Ave.
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Telex: 04-352597
Fax: (604) 984-0218

To: Brinco Coal Corporation
P.O. Box 938
Campbell River, BC
V9W 6Y4

Certificate No.: A9213996
Invoice No.: I9280335

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Raw Coal Composites QU92

3 Fractions
1: 3/8 - 6M
2: 6 - 60M
3. 60M - 0

Date Received: April 16, 1992
Date Reported: April 29, 1992

No.	Sample	Screen Yield %	Basis	R.M. %	Ash %	Sulphur %	C.V. Cal/g	FSI
1	01-A-1	42.4	A.D. Dry	3.16	13.27 13.70	0.79 0.82	6471 6690 7720	0.0
2	01-A-2	51.3	A.D. Dry	3.30	12.72 13.15	0.53 0.54	6445 6665 7674	0.0
3	01-A-3	6.3	A.D. Dry	2.75	24.68 25.37	0.55 0.57	5248 5397 7232	0.0

Tot. 13.71

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Re: Raw Coal Composites QU92

3 Fractions
1: 3/8 - 6M
2: 6 - 60M
3. 60M - 0

Date Received: April 16, 1992
Date Reported: April 29, 1992

No.	Sample	Screen Yield %	Basis	R.M. %	Ash %	Sulphur %	C.V. Cal/g	FSI
4	02-B-1	59.3	A.D. Dry	3.76	9.55 9.92	0.27 0.28	6822 7109 7867	0.0
5	02-B-2	35.3	A.D. Dry	4.04	11.74 12.23	0.25 0.26	6516 6791 7738	0.0
6	02-B-3	5.4	A.D. Dry	3.14	20.45 21.12	0.20 0.21	5481 5658 7173	0.0

Total 100.11

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Certificate No.: A9213996
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Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Raw Coal Composites QU92

3 Fractions 1: 3/8 - 6M
2: 6 - 60M
3. 60M - 0

Date Received: April 16, 1992
Date Reported: April 29, 1992

No.	Sample	Screen Yield %	Basis	R.M. %	Ash %	Sulphur %	C.V. Cal/g	FSI
7	03-C-1	62.5	A.D. Dry	3.53	17.44 18.08	0.29 0.30	6105 6331 7784	0.0
8	03-C-2	33.3	A.D. Dry	3.70	14.75 15.32	0.30 0.31	6291 6532 7714	0.0
9	03-C-3	4.2	A.D. Dry	3.26	22.58 23.34	0.38 0.40	5322 5501 7175	0.0

Total 16.76

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Certificate No.: A9213996
Invoice No.: I9280335

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Raw Coal Composites QU92

3 Fractions
1: 3/8 - 6M
2: 6 - 60M
3. 60M - 0

Date Received: April 16, 1992
Date Reported: April 29, 1992

No.	Sample	Screen Yield %	Basis	R.M. %	Ash %	Sulphur %	C.V. Cal/g	FSI
10	04-D-1	59.4	A.D. Dry	3.81	16.43 17.08	0.23 0.24	6165 6409 7729	0.0
11	04-D-2	35.7	A.D. Dry	4.10	12.70 13.24	0.23 0.24	6425 6700 7722	0.0
12	04-D-3	4.9	A.D. Dry	3.38	20.25 20.96	0.20 0.20	5559 5754 7280	0.0

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Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Raw Coal Composites QU92

3 Fractions 1: 3/8 - 6M
2: 6 - 60M
3. 60M - 0

Date Received: April 16, 1992
Date Reported: April 29, 1992

No.	Sample	Screen Yield %	Basis	R.M. %	Ash %	Sulphur %	C.V. Cal/g	FSI
13	05-E-1	60.4	A.D. Dry	3.19	18.40 19.01	0.25 0.26	6012 6217 7706	0.0
14	05-E-2	34.7	A.D. Dry	3.52	15.76 16.33	0.26 0.27	6161 6386 7633	0.0
15	05-E-3	4.9	A.D. Dry	2.94	23.28 23.99	0.21 0.22	5098 5253 6911	0.0

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Certificate No.: A9213996
Invoice No.: I9280335

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Raw Coal Composites QU92

3 Fractions 1: 3/8 - 6M
2: 6 - 60M
3. 60M - 0

Date Received: April 16, 1992
Date Reported: April 29, 1992

No.	Sample	Screen Yield %	Basis	R.M. %	Ash %	Sulphur %	C.V. Cal/g	FSI
16	06-F-1	57.3	A.D. Dry	3.09	22.24 22.95	0.26 0.27	5642 5822 7555	0.0
17	06-F-2	37.5	A.D. Dry	3.22	20.02 20.68	0.30 0.31	5798 5991 7553	0.0
18	06-F-3	5.2	A.D. Dry	2.66	24.55 25.22	0.26 0.27	5189 5331 7128	0.0

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Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Raw Coal Composites QU92

3 Fractions 1: 3/8 - 6M
2: 6 - 60M
3. 60M - 0

Date Received: April 16, 1992
Date Reported: April 29, 1992

No.	Sample	Screen Yield %	Basis	R.M. %	Ash %	Sulphur %	C.V. Cal/g	FSI
19	07-G-1	56.2	A.D. Dry	3.35	18.08 18.70	0.31 0.32	5957 6164 7582	0.0
20	07-G-2	37.9	A.D. Dry	3.21	18.50 19.11	0.34 0.35	5956 6154 7608	0.0
21	07-G-3	5.9	A.D. Dry	2.67	28.44 29.22	0.26 0.27	4810 4942 6982	0.0

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Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Raw Coal Composites QU92

3 Fractions 1: 3/8 - 6M
2: 6 - 60M
3. 60M - 0

Date Received: April 16, 1992
Date Reported: April 29, 1992

No.	Sample	Screen Yield %	Basis	R.M. %	Ash %	Sulphur %	C.V. Cal/g	FSI
22	14-H-1	60.1	A.D. Dry	3.28	16.53 17.09	0.23 0.24	6424 6659 7868	0.0
23	14-H-2	35.0	A.D. Dry	3.74	14.46 15.02	0.23 0.24	6323 6568 7729	0.0
24	14-H-3	4.9	A.D. Dry	3.11	20.95 21.62	0.19 0.20	5388 5561 7095	0.0

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Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Raw Coal Composites QU92

3 Fractions 1: 3/8 - 6M
2: 6 - 60M
3. 60M - 0

Date Received: April 16, 1992
Date Reported: April 29, 1992

No.	Sample	Screen Yield %	Basis	R.M. %	Ash %	Sulphur %	C.V. Cal/g	FSI
25	16-I-1	57.1	A.D. Dry	2.79	21.86 22.49	1.34 1.38	5756 5925 7658	0.0
26	16-I-2	37.4	A.D. Dry	3.28	15.81 16.35	1.12 1.16	6215 6426 7682	0.0
27	16-I-3	5.5	A.D. Dry	2.74	24.68 25.37	1.24 1.28	5304 5454 7308	0.0

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Certificate No.: A9213996
Invoice No.: I9280335

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Raw Coal Composites QU92

3 Fractions 1: 3/8 - 6M
2: 6 - 60M
3. 60M - 0

Date Received: April 16, 1992
Date Reported: April 29, 1992

No.	Sample	Screen Yield %	Basis	R.M. %	Ash %	Sulphur %	C.V. Cal/g	FSI
28	20-K-1	55.8	A.D. Dry	3.94	15.46 16.09	0.29 0.31	6163 6416 7647	0.0
29	20-K-2	38.5	A.D. Dry	3.62	22.41 23.26	0.30 0.31	5621 5832 7600	0.0
30	20-K-3	5.7	A.D. Dry	2.97	33.68 34.71	0.23 0.24	4385 4519 6922	0.0

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Certificate No.: A9213996
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Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Raw Coal Composites QU92

3 Fractions 1: 3/8 - 6M
2: 6 - 60M
3. 60M - 0

Date Received: April 16, 1992
Date Reported: April 29, 1992

No.	Sample	Screen Yield %	Basis	R.M. %	Ash %	Sulphur %	C.V. Cal/g	FSI
31	21-L-1	56.6	A.D. Dry	3.44	23.88 24.73	0.27 0.28	5501 5716 7663	0.0
32	21-L-2	37.4	A.D. Dry	3.91	17.70 18.42	0.28 0.30	6009 6253 7664	0.0
33	21-L-3	6.0	A.D. Dry	3.36	24.48 25.33	0.23 0.24	5122 5300 7099	0.0

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Campbell River, BC
V9W 6Y4

Certificate No.: A9213996
Invoice No.: I9280335

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Raw Coal Composites QU92

3 Fractions 1: 3/8 - 6M
2: 6 - 60M
3. 60M - 0

Date Received: April 16, 1992
Date Reported: April 29, 1992

No.	Sample	Screen Yield %	Basis	R.M. %	Ash %	Sulphur %	C.V. Cal/g	FSI
34	24-M-1	58.4	A.D. Dry	3.94	17.58 18.31	0.27 0.28	5968 6212 7604	0.0
35	24-M-2	36.3	A.D. Dry	3.96	13.27 13.82	0.28 0.30	6376 6639 7703	0.0
36	24-M-3	5.3	A.D. Dry	3.40	19.77 20.46	0.23 0.24	5487 5680 7141	0.0

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Certificate No.: A9213996
Invoice No.: I9280335

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Raw Coal Composites QU92

3 Fractions 1: 3/8 - 6M
2: 6 - 60M
3. 60M - 0

Date Received: April 16, 1992
Date Reported: April 29, 1992

No.	Sample	Screen Yield %	Basis	R.M. %	Ash %	Sulphur %	C.V. Cal/g	FSI
37	18-N-1	62.7	A.D. Dry	3.31	23.84 24.65	0.60 0.62	5585 5777 7667	0.0
38	18-N-2	32.9	A.D. Dry	3.37	21.35 22.09	0.51 0.53	5737 5937 7621	0.0
39	18-N-3	4.4	A.D. Dry	2.89	26.73 27.52	0.58 0.60	4984 5132 7081	0.0

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V9W 6Y4

Certificate No.: A9213996
Invoice No.: I9280335

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Raw Coal Composites QU92

3 Fractions
1: 3/8 - 6M
2: 6 - 60M
3. 60M - 0

Date Received: April 16, 1992
Date Reported: April 29, 1992

No.	Sample	Screen Yield %	Basis	R.M. %	Ash %	Sulphur %	C.V. Cal/g	FSI
40	25-P-1	54.8	A.D. Dry	3.22	20.34 21.02	0.20 0.20	5762 5953 7664	0.0
41	25-P-2	38.7	A.D. Dry	3.37	17.60 18.21	0.21 0.22	6138 6352 7766	0.0
42	25-P-3	6.5	A.D. Dry	3.00	20.91 21.56	0.18 0.19	5535 5706 7274	0.0

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TO: BRINCO COAL
P.O. Box 938
Campbell River,B.C.
V9W 6Y4

Attn: Mr. Stephen Gardner

Certificate:A9213985
Invoice No.:I9280324
P.O. No.9100004

Re: Quinsam Coal 1992
1.5SG Clean Coal Composites 3/8" x 60 M

QU 92 Drill Hole	Composite	Basis	R.M. %	ASH %	V.M. %	F.C. %	Sulphur %	C.V. cal/g	FSI	HGI
-01	A	A.D	3.56	4.43	38 16	53.85	0.54	7332	1	38
		Dry		4 59	39 57	55 84	0 56	7602		
-02	B	A.D	4.25	5.16	37 30	53.29	0.27	7235	1	40
		Dry		5 39	38 96	55 65	0.29	7556		
-03	C	A D	2 94	5 53	38 36	53 17	0 32	7290	1	37
		Dry		5 70	39 52	54 78	0 33	7511		
-04	D	A D	3 29	5 63	37 60	53 48	0.27	7255	1	38
		Dry		5 82	38 88	55 30	0 28	7502		
-05	E	A.D	3.05	5.31	38 45	53 19	0.28	7280	0.5	40
		Dry		5 47	39 65	54 87	0 29	7509		
-06	F	A.D	2 80	5 52	38 73	52 95	0.28	7274	0 5	39
		Dry		5 67	39 85	54 48	0 29	7483		
-07	G	A D	3 02	5 80	37 94	53.24	0 36	7248	1	38
		Dry		5 98	39 12	54 90	0 37	7473		
-14	H	A D	2.79	6 15	38 23	52 83	0 25	7228	1	40
		Dry		6 33	39 32	54 35	0 25	7436		
-16	I	A.D	2 52	6.27	37 61	53 60	0 63	7305	0 5	39
		Dry		6 43	38 58	54 99	0 65	7493		
-20	K	A D.	2 85	5.02	37 80	54 33	0.27	7323	1	42
		Dry		5 17	38 91	55 92	0 28	7538		
-21	L	A.D	3 55	5.51	37 91	53 03	0 25	7244	1	40
		Dry		5 71	39 30	54 99	0 26	7511		
-24	M	A D	3 47	5 81	38 18	52 54	0.26	7247	1	40
		Dry		6 02	39 56	54 42	0 27	7508		
-18	N	A D.	2.50	5.49	38 50	53 51	0.54	7339	1	40
		Dry		5 63	39 49	54 88	0 55	7527		
-25	P	A.D.	2.30	5.66	38 66	53 38	0.26	7313	1	40
		Dry		5.79	39 57	54 64	0 27	7485		

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To: Brinco Coal Corp.
P.O. Box 938
Campbell River, BC
V9W 6Y4

Certificate No.: A9213993
Invoice No.: 19280309

Date: May 14, 1992

Attn: Mr. Stephen Gardner

Re: Clean coal composites at 1.5 SG - Ash Fusion Temperatures Deg. F

	Drill Hole	Composite	Atmosphere	Initial	Soft.	Hemisp.	Final
1.	01	A	red ox	2255 2310	2306 2332	2318 2355	2358 2470
2.	02	B	red ox	2366 2482	2425 2500	2438 2508	2470 2530
3.	03	C	red ox	2298 2428	2385 2455	2432 2467	2466 2491
4.	04	D	red ox	2264 2335	2305 2370	2314 2382	2559 2475
5.	05	E	red ox	2365 2380	2423 2441	2435 2467	2465 2483
6.	06	F	red ox	2278 2338	2288 2356	2292 2366	2325 2444
7.	07	G	red ox	2282 2321	2315 2335	2322 2346	2370 2390
8.	14	H	red ox	2261 2313	2308 2325	2327 2336	2354 2380
9.	16	I	red ox	2540 2606	2578 2624	2600 2643	2632 2668
10.	20	K	red ox	2260 2320	2310 2340	2349 2390	2371 2425
11.	21	L	red ox	2259 2337	2303 2360	2334 2375	2377 2412
12.	24	M	red ox	2369 2518	2433 2535	2517 2576	2605 2617
13.	18	N	red ox	2254 2410	2316 2432	2430 2488	2526 2554
14.	25	P	red ox	2325 2455	2384 2481	2460 2495	2534 2582

Certified by:

Chemex Labs Ltd.

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To: Brinco Coal Corp.
P.O. Box 938
Campbell River, BC
V9W 6Y4

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-01
SAMPLE NO : 01-A
CHEMEX NO : 01-A

SIZE FRACTION : 3/8X6M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		3.33	4.30	0.00	0.00	0.70	0
	DRY	74.84		4.45	0.00	0.00	0.73	0
1.5	A.D.		2.99	14.24	0.00	0.00	1.25	0
	DRY	6.34		14.68	0.00	0.00	1.29	0
1.6	A.D.		3.00	21.27	0.00	0.00	0.89	0
	DRY	6.05		21.93	0.00	0.00	0.92	0
****	A.D.		1.78	63.63			0.85	
	DRY	12.77		64.78			0.87	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	74.84	4.45	0.00	95.55	0.73	0
1.5	81.18	5.25	0.00	94.75	0.77	0
1.6	87.23	6.41	0.00	93.59	0.78	0
****	100.00	13.86			0.79	

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212 Brooksbank Ave.
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Telex: 04-352597
Fax: (604) 984-0218

To: Brinco Coal Corp.
P.O. Box 938
Campbell River, BC
V9W 6Y4

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-01
SAMPLE NO : 01-A
CHEMEX NO : 01-A

SIZE FRACTION : 6X60M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		1.23	3.62	0.00	0.00	0.47	0
	DRY	77.29		3.67	0.00	0.00	0.48	0
1.5	A.D.		1.50	12.16	0.00	0.00	0.71	0
	DRY	4.94		12.34	0.00	0.00	0.72	0
1.6	A.D.		2.23	20.04	0.00	0.00	0.84	0
	DRY	2.37		20.50	0.00	0.00	0.86	0
****	A.D.		1.06	57.00			0.80	
	DRY	15.40		57.61			0.81	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	77.29	3.67	0.00	96.33	0.48	0
1.5	82.23	4.19	0.00	95.81	0.49	0
1.6	84.60	4.64	0.00	95.36	0.50	0
****	100.00	12.80			0.55	

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Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU-92-02
SAMPLE NO : 02-B
CHEMEX NO : 02-B

SIZE FRACTION : 3/8X6M
WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		4.12	4.84	0.00	0.00	0.31	0
	DRY	80.56		5.05	0.00	0.00	0.32	0
1.5	A.D.		3.12	18.05	0.00	0.00	0.27	0
	DRY	7.28		18.64	0.00	0.00	0.28	0
1.6	A.D.		3.08	25.16	0.00	0.00	0.26	0
	DRY	4.09		25.96	0.00	0.00	0.26	0
****	A.D.		2.06	49.64			0.14	
	DRY	8.07		50.68			0.14	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	80.56	5.05	0.00	94.95	0.32	0
1.5	87.84	6.18	0.00	93.82	0.32	0
1.6	91.93	7.06	0.00	92.94	0.32	0
****	100.00	10.58			0.30	

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V9W 6Y4

Attn: Mr. Steve Gardner

Re: Washability Data

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

HOLE NO : QU92-02
SAMPLE NO : 02-B
CHEMEX NO : 02-B

SIZE FRACTION : 6X60M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		1.89	3.64	0.00	0.00	0.31	0
	DRY	77.57		3.71	0.00	0.00	0.31	0
1.5	A.D.		1.73	14.92	0.00	0.00	0.27	0
	DRY	3.90		15.18	0.00	0.00	0.27	0
1.6	A.D.		2.11	23.41	0.00	0.00	0.23	0
	DRY	2.82		23.91	0.00	0.00	0.23	0
****	A.D.		1.19	47.32			0.11	
	DRY	15.71		47.89			0.12	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	77.57	3.71	0.00	96.29	0.31	0
1.5	81.47	4.26	0.00	95.74	0.31	0
1.6	84.29	4.92	0.00	95.08	0.31	0
****	100.00	11.67			0.28	

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Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-03
SAMPLE NO : 03-C
CHEMEX NO : 03-C

SIZE FRACTION : 3/8X6M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		3.87	5.01	0.00	0.00	0.33	0
	DRY	75.14		5.21	0.00	0.00	0.35	0
1.5	A.D.		2.90	16.92	0.00	0.00	0.35	0
	DRY	5.31		17.43	0.00	0.00	0.36	0
1.6	A.D.		2.82	26.51	0.00	0.00	0.32	0
	DRY	3.23		27.29	0.00	0.00	0.32	0
****	A.D.		2.02	69.28			0.12	
	DRY	16.32		70.71			0.12	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	75.14	5.21	0.00	94.79	0.35	0
1.5	80.45	6.02	0.00	93.98	0.35	0
1.6	83.68	6.84	0.00	93.16	0.35	0
****	100.00	17.26			0.31	

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Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-03
SAMPLE NO : 03-C
CHEMEX NO : 03-C

SIZE FRACTION : 6X60M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		1.51	4.25	0.00	0.00	0.33	0
	DRY	77.54		4.32	0.00	0.00	0.33	0
1.5	A.D.		1.36	14.77	0.00	0.00	0.42	0
	DRY	4.39		14.97	0.00	0.00	0.42	0
1.6	A.D.		2.24	23.77	0.00	0.00	0.39	0
	DRY	1.99		24.31	0.00	0.00	0.40	0
****	A.D.		1.06	63.76			0.22	
	DRY	16.08		64.44			0.22	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	77.54	4.32	0.00	95.68	0.33	0
1.5	81.93	4.89	0.00	95.11	0.34	0
1.6	83.92	5.35	0.00	94.65	0.34	0
****	100.00	14.85			0.32	

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V9W 6Y4

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-04
SAMPLE NO : 04-D
CHEMEX NO : 04-D

SIZE FRACTION : 3/8X6M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		4.08	5.22	0.00	0.00	0.30	0
	DRY	74.99		5.44	0.00	0.00	0.31	0
1.5	A.D.		2.95	16.60	0.00	0.00	0.30	0
	DRY	5.15		17.10	0.00	0.00	0.31	0
1.6	A.D.		2.84	26.56	0.00	0.00	0.26	0
	DRY	3.80		27.34	0.00	0.00	0.26	0
****	A.D.		2.02	73.38			0.07	
	DRY	16.06		74.90			0.07	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	74.99	5.44	0.00	94.56	0.31	0
1.5	80.14	6.19	0.00	93.81	0.31	0
1.6	83.94	7.15	0.00	92.85	0.31	0
****	100.00	18.03			0.27	

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V9W 6Y4

Attn: Mr. Steve Gardner

Re: Washability Data

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

HOLE NO : QU92-04
SAMPLE NO : 04-D
CHEMEX NO : 04-D

SIZE FRACTION : 6X60M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		1.49	3.93	0.00	0.00	0.30	0
	DRY	78.89		3.99	0.00	0.00	0.31	0
1.5	A.D.		1.47	13.82	0.00	0.00	0.28	0
	DRY	5.19		14.03	0.00	0.00	0.29	0
1.6	A.D.		1.85	22.87	0.00	0.00	0.25	0
	DRY	2.26		23.30	0.00	0.00	0.26	0
****	A.D.		0.86	66.48			0.10	
	DRY	13.66		67.06			0.10	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	78.89	3.99	0.00	96.01	0.31	0
1.5	84.08	4.61	0.00	95.39	0.31	0
1.6	86.34	5.10	0.00	94.90	0.31	0
****	100.00	13.56			0.28	

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To: Brinco Coal Corp.
P.O. Box 938
Campbell River, BC
V9W 6Y4

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-05
SAMPLE NO : 05-E
CHEMEX NO : 05-E

SIZE FRACTION : 3/8X6M
WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		3.49	4.81	0.00	0.00	0.31	0
	DRY	73.34		4.98	0.00	0.00	0.32	0
1.5	A.D.		2.68	15.10	0.00	0.00	0.42	0
	DRY	5.68		15.51	0.00	0.00	0.43	0
1.6	A.D.		2.72	22.33	0.00	0.00	0.32	0
	DRY	3.31		22.95	0.00	0.00	0.33	0
****	A.D.		2.00	70.95			0.10	
	DRY	17.67		72.40			0.10	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	73.34	4.98	0.00	95.02	0.32	0
1.5	79.02	5.74	0.00	94.26	0.33	0
1.6	82.33	6.43	0.00	93.57	0.33	0
****	100.00	18.09			0.29	

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Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-05
SAMPLE NO : 05-E
CHEMEX NO : 05-E

SIZE FRACTION : 6X60M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		1.24	3.94	0.00	0.00	0.31	0
	DRY	75.59		3.99	0.00	0.00	0.32	0
1.5	A.D.		1.69	13.90	0.00	0.00	0.30	0
	DRY	4.28		14.14	0.00	0.00	0.30	0
1.6	A.D.		2.43	21.31	0.00	0.00	0.33	0
	DRY	2.38		21.84	0.00	0.00	0.34	0
****	A.D.		1.03	66.50			0.36	
	DRY	17.75		67.20			0.37	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	75.59	3.99	0.00	96.01	0.32	0
1.5	79.87	4.53	0.00	95.47	0.32	0
1.6	82.25	5.03	0.00	94.97	0.32	0
****	100.00	16.07			0.33	

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Attn: Mr. Steve Gardner

Re: Washability Data

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

HOLE NO : QU92-06
SAMPLE NO : 06-F
CHEMEX NO : 06-F

SIZE FRACTION : 3/8X6M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		3.70	5.28	0.00	0.00	0.31	0
	DRY	72.25		5.49	0.00	0.00	0.32	0
1.5	A.D.		2.59	15.28	0.00	0.00	0.33	0
	DRY	4.22		15.69	0.00	0.00	0.34	0
1.6	A.D.		2.59	26.98	0.00	0.00	0.31	0
	DRY	1.80		27.69	0.00	0.00	0.32	0
****	A.D.		1.55	75.20			0.37	
	DRY	21.73		76.39			0.37	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	72.25	5.49	0.00	94.51	0.32	0
1.5	76.47	6.05	0.00	93.95	0.32	0
1.6	78.27	6.35	0.00	93.45	0.32	0
****	100.00	21.72			0.33	

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Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-06
SAMPLE NO : 06-F
CHEMEX NO : 06-F

SIZE FRACTION : 6X60M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		1.33	4.30	0.00	0.00	0.33	0
	DRY	72.47		4.36	0.00	0.00	0.33	0
1.5	A.D.		1.28	15.00	0.00	0.00	0.35	0
	DRY	3.80		15.20	0.00	0.00	0.35	0
1.6	A.D.		1.96	23.04	0.00	0.00	0.31	0
	DRY	2.02		23.50	0.00	0.00	0.32	0
****	A.D.		0.91	71.39			0.12	
	DRY	21.71		72.05			0.12	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	72.47	4.36	0.00	95.64	0.33	0
1.5	76.27	4.30	0.00	95.10	0.34	0
1.6	78.29	5.38	0.00	94.62	0.33	0
****	100.00	19.85			0.29	

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Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-07
SAMPLE NO : 07-G
CHEMEX NO : 07-G

SIZE FRACTION : 3/8X6M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		3.64	5.05	0.00	0.00	0.36	0
	DRY	71.38		5.24	0.00	0.00	0.38	0
1.5	A.D.		2.66	16.71	0.00	0.00	0.83	0
	DRY	6.94		17.17	0.00	0.00	0.85	0
1.6	A.D.		2.66	27.67	0.00	0.00	0.41	0
	DRY	5.27		28.42	0.00	0.00	0.42	0
****	A.D.		1.98	68.41			0.16	
	DRY	16.41		69.80			0.16	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	71.38	5.24	0.00	94.76	0.38	0
1.5	78.32	6.30	0.00	93.70	0.42	0
1.6	83.59	7.69	0.00	92.31	0.42	0
****	100.00	17.88			0.38	

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Attn: Mr. Steve Gardner

Re: Washability Data

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

HOLE NO : QU92-07
SAMPLE NO : 07-G
CHEMEX NO : 07-G

SIZE FRACTION : 6X60M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		1.29	4.17	0.00	0.00	0.35	0
	DRY	70.03		4.23	0.00	0.00	0.35	0
1.5	A.D.		1.54	15.87	0.00	0.00	0.55	0
	DRY	4.65		16.12	0.00	0.00	0.56	0
1.6	A.D.		1.95	24.61	0.00	0.00	0.47	0
	DRY	3.18		25.10	0.00	0.00	0.48	0
****	A.D.		1.12	67.13			0.22	
	DRY	22.14		67.90			0.23	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	70.03	4.23	0.00	95.77	0.35	0
1.5	74.68	4.97	0.00	95.03	0.37	0
1.6	77.86	5.79	0.00	94.21	0.37	0
****	100.00	19.54			0.34	

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Telex: 04-352597
Fax: (604) 984-0218

To: Brinco Coal Corp.
P.O. Box 938
Campbell River, BC
V9W 6Y4

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-14
SAMPLE NO : 14-H
CHEMEX NO : 14-H

SIZE FRACTION : 3/8X6M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		3.87	5.46	0.00	0.00	0.30	0
	DRY	72.83		5.68	0.00	0.00	0.31	0
1.5	A.D.		2.89	17.57	0.00	0.00	0.27	0
	DRY	6.40		18.09	0.00	0.00	0.28	0
1.6	A.D.		2.88	25.46	0.00	0.00	0.23	0
	DRY	3.38		26.22	0.00	0.00	0.24	0
****	A.D.		2.37	66.90			0.10	
	DRY	17.39		68.53			0.11	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	72.83	5.68	0.00	94.32	0.31	0
1.5	79.23	6.68	0.00	93.32	0.31	0
1.6	82.61	7.48	0.00	92.52	0.31	0
****	100.00	18.10			0.27	

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Campbell River, BC
V9W 6Y4

Attn: Mr. Steve Gardner

Re: Washability Data

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

HOLE NO : QU92-14
SAMPLE NO : 14-H
CHEMEX NO : 14-H
--
SIZE FRACTION : 6X60M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		1.50	4.40	0.00	0.00	0.27	0
	DRY	76.09		4.47	0.00	0.00	0.28	0
1.5	A.D.		1.55	15.93	0.00	0.00	0.25	0
	DRY	5.12		16.24	0.00	0.00	0.25	0
1.6	A.D.		1.79	25.05	0.00	0.00	0.21	0
	DRY	2.68		25.51	0.00	0.00	0.22	0
****	A.D.		1.27	63.16			0.11	
	DRY	16.11		63.98			0.11	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	76.09	4.47	0.00	95.53	0.28	0
1.5	81.21	5.21	0.00	94.79	0.28	0
1.6	83.89	5.86	0.00	94.14	0.27	0
****	100.00	15.22			0.25	

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Campbell River, BC
V9W 6Y4

Attn: Mr. Steve Gardner

Re: Washability Data

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

HOLE NO : QU92-16
SAMPLE NO : 16-I
CHEMEX NO : 16-I

SIZE FRACTION : 3/8X6M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		3.40	5.71	0.00	0.00	0.65	0
	DRY	66.96		5.91	0.00	0.00	0.67	0
1.5	A.D.		2.44	18.56	0.00	0.00	0.73	0
	DRY	7.28		19.03	0.00	0.00	0.75	0
1.6	A.D.		2.48	26.10	0.00	0.00	1.01	0
	DRY	4.30		26.77	0.00	0.00	1.04	0
****	A.D.		1.61	69.62			4.11	
	DRY	21.46		70.76			4.18	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	66.96	5.91	0.00	94.09	0.67	0
1.5	74.24	7.19	0.00	92.81	0.68	0
1.6	78.54	8.27	0.00	91.73	0.70	0
****	100.00	21.68			1.45	

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V9W 6Y4

Attn: Mr. Steve Gardner

Re: Washability Data

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

HOLE NO : QU92-16
SAMPLE NO : 16-I
CHEMEX NO : 16-I

SIZL FRACTION : 6X60M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		1.32	4.39	0.00	0.00	0.66	0
	DRY	74.28		4.45	0.00	0.00	0.67	0
1.5	A.D.		1.30	17.52	0.00	0.00	0.92	0
	DRY	5.51		17.75	0.00	0.00	0.93	0
1.6	A.D.		1.81	25.46	0.00	0.00	1.25	0
	DRY	2.75		25.93	0.00	0.00	1.27	0
****	A.D.		1.13	60.53			3.02	
	DRY	17.46		61.22			3.06	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	74.28	4.45	0.00	95.55	0.67	0
1.5	79.79	5.37	0.00	94.63	0.69	0
1.6	82.54	6.06	0.00	93.94	0.71	0
****	100.00	15.69			1.12	

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V9W 6Y4

Attn: Mr. Steve Gardner

Re: Washability Data

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

HOLE NO : QU92-18
SAMPLE NO : 18-N
CHEMEX NO : 18-N

SIZE FRACTION : 3/8X6M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		3.83	4.78	0.00	0.00	0.49	0
	DRY	61.89		4.97	0.00	0.00	0.51	0
1.5	A.D.		2.74	16.05	0.00	0.00	1.08	0
	DRY	5.33		16.50	0.00	0.00	1.11	0
1.6	A.D.		2.70	24.87	0.00	0.00	1.05	0
	DRY	4.33		25.56	0.00	0.00	1.08	0
****	A.D.		2.23	70.23			0.71	
	DRY	28.45		71.83			0.73	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	61.89	4.97	0.00	95.03	0.51	0
1.5	67.22	5.89	0.00	94.11	0.55	0
1.6	71.55	7.08	0.00	92.92	0.59	0
****	100.00	25.50			0.63	

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To: Brinco Coal Corp.
P.O. Box 938
Campbell River, BC
V9W 6Y4

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-18
SAMPLE NO : 18-N
CHEMEX NO : 18-N

SIZE FRACTION : 6X60M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		1.13	4.14	0.00	0.00	0.46	0
	DRY	68.78		4.19	0.00	0.00	0.46	0
1.5	A.D.		1.90	15.83	0.00	0.00	0.86	0
	DRY	3.95		16.14	0.00	0.00	0.88	0
1.6	A.D.		2.25	24.51	0.00	0.00	1.00	0
	DRY	1.68		25.08	0.00	0.00	1.02	0
****	A.D.		1.30	69.41			0.70	
	DRY	25.59		70.33			0.71	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	68.78	4.19	0.00	95.81	0.46	0
1.5	72.73	4.84	0.00	95.16	0.49	0
1.6	74.41	5.30	0.00	94.70	0.50	0
****	100.00	21.94			0.55	

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V9W 6Y4

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-20
SAMPLE NO : 20-K
CHEMEX NO : 20-K

SIZE FRACTION : 3/8X6M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		4.29	4.55	0.00	[illegible].00	0.32	0
	DRY	73.93		4.75	0.00	[illegible].00	0.33	0
1.5	A.D.		3.04	14.91	0.00	[illegible].00	0.32	0
	DRY	6.33		15.38	0.00	[illegible].00	0.33	0
1.6	A.D.		2.84	22.46	0.00	[illegible].00	0.29	0
	DRY	3.96		23.11	0.00	[illegible].00	0.30	0
****	A.D.		1.77	61.57			0.14	
	DRY	15.78		62.68			0.14	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	73.93	4.75	0.00	[illegible].25	0.33	0
1.5	80.26	5.59	0.00	[illegible].41	0.33	0
1.6	84.22	6.41	0.00	[illegible].59	0.33	0
****	100.00	15.29			0.30	

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To: Brinco Coal Corp.
P.O. Box 938
Campbell River, BC
V9W 6Y4

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-20
SAMPLE NO : 20-K
CHEMEX NO : 20-K

SIZE FRACTION : 6X60M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		0.37	3.81	0.00	0.00	0.32	0
	DRY	67.06		3.83	0.00	0.00	0.32	0
1.5	A.D.		2.01	13.84	0.00	0.00	0.29	0
	DRY	4.31		14.13	0.00	0.00	0.30	0
1.6	A.D.		2.32	22.11	0.00	0.00	0.27	0
	DRY	2.24		22.64	0.00	0.00	0.28	0
****	A.D.		1.25	69.85			0.11	
	DRY	26.39		70.73			0.11	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	67.06	3.83	0.00	96.17	0.32	0
1.5	71.37	4.45	0.00	95.55	0.32	0
1.6	73.61	5.00	0.00	95.00	0.32	0
****	100.00	22.35			0.26	

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Attn: Mr. Steve Gardner

Re: Washability Data

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

HOLE NO : QU92-21
SAMPLE NO : 21-L
CHEMEX NO : 21-L

SIZE FRACTION : 3/8X6M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		4.06	5.37	0.00	0.00	0.30	0
	DRY	67.84		5.60	0.00	0.00	0.31	0
1.5	A.D.		3.12	14.87	0.00	0.00	0.28	0
	DRY	4.69		15.35	0.00	0.00	0.29	0
1.6	A.D.		2.88	24.38	0.00	0.00	0.25	0
	DRY	3.03		25.11	0.00	0.00	0.26	0
****	A.D.		2.09	69.94			0.09	
	DRY	24.44		71.43			0.09	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	67.84	5.60	0.00	94.40	0.31	0
1.5	72.53	6.23	0.00	93.77	0.31	0
1.6	75.56	6.99	0.00	93.01	0.31	0
****	100.00	22.74			0.26	

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V9W 6Y4

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-21
SAMPLE NO : 21-L
CHEMEX NO : 21-L

SIZE FRACTION : 6X60M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		1.33	4.29	0.00	0.00	0.29	0
	DRY	74.27		4.35	0.00	0.00	0.30	0
1.5	A.D.		2.25	14.14	0.00	0.00	0.25	0
	DRY	4.32		14.47	0.00	0.00	0.26	0
1.6	A.D.		2.14	22.96	0.00	0.00	0.21	0
	DRY	1.88		23.46	0.00	0.00	0.21	0
****	A.D.		1.24	67.23			0.09	
	DRY	19.53		68.08			0.09	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	74.27	4.35	0.00	95.65	0.30	0
1.5	78.59	4.91	0.00	95.09	0.29	0
1.6	80.47	5.34	0.00	94.66	0.29	0
****	100.00	17.59			0.25	

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Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-24
SAMPLE NO : 24-M
CHEMEX NO : 24-M

SIZE FRACTION : 3/8X6M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		4.25	5.09	0.00	0.00	0.26	0
	DRY	73.83		5.32	0.00	0.00	0.28	0
1.5	A.D.		2.98	16.27	0.00	0.00	0.29	0
	DRY	5.24		16.77	0.00	0.00	0.30	0
1.6	A.D.		2.86	25.18	0.00	0.00	0.23	0
	DRY	3.95		25.92	0.00	0.00	0.24	0
****	A.D.		2.11	67.29			0.09	
	DRY	16.98		68.74			0.09	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	73.83	5.32	0.00	94.68	0.28	0
1.5	79.07	6.08	0.00	93.92	0.28	0
1.6	83.02	7.02	0.00	92.98	0.28	0
****	100.00	17.50			0.24	

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Attn: Mr. Steve Gardner

Re: Washability Data

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

HOLE NO : QU92-24
SAMPLE NO : 24-M
CHEMEX NO : 24-M

SIZE FRACTION : 6X60M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		0.23	4.35	0.00	95.30	0.30	0
	DRY	78.42		4.36	0.00	95.64	0.30	0
1.5	A.D.		2.05	14.99	0.00	85.01	0.25	0
	DRY	4.70		15.30	0.00	84.70	0.26	0
1.6	A.D.		2.40	21.70	0.00	78.30	0.24	0
	DRY	1.95		22.23	0.00	77.77	0.25	0
****	A.D.		1.26	62.59			0.10	
	DRY	14.93		63.39			0.10	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	78.42	4.36	0.00	95.64	0.30	0
1.5	83.12	4.98	0.00	95.02	0.30	0
1.6	85.07	5.37	0.00	94.63	0.30	0
****	100.00	14.04			0.27	

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Fax: (604) 984-0218

To: Brinco Coal Corp.
P.O. Box 938
Campbell River, BC
V9W 6Y4

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

Attn: Mr. Steve Gardner

Re: Washability Data

HOLE NO : QU92-25
SAMPLE NO : 25-P
CHEMEX NO : 25-P

SIZE FRACTION : 3/8X6M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		3.49	5.22	0.00	0.00	0.27	0
	DRY	69.53		5.41	0.00	0.00	0.28	0
1.5	A.D.		2.70	17.35	0.00	0.00	0.26	0
	DRY	5.17		17.83	0.00	0.00	0.27	0
1.6	A.D.		2.71	26.13	0.00	0.00	0.23	0
	DRY	3.88		26.86	0.00	0.00	0.24	0
****	A.D.		1.90	66.71			0.10	
	DRY	21.42		68.00			0.10	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	69.53	5.41	0.00	94.59	0.28	0
1.5	74.70	6.27	0.00	93.73	0.28	0
1.6	78.58	7.28	0.00	92.72	0.28	0
****	100.00	20.29			0.24	

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To: Brinco Coal Corp.
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V9W 6Y4

Attn: Mr. Steve Gardner

Re: Washability Data

Certificate No.: A9213995
Invoice No.: I9280336

Date: May 26, 1992

HOLE NO : QU92-25
SAMPLE NO : 25-P
CHEMEX NO : 25-P

SIZE FRACTION : 6X60M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	A.D.		1.54	4.30	0.00	0.00	0.27	0
	DRY	72.80		4.36	0.00	0.00	0.27	0
1.5	A.D.		2.08	15.96	0.00	0.00	0.23	0
	DRY	4.52		16.30	0.00	0.00	0.24	0
1.6	A.D.		2.40	24.84	0.00	0.00	0.20	0
	DRY	2.81		25.45	0.00	0.00	0.21	0
****	A.D.		1.55	62.65			0.11	
	DRY	19.87		63.69			0.11	

CUMULATIVE

S.G.	YIELD %	ASH %	V.M. %	F.C. %	SULFUR %	C.V. CAL/G
1.4	72.80	4.36	0.00	95.64	0.27	0
1.5	77.32	5.06	0.00	94.94	0.27	0
1.6	80.13	5.78	0.00	94.22	0.27	0
****	100.00	17.27			0.24	

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To: Brinco Coal Corp.
P.O. Box 938
Campbell River, BC
V9W 6Y4

Date: February 3, 1993

Attn: Mr. Steve Gardner

1992 Fall Exploration
Quinsam Coal Compositing
(as per your instructions)

ID DH #	Coal Components - Sequential Sample #	Dilution Samples - Individual -
92-037	82 84	83
93-035	85 87	86
92-039	99 100	
92-040	92 94 96 98	93 95 97
92-044	101	

Dilution samples were not composited, each was analyzed separately.

Liba Lakosil

L Lakosil

To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

QUINSAM COAL - EXPLORATION FALL 92'

COAL SAMPLES - RAW HEAD ANALYSIS

No. 3 Seam ↓

DH QU 92-	Basis	R.M. %	Ash %	V.M. %	F.C. %	Sulphur %	SG g/cu cm	CaO % In Ash	Rec'd Wt. KG
037-82	A.D. Dry	2.95	13.25 13.66	36.94 38.06	46.86 48.28	3.66 3.77	1.38	13.19	12.46
037-84	A.D. Dry	5.49	12.43 13.16	34.90 36.93	47.18 49.91	3.00 3.17	1.37	20.96	3.71
035-85	A.D. Dry	2.57	11.07 11.36	41.07 42.15	45.29 46.49	4.22 4.33	1.36	44.53	2.48
035-87	A.D. Dry	2.79	11.13 11.45	38.05 39.14	48.03 49.41	2.47 2.54	1.36	35.60	14.14
039-99	A.D. Dry	3.79	18.54 19.27	32.08 33.35	45.59 47.38	1.51 1.57	1.41	5.72	12.77
040-100	A.D. Dry	2.71	39.06 40.15	26.52 27.26	31.71 32.59	1.29 1.33	1.70	6.92	4.07
040-92	A.D. Dry	4.01	12.33 12.85	35.27 36.74	48.39 50.41	1.86 1.94	1.37	23.29	9.57

To: Brinco Coal Corporation
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V9W 6Y4

Attn: Mr. S. Gardner

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Invoice No.: I9281191

DH QU 92-	Basis	R.M. %	Ash %	V.M. %	F.C. %	Sulphur %	SG g/cu cm	CaO % in Ash	Rec'd Wt. KG
040-94	A.D. Dry	4.10	15.46 16.12	33.42 34.85	47.02 49.03	0.58 0.61	1.40	16.31	5.24
040-96	A.D. Dry	3.73	14.41 14.97	34.27 35.60	47.59 49.43	0.88 0.91	1.39	20.52	2.97
040-98	A.D. Dry	3.27	24.87 25.72	32.34 33.43	39.52 40.85	1.01 1.05	1.50	5.59	4.24
044-101	A.D. Dry	4.31	11.19 11.69	36.42 38.06	48.08 50.25	0.32 0.33	1.35	34.58	17.46

↑
No. 3 Seam
No. 1 Seam Pit ZN

To: Brinco Coal Corporation
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Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

QUINSAM COAL - EXPLORATION FALL 92'

DILUTION SAMPLES - RAW HEAD ANALYSIS

DH	Basis	R.M. %	Ash %	Sulphur %	SG grams/cu cm	Rec'd Wt. KG
92-037-83	A.D. Dry	2.07	37.62 38.41	10.29 10.51	1.67	4.7
92-035-86	A.D. Dry	1.55	53.34 54.18	3.13 3.18	1.90	0.59
92-040-93	A.D. Dry	0.95	81.51 82.30	0.13 0.13	2.39	0.5
92-040-95	A.D. Dry	1.48	71.69 72.77	1.07 1.09	2.17	0.72
92-040-97	A.D. Dry	0.75	85.87 86.52	0.15 0.15	2.44	1.15

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To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

QUINSAM COAL - EXPLORATION FALL 92'

RAW COAL COMPOSITES - SCREEN FRACTIONS ANALYSIS

DH92-	Fraction	Basis	R.M. %	Ash %	Sulphur %	Screen Yield %
037	+ 1/4 "	A.D. Dry	2.89	12.38 12.75	3.28 3.38	45.29
037	+ 28 Mesh	A.D. Dry	2.92	11.82 12.17	3.27 3.37	45.76
037	+100 Mesh	A.D. Dry	2.50	19.15 19.64	2.91 2.98	6.40
037	-100 Mesh	A.D. Dry	2.32	26.19 26.81	3.29 3.36	2.55
035	+ 1/4 "	A.D. Dry	3.01	9.76 10.06	2.92 3.01	42.79
035	+ 28 Mesh	A.D. Dry	2.96	9.98 10.29	2.63 2.71	47.38
035	+100 Mesh	A.D. Dry	2.66	15.48 15.90	2.22 2.28	6.97
035	-100 Mesh	A.D. Dry	2.36	22.45 23.00	2.63 2.69	2.86
039	+ 1/4 "	A.D. Dry	3.43	26.59 27.53	1.40 1.45	48.02
039	+ 28 Mesh	A.D. Dry	3.76	20.53 21.34	1.37 1.42	41.96
039	+100 Mesh	A.D. Dry	3.38	25.25 26.14	1.46 1.51	6.48
039	-100 Mesh	A.D. Dry	2.87	32.01 32.95	1.93 1.98	3.54

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Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

QUINSAM COAL - EXPLORATION FALL 92'

RAW COAL COMPOSITES - SCREEN FRACTIONS

ANALYSIS

DH92-	Fraction	Basis	R.M. %	Ash %	Sulphur %	Screen Yield %
040	+ 1/4 "	A.D. Dry	3.76	15.99 16.62	1.43 1.49	51.53
040	+ 28 Mesh	A.D. Dry	3.87	13.39 13.93	1.29 1.34	40.86
040	+100 Mesh	A.D. Dry	3.50	18.27 18.93	1.45 1.50	5.32
040	-100 Mesh	A.D. Dry	3.02	23.97 24.72	1.89 1.95	2.28
044	+ 1/4 "	A.D. Dry	4.43	9.98 10.44	0.34 0.35	45.47
044	+ 28 Mesh	A.D. Dry	4.44	7.98 8.36	0.31 0.32	44.71
044	+100 Mesh	A.D. Dry	4.28	9.95 10.40	0.31 0.32	6.79
044	-100 Mesh	A.D. Dry	3.43	18.54 19.20	0.28 0.29	3.03
037 #83 Dil.	+100 Mesh	A.D. Dry	1.64	38.58 39.22	9.99 10.16	96.21
037 #83 Dil.	-100 Mesh	A.D. Dry	2.35	35.18 36.03	3.83 3.92	3.79

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P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
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Invoice No.: I9281191

QUINSAM COAL - EXPLORATION FALL 92'

RAW COAL COMPOSITES

SCREEN YIELDS, AIR DRY BASIS

I.D.	DH QU-	Unit MM	> 13.3	-13.3 x 6.7	-6.7 x 2.4	-2.4 x 0.6	-0.6 x 0.15	-0.15 x 0
		INCH	> 1/2	-1/2 x 1/4	-1/4 x 8 Mesh	-8M x 28M	-28M x 100M	-100M x 0
A	92-037	%	4.12	41.17	29.24	16.52	6.40	2.55
B	92-035	%	3.92	38.87	29.95	17.44	6.97	2.86
C	92-039	%	5.42	42.60	26.70	15.26	6.48	3.54
D	92-040	%	5.05	46.48	26.27	14.59	5.32	2.28
E	92-044	%	4.23	41.24	27.87	16.84	6.79	3.03
	92-037 Dilution 83	%	--	--	--	--	96.21	3.79

To: Brinco Coal Corporation
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Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
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Invoice No.: I9281191

QUINSAM COAL - EXPLORATION FALL 92'

CLEAN COAL COMPOSITES AT 1.7 S.G.

	I.D.	DH QU-	Basis	R.M. %	Ash %	V.M. %	F.C. %	Sulphur %	C.V. Cal/g	HGI
No. 3.	A	92-037	A.D. Dry	1.86	9.27 9.45	38.17 38.89	50.70 51.66	2.63 2.68	7050 7183	39
No. 3	B	92-035	A.D. Dry	1.72	6.82 6.94	39.10 39.79	52.36 53.27	2.40 2.45	7302 7429	42
No. 3	C	92-039	A.D. Dry	1.78	14.55 14.81	33.76 34.37	49.91 50.82	1.22 1.24	6556 6674	39
No. 3	D	92-040	A.D. Dry	1.82	11.19 11.39	35.53 36.19	51.46 52.42	1.12 1.14	6815 6941	36
No. 1 (2N)	E	92-044	A.D. Dry	2.29	7.06 7.22	37.96 38.85	52.69 53.93	0.29 0.29	7166 7334	43
		92-037 #83 Dil.	A.D. Dry	1.64	20.17 20.50	35.37 35.96	42.82 43.54	5.63 5.72	6121 6223	--

To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

QUINSAM COAL - EXPLORATION FALL 92'

CLEAN COAL COMPOSITES AT 1.7 S.G.

ULTIMATE ANALYSIS

I.D.	DH QU-	Basis	R.M. %	Ash %	C %	H %	N %	S %	O_2 %
A	92-037	A.D. Dry	1.86	9.27 9.45	71.02 72.37	4.91 4.79	0.71 0.72	2.63 2.68	11.46 9.99
B	92-035	A.D. Dry	1.72	6.82 6.94	72.04 73.30	4.98 4.87	0.75 0.76	2.40 2.44	13.01 11.69
C	92-039	A.D. Dry	1.78	14.55 14.81	65.82 67.01	4.53 4.41	0.68 0.69	1.22 1.24	13.20 11.84
D	92-040	A.D. Dry	1.82	11.19 11.40	69.84 71.13	4.71 4.59	0.73 0.74	1.12 1.14	12.41 11.00
E	92-044	A.D. Dry	2.29	7.06 7.23	72.63 74.33	4.92 4.77	0.89 0.91	0.29 0.30	14.21 12.46
	92-037 #83 Dil.	A.D. Dry	1.64	20.17 20.51	60.94 61.96	4.43 4.32	0.56 0.57	5.63 5.72	8.27 6.92

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Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

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QUINSAM COAL EXPLORATION - FALL 92'

CLEAN COAL COMPOSITES AT 1.7 S.G.

ASH FUSION TEMPERATURE DEG. F

I.D.	Drill Hole	ATM	Initial	Soft.	Hemisph.	Final
A	QU 92-037 Coal	Red Ox	2243 2447	2348 2465	2427 2555	2454 2564
B	QU 92-035 Coal	Red Ox	2188 2317	2237 2341	2269 2352	2305 2366
C	QU 92-039 Coal	Red Ox	2589 2665	2635 2680	2685 2700	2700 2721
D	QU 92-040 Coal	Red Ox	2452 2588	2468 2611	2501 2627	2522 2654
E	QU 92-044 Coal	Red Ox	2294 2341	2337 2360	2368 2392	2434 2443
	QU 92-037 #83 Dilution	Red Ox	2082 2527	2146 2556	2394 2571	2424 2587

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P.O. Box 938
Campbell River, BC
V9W 5Y4

Invoice No.: I9281191

Date: December 30, 1992

Attn: Mr. Stephen Gardner

QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1735B +1/4
DH QU-92-035

SIZE FRACTION: -1" X 1/4"

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	A.D.		1.32	8.24	2.64	0.01	0.99	1.64
	DRY	92.83		8.35	2.68	0.01	1.00	1.67
SINK	A.D.		0.94	58.95	7.04	0.13	6.41	0.50
	DRY	7.17		59.51	7.10	0.13	6.47	0.50

SULPHUR FORMS

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	92.83	8.35	2.68	0.01	1.00	1.67
FEED	DRY	100.00	12.02	2.99	0.02	1.39	1.58

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Invoice No.: I9281191

Date: December 30, 1992

Attn: Mr. Stephen Gardner

QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1735B +28
DH QU-92-035

SIZE FRACTION: -1/4" X 28M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	A.D.		1.67	6.28	2.36	0.01	0.72	1.63
	DRY	92.91		6.39	2.40	0.01	0.73	1.66
SINK	A.D.		0.65	53.64	5.17	0.09	4.58	0.50
	DRY	7.09		54.00	5.20	0.09	4.61	0.50

SULPHUR FORMS

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	92.91	6.39	2.40	0.01	0.73	1.66
FEED	DRY	100.00	9.76	2.60	0.02	1.01	1.57

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Date: December 30, 1992

QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1735B +100
DH QU-92-035

SIZE FRACTION: -28M X 100M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	A.D.		1.62	4.25	2.06	0.01	0.37	1.68
	DRY	79.82		4.32	2.10	0.01	0.38	1.71
SINK	A.D.		0.43	56.48	2.35	0.04	2.11	0.20
	DRY	20.18		56.72	2.36	0.04	2.12	0.20

SULPHUR FORMS

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	79.82	4.32	2.10	0.01	0.38	1.71
FEED	DRY	100.00	14.89	2.15	0.02	0.73	1.40

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V9W 5Y4

Invoice No.: I9281191

Date: December 30, 1992

Attn: Mr. Stephen Gardner

QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1737A + 1/4
DH QU-92-037

SIZE FRACTION: -1" x 1/4"

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	A.D.		2.04	9.32	2.78	0.02	1.10	1.66
	DRY	90.15		9.52	2.83	0.02	1.12	1.69
SINK	A.D.		0.79	47.51	14.46	0.24	14.12	0.10
	DRY	9.85		47.89	14.57	0.24	14.23	0.10

SULPHUR FORMS

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	90.15	9.52	2.83	0.02	1.12	1.69
FEED	DRY	100.00	13.30	3.99	0.23	2.41	1.35

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QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1737A + 28
DH QU-92-037

SIZE FRACTION: 1/4" x 28M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	A.D.		1.47	8.15	2.71	0.02	0.98	1.71
	DRY	91.41		8.27	2.75	0.02	0.99	1.74
SINK	A.D.		0.80	48.98	11.20	0.22	9.74	1.24
	DRY	8.59		49.37	11.29	0.22	9.82	1.25

SULPHUR FORMS

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	91.41	8.27	2.75	0.02	0.99	1.74
FEED	DRY	100.00	11.80	3.49	0.04	1.75	1.70

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Fax: (604) 984-0218

To: Brinco Coal Corp.
P.O. Box 938
Campbell River, BC
V9W 5Y4

Invoice No.: I9281191

Date: December 30, 1992

Attn: Mr. Stephen Gardner

QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1737A + 100
DH QU-92-037

SIZE FRACTION: -28M x 100M

FRACTIONAL

SULPHUR FORMS

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	A.D.		2.30	6.99	2.25	0.02	0.57	1.66
	DRY	76.79		7.16	2.31	0.02	0.58	1.71
SINK	A.D.		0.67	57.87	4.63	0.09	4.06	0.48
	DRY	23.21		58.26	4.66	0.09	4.09	0.48

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	76.79	7.16	2.31	0.02	0.58	1.71
FEED	DRY	100.00	19.02	2.85	0.04	1.39	1.42

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QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1739C +1/4
DH QU-92-039

SIZE FRACTION: -1" X 1/4"

FRACTIONAL — SULPHUR FORMS

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	A.D.		1.54	15.87	1.19	0.01	0.52	0.66
	DRY	77.92		16.12	1.21	0.01	0.53	0.67
SINK	A.D.		0.81	71.64	1.61	0.02	1.33	0.26
	DRY	22.08		72.22	1.63	0.02	1.34	0.27

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	77.92	16.12	1.21	0.01	0.53	0.67
FEED	DRY	100.00	28.51	1.30	0.01	0.71	0.58

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QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1739C +28
DH QU-92-039

SIZE FRACTION: -1/4" X 28M

FRACTIONAL — SULPHUR FORMS

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	A.D.		1.53	11.45	1.24	0.01	0.48	0.75
	DRY	84.32		11.63	1.26	0.01	0.49	0.76
SINK	A.D.		0.69	67.38	2.47	0.02	2.11	0.34
	DRY	15.68		67.85	2.49	0.02	2.12	0.35

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	84.32	11.63	1.26	0.01	0.49	0.76
FEED	DRY	100.00	20.44	1.45	0.01	0.75	0.69

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QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1739C +100
DH QU-92-039

SIZE FRACTION: -28M X 100M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHUR FORMS SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	A.D.		2.27	7.85	1.01	0.01	0.25	0.75
	DRY	73.49		8.03	1.03	0.01	0.26	0.76
SINK	A.D.		0.83	70.85	2.42	0.03	2.02	0.37
	DRY	26.51		71.45	2.45	0.03	2.04	0.38

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	73.49	8.03	1.03	0.01	0.26	0.76
FEED	DRY	100.00	24.84	1.41	0.02	0.73	0.66

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QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1740D +1/4
DH QU-92-040

SIZE FRACTION: -1" X 1/4"

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
					SULPHUR FORMS			
1.7 F	A.D.		1.83	11.72	1.20	0.01	0.60	0.59
	DRY	92.79		11.94	1.22	0.01	0.61	0.60
SINK	A.D.		0.69	59.21	2.42	0.03	2.09	0.30
	DRY	7.21		59.62	2.44	0.03	2.10	0.31

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	92.79	11.94	1.22	0.01	0.61	0.60
FEED	DRY	100.00	15.38	1.31	0.01	0.72	0.58

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QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1740D +28
DH QU-92-040

SIZE FRACTION: -1/4" X 28M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
					SULPHUR FORMS			
1.7 F	A.D.		1.75	9.15	1.18	<0.01	0.54	0.63
	DRY	91.69		9.31	1.20	0.01	0.55	0.64
SINK	A.D.		0.51	56.07	3.36	0.03	3.26	0.07
	DRY	8.31		56.36	3.38	0.03	3.28	0.07

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	91.69	9.31	1.20	0.01	0.55	0.64
FEED	DRY	100.00	13.22	1.38	0.01	0.78	0.59

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QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1740D +100
DH QU-92-040

SIZE FRACTION: -28M X 100M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	A.D.		2.20	6.21	0.93	0.01	0.29	0.63
	DRY	79.05		6.35	0.95	0.01	0.30	0.64
SINK	A.D.		0.47	59.13	3.04	<0.01	2.99	0.04
	DRY	20.95		59.41	3.06	<0.01	3.00	0.05

SULPHUR FORMS

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	79.05	6.35	0.95	0.01	0.30	0.64
FEED	DRY	100.00	17.46	1.39	0.01	0.87	0.51

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QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1744E +1/4
DH QU-92-044

SIZE FRACTION: -1" X 1/4"

FRACTIONAL — SULPHUR FORMS

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	A.D.		1.66	8.02	0.31	<0.01	0.01	0.29
	DRY	95.07		8.15	0.32	0.01	0.01	0.30
SINK	A.D.		1.09	51.57	0.16	<0.01	0.03	0.12
	DRY	4.93		52.14	0.17	0.01	0.03	0.13

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	95.07	8.15	0.32	0.01	0.01	0.30
FEED	DRY	100.00	10.32	0.31	0.01	0.01	0.29

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QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1744E +28
DH QU-92-044

SIZE FRACTION: -1/4" X 28M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHUR FORMS SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	A.D.		2.20	6.18	0.30	<0.01	<0.01	0.28
	DRY	95.62		6.32	0.31	0.01	0.01	0.29
SINK	A.D.		0.92	49.82	0.17	0.02	0.05	0.10
	DRY	4.38		50.28	0.17	0.02	0.05	0.10

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	95.62	6.32	0.31	0.01	0.01	0.29
FEED	DRY	100.00	8.25	0.30	0.01	0.01	0.28

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QUINSAM COAL EXPLORATION FALL 1992

WASHABILITY IN 1.7 SG

FOR SIZE FRACTIONS -1"x1/4", -1/4"x20M, -28Mx100M

SAMPLE NO.: 1744E +100
DH QU-92-044

SIZE FRACTION: -28M X 100M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	A.D.		2.75	4.02	0.32	<0.01	0.01	0.30
	DRY	88.49		4.13	0.33	0.01	0.01	0.31
SINK	A.D.		0.95	52.03	0.20	0.01	0.10	0.09
	DRY	11.51		52.53	0.20	0.01	0.10	0.09

SULPHUR FORMS

CUMULATIVE

S.G.	BASIS	YIELD %	ASH %	SULF. TOT. %	SULPHATE %	PYRITIC %	ORGANIC %
1.7 F	DRY	88.49	4.13	0.33	0.01	0.01	0.31
FEED	DRY	100.00	9.70	0.31	0.01	0.01	0.29

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V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : DH QU-92-035
CHEMEX NO : 435B

SIZE FRACTION : -1" x 1/4"

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		1.58	3.42	1.91
	DRY	22.25		3.48	1.94
1.5	A.D.		1.55	7.56	2.63
	DRY	68.76		7.68	2.68
1.7	A.D.		1.64	24.07	4.51
	DRY	3.98		24.48	4.58
1.9	A.D.		1.59	36.83	6.06
	DRY	1.16		37.43	6.16
****	A.D.		0.82	67.54	6.75
	DRY	3.85		68.09	6.80

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	22.25	3.48	1.94
1.5	91.01	6.65	2.50
1.7	94.99	7.40	2.58
1.9	96.15	7.76	2.63
****	100.00	10.08	2.79

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Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : DH QU-92-035
CHEMEX NO : 435B +28M

SIZE FRACTION : -1/4" x 28M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		1.69	2.53	1.88
	DRY	33.76		2.58	1.91
1.5	A.D.		1.72	7.03	2.53
	DRY	55.52		7.16	2.57
1.7	A.D.		1.60	22.72	4.90
	DRY	3.55		23.09	4.98
1.9	A.D.		1.54	33.09	5.41
	DRY	1.68		33.61	5.50
****	A.D.		0.48	56.60	4.60
	DRY	5.49		56.87	4.62

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	33.76	2.58	1.91
1.5	89.28	5.42	2.32
1.7	92.83	6.10	2.42
1.9	94.51	6.59	2.48
****	100.00	9.35	2.60

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Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : DH QU-92-035
CHEMEX NO : 435B 100M

SIZE FRACTION : -28M x 100M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		2.34	1.73	1.87
	DRY	34.56		1.77	1.91
1.5	A.D.		2.01	4.40	2.21
	DRY	39.52		4.49	2.25
1.7	A.D.		1.94	16.96	2.96
	DRY	3.72		17.29	3.02
1.9	A.D.		1.42	28.51	3.22
	DRY	2.04		28.92	3.27
****	A.D.		0.27	56.23	2.41
	DRY	20.16		56.38	2.41

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	34.56	1.77	1.91
1.5	74.08	3.22	2.09
1.7	77.80	3.89	2.14
1.9	79.84	4.53	2.17
****	100.00	14.98	2.22

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CaO % IN ASH

S.G.	FRACTIONAL YIELD %	FRACTIONAL CaO %	CUMULATIVE YIELD %	CUMULATIVE CaO %	
1.3 F	22.25	22.32	22.25	22.32	+1/4
1.5 F	68.76	24.50	91.01	23.97	
1.7 F	3.98	33.83	94.99	24.38	
1.9 F	1.16	43.12	96.15	24.61	
*****	3.85	5.86	100.00	23.88	

CaO % IN ASH

S.G.	FRACTIONAL YIELD %	FRACTIONAL CaO %	CUMULATIVE YIELD %	CUMULATIVE CaO %	
1.3 F	33.76	26.30	33.76	26.30	
1.5 F	55.52	22.31	89.28	23.82	+28
1.7 F	3.55	38.98	92.83	24.40	
1.9 F	1.68	54.20	94.51	24.93	
*****	5.49	42.51	100.00	25.89	

CaO % IN ASH

S.G.	FRACTIONAL YIELD %	FRACTIONAL CaO %	CUMULATIVE YIELD %	CUMULATIVE CaO %	
1.3 F	34.56	19.46	34.56	19.46	
1.5 F	39.52	18.28	74.08	18.83	
1.7 F	3.72	37.00	77.80	19.70	+100
1.9 F	2.04	54.55	79.84	20.59	
*****	20.16	69.90	100.00	30.53	

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To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : DH QU-92-037
CHEMEX NO : 437A + 1/4 "

SIZE FRACTION : -1" x 1/4 "

WASHABILITY DATA -

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		1.71	2.51	1.94
	DRY	9.06		2.56	1.97
1.5	A.D.		1.55	7.84	2.70
	DRY	73.06		7.96	2.74
1.7	A.D.		1.36	25.73	5.14
	DRY	9.54		26.09	5.22
1.9	A.D.		1.38	38.07	8.62
	DRY	3.58		38.61	8.74
****	A.D.		0.71	50.85	21.73
	DRY	4.76		51.21	21.89

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	9.06	2.56	1.97
1.5	82.12	7.37	2.66
1.7	91.66	9.31	2.92
1.9	95.24	10.42	3.14
****	100.00	12.36	4.03

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Analytical Chemists *Geochemists* *Registered Assayers*

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Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : DH QU-92-037
CHEMEX NO : 437A +28M

SIZE FRACTION : -1/4" x 28M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		1.26	2.54	1.97
	DRY	25.03		2.58	1.99
1.5	A.D.		1.50	8.20	2.69
	DRY	58.61		8.32	2.73
1.7	A.D.		1.56	26.04	4.17
	DRY	6.98		26.45	4.24
1.9	A.D.		1.34	39.08	5.43
	DRY	3.40		39.61	5.50
****	A.D.		0.76	54.34	13.76
	DRY	5.98		54.75	13.86

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	25.03	2.58	1.99
1.5	83.64	6.60	2.51
1.7	90.62	8.13	2.64
1.9	94.02	9.27	2.74
****	100.00	11.99	3.41

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Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : DH QU-92-037
CHEMEX NO : 437A +100M

SIZE FRACTION : -28M x 100M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		2.54	1.91	1.95
	DRY	17.01		1.96	2.00
1.5	A.D.		2.28	5.45	2.30
	DRY	50.47		5.58	2.35
1.7	A.D.		2.28	24.17	2.99
	DRY	7.76		24.73	3.06
1.9	A.D.		1.88	38.57	3.30
	DRY	4.56		39.31	3.36
****	A.D.		0.47	59.76	5.04
	DRY	20.20		60.04	5.06

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	17.01	1.96	2.00
1.5	67.48	4.67	2.26
1.7	75.24	6.73	2.34
1.9	79.80	8.60	2.40
****	100.00	18.99	2.94

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Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

CaO % IN ASH

S.G.	FRACTIONAL YIELD %	CaO %	CUMULATIVE YIELD %	CaO %
1.3 F	9.06	22.51	9.06	22.51
1.5 F	73.06	14.04	82.12	14.97
1.7 F	9.54	33.19	91.66	16.87
1.9 F	3.58	21.49	95.24	17.04
****	4.76	6.89	100.00	16.56

+1/4

CaO % IN ASH

S.G.	FRACTIONAL YIELD %	CaO %	CUMULATIVE YIELD %	CaO %
1.3 F	25.03	22.33	25.03	22.33
1.5 F	58.61	13.12	83.64	15.88
1.7 F	6.98	28.78	90.62	16.87
1.9 F	3.40	30.77	94.02	17.37
*****	5.98	35.52	100.00	18.46

+28

CaO % IN ASH

S.G.	FRACTIONAL YIELD %	CaO %	CUMULATIVE YIELD %	CaO %
1.3 F	17.01	18.78	17.01	18.78
1.5 F	50.47	11.92	67.48	13.65
1.7 F	7.76	10.30	75.24	13.30
1.9 F	4.56	13.43	79.80	13.31
*****	20.20	56.55	100.00	22.05

+100

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V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : DH QU-92-039
CHEMEX NO : 439C +1/4"

SIZE FRACTION : -1" x 1/4"

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		2.90	2.61	0.84
	DRY	1.36		2.69	0.87
1.5	A.D.		1.73	12.80	1.09
	DRY	66.87		13.03	1.11
1.7	A.D.		1.75	32.79	1.91
	DRY	13.40		33.37	1.95
1.9	A.D.		1.58	48.80	2.33
	DRY	3.91		49.59	2.37
****	A.D.		0.48	78.56	1.32
	DRY	14.46		78.94	1.33

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	1.36	2.69	0.87
1.5	68.23	12.82	1.10
1.7	81.63	16.19	1.24
1.9	85.54	17.72	1.29
****	100.00	26.57	1.30

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V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : DH QU-92-039
CHEMEX NO : 439C +28M

SIZE FRACTION : -1/4" x 28M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		2.58	1.69	0.81
	DRY	3.97		1.73	0.83
1.5	A.D.		1.97	9.07	1.10
	DRY	70.68		9.25	1.13
1.7	A.D.		1.97	30.16	1.97
	DRY	10.62		30.77	2.01
1.9	A.D.		1.67	47.51	2.52
	DRY	4.43		48.31	2.57
****	A.D.		0.63	75.58	1.93
	DRY	10.30		76.05	1.94

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	3.97	1.73	0.83
1.5	74.65	8.85	1.11
1.7	85.27	11.58	1.22
1.9	89.70	13.39	1.29
****	100.00	19.85	1.36

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V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : QU92-039
CHEMEX NO : 439C +100M

SIZE FRACTION : -28M x 100M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		3.12	1.85	0.80
	DRY	4.87		1.91	0.83
1.5	A.D.		2.36	5.41	0.93
	DRY	55.43		5.54	0.95
1.7	A.D.		2.37	23.36	1.44
	DRY	9.80		23.92	1.48
1.9	A.D.		1.73	41.68	2.13
	DRY	5.49		42.41	2.17
****	A.D.		0.50	75.03	2.56
	DRY	24.41		75.41	2.57

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	4.87	1.91	0.83
1.5	60.30	5.25	0.94
1.7	70.10	7.86	1.02
1.9	75.59	10.37	1.10
****	100.00	26.25	1.46

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439 C

CaO % IN ASH

S.G.	FRACTIONAL YIELD %	CaO %	CUMULATIVE YIELD %	CaO %	
1.3 F	1.36	14.20	1.36	14.20	
1.5 F	66.87	4.71	68.23	4.90	+ 1/4
1.7 F	13.40	10.37	81.63	5.80	
1.9 F	3.91	6.19	85.54	5.82	
*****	14.46	3.68	100.00	5.51	

CaO % IN ASH

S.G.	FRACTIONAL YIELD %	CaO %	CUMULATIVE YIELD %	CaO %	
1.3 F	3.97	15.02	3.97	15.02	
1.5 F	70.68	5.35	74.65	5.86	+ 28
1.7 F	10.62	8.97	85.27	6.25	
1.9 F	4.43	7.50	89.70	6.31	
*****	10.30	7.68	100.00	6.45	

CaO % IN ASH

S.G.	FRACTIONAL YIELD %	CaO %	CUMULATIVE YIELD %	CaO %	
1.3 F	4.87	7.65	4.87	7.65	
1.5 F	55.43	3.90	60.30	4.20	
1.7 F	9.80	3.89	70.10	4.16	+100
1.9 F	5.49	5.87	75.59	4.28	
*****	24.41	14.17	100.00	6.70	

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V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : DH QU-92-040
CHEMEX NO : 440D

SIZE FRACTION : -1" x 1/4"

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		2.40	2.78	0.63
	DRY	1.84		2.85	0.64
1.5	A.D.		1.69	10.06	1.24
	DRY	79.40		10.23	1.26
1.7	A.D.		1.63	30.19	2.03
	DRY	10.08		30.69	2.07
1.9	A.D.		1.37	48.02	2.95
	DRY	3.90		48.69	2.99
****	A.D.		0.54	73.91	2.15
	DRY	4.78		74.30	2.16

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	1.84	2.85	0.64
1.5	81.24	10.06	1.25
1.7	91.32	12.34	1.34
1.9	95.22	13.83	1.41
****	100.00	16.72	1.44

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V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : DH QU-92-040
CHEMEX NO : 440D +28M

SIZE FRACTION : -1/4" x 28M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		1.69	2.17	0.74
	DRY	8.06		2.21	0.76
1.5	A.D.		1.32	8.11	1.07
	DRY	76.20		8.22	1.09
1.7	A.D.		1.52	29.58	2.26
	DRY	6.70		30.03	2.29
1.9	A.D.		1.43	44.43	2.50
	DRY	2.89		45.08	2.54
****	A.D.		0.47	61.14	3.53
	DRY	6.15		61.43	3.54

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	8.06	2.21	0.76
1.5	84.26	7.64	1.05
1.7	90.96	9.29	1.15
1.9	93.85	10.39	1.19
****	100.00	13.53	1.33

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Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : DH QU-92-040
CHEMEX NO : 4400 +100M

SIZE FRACTION : -28M x 100M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		2.82	2.00	0.76
	DRY	7.30		2.06	0.78
1.5	A.D.		2.48	5.17	0.89
	DRY	65.13		5.30	0.91
1.7	A.D.		2.31	24.75	1.76
	DRY	5.54		25.33	1.81
1.9	A.D.		1.70	40.68	2.45
	DRY	2.27		41.38	2.49
****	A.D.		0.39	62.63	3.27
	DRY	19.76		62.87	3.28

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	7.30	2.06	0.78
1.5	72.43	4.98	0.90
1.7	77.97	6.42	0.96
1.9	80.24	7.41	1.00
****	100.00	18.37	1.45

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Date: December 15, 1992
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440 D

CaO % IN ASH

S.G.	FRACTIONAL YIELD %	FRACTIONAL CaO %	CUMULATIVE YIELD %	CUMULATIVE CaO %
1.3 F	1.84	14.04	1.84	14.04
1.5 F	79.40	10.11	81.24	10.20
1.7 F	10.08	16.96	91.32	10.95
1.9 F	3.90	8.64	95.22	10.85
*****	4.78	3.40	100.00	10.49

+ 1/4

CaO % IN ASH

S.G.	FRACTIONAL YIELD %	FRACTIONAL CaO %	CUMULATIVE YIELD %	CUMULATIVE CaO %
1.3 F	8.06	16.13	8.06	16.13
1.5 F	76.20	10.90	84.26	11.40
1.7 F	6.70	18.47	90.96	11.92
1.9 F	2.89	20.35	93.85	12.18
*****	6.15	34.39	100.00	13.55

+ 28

CaO % IN ASH

S.G.	FRACTIONAL YIELD %	FRACTIONAL CaO %	CUMULATIVE YIELD %	CUMULATIVE CaO %
1.3 F	7.30	11.00	7.30	11.00
1.5 F	65.13	7.73	72.43	8.06
1.7 F	5.54	11.66	77.97	8.32
1.9 F	2.27	18.53	80.24	8.60
*****	19.76	57.50	100.00	18.27

+ 100

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Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : DH QU-92-044
CHEMEX NO : 44E + 1/4"

SIZE FRACTION : -1" X 1/4"

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		2.45	2.91	0.30
	DRY	8.18		2.99	0.31
1.5	A.D.		2.89	6.68	0.28
	DRY	77.80		6.88	0.29
1.7	A.D.		1.78	24.71	0.20
	DRY	9.77		25.15	0.21
1.9	A.D.		1.58	39.02	0.15
	DRY	2.27		39.65	0.15
****	A.D.		1.16	65.45	0.21
	DRY	1.98		66.22	0.21

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	8.18	2.99	0.31
1.5	85.98	6.51	0.29
1.7	95.75	8.41	0.28
1.9	98.02	9.13	0.28
****	100.00	10.26	0.28

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Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : DH QU-92-044
CHEMEX NO : 444E +28M

SIZE FRACTION : -1/4" x 28M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		1.85	2.53	0.29
	DRY	16.90		2.57	0.30
1.5	A.D.		2.71	6.30	0.30
	DRY	73.20		6.48	0.31
1.7	A.D.		1.65	25.55	0.23
	DRY	4.81		25.97	0.23
1.9	A.D.		1.60	37.50	0.19
	DRY	1.81		38.11	0.19
****	A.D.		0.84	53.98	0.10
	DRY	3.28		54.43	0.10

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	16.90	2.57	0.30
1.5	90.10	5.75	0.31
1.7	94.91	6.77	0.30
1.9	96.72	7.36	0.30
****	100.00	8.90	0.30

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Invoice No.: I9281191

SAMPLE NO : DH QU-92-044
CHEMEX NO : 444E +100M

SIZE FRACTION : -28M x 100M

WASHABILITY DATA

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.3	A.D.		2.60	1.96	0.30
	DRY	15.91		2.01	0.31
1.5	A.D.		2.91	4.00	0.30
	DRY	68.22		4.12	0.31
1.7	A.D.		2.45	17.59	0.23
	DRY	4.58		18.03	0.24
1.9	A.D.		1.68	33.30	0.18
	DRY	1.80		33.87	0.18
****	A.D.		0.43	54.94	0.08
	DRY	9.49		55.17	0.08

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.3	15.91	2.01	0.31
1.5	84.13	3.72	0.31
1.7	88.71	4.46	0.31
1.9	90.51	5.05	0.30
****	100.00	9.80	0.28

Chemex Labs Ltd.

Analytical Chemists *Geochemists* *Registered Assayers*

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1
Phone: (604) 984-0221
Telex: 04-352597
Fax: (604) 984-0218

To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

444 E

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

CaO % IN ASH

S.G.	FRACTIONAL YIELD %	FRACTIONAL CaO %	CUMULATIVE YIELD %	CUMULATIVE CaO %	
1.3 F	8.17	15.24	8.17	15.24	
1.5 F	77.82	28.04	85.99	26.82	-1/4
1.7 F	9.76	47.62	95.75	28.94	
1.9 F	2.27	42.81	98.02	29.26	
*****	1.98	10.84	100.00	28.90	

CaO % IN ASH

S.G.	FRACTIONAL YIELD %	FRACTIONAL CaO %	CUMULATIVE YIELD %	CUMULATIVE CaO %	
1.3 F	16.90	17.04	16.90	17.04	
1.5 F	73.20	22.57	90.10	21.53	+28
1.7 F	4.81	39.14	94.91	22.43	
1.9 F	1.81	47.39	96.72	22.89	
*****	3.28	47.30	100.00	23.69	

CaO % IN ASH

S.G.	FRACTIONAL YIELD %	FRACTIONAL CaO %	CUMULATIVE YIELD %	CUMULATIVE CaO %	
1.3 F	15.91	15.94	15.91	15.94	
1.5 F	68.22	14.64	84.13	14.89	+100
1.7 F	4.58	31.80	88.71	15.76	
1.9 F	1.80	39.16	90.51	16.22	
*****	9.49	73.03	100.00	21.62	

Cheme Labs Ltd.

TO: BRINCO COAL
P.O. Box 938
Campbell River,B.C.
V9W 6Y4

Attn: Mr. Stephen Gardner

Re: Quinsam Coal 1992
1.5SG Clean Coal Composites 3/8" x 60M
Mineral Analysis of Ash

Certificate:A9213912
Invoice No.:I9280322
P.O. No.:9100004

SAMPLE #	QU 92 Drill Hole	Composite	Al2O3	CaO	Fe2O3	K2O	MgO	Na2O	P2O5	SiO2	TiO2	SO3
1	-01	A	25.36	22.24	8.33	0.03	0.24	0.34	1.81	25.97	1.86	12.91
2	-02	B	28.09	19.80	7.21	0.04	0.63	0.33	1.48	30.63	1.97	8.84
3	-03	C	28.70	20.28	8.06	0.02	0.27	0.35	1.43	28.48	2.02	9.89
4	-04	D	27.26	23.82	9.25	0.03	0.87	0.34	1.50	24.92	1.69	8.61
5	-05	E	25.53	29.18	8.70	0.02	0.82	0.37	1.52	20.61	1.68	10.54
6	-06	F	27.97	24.36	8.95	0.02	0.83	0.31	1.60	24.19	1.67	9.49
7	-07	G	28.62	22.23	9.29	0.05	0.74	0.32	1.17	27.39	2.02	8.41
8	-14	H	27.70	24.24	8.44	0.03	0.87	0.29	1.28	26.09	1.98	7.24
9	-16	I	28.61	17.71	5.79	0.06	0.51	0.28	1.23	31.98	1.96	12.66
10	-20	K	27.15	22.36	9.03	0.03	0.27	0.26	1.47	27.64	1.76	9.49
11	-21	L	27.93	24.28	8.43	0.03	0.42	0.25	1.46	27.78	1.84	4.24
12	-24	M	29.64	19.96	8.18	0.02	0.47	0.29	1.16	30.17	2.09	8.27
13	-18	N	27.28	19.46	11.41	0.05	0.76	0.32	1.17	26.07	2.08	11.14
14	-25	P	29.41	20.84	7.17	0.03	0.54	0.32	1.04	30.28	2.39	8.12

Note: Above results are average of 3 determinations

CERTIFIED BY: B. Caglio

Chemex Labs Ltd.

Analytical Chemists *Geochemists* *Registered Assayers*

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1
Phone: (604) 984-0221
Telex: 04-352597
Fax: (604) 984-0218

To: Brinco Coal Corp.
P.O. Box 938
Campbell River, BC
V9W 6Y4

Certificate No.: A9226531
Project: Dilution
Date: December 30, 1992

Attn: Mr. Stephen Gardner

Quinsam Coal Exploration Program Fall 1992
Dilution Samples SG > 1.9

1. Mineral Analysis of Ash

DH QU 92	Al_2O_3 %	CaO %	Fe_2O_3 %	K_2O %	MgO %	Na_2O %	P_2O_5 %	SiO_2 %	TiO_2 %	SO_3 %
-037-86	31.04	2.58	6.22	0.17	0.27	0.15	0.19	54.66	2.68	2.57
-040-93	41.59	1.87	0.57	0.14	0.15	<0.01	0.19	53.78	1.05	0.12
-040-95	16.20	1.20	2.43	0.65	0.10	0.03	0.16	77.55	1.75	1.03
-040-97	15.63	1.00	2.79	0.74	0.50	<0.01	0.17	77.64	1.76	0.25

2. Ash Fusion Temperature Deg. F

DH QU 92	ATM	Initial	Softening	Hemisph.	Fluid
-037-86	Red Ox	2800+ 2800+	2800+ 2800+	2800+ 2800+	2800+ 2800+
-040-93	Red Ox	2800+ 2800+	2800+ 2800+	2800+ 2800+	2800+ 2800+
-040-95	Red Ox	2800+ 2800+	2800+ 2800+	2800+ 2800+	2800+ 2800+
-040-97	Red Ox	2747 2762	2797 2800+	2800+ 2800+	2800+ 2800+

3. Calorific Value Cal/g

DH QU 92	Air Dry	3710
-037-86	Dry	3768

L. Lakosil

Certified by:

To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

QUINSAM COAL - EXPLORATION FALL 92'

CLEAN COAL AT 1.7 S.G.

MINERAL ANALYSIS OF ASH

I.D.	DH QU-	Al_2O_3 %	CaO %	Fe_2O_3 %	K_2O %	MgO %	Na_2O %	P_2O_5 %	SiO_2 %	TiO_2 %	SO_3 %
A	92-037	23.61	18.05	16.44	0.10	0.20	0.24	0.32	28.14	1.34	11.31
B	92-035	20.40	20.30	16.88	0.14	0.48	0.31	0.32	24.23	1.56	13.46
C	92-039	26.32	6.29	6.92	0.10	0.12	0.13	0.34	57.46	1.43	2.44
D	92-040	28.90	10.71	7.39	0.26	0.36	0.18	0.52	42.96	1.58	9.16
E	92-044	25.54	27.11	6.77	0.04	0.32	0.26	1.19	29.24	1.82	7.92
83	92-037 #83 Dil.	23.73	4.78	26.73	0.18	0.17	0.14	0.20	37.11	1.78	5.09

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Fax: (604) 984-0218

To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1735B +1/4
DH QU-92-035
SIZE FRACTION : -1" x 1/4"

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		1.32	8.24	2.64
	DRY	92.83		8.35	2.68
****	A.D.		0.94	58.95	7.04
	DRY	7.17		59.51	7.10

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	92.83	8.35	2.68
****	100.00	12.02	2.99

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To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1735B +28
DH QU-92-035
SIZE FRACTION : -1/4" x 28M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		1.67	6.28	2.36
	DRY	92.91		6.39	2.40
****	A.D.		0.65	53.64	5.17
	DRY	7.09		54.00	5.20

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	92.91	6.39	2.40
****	100.00	9.76	2.60

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To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1735B +100
DH QU-92-035

SIZE FRACTION : -28M x 100M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		1.62	4.25	2.06
	DRY	79.82		4.32	2.10
****	A.D.		0.43	56.48	2.35
	DRY	20.18		56.72	2.36

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	79.82	4.32	2.10
****	100.00	14.89	2.15

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To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1737A +1/4
DH QU-92-037

SIZE FRACTION : -1" x 1/4"

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		2.04	9.32	2.78
	DRY	90.15		9.52	2.83
****	A.D.		0.79	47.51	14.46
	DRY	9.85		47.89	14.57

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	90.15	9.52	2.83
****	100.00	13.30	3.99

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To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1737A +28
DH QU-92-037

SIZE FRACTION : 1/4" x 28M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		1.47	8.15	2.71
	DRY	91.41		8.27	2.75
****	A.D.		0.80	48.98	11.20
	DRY	8.59		49.37	11.29

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	91.41	8.27	2.75
****	100.00	11.80	3.49

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To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1737A +100
DH QU-92-037
SIZE FRACTION : -28M x 100M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		2.30	6.99	2.25
	DRY	76.79		7.16	2.31
****	A.D.		0.67	57.87	4.63
	DRY	23.21		58.26	4.66

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	76.79	7.16	2.31
****	100.00	19.02	2.85

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Fax: (604) 984-0218

To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1783 +100 (Dilution)
DH QU-92-037
SIZE FRACTION : -1" x 100M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		1.64	20.17	5.63
	DRY	45.69		20.50	5.72
****	A.D.		1.63	54.07	13.67
	DRY	54.31		54.97	13.89

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	45.69	20.50	5.72
****	100.00	39.22	10.16

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Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1739C +1/4
DH QU-92-039
SIZE FRACTION : -1" x 1/4"

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		1.54	15.87	1.19
	DRY	77.92		16.12	1.21
****	A.D.		0.81	71.64	1.61
	DRY	22.08		72.22	1.63

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	77.92	16.12	1.21
****	100.00	28.51	1.30

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To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1739C +28
DH QU -92-039

SIZE FRACTION : 1/4" x 28M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		1.53	11.45	1.24
	DRY	84.32		11.63	1.26
****	A.D.		0.69	67.38	2.47
	DRY	15.68		67.85	2.49

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	84.32	11.63	1.26
****	100.00	20.44	1.45

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To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1739C +100
DH QU-92-039
SIZE FRACTION : -28M x 100M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		2.27	7.85	1.01
	DRY	73.49		8.03	1.03
****	A.D.		0.83	70.85	2.42
	DRY	26.51		71.45	2.45

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	73.49	8.03	1.03
****	100.00	24.84	1.41

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To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1740D +1/4
DH QU-92-040

SIZE FRACTION : -1" x 1/4"

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		1.83	11.72	1.20
	DRY	92.79		11.94	1.22
****	A.D.		0.69	59.21	2.42
	DRY	7.21		59.62	2.44

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	92.79	11.94	1.22
****	100.00	15.38	1.31

Chemex Labs Ltd.

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To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1740D +28
DH QU-92-040

SIZE FRACTION : -1/4" x 28M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		1.75	9.15	1.18
	DRY	91.69		9.31	1.20
****	A.D.		0.51	56.07	3.36
	DRY	8.31		56.36	3.38

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	91.69	9.31	1.20
****	100.00	13.22	1.38

Chemex Labs Ltd.

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Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1740D +100
DH QU-92-040

SIZE FRACTION : -28M x 100M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		2.20	6.21	0.93
	DRY	79.05		6.35	0.95
****	A.D.		0.47	59.13	3.04
	DRY	20.95		59.41	3.06

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	79.05	6.35	0.95
****	100.00	17.46	1.39

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V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1744E +1/4
DH QU-92-044

SIZE FRACTION : -1" x 1/4"

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		1.66	8.02	0.31
	DRY	95.07		8.15	0.32
****	A.D.		1.09	51.57	0.16
	DRY	4.93		52.14	0.17

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	95.07	8.15	0.32
****	100.00	10.32	0.31

Chemex Labs Ltd.

Analytical Chemists *Geochemists* *Registered Assayers*

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1
Phone: (604) 984-0221
Telex: 04-352597
Fax: (604) 984-0218

To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1744E +28
DH QU-92-044

SIZE FRACTION : -1/4" x 28M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		2.20	6.18	0.30
	DRY	95.62		6.32	0.31
****	A.D.		0.92	49.92	0.17
	DRY	4.38		50.28	0.17

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	95.62	6.32	0.31
****	100.00	8.25	0.30

Chemex Labs Ltd.

Analytical Chemists *Geochemists* *Registered Assayers*

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1
Phone: (604) 984-0221
Telex: 04-352597
Fax: (604) 984-0218

To: Brinco Coal Corporation
P.O. Box 938, Km 18, Hwy. 28
Campbell River, BC
V9W 6Y4

Attn: Mr. S. Gardner

Date: December 15, 1992
Certificate No.: A9281191
Invoice No.: I9281191

SAMPLE NO : 1744: +100
DH QU-92-044

SIZE FRACTION : -28M x 100M

FRACTIONAL

S.G.	BASIS	YIELD %	R.M. %	ASH %	SULF %
1.7	A.D.		2.75	4.02	0.32
	DRY	88.49		4.13	0.33
****	A.D.		0.95	52.03	0.20
	DRY	11.51		52.53	0.20

CUMULATIVE

S.G.	YIELD %	ASH %	SULF %
1.7	88.49	4.13	0.33
****	100.00	9.70	0.31

DWG. NO.	REFERENCE DRAWING	DWG. NO.	REFERENCE DRAWING	NO.	DESCRIPTION OF REVISION	DATE	BY	NO.	DESCRIPTION OF REVISION	DATE	BY

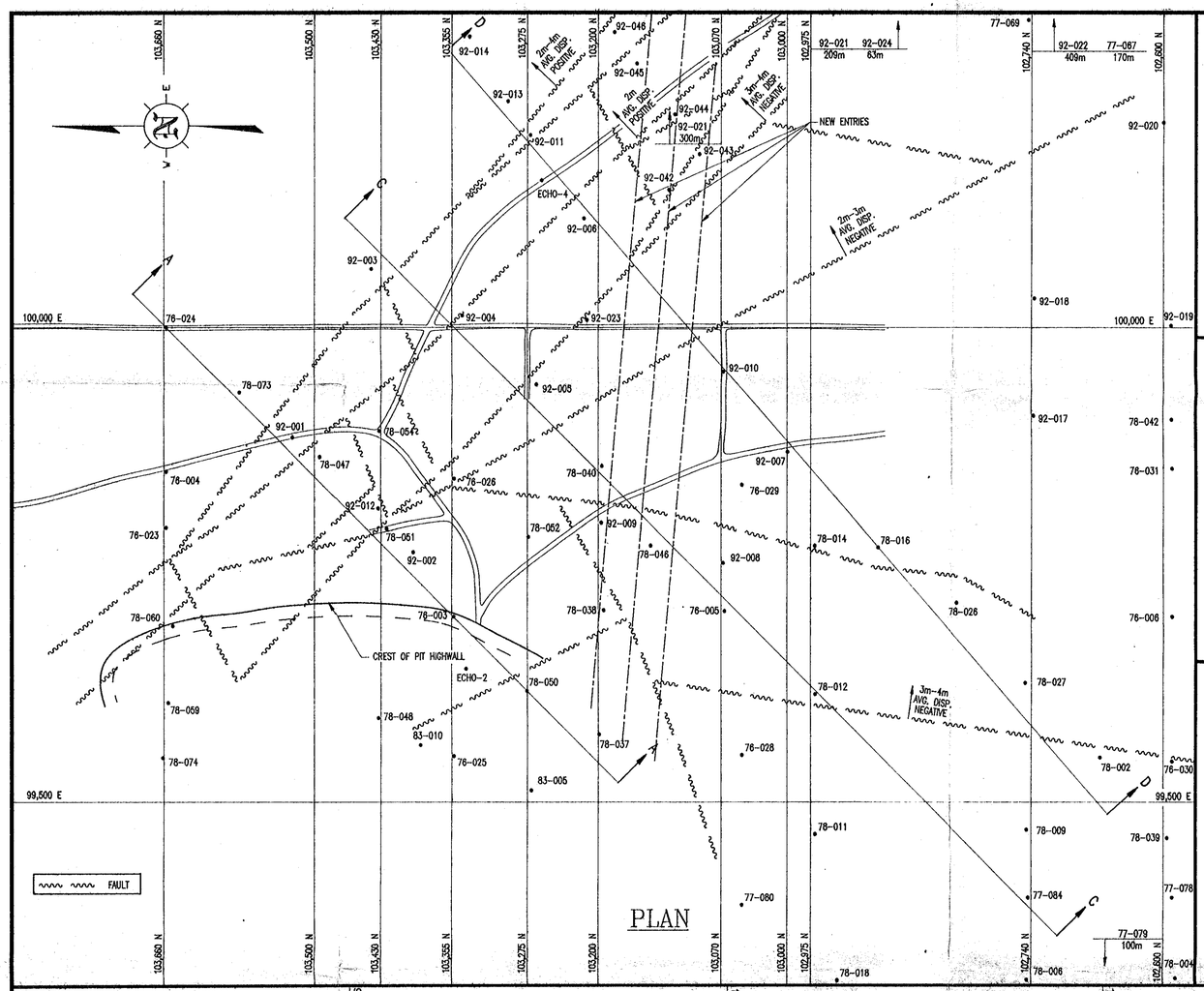
SCALE:	1:10,000	DATE
DESIGNED:		
DRAWN:	E.P.	FEB 12/93
CHECKED:		
APPROVED:		

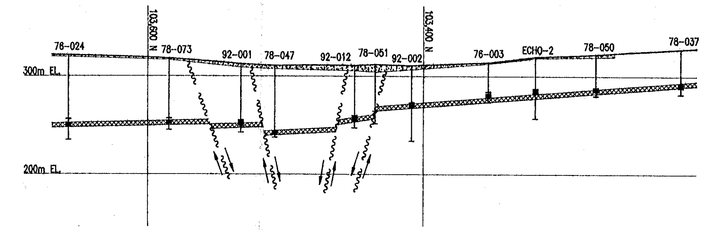
BRINCO COAL CORPORATION
QUINSAM MINE
DRILL HOLE LOCATIONS

HILLSBOROUGH RESOURCES LTD.
BRAMPTON, ONTARIO CANADA

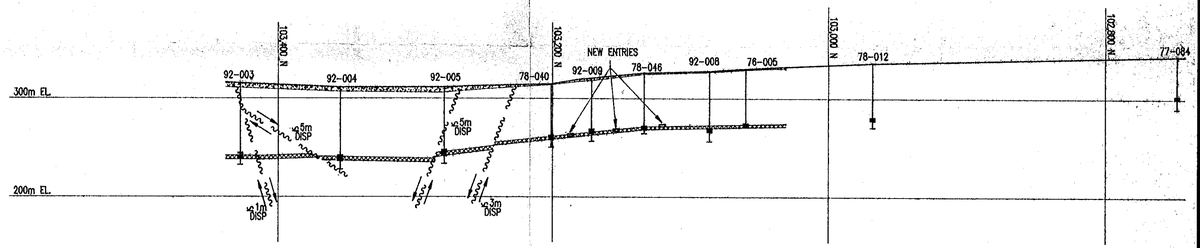
DWG. NO. 91-BC-337 REV.

#815





SECTION A–A



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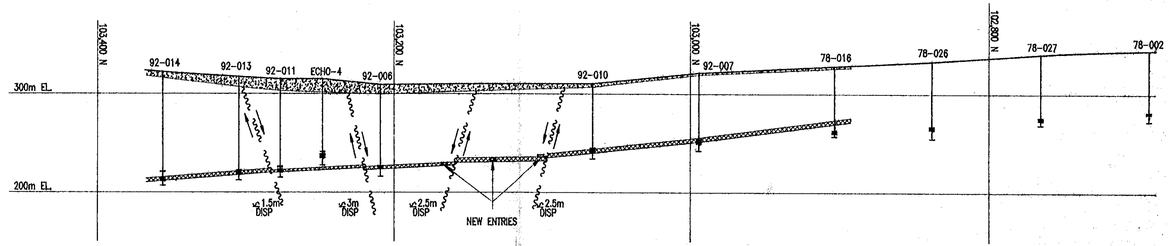

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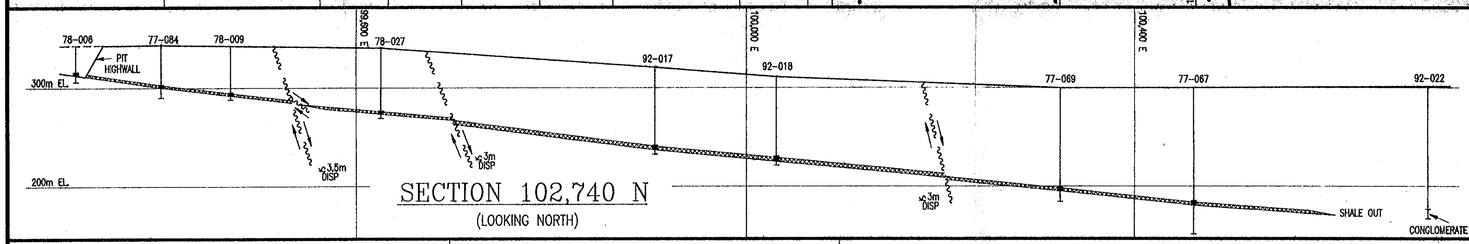
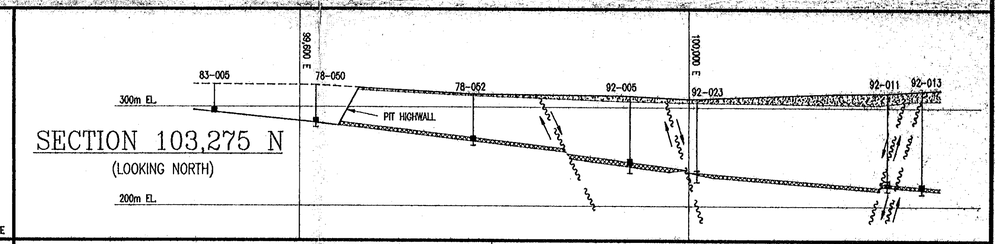


SECTION 102,740 N
(LOOKING NORTH)



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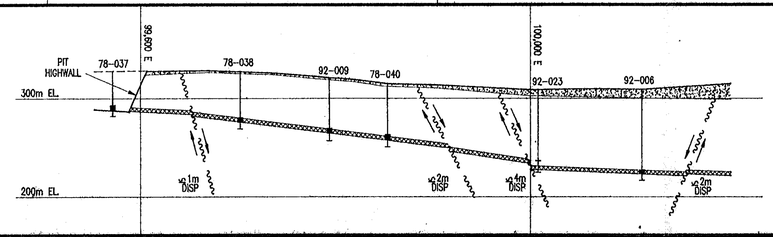
(LOOKING NORTH)



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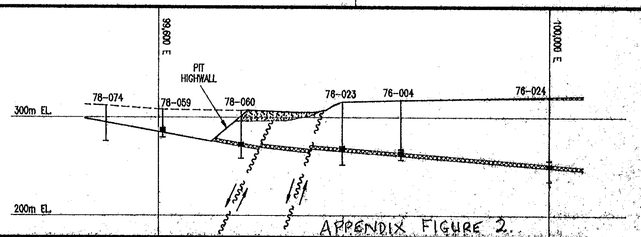
(LOOKING NORTH)



SECTION 103,660 N
(LOOKING NORTH)

0 150m
SCALE

APPENDIX FIGURE 2.

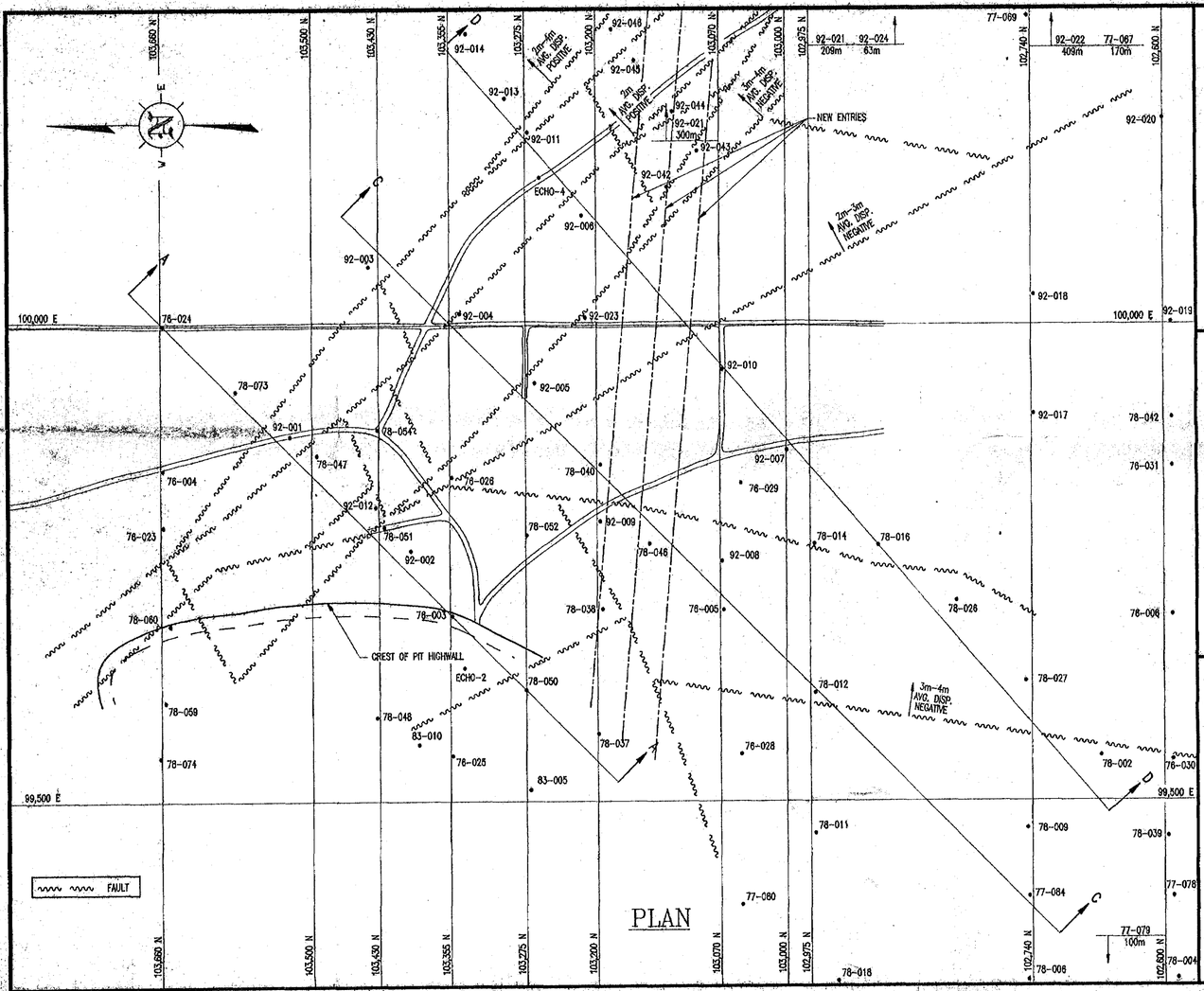
#815

DWG. NO.	REFERENCE DRAWING	DWG. NO.	REFERENCE DRAWING	NO.	DESCRIPTION OF REVISION	DATE	BY	NO.	DESCRIPTION OF REVISION	DATE	BY

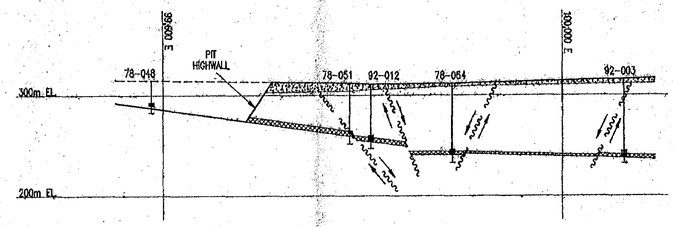
SCALE:	1:3000	DATE
DESIGNED:		
DRAWN:	E.P.	FEB 22/93
CHECKED:		
APPROVED:		

BRINCO COAL MINING CORP.
QUINSAM MINE
1992 2-N DRILLING

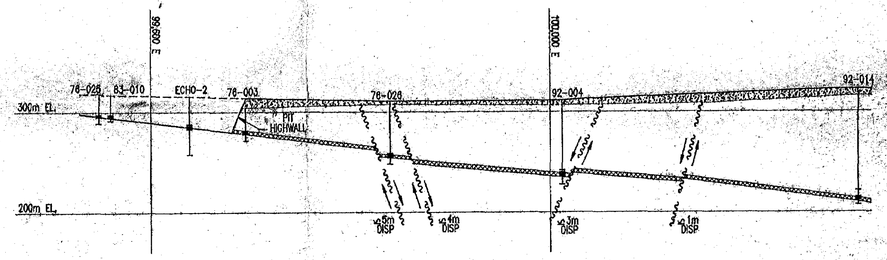
HILLSBOROUGH RESOURCES
BRAMPTON, ONTARIO
DWG. NO. 91-BC-103
1



PLAN



SECTION 103,430 N
(LOOKING NORTH)



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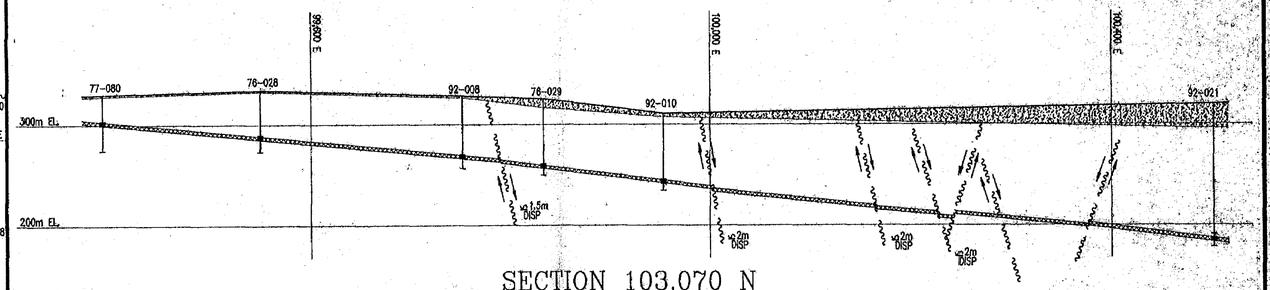
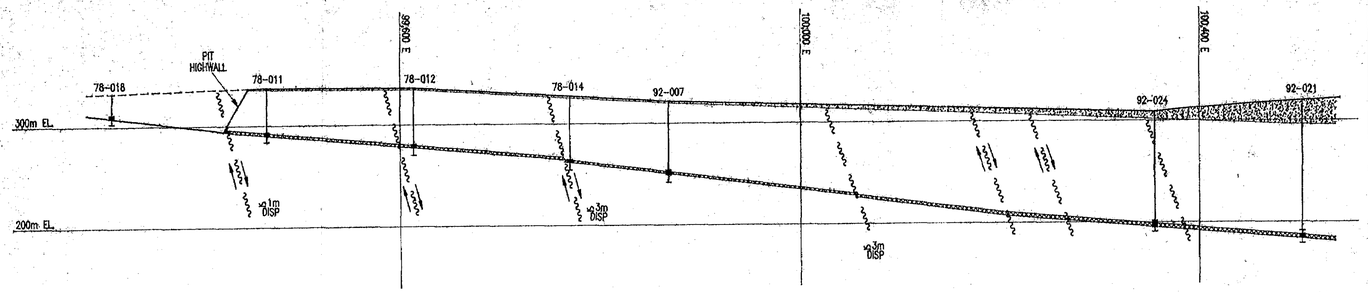
(LOOKING NORTH)



SECTION 103,070 N
(LOOKING NORTH)



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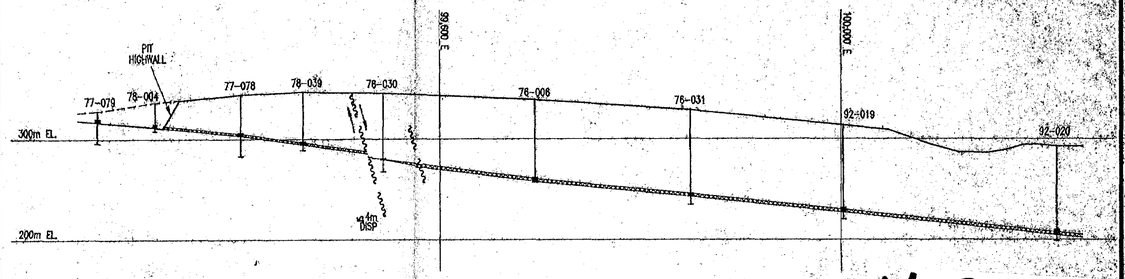


SECTION 102,600 N
(LOOKING NORTH)

0 150m
SCALE

#815

APPENDIX FIGURE 3.

DWG. NO.	REFERENCE DRAWING	DWG. NO.	REFERENCE DRAWING	NO.	DESCRIPTION OF REVISION	DATE	BY

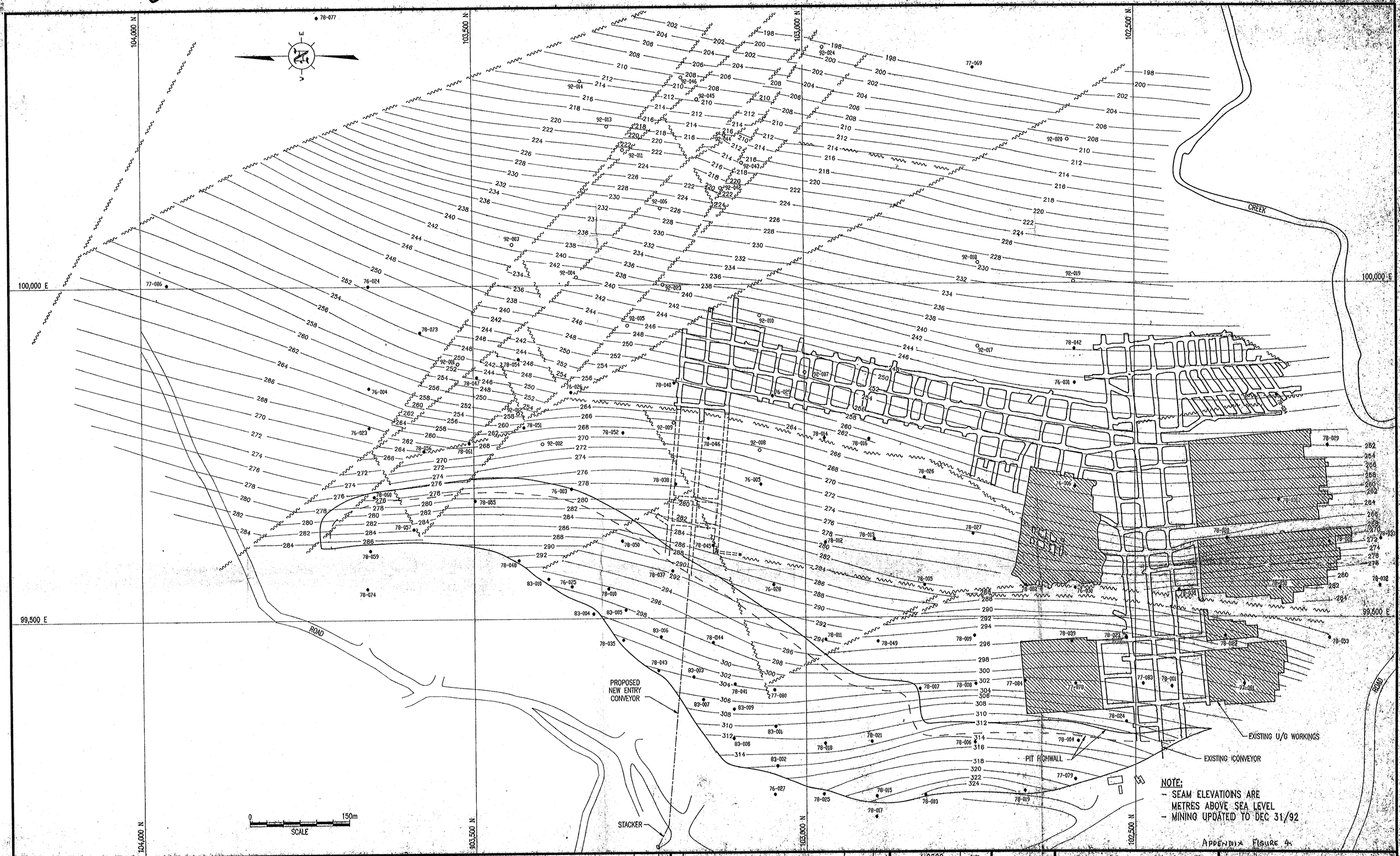
SCALE	1:3000'	DATE	
DESIGNED			
DRAWN	B.P.	FEB 22/93	
CHECKED			
APPROVED			

BRINCO COAL MINING CORP.
QUINSAM MINE
1992 Z-N DRILLING

HILLSBOROUGH RESOURCES LTD.
BRAMPTON, ONTARIO

DWG. NO. 91-BC-104 REV. 1

518#



NOTE:
- SEAM ELEVATIONS ARE METRES ABOVE SEA LEVEL
- MINING UPDATED TO DEC 31/92

APPENDIX FIGURE 4.

DWG. NO.	REFERENCE DRAWING	DWG. NO.	REFERENCE DRAWING

NO.	DESCRIPTION OF REVISION	DATE	BY	NO.	DESCRIPTION OF REVISION	DATE	BY

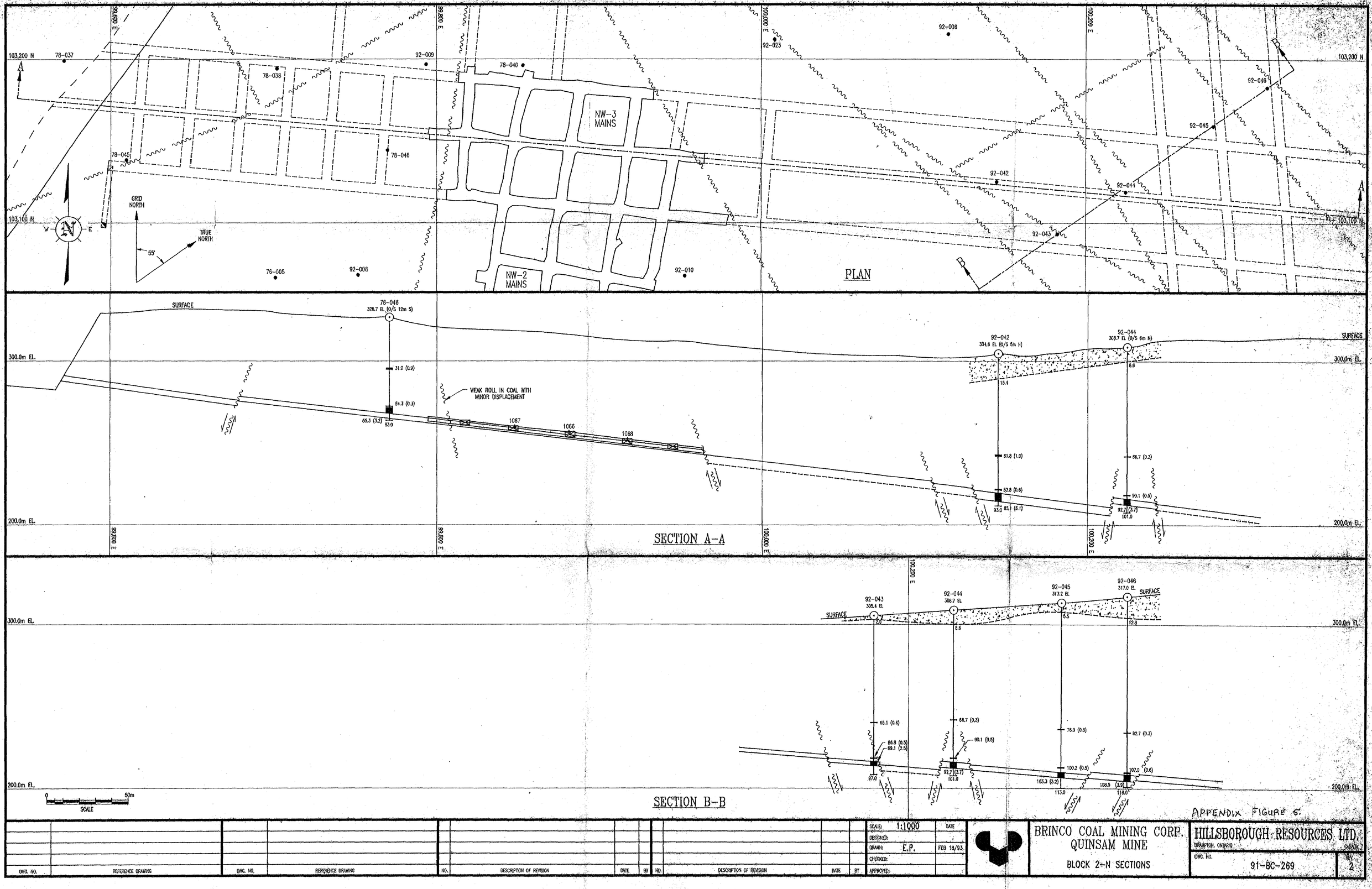
SCALE:	1:2500	DATE
DESIGNED:		
DRAWN:	E.P.	FEB 18/93
CHECKED:		
APPROVED:		

BRINCO COAL MINING CORP.
QUINSAM MINE
BLOCK 2-N STRUCTURE CONTOURS
TOP OF SEAM #1 (REVISED)

HILLSBOROUGH RESOURCES LTD.
BRAMPTON, ONTARIO, CANADA

DWG. NO. 91-BC-305

REV. 2



DWG. NO.	REFERENCE DRAWING	DWG. NO.	REFERENCE DRAWING

NO.	DESCRIPTION OF REVISION	DATE	BY

NO.	DESCRIPTION OF REVISION	DATE	BY

SCALE:	1:1000	DATE
DESIGNED:		
DRAWN:	E.P.	FEB 18/93.
CHECKED:		
APPROVED:		

APPENDIX FIGURE 5.

BRINCO COAL MINING CORP.
QUINSAM MINE

BLOCK 2-N SECTIONS

HILLSBOROUGH RESOURCES LTD.
BRAMPTON, ONTARIO, CANADA

DWG. NO. 91-BC-269

REV. 2

#818

99,500 E

100,000 E

100,500 E

101,000 E

101,000 N

100,500 N

78-157 78-150 78-151 78-158 78-152 78-164 78-317 79-021 79-016

78-250 78-186 78-190 78-175 78-177 78-200 79-011 79-026

78-241 78-172 78-155 78-154 78-235 78-165 ECHO-007 78-159 78-162

77-013 78-197 76-039 76-010 78-209 76-040 76-041 79-014 78-316 78-311

78-156 78-168 78-239 78-234

78-248 78-237 78-243 78-232 78-238 78-233 79-010

78-240

78-169 78-176 78-161 78-160 78-166

SECTION 35+00: 92-026 79-019 78-310 78-313 78-315 78-312

77-022 92-027 78-307 79-017 78-305 78-308

92-028

92-029

92-035 78-303 78-300 78-302

92-030

92-034

77-024 77-053

SECTION 19+00: 78-295 78-293 78-296 78-292 78-291 78-298

92-037

78-278

79-015 78-290 78-301 78-304

92-031A 92-031 92-033 92-040

92-032 92-038 78-288 77-050 78-289 78-299

SECTION 9+00: 92-036 77-054

92-039

92-041

GRID NORTH

TRUE NORTH

55°

0 200m

SCALE

DWG. NO.	REFERENCE DRAWING		DESCRIPTION OF REVISION	DATE	BY

SCALE: 1:4000	DATE	
DESIGNED:		
DRAWN: E.P.	FEB 12/93	
CHECKED:		
APPROVED:		

BRINCO COAL MINING CORP.
QUINSAM MINE

LOCATION PLAN OF BLOCK 7-S SECTIONS

HILLSBOROUGH RESOURCES LTD.
BRAMPTON, ONTARIO CANADA

DWG. NO. 91-BC-272

REV. 1

#815

#8915

LONG LAKE

MIDDLE QUINSAM LAKE

BLOCK 4-S

BLOCK 5-S & 6-S

BLOCK 2-N

BLOCK 7-S

BLOCK LOT 242

SECTION 9-00

SECTION 19-00

SECTION 35-00

IRON RIVER

QUINSAM RIVER

EXISTING ADIT

99,000 E

100,000 E

101,000 E

102,000 N

103,000 N

GRID NORTH

TRUE NORTH

-5°

0 250m

SCALE

DWG. NO.	REFERENCE DRAWING	DWG. NO.	REFERENCE DRAWING	NO.	DESCRIPTION OF REVISION	DATE	BY	NO.	DESCRIPTION OF REVISION	DATE	BY

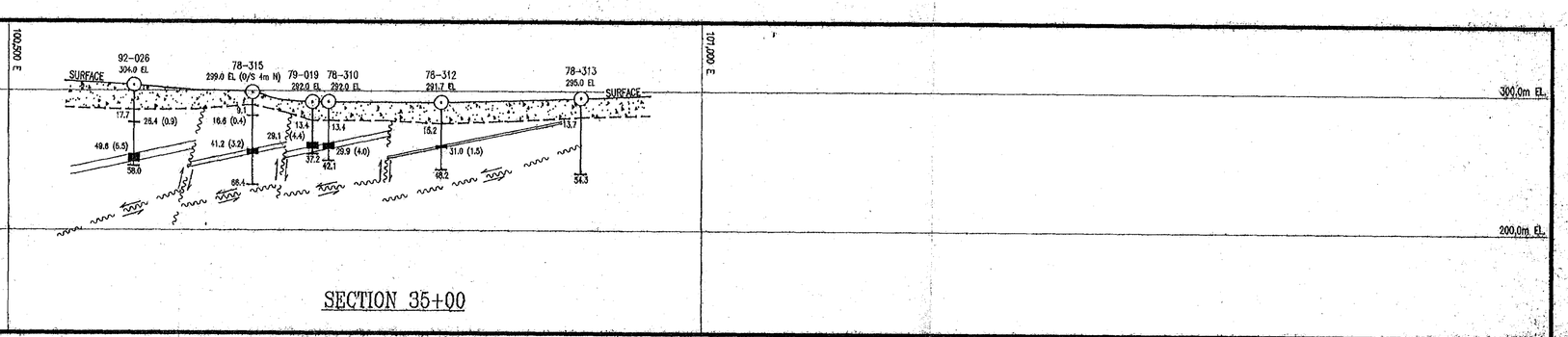
SCALE:	1:5000	DATE
DESIGNED:		
DRAWN:	E.P.	FEB 12/93
CHECKED:		
APPROVED:		

BRINCO COAL MINING CORP.
QUINSAM MINE
BLOCK 4-S, 5-S, 6-S, 7-S & LOT 242
DRILL HOLE LOCATIONS

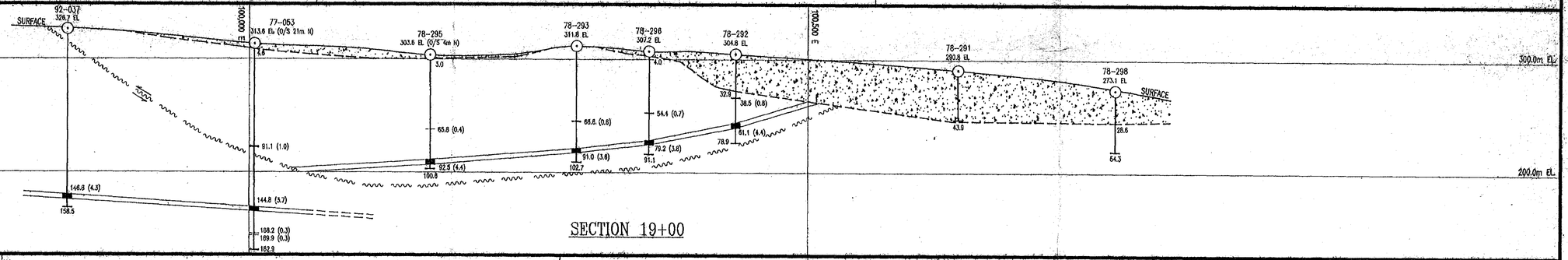
HILLSBOROUGH RESOURCES LTD.
BRAMPTON, ONTARIO CANADA

DWG. NO. 91-BC-274

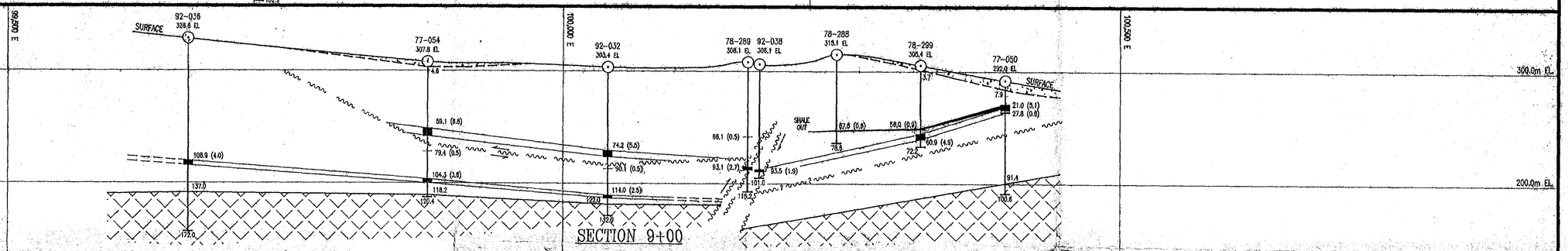
REV. 1



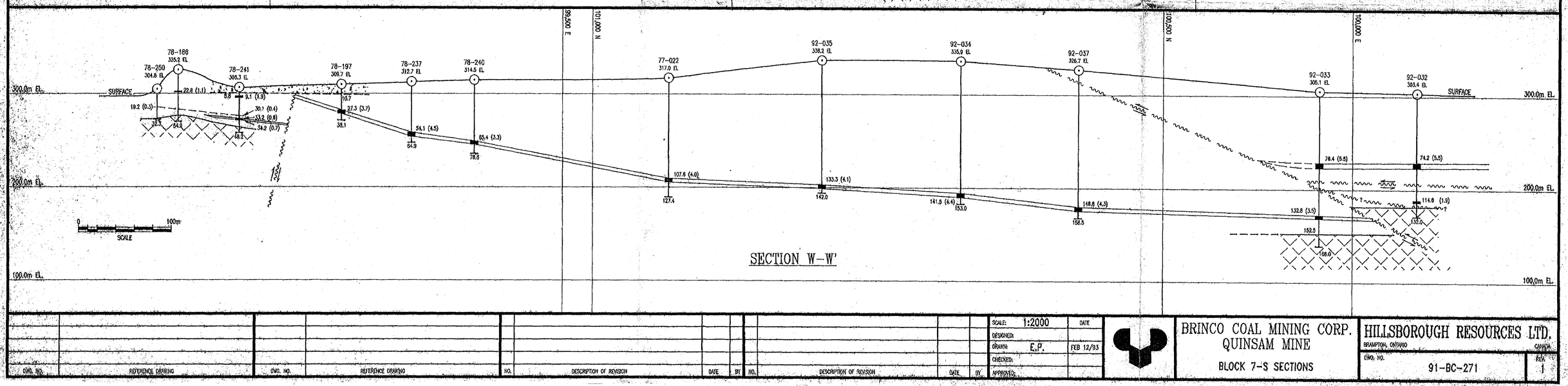
SECTION 35+00



SECTION 19+00



SECTION 9+00



SECTION W-W'

DWG. NO.	REFERENCE DRAWING	DWG. NO.	REFERENCE DRAWING	NO.	DESCRIPTION OF REVISION	DATE	BY	NO.	DESCRIPTION OF REVISION	DATE	BY

SCALE:	1:2000	DATE
DESIGNED:		
DRAWN:	E.P.	FEB 12/93
CHECKED:		
APPROVED:		

BRINCO COAL MINING CORP.
QUINSAM MINE

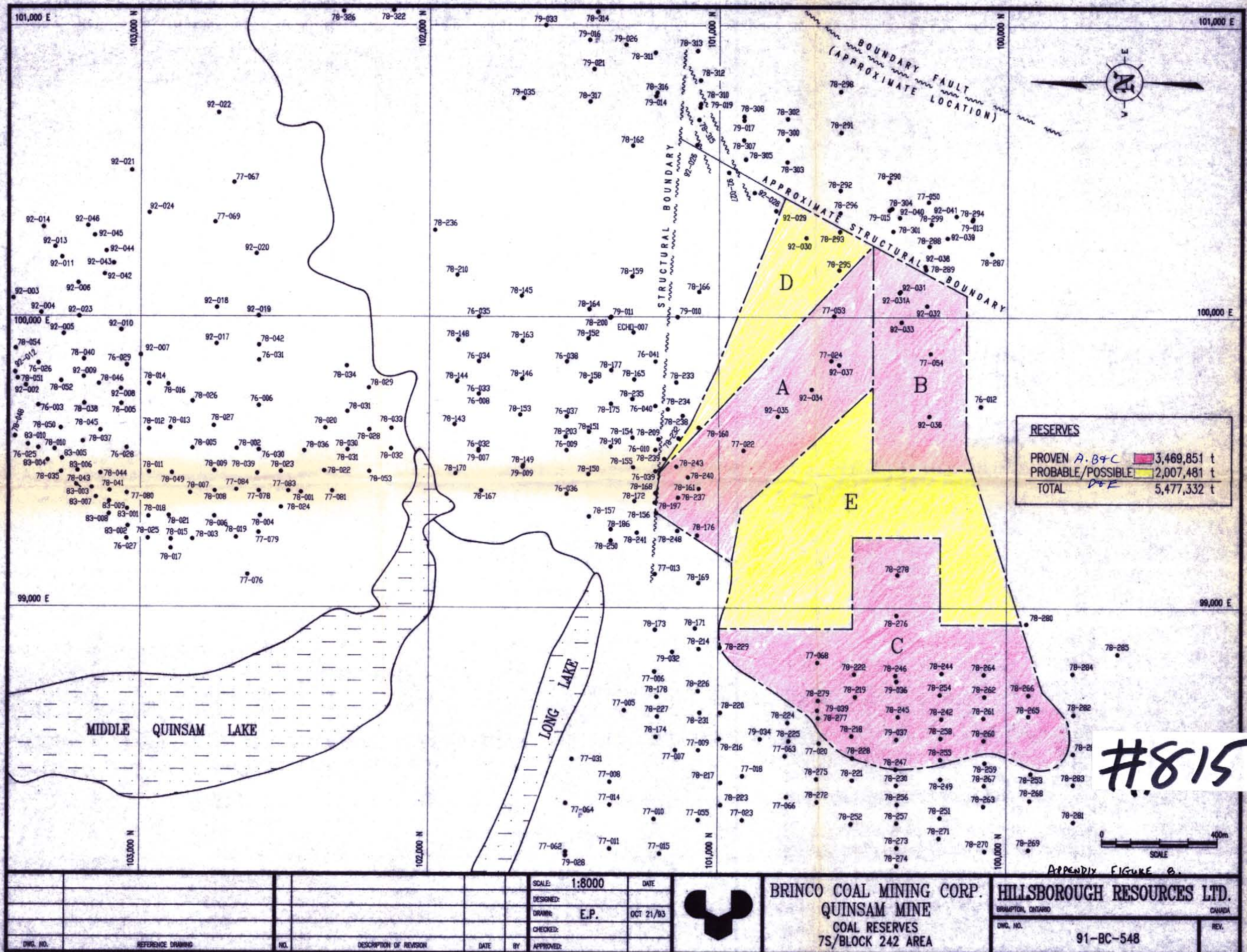
BLOCK 7-S SECTIONS

HILLSBOROUGH RESOURCES LTD.
BRAMPTON, ONTARIO CANADA

DWG. NO. 91-BC-271

REV. 1

5184



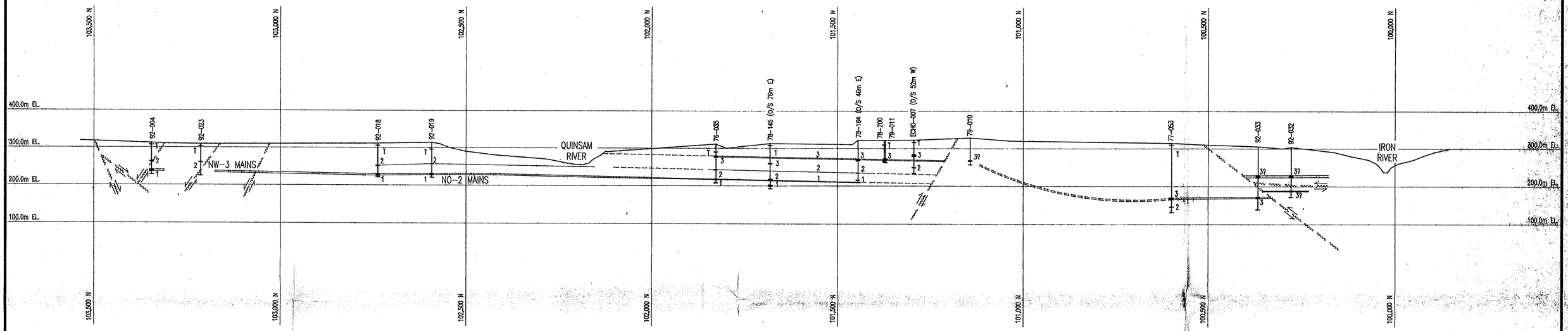
#815

APPENDIX FIGURE 8.

						SCALE: 1:8000	DATE	BRINCO COAL MINING CORP. QUINSAM MINE COAL RESERVES 7S/BLOCK 242 AREA	HILLSBOROUGH RESOURCES LTD. BRAMPTON, ONTARIO CANADA	
						DESIGNED:			DWG. NO. 91-BC-548	REV.
						DRAWN: E.P.	OCT 21/93			
						CHECKED:				
DWG. NO.	REFERENCE DRAWING	NO.	DESCRIPTION OF REVISION	DATE	BY	APPROVED:				

NORTH

SOUTH



APPENDIX FIGURE 9.

DWG. NO.	REFERENCE DRAWING	DWG. NO.	REFERENCE DRAWING	NO.	DESCRIPTION OF REVISION	DATE	BY	NO.	DESCRIPTION OF REVISION	DATE	BY

SCALE: 1:5000	DATE	
DESIGNED:		
DRAWN: E.P.	FEB 19/93	
CHECKED:		
APPROVED:		

BRINCO COAL MINING CORP.
QUINSAM MINE
SECTION 100,000 E
(LOOKING EAST)

HILLSBOROUGH RESOURCES LTD.
BRAMPTON, ONTARIO

DWG. NO. 91-BC-306

REV. NO. 1

518 #

APPENDIX B

CORELOG DESCRIPTIONS

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-001

PAGE 1 OF 3

CORE No.	CORE FOOTAGES metres DRILLED FROM	DRILLED TO	DRILLED TOTAL	RECOVERED SECTION	RECOVERED TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	30.5	30.68				Coal: 4cm coaly mudstone, 64 cm broken, bright coal	30.9 – 31.7
	30.68	33.3				Mudstone: Med. green to brown-green - 2 zones discontinuous coalified lenses and fragments. Coalified material on bedding planes.	31.7 – 33.7
(1)	30.5	33.5	3.0	1.70	57%	- Disseminated pyrite in fractures, clusters	
(2)	33.5	36.5	3.0	2.84	95%	and along beds. Pyrite < 1%	
(3)	36.5	39.5	3.0	1.83	61%	- Bedding crudely 90° TCA.	
(4)	39.5	40.9	1.4	0.41	29%	- Fracturing @ 8/m along bedding	
(5)	40.9	43.5	2.6	0	0%	= Gradational basal contact	
	33.3	35.1				Siltstone / Sandstone: Med. green-grey interbedded med to fine sandstone with siltstone - Minor coalified fragments. - Sandstone : Siltstone 30:70 - Fracturing 10-15/m. Commonly 90° TCA. - Weak fault plane 15° TCA at 34.6 m.	
	35.1	47.37				Sandstone: Med green-grey. Fining upward sequence from coarse grained pebbly sandstone (46.15-47.37) - Coarse grained sandstone 36.4-46.15m with minor silt intervals or rip-ups at 40.2-40.9m. Fine grained sandstone from 35.1 – 36.4 m. Competent core throughout interval. Weak fracturing 36.0m (17° TCA), 39.4m (20° TCA), 45.1m (25° TCA), 45.2m (30° TCA), 45.7m, (15° TCA) - Sharp basal contact, 90° TCA.	35.5 – 47.77
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM
COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-001
PAGE 2 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	47.37	57.91				Siltstone / Muddy Siltstone	47.77 -
						- Med. to dark green-grey to mottled colouring.	58.60
						- Mottling of light beige-brown concretions	
(6)	43.5	46.5	3.0	2.84	95%	+/or siltstone fragments becoming more	
(7)	46.5	49.5	3.0	2.87	96%	numerous towards bottom of interval	
(8)	49.5	52.5	3.0	2.89	96%	- Coalified material in < 1mm laminae and	
(9)	52.5	55.5	3.0	2.69	90%	ground fragments	
(10)	55.5	58.5	3.0	2.90	97%	- Weak fracturing at 40-50° TCA increasing	
						from 49.8 - 50.8m and 51.6 to 52.1m.	
						- Occasionally fractures with < 1mm	
						calcite infill	
						- Weak slickensides on fault plane 35+50° TCA	
						at 57.0m. Pyrite on plane	
						- 57.2m - calcite stringer network (5cm)	
						- 57.3 - 1mm calcite stringer on fracture	
						plane at 20° TCA.	
	57.91	58.09				Coal Mudstone: Med. grey-brown to	58.42
						black interlaminated mudstone and bright coal.	- 58.57
						- Coal bands < 1cm.	
						- Bedding 90° TCA. Rubbly basal contact.	
	58.09	58.72				Coal: #1 Rider	
						- Top 3cm of broken core, slickensides	58.57 -
						on blocks. Pyrite on fracture + slickenside	59.20
						surfaces. Calcite/Pyrite, < 1mm @ 10° TCA @ 59.8m	
						- Mudstone parting (4cm) in rubbly core within	
						basal 15cm.	
						- Numerous calcite stringers near base	
						- Slickensides on blocks at base of interval.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-001

PAGE 3 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						1	
	58.72	60.17				Mudstone: Med green-grey. Numerous coalified inclusions and laminae up to 1.0 cm.	59.20-
						- Poorly bedded, commonly disrupted (soft sediment deformation)	60.85
						- Fracturing common along bedding laminae approx: 90° TCA, 10/m	
						- Rubble @ basal contact.	
	60.17	64.1				Coal: #1 Seam	
						60.17 - 61.5 - Bright blocky coal with numerous hairline calcite fractures as	60.85-
						net texture & along bedding laminae.	63.93
(11)	58.5	61.5	3.0	2.81	94	- Pyrite along fractures.	
(12)	61.5	64.5	3.0	1.63	54	61.5 - 61.8 - Mudstone parting with coal laminae	
(13)	64.5	67.5	3.0	2.79	93	61.8 - 63.8 - Coal, blocky to fractured	
(14)	67.5	70.5	3.0	2.11	70	coal with numerous hairline calcite/pyrite infilled fractures.	
						- Fracturing increasing towards base of interval. No preferred orientation	
						63.8 - 64.1: Interbedded mudstone with coal: Coal heavily stringered with calcite ± pyrite. Polished fault planes approx. 90 TCA. Basal contact sharp.	
	64.1	70.5				Muddy Siltstone: Med. green-grey at top of interval grading into mottled red-brown & green-grey	63.93-
						Basal 3.0m of red-brown muddy siltstone. Poorly defined bedding. 90° TCA. Soft easily broken core	70.5
						90°, 35-40° TCA Slickensides on weak fault 37°, 68.4m	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-002

PAGE 1 OF 6

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	0.0	13.0				Casing	
	13.0	14.92				Sandstone:	13.2-
						- Light-med grey & green-grey. Top well	15.12
①	13.0	16.0	3.0	2.97	99%	sorted. Bottom 1/3 poorly sorted. Pebbly	
②	16.0	19.0	3.0	2.49	83%	zones and carbonaceous &/or silty	
						laminae near base.	
						- Pyrite clusters to 1 cm. near base.	
						- Soft sediment deformation at basal contact	
						- Bedding 90° TCA.	
	14.92	15.57				Carbonaceous Mudstone:	15.12-
						- Dark brown at top grading into silty	15.77
						and sandy mudstone at base.	
	15.57	16.0				Coal: No. 2 Seam	15.8-
						- Top 15 cm silty and muddy coal.	16.2
						- Basal section - brittle coal.	
						- Well developed cleat with calcite.	
	16.0	17.32				Carbonaceous Mudstone:	16.2-
						Med - dark brown & med. green-grey.	17.57
						- Numerous carbonaceous laminae & coalified	
						material. Laminae 90° TCA.	
						- Fault plane: 50° TCA @ 16.05m.	
						- Gradational basal contact	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-002

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	17.32	23.21				Mudstone:	17.52
						- Med brown-green-grey	-23.4
(3)	19.0	21.7	2.7	2.65	98%	- Coalified material throughout:	
(4)	21.7	24.2	2.5	2.51	100%	- Interval marked by last appearance of	
(5)	24.2	27.2	3.0	2.71	90%	carbonaceous material	
(6)	27.2	30.2	3.0	3.01	100%	- Pyrite aggregates in upper 2.0 m.	
(7)	30.2	31.5	1.3	1.16	89%	- Fracturing commonly 90° TCA, rarely	
						sub-parallel TCA.	
	23.21	37.37				Mudstone / Siltstone / Sandstone:	23-41
						- Med-dark green-grey interbedded units	37-5
						23.21 - 24.2 - Mudstone with shell fragments.	
(8)	31.5	34.5	3.0	3.02	101%	- Beds range from cm. laminae to 2.0m	
(9)	34.5	37.5	3.0	2.96	99%	mudstone beds.	
						- Some zones of bioturbated silt / sand.	
						- Upper interval weak fracturing 2/m	
						at 90° TCA.	
						- 33.97m - Weak joint fracture 15° TCA.	
						- Basal 2.0 m bedding plane fractures	
						along carbonaceous laminae.	
						- 37.30 - Fracture with clay / calcite on	
						fracture plane @ 20° TCA. 5mm width	
	37.37	37.67				Coaly Mudstone:	
						- Laminated Coal: mudstone (15:85)	37.5
						- Coal laminae up to 5mm	37.8
						- Strong slickensides on plane 58° TCA	
						near base.	
						- Sharp basal contact	
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-002
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	37.67	38.21				Coal: (#1 Rider)	37.87 -
						- Solid relatively unfractured coal	38.42
(10)	37.5	40.5	3.0	2.93	98%	- Banding ≃ 90° TCA	
						- 1.0 cm Bone coal @ 37.83 m	
						- Slickensides on weak fracture 78° TCA 38.17m	
						- Hairline calcite stringers along bedding ≃ 90° TCA @ 38.13 m.	
						- Basal contact gradational	
	38.21	38.33				Coaly Mudstone:	38.42 -
						- Laminated coal and mudstone (20:80)	38.58
						- 5mm calcite stringer zone at center of interval	
	38.33	39.20				Mudstone:	38.58 -
						- Med brown-grey. Moderate to strongly fractured at: 38° TCA - 38.45m	39.45
						35° TCA - 38.49m	
						85° TCA - 38.70m	
						Minor slickensides on fault planes, 40° TCA @ 38.9 m	
						Multiple, minor fractures with slickensides on planes from 38.9 - 39.20m. Fracturing 60-75° TCA with calcite infill	
						- Basal contact irregular	
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-002

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	39.20	43.15				Coal: (#1 Seam)	39.45 - 43.40
						39.20 - 41.80 Hard, blocky coal	
						- Calcite on cleat and along coal bands (1.0cm)	
(11)	40.5	43.5	3.0	2.92	97	- 1.0 cm Rone coal @ 39.40m	
(12)	43.5	46.5	3.0	2.83	94	41.80 - 41.81 - Mudstone parting	
						41.81 - 42.97 - Friable fractured core	
						Fracturing commonly 90° TCA with	
						increased fracturing toward base of	
						interval.	
						Weak fracturing 75° & 80° TCA @ 42.65m	
						70° TCA @ 42.87m	
						42.97 - 43.04 - Mudstone parting with	
						polished, undulating "fault surfaces.	
						Fracturing commonly @ 80-90° TCA, also	
						irregular orientation	
						- Undulating, polished basal contact	
	43.15	43.50				Coaly Mudstone:	43.40 - 43.77
						43.15 - 43.25 - Zone of interbedded & contorted	
						mudstone and coal. Strongly fractured	
						commonly at high angle TCA.	
						43.25 - 43.50 Soft, strongly fractured mudstone	
						with less coalified material than upper interval	
						- Fracture at 45° TCA @ 43.40m	
						- Slickensides on basal contact at high angle	
						TCA.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-002

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	43.50	47.1				Siltstone:	43.77 -
						- Light-med green-grey	47.3
						- Fractured with slickensides from 43.90 - 44.20m. Planes at 30°, 25°, 35°, & 80° TCA.	
(13)	46.5	49.5	3.0	3.01	100%	- Fractures @ 55° TCA. - 43.65m	
(14)	49.5	52.5	3.0	2.97	99%	60° TCA - 44.64 m	
(15)	52.5	55.5	3.0	3.05	102%	- Fracture Zone 45.33 - 45.65m with fractures 80-90° TCA & 35° TCA.	
						Fractured, broken core 46.1 - 46.6	
						- Basal contact defined by first appearance of red mottled siltstone	
	47.10	50.82				Siltstone:	47.3 -
						- Variably mottled siltstone	51.02
						- Ranging from med-green to red-brown.	
						- Relatively competent throughout interval.	
						- Weak fractures 70-90° TCA.	
	50.82	53.2				Sandstone:	51.02
						- Med-light green	53.4
						- Med grained at top to coarse grained at base.	
						- Competent	
						- Gradational basal contact.	
	53.2	55.7				Conglomerate:	53.4 -
						- Pebble conglomerate	55.9
						- Dominantly 0.5 - 2.0 cm chloritized volcanic clasts in a sandy matrix. Poorly sorted at base with sand & coalified material.	
						- Sharp 90° TCA. basal contact	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-002
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	55.7	62.3				Mudstone / Siltstone:	55.9 –
						Grading from mudstone to siltstone and	62.5
16	55.5	58.5	3.0	2.67	89 %	sandstone (at base of interval)	
17	58.5	61.5	3.0	2.88	96 %	– Upper 2.0m of red-brown mottled dark	
18	61.5	64.5	3.0	2.91	97 %	green mudstone followed by ~0.30m	
19	64.5	67.5	3.0	2.95	98 %	interbeds of sandstone (58.6–58.9m)	
20	67.5	70.5	3.0	2.97	99 %	– Mottled red + green mudstone 59.1–60.3m	
21	70.5	73.5	3.0	3.10	103 %	– Minor coalified material @ 60.5m	
22	73.5	75.0	1.5	1.37	91 %	– Bedding in basal 0.5m @ 70–80° TCA.	
23	75.0	77.0	2.0	1.88	94 %	– Gradational basal contact	
	62.3	77.0				Conglomerate:	62.5 –
						– Coarsening downsection	77.0
						– Well rounded clasts dominantly of	
						chlorite + epidote altered volcanic	
						clasts. Minor granitic clasts	
						– Cobble to boulder sized clasts	
						up to 20 cm.	
						– Calcite cement	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-003

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	38.4	50.91				Sandstone:	38.3 - 50.81
						38.4 - 42.3 - Light grey, med. to coarse grained well sorted sandstone. Bedding 87° TCA.	
(1)	38.4	40.9	2.5	2.37	95%	42.3 - 44.8 Med. green-grey, moderately sorted,	
(2)	40.9	44.0	3.1	3.05	98%	med. grained. Bedding weakly bioturbated.	
(3)	44.0	47.0	3.0	2.83	94%	Bedding 70° & 83° TCA. Weak fracture @	
(4)	47.0	50.0	3.0	3.0	100%	41.95m 55° TCA. Thin silt Laminae	
(5)	50.0	53.0	3.0	2.39	80%	near base.	
						44.8 - 47.3. Med green-grey, strongly bioturbated, med.-fine sandstone & siltstone.	
						46.5m - weak fracture @ 10° TCA.	
						47.3 - 49.45 - Med. grained, med green-grey, well sorted sandstone with concretions up	
						to 3cm. diameter. Weak fractures:	
						47.45m - 53° TCA.	
						49.2 m - 15° TCA with clay	
						altered basal contact	
						49.45 - 50.91 - Light-med grey crudely	
						bedded at ≈ 80° TCA	
						Weak fractures near base @ 20° & 50° TCA.	
						- Distorted mudstone laminae (mm scale) in	
						basal 5cm	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-003
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	50.91	51.37				Mudstone:	50.81
						- Dark brown, strongly fractured & distorted	51.27
						- Fracturing 70°, 73°, 50°, 45° TCA.	
						- Minor <1 cm coal bands	
						- Basal 15 cm of gritty mudstone	
						- Basal contact: sharp - broken core	
	51.37	51.64				Coal: No. 2 Seam	
						51.37 - 51.40 - Coal & mudstone	51.35 -
						51.40 - 51.64 - Coal - Strongly banded at	52.20
						70° TCA. Pyrite as discontinuous bands up to	
						2.0 mm. Minor slickensides along banding	
						- Weak fracture near base @ 40° TCA.	
						- Minor calcite in fractures.	
	51.64	70.88				Mudstone / Siltstone:	
						Interbedded mudstone and siltstone with	51.54 -
(6)	53.0	56.0	3.0	2.83	94%	gradational contacts throughout interval	70.78
(7)	56.0	59.0	3.0	2.52	84%	51.64 - 51.84 Carbonaceous mudstone med	
(8)	59.0	61.5	2.5	2.65	106%	brown-grey. 1 cm gouge zone + weak	
(9)	61.5	64.5	3.0	2.95	98%	slickensided plane @ 65° TCA	
(10)	64.5	67.5	3.0	2.70	90%	51.84 - 57.1 Mod. green to green-brown	
(11)	67.5	70.5	3.0	1.60	53%	mudstone and silty mudstone	
						Weak fracturing @ 53.0m - 45° TCA,	
						53.5m 50° TCA, 53.84 - 65° TCA.	
						Pyrite aggregates throughout.	
						Weak gouge + fracture ≈ 90° TCA @ 54.5m	
						Coal interbands: up to 0.5cm up to 54.7m	
						Weak fractures @ 55.8 m - 25° TCA	
						55.9 m - 33° TCA	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	51.64	70.88				57.1 - 57.6 Sandstone - med-fine grained gradational basal contact.	
	(Cont'd.)					57.6 - 70.88 Interbedded with gradational contacts med-dark green siltstone + mudstone	
						Weak fractures: 59.0m 20°+50° TCA	
						60.1 m 30° TCA.	
						64.4m 40° TCA	
						- Shell debris in mudstone from 60.2-70.4m	
						- Moderately broken core from 64.4 - 70.5m	
						- Weak fractures at: 65.4 m - 30° TCA	
						67.5m - 50° TCA	
						67.75m - 55° TCA.	
	70.88	71.49				Coaly Mudstone:	70.78 - 71.39
						Increasing in coal content towards base of interval. Discontinuous coal bands to 1.0 cm	
						- Banding 90° TCA.	
						- Weak fracture: @ 27° TCA - 71.1m	
						50° TCA - 71.16 m	
						- Fracturing along banding, 90° TCA.	
	71.49	72.04				Coal: #1 Rider Seam (Saved in Core Box)	71.39 - 71.94
						Top 15cm, fractured and calcite stringered (<0.5mm stringers) at 20° TCA.	
						- Weak fracture @ 70° TCA - 71.60m.	
						- Joint/cleat sub-parallel TCA.	
						- Calcite/clay on cleat surfaces	
						- Sharp basal contact @ 90° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	72.04	72.07				Mudstone Parting	71.94 - 71.97
	72.07	72.15				Coal - Calcite & clay on cleat surfaces	71.97 - 72.05
	72.15	72.36				Dirty Coal: < 1 cm mudstone bands & up to 2cm coal bands Coal: Mudstone 60:40, Banding 9° TCA.	72.05 - 72.26
	72.36	72.54				Cooly Mudstone: Dominently brown mudstone with thin coal bands	72.26 - 72.44
	72.54	74.39				Mudstone: - Med-dark brown-grey with coalified fragments and lenses up to 5mm. - Fracturing along banding in coal - Weak slickensided fracture @ 74.14m	72.44 - 74.26
12	70.5	72.5	2.0	1.77	89%	@ 30° TCA. & 34° TCA @ 74.23m	
13	72.5	75.5	3.0	2.85	95%	- Very brittle near base. - Numerous slickensided surfaces at random angles; poor strength.	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	74.39	77.68				Coal: #1 Seam	74.26-
						74.39 - 75.71 - Clean, brittle coal.	77.45
						Fracturing: 30° TCA - 74.50m	
						10° TCA - 74.60m	
						35° TCA - 74.80m with	
						3.0 cm calcite stringer	
(14)	75.5	77.5	2.0	2.0	100%	75.0 - 75.8 - Fracture/Joint sub-parelle/TCA	
(15)	77.5	80.5	3.0	2.76	92%	75.71 - 75.76 - Bone Coal	
						75.76 - 77.68 - Coal similar to 74.39 - 75.71	
						- Fracture/Joint along C.A.	
						- Weak fractures at 76.2m, 76.3m @ 40-50° TCA	
						- Pyrite on fracture surfaces	
						- Calcite/clay on cleat surfaces.	
						- Bedding/banding fractures @ 85° TCA.	
						- Basal contact strongly foliated.	
	77.68	77.74				Coaly Mudstone:	77.45-
						- Strongly foliated, polished mudstone at contact	77.68
						- Flakey core	
	77.74	78.29				Mudstone:	77.68-
						- Strongly deformed over upper 30 cm.	78.19
						- Coal fragments and bands decreasing downsection	
						- Fractures @ 50-90° TCA.	
						- Gradational contact into siltstone	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	78.29	81.9				Siltstone:	78.19 –
						- Med green-grey muddy siltstone	81.80
						- Concretions of lighter, beige-grey silt ± burrows.	
						- Coalified material near base of siltstone	
						- Weak fracturing at high angle TCA (80-90°)	
						- Relatively competent core	
	81.9	83.5				Sandstone:	81.80 –
						- Coarsening down-interval from fine grained to coarse grained	83.40
						- Mudstone rip-ups.	
						- Crude bedding 90° TCA.	
						- Competent core	
(16)	80.5	83.5	3.0	2.94	98%		
TOTALS						÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-004

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	35.5	47.96				Sandstone:	36.0 -
						- Interval comprised of fine to coarse,	48.61
(1)	35.5	38.5	3.0	2.94	98%	moderate to well sorted, light to med green-	
(2)	38.5	40.5	2.0	1.86	93%	grey and grey	
(3)	40.5	43.5	3.0	2.63	88%	33.5 - 35.1 - light grey, med-coarse grained,	
(4)	43.5	46.4	2.9	3.0	103%	massive. Coarse bands. Bed 83° TCA.	
(5)	46.4	49.4	3.0	2.54	85%	35.1 - 45.0 - Med. green, med grained.	
						Upper 50 cm bio-turbated.	
						Thinly bedded at 75° TCA @ 42.5m.	
						with variably coloured laminae < 1 cm.	
						- Concretions in basal 2.5m.	
						45.0 - 47.96 Light grey, coarse grained,	
						well sorted. Massive. Irregular basal	
						contact, soft sediment deformed (ball +	
						pillow structures)	
	47.96	48.98				Carbonaceous Mudstone:	48.61 -
						Upper 60 cm composed of soft-sediment	49.20
						ball + pillows, coarse grained sandstone in	
						mudstone.	
						- Basal 42 cm of gritty mudstone	
						- Dark brown	
	48.98	49.07				Muddy Coal:	49.20 -
						Thin < 5mm mudstone + coal bands.	49.30
						Coal : Mudstone 60:40	
						Fracturing along banding ≈ 90° TCA and	
						crudely along C.A.	
						Calcite / clay on cleat / fractures.	
	TOTALS					÷ · x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-004

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	49.07	49.31				Coal: No. 2 Seam	49.30 -
						- Dirty coal with thin 0.5cm mudstone partings	49.70
						- Fracturing along bedding @ 83° TCA and crudely along C.A.	
						- Calcite / clay on cleat / fractures	
						- Basal contact broken core	
	49.31	50.26				Coaly Mudstone	49.70 -
						- Dark brown with variable coal banding.	50.96
						Coal : Mudstone 5 : 95	
						- Numerous weak fractures at various orientations. Commonly @ 40-60° TCA.	
						- Calcite on fractures.	
						- Gradational basal contact	
	50.26	68.47				Mudstone / Siltstone	50.96
						- Gradational contacts with mudstone & siltstone interbeds	69.17
						- Mudstone : Siltstone 80 : 20	
(6)	49.4	52.0	2.6	1.89	73%	- Dominantly med-dark green with brown-green	
(7)	52.0	54.5	2.5	2.30	92%	carbonaceous zones.	
(8)	54.5	57.0	2.5	2.44	98%	- Numerous pyrite nodules up to 2.0 cm	
(9)	57.0	58.5	1.5	1.95	130%	from 50.7 - 52.5m.	
(10)	58.5	61.5	3.0	2.65	88%	- Carbonaceous zones 52.7-53.7m, 57.4-59.1m	
(11)	61.5	64.5	3.0	2.18	73%	- Shell fragments 59.1 - 68.4m	
(12)	64.5	67.0	2.5	2.30	92%	- Weak fractures & slickensides @ 53.9m, conjugate	
(13)	67.0	70.0	3.0	2.96	99%	fractures @ 40° & 60° TCA; 55.5m, 30° TCA; 58.4, 45° TCA (with calcite infill); 59.8m, 45° TCA (with calcite infill); 60.3m; 25° TCA with 2mm calcite infill	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-004

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	50.26	68.47				Calcite infilled fractures from 60.3-60.7m.	
	(cont'd.)					@ 15-30° TCA.	
						-Weak fractures 65 & 35° TCA, 61.0m	
						30° TCA, 62.7m	
						-Core moderately broken from 62.7-65.5m	
						-Rubbly core & weak fracture planes	
						38° TCA, 63.2m ; 75° TCA, 64.0m	
						80° TCA, 64.0m ; 28° TCA, 64.7m	
						20° TCA 64.8m ; 20° TCA 65.9m.	
						-Weak calcite filled fractures 50° TCA - 67.5m	
						-Weak fracturing 50° & 35° TCA @ 68.20m	
						-Weak fractures along coal inclusions	
						at 67.9m, 70° TCA.	
							69.13
	68.47	68.76				Coaly Mudstone:	69.46
						Banded coal & mudstone. Bands up to 1.0 cm.	
						Gradational bedding towards increased coal at	
						base of interval	
						-Banding 80-85° TCA	
						-Polished fracture surfaces 60-80° TCA.	
	68.76	69.24				Coal: No. 1 Rider	69.46
						-Solid blocky coal.	69.91
						-Banding 85°-90° TCA.	
						-Calcite on cleat.	
						-Pyritic and silt in continuous bands.	
						up to 5mm at base of interval	
						68.83- ~1.0 cm bone coal	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-004
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							69.94
	69.24	69.30				Mudstone:	70.02
						Med-brown - little carbonaceous material	
							70.02 -
	69.30	69.37				Coal:	70.10
						- Banded coal:	
						- Minor <5mm mudstone bands near top.	
						- Basal faulted contact undulating ≈ 90° TCA.	
						with minor calcite.	
							70.10 -
	69.37	69.45				Muddy Coal:	Continued
						- Interbedded mudstone: coal 20:80	into
							lower
	69.45	69.64				Coaly Mudstone:	Interval
						- Coalified material decreasing downsection	70.28
						- Banding 80° TCA	
						- Fracturing along coalified material	
							70.28
	69.64	71.08				Carbonaceous Mudstone:	71.72
						69.64 - 70.0 Med green-grey mudstone	
						with coalified lenses & fragments	
						70.0 - 71.08 Dark brown mudstone with	
						fine grained coaly fragments, coal lenses	
						- Basal 10 cm with weak polished fault	
						surfaces. Primary fault direction appears	
						25° TCA (But is generally irregular.)	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-004

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	71.08	75.5				Coal: No. 1 Seam	71.72 – 75.70
						- Solid blocky coal	
14	70.0	73.0	3.0	2.63	88%	- Minor calcite restricted to narrow fractures	
15	73.0	75.7	2.7	1.65	61%	and within distinct bands. Fracture/cleat	
16	75.7	77.7	2.0	1.51	76%	weak along C.A.	
17	77.7	80.0	2.3	2.46	107%	Bone coal 71.28m, 1.0 cm	
18	80.0	82.7	2.7	2.77	103%	72.77m, 6.0 cm	
19	82.7	84.0	1.3	1.30	100%	73.49 m, 1.0 cm.	
						Broken basal contact with mudstone	
	75.5	77.6				Mudstone:	75.70 – 77.8
						- Med green-grey. Moderate-strongly fractured	
						- Fracturing at variable angles TCA (few slickensides)	
						- Angles TCA, 25°, 50°, 70°, 45°, 30°	
						- Gradational basal contact	
	77.6	81.0				Sandstone:	77.8 – 81.2
						- Med-dark green.	
						- Coarsening toward base of interval - numerous pebbles	
						- Weakly mottled at top of interval	
						- Competent core	
	81.0	84.0				Conglomerate:	81.2 – 84.2
						- Well rounded clasts up to 3.0 cm.	
						- Dominantly chloritized volcanic clasts.	
						- Calcite matrix and cement.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-005

PAGE 1 OF 5

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	33.4	42.5				Sandstone:	32.70 - 42.30
						Overall fining upward from coarse-grained well sorted sandstone to medi to fine	
(1)	33.4	35.8	2.4	2.32	97%	grained sandstone, moderate to well sorted,	
(2)	35.8	38.8	3.0	2.91	97%	silty laminae.	
(3)	38.8	41.8	3.0	3.12	104%	33.4 - 36.0 Med - fine grained green-grey,	
(4)	41.8	44.8	3.0	2.74	91%	bioturbated. Occasional weak silt laminae	
						Bedding 75 - 80° TCA.	
						36.0 - 42.5 Massive green-grey s.s with	
						lighter concretions (?) from 38.0 - 39.5 m	
						Pebbly sand from 39.5 - 39.6. Basal 3.0m	
						of light grey, well sorted coarse grained	
						Sandstone. Worm burrows	
						Competent core with weak fractures	
						@ 34.2m, 45° TCA, 37.3m - 35° TCA,	
						calcite infill 2mm.	
						Gradational, soft sediment deformed basal	
						contact. Sandstone ball & pillow in	
						mudstone.	
	42.5	43.63				Carbonaceous Mudstone:	42.30 - 42.75
						- Dark brown carbonaceous mudstone, gritty	
						throughout.	
						- Grit increases within bottom 10 cm.	
						- Sandstone fragments within top 10-15cm	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-005
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							42.75
	43.63	44.23				Coal: No. 2 Seam	43.20
	1.61					- Upper 5 cm with 3mm, minor mudstone laminae	
						- Well banded @ 83° TCA.	
						- Weak calcite filled fracturing @ 15° TCA.	
						- Sharp basal contact	
	44.23	44.41				Coaly Mudstone:	43.20 – Continued into lower interval ↓ -44.30
						Interbedded coal & mudstone 20:80	
						Coal bands to 0.5cm.	
	44.41	45.85				Carbonaceous Mudstone:	
						- Dark brown mudstone with occasional coal bands	
5	44.8	47.8	3.0	2.4	80%	- Zone of 5–7% pyrite as clusters, framboids & thin lenses from 45.18–45.55m	
						44.6–45.0m – Zone with numerous weak, polished fractures commonly 60–90° TCA. (in zone of increased coal banding)	
						- Sharp basal contact 80° TCA.	
	45.85	46.91				Sandstone:	44.3 – 45.70
						- Dirty green-grey, coarse, poorly sorted	
						- Coalified material	
						- Sharp, broken basal contact with mudstone	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-005
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	46.91	65.0				Mudstone / Siltstone:	45.70
						Dominantly mudstone throughout interval	63.87
						with silty sections (rarely fine sandstone)	
						- Gradational between all units	
						- Mudstone : Siltstone 70:30	
						- Med-dark green to green-grey.	
(6)	47.8	50.3	2.5	2.80	112%	46.91 - 48.6 Silty mudstone	
(7)	50.3	53.3	3.0	2.90	97%	Weak fractures, minor slickensides @	
(8)	53.3	56.3	3.0	3.03	101%	48.6m. — 55°+40° TCA.	
(9)	56.3	59.3	3.0	2.58	86%	48.6 - 49.9m - Carbonaceous mudstone	
(10)	59.3	61.9	2.6	2.80	108%	brown-green. Coal lenses and coalified	
(11)	61.9	64.7	2.8	2.50	89%	material throughout. Weak fracturing	
						more abundant in carbonaceous material	
						at: 48.85 m, 55° TCA	
						49.60 m, 65° TCA.	
						Bedding ≈ 85° TCA.	
						49.9 - 65.0 Shell fragments in silt &	
						mudstone. 49.9 - 52.5 - Mudstone concretions	
						52.5 - 59.3 - Siltstone. Weak fractures	
						along C.A. @ 53.3m & 55.6m.	
						Bedding 87° TCA @ 57.5m.	
						Weak fracture 18° TCA @ 58.1 m.	
						59.3 - 65.0 - Mudstone. Zone of	
						concretions erratic throughout interval	
						becoming carbonaceous with weak	
						coal banding & lenses from 64.0 - 65.3	
						at 85° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-005

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL . DESCRIPTION LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	65.0	65.30				Coaly Mudstone: - Gradational contact into coal - Thinly banded at top of interval (<1.0 cm) with banding width and occurrence increasing toward base Banding at 85°-90° TCA. - Weak fracture 65° TCA near base	63.87 - 64.18
	65.30	65.65				Coal: No 1 Rider Weak fracture 35° TCA @ 65.40 m - 2 cm pyrite band - 65.55 m - Weak fractures sub-parallel to banding @ 80-90° TCA. - Calcite in very fine stringers @ 30° TCA.	64.18 - 64.47
	65.65	65.98				Coaly mudstone: - Top 4 cm of soft mud. - 7 cm. coal. - 22 cm interbedded coal & mudstone with coal content decreasing downsection - Weak fracturing. Relatively incompetent core 20-25 fractures/m. - Fracture angles 55-90° TCA. Calcite common on fractures:	64.47 - 64.79
	65.98	66.84				Mudstone: - Med dirty beige grey to green-grey. Strong fracturing in mudstone (soft) Fractures 7-30/m at 55°-60° TCA. Strongly deformed in basal portion of interval. Minor coal bands.	64.79 - 66.16
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-005

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	66.84	71.04				Coal: No. 1 Seam	66.16 -
						- Clean, blocky coal.	70.48
12	64.7	66.3	1.6	1.66	104%	- Fracturing @ 90° TCA	
13	66.3	68.8	2.5	2.06	82%	- 1.0 cm mudstone 66.89 m	
14	68.8	71.1	2.3	1.98	86%	- Weak fracture 25° TCA @ 68.8m.	
15	71.1	74.0	2.9	2.15	74%	- Bone coal 69.04 - 69.10	
16	74.0	76.5	2.5	2.94	118%	- Calcite in <1mm stringers	
17	76.5	78.4	1.9	1.9	100%	- Weak fracture 67° TCA @ 68.10m	
						- Calcite stringers along C.A. 69.1 - 70.1m	
						- Rubble at basal contact. Slickensides on rubble fragments	
	71.04	76.7				Mudstone:	70.48 -
						- Mudstone and silty mudstone	76.14
						- Upper 0.95m mod-strongly faulted with numerous fault (slip) planes at 60-65° TCA, 20-30° TCA @ 72.0-72.45m	
						- Red.-brown mottling @ 75.0 - 76.7m	
	76.7	78.4				Sandstone:	76.14 -
						Med. green, med-coarse grained, competent	77.8
						- Weak bedding @ 70-80° TCA (Crossbeds?)	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-006

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	60.2	62.96				Mudstone: Carbonaceous dark brown in top 1.5m. Basal section brown-green & green becoming silky	61.0
							63.7
(1)	60.2	63.2	3.0	2.48	83%		
(2)	63.2	64.5	1.3	1.85	142%	- Upper 1.25m with strongly developed fracture foliation. Strongly slickensided planes at 60-70° TCA. Fracturing decreasing in intensity downsection and altering to 90° & 60° TCA	
(3)	64.5	67.5	3.0	2.77	92%	- Basal portion, fractures @ 75-90° TCA. - Gradational basal contact	
	62.96	64.0				Siltstone: Mod-dark brown-green - Bedding 70° TCA @ 63.55m in banded silt and mudstone Weak fracturing 60-70° TCA throughout interval. Gradational basal contact.	63.7
							65.1
	64.0	64.98				Sandstone: Gradational in size and colour from med green, fine grained to light grey, coarse grained at base. Weak fracturing @ 64.3m, 35 & 50° TCA, 64.8m - 30 & 45° TCA. (Ruffle) - Weakly faulted basal contact with slickensides & calcite stringers @ 50° TCA.	65.1
							66.1
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-006

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION	TRUE DEPTH
	64.98	82.1				Interbedded Mudstone / Siltstone:	66.13
						- Entire interval of med to dark brown-green	83.2
						and grey-green interbedded silt & mudstone	
(4)	67.5	70.5	3.0	2.70	90%	with gradational contacts.	
(5)	70.5	73.2	2.7	3.04	113%	- Darker brown intervals generally with	
(6)	73.2	76.2	3.0	2.82	94%	coalified material.	
(7)	76.2	79.2	3.0	3.0	100%	- Fossil shell material throughout	
(8)	79.2	82.2	3.0	1.97	66%	- Weak fractures @ 66.7m - 75° TCA;	
						67.1m - 10+25° TCA; 68.4m - 50-70° TCA;	
						72.0m - 90° TCA with slickensides + 5cm rubble.	
						- Bedding 80° TCA - 71.2m; 80° TCA - 77.9m	
						- Fracturing 1-3/m. to 79.0m with	
						increased fracturing toward base of interval	
						79.0 - 80.56m - 12 fractures/m with	
						weak slickensides. Fractures 90° TCA.	
						80.56 - 82.1 - Increased coalified material	
						Moderate fracturing and fracture foliation	
						within top 1/2 of interval. Fractures	
						60°-70° TCA, >30/m.	
						- Basal 20 cm of med - light green-grey	
						mudstone. Slickensides on plane at 60° TCA.	
						- Rubble at basal contact.	
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	SEAM(S)

COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-006

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	82.1	85.00				Coal: Clean blocky coal at top of interval	83.3
						- Two 1cm mudstone partings within top	86.1
(9)	82.2	84.2	2.0	2.0	100%	20.cm.	
(10)	84.2	86.7	2.5	1.86	74%	- Weak fracture planes at 90° TCA and at:	
(11)	86.7	88.8	2.1	1.0	48%	83.04m - 70°; 83.18m - 50°; 83.24m - 70°; 83.6m - 55°	
						- Strongly fractured / sheared coal at 83.76 - 83.91m at 70-90° TCA; 83.91 - 84.97 at 70-90° TCA.	
						84.97 - 85.00 Rubbly local contact with mixed mudstone & coal.	
						- Calcite in hairline fractures and on cleat surfaces.	
	85.0	85.5				Mudstone: Med brown-green strongly	86.1
						sheared mudstone	86.6
						- Fracture foliation crudely aligned 70-90° TCA, also random orientation	
	85.5	89.05				Muddy Siltstone: Highly broken & fractured	86.6
						core in interbedded silt & mudstone.	90.2
						- Fracture angles:	
						85.6m - 40° TCA 86.9m - 40° TCA	
						85.8m - 70° 87.7 - 35°	
						86.2m - 55° 88.8 - 30°	
						86.4m - 40° 88.9 - 65°	
						86.8m - 55°	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	89.05	91.3				Sandstone: Med-dark green. Coarsening down-section.	90.2
						- Moderate fracturing. Slickensides on weak fracture at upper contact @ 23° TCA, and opposite direction @ 40° TCA.	92.4
						- Weak fractures 65° TCA – 90.0m; 77° TCA 90.7m	
						- Bedding @ base @ 75° TCA.	
	91.3	94.6				Conglomerate:	
						Volcanic pebble conglomerate	92.45
						- Clasts to 4.0 cm	95.15
						- Competent core	
						- 3mm calcite infill in fracture at 5–30° TCA @ 93.0m.	
12	88.8	91.0	2.2	2.09	95%		
13	91.0	94.0	3.0	3.0	100%		
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-007

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	52.8	68.1				Mudstone / Siltstone:	53.0
						- Overall dark brown-grey to grey with	67.4
(1)	52.8	55.9	3.1	3.01	97%	gradational contacts between mudstone	
(2)	55.9	58.9	3.0	2.21	74%	and siltstone.	
(3)	58.9	60.9	2.0	1.50	75%	- Pale beige-grey concretions erratically	
(4)	60.9	63.0	2.1	2.15	102%	dispersed through interval	
(5)	63.0	65.5	2.5	1.98	79%	- Shell fragments throughout	
(6)	65.5	68.0	2.5	2.76	110%	- 52.8 - 55.8 - Weak joint/fracture ≃ 0° TCA	
						- Bedding 80° TCA - 60.5m; 80° - 61.5m;	
						60° - 64.0m (salt sediment deformed?);	
						80° - 67.7m.	
						- Minor fractures generally bedding parallel	
						throughout interval.	
						- 66.6 - 68.1m - Basal section with thin (<2mm)	
						coal laminae, increasing within basal 10cm.	
						- Basal 10 cm - fractured along coal banding	
	68.1	68.44				Coaly Mudstone:	67.44
						Banded coal & mudstone. Coal: mudstone 10:90	67.7
						in upper 5cm (med-dark grey), increasing	
						to 20:80 toward base of interval	
						- Weak fracturing & slickensides along	
						banding @ 80° TCA. Coal bands @ 78° TCA	
						- 2cm pyrite band, 77° TCA - 68.34m.	
						- Basal contact sharp @ 77° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-007

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	68.44	68.90				Coal: No. 1 Rider	67.7
						- Solid, blocky coal	68.2
						- < 5 mm mudstone bands within top 15 cm.	
						- Bedding / banding @ 82° TCA.	
						- Minor mudstone bands within basal 5 cm.	
						- Calcite stringers < 1 mm along cleat surfaces sub-parallel TCA.	
	68.90	69.85				Mudstone / Coaly Mudstone:	68.23
						68.90 - 69.0 Med - light beige grey mudstone with coal lenses ≈ 90° TCA.	69.1
						69.0 - 69.23 - Med - light beige grey mudstone with little to no coal material - competent core	
						69.23 - 69.58 - Coaly mudstone. Coal bands increasing downsection. Fracturing increasing downsection	
						- Slickensides on fractures at:	
						Top contact — 75° TCA	
						Center section — 65° TCA	
						Basal contact — 65° TCA	
						69.58 - 69.85 - Mud. Unlithified mud band with slickensided shear fragments at top & bottom contact. Shearing at 65° - 80° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-007

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	69.85	72.92				Coal: No. 1 Seam	69.15
						Clean, brittle coal.	72.3
						- Minor mudstone laminae in upper 5.0 cm	
						- Weak fracture following C.A. (with or without calcite) in upper 2.0 m.	
						- Banding in coal @ 72° & 80° TCA.	
7	68.0	71.0	3.0	3.12	104%	- Bone Coal @ 71.18 - 71.26 (0.08m)	
8	71.0	74.0	3.0	2.83	94%	- Calcite stringers <0.5mm commonly	
9	74.0	77.0	3.0	2.63	88%	within 1-2 cm bands along bedding,	
10	77.0	79.7	2.7	2.99	111%	and also perpendicular from these bands.	
						72.01 - 72.92 - Moderate to strongly	
						fractured coal; 50° TCA near upper contact,	
						70° TCA @ 72.25m.	
						- Banding 70° TCA.	
						- Friable, muddy, sheared coal @	
						72.18m ± 75° TCA.	
						- Polished fractures @ 42° TCA - 72.60m	
						65° TCA - 72.75m	
						- Rubbly core near base.	
	72.92	73.0				Carbonaceous Mudstone:	72.3
						- Soft, sheared, foliated + friable	72.5
	73.0	73.6				Mudstone:	72.5
						Med. green-brown, med. to weakly	73.0
						fractured with slickensides.	
						- Fracturing 20° + 50° TCA near top of interval,	
						80° TCA @ 73.3m. Gradational contact	
						into siltstone. Rock competency increasing	
						with increased silt content.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-007

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	73.6	77.5				Siltstone:	73.0
						- Med-dark brown-green-grey	76.9
						- Muddy siltstone grading to fine grained sandstone at base of interval.	
						- Competent throughout	
						- Fracturing at high angle TCA - 70°-90°	
						- Rare, weak discontinuous slickensides on weak fault planes. (Generally in mudstone)	
	77.75	79.7				Sandstone:	76.9
						- Poorly sorted, med green	79.1
						- Grading from fine to very coarse grained at base of interval.	
						- Competent core	
						- Bedding @ 68-77° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-008

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	58.0	58.10				Mudstone:	58.40
						- Med beige-grey-brown with up to 1.0 cm coal bands	58.4
						- Banding & basal contact 80° TCA.	
						- Mudstone : Coal ; 80 : 20	
	58.10	58.17				Muddy Coal:	
						58.10 - 58.14 - Interlaminated coal bands and mudstone. Laminations <0.5 cm	58.48
						Coal: Mudstone 60:40	58.53
						58.14 - 58.17 Bone Coal.	
	58.17	58.77				Coal: No. 1 Rider	
						- Relatively competent coal.	58.53
						- Weak <0.5mm calcite stringers. Irregularly sub-parallel TCA. and along discrete beds, < 3 cm.	58.9
						- Banding / bedding @ 80° TCA.	
						- Minor pyrite on cleat surfaces	
	58.77	58.81				Carbonaceous Mudstone:	58.9
						- Minor coal bands	↑ Combin Interval
						- Gradational zone into mudstone.	
	58.81	59.44				Mudstone:	↓
						Gradational from light-med grey at top to increased carbonaceous material & dark brown colour.	59.5
						58.96 m - Weak slickensided fracture @ 70° & 80° TCA.	
						58.81 - Top contact - weak fracture / slicks	
						83° TCA (minor calcite)	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-008

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	58.81	59.44				Slickensides + calcite on fractures, commonly	
	(Cont'd)					parallel to banding @ 75°-85° TCA.	59.
						- Basal 10 cm of fracture foliated.	
						(90° TCA) mud.	
	59.44	62-8				Coal: No. 1 Seam	
						- 59.44 - 62.0 Blocky coal	59.52
						- Calcite in cleat and in weak fractures 0° TCA.	62.8
(1)	58.0	61.0	3.0	2.34	78%	- Weak fracturing along bedding/banding 80° TCA	
(2)	61.0	63.6	2.6	2.58	99%	- 61.17 - 61.22 Bone Coal	
(3)	63.6	66.5	2.9	2.82	97%	- 62.0 - 62.8 Strongly broken, very friable coal	
(4)	66.5	69.5	3.0	2.70	90%	Fracture/Polishing @ 45° TCA - 62.22m;	
(5)	69.5	72.3	2.8	2.97	106%	45° - 62.29m; 42° TCA - 62.42m.	
						- Broken core with calcite fragments	
						as stringers occupying 45° fractures	
	62-8	62-96				Muddy Coal:	
						- Highly broken core + carbonaceous mud.	
						- Coal: mud (± mudstone) 60:40	
	62.96	65.5				Mudstone:	
						- Med beige-grey	
						- Very weak fracturing, 38° TCA (typ 20 cm)	
						- Weak fracture foliation for 5cm @ 63.8m.	
						- Minor carbonaceous material	
						- Silty bands.	
						- Gradational basal contact	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-008

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CORE No.	CORE FOOTAGES: DRILLED FROM	DRILLED TO	DRILLED TOTAL	RECOVERED SECTION	RECOVERED TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	65.5	66.7				Siltstone: - Muddy siltstone - Similar in appearance to overlying mudstone, with increasing grit - Weak fracture foliation at 75° TCA at 65.9m	
	66.7	72.3				Sandstone: - Mod- dark green - Top well sorted, bottom poorly sorted. - Gradational, coarsening down interval into pebbly sandstone - Bedding 80° TCA. - Competent core	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-009

PAGE 1 OF 2

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	54.8	57.18				Coal: 54.8-55.1 - Relatively solid coal.	53.7c
						Fracturing, parallelling banding @ 87° TCA.	56.88
(1)	54.8	57.8	3.0	2.28	76%	55.0-55.06 m - Bone coal.	
(2)	57.8	60.3	2.5	1.69	68%	55.1-56.6 - Broken coal. Fractured sub-parallel	
(3)	60.3	61.8	1.5	1.51	101%	TCA & 20°-30° TCA. throughout interval	
(4)	61.8	62.8	1.0	0.95	95%	56.1-57.18: Relatively solid coal with	
(5)	62.8	64.9	2.1	2.22	106%	fractures parallelling banding @ 85° TCA.	
						- Minor 40.5 mm calcite stringers near base of interval	
						- Basal contact grading into muddy coal.	
							56.8
	57.18	57.37				Muddy Coal: Intensely shear fractured friable mudstone & coal. Fracturing 90° TCA.	57.07
						Coal: Mudstone 60:40	
						- Mudstone dominant at top of interval	
							57.0
	57.37	57.9				Mudstone: Strongly broken core	
						- Fracture foliation at top of interval ≈ 90° TCA.	57.6
						- Numerous slickensided planes, no preferred orientation	
	57.9	60.2				Interbedded Sandstone/Siltstone/Mudstone:	57.6
						- Med-dark green throughout.	59.9
						- Top of interval - sandstone with calcite in fractures at low angle TCA ≈ 10°-30° over 30-40 cm of sandstone.	
						- 58.5-59.5 m - Strongly fractured mudstone Fracturing 50° TCA with slickensides	
						- Rubbly core	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-009

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CORE No.	CORE FOOTAGES DRILLED FROM	DRILLED TO	DRILLED TOTAL	RECOVERED SECTION	RECOVERED TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR; SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	60.2	62.47				Interbedded Mudstone / Siltstone:	59.9
						- Green with red-brown mottling.	62.17
						- Similar to interval above, but more competent	
						- Distinguished by mottled colouring	
						- Fracturing weak @ ≈90° TCA.	
	62.47	64.9				Sandstone: Med. green	62.17
						- Grading from fine @ top of interval to coarse, pebbly at base.	64.1
						- Competent throughout.	
						- Bedding @ 85° TCA.	
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	-- SEAM(S)

COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-010

PAGE 1 OF 2

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	67.1	70.1				Coal: —	66.5
						No. 1 seam incomplete. Top unknown	70.0
						(From drillcore)	
						- Banded coal @ 80-85° TCA	
(1)	67.1	70.1	3.0	2.35	78%	- Fracture/jointing along banding	
(2)	70.1	72.6	2.5	2.37	95%	- Minor <0.5cm silt bands in	
(3)	72.6	73.7	1.1	1.18	107%	upper 0.5m.	
(4)	73.7	76.7	3.0	2.91	97%	- Weak <0.5mm calcite stringers along	
						C.A. (cleat?)	
						67.82-67.87 - Bone coal	
						- Weak fracturing @ 68.4m - 10° TCA.	
						68.77m - <0.5 mm calcite stringers	
						in weak fractures @ 35° TCA.	
						- Bedding/banding @ 80-85° TCA near	
						bottom of interval	Core Loss
						- Broken, friable core 69.82-69.92m	70.0-
						69.92-69.96 - Mudstone parting	70.4
						69.96-70.01 - Broken core, brittle coal.	
	70.86	72.0				Sandstone:	70.4-
						Med. grey, med. grained	73.1
						- Poorly sorted	
						- Minor carbonaceous material	
						- Silty bands	
						- Bedding near base of interval ≈ 80° TCA	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

Quinsam

COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-010

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	72.0	73.1				Silty Mudstone:	
						Med-dark grey to green-grey mudstone	
						grading into siltstone & fine sandstone	
						All weak fractures ≈ 80-90° TCA.	
	73.1	76.7				Sandstone:	73.1
						Medium-light fine to coarse grained	76.7
						-Coarser near base	
						-Moderate to well sorted.	
						-Competent Core	
						-Weak bedding variable from 75° - 90° TCA	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-011

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						Note: Hole cored in fault zone. Core fractured throughout. Calcite stringers common. Muddy gouge zones. Overall hole core recovery 68%.	
	74.7	89.9				Interbedded Mudstone / Siltstone:	74.0
						- Med.-dark green to grey-green.	89.4
						- Complete interval fractured / faulted at various orientations	
①	74.7	77.2	2.5	1.94	78%	- Dominant fracture / fault planes listed below.	
	77.2	79.9	2.7	2.30	85%	75.2m - 50° TCA	
	79.9	82.9	3.0	2.66	89%	76.0 - 15°	
	82.9	85.9	3.0	2.67	89%	76.5 - 13°	
	85.9	88.9	3.0	0.22	07%	77.7 - 15-20° - Fault Breccia	
	88.9	89.2	0.3	0.20	67%	78.6 - 60° ± 05°	
	89.2	92.2	3.0	2.0	67%	78.7 - 45°	
	92.2	94.4	2.2	1.72	78%	78.9 - 15° - Fault gouge	
	94.4	97.2	2.8	1.43	51%	79.2 - 35° - with calcite stringering	
	97.2	100.1	2.9	1.84	63%	79.7 - 35°	
	100.1	101.2	1.1	0.92	84%	80.1 45° - with 2mm calcite stringer	
						80.6 55°	
						80.1 - 83.0 - Sub-parallel TCA, or multiples of 10° - 15° TCA	
						80.6 - 80.9 - 50°-70°. Zone of multiple parallel fractures.	
						81.3 - 50°	
						81.8 - 50°	
						82.0 - 82.5 - 0-10° - with calcite veining	
						82.5 - 30°	
						83.0 - 60° (Cont'd.)	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-011

PAGE 2 OF 5

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	74.7	89.9				83.3m - 30° TCA	
	(cont'd.)					83.5 - 30°	
						83.9 - 15°	
						84.1 - 40°	
						84.6 - 15°	
						85.1 - 15°	
						85.2 - 50°	
						85.4 - 40°	
						85.7 - 25°	
						89.0 - 50°	
						89.4 - 45°	
						89.8 - 20°	
						89.9 - 20°	
						Bedding 74° TCA @ 82.7m	
	89.9	90.27				Coaly Mudstone:	89.4 -
						Interbedded coal & mudstone bands.	90.0
						Coal up to 1 cm, mudstone to 4 cm.	
						- Mudstone : Coal 70:30	
						- Fracture in upper section @ 20° TCA.	
						- Bedding at 65° TCA.	
	90.27	91.13				Coal: No. 1 Rider	90.0 -
						- Bedding / Banding @ 55° & 60° TCA.	90.7
						- Very prominent fracturing @ 25° TCA (pervasive)	
						- 1-2 cm pyrite band @ 90.54 m.	
						- Muddy coal at top and bottom of interval	
						- Rubble @ basal contact.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-011

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	91.13	91.3				Coaly Mudstone:	90.7 -
						Extremely fractured coal & mudstone rubble	90.9
						Coal: mudstone 10:90	
	91.3	92.57				Mudstone:	90.9 -
						- Med - light dirty green - grey	93.0
						- Strongly fractured throughout	
						- Calcite stringering (2mm) throughout	
						upper 10 cm of rubble. 2 cm calcite	
						veinlet @ 92.3 m	
						- Fractures @ random angles TCA. and	
						at: 92.0 m - 60° TCA.	
						92.2 m - 40° TCA	
						92.5 m - 55° TCA	
						92.55 m - 15° TCA	
						92.57 m - 66° TCA - Slickensides	
						Slickensides on mudstone & coal at rubbly base	
	92.57	94.94				Coal: #1 Seam	93.0
						- Sheared broken core throughout	94.51
						- Upper portion of seam more competent	
						than all overlying mudstone.	
						- Fracture @ 10° TCA with subsidiary	
						fractures @ 35° & 10° TCA from 92.6 - 93.3 m.	
						- Fracturing @ 48° TCA @ 92.60 m	
						12° TCA @ 93.50 m	
						- Shallow angle fractures 10-20° TCA from	
						93.8 - 94.94 m	
						(cont'd)	
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	92.57	94.94				- Extremely rubbly (ground?) coal from 94.1 - 94.5m.	
	(cont'd.)					- Weak calcite stringers <1mm width.	
						- Slickensides on fracture @ 94.5m — 90° TCA	
						- Banding/bedding @ 75° TCA — 94.5m	
						72° — 92.7m	
							94.51-
	94.94	95.10				Coaly Mudstone:	94.7
						Extremely sheared, friable	
						- Shear foliation ± 70° TCA	
						- Basal contact 50° TCA.	
							94.7-
	95.10	96.2				Mudstone:	95.8
						- Med. grey-brown at top of interval, med green-grey at base.	
						- Strongly shear foliated @ 50° TCA over top 25 cm.	
						- Very incompetent	
						- Silty bands slightly more competent	
						- Basal 30 cm strongly shear foliated at 70° TCA.	
						Later faults @ 45° TCA & 15° TCA.	
						- Basal contact @ 55° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-011

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	96.2	101.2				Sandstone / Siltstone / Mudstone:	95.8
						Interbedded units, strong to moderately	101.2
						fractured with fracturing increasing in	
						finer grained units.	
						- Med. grey-green (chlorite) coarse grained	
						sandstone to mudstone	
						Fracturing:	
						96.5 m — 70° TCA	
						97.64 60	
						97.83 40	
						98.0 45-50	
						98.2 45	
						98.4 38	
						98.5 40	
						99.5 50	
						100.3 45	
						101.1 25	
						- Weak hairline calcite stringers	
						- Bedding 65° TCA @ Top of interval	
						80° TCA @ Base of interval	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-012

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							7.90 -
	7.90	25.6				Sandstone:	25.7
						- Light grey, med. grained	
						- Generally massive	
(1)	7.90	10.3	2.4	2.27	114%	- Some crossbedding near top of interval	
(2)	10.3	13.2	2.9	3.04	105%	- Zones with darker silt laminae	
(3)	13.2	16.2	3.0	2.96	99%	generally towards base.	
(4)	16.2	19.2	3.0	3.0	100%	- Bioturbated zones (fine grained sandstone)	
(5)	19.2	22.2	3.0	2.92	97%	- Concretions and round, lighter coloured	
(6)	22.2	25.2	3.0	2.90	97%	sandstone balls in basal 6.0 m.	
						- Bedding 70° TCA - 8.8m	
						80° - 10.4	
						77° - 19.7	
						76° - 22.8	
						- Basal contact irregular & displaying	
						soft-sediment ball & pillow structure	
							25.7
	25.6	26.0				Gritty Carbonaceous Mudstone:	26.1
						- Dark brown mudstone with lighter sandy	
						grit in basal portion	
							26.1
	26.0	26.45				Coal: No. 2 Seam	26.5
						- Competent core with weak fractures	
						@ 20° & 30° TCA.	
						- Bedding / Banding @ 178° TCA	
						- Silt bands & mudstone bands increasing	
						towards upper & lower contact	
						- Basal contact @ 80° TCA	
						- Pyrite bands < 2mm, discontinuous	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM
COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-012
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	26.45	27.6				Mudstone / Coaly Mudstone:	26.45
						- Variable med. grey to dark brown::	27.7
						Colour dependent on carbonaceous (brown) content.	
						- Coal bands up to 1.0 cm @ 75° TCA.	
						- Minor calcite on bonding parallel fractures.	
						- Pyrite content 3-5% as nodules and	
						bands up to 1.0 cm.	
						- Pyrite band at 27.4 m	
						- Weak polished fracture @ 75° TCA @ 27.15m	
						- Gradational basal contact.	
	27.6	51.1				Interbedded Siltstone / Mudstone / Sandstone	27.7 -
						- Mudstone med. brown-grey	51.24
						- Siltstone / Sandstone light beige-grey	
						- Variably bedded from massive mudstone,	
(7)	25.2	28.2	3.0	2.83	94%	sandstone with weak bedding, bioturbated	
(8)	28.2	31.2	3.0	3.06	102%	and concretionary	
(9)	31.2	34.2	3.0	3.02	101%	- Shell fragments erratically dispersed	
(10)	34.2	37.2	3.0	3.0	100%	through interval, but commonly more	
(11)	37.2	40.2	3.0	2.96	99%	abundant in mudstone beds.	
(12)	40.2	43.2	3.0	2.83	94%	- Bedding 82° TCA - 32.3 m	
(13)	43.2	46.2	3.0	3.06	102%	83° - 34.3	
(14)	46.2	49.2	3.0	2.77	92%	82° - 51.0	
(15)	49.2	51.7	3.0	2.37	95%	- Rare, weak fracture - 43° TCA - 41.6m	
						- Basal 10 cm with gradational contact	
						from mudstone to coaly mudstone	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM
COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-012
PAGE 3 OF 5

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	51.1	51.6				Coal: No. 1 Rider	51.24
						- Coal broken throughout interval commonly along banding @ 75° TCA and 30° TCA	51.73
						- Numerous fractures @ 50° TCA.	
						- Muddy coal near top + bottom of interval	
						- Minor calcite along 50° TCA fractures and along cleat.	
						- Basal contact gradational over 5cm.	
	51.6	52.95				Mudstone:	51.73
						- Med. beige-grey with occasional coal bands + fragments.	53.18
						- Strongly fractured throughout	
						- Fracturing from top to bottom at:	
						50° TCA – 51.85m	
						60° – 51.9	
						40° – 52.1	
						68°, 50°, 70° } 52.45 – 52.50m	
						50° – 52.60	
						- Intensely fracture foliated from 52.25 – 52.40m @ 70° – 85° TCA. Very soft, friable core.	
						= 52.60 – 52.95 - Strong fracture foliation @ 75°–90° with 1cm mud bands. Very soft, friable core	
						- Basal contact – soft friable mudstone with foliated, broken, brittle coal	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-012

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	52.95	57.18				Coal: No. 1 Seam	53.18
						Overall coal is moderately broken through	57.23
						top 1.0m, becoming increasingly	
						competent towards the base.	
C16	51.7	54.7	3.0	2.81	94	- Clean, brittle to blocky coal with minor	
C17	54.7	57.7	3.0	2.85	95	Bone coal @ 54.85 - 54.87m.	
						Coaly mudstone @ 56.95 - 57.03	
						Blocky, soft, friable carbonaceous mudstone 55.96 -	
						56.03 m.	
						- Fractures in coal:	
						45° TCA - 53.1m	
						30° + 53.35	
						22° 53.45	
						50° 54.0	
						- Bedding / Banding @ 85° TCA - 55.8 m	
						85° - 54.45	
						87° - 56.35	
						85° - 56.90	
						- Fracturing along banding @ 54.5 & 57.18m	
						- Weak fracture 35° TCA @ 56.1 m.	
						- Weak < 1mm calcite stringering in basal	
						2.0 m. Commonly along C.A. in	
						cleat and weak fracturing.	
						- Sharp contact with basal mudstone	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-012

PAGE 5 OF 5

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
							57.23-
	57.18	62.0				Mudstone / Siltstone:	62.1
						- Med beige grey and green-grey	
						- Gradational contacts between units	
						- Minor coalified material in brown-grey carbonaceous mudstone.	
						- Upper contact weak slickensided fracture @ 75° TCA.	
						- Weak fracturing:	
						22° TCA - 57.6m	
						70° - 59.9	
						- Bedding crudely 80° TCA.	
							62.1-
	62.0	63.7				Mottled Siltstone / Mudstone:	63.8
						- Med-dark green siltstone and mudstone with red-brown mottling	
						- Gradational contacts	
						- Relatively competent core.	
(18)	57.7	60.7	3.0	2.98	99%	- Bedding 85° TCA - 63.2m	
(19)	60.7	63.7	3.0	3.01	100%	- Weak fracture 25° TCA - 63.3m.	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM
COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-013
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	96.6	96.7				Mudstone:	96-0
						- Med. - light beige - grey	96-89
						- Strongly fractured + slickensided in multiple directions with prominent plane @ 20° TCA.	
						- Rubbly contact with coal @ base.	
	96.7	100.49				Coal: No. 1 Seam.	96-89
						- Blocky, bright coal	100.29
						- Throughout interval coal broken into 5-10cm	
(1)	96.6	99.0	2.4	2.11	88	lengths. with fractures paralleling	
(2)	99.0	101.7	2.7	1.39	51	bedding / banding	
(3)	101.7	104.2	2.5	1.64	66	- Banding @: 87° TCA - 97.8m	
(4)	104.2	106.0	1.8	1.96	109	86° TCA - 98.4m	
						- Weak calcite in <1mm stringers commonly confined to 1-3cm zones paralleling banding.	
						- 1cm zones paralleling banding	
						- 1cm calcite in fracture infill @ 12° TCA @ 97.5m.	
						- Basal contact indistinct	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

Quinsam COAL LIMITED

COREHOLE LOG

HOLE NUMBER:	92-013
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CORE No.	DRILLED FROM	DRILLED TO	DRILLED TOTAL	RECOVERED SECTION	RECOVERED TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	100.49	106.0				Mudstone / Siltstone / Sandstone:	100.29
						- Gradationally interbedded units	106.0
						- Colour varying with lithology	
						mudstone - beige grey to beige-green	
						siltstone - green - grey	
						sandstone - medium green to beige	
						- Bedding approx. 85° @ 103.7m.	
						- Upper 15cm of strongly fractured	
						and slickensided mudstone	
						- Mudstone underlain by siltstone	
						- Upper 5cm of friable mud chips with	
						crude foliation ≃ 80° TCA.	
						- Core broken in 3-10 cm sections	
						- Weak fracturing:	
						50° TCA - 101.1m	
						50° - 102.9m	
						65° - 103.7m	
						- Minor carbonaceous material throughout	
						interval	

TOTALS			÷ x 100 = % REC. SEAM
			÷ x 100 = % TOTAL REC. SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-014

PAGE 1 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	99.4	102.26				Mudstone:	99.4
						- Med. brown-green with minor siltstone at top of interval.	101.90
						- Bedding 78° TCA @ 100.7m	
						- Weak fracture @ 38° TCA - 100.3m	
						- Core broken along bedding	
						- Basal 20 cm becoming increasingly carbonaceous. with coal bands up to 1.0 cm in basal 10 cm.	
						- Gradational contact	
	102.26	102.57				Coal: No. 1 Rider	101.90
						- Solid, blocky coal	102.40
						- Banding / bedding @ 75° & 80° TCA	
(1)	99.4	101.9	2.5	1.87	75%	- Thin, <1mm, mudstone bands	
(2)	101.9	104.4	2.5	2.51	100%	- Pyrite along cleat surfaces and as	
(3)	104.4	107.3	2.9	2.83	98%	a 1cm band at 102.43 m.	
						- Strongly slickensided basal contact @ 70° TCA.	
						102.47 - 102.51m :- Beige mudstone band, strongly slickensided	
	102.57	108.62				Mudstone:	
						Top 20 cm - gradational contact, coal to mudstone	102.40
						- Mudstone med-dark grey brown. Coalified material irregularly spaced throughout at random orientations. Coal up to 1.0 cm.	108.49
						- Weak bedding 78° TCA - 107.5 m	
						- Minor beige-grey concretions	
						- Single weak fracture with slickensides...	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-014

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						at 107.3m - 25° TCA.	
						- Basal 15 cm of strongly fractured foliated mudstone. Foliation 70° TCA	
	108.62	112.1				Coal: No. 1 Seam	108.49
						- Very solid, blocky coal	111.98
						- 1.0 cm bone coal @ 110.6m	
(4)	107.3	110.3	3.0	2.71	90%	- Broken upper contact	
(5)	110.3	113.3	3.0	2.88	96%	- Bedding/banding measured throughout interval at 83°, 80° & 82° TCA.	
(6)	113.3	116.3	3.0	2.90	97%	- Minor calcite along cleat surfaces and restricted to fine stockwork within discrete bands, all bands less than 5cm.	
						- Fracturing weak and restricted to bedding/banding surfaces.	
						111.90 - 111.97 - Mudstone - Light beige-grey and dark brown with thin coal laminae up to 1.0 mm.	
						111.97 - 112.10 - Muddy Coal, mudstone bands in coal.	
						Basal contact at 85-90° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-014

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	112.1	112.2				Coaly Mudstone:	111.98
						Interbedded coal & carbonaceous mudstone	112.07
						- Coal bands up to 5mm width	
						- Banding at 83° TCA.	
						Mudstone : Coal 80 : 20	
	112.2	113.1				Mudstone:	112.07
						- Med. beige-brown, soft.	112.97
						- weak slickensided fracture @ 25° TCA - 112.8m	
						- Minor carbonaceous material	
						- Gradational basal contact.	
	113.1	116.3				Siltstone / Sandstone:	112.97 -
						Interbedded siltstone and sandstone at top	116.3
						grading into poorly sorted, dirty sandstone at base.	
						- Med to dark brown-green	
						- Bedding measured @ 78° & 83° TCA.	
						- Weak fractures along bedding planes.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-015
PAGE 1 OF 2

South Pit (No. E-logs)

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	14.0	14.26				Mudstone:	
						- Mod grey with coal bands up to 2cm	
						- Banding 87° TCA.	
	14.26	16.5				Coal:	
						- Banded with numerous mudstone	
						lenses & bands in upper 30 cm.	
①	14.0	16.5	2.5	2.16	86%	- Banding @ 83° TCA.	
②	16.5	19.5	3.0	2.63	88%	- Pyrite common on cleat - up to 1%	
③	19.5	22.5	3.0	2.65	88%	- Calcite as fine stockwork, restricted	
						to bands up to 7cm. 1% calcite	
						within bands	
						- Bone coal 14.99-15.06m	
						- Weak fracturing sub-parallel TCA.	
	16.5	18.53				Coaly Mudstone:	
						- Interlaminated coal & mudstone bands.	
						- Coal bands up to 3cm thick, commonly	
						mm size.	
						- Coal : mudstone 35 : 65	
						- Banding @ 88° TCA, 83° TCA	
						- Weak slickensides on planes @ 70-85° TCA	
						near top of interval	
	18.53	18.87				Coal:	
						- Banded coal - 84° TCA	
						- Dull	
						- Calcite along bands as thin stockwork	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM
COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-015
PAGE 2 OF 2

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	18.87	19.00				Muddy Coal:	
						- Thinly banded, increased carbonaceous mudstone	
						- Gradation top & bottom contacts.	
	19.00	19.50				Coal:	
						- Banded, bright coal	
						- Fractured toward base with calcite on fractures	
						- Calcite as thin stockwork	
	19.50	19.73				Coaly Mudstone:	
						- Thinly banded dark brown-black coal & mudstone	
						- Banding 84° TCA. Coal bands to 4mm.	
						- Sharp basal contact.	
	19.73	21.07				Mudstone:	
						- Beige-grey with minor carbonaceous & coaly bands.	
						- 5cm carbonaceous mudstone at 20.0 - 20.05m	
	21.07	21.47				Coaly Mudstone:	
						- Carbonaceous mudstone with coal bands and laminae up to 2.0 cm. Bedding 86° TCA.	
						- Coal: Mudstone 35:65	
	21.47	22.5				Mudstone:	
						Beige-grey - minor coalified lenses, fragments & fine inclusions. Top 15cm gradational contact.	
						- Basal 20cm with increased carbonaceous material.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM
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COREHOLE LOG

HOLE NUMBER: 92-016
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South Pit: No E-Logs

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	2.8	10.65				Mudstone / Siltstone:	
						- Dark green-grey with thin bedding 90° TCA.	
						- Beige concretions, all < 15cm of cored interval	
						- Mudstone: Siltstone 20:80	
						- Basal 10 cm with coal bands & lenses at irregular orientations	
	10.65	10.81				Coal:	
						Banded, bright coal	
(1)	2.8	5.8	3.0	2.94	98%	- Top contact with interbedded light	
(2)	5.8	8.8	3.0	3.00	100%	grey mudstone.	
(3)	8.8	11.8	3.0	2.90	97%	- Pyrite on fracture surfaces	
(4)	11.8	14.8	3.0	2.97	99%	- < 1cm bone coal bands at top of interval	
						- Banding 86° TCA	
	10.81	10.88				Mudstone:	
						- Med. grey	
						- Sharp, broken upper & lower contacts	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-016
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	10.88	14.0				Coal:	
						- Bright, banded coal	
						11.3 - 11.46 - Bone coal	
						12.75 - 12.79 - Mudstone	
						12.92 - 12.97 Mudstone	
						- Pyrite on fracture & cleat surfaces	
	14.0	15.43				Muddy Coal: Basal Unit	
						- Variably banded coal and carbonaceous mudstone	
						- Coal: Mudstone 60:40	
						- Coal bands up to 5cm	
	15.43	16.1				Coaly Mudstone:	
						- Thin coal bands in carbonaceous mudstone	
						- Banding as lenses & laminae	
	16.1	16.8				Mudstone / Siltstone:	
						- Light beige-grey with minor coalified material	
						- Minor 7cm coal band at 16.3m	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-017
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	79.5	82.79				Coal: : No. 1 Seam	80.2-
						Clean, blocky	83.4
(1)	79.5	82.5	3.0	2.61	87%	81.06 - 81.09 Bone Coal	
(2)	82.5	85.5	3.0	2.66	89%	- Bedding / Banding 83° TCA.	
(3)	85.5	88.2	2.7	2.72	101%	- Weak fracture 45° TCA - 82.4m	
						27° - 82.5	
						- Friable, carbonaceous mudstone 82.45-82.50m	
						- Minor calcite on cleat & restricted to	
						bands up to 5 cm as a fine stockwork.	
						- Basal contact sharp with slickensides on	
						weak fault plane at 90° TCA.	
	82.79	85.7				Mudstone / Siltstone:	83.4-
						- Med. green-grey mudstone & siltstone	85.7
						- Gradationally interbedded with minor	
						sandstone.	
						- Weak fracturing @ 90° TCA, roughly	
						paralleling bedding	
						- Sandy, resistant concretions up to 5cm	
	85.7	88.2				Mudstone / Siltstone:	85.7
						- Similar to interval above but mottled	88.2
						red-brown colour	
						- Med-dark green & red-brown.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-018

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	80.9	81.17				Coal: No. 1 Rider	80.53
						Coal with < 2mm mudstone bands	81.18
						- Banding 84° TCA	
						- Pyrite on cleat	
						- Gradational basal contact	
	81.17	81.49				Mudstone:	81.18
						- Top 10 cm carbonaceous varying in colour from dark brown with coal lenses, downward into med-light beige grey.	81.64
						- Solid, unfractured	
						- Sharp basal contact, undulating and approx. 90° TCA.	
	81.49	81.53				Coal:	81.64
						- Narrow band with calcite ± pyrite stringers at random orientations	81.70
						- Sharp basal contact approx. 90° TCA with weak slickensides	
	81.53	81.63				Coaly Mudstone:	81.70
						- Dark brown-black mudstone with coal lenses and laminae throughout.	81.83
						- Coal: Mudstone 15:85	
						- Banding at 85° TCA.	
						- Slickensides on fault plane ≈ 65° TCA.	
						- Broken basal contact.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-018

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	81.63	85.86				Coal: No. 1 Seam	81.83
						Blocky, hard coal.	85.93
①	80.9	83.9	3.0	2.87	96%	- Banding at top of interval @ 85° TCA.	
②	83.9	86.9	3.0	2.48	83%	- Weak fracture 10° TCA @ 83.5m	
③	86.9	90.0	3.1	3.12	101%	- Calcite stringering commonly along cleat.	
						84.59 - 84.89 - Mudstone parting - Med-dark brown, very friable with strong fracture foliation at 50° TCA.	
						- Broken upper contact.	
						- Basal contact ≈ 90° TCA.	
						- From mudstone parting to bottom of seam fracturing increases.	
						- Fracturing at 65° - 75° TCA.	
						85.31 - 85.48 Carbonaceous mudstone. fractured at 65° - 75° TCA.	
						- Broken basal contact	
	85.86	89.3				Siltstone:	85.93 - 89.4
						- Dominantly med. green-grey siltstone	
						- Top 15cm of beige-grey mudstone, grading into siltstone	
						- Minor Sandstone, fine grained, with light. beige concretions < 5cm.	
						- Weak fractures @ 38° TCA - 87.84-88.1m	
						- Bedding 82° TCA - 88.1m	
	89.3	90.0				Mudstone:	89.4 - 90.0
						- Soft, med. brown-grey, slightly red-brown.	
						- Minor carbonaceous material	
						- Relatively featureless.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM
COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-019
PAGE 1 OF 2

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	82.2	82.32				Mudstone:	82.7
						- Broken interval with dark green-grey mudstone with carbonaceous + oaly bands	83.04
						- Fragments all with slickensides or polishing on fracture surfaces.	
	82.32	85.04				Coal: No. 1 Seam	83.04
						Hard, blocky coal	86.28
						- Fractured + slickensided in preferred direction over entire interval	
(1)	82.2	85.2	3.0	2.04	68%	- Calcite infill on some fracture surfaces	
(2)	85.2	87.7	2.5	1.82	73%	- Calcite rarely on cleat ends as a fine stockwork in discrete bedding parallel bands.	
(3)	87.7	90.2	2.5	2.53	101%		
(4)	90.2	93.2	3.0	2.98	99%		
						Fracturing:	
						50° TCA - 82.35m 73° - 83.5 m	
						60° - 82.7 50° - 83.6	
						55° - 82.81 60° - 83.9	
						55° - 82.9 65° - 84.1	
						18° - 83.05 62° - 84.15	
						76° - 83.2 65° - 84.5	
						- Bedding / Banding @ 76°, 73° + 75° TCA.	
						- Bone Coal at 83.68 - 83.72m.	
						Core loss	84.93
							85.68
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM
COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-019
PAGE 2 OF 2

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	85.04	91.20				Mudstone / Siltstone / Sandstone: Interbedded with gradational contacts over the entire interval. Overall med. green to med-dark green / green-grey and beige	86.28
						85.04 - 85.6 Soft, friable med. beige-brown mudstone with carbonaceous material - bedding 75° TCA.	91.20
						85.6 - 89.3 - Siltstone, fine grained sandstone with minor mudstone bands.	
						89.3 - 90.3 - Sandstone - med to fine grained with minor beige concretion zones.	
						90.3 - 91.20 - < 5cm interbedded dark green-brown soft mudstone and sandstone / siltstone. Weak fracture 60° TCA - 90.3 m - slickensides	
						Minor carbonaceous material	
	91.20	93.2				Mudstone / Siltstone / Sandstone	91.2
						- Similar to interval above, but mottled colour.	93.2
						- Base colour medium green-grey with red-brown mottling to completely red-brown colour.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM
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COREHOLE LOG

HOLE NUMBER: 92-020
PAGE 1 OF 2

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	83.2	83.3				Coal: No. 1 Rider	82.92
						Strongly banded, dirty coal.	83.72
						- Brown mudstone bands 10%	
						- Pyrite bands 15%	
						- Bright, brittle coal 75%	
						- Minor calcite on cleat.	
						- Banding ≈ 90° TCA.	
	83.3	84.5				Mudstone:	
						83.3 - 83.35 - Gradational carbonaceous mud with coal bands.	83.72
						83.35 - 84.4 - Med. beige-grey mudstone minor carbonaceous +/or coaly bands.	84.57
						84.4 - 84.5 Mud - beige-grey unconsolidated	
	84.5	86.4				Coal: No. 1 Seam	84.57
						Top 5cm of broken coal, remainder of interval comprised of solid, blocky coal.	88.16
(1)	83.2	86.2	3.0	2.83	94%	- Bedding @ 87° TCA - 85.3m	
(2)	86.2	88.4	2.2	1.63	74%	86° - 85.9m	
						- Weak fracturing 13° TCA - 85.1m	
						30° - 86.1m	
						- Minor calcite on cleat + as fine stockwork in discrete bands ∠4cm.	
						- 85.2m - 1cm Bone coal band	
						- Basal contact broken + gradational into friable, carbonaceous mudstone.	
						Note: True depth includes mudstone and coal intervals below	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-020
PAGE 2 OF 2

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	86.4	87.3				Mudstone:	87.21
						- Med. grey - brown, minor silt.	87.77
(3)	88.4	91.0	2.6	2.53	97%	- Minor coal bands & discontinuous lenses	
(4)	91.0	93.9	2.9	3.08	103%	< 5mm.	
						- Weak fractures 80° & 30° TCA.	
						- Basal contact 85° TCA with	
						2 cm carbonaceous mudstone	
	87.3	87.90				Coal:	
						- Well banded, blocky	87.77
						87.50 - 87.54 - Mudstone - pale beige - grey	88.16
						- Bedding at 85° TCA on mudstone/coal contact.	
						- Sharp basal contact	
	87.90	91.35				Mudstone / Siltstone / Sandstone:	88.16
						- Gradational contacts between all	91.35
						interbedded units.	
						- Overall med. green - gray to drab brown - grey	
						87.90 - 88.20 Mudstone with decreasing	
						carbonaceous content downsection	
						88.20 - 91.35 - Siltstone / Sandstone with	
						minor mudstone. Lighter beige - grey concretions.	
						Bedding 80° TCA in Sandstone.	
	91.35	93.9				Mudstone / Siltstone / Sandstone:	91.35
						- Similar to unit above but red-brown	93.90
						mottling at top of interval, disappearing	
						down-interval into med.-green	
						Sandstone with beige concretions	
	TOTALS						

÷ x 100 = % REC. SEAM

÷ x 100 = % TOTAL REC. SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-021

PAGE 1 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	121.3	128.9				Mudstone:	
						- Dark green-grey - minor silty zones	
						- Coalified material in upper 2.0m.	
						- Commonly fractured at 80-90° TCA. along bedding	
						- Minor beige-grey, lighter coloured concretions in top 1.5m.	
						- Bedding indistinct but appears ≈ 90° TCA	
						- Few fractures in upper 6.0m.	
						- Basal 15cm with interbanded mudstone and coal bands up to 1cm. Banding a 78° TCA.	
						- Basal 1.5m with numerous weak fractures along bedding	
	128.9	129.28				Coal: No 1 Rider	
						- Banded coal at top & bottom of interval	
						- Banding @ 79° & 73°	
						- Strongly broken core in center of interval	
(1)	121.3	124.3	3.0	2.54	85%		
(2)	124.3	127.0	2.7	2.57	95%	- Calcite veining on fracture surfaces 45° TCA.	
(3)	127.0	130.0	3.0	3.0	100%	- 3cm mudstone band within top 10cm	
						- Thin calcite stockwork along 4cm band at base of interval	
						- Slickensides with pyrite and calcite on surfaces.	
						- Basal contact along carbonaceous mudstone 71° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-021

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	129.28	132.47				Mudstone:	
						-Upper 10 cm - gradational contact with coal.	
						- Carbonaceous mudstone with <2mm coal lenses.	
						- Med. brown-grey with minor coal bands	
						- Fracturing across core common @ 75°-90° TCA, at 13-15 fractures/m	
						- Basal contact unknown. ≈ 90°-fractured	
	132.47	136.0				Coal: No. 1 Seam	
						- Solid blocky coal over upper 3.0 m.	
(4)	130.0	133.0	3.0	2.87	96%	- Basal 0.5m of fractured, friable coal	
(5)	133.0	136.0	3.0	2.63	88%	- Fracturing ≈ 90° TCA.	
						- Mudstone partings @ 134.09 - 134.16	
						135.42 - 135.51	
						- Bone coal (1cm.) - 134.88m	
						- Banding in coal @ 90°, 84° & 86° TCA.	
						- Very weak fracture over entire core length at 0°~10° TCA. Minor calcite along fracture.	
						- Calcite as hairline fracture infill and as small <1mm stringers within discrete bands.	
						- Single fracture @ 134.7m - 20° TCA.	
						- Basal section fracturing >30 fractures/m all along bedding ≈ 90° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-021

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	136.0	138.8				Mudstone / Siltstone / Sandstone:	
						Top 0.75m highly broken with numerous fracture directions. Weak slickensides & minor calcite.	
						- Fracture directions of 40° 43° & 45° TCA	
						- Grading rapidly into siltstone & sandstone	
						- Green, med. grained sandstone with beige concretions.	
						- Bedding 85° TCA. in sandstone / siltstone	
						- Siltstone & sandstone relatively competent.	
	138.8	141.5				Mottled Mudstone / Siltstone / Sandstone:	
						- Similar to above unit but mottled red-brown colour on green base	
						- Minor beige concretions.	
(6)	136.0	138.8	2.8	2.36	84%		
(7)	138.8	141.5	2.7	2.36	87%		
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-022
PAGE 1 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	76.7	77.54				Coal: No. 3 Seam	76.60-
						-Banded coal	77.67
						-Numerous, thin mudstone lenses and laminae	
①	76.7	79.7	3.0	2.92	97%		
②	79.7	82.7	3.0	3.0	100%	- Pyrite as replacement in lenses up to 1 cm width and along bedding planes. Pyrite content 3-5%	
③	82.7	85.7	3.0	2.98	99%		
						- Bone Coal 76.90 - 76.90	
						- Banding at 83° TCA.	
						- Upper 1/2 of interval fractured in 2-5 cm. blocks. Fracturing parallel to banding	
						- Sharp basal contact ≈ 90° TCA	
						- Minor calcite in narrow < 1mm stringers	
	77.54	77.84				Carbonaceous Mudstone:	77.67
						-Dark grey-brown	78.20
						- Minor coal laminae	
						- Pyrite band over basal 3 cm.	
						- 25% Pyrite	
						- Weak fracture along banding at 83° TCA.	
	77.84	78.52				Coal:	78.20
						Dirty, blocky coal	78.79
						-Bone coal 78.03 - 78.08m	
						-Numerous calcite stringers in bottom 1/2 of interval, bounded within discrete beds.	
						-Pyrite as thin < 1mm laminae + as concentrations up to 1 x 2 cm. -Pyrite 3-5%. Banding 80° TCA.	
						Basal contact @ coaly mudstone, sharp contact.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-022
PAGE 2 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	78.52	79.98				Carbonaceous Mudstone:	78.79
						Dark brown, with thin, <5mm coal laminae	79.98
						- Laminae / bedding @ 81° TCA	
						- Pyrite common throughout interval as lenses, thin laminae and fracture fill.	
						- Pyrite 3-5%	
						- Fracturing along bedding plane.	
	79.98	80.08				Coal:	79.98
						- Dirty, banded coal	80.10
						Mudstone: Coal 30:70	
						- Banding 80° TCA.	
	80.08	80.50				Carbonaceous Sandstone:	80.10
						- White med. grained sandstone mixed with fine grained carbonaceous material	80.70
						- Carbonaceous, wispy bands, sub-parallel to bedding	
						- Basal contact sharp @ 80° TCA	
	80.5	81.12				Coal:	80.70
						- Banded, dirty coal	81.30
						- Coal: Mudstone 90:10	
						- Banding commonly 5mm	
						- Pyrite in bands, on fractures and as a single lens 7cm x 3cm.	
						- Calcite as thin stringers on fractures, cleat & as a fine stockwork in beds to 2.0cm.	
						- Single weak fracture 23° TCA.	
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	SEAM(S)

1.46
0.1
0.42
0.62

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COREHOLE LOG

HOLE NUMBER: 92-022
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CORE No.	CORE FOOTAGES DRILLED FROM	DRILLED TO	DRILLED TOTAL	RECOVERED SECTION	RECOVERED TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	81.12	81.4				Carbonaceous Mudstone:	81.30
						- Dark brown	81.58
						- Minor coal bands	
						- Pyrite in upper 10 cm 30%	
						- Gradational basal contact.	
	81.4	85.7				Sandstone:	
						- Upper 0.8 m. gradational zone with decreasing carbonaceous content grading into well sorted light grey, med grained sandstone.	81.58 - 85.88
						- Bedding obscured by bio-turbation from 82.7 - 83.5m.	
						- Thin silty laminae 83° TCA - 83.8m	
						- Minor irregular carbonaceous laminae	
	124.7	134.4				Conglomerate:	
						- Med. green conglomerate & coarse grained	124.7
(4)	124.7	126.2	1.5	0.9	60%	sandstone	134.4
(5)	126.2	128.4	2.2	2.69	122%	- Dominantly pebble conglomerate with clasts	
(6)	128.4	131.4	3.0	3.05	102%	up to 3cm. Modal size ≈ 1.5cm.	
(7)	131.4	134.4	3.0	2.95	98%	- Green colour from chlorite altered	
						volcanics.	
						- Fracturing weak along C.A. at	
						125.0m & 133.4m.	
						- Bedding in sandstone units at 75° & 80° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-623
PAGE 1 OF 4

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	56.6	71.2				Mudstone / Siltstone:	57.6
						- Whole interval - dark green or brown-grey	72.2
						with minor lighter concretions and	
						minor carbonaceous zones. Mudstone:	
①	56.6	58.1	1.5	1.31	87%	Siltstone, 80:20	
②	58.1	61.1	3.0	3.03	101%	56.6 - 57.1 Carbonaceous mudstone - dark brown	
③	61.1	64.1	3.0	2.91	97%	with minor coalified material	
④	64.1	67.1	3.0	3.04	101%	- Bedding poorly preserved 75° - 80° TCA	
⑤	67.1	70.1	3.0	2.98	99%	83° TCA @ 62.5m	
						- Mudstone intervals, soft with increased	
						fracturing along bedding	
						- Shell material dispersed throughout	
						- 70.1 - 71.20 - Coalified material and	
						thin bands increasing downsection.	
						Fracturing increasing through interval,	
						commonly 80-85° TCA. > 30 fractures/m	
						in basal section	
						- Minor calcite stringers within 10 cm	
						section 65.0 - 65.1m at 90° & 50° TCA.	
	71.2	71.35				Coaly Mudstone:	72.2
						- Interbedded mudstone, dark grey with	72.40
						coal bands and lenses.	
						- Coal: Mudstone 15:85	
						- Banding 81° TCA	
						- Basal contact is slickensided	
						plane @ 73° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-023

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	71.35	71.94				Coal: No. 1 Rider	
						- Coal moderately fractured	72.40
						- Upper 20 cm with calcite common	72.85
						on cleat + fracturing	
(6)	70.1	73.1	3.0	2.54	85%	- 1-2 cm pyrite band 86° TCA @ 71.5m	
(7)	73.1	76.1	3.0	1.61	54%	- Single fracture with slickensides at	
						71.55 m @ 35° TCA. Minor calcite	
						- Weak banding 85° TCA	
						- Polished fracture with mudstone along	
						plane @ 70° TCA	
						- Basal contact broken with polished	
						fault/fracture surfaces (bedding plane	
						slip ≃ 78° TCA)	
	71.94	73.3				Mudstone:	72.85
						- Moderately fractured	74.3
						- med. brown - grey	
						- Carbonaceous + coalified material	
						- Slickensides, polishing and calcite on	
						planes at variable orientations	
						- Preserved weak fault planes	
						at: 60°, 49°, 55°, 40°, 63°	

TOTALS			÷ x 100 = % REC.	SEAM
			÷ x 100 = % TOTAL REC.	SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-023
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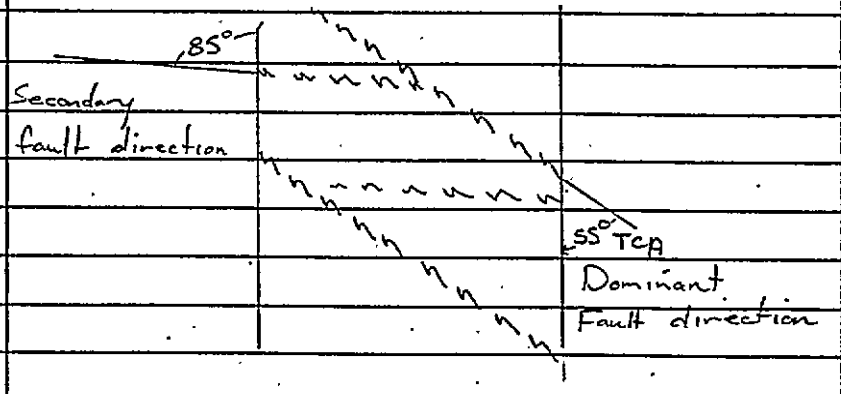
CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	73.3	75.8				Faulted Mudstone:	74.3
						Intensely fractured &/or fracture foliated	76.8
						- med. grey-brown:	
						- Fracture foliation 57°, 29°, 65° TCA	
						- 74.4-74.7 - Zone of intense fracture foliation - 65°, 80°, 55°. Major fault direction appears to be 55-65° TCA with subsidiary direction 80-90° TCA	
						- Very friable core	
						- Whole interval highly broken.	
							
	75.8	78.5				Mudstone / Siltstone:	76.8
						- Dark green-grey. Mudstone grading to siltstone near base	79.5
						- Light beige concretions and beige shell fragments &/or burrows. Minor carbonaceous material.	
						- Top of interval strongly broken core	
						- Weak fracture 40° TCA - 76.3m	
						- Bedding ≈ 83° TCA.	
						- Very incompetent when wet.	
						- Rubbly core at base of interval	
						- Weak fracture 35° TCA @ 77.5m	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-023
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	78.5	80.9				Mottled Siltstone:	79.5-
						- Dominantly dark-med green siltstone and	81.9
						lesser sandstone.	
(8)	76.1	78.5	2.4	2.02	84%	- Dark red-brown mottling throughout interval	
(9)	78.5	81.5	3.0	2.52	84%	- Weak fracture with slickensides 30° TCA - 79.2m	
(10)	81.5	84.5	3.0	3.08	103%	- Weak fracture sub-parallel TCA 79.25 - 79.6m	
						- Minor rubble zones with slickensides on	
						fragments @ 79.6m & 80.0m	
						- Weak slickensides on plane @ 55° TCA - 80.3m	
						- Multi-direction weak slickensided	
						planes @ 80.6m	
	80.9	82.8				Sandstone:	81.9-
						- Fine to coarse grained. Fining upward.	83.8
						- Dark green at top to light green at base.	
						- Irregularly bedded from 70°-90° TCA with	
						silty and carbonaceous material. Irregular,	
						coalified material	
						- Bedding 80° TCA at silt band - 82.7m	
	82.8	84.5				Conglomerate:	83.8-
						- Med. green.	85.5
						- Clasts up to 5cm.	
						- Volcanic clasts cemented with calcite.	
						- Chloritized volcanics	
						- Sandstone at base of interval	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-024

PAGE 1 OF 4

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						- Attempt to core No. 3 Seam	
	48.0	69.0				Sandstone:	48.0
						- Dominantly med. grained, light grey	69.0
						- Relatively massive	
(1)	48.0	51.0	3.0	3.0	100%	- Silty, carbonaceous zone - minor coalified	
(2)	51.0	54.0	3.0	2.9	97%	material from 52.1 - 53.1 Coalified	
(3)	54.0	57.0	3.0	3.08	103%	material (rootlets) for 30 cm below.	
(4)	57.0	60.0	3.0	3.00	100%	- Coarse sand to pebbly sand 59.0 - 60.5m,	
(5)	60.0	63.0	3.0	3.01	100%	62.5 - 63.1m, 63.5 - 65.0m.	
(6)	63.0	66.0	3.0	3.00	100%	- Basal 4.0m sandstone becoming	
(7)	66.0	69.0	3.0	3.01	100%	increasingly green (chlorite?)	
						- Bedding 85° TCA - 55.8m	
						84° 64.0m.	
						78° 65.8m.	
						Crossbedding in basal 3.0m.	
						Coring on No. 1 Seam.	
	99.0	106.43				Mudstone:	99.0
						Dark brown - minor pale beige concretions	107.15
						- Weakly fractured at 80° - 90° TCA	
						along bedding (?)	
						- Bedding poorly defined	
						- Basal 20 cm with minor coalified	
						material	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM
COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-024
PAGE 2 OF 4

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	106.43	106.6				Muddy Coal:	107.15
						-Interbedded mudstone & coal 40:60	107.49
						- Banding 86° TCA	
						-Weak calcite on bedding / weak fracture surfaces	
	106.6	107.07				Coal: No. 1 Rider	107.49
						-Blocky, banded pyritic coal.	108.10
(8)	99.0	101.0	2.0	1.92	96%	-Heavy concentration of pyrite as	
(9)	101.0	104.0	3.0	3.0	100%	aggregates up to 6x3 cm, Massive	
(10)	104.0	107.0	3.0	2.59	86%	pyrite and along fracture & cleat surfaces. Pyrite 5%	
						- Banding 87° TCA	
						- Basal contact broken with thin core foliations in basal mudstone	
	107.07	109.10				Mudstone:	108.1-
						Med. beige-grey	110.32
						-Carbonaceous & coaly material throughout.	
						-Coal lenses at 80° TCA	
						- Very weak fracture @ 107.55m 63° TCA	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM
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COREHOLE LOG

HOLE NUMBER: 92-024
PAGE 3 OF 4

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	109.10	112.65				Coal: No. 1 Seam	
						- Relatively competent, blocky, banded coal	110.32
						- Top contact is broken, but appears sharp.	114.27
(11)	107.0	110.0	3.0	2.29	76%	- Banding / bedding	
(12)	110.0	112.6	2.6	2.40	92%	86° TCA - 109.15m	
(13)	112.6	115.6	3.0	2.37	79%	85° - 111.0	
(14)	115.6	118.6	3.0	3.0	100%	86° - 112.2	
						- Calcite common as fracture / cleat infill ± along C.A. and as fine stockwork of stringers < 1.0 mm concentrated in bands up to 1.0 cm.	
						112.02 - 112.07 - Mudstone	
						110.77 - 110.81 - Bone Coal	
						- Fracturing weak throughout interval	
						109.2 - 110.2 - Fracturing sub-parallel and at 10° TCA	
						- Basal contact - broken core	
	112.65	113.6				Mudstone:	114.27
						- Med. - dark brown - grey	115.2
						- Strongly fractured in upper 30 cm.	
						- Slickensides on fragment surfaces.	
						- Single weak plane with slickensides at 38° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

Quinsam
COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-024
PAGE 4 OF 4

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	113.6	118.6				Siltstone / Mudstone:	115.2
						- Dark green to grey-green	120.2
						- Gradational contacts into either unit.	
						- Light beige-grey concretions	
						- Top 30 cm with beige concretions +/or burrows	
						- Weak bedding poorly defined 82° TCA	
						- Mudstone with minor organic + coalified material	
						- Minor sand bands.	
						- Very weak fracturing, bedding parallel in mudstone.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-025

PAGE 1 OF 4

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	117.7	125.3				Sandstone:	118.35
						- Light to med. grey & med. green-grey	125.95
						- 4 2cm silt bands throughout interval. Dark grey-brown.	
						- Coarse to fine grained, dominantly med-fine grained	
①	117.7	120.0	3.0	2.40	80%	- Minor coalified material (rootlets, sticks)	
②	120.0	123.0	3.0	3.02	101%	- Moderately sorted.	
③	123.0	126.0	3.0	3.02	101%	- Bedding throughout interval at:	
						118.3 m — 70° TCA	
						118.8 — 80°	
						119.0 — 82°	
						119.5 — 83°	
						121 — 85°	
						122.7 — 62°	
						124.6 — 85°	
						125.0 — 80°	
						- Weak faults with slickensides ± calcite infill at:	
						120.4 - 35° TCA - calcite	
						121.9 - 15° — "	
						122.0 - 43° — "	
						122.1 - 48° — "	
						122.2 - 28° — "	
						123.2 - 5°-10° — —	
						Gradational basal contact	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-025
PAGE 2 OF 4.

CORE No.	CORE FOOTAGES DRILLED FROM	DRILLED TO	DRILLED TOTAL	RECOVERED SECTION	RECOVERED TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	125.3	126.5				Siltstone:	125.95
						- Med. - dark green - grey with lighter beige concretions and darker carbonaceous mud / siltstone zones.	127.15
						- Indistinct bedding.	
	126.5	127.93				Mudstone:	127.15
						- Med. - dark grey - brown	128.68
						- Minor, hard beige concretions up to 6 cm.	
						- Relatively competent	
						- Basal 30 cm. - Weakly faulted & polished at 55°, 65° & 25° TCA.	
	127.93	130.98				Coal: No. 1 Seam	128.68
						- Bright, blocky coal.	131.63
						- Faulting across coal, prominent but not strong.	
						- Faulting: 128.06m - 59° TCA - Minor calcite	
(4)	126.0	129.0	3.0	2.94	98%	129.23 - 32° - Weak slickensides	
(5)	129.0	132.0	3.0	2.70	90%	129.52, 129.62 - 35° - Parallel faults	
						130.20 - } Multiple faults (4)	
						130.45 } between 40°-45° TCA.	
						- Banding in Coal 84° TCA - 128.42m, 85° - 129.73m	
						- Bone Coal 129.21 - 121.29m, 129.70 (1cm) 85° TCA	
						- Mudstone 130.10m (2cm)	
						- Very friable mudstone and coal 130.62 - 130.73m.	
						- Weak, fine calcite as stockwork bounded within bands and zones up to 15 cm. Most prominent at top & bottom of interval. (Cont'd.)	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM (S)	

Quinsam
COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-025
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	127.93	130.98				- Minor mudstone laminae in basal 25 cm. < 0.5cm.	
	(cont'd.)					- Slickensides & polishing on planes at basal contact.	
						- Basal 30 cm strongly broken along bedding 84°-86° TCA.	
	130.98	131.1				Coaly Mudstone:	131.63
						Strongly fractured & polished coaly & carbonaceous mudstone.	132.0
						- Fracturing / faulting at 80° & 83° TCA. and also at erratic orientations	
	131.1	134.0				Muddy Siltstone	132.0
						- Variably muddy. Med-dark green-grey	134.65
(6)	132.0	135.0	3.0	2.86	95%	mudstone & siltstone	
(7)	135.0	136.7	1.7	1.7	100%	- Minor beige concretions up to 10cm.	
						- Top 70 cm. of med. brown-grey mudstone - relatively incompetent with erratic orientation, polished faults at 80° TCA near coaly mudstone and 30-60° TCA faults at 131.72m.	
						- Siltstone intervals relatively competent	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-025

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	134.0	136.7				Mottled Siltstone / Sandstone:	134.65
						- Red-brown mottling of med-dark green muddy siltstone and sandstone	136.7
						- Poorly defined bedding	
						- Very coarse grained to pebbly sandstone band from 135.3 to 135.45m	
						- Muddy zones most prominently mottled	
						- Relatively competent in sand & silt	
						- Mudstone fractures easily when dried	
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-026

PAGE 1 OF 6

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE
	35.0	49.60				Sandstone	
						Depths are true depths	
	35.0	38.0	3.0	2.88		35.0 - 40.3 - Light grey to light green-grey	
	38.0	40.6	2.6	2.56		· Medium grained to coarse grained with	
	40.6	43.6	3.0	3.0		gradational contacts. Sandstone dominantly	
	43.6	46.6	3.0	2.98		quartz. Minor chlorite and silt. Bedding	
	46.6	49.6	3.0	2.99		at 35.0m - 80° TCA. Competent core. Weak	
	49.6	52.6	3.0	2.29		fracture, 33° TCA at 37.1m - no apparent movement	
	52.6	55.1	2.5	2.36		40.3 - 40.43 - Silty mudstone - dark brown -	
	55.1	58.1	3.0	3.02		black. Top contact 80° TCA. Weak fracture	
						sub-parallel TCA	
						40.43 - 49.60 Sandstone - light grey, coarse	
						grained. Minor clasts to 5mm. Competent	
						core throughout interval. Weak fracturing	
						15° TCA at 43.9m, 0-5° TCA @ 44.0 - 44.6m	
	Note: Depth blocks in					30° TCA @ 46.5m (Very minor Calcite), 33° TCA	
	core boxes and photographs					@ 47.65m.	
	are incorrect. Interval					- Bedding along mudstone band 75° TCA @ 49.45m	
	from 43.6 to 49.6					Note: All fractures indicate little to no movement	
	should be 43.6 to 46.6					- Basal contact with coal indicates lenses of	
	and continuing down-					sandstone, mudstone and soft sediment	
	hole in runs indicated					deformation above No. 3 seam	
	above.					Fractures along laminae at 75-80° TCA.	
						48.9 - 49.6m - 6 fractures laminae parallel	
						49.65 - 48.9 - 4 fractures laminae parallel	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-026

PAGE 2 OF 6

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	49.60	55.10				Coal · No. 3 Seam	
	49.60	49.93				Core Loss	
	49.93	50.02				-Rubbly coal with minor mudstone. Fragments show weak fault polishing	
	50.02	50.19				- Dirty Coal · Top 6cm. with 3-5% Pyrite 1-2% Calcite. Bedding / Polished fracture at 80° TCA 50.08 - 50.13 Muddy coal 50.13 - 50.19 Coal - brittle, strong cleat.	
	50.19	50.25				Sandstone - irregular soft-sediment deformed sandstone and coal.	
	50.25	50.37				Coal - very pyritic with massive to wispy pyrite up to 20% in relatively clean coal. Polished contacts at 75° TCA	
	50.37	50.60				Core Loss 0.13 m	
	50.60	51.15				Coal - Weakly banded, brittle, bright coal Banding 68° TCA - Polished surfaces paralleling banding · Random & irregular polished surfaces throughout interval · Pyrite & Calcite on cleat & fractures <0.5%.	
	51.15	51.20				Sandstone & Bone Coal Top 3cm gradational contact from Bone coal to sandstone - Sandstone med. grained, light grey - Contact at 60° TCA - Bedding	
TOTALS						÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-026

PAGE 3. OF 6

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	(49.63	55.10)	(Cont'd.)			No. 3 Seam	
	51.20	51.27				..) - Coal - Banded coal, with banding becoming contorted near base. Polished slip surfaces with minor pyrite & calcite. Pyrite & calcite on cleat surfaces.	
	51.27	51.30	.03			..) - Bone Coal - highly contorted sandstone/coal. Weak fault at base at 65° TCA with <1mm calcite stringers	
	51.30	51.41	0.11			..) - Banded coal - numerous slips along banding at 77° TCA	
	51.41	51.49	.08			Sandstone & bone coal Rapid gradational contact into med. grained S.S. Basal contact 73° TCA	
	51.49	51.95	0.46			..) - Coal - banded, bright clean coal. Pyrite on cleat throughout interval <0.5% - Banding at 75° TCA. Pyrite rarely as 2mm lenses. Minor calcite on cleat and as "net" texture as <0.5mm stringers near top 5.0cm & 25 cm & 30cm down the interval.	
	51.95	52.06	(0.11)			..) Bone Coal - Muddy and silty - friable foliated coal/silt	
	52.06	52.13	(0.07)			..) Sandstone - Bone coal Disturbed sandstone with coal laminae	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-026

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	(49.60	55.10)	Cont'd)			No. 3 Seam	
	52.13	52.38	(.25)			Core Loss 0.25m	
	52.38	52.70	(.32)			Muddy Coal	
						- Weakly banded coal. Banding with silt and mudstone component	
						- Banding + weak, polished slips at 80° TCA.	
						Mud + Silt : Coal 20 : 80	
						- Basal contact gradational into Bone Coal 77° TCA	
	52.70	52.79	(.09)			Sandstone - Med-coarse grained, light grey with minor carbonaceous material	
						Sharp contacts - Basal @ 75° TCA	
	52.79	53.09	(.30)			52.79 - 53.05 Dirty Coal Minor 2mm mud bands in upper 5cm	
						53.05 - 53.06 Bone Coal	
						53.06 - 53.09 Coal	
		53.09				53.07 - 53.09 Silty Coal - gradational contact.	
	53.09	53.83	(.74)			Sandstone.	
						- Med-fine grained with carbonaceous laminae & fragments in light grey sandstone	
						Top + bottom contacts with interbedded and distorted bedding laminae of sandstone + silty-mudstone (carbonaceous)	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-026

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	(49.60	55.10	Cont'd)			No 3 Seam	
	53.83	54.09				Coal weakly banded coal - 78-80° TCA	
						- Prominent but weak fracturing @ 17° TCA	
						with minor calcite on fracture surfaces	
	54.09	54.15				Bone Coal - Sandstone	
						Interlaminated coal lenses & sandstone	
						lenses up to 1cm. (coal)	
						Sandstone - 2cm lenses Coal: SS. 20:80	
	54.15	54.30				Bone Coal	
						- Banded sandstone & coal.	
						Coal: Sandstone 60:40	
						Banding at 80° TCA.	
	54.30	54.53				Sandstone	
						Med-fine grained light grey	
						minor carbonaceous lenses & laminae, all	
						< 1mm. Basal Contact undulating 73° TCA.	
	54.53	54.78				Coal	
						- weakly banded coal. Banding 82° TCA	
						- 1cm Bone coal @ 5cm below Top contact.	
	54.78	54.84				Core loss	
	54.84	54.88				Bone Coal -	
						Interbedded sandstone & coal lenses. Sandstone	
						with carbonaceous component	
						Basal contact @ 76° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-026

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	(49.60	55.10	Cont'd)			No. 3 Seam	
	54.88	54.94				Sandstone - light grey with carbonaceous lenses	
	54.94	55.00				Core Loss 0.06	
	55.00	55.16				Dirty Coal	
						Top 4cm = Bone Coal	
						Basal section = Coal.	
						Interval moderately broken	
	55.1	55.5				Siltstone	
						Dark grey - brown	
						Muddy - siltstone with coal laminae	
						at top of interval. Grading into	
						siltstone, then sandstone at base	
	55.5	56.2				Sandstone	
						Fine - grained, light grey sandstone	
						with minor, <0.5cm carbonaceous	
						laminae	
	56.2	56.6				Siltstone	
						Variably muddy to sandy med brown	
						grey siltstone. Disturbed bedding	
	56.6	58.1				Sandstone	
						- Light grey - grading from fine to	
						medium grained. Top = bioturbated	
						base = bedded at 72-78° TCA.	
						58.1 E.O.H.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-028
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	68.8	70.9				Sandstone	68.6-
						Light grey sandstone with numerous	70.7
	68.8	71.0	2.2	2.2		interbeds of dark grey-brown mudstone,	
						carbonaceous mudstone and minor	
						coal.	
						4cm coal band at 69.1 m	
						7cm coal band at 69.9 m	
						Bedding: 77° TCA @ 70.0 m	
						73° TCA @ 70.4 m	
						83° TCA @ 70.5 m	
						Numerous soft sediment deformation structures	
						- Minor 2mm calcite filled slip @ 69.6m	
						25° TCA. Weak slips along bedding	
	70.9	71.26				Coal (0.36)	70.70-
						- Dirty coal band with increased grit	71.06
						material near base of interval	
						- Pyrite 3-5% as 1cm x 0.3cm	
						aggregates (Banding parallel)	
						- < 1mm calcite stringers at ± 5° TCA	
						Calcite < 1%	
						- Interbedded sandstone and coal at basal	
						contact	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-028
PAGE 2 OF 6

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							71.06-
	71.26	92.4				Sandstone	92.2
						Massive light grey med- coarse grained sandstone	
	71.0	74.0	3.0	2.93		sandstone	
	74.0	77.0	3.0	2.90		- Generally weakly bedded	
	77.0	80.0	3.0	3.14		- Minor coarse grained intervals	
	80.0	83.0	3.0	2.98		77.5 - 80.0	
	83.0	86.0	3.0	2.94		83.5 - 85.3	
	86.0	89.0	3.0	3.10		86.3 - 91.0	
	89.0	92.0	3.0	2.84		- Bedding 80° TCA @ 74.3 m	
	92.0	95.0	3.0	2.95		80° " @ 74.9 m	
	95.0	98.0	3.0	2.83		85° " @ 81.4 m	
						73° " @ 85.0 m	
						75° " @ 91.0 m	
						Sandstone very competent commonly	
						< 1 fractures / m	
						Weak to moderately fractured	
						from 88.0 - 89.8	
							92.2-
	92.4	94.87				Sandstone	94.67
						Similar to unit above, but increased	
						fracturing.	
						Fracturing 26° TCA @ 92.4 m 2x 25° TCA @ 93.5m	
						50° - 92.8 40° - 93.7	
						28° - 93.0 65° - 94.0	
						17° - 93.4 26° - 94.1	
						- 3cm Pyrite Band with 30° - 94.3	
						carbonaceous sandstone ± coaly 80° - 94.4	
						material and 1-3cm calcite 15° - 94.6	
						vein at 93.95 m.	
						- Fractures show little to no movements	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-028
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						Note: True depths recorded to Hole bottom from top of No. 3 Seam Coal. # 3 Seam	
	98.0	101.0	3.0	2.77			
	(94.67	101.01)	—	—	—		
						Note: Only intersected widths are recorded	
						Top of seam at 94.67	
	94.67	94.87				0 - 20 (20cm) - Coal - banded coal with	
	94.87	94.93	Core	loss	(6cm)	weak calcite stringers < 1mm at 25° TCA	
						in fracturing. Calcite < 0.5%	
						Pyrite in small clusters < 3mm	
						Bone coal band from 7.0 - 8.0 cm	
						95.0 Metre block	
	94.93	95.01				20 - 28 (8 cm) - Coal - banded at 78° TCA	
	95.01	95.08	Core	loss	(7cm)	- Gritty bands	
	95.08	95.17				28 - 37 (9 cm) Sandstone light grey	
						Sandstone and black carbonaceous material	
	95.17	95.64				37 - 84 (47cm) Coal top 13 cm of	
						mod. broken coal. Strong fracture 25° TCA.	
						- Pyrite along poorly developed banding	
						and as aggregates up to 30 x 40 mm	
						- Very minor calcite as < 0.5mm stringers	
						(all < 0.5%)	
						- Basal contact 75° TCA.	
	95.64	95.80				84 - 100 (16cm) Sandstone - light grey	
						med - coarse grained - minor carbonaceous	
						material	
	95.80	96.66				100 - 180 (80cm) Coal	
						2cm Bone Coal (115 - 117cm)	
						- Minor pyrite (< 0.5%) on cleat surfaces	
						- Calcite "net" stringer zone (147 - 151cm)	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-028

PAGE 4 OF 6

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	94.78	97.8				100-180 (80cm) Coal (cont'd)	
	(cont'd.)					- Coal banded at 80° TCA.	
						- Total calcite = < 0.25%	
	96.6	96.72				180-192 (12cm) Sandstone / Siltstone	
						Black-brown carbonaceous siltstone interbedded	
						with light grey, med-coarse grained	
						sandstone. Soft sediment deformed.	
	96.72	97.62				192-284 (90cm) Coal	
						- Numerous Siltstone / Sandstone	
						Partings.	
						From	
					96	76-89 200 - 204 (4cm) Soft sediment deformed	
						Sandstone	
					77	210 - 211 (1cm) Bone	
						217 - 218 (1cm) Bone	
						229 - 231 (3cm) Bone	
						242 - 246 (4cm) Bone	
						251 - 253 (2cm) Bone	
						255 - 256 (1cm) Bone	
						273 - 274 (1cm) Bone	
						Bedding / Banding 77° TCA @ 220cm (78)	
						78° TCA @ 270cm (78)	
						Very minor calcite stringers	
						- Weak, polished slips along bedding	
	97.62	97.82				284 302 (20cm) Sandstone	
						Med grained, med-light grey. Minor	
						carbonaceous material + < 1cm coal	
						interbeds @ top. Bedding 68° TCA	
						— 98.0 m. block.	
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-028

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	97.82	99.62				Sandstone (1.8)	
						Med. grained, med. to light grey, weakly bedded. Moderately broken along bedding.	
						Minor carbonaceous and silty laminae.	
						Bedding 74° TCA near base of interval	
						(coal band)	
	99.62	100.02				Coal. (0.4)	
						Weakly banded coal.	
						- Very fine calcite in cleat? @ ∠10° TCA	
						- Calcite - trace amount	
						- Weak fracturing @ 25° TCA.	
						- Bottom 15 cm with interbeds (1-3cm)	
						of light grey silt/sand.	
						- Basal contact 78° TCA.	
	100.02	100.52				Sandstone (0.5)	
						Light grey med grained sandstone with	
						coal lenses and inclusions	
	100.52	100.83				Coal. (0.3)	
						Bright, brittle coal. Banded @ 77° TCA.	
						Minor pyrite on cleat surfaces.	
						- Minor Bone coal band, 1cm at 100.66-100.67	
	100.83	100.97				Sandstone (0.1) - light grey med grained	
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-028

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	100.92	101.01	0.09			Coal 0.09	
						- Coal band - with stringer calcite throughout in cleat & fractures	
	101.0	104.0	3.0	2.95		Calcite 1%	
			(1.69)			1.69	
	101.01	102.70				Siltstone / Sandstone / mudstone med - dark brown - grey interbedded and disturbed bedding siltstone / sandstone with minor mudstone and lesser carbonaceous zones. Moderately competent. Single fracture @ 21° TCA at 102.6m Gradational basal contact	
	102.70	104.0				Sandstone 1.14	
	1.30					med - light grey fine grained sandstone. Thin mudstone laminae Bedding 81° TCA @ 103.3m Weakly fractured in top 30cm of unit	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-029

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	75.5	76.9				Sandstone	75.4
						Med. grey, medium to coarse grained.	76.8
	75.5	77.3	1.8	1.53		Top 2cm - clean, lower section numerous carbonaceous laminae, leases & fragments	
						76.0m - 4cm - Coly mudstone band	
						76.65 - 10cm Coal and mudstone interbedded	
						band Basal 5cm with increased	
						carbonaceous material in sandstone	
	76.9 G.C.	77.4				Coal	76.8
						Dirty banded seam - Silt/Sand and	77.3
						mudstone interbeds. Gritty bone coal	
						in basal 10 cm. Banding 81° TCA.	
						- Pyrite in clusters - sub-parallel to banding	
						in aggregates up to 2cm x 0.5cm	
						- Coal is bright & bright.	
						- Basal contact gradational into sandstone	
	77.4	99.97				Sandstone	77.3
						Light grey, medium to coarse grained	99.13
						Variably massive with weak bedding to	
						moderately bedded.	
						Bedding 81° TCA at 80.2 m	
						80° 88.1 m	
						82° 90.0 m	
						84° 96.6 m	
						(Con'd.)	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-029

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	77.4	99.63				Sandstone	77.3 - 99.63
	(Cont'd.)					Sandstone composition dominantly quartz with minor dark chert clasts. Calcite cement.	
						- Dominantly competent core with minor zones of weak fracturing:	
						- 82.15 - 82.95 - Strongly fractured @ 2E/m along bedding ≈ 80° TCA	
						- 84.4 - 85.0 - Strongly fractured (as above)	
						85.2 - Weak fracture ≈ 0-5° TCA	
						95.6 - Fracture with minor calcite (no movement) ≈ 0-5° TCA.	
						95.8 - 97.4 - Competent core	
						97.4 - 99.2 - Strongly broken core due to weak fracturing of shallow angle to core axis 0-10° and 20° TCA. ± calcite	
						98.0 - 98.15 - Very carbonaceous grit with heavy calcite stringering @ 80° TCA. Pyrite in clusters + aggregates up to 7 x 3 cm.	
						- Weak slicks at bottom contact (parallels bedding)	
						- Minor calcite fracture infill < 0.2cm and bedding parallel stringers < 0.2cm	
						- Basal contact with coal 70° TCA	
	99.63	99.77				Core Loss (0.14m)	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-029

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	99.77	102.90				Coal # 3 Seam	True Depths in Coal Recorded in Geological Description
				0.05 (.05)		99.77 - 99.82 - Coal - Weak fault ± Soft sediment centering of basal contact < 2mm calcite stringers along bedding all < 1%	
				0.06 (.06)		99.82 - 99.88 - Sandstone - light grey, med grained, numerous carbonaceous laminae	
				0.18 (.18)		99.88 - 100.06 - Coal - Bright banded coal. Banding 78° TCA. Pyrite < 0.5% on Banding slip planes + along banding Minor < 1mm calcite stringers along C.A. fracture	
				0.14 (.14cm)		100.06 - 100.20 Sandstone - light grey med grained with numerous carbonaceous laminae + coalified material Contacts at 75° - 85°	
				0.53 (.53)		100.20 - 100.73 Coal - Banded coal with gritty intervals common. Bone Coal @ 100.24 < 1cm 100.29 - 100.31 100.50 - 100.51 Banding @ 80° TCA. Pyrite along banding near base of interval (all < 1%)	
				0.08		100.73 - 100.81 Sandstone Mid grey med grained. Carbonaceous laminae + fragments	
				0.16		100.81 - 100.97 Coal - Pr. dul. cloan coal. Banding 85° TCA. Pyrite as clusters along banding near base of interval. Undulating basal contact	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-029

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	99.77	102.90		0.06		100.97 – 101.03 Sandstone (as before)	
				0.33		101.03 – 101.36 Coal - Clean, bright, banded Pyrite < 0.5% in cleat and along banding Single 1cm bone coal 101.17 – 101.18	
				0.14		Core loss 0.10 m 101.36 – 101.46	
				0.21		101.46 – 101.67 Coal - Weakly banded Increased calcite as < 0.5mm stringers on fractures (weak) at 10-15° TCA and on preferred beds as a fine "net" texture. Minor < 0.5% Pyrite Basal contact ≈ 85° TCA	
				0.05		101.67 – 101.72 Siltstone - light beige-grey. fine grained - fault polished irregular basal contact	
				0.23		101.72 – 101.95 Gritty Coal. Coal with numerous gritty sand/coal bands. Coal : Sand 95:5 Weak, polished fault slips 71° TCA @ 101.81m and 15° TCA @ 101.96 m	
				0.47		101.95 102.42 Coal - Bright, banded coal. Very weak calcite stringers < 0.25mm sub-parallel TCA. Pyrite in aggregates along bedding + on cleat surfaces < 1%	
				0.10		102.92 102.52 - Sandstone - Med grained, light grey with contorted lenses & laminae of coaly material	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-029

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	102.52	102.85		0.33		Coal - Banded coal. Very minor calcite on cleat surfaces. Basal 7.0 cm with numerous bone coal (grit) interbands. Gradational basal contact	
	102.85 (1.12)	103.97		1.12		Sandstone Light grey, med. to coarse grained. - Bedding as minor carbonaceous laminae & thin f.g. sandstone interbeds at 85° TCA. Gradational upper & lower contacts with increased coaly & carbonaceous material toward contacts.	
	103.97 (0.26)	104.23		0.26		Coal - Bright banded coal, broken upper contact. Weak calcite on cleat fractures at c-10° TCA. Trace pyrite on banding & fractures (cleat). Weak fracture 25° TCA at base of interval	
	104.23 (0.47)	104.70		0.47		Sandstone Fine grained, light grey with numerous coaly bands. Sandstone : Coal 90:10	
						104.37 - 104.43 - Coal	
						104.5 - 104.55 - Coal	
						104.70 - 104.72 - Coal	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-029

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	104.70	105.17		0.47		Coal - Bright, banded coal. Minor calcite on <0.5mm fractures at 0-10° TCA. Pyrite on cleat surfaces <0.5% Sandstone parting 104.99 - 105.07 m	
	105.17 (0.38)	105.55		0.38		Mudstone Med to dark grey-brown Minor coal bands up to 2cm. Gradational basal contact into f.g. Sandstone	
	105.55	106.45		0.9		Sandstone Light grey, grading from fine grained at top of interval to med grained down section. Minor coalified material and lenses, occassionally at steep angles TCA. Bedding 80° TCA Competent core throughout.	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-030

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTANINATION.)	TRUE DEPTH
	90.8	98.59				Sandstone	90.8-
						Light grey med to coarse grained, quartz	98.59
	90.8	93.8	3.0	2.78		clasts. Moderate to weakly bedded	
	93.8	95.6	1.8	1.81		- Minor calcite stringers commonly at 80-90°	
						TCA (Bedding) & rarely at moderate to	
						low angle. All stringers < 2-3 mm width.	
						Bedding 85° TCA @ 91.7m	
						75° TCA @ 94.5m	
						78° TCA @ 96.7 m	
						78° TCA @ 98.0 m & carbonaceous material	
						Broken core with calcite and slickensides	
						at 97.4m.	
						Wavy, polished fault plane 68° TCA @ 98.4m.	
						Contact with coal below slightly	
						gradational over 15 cm	
	98.59					Coal # 3 Seam	
	95.6	98.6	3.0	2.93			98.59-
				.01		98.59 - 98.60 - Coal	
				.10		98.60 - 98.70 - Core loss 10 cm.	True
				.51		98.70 - 99.21 Coal.	Depths
						Dirty coal with numerous bony sandstone	of Coal
						partings. 98.76 - 98.82 - Gritty Coal	are
						98.82 - 98.84 - Bone Coal	recorded
						99.02 - 99.03 - Bone	in
						Banding in coal 72° TCA	Geological
							Descriptn
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-030

CORE No.	CORE FOOTAGES					GEOLOGICAL DESCRIPTION	TRUE DEPTH
	DRILLED			RECOVERED		LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	
	FROM	TO	TOTAL	SECTION	TOTAL		
				.06		99.21 - 99.27 Sandstone light beige-grey, med. grained with carbonaceous inclusions.	
				.09		99.27 - 99.36 Dirty Coal - Gritty Coal with minor pyrite and calcite on cleat surfaces	
				0.41		99.36 - 99.77 Sandstone with coal interbands - Beige-grey, med. grained s.s. with coal bands and inclusions. Coal bands from 99.42 - 99.46 m, 99.65 - 99.71 m.	
				.30		99.77 - 100.07 30.0 cm Core loss.	
				.39		100.07 - 100.46 - Coal - Upper 20 cm of broken, banded coal. Minor, weak faulted fragments (65°TCA) Minor Calcite and pyrite on cleat surfaces. Sharp basal contact	
				.27		100.46 - 100.73 Sandstone with minor Coal. Upper contact sharp at 75° TCA 100.46 - 100.51 - Distinct Sandstone band 100.51 - 100.73 - Soft sediment highly deformed coal & sandstone	
				0.58		100.73 - 101.31 - Coal Coal with numerous sand/bone coal bands. Coal weakly fractured sub-parallel TCA. with minor calcite ± Pyrite all < 1% Bone coal/sand 100.78 - 100.79, 100.93 - 100.96, 101.07 - 101.09. Banding 82° TCA @ 101.2m	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
						101.31 - 101.40	
	101.31	101.40		0.09		Sandstone - Med. grained, beige grey with carbonaceous laminae / lenses + fine silty material. Bedding distorted	
	101.40	101.47		0.07		101.40 - 101.47 Coal - Banded dirty coal with thin (< 0.5cm) mudstone bands and grit bands. Banding 77° TCA	
						101.60 - Block	
	101.47	101.73		0.26		101.60 - 101.86 - Coal - Upper 10cm	
	101.47	101.73				with numerous, very thin < 0.5mm calcite stringers in cleat + fractures. Minor pyrite on fractures. Fractures sub-parallel TCA. 101.76 - 101.86 = Gritty coal - dispersed Sand	
	101.73	102.94		1.21		Sandstone	
	101.73	102.94				Med. grained, beige-grey sandstone. Minor carbonaceous inclusions @ top of interval Wkly bedded @ 85° TCA. Sharp basal contact 75° TCA.	
	102.94	103.21		0.27		Coal	
	102.94	103.21				- Dirty, banded coal. Banding 80° TCA	
						- Minor calcite in < 1mm fractures @ 10° TCA	
						- Minor pyrite	
						- Gradational basal contact	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	103.21	103.97		0.76		Sandstone	
	103.21	103.97				Sandstone with minor coal bands	
						Sandstone med. beige-grey, med. grained	
						with minor coalified material	
						Coal bands @ 103.5 - 103.56m,	
						103.61 - 103.63, 103.96 - 103.97	
	103.97	104.22		0.25		Coal.	
	103.97	104.22				Dirty coal with minor sand-bony bands.	
						- Bone coal 104.18 - 104.20	
						- Banding @ 82° TCA	
						- Minor < 1mm calcite filled fractures	
	104.22	104.47		0.25		Sandstone	
	104.22	104.47				Dirty - med grey sandstone with carbonaceous	
						inclusions + coal laminae + lenses	
						Coal at base of sandstone (base of N. 3 Seam)	
	104.47	105.77		1.3		Mudstone	
	104.47	105.77				Dark grey - brown mudstone with carbonaceous	
						inclusions and coal bands	
						- Coal bands @ 104.60 - 104.65	
						104.90 - 104.95	
						Gradational basal contact.	
	105.77	106.07		0.3		Sandstone	
	105.77	106.07				Gradational contact from fine grained	
						carbonaceous sandstone, down section into	
						clean, coarse grained light grey sandstone	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-030

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	106.07	107.22		1.15		Interbedded Mudstone and Siltstone - Mudstone dark grey-brown Top 30 cm of mudstone with sandstone "ball & pillow" structures - Gradational into 30 cm f.g. sandstone - Basal unit composed of mudstone & siltstone	
	107.22	109.97		2.75		Sandstone - Coarse grained, light grey sandstone with minor carbonaceous laminae - Bedding variable from 75°-85° in x-bedded units - Thin 2mm calcite stringers along crude bedding - Competent throughout. Fractures = parting along bedding laminae	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-031 A
PAGE 1 OF 6

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	71.0	77.60				Sandstone	
						Light grey to green-grey. Med. grained	
	Note:	All Drilled	footages			- Generally massive. Also with soft	
	are	true depth.				sediment deformation - identified	
						by silty and carbonaceous bands	
						and inclusions	
						- Weak bedding 65° TCA @ 71.6m	
						65° TCA @ 73.0m	
						76°+73° TCA @ 76.0m	
						72° TCA @ 76.5m	
						- Core commonly breaks along carbonaceous	
						laminae & lenses	
						- Minor calcite infilled fractures < 3mm	
						Fractures ≈ 5-13° TCA @ 73.5-74.5m	
						80° TCA @ 74.5-74.8m	
						28° TCA @ 75.8m	
						23° TCA @ 76.8m	
						07° TCA @ 77.0-77.4m	
						Calcite stringer concentration paralleling	
						bedding from 75.3-75.8m.	
						and 76.5-80.0m	
						* - Carbonaceous sandstone with	
						calcite stringers & pyrite	
						from 75.95-76.01, 73° TCA.	
						(* Marker horizon) Pyrite band 1.5cm	
						at top of marker	
						Basal 35cm strongly silt sediment deformed	
						& coaly inclusions as disturbed lenses.	
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-031 A

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	77.60	77.80		0.20		Coal Banded coal with thin <0.5mm calcite filled fractures sub-parallel TCA. Calcite <0.5% Pyrite as thin 1-2mm x 5cm lenses along bedding	
	77.80	77.95		0.15		CORE LOSS	
	77.95	78.32		0.37		Sandstone Dirty, light grey med. grained. Carbonaceous and coaly lenses & laminae - Strong fracture with calcite at 12° TCA.	
	78.32	79.15		0.83		Dirty Coal Strongly broken & faulted interbedded coal, gritty coal and sandstone 78.17 - 78.30 - Coal & calcite on fractures and along bonding 78.30 - 78.34 - Sandstone with carbonaceous material 78.34 - 78.45 - Sheared coal - strongly polished, friable coal 78.45 - 78.49 - Distorted sandstone & coal 78.49 - 78.53 - Coal 78.53 - 78.59 - Sandstone 78.59 - 78.64 - Coal - Fault polished 78.64 - 78.68 - Sandstone 78.68 - 79.0 - Coal - Strongly broken, friable, faultpolished coal. Calcite < 0.5% on fracture surfaces	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-031 A

PAGE 3 OF 6

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	79.15	80.25		1.10		Sandstone	
						Upper 30 cm - with coal + carbonaceous content high, decreasing to relatively clean sand towards bottom of interval	
						- Coal bands 79.04 - 79.09m, 79.11 - 79.15m	
						- Bedding 79° TCA	
						- Weak fracture 25° TCA	
						- Basal contact 83° TCA	
	80.25	80.36		0.11		Coal	
						Dirty, banded coal. Minor calcite in fractures sub-parallel TCA.	
						- Pyrite in < 3mm width lenses along bedding. Bedding 83° TCA	
						Silty top + bottom contact	
	80.36	80.41		0.05		Sandstone	
						Med. grained dirty, carbonaceous	
	80.41	80.88		0.47		Coal	
						- Banded coal. 84° TCA.	
						- Weak grit zones - Weak bone coal	
						- Calcite in < 0.5mm stringers as "net" stockwork and along fractures sub-parallel TCA. Calcite < 0.5%	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-031A
PAGE 4 OF 6

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	80.88	80.91		0.03		Mudstone Mod beige-grey mudstone	
	80.91	81.16		0.25		Dirty Coal Interbedded Coal, sandstone & gritty Coal. Coal : Sandstone : Gritty Sandstone 50 : 20 : 30	
	81.16	81.92		0.76		Coal Weakly banded coal with minor bone coal (sandstone bands) at 81.10 - 81.11 80.42 (1cm), 81.70 (1cm.) Banding @ 85° TCA. - Competent, blocky coal - Becoming gritty near basal contact.	
	81.92	82.88		0.96		Sandstone - Upper 15 cm with coalified lenses/laminae - Basal 30 cm " " " " - Med. grained beige-grey	
	82.88	83.10		0.22		Coal. - Weakly gradational upper contact. - Blocky coal. Fractures sub-parallel TCA with calcite + pyrite. - Bone Coal 1cm @ 82.82 m - Banding at 80° TCA - Distorted basal contact	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-031A

PAGE 5 OF 6

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	83.10	83.49		0.39		Interbedded Coal + Sandstone	
						Upper contact weakly gradational with 1-2cm mudstone	
						82.95 - 83.07 - Sandstone with coaly lenses	
						83.07 - 83.09 - Coal band	
						83.09 - 83.14 - Gritty coal + sandstone	
						83.14 - 83.28 - Coal with single 1cm bone coal @ 83.22	
						83.28 - 83.34 Sandstone. vi coal lenses.	
	83.49	83.77		0.28		Coal	
						Clean, blocky coal.	
						Calcite and pyrite along < 1mm fractures sub-parallel TCA. Calcite < 0.5%	
						Pyrite < 0.5%	
	83.77	83.86		0.09		Sandstone	
						Med. grained. Minor carbonaceous lenses and laminae	
	83.86	84.04		0.18		Coal	
						Clean blocky coal	
						- Weak < 0.5mm calcite stringers sub-parallel TCA.	
						- Single strong fracture < 5° TCA with calcite	
						Base of No. 3 Seam	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-031A

PAGE 6 OF 6

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	84.04	84.65		0.61		Siltstone mod-dark brown grey with sand throughout - disturbed bedding. Gradational basal Contact.	
	84.65	89.15		4.5		Sandstone 84.5 - 85.8 - Sandstone - Med grained. with darker patches - possibly burrows - Basal 30 cm of carbonaceous Siltstone with sandstone ball + pillow structures 85.8 - 87.5 - Massive med - f.g. sandstone 87.5 - 89.0 - Bedded with f.g. darker S.S. Bedding 85° - 90° with minor x-bedding	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-032

PAGE 1 OF 5

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	65.0	74.58				Sandstone.	64.6 -
						Massive to weakly bedded; Light grey, med to coarse grained.	74.18
						- Numerous thin (< 1cm, commonly 2mm) calcite stringers in fractures paralleling bedding and at various angles TCA.	
						65.2m - Bedding x calcite stringers @ 77° TCA	(64.8)
						66.1 - Bedding 78° TCA	(65.7)
						67.1 - Fracture 42° TCA	(66.7)
						67.45 - " 60° TCA.	(67.05)
						68.7 " 45° TCA.	(68.3)
						69.2 " 45° TCA + 5mm calcite	(68.8)
						70.7 " Zone over 15cm	(70.3)
						Basal fracture 45° TCA.	
						71.1m - Bedding 62° TCA (x-bed?)	70.7)
						72.3 m - Calcite stringer 80° TCA	(71.1)
						72.3 - 73.7 - Numerous calcite stringers @ 8c - 9c° TCA 73.5m = 88° TCA	71.9 - 73.3
						73.5 - Bedding 68° TCA	73.1
						*73.8 - 73.9 - Marker zone with carbonaceous sandstone, calcite and 1-2cm width pyrite band at top of interval	73.4 - 73.5
						73.9 - 74.2 - Calcite infilled fractures at 21° TCA.	73.5 - 73.8
						74.4 - Carbonaceous band at 77° TCA.	74.0
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

Quinsam COAL LIMITED

COREHOLE LOG

0.87%

HOLE NUMBER: 92-032

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							74.18
	74.58					Coal # 3 Seam	74.18 – 75.55
	74.58			1.37		74.58 – 75.95 Interbedded Sandstone & Coal	74.18 – 74.46
				0.24		74.58 – 74.86 Core loss 0.28m	74.46 – 74.51
				0.05		74.86 – 74.91 – Broken Coal – calcite on fractures	74.51 – 74.56
				0.05		74.91 – 74.96 Contorted Sandstone with carbonaceous inclusions & laminae	74.56 – 74.68
				0.12		74.96 – 75.08 – Banded/fractured coal – Coal with Pyrite band 1cm width – fracturing 28° TCA – Calcite on fractures. Banding 73° TCA	74.68 – 74.71
				0.03		75.08 – 75.11 – Sandstone & Carbonaceous laminae	74.71 – 74.78
				0.07		75.11 – 75.18 – Coal – Calcite in Co. 5mm fractures @ 25° TCA. Calcite <1% Pyrite on banding. Fault polished basal Contact. Pyrite 1%	74.78 – 74.85
				0.07		75.18 – 75.25 – Sandstone as above. Undulating basal contact.	74.85 – 75.12
				0.27		75.25 – 75.52 – Coal – Banded 82° TCA fractured @ 25° TCA with calcite on fractures. Minor Pyrite Minor honey bands	75.12 – 75.15
				0.03		75.52 – 75.55 – Sandstone – carbonaceous	75.15 – 75.17
				0.02		75.55 – 75.57 – Coal band	75.17 – 75.20
				0.03		75.57 – 75.60 – Sandstone	75.20 – 75.26
				0.06		75.60 – 75.66 – Coal – dirty	75.26 – 75.95
				0.29		75.66 – 75.95 – Sandstone with carbonaceous material, minor irregular fractures – Irregular basal contact	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-032

PAGE 3 OF 5

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							75.55 - 75.65
				→		Core loss 0.10 m 75.95 - 76.05	75.65 - 75.81
	75.95	77.89		0.16		76.05 - 76.21 - Coal - strongly fractured @ ≈25° TCA. Calcite in fractures	
				0.03		76.21 - 76.24 - Sandstone - irregular contacts	75.81 - 75.84
				0.04		76.24 - 76.28 - Coal	75.84 - 75.85
				0.10		→	
				0.45		76.28 - 76.73 Rounded & fractured Coal - weak calcite filled fractures, 25° TCA in upper 1/2. Banding at 85° TCA Weak fault slip at 77.98m - 60° TCA Pyrite along banding in lenses.	75.88 - 76.33
				0.05		76.73 - 76.78 - Mudstone band 83° TCA	76.33 - 76.38
				0.05		76.78 - 76.83 - Coal with 1-3% calcite as stockwork < 1mm stringers Pyrite clusters.	76.38 - 76.43
				0.03		76.83 - 76.86 - Irregular sandstone band.	76.43 - 76.46
				1.03		76.86 - 77.89 Coal	76.46 - 77.49
						Numerous sandstone bands @ 76.50 - 76.91 m, 76.73 - 76.75, 77.13 - 77.15, 77.07 - 77.10, 77.38 - 77.39	
						weak calcite stringers < 0.5mm at ≈25° TCA and as "mat" texture in < 2cm bands. Total calcite < 1%	
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-032

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							77.49 – 77.89
	77.89	78.39		0.50		- Sandstone Light Beige - Grey Sandstone, med - coarse grained - minor coal laminae near base	
							77.89 – 78.06
	78.39	78.46		0.07		- Sandstone - Carbonaceous - 1cm coal at top. - 6cm Carbonaceous Sandstone	
							78.06 – 78.36
	78.46	78.76		0.30		Coal. Banded coal. 87° TCA - Fractured @ 8-10° TCA with calcite in < 0.5mm stringers - Bone coal, 1cm @ 78.61 - Gradational basal contact over 3cm	
							78.36 – 78.65
	78.76	79.05		0.29		Sandstone Fine grained with numerous carbonaceous inclusions & laminae. - Bedding (bio?) turbated	
							78.65 – 78.82
	79.05	79.22		0.17		Dirty Coal. Fractured, with calcite Bone coal. 79.11 – 79.14, + 1cm @ 79.19m	
							78.82 – 79.03
	79.22	79.43		0.21		Sandstone Light beige-grey with carbonaceous inclusions + rootlets?	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-032

PAGE 5 OF 5

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							79.03 79.31
	79.43	79.71		0.28		Coal	
						Top 10 cm broken coal with calcite on fractures.	
						- Bottom section with calcite in <1mm fractures	
						- Coal banded @ 85° TCA	
						- Minor Pyrite along banding	
							79.31 79.39
	79.71	79.79		0.08		Sandstone	
						Light beige-grey with minor carbonaceous inclusions. Erratic contact with coal	
							79.39 79.64
	79.79	80.04		0.25		Coal	
						Banded coal, trace Pyrite Banding 85° TCA.	
						Calcite <0.5% along 0-12° fractures in <1mm stringers	
						- Mudstone band 79.96 - 79.98 - Med brown grey	
						- Pyrite aggregates near bottom contact	
						- Basal contact gradational/ Bottom of No 3 seam	
							79.64 85.6
	80.04	86.0		5.96		Sandstone	
						Light grey med to coarse grained.	
						Generally massive	
						- Silty zones with carbonaceous material	
						80.55 - 80.5 m, 81.75 - 81.85	
						82.72 - 83.0 + minor coal bands <1 cm	
						Bedding 83° TCA - 83.8m / X-beds	
						70° TCA - 85.4 m /	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-035

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	All footages are True depth						
	128.6	133.25		4.65		Sandstone: Light grey, med to coarse grained weak to moderately bedded. Massive,	
						Very minor fractures along bedding ∠ 1/metre	
						Bedding 85° TCA @ 130.3 m	
						83° TCA @ 132.7 m	
						Contact with coal sharp with 1/16" organic	
						(coalified) material in sandstone. Contact	
						≈ 80° TCA.	
						~~No 3. Seam (133.25 - 137.37)~~	
	133.25	133.79		0.54		Coal - - weakly banded, moderately broken	
						- Banding 85-90° TCA. Calcite stringering	
						1% in top 5 cm, paralleling banding	
						- Calcite along cleat in balance of section	
						∠ 0.5%.	
						- Nodular 1.5 x 3 cm pyrite at 133.6m.	
						10% pyrite over 10 cm.	
	133.79	133.89	10 cm	6		Mudstone	
						Dark brown, black, very rubbly mudstone	
						Poor contacts	
	133.89	136.14		2.25		Coal - 133.89 - 134.76 blocky coal	
						with prominent fracturing 17-30° TCA.	
						Minor 1 cm calcite "net" stringering @ 134.14	
	134.76	135.21	CORE LOSS 0.45m			Rubbly coal at core loss zone 134.76 - 135.21	
						135.21 - 136.14 (0.93) Clean coal broken at ≈ 6cm	
						spacing at 70-80° TCA. Minor shearing	
						Calcite very minor in cleat + as weak	
						"net stringering	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-033

PAGE 1 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
						Sandstone	
						from 131.5m block	
	131.55	133.18				1.63m - Sandstone - light grey med (132.1) grained Moderately fractured along uneven fracture planes @ 80-90° TCA. Strongly broken basal contact with coal	131.12 132.75
	133.18	133.83				0.65m - Coal (No. 3 Seam) (133.53) (134.5m block @ 0.61m) - Strongly broken coal. Rubbly top contact - Faulted (slips) at. 8cm - 16° TCA 17cm - 52° TCA, 21cm - 21° TCA 43cm - 22° TCA. 2cm Pyrite within top 4cm Crudely banded @ 80° TCA. Calcite in fractures along banding, + sub-parallel TCA.	132.75 133.40
	CORE	LOSS				Core Loss. 0.35m	133.40 133.75
	133.83	134.93				0.10 - Muddy Coal Interbedded Mudstone and coal mudstone : coal 35:65 - Broken along banding	133.75 133.85
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-033

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						Coal	133.85
	133.93	134.91				0.98m Strongly broken & fractured coal. Broken along C.A. and 30-50° TCA	134.83
						10 cm - Strong fracture Variable @ 30-60°	
						34 cm - fracture 40° TCA	
						48-67 - Very friable coal. Thin strong banding 90° TCA - Dull coal	
	CORE LOSS					Core Loss (0.45m)	134.83-135.28
	134.91	135.37				Muddy Coal	135.28-135.74
						0.46 m - Strongly broken & fractured with weak slips & slickensides ± calcite. Banding strong @ 78°	
						Faulting @ 65° TCA	
						Numerous mudstone bands	
						Mudstone : Coal 40 : 60	
	135.37	136.14				Coaly Mudstone	135.74
						0.77m - Dark brown-gray mudstone, strongly fractured & fault polished in upper interval : Strong slickensided plane 35° TCA.	136.51
						@ 40 cm + parallel slip structures.	
						- Decreasing coal content towards bottom of interval	
						(Rusty-orange crystalline mineral on fracture planes - Zeolites?)	
						(137.1m Block @ 0.77m)	
						Bottom of No. 3 Seam	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-033
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						(0.89 m)	136.51-
	137.1	138.1				Mudstone interval)	137.4
						Dark brown grey with minor coalified material	
							137.4-137.55
	CORE	LOSS				Core loss 0.15 m	137.55-
	138.1	138.30				Interbedded Mudstone / Sandstone (0.18)	137.73
						Crudely bedded @ 74° TCA.	
						Coarse Sandstone & siltstone-mudstone	
	138.30	138.55				Mudstone	137.73
						Dark brown-grey mudstone (0.22)	137.95
						with minor coal lenses and laminae	
						bedding @ 84° TCA.	
							137.95
	138.55	140.10	+			Sandstone (1.59 to 140.1 block.	139.54
						- Fine to med. grained light grey	
						- Weakly bedded at 70-75° TCA.	
						Rusty-orange crystalline to amorphous	
						material on fracture plane (<1cm)	
						Calcite stringers to 1cm 23° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-034

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							109.15
	111.5	112.1				Sandstone - Med-light grey, med grained - Carbonaceous material & mudstone as fine	109.65
						inclusions - Massive, no fractures	
						Gradational basal contact	
							109.65
	112.1	112.9				Mudstone - Dark brown with minor <5mm	110.55
						coal bands. Sand inclusions. Gradational	
						basal contact into Sand.	
							110.55
	112.9	135.0				Sandstone - Very light grey med-coarse	132.7
						grained Sandstone - Weak bedding both	
						parallel & cross-bedded. Minor laminations	
						of silt. Minor <1m zones of bio-	
						turbated sandstone. Bedding becoming	
						more apparent towards base of section	
						Bedding 90° TCA, 115.0 m	
						80° TCA, 116.0	
						86° TCA. 121.0 m	
						88° TCA, 125.5 m	
						84° TCA. 130.0 m	
						Strong x-bedding 73° & 83° TCA 134.5m	
							132.7
	135.0	141.74				Sandstone - Distinctive Sandstone with	141.5
						alternating light and dark grey banding. Bands	
						generally 2-3cm (dark) and 3-10cm (light)	
						Banding commonly discontinuous across	
						core Competent core. Weak fracturing	
						across core as bedding parting. Med. grained	
						-Basal 0.8m with minor carbonaceous material	
						and 4 partings / metre	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-034

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						No. 3 Seam (141.5 - 145.85)	141.5
	141.74	143.3		1.56		Coal Removed for Mottano test. 130 cm mudstone at top of interval	143.06
	143.3	144.0		0.70		Coal. - Bright, clean, broken coal	
	144.0	144.5		0.50		Coal - Clean, weakly banded 88° TCA Minor calcite as "net" shrinkering	144.26
	144.5	144.8		0.30		Coal → Removed for mottano test.	144.56
	144.8			0.10		- Coal.	
				0.08		Sandstone	
				0.78		Coal - broken, banded, clean coal. Minor calcite < 0.5%	
						Friable, flakey coal at base of interval	145.52
	145.9	146.3		0.33		Coal removed for mottano test (F.W.)	145.85
	146.3	147.25		0.95		Mudstone - Dark brown carbonaceous mudstone - Minor silt bands and rare coal laminae to 5mm width	145.45 146.4
	147.25	148.65		1.4		Sandstone - Upper 30 cm gradational from muddy siltstone into fine, then med grained sandstone. Disturbed bedding	147.8
	148.65	149.20		0.55		- Coaly mudstone. Top 30 cm - ball + pillow soft sediment deformed mudstone with minor coal. Basal section = dominantly interbedded coal + mudstone	148.35
	149.20	150.0		0.65		Sandstone Clean, massive light grey med. grained Weak bedding at 151.1m 82° TCA.	152.0
	150.0	153.0		3.0			
	TOTALS						

÷ x 100 = % REC. SEAM

÷ x 100 = % TOTAL REC. SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-035

PAGE 2 OF 2

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	136.14	136.16	0.02	0.02		Mudstone - Silty mudstone deformed bedding & contacts - med-dark grey-brown.	
	136.16	137.13		0.97		Coal - Blocky, weakly banded coal. Irregular calcite stringering along cleat and as "net" stringering in <1cm bands. 136.36 - 136.46 Calcite 1% as fracture/cleat infill. Generally Calcite <0.5%. Banding 78° TCA. Broken basal contact.	
	137.13	137.37	0.24	—		Core loss (Base of No. 3 Seam)	
	137.37	138.9	1.	1.53		Mudstone - med-dark brown-grey. Top 20 cm with interbedded coal bands to 2cm. Minor coal bands over basal inland. Gradational contact into silt, then Sandstone	
	138.9	140.5		1.60		Sandstone: Fine to med grained with minor siltstone. - Soft sediment ball + pillow deformation at base	
	140.5	140.8		0.30		Mudstone - As before. Coal bands 5%	
	140.8	143.7		2.9		Sandstone - Med. grained, light grey. Massive to weakly bedded 83° TCA.	
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

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COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 72-037
PAGE 1 OF 4

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	120.2	146.75	26.55			Sandstone	
						From 144.0 m block: Sandstone light gray. Coarse-med grained at top of interval becoming finer grained towards coal at base.	
						- Basal 70 cm interlaminated with <1cm irregular coal bands ≈ sub-parallel to bedding	
						- Bedding 83° TCA @ 144.2 m	
						85° TCA @ 146.0 m	
						≈ 87° TCA @ 146.6 m	
						- Competent sandstone. Very weak fracture @ 145.7 m - 53° TCA.	
						- Weak bedding plane parting at coal-sandstone contacts in basal 70 cm.	
						- Calcite < 2mm qz fracture fill 15° TCA at 145.45 m	
						- 2 x 2mm Pyrite bands 60° TCA at 145.10 m	
						- Sandstone at basal contact - competent & weakly polished	
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-037

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						-	
	All Footages are True Depth						
						No. 3 Seam	
	146.75	146.80	0.05			Coal - Strongly broken, calcite on cleat 1%	
	146.80	146.86	0.06			Core loss	
	146.86	147.19	0.33			Coal - Blocky coal, weak calcite stringers sub-parallel TCA and as minor "net" texture. Calcite < 0.5%	
						- Minor pyrite parallel to banding @ ~90° TCA	
						- Calcite increased over basal 10 cm to 1% in fractures.	
	147.19	147.29	0.10			Mudstone - Coaly mudstone with coal:mudstone 25:75. Dark brown-black	
						strongly broken - poor recovery	
	147.29	147.34	0.05			Core loss	
	147.34	147.50	0.16			Coal - Moderately sheared at 75° & 45° TCA	
						- Slickensides. Calcite weak in fractures & cleat.	
	147.5	147.51	0.01			Calcite in coal. Very fine "net" texture - Calcite 5-7%	
	147.5	148.4	0.90			Coal - Solid, blocky coal - Very weakly banded. Weak fracturing sub-parallel TCA. and @ 80-90° TCA.	
						- Pyrite as massive clusters up to 1cm x 2cm	
						- Calcite generally < 0.5% but up to 2% from 147.90 - 148.02 m. Calcite "net" texture	
						148.17 - 148.20. Also 148.37 - 148.40	
	148.4	148.47	0.07			- Mudstone - Rubbly recovery, brown-black mudstone - Minor coalified material - Coal:mud 20:80	
	148.47	148.55	0.08			Core loss	
	TOTALS						

÷ x 100 = % REC. SEAM

÷ x 100 = % TOTAL REC. SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-037

PAGE 3 OF 4

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	148.55	149.3	0.75			Coal: Clean, blocky coal. Fracturing at 37° x 35° TCA. (weak)	
						- Weak banding at 84° TCA	
						- Disturbed banding & shearing near base of interval	
						- Calcite as 2cm "net" texture band 3% Calcite at 149.25m.	
						- Basal contact sharp but undulating (deformed)	
	149.3	149.77	0.47			Mudstone - Dark brown - black mudstone with minor coal bands. Coal: mudstone 25:75	
						- Pyrite as 6cm band at 149.57 - 149.63m	
						- Fracturing at ±80° TCA. Banding 81° TCA	
			150	Block		x 150 Block	
	149.77	149.91	0.14			Core loss	
	149.91	150.10	0.19			Mudstone - Strongly broken. Coal: Mudstone 10:90	
	150.10	150.81	0.71			Coal: Blocky banded coal - Banding 85° TCA	
						Moderately fractured at 45° & 35° TCA.	
						< 0.5% $CaCO_3$ in < 0.5mm fractures.	
						Very friable coal over basal 15cm.	
	150.81	151.05	0.24			Core loss	
						Base of No. 3 Seam	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 12-037

PAGE 4 OF 4

CORE No.	CORE FOOTAGES DRILLED FROM:	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	151.05	151.49	0.44			Mudstone: Dark brown-black, banded (85° TCA) with < 1cm coal bands.	
						Coal: Mudstone 5:95. Fracturing paralleling banding	
	151.49	151.64	0.14			Core loss	
	151.64	152.05	0.41			Mudstone: Similar to mudstone above	
						Fractures: 23° TCA, 33° TCA.	
						Weak slips	
						- Gradational basal contact.	
	152.05	152.63	0.58			Mudstone: Dark brown, silty. Very minor coalified material. Pyrite bands: up to 1.0 cm.	
						Banding 80° TCA Fractures (parting) along banding	
	152.63	152.76	0.13			Core loss (15' 2' 8 cm block)	
	152.76	153.16	0.40			Mudstone: Dark brown, minor coalified	
						lenses at 70-90° TCA Variable banding	
						angles due to distortion of mudstone.	
	153.16	160.6	Block			Sandstone - Light grey med-coarse,	
						clean sandstone. Competent	
						weakly bedded 80° TCA	
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 72-038
PAGE 1 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
	81.0	92.78				Sandstone - Light grey, med-coarse grained	81.0 -
						Weakly bedded 63° TCA @ 84.7 m	92.78
						72° TCA @ 90.6m	
						Strong (prominent) joint set with	
						calcite infill	
						17° TCA - 81.2m	
						0 - 20° TCA 81.8 m	
						15 - 20° TCA 86.2m	
						28° TCA 89.6m	
						10° TCA 89.8m	
						Relatively competent core throughout	

TOTALS				÷ x 100 = % REC.	SEAM
				÷ x 100 = % TOTAL REC.	SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-038

PAGE 2 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						From 92.5m block	
	0.00	0.67		0.67		Sandstone - Light to med. grey, med. grained competent sandstone. Minor carbonaceous/ coaly lenses in basal 30cm	92.78 / 93.45
						Fracture at 30cm 41° TCA.	
						Sharp basal contact 80° TCA	93.45
						No. 3 Seam Core loss 0.20m	93.65
	0.67	1.85		1.18		Coal. Blocky, banded coal	
						- Sandstone inclusion 0.94 - 0.98	93.65
						- Bone Coal 1.15 - 1.16	94.83
						- Pyrite 3-5% in upper 50 cm. Pyrite as lenses along banding, and on cleat.	
						- Banding 80° TCA	
						- weak slip sub-parallel TCA at 1.20m	
						- Calcite as cleat + weak fracture fill blk ∠0.5%	
						- Basal contact sharp 73° TCA.	94.83
	1.85	1.96		0.11		Sandstone - pale beige-grey with <1mm calcite stringers + minor carbonaceous inclusions	94.94
	1.96	2.11		0.45		Coal - Broken + strongly banded coal.	94.94 / 95.09
	2.11	2.18		0.07		Sandstone - Beige-grey with carbonaceous material	95.09 - 95.16
	2.18	2.24		0.06		Coal - Banded, 81° TCA. with 2% Pyrite along banding and on cleat	95.16 / 95.22
				2.74			
	Block	95.5m					
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-039

PAGE 2 OF 4

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						From 80.0 m Block.	
	0.0	2.11		2.11		Sandstone - Light grey, coarse to med. grained	80.06
						Fractured at 4 per metre, with minor	82.17
						calcite in f. 11 < 2mm width	
						Fractures 34° TCA @ 0.30 m	
						44° TCA @ 0.50 m	
						79° TCA @ 0.80 m	
						37° TCA @ 1.10 m	
						30° TCA @ 1.57 m	
						Basal contact sharp at 70° TCA.	82.17
	2.11	2.63		0.52		No. 3 Seam Coal - Bright, blocky banded (74° TCA)	82.69
	(83.1 in Block)					Clean coal, with 1% pyrite & calcite	
						From 83.0 m Block	82.69
	0.00	0.82		0.92		Coal - Bright banded, (69° TCA)	83.51
						minor calcite along banding. Basal section	
						with numerous polished slip faces along banding	
	0.82	0.92		0.10		Sandstone - Interbedded sandstone and	83.61
						coaly mudstone. Disturbed beds & lenses of	
						coal in sandstone. Beige-grey to dark	
						brown-black.	
	0.92	1.93		1.01		Coal - Upper section, 50cm, of moderately	84.62
						broken coal. Fractures along banding	
						- weak calcite infilled fractures at ≈ 30° TCA;	
						1.65 m.	
	1.93	2.20		0.27		Sandstone - soft sediment deformed Sandstone	84.89
						with minor mudstone and coal lenses	
						coal, very platy from 2.07 to 2.17 m	
						Minor calcite stringers	
						CORE LOSS 0.50 m	84.89 - 85.39
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-038

PAGE 3 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
X	X	X		X		From 95.5m Hook.	
							95.22
	0.00	0.10		0.10		Coal - as before - Broken, bright coal (Base of No 3 Seam) Core loss 40cm	95.32 95.32 95.72
	0.10	0.64		0.54		Coaly Mudstone - Dark brown - black	95.72 96.26
						with interlaminated mudstone and	
						coal 90:10 Mudstone : Coal.	
	0.64	1.43		0.79		Sandstone - Med grained, Med to light	96.26 97.09
						beige-grey. Minor carbonaceous inclusions	
						in upper 20 cm. Very minor calcite	
						stringers 0-20° TCA.	
	1.43	1.51		0.08		Coal - Broken, Rubbly	97.09 97.17
	1.51	1.68		0.17		Muddy Coal Coal : Mudstone 65:35	97.17 97.34
						gradational into basal mudstone, siltstone.	
	1.68	2.90		0.72		Sandstone. Fine-med grained, solid.	97.54 98.06
						Bedding 78° TCA. Thin silt/sand	
						beds.	
	Block		98.0 m				
							98.06
	98	100.95		2.95		Sandstone - Mod. to coarse grained	101.01
						Parallel and cross-bedded. Light beige-grey	
						Competent throughout	
						Bedding 70° TCA 98.9 m	
						71° TCA 100.4 m.	
	100.95	101.0		1.05		Carbonaceous Mud - Dark brown - black	101.06
				3.00		- Unconsolidated mud with coaly fragments	
	101.0 m	Block					
X	TOTALS			X		÷ x 100 = % REC. SEAM	X
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-039

PAGE 1 OF 4

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							70.9 -
	70.9	73.3				Mudstone Dark brown - black. Very minor coal bands Strong fracture (prominent) at 45° TCA.	73.3
						- Thin banding with pyrite at 45° TCA	
						- Polished slip plane 46° TCA @ 72.25 m	
						(approx 90° strike difference to banding & fractures	
	73.3	80.0				Sandstone - Light grey med-coarse grained	80.06
						Generally massive.	
						Minor fracturing 27° TCA. @ 75.6m,	
						35° 32°. 78.0-78.2m.	
						Rubbly fractures 79.8 - 80.0 25 + 46° TCA	
						Bedding 70° TCA @ 75.2m	
						63° TCA @ 77.4	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-039

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						From 83.0 m Block	
							85.31
	2.20	2.30		0.10		Coal. - Weakly fractured along banding and ≈60° TCA.	85.49
	2.30	2.34		0.04		Sandstone - Med. beige-grey sandstone with carbonaceous laminae	85.53
	2.34	2.58		0.24		Coal - Banded, 78° TCA with minor calcite along slips at 75-80° TCA.	85.77
	2.58	2.59		0.01		Mudstone. Dark brown - minor coal	85.78
	85.9 m	block				(Base of No. 3 Seam) From 85.9 m block * Core loss (0.55)	85.78-86.33
	0.0	0.29		0.29		Coaly mudstone - Strongly banded interlaminated coal and mudstone. Laminations 2-10 mm Coal & mudstone Banding 81° TCA. Gradational basal contact into muddy siltstone to sandstone	86.62
	0.29	1.27		0.98		Sandstone - Med. beige-grey, fine grained - Bedding 81° TCA. Minor <1 mm calcite stringers sub-parallel TCA. - Coaly material within 15cm of top & bottom contacts.	87.60
	1.27	1.38		0.11		Coal. - Well banded, bright coal Banding 73° TCA. Minor <2mm dirt band.	87.71
	1.38	1.66		0.22		Sandstone. Med beige-grey, fine grained Carbonaceous inclusions. Calcite on 10° fracture	87.93
	1.66	1.78		0.18		Coal - Blocky - minor calcite on cleat & fractures	88.11
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-039

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						From 85.9 m Block	
	1.78	1.81		0.03		Sandstone - Med. - beige-grey with carbonaceous inclusions	88.14
	1.81	2.07		0.26		Coal - Blocky, banded (178° TCA) Calcite on cleat and C.A. parallel fractures.	88.40
	88.7 m			Block			
						From 88.7 m Block	
	0.00	0.59		0.59		Mudstone. med-dark brown. Coaly material in top 10 cm. Minor coal bands and lenses near base. - Weak gradational contact into siltstone	88.99
	0.59	1.04		0.45		Siltstone - med brown-grey siltstone. Bedding strongly bio-turbated but ≈ 83° TCA. - Solid, blocky core. - Gradational contacts	89.44
	1.04	3.03		1.99		Sandstone. - Light grey med-coarse grained, massive sandstone.	91.43
	91.7 m.	Block					
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-040

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							44.0
	44.0	45.35				Mudstone - Dark brown with minor	45.35
						coaly material. Upper 8 cm of rubbly	
						coal followed by 7 cm, coarse grained	
						Sandstone. Bedding at ≃90° TCA.	
						Sharp basal contact at 85-90° TCA.	
							45.35
	45.35	61.57				Sandstone - Light grey, med to coarse	61.60
						grained. Massive, to weakly bedded.	
						Bioturbated intervals.	
						Fracturing < 1/m - Above coal = massive	
						sandstone. Weak fracturing 59.75 m, 15° TCA	
						with calcite infill, < 2 mm.	
						0-15 cm above coal contact, rubbly sandstone	
						with weak 51° TCA Joint	
						- Bedding 83° TCA @ 47.4 m	
						82° TCA @ 55.4 (+X-Beds)	
						84° TCA @ 56.5 m	
						80° TCA @ 61.0 m	
						- Fracture/Jointing 26° TCA @ 57.5 m	
						25° TCA. @ 58.8	
						with minor calcite 15° TCA @ 59.75	

TOTALS			÷ x 100 = % REC. SEAM
			÷ x 100 = % TOTAL REC. SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-040

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						From 61.5m block.	
	6.00	61.57 0.07		0.07		Sandstone - med-light grey, coarse grained	61.60
						Sharp basal contact 80-90° TCA	61.67
						No. 3 Seam	
	0.07	63.36 1.86		1.79		Coal - Banded, blocky coal. Bands of	61.67
						Sooty coal < 1cm.	63.46
						Thin 1cm mudstone 0.18-0.19m.	
						- Calcite 0.5-1.0% as stringers up to	
						1.0 mm at 10°-30° TCA, also along cleat	
						and bounded in discrete bands as	
						"net" stringering	
						- Pyrite as minor, < 1cm nodules	
						commonly following banding	
						- Banding 75° TCA.	
						* Concentration of Pyrite, calcite and	
						minor muddy coal. 0.91 - 1.73m	
	1.86	63.4 1.90		0.04		Sandstone. - Med grained, light beige grey	63.5
						Contacts 78° TCA	
	1.90	63.43 1.93		0.03		Coal - Gritty	63.53
	1.93	63.45 1.95		0.01		Sandstone - Irregular + gradational contact	63.54
						- Carbonaceous sandstone	
	1.95	64.35 2.85		0.90		Coal - Banded, blocky coal. Banding 80° TCA	64.44
						Calcite 1% as fracture + cleat fill	
						in < 1mm stringers. Sooty 1cm	
						band 2.45-2.46m	
	2.85	64.43 2.93		0.08		Sandstone - Carbonaceous. Contacts 79° TCA	64.52
						- Pyrite along bedding	
	2.93	64.48 2.98		0.05		Coal - dirty, banded	64.57
	64.5m	Block					
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

HOLE NUMBER: 92-040

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CORE No.	CORE FOOTAGES DRILLED FROM	DRILLED TO	DRILLED TOTAL	RECOVERED SECTION	RECOVERED TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							64.57
						From 64.5 m Black	65.08
	0.00	65.01 0.51		0.51		Coal. - Blocky. Calcite in fractures 10-30° TCA	
						+ cleat - 0.5% Pyrite on cleat surfaces	
						Weak slips along banding @ 80° TCA.	
						Basal contact ≈ 80° TCA	
	0.51	65.11 0.61		0.10		Sandstone - med - light beige - grey	65.18
						with minor carbonaceous laminae. Basal	
						contact 72° TCA.	
	0.61	65.5 1.00		0.39		Coal. Blocky, banded coal. Fractured	65.57
						at 20° TCA Pyrite and calcite on cleat	
						surfaces. Both < 0.5%	
	1.00	65.52 1.02		0.02		Carbonaceous Grit (Bone)	65.59
	1.02	65.55 1.05		0.03		Mudstone	65.62
	1.05	65.58 1.08		0.03		Coal	65.65
	1.08	65.61 1.11		0.03		Mudstone	65.68
	1.11	65.7 1.28		0.17		Coal. - Blocky, strongly fractured at	65.85
						5-15° TCA with < 1mm calcite	
						stringers. Calcite 1%. Calcite also	
						along banding (wet stringering) Bottom No. 3 Seam	
	1.28	66.48 1.98		0.70		Mudstone / Siltstone	66.55
						Gradational contact from coaly mudstone	
						over upper 18 cm, then 22 cm silty	
						mudstone, 30 cm basal coaly mudstone.	
						well bedded. Pyrite 5% in basal 10 cm.	
						Bedding variable 80-90° TCA. Weak slip 38° TCA	
						at base.	
	1.98	67.39 2.82		0.84		Sandstone med to fine grained. Bedded at 80° TCA	67.39
						Pyrite along bedding laminae	
	2.82	67.41 2.97		0.15		Coal - Dirty, banded coal. Calcite + pyrite	67.54
	67.5m	Block				on cleat. Mudstone bands	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-040

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CORE No.	CORE FOOTAGES DRILLED FROM	DRILLED TO	DRILLED TOTAL	RECOVERED SECTION	RECOVERED TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							67.54
						From 67.5 m Block.	
	0.00	67.57 0.07		0.07		Coal - Dirty coal as above. Banding 79° TCA	67.61
						Fracturing with calcite 20° TCA	
	0.07	67.92 0.42		0.35		Sandstone. Upper interval 0.07 - 0.18	67.96
						of thinly (<0.5cm) interlaminated	
						coal sandstone and mudstone. Gradational	
						into med. grained sandstone. Basal	
						contact with thinly laminated carbonaceous	
						material	
	0.42	67.97 0.47		0.05		Coaly mudstone	
	0.47	68.16 0.66		0.19		Coal - banded blocky coal. Minor <0.5%	68.01
						calcite in stringers along fractures @	68.20
						10 - 20° TCA. Banding 79° TCA	
	0.66	68.19 0.69		0.03		Sandstone - Interlaminated coal + sandstone	
	0.69	68.25 0.75		0.06		Coal	68.23
	0.75	68.27 0.77		0.02		Pyrite - massive band	68.29
	0.77	68.49 0.99		0.22		Coal. Banded, blocky coal. Similar to	68.31
						Coal above. Banding 79° TCA	68.53
						Pyrite on cleat + banding surfaces	
						- Basal 3 cm = mud with fragments of	68.53
						massive pyrite (1cm x 3cm) (core loss 0.13m)	68.68
	0.99	69.32 1.82		0.83		Mudstone - dark brown. Coal laminae	69.51
						in top 5cm. Minor coal laminae	
						throughout. Gradational basal contact.	
	1.82	70.35 2.85		1.03		Sandstone. Light - med grey. Grading	70.54
						from fine at top to med. grained @ base.	
	70.5M BLOCK					Dirty sandstone - silty - muddy. Laminations	
						at 79° °TCA. Completed core	
	TOTALS					÷ x 100 = % REC. SEAM / ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-041

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	40.2	49.2				Sandstone	40.2 -
						- Light grey coarse - med grained	49.2
						- Very strong, prominent Jointed throughout interval. Joints 35-40 common	
						- Minor silt laminae <1.0 cm.	
						Jointing 40.6 m - 40° TCA	
						41.0 33°	
						41.4 21°	
						41.6 40°	
						42.1 35°	
						42.3 37°	
						42.7 38°	
						45.3 32°	
						47.5 45	
						48.0 40°	
						48.3 33°	
						48.7 38°	
						- Fair Joint Frequency 3-6/metre	
						- Sandstone fossils	
						- Mudstone at basal Contact	
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-041

PAGE 2 OF 5

CORE No.	CORE FOOTAGES DRILLED FROM	DRILLED TO	DRILLED TOTAL	RECOVERED SECTION	RECOVERED TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							49.2
						From 49.2m. block	49.65
						Core Loss 0.45m	49.68
	0.00	49.23 0.03		.03		Mudstone - Locken	49.92
	0.03	49.47 0.27		0.24		Sandstone. dirty, med gray. Joint 25° TCA @ 0.22m	
	0.27	49.61 0.41		0.14		Mudstone Dark brown - 5-7% Pyrite as nodules to 2cm diameter	50.06
	0.41	49.71 0.71		0.30		Sandstone - med-coarse grained. minor silt laminae at 76° TCA.	50.36
	0.71	50.11 0.91		0.20		Mudstone: Dark brown, carbonaceous with minor coal laminae	50.56
	0.91	50.36 1.16		0.25		* Top of No. 3 Seam Coal - Dirty coal with 2% Pyrite along banding and cleat	50.81
	1.16	50.45 1.25		0.09		Sandstone - dirty, med grained, med beige-grey	50.90
	1.25	50.51 1.31		0.06		Coal. Pyrite + Calcite on cleat + fracture rubble	50.96
	1.31	50.55 1.38		0.07		Sandstone - Dark brown-grey carbonaceous, med grained	51.03
						Core loss 0.25m	51.03 - 51.28
	1.38	50.60 1.49		0.11		Coal - strongly banded @ 63° TCA	51.39
						Calcite + pyrite (minor) on cleat and banding	
	1.49	50.72 1.52		0.03		Mudstone parting	51.42
	1.52	51.73 2.53		1.01		Coal - Solid, banded coal. Banding 77° TCA. Weak <0.5% calcite on cleat and in minor "wet" stockwork. Pyrite 1% along cleat and banding parallel (up to 2mm width)	52.43
		(52.2 Block)					
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-041
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
						From 52.2 m Block	
	0.00	52.77 0.57		0.57		Coal - as above, becoming very thinly banded in basal 10 cm. Strongly broken along banding (basal 20 cm)	53.0
	0						
	0.57	52.83 0.63		0.06		Mud - Dark brown-black unconsolidated mud	53.06
	0.63 -	53.41 1.78		1.15		Coal - blocky, solid, clean coal. Very minor calcite, well banded at 69° TCA. Fracturing weak along banding	54.21
	1.78	54.01 1.81		0.03		Bone Coal - beige-grey	54.24
Lo 0.11	1.81	54.79 2.59		0.78		Coal - Solid, blocky, clean, banded (78° TCA) Minor calcite along cleat + paralleling banding	55.02
		54.9	metre			Block	
						From 54.9 m Block	
	0.0	56.21 1.31		1.31		Coal - Clean, banded (63° TCA) with minor fractures sub-parallel TCA. - Minor pyrite on cleat - Calcite - trace along banding + "not" stringering (0.50 - 0.85 and 1.14 - 1.16)	56.33
	1.31	56.34 1.44		0.13		Bone Coal. Gritty, carbonaceous black sand/coal band.	56.46
	1.44	56.09 1.79		0.35		Coal - Strongly broken, clean coal. Minor mudstone laminae near base @ 0.19	56.81
Base of No 3 Seam							56.81 - 57.0
	1.79	57.2 2.30		0.51		Sandstone - Med - light beige-grey, fine grained. Minor carbonaceous laminae + coal lenses. ~~Bedding 65° TCA~~	57.32
CSS 0.4	CORE LOSS 0.40m						57.32 +
	57.6 m - Block					Sharp basal contact.	57.72
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

Quinsam COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-04.1

PAGE 4 OF 5

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION)	TRUE DEPTH
							57.72
						From 57.6 m Block	
	0.0	57.98 0.38		0.38		Sandstone - as above, but thinly bedded	58.10
						at 65° TCA - Broken basal contact	
	0.38	58.12 0.52		0.14		Muddy Coal - Carbonaceous to sandy	58.24
						Mudstone	
	0.52	58.26 0.66		0.14		Coal - solid material - basal contact 67° TCA	58.38
	0.66	58.49 0.89		0.23		Sandstone mat - light beige-grey	58.61
						with carbonaceous laminae & calcite	58.61 -
℄ 0.35 m.						stringers CORE LOSS	58.96
	0.89	58.53 0.93		0.04		Mudstone - Broken	59.00
	0.93	58.59 0.99		0.06		Coal - broken	59.06
	0.99	58.62 1.02		0.03		Bone Coal (sandstone)	59.09
	1.02	58.5 1.20		0.18		Coal banded (76° TCA) with <1 cm	59.27
						mudstone band.	
Loss 0.8)	1.20	59.8 2.20	60.6	1.08 block		Mudstone Dark brown-grey	60.27
						Moderate to strongly fractured at	
						45°, 73° (variable angles) TCA	
						From 60.6 Block	
	60.6	63.6		3.0		Mudstone - as above - erratically banded	63.27
						with minor coal at 70° TCA	
						coal in top 0.80 m only Calcite	
						stringers <1 cm 10-15° TCA	
						From 63.2 m Block	
	0.0	0.25		0.25		Mudstone - as above	63.52
	0.25	0.75		0.50		- Siltstone - fracturing increasing	64.02
	0.75	← →	66.2	block 0.31		- extremely fractured & slickensided	
	66.2	block	67.6	block 1.4	0.36	- " " " Core loss 1.07	64.33
	67.6		69.6	0.96 2.0		- " " "	66.2 - 66.56
							68.64 69.6
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

CORECOREHOLE LOG

HOLE NUMBER:	92-041
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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION — LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
						From 69.6 in block	
	0.0	0.82		0.82		Siltstone - ~~Banded~~ - Crudely banded silt, and mudstone with very minor <1cm coal bands. - Soft sediment deformed. Moderately broken.	69.6 - 70.42
	0.82 - (72.6 in block)			1.46		Mudstone - dark brown-black Moderately broken along bedding at 68° TCA. - Weak slips at 70-40°TCA	70.42 - 71.88
TOTALS						÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-042

PAGE 1 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							77.5 - 77.8
	77.0	77.3	0.3	0.4		Mudstone / Siltstone	77.8 - ~~80.8~~
	77.3	80.3	3.0	3.0		Med - dark grey. Lighter beige concretions. Dominantly mudstone + very fine grained siltstone. Moderately broken throughout interval. Weak fractures at various angles TCA.	
	80.3	83.2	2.9				80.8 - 82.75
				1.95		Mudstone / Siltstone. As above with prominent fracturing at 63° TCA in basal 1.0m. Broken bottom contact	
				0.58		Coal No 1 Rider. Banded at 73° TCA. Weak fault at 23° TCA. Pyrite 1-2% in bands + as fracture coating. Calcite < 0.5% as fracture fill. Weakly gradational / contact.	82.75 83.33
				0.16		Carbonaceous Mudstone. Dark brown carb mudstone - 1mm coal bands in fine mud.	83.49
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: Q2-042

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							83.49
	83.2	86.2	3.0	2.42 1.51		Mudstone - Mod-light beige-grey mudstone highly fractured with very friable, incompetent sections	85.0
						Top of interval - fault polished plane 54° TCA. Friable foliation at 80-90° TCA	
						- Near base of interval fault plane with calcite on slickensided surface 64° TCA	
*	Core loss 0.20m					Moderate to strong fault with rubble zone to coal contact (25 cm)	85.0 85.2 *
				0.92		Coal No. 1 Seam	85.2
						Highly broken core. Faulted, rubbly	86.12
						Upper contact. Pyrite on cleat and	
*	Core loss	0.40				fracture surfaces. No preferred	86.12 - 86.52 *
	86.2	88.9	2.7	0.65		Coal - Very strongly broken core	87.17
						at 70-80° TCA. Pyrite 2-3%	
						as coating on fractures & cleat.	
						Calcite as fracture fill at 10° TCA	
						< 1mm fractures.	
*						Bone coal 0.41 - 0.48m, 0.58 - 0.62	*
*	88.9	89.3	0.4	0		CORE LOSS 2.45m	89.62
*	89.3	89.8	0.5	0.10		Coal. Rubble CORE LOSS 0.43	89.72
	89.8	92.3	2.5	1.17		Siltstone - Mod Green-grey Strongly	
						faulted, broken, rubbly. Minor coalified	91.32
						material. Faulting & fault polished planes	
						at 45-70° TCA.	
				0.79		Siltstone - Mottled Red-Green siltstone	92.11
						and muddy siltstone. Numerous fault slips	
						Sub-parallel TCA to 80° TCA - erratic	
						orientation	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

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COREHOLE LOG

1.29

HOLE NUMBER: 92-042	
PAGE 3	OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	92.3	95.1	2.8	1.10		- Siltstone - Mottled red green as above with numerous fault slips at variable orientation.	93.21
				0.35		Sandstone - Coarse grained med. green. with 2mm calcite stringers	93.56
				1.29		Conglomerate. - Med. green, chloritic Rounded fragments up to 4cm diameter	94.85
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-043

PAGE 1 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTANINATION.)	TRUE DEPTH
	81.1	83.5	2.4	2.4		Mudstone Siltstone	
						- Dark grey-green mudstone with minor silty zones. Numerous beige concretions up to 4cm and across core width. Weak bedding along silty beds at 83° TCA - Soft core - easily parting along bedding	
	83.5	86.5	3.0	2.9		- Strongly broken zones from 83.5m block 1.5 - 2.0cm fractures along bedding at 83° TCA and 35° TCA.	
						- Basal 20cm 86.2 - 86.5m - increase in coal laminae and bedding fracture	
	86.5	89.5	3.0	2.0			86.45 86.75
			1.30			- Mudstone - Dark grey, numerous coal laminae & partings along laminae 75° TCA	
						- Strongly broken.	
			0.46			- Coal No. 1 Rider	87.21
						- Strongly banded, 73° TCA	
						- Pyritic - Pyrite on cleat surfaces 0.5%	
						Minor mm scale mudstone laminae. Minor calcite on cleat	
			0.03			Mudstone - marl beige-grey very incompetent.	87.24
			0.08			Coal - dirty coal with gradational basal contact into mudstone.	87.32
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 97-043

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
				1.13		Mudstone. - Med grey-brown. Very strongly fractured mudstone. Numerous fault polished fragments. Fault plane 33° TCA at. 0.36m. Very rubbly c.ac - c.74m and c.c4 - c.93 - Numerous coal laminae and lenses.	88.45
						CORE LOSS 1.0 m	
	89.5	92.5	3.0				89.45
				1.50		Coal No. 1 Seam	90.95
						- Very strong to extremely broken core. - Faulted. Fragments with slickensides & fault polishing - Extremely friable intervals Weak calcite, < 0.5% as fracture fill - Fractures at various angles TCA. Strict fault plane measured at 34° TCA. Commonly faulted at 40-60° TCA.	
						CORE LOSS 0.72	91.67
				0.78		Mudstone / Siltstone Med-grey green mudstone with minor silt / sand bands. Very strongly broken core with numerous polished surfaces Fault planes · 37°, 25°, 66° TCA & sub-parallel TCA.	92.45
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-043

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CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	92.5	95.3	2.8	2.19		Mudstone / Siltstone - Med-dark green-grey. Mudstone w interbedded siltstone. Upper 40cm of strongly fractured at 60° TCA - Minor coal inclusions at top of interval. Weakly bedded.	94.64
				1.1		Mudstone / Siltstone Similar to lithology above but distinct red-green oxidized mudstone.	95.25
	95.3	98.3	3.0	2.30			
				1.60		-Mudstone / Siltstone - Med red-brown and green mudstone. Minor siltstone Strongly broken at various angles TCA. Sub-parallel; 40-90° TCA. - Rubbly over bottom half of interval	96.85
				0.76		Sandstone Med green, coarse grained sandstone strongly fractured throughout with erratic calcite filled fractures. Strong fault plane @ 50° TCA	97.55
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-044

PAGE 1 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTANINATION.)	TRUE DEPTH
	80.6	83.0	2.4	2.37		Mudstone - Med-dark grey and green-grey. Very Minor silty zones. - Light beige concretions as ovoids and bands up to 4 cm width. Moderately competant (for mudstone) 6-10 fractures/m - Bedding indistinct	
	83.0	86.0	3.0	2.87			
	86.0	89.0	3.0	2.96			
	89.0	92.0	3.0	1.81			
				0.87		Mudstone as above. Fractured above coal (No. 1 Rider) at 50° TCA. Rubbly core recovery over 10 cm at contact with coal. 11 fractures over 2m of roof. Fracturing dominantly bedding parting at ≈ 90° TCA.	
				0.48		Coal No. 1 Rider - Blocky, weakly banded, 88° TCA. Thin <3mm light grey siltstone laminae. Minor Pyrite & calcite on cleat surfaces	90-08 - 90-56
				0.05		Mudstone - Light beige grey	90-61
				0.05		Coal. 3% Calcite on numerous 0-10° TCA fractures	90-66
				1.44		Mudstone - Carbonaceous near top contact with coal lamina, bands & lenses throughout interval. Bands at 75° TCA "Net" stringering paralleling and included in coal bands. 10 fractures through interval, all paralleling banding	92-1
						Core loss 0.15m	92-1 - 92-25
	TOTALS			÷	x 100 =	% REC. SEAM	
				÷	x 100 =	% TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-044
PAGE 2 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							92.35
	92.0	95.0	3.0	2.92			92.68
				0.43		Mudstone - Light - med beige - grey with minor coal lenses and laminae basal 15cm of rubbly core with single fracture at 15° TCA - Sharp basal contact at 90° TCA.	
				1.49 / 2.92		Coal No. 1 Seam Very blocky, weakly banded coal. - Banding approximately 90° TCA - Very minor calcite in weak fractures sub-parallel TCA. and along banding in fine wispy stringers - Minor Bone coal. - Gritty bands. 1.52 - 1.57, 2.14 - 2.15	95.17
	95.0	98.0	3.6	2.72			
				0.89		Coal - Strongly broken core at various angles T.C.A. Increasing calcite as stringers along fractures & cleat. Single strong fault plane 57° TCA at 0.51 m.	96.06
	Core Loss		0.28m			Basal contact broken core.	96.06 - 96.34
				0.38		Mudstone - med brown, very soft & reforming water. Coaly material throughout as <1mm lenses incompetent	96.72
				1.45 / 1.72		Mudstone - Upper 60cm of strongly faulted and deformed green-grey mudstone Faulting 58° & 50° TCA. Fault polished. Soft muddy (5cm) intervals. Competency increasing down-section.	98.17
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

Quinsam
COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-044

PAGE 3 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
X	X	X		X			98.17
	98.0	101.0	3.0	2.73		Siltstone - Med - dark green-grey fine grained to muddy siltstone Minor light-beige concretions Moderately competent with very weak fracturing 30° TCA -Weak, mottled red-brown near base of interval	101.1

X	TOTALS		X	÷ x 100 = % REC.	SEAM
				÷ x 100 = % TOTAL REC.	SEAM(S)

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-045

PAGE 1 OF 3

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.	TRUE DEPTH
							92.9
	93.0	95.5	2.5	2.45		Siltstone - Med-dark green-grey	
	95.5	98.5	3.0	2.96		muddy siltstone. Very fine grained	
						stiff. Minor beige-grey concretions as	
						bands & irregular ovoid shapes to	
2.96	98.5	101.5	3.0	1.77		5cm width. Bedding core at	98.4 – 100.17
						83° TCA. Basal 50cm with	
						minor coal bands and increased	
						fractures paralleling banding.	
						Fracturing 20/m in basal portion	
				0.53		Coal No. 1 Rider	100.17
						-Banded, blocky coal. Minor <1mm	100.70
						erratic calcite stringers. Calcite <0.5%	
						Banding 73° TCA	
						<0.5% Pyrite on cleat surfaces	100.70
				0.04		Mudstone - beige-grey	100.74
				0.09		Coal	100.74 100.83
				0.22		Coaly Mudstone - Dark brown-black	100.83 101.05
						weakly banded mudstone with minor	
						coal Coal : Mudstone 30:70	101.05
2.89				0.24		Mudstone: Dark grey mudstone with coal bands	101.29
						73° TCA. Weak fracturing along banding	
	101.5	104.5	3.0	1.96		Mudstone Dark grey with minor	101.29
						coal bands, laminae & lenses. 72° TCA.	103.25
						Bedding weakly distorted. Minor fault	
						polishing on plane @ 60° TCA Fracturing	
						along banding (slips). Basal 10 cm	
						of rubbly fault polished core.	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-045

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
	107.5	110.5		2.65		Siltstone - Mod. green-grey, med grained strongly broken in top 25cm. Rubbly. Also strongly broken at 1.12 - 1.37m. Single fault plane @ 1.37m. 36° TCA. Fractured strongly @ 65 - 70° TCA over basal 60 cm. Red mottling weak starting @ 1.70 m.	107.11 109.76
	Core Loss 0.35						109.76 110.11
	110.5	113.5		2.35		Siltstone - Red & Green variegated. Mudstone and siltstone locally fractured. Basal contact gradational into poorly bedded sandstone	110.11 112.46
				0.69		Sandstone - med-dark green. Med grained Bedding 58° TCA	112.46 113.15
	TOTALS					÷ x 100 = % REC. SEAM ÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-046

PAGE 1 OF 2

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							98.9-
	98.9	101.3		2.16		Siltstone - Mod-dark grey-green	106.95
	101.3	104.3		2.95		with lighter beige concretionary zones.	
	104.3	107.3		2.30		- Bedding moderate to poorly developed.	
						- 85° TCA, 83°, 90° (80° directly above #1 Rider)	
						- Core broken at ≈ 7 fractures / m	
						at variable angles TCA. Pyrite 3-5%	
						in coal bands < 1 cm, 30 cm above #1 Rider	106.95
				0.44		Coal - No 1 Rider - well banded coal	
						- Bony near top contact - Banding	
	107.3	110.3		0.16		73° TCA. 2% Calcite along cleaty fractures	107.55
						+ - Pyrite 1% along banding < 3mm	
						thick	
							107.55-
				0.84		Mudstone / Siltstone - mod - dark	108.50
						grey-green - Minor light beige concretions	
						Strong fractures with fault polishing and	
						calcite. Faults 35°, 55°, ≈10° TCA.	
						- Minor coal bands + fragments near	
						top contact Basal contact with coal	
						sharply broken + faulted.	
							108.50
				0.92		Coal. No 1 Seam (Remaining Coal)	112.41
						- Samples removed for washing Testing	
						BCMEMPR.	
						- Banding in coal 88-90° TCA.	
						- Fracturing along Banding + along CP.	
						- Minor bone coal to 2 cm width	
	110.3	113.3		0.63		- Coal as above - sharply broken. Minor	
						Calcite as "net stringering" < 0.5 mm	
						Stringering + calcite within bands to 2 cm width	
	TOTALS					÷ x 100 = % REC. SEAM	
						÷ x 100 = % TOTAL REC. SEAM(S)	

QUINSAM
COAL LIMITED

COREHOLE LOG

HOLE NUMBER: 92-046
PAGE 2 OF 2

CORE No.	CORE FOOTAGES DRILLED FROM	TO	TOTAL	RECOVERED SECTION	TOTAL	GEOLOGICAL DESCRIPTION (LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.)	TRUE DEPTH
							112.41
	110.3	113.3		0.99		Mudstone - Med green-grey - extremely friable & fractured. Fracturing common at 65° TCA, 35° TCA. Very friable & platy @ ≈ 50° TCA below No 1 Seam. Fractures with fault polishing. No calcite. Coarse silt near base of interval	113.4
	113.3	116.3		2.72		Siltstone / Sandstone. Med.-dark green silt and Sandstone - Very strongly fractured. Commonly at 10-20° TCA. Bedding irregular (disturbed) - Minor coalified material - Slickensides on fracture planes. - Minor concretions (beige) in worm? burrows.	113.4
							116.7
	TOTALS					÷ x 100 = % REC.	SEAM
						÷ x 100 = % TOTAL REC.	SEAM(S)

APPENDIX C

LITHOLOGS

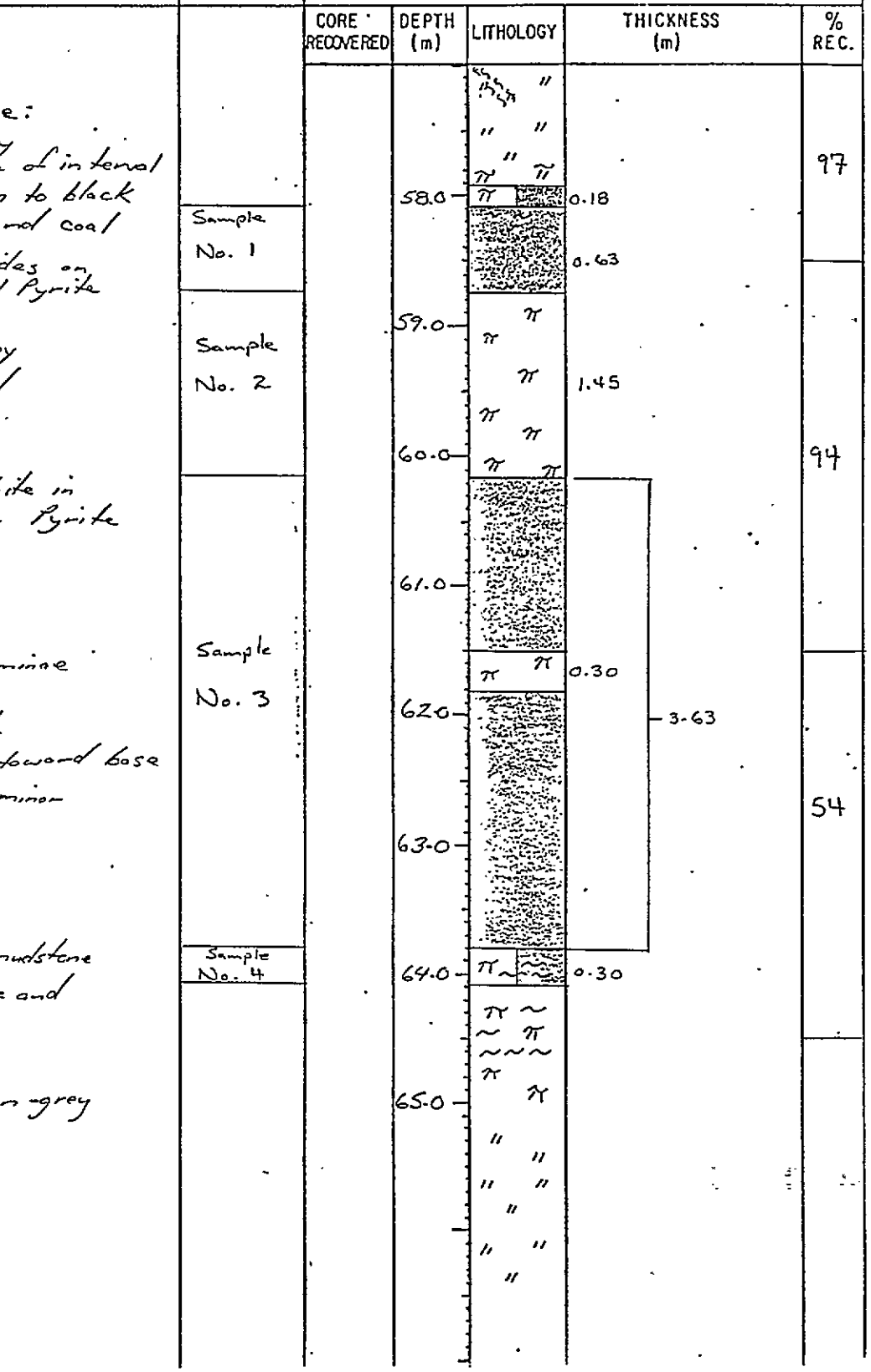
QUINSAM
COAL LIMITED

Hole Number: 92-001 Pit Number:

Location: N 103,526.20 Elevation: 313.25 m
E 99,883.53 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL
Siltstone / Muddy Siltstone: med.-dark green-grey concretions towards base of interval	
Coaly Mudstone: Grey brown to black interlaminated mudstone and coal	
Coal: #1 Rider, Slickensides on top & bottom. Calcite and Pyrite on fracture surfaces	Sample No. 1
Mudstone: Med. green-grey minor coalified material	Sample No. 2
Coal: Bright, blocky. Calcite in fine stockwork. Minor Pyrite	
Mudstone: Minor coal laminae	Sample No. 3
Coal: Blocky to fractured. Fracturing increasing toward base Calcite and Pyrite in minor fracturing.	
Muddy Coal: Interbedded mudstone and coal. Heavy calcite and pyrite in fractures.	Sample No. 4
Muddy Siltstone: Med. green-grey soft, easily broken	

CORE COLUMN Scale: 1:50



QUINSAM COAL LIMITED

Hole Number: 92-002 Pit Number:

Location: N 103,394.909 Elevation: 310.98

E 99,765.105 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Muddy Siltstone: Med-dark green-grey, interbedded. Shell fragments.			37.0		0.30	99
Coaly Mudstone: Laminated coal + mudstone						
Coal: #1 Rider. Blocky coal. Minor calcite. Gradational basal contact	Sample No. 5		38.0		0.54	
Coaly Mudstone: Laminated coal + mudstone					0.12	
Mudstone: Med. brown-grey	Sample No. 6				0.87	98
Coal: Hard, blocky coal Bone Coal: 1cm band @ 39.40 m. Calcite along cleat surfaces. Increased fracturing toward base of interval.			39.0		0.01	
			40.0			
	Sample No. 7		41.0		3.95	
1cm. Mudstone band.			42.0		0.01	97
Mudstone: 7cm with polished fault surfaces.			43.0		0.07	
Coal: Strongly fractured + polished.					0.35	
Coaly Mudstone: Strongly fractured, interbedded coal + mudstone.	Sample No. 8					
Siltstone: Light-med. green-grey Fractured + slickensides within zones			44.0			94
			45.0			

CORE COLUMN Scale: 1:50

Quinsam
COAL LIMITED

Hole Number: 92-003 Pit Number:

Location: N 103 452.167 Elevation: 315.88 m

E 100052.441 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Muddy Siltstone: Med.-dark green siltstone and mudstone. Minor shell debris						
Coaly Mudstone: Gradational contact into coal below.			71.0		0.61	89
Coal: # 1 Rider. Calcite as fracture and cleat infill.	Sample No. 9				0.55	
Mudstone:			72.0		0.03	
Coal: Calcite + clay on cleat.					0.08	
Dirty Coal: Coal: Mudstone 60:40					0.21	
Coaly Mudstone: Mudstone with thin coal bands.					0.18	
Mudstone: Med.-dark brown-grey. Very brittle near base.			73.0		1.85	
	Sample No. 10		74.0			95
Coal: Clean, brittle coal. Calcite and clay on cleat surfaces. Pyrite on fracture surfaces.			75.0			
Bone Coal: 5cm.	Sample No. 11				0.05	
Coal: As Above			76.0		3.29	100
			77.0			
Coaly Mudstone: Strongly foliated, polished mudstone OS fragments					0.06	
Mudstone: Upper portion strongly deformed. Minor coal bands	Sample No. 12		78.0		0.55	92
Siltstone: med. green-grey muddy siltstone			79.0			

QUINSAM COAL LIMITED

Hole Number: 92-004 Pit Number:

Location: N 103 355 · 991 Elevation: 311.66

E 100 002 · 72 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Mudstone / Siltstone: Interbedded units with shell debris. Med-dark green.			68.0			
Coaly Mudstone: Banded coal & mudstone						
Coal: Solid, blocky coal. Calcite on cleat. Pyrite as discontinuous bands.	Sample No. 13		69.0		0.29	99
Mudstone: med. brown					0.48	
Coal: Banded with mudstone near top					0.06	
Muddy Coal: mudstone: coal 20:80					0.07	
Coaly Mudstone: coalified material decreasing downsection					0.08	
					0.19	
			70.0			
Carbonaceous Mudstone: med. green & dark brown. Coalified material					1.44	
	Sample No. 14		71.0		0.01	88
Coal: Solid, blocky coal - Minor calcite in fractures, Bone Coal Band 1cm						
			72.0			
Bone Coal Band 6cm.	Sample No. 15				0.06	3.66
			73.0			
Bone Coal Band 1cm					0.01	
			74.0			61
			75.0		0.76 Lost Core.	
Mudstone: med. green-grey	Sample No. 16		76.0			

QUINSAM COAL LIMITED

Hole Number: 92-005 Pit Number:

Location: N 103 277.52 Elevation: 311.95m

E 99 930.35 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Mudstone/Siltstone: Dominantly mudstone with silty sections. Dark green to green-grey			64.0			89
Coaly Mudstone: Thinly banded, gradational contacts.			65.0		0.30	
Coal: Pyrite and calcite.	Sample No. 17				0.35	104
Coaly Mudstone: Interbanded mudstone & coal			66.0		0.33	
Mudstone: Med beige-grey & green-grey.	Sample No. 18				0.86	
mudstone band.			67.0		0.01	
Coal: Clean, blocky coal. Calcite stringers Rubble at basal contact						82
	Sample No. 19		68.0			
Bone Coal			69.0		0.06	
			70.0			86
			71.0			
Mudstone: Silty. Strongly fractured in upper 0.95m	Sample No. 20					74
			72.0			

CORE COLUMN Scale: 1:50

4.20

QUINSAM
COAL LIMITED

Hole Number: 92-006 Pit Number:

Location: N 103 222.07 Elevation: 309.35
E 100 107.06 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Mudstone/Siltstone: Dark brown-green and grey-green. Increasing in coalified material downsection.	Sample No. 22		81.0			66
Coal: Clean blocky coal at top of interval. Minor mudstone in top 0.2 m. Basal 1.25 m of strongly fractured coal.	Sample No. 23		82.0		2.9	100
Mudstone: Mod. brown-green. Strongly sheared.	Sample No. 24		83.0		0.5	74
Muddy Siltstone: Strongly broken and fractured			84.0			
			85.0			
			86.0			48
			87.0			

CORE COLUMN Scale: 1:50

QUINSAM
COAL LIMITED

Hole Number: 92-007 Pit Number:

Location: N 102 999.449 Elevation: 321.85 m

E 99 868.12 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Mudstone / Siltstone: Dark brown-grey to grey. Shell fragments. Basal section with minor coal laminae.			67.0			110
			68.0			
Coaly Mudstone: Banded coal and mudstone					0.34	
Coal: Solid blocky coal. Minor mudstone and calcite.	Sample No. 25				0.46	
Mudstone / Coaly Mudstone: Med-light beige grey with coal lenses. Mud band 27 cm at base.	Sample No. 26		69.0		0.95	104
Coal: Clean, brittle coal. Fine calcite stringers within bands and on cleat surfaces.			70.0			
Bone Coal	Sample No 27		71.0		0.08	94
			72.0		3.07	
Carbonaceous Mudstone: Soft, sheared, friable.			73.0		0.08	
Mudstone: Med. green-brown. Gradational into siltstone below. Moderate to weakly fractured.	Sample No 28				0.60	
Siltstone: Med. to dark brown-grey-green. Competent			74.0			88
			75.0			

CORE COLUMN Scale: 1:50

Quinsam
COAL LIMITED

Hole Number: 92-008 Pit Number:

Location: N 103 069.49 Elevation: 328.56 m
E 99 754.46 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Mudstone: Med. beige-grey. Minor Coal bands.						
Muddy Coal: Interlaminated coal + mudstone			58.0		0.10	
					0.07	
Coal: Competent, bonded. Minor calcite.	Sample No. 29				0.60	
Carbonaceous Mudstone: Minor coal bands.					0.04	
Mudstone: Med. beige-grey to dark brown in carbonaceous base.	Sample No. 30		59.0		0.63	78
Coal: Blocky coal in upper part of seam. Strongly broken, very friable in bottom part of seam. Calcite as fracture infill and on cleat	Sample No. 31		60.0			
Bone Coal			61.0		0.05	3.36
			62.0			99
Muddy Coal: Highly broken carbonaceous mudstone and coal	Sample No. 32		63.0		0.16	
Mudstone: med. beige-grey. Weakly fractured.			64.0			97
			65.0			

QUINSAM COAL LIMITED

Hole Number: 92-009 Pit Number: _____

Location: N 103 195.29 Elevation: 321.38

E 99 796.674 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
			54.0		1.17 - Coal not Cored	
Coal: Solid, banded coal. Bone Coal			55.0		0.20 0.06	
Coal: Broken, fractured coal, becoming solid toward base. Minor calcite stringers. Gradational basal contact.			56.0			76
Muddy Coal: Intensely sheared, friable. Mudstone: Strongly broken core			57.0		0.15 Core Loss	
Interbedded Sandstone / Siltstone / Mudstone: Med-dark green throughout. Minor calcite stringers.			58.0			
			59.0			68
			60.0			

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COAL LIMITED

Hole Number: 92-010 Pit Number:

Location: N 103 067 · 255 Elevation: 310·85

E 99 953 · 55 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
			67.0		Coal 0.75 : Not cored	
Coal: Banded coal with minor silt bands < 5mm.						
Bone Coal			68.0			
Coal: Banded coal. Weak calcite stringering in fractures. Broken and friable coal near base of interval						78
			69.0			
Mudstone Parting						
Coal: Broken, brittle			70.0			
Mudstone: Extremely fractured, minor carbonaceous material.						
			71.0			
Sandstone: Med grey, med. grained poorly sorted						95
			72.0			
Silty Mudstone: Med.-dark grey						
			73.0			

QUINSAM
COAL LIMITED

Hole Number: 92-011 Pit Number:

Location: N 103 281.08 Elevation: 316.46m
E 100 193.98 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Mudstone / Siltstone: Interbedded med-dark green to grey-green. Fractured and faulted			89.0			7
						67
Coaly Mudstone: Interbedded coal + mudstone. Coal bands 1cm, mudstone to 4 cm.			90.0		0.37	
Coal: #1 Rider. Banded coal with prominent fracturing 25° TCA. Pyrite					0.86	67
Coaly Mudstone: Extremely fractured coal and mudstone			91.0		0.17	
Mudstone: med to light green-grey. Strongly fractured throughout. Calcite stringers					1.27	
Coal: Sheared + broken throughout. Ground coal, slickensides.			92.0		0.7m Core Loss	
			93.0		2.37	78
Coaly Mudstone: Extremely sheared, friable Shear foliation 70° TCA.			94.0			
			95.0		0.16	
Mudstone: Strongly shear foliated med grey brown. Very incompetent					1.10	51
Sandstone / Siltstone / Mudstone: Strong to moderately fractured, interbedded			96.0			
			97.0			

QUINSAM COAL LIMITED

Hole Number: 92-012 Pit Number:

Location: N 103431.84 Elevation: 311.14

E 99808.67 Page ___ of ___

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Siltstone / Mudstone / Sandstone: Mudstone med. brown-grey, siltstone/sandstone light beige-grey. Shell fragments.						
Coal: #1 Rider. Broken coal. Muddy top + bottom. Calcite on fractures & cleat.			51.0		0.50	95
Mudstone: Med. beige-grey. Strongly fractured throughout. Very incompetent core.			52.0		1.35	
Coal: Moderately fractured in top 1.0 m. Relatively clean, brittle coal. Minor calcite in cleat and fracturing. Banded coal			53.0			94
			54.0			
Bone Coal			55.0		0.02	4.0
Carbonaceous Mudstone			56.0		0.07	95
Coaly Mudstone:			57.0		0.08	
Coal: Sharp contact with mudstone below.					0.15	
Mudstone / Siltstone: Med. beige-grey and green-grey. Gradational contacts between units. Minor coalified material.			58.0			99

QUINSAM
COAL LIMITED

Hole Number: 92-013 Pit Number:

Location: N 103 305·275 Elevation: 318·52 m
E 100 229·221 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
			95.0			
			96.0			
Mudstone: Med. - light beige-grey, strongly fractured					0.10	
Coal: Blocky, bright coal. Coal broken into 5-10cm lengths. - Minor calcite as fine stringers True seam thickness from E-logs = 3.4 metres			97.0			
			98.0		3.79	88
			99.0			
			100.0			51
Mudstone/Siltstone/Sandstone: Gradationally interbedded units Upper 15 cm strongly fractured			101.0			
			102.0			66

QUINSAM COAL LIMITED

Hole Number: 92-014 Pit Number:

Location: N 103348.00 Elevation: 323.33

E 100297.00 Page 1 of

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Mudstone: Med.-dark grey-brown. Minor coalified material. Minor beige-grey concretions			107.0			98
	Sample No. 36		108.0			
			109.0			90
Coal: Solid, blocky coal. Minor fractures along banding. Minor calcite on cleat surfaces and as hairline fracture infill. Bone Coal	Sample No. 37		110.0		core loss 17cm 3.28	
			111.0		0.01	
Mudstone: Light beige grey and dark brown muddy Coal: Mudstone bands in coal Coaly Mudstone: Interbedded coal and carbonaceous mudstone. Mudstone: Coal 80:20	Sample No. 38		112.0		0.07 0.13 0.10	96
Mudstone: Med. beige-brown. Soft. weak fracturing					0.70	
Siltstone / Sandstone: Med.-dark brown-green. Interbedded siltstone and sandstone.			113.0			
			114.0			

QUINSAM COAL LIMITED

Hole Number: 92-017 Pit Number:

Location: N 102 737.515 Elevation: 320.857

E 99 906.329 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
			79.0			
Coal: Clean, blocky coal. Minor calcite on cleat and as fine stringers.			80.0			87
Bone Coal			81.0		0.03	3.29
Coal: As above			82.0		0.05	
Carbonaceous Mudstone: Friable Coal: As above.			83.0			89
Mudstone / Siltstone: Med. green-grey Gradational contacts, interbedded. Weak fracturing			84.0			
			85.0			101

CORE COLUMN Scale: 1:50

QUINSAM
COAL LIMITED

Hole Number: 92-018 Pit Number:

Location: N 102,736.789 Elevation: 311.222
E 100,030.852 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Coal: Coal with mudstone bands. Pyrite		Sample No. 57	81.0		0.27	
Mudstone: Med.-light beige-grey. Minor carbonaceous content		Sample No. 58			0.32	
Coal: Calcite and pyrite stringers					0.04	
Cooly Mudstone: Coal: mudstone 15:85		Sample No. 59	82.0		0.10	96
Coal: Blocky, hard coal. Calcite on cleat. Weak fracturing		Sample No. 60	83.0		4.23	
Mudstone: Med-dark brown, friable.			84.0		0.30	
Coal: Moderately fractured			85.0			83
Carbonaceous Mudstone: Moderately fractured.					0.17	
Siltstone: Med. green-grey, minor sandstone. Weakly fractured.		Sample No. 61	86.0	//		
			87.0	//		
			88.0	//		101

CORE COLUMN Scale: 1:50

QUINSAM
COAL LIMITED

Hole Number: 92-019 Pit Number:

Location: N 102591.957 Elevation: 313.563
E 100002.094 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
			81.0			
Mudstone: Dark green-grey. Highly broken			82.0			
Coal: Hard, blocky. Prominent fracture direction throughout (60° TCA)					0.08	
			83.0			
Bone Coal					0.04	2.72
			84.0			68
Mudstone / Siltstone / Sandstone: Gradational contacts in interbedded units Mod green. to mod-dark green-grey and beige. Top part of friable mudstone. Minor carbonaceous material.			85.0			
			86.0			73

CORE COLUMN Scale: 1:50

Quinsam
COAL LIMITED

Hole Number: 92-020 Pit Number:

Location: N 102600.331 Elevation: 292.667 m

E 100215.646 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
			83.0			
Coal: Strongly banded, dirty, pyritic Minor calcite					0.10	
Mudstone: Gradational carbonaceous and med. beige-grey. Mud at base					1.2	
	Sample No 48		84.0			
Coal: Upper contact broken coal. Dominantly solid, blocky coal.						94
Bone Coal	Sample No. 49		85.0		0.01	
Coal: Basal Contact broken and gradational into friable carbonaceous mudstone.					1.9	
			86.0			
Mudstone: Med. grey-brown. Minor silt. Weak fracturing	Sample No. 50				0.9	74
			87.0			
Coal: Well banded, blocky coal					0.04	
Mudstone band					0.6	
Mudstone / Siltstone / Sandstone: Gradational contacts between interbedded units. Med. green-grey to drab brown-grey			88.0			
			89.0			100
			90.0			

QUINSAM COAL LIMITED

Hole Number: 92-021 Pit Number:

Location: N 103 043.570 Elevation: 319.995

E 100 492.878 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Mudstone: Dark green-grey. Minor silty zones. Concretions. Fracturing in basal 1.5m.						
Coal: Banded. Strongly broken in centre of interval. Calcite and pyrite in fractures and cleat.			129.0		0.38	100
Mudstone: Gradational contact. Carbonaceous contact. Fracturing common.			130.0		3.19	
			131.0			96
	Sample No. 51		132.0			
Coal: Upper 3.0m of solid, blocky coal. Basal 0.5m of fractured, friable coal. Minor calcite.			133.0			
	Sample No. 52		134.0		0.07	88
Mudstone					3.53	
Bone Coal			135.0		0.01	
Mudstone					0.09	
Mudstone / Siltstone / Sandstone: Top 0.75m highly broken. Minor calcite.			136.0			
	Sample No 53		137.0			84

CORE COLUMN Scale: 1:50

QUINSAM COAL LIMITED

Hole Number: 92-022 Pit Number:

Location: N 102 743.553 Elevation: 301.502

E 100 690.600 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Note: Number 3 Seam.						
Coal: Banded coal. Numerous thin mudstone laminae. Pyrite as replacement & lenses. Minor calcite	Sample No. 62		75.0			
Carbonaceous Mudstone: Dark grey-brown. Pyrite - 25%	Sample No. 63		76.0			
Coal: Dirty, Blocky coal. Numerous calcite stringers. Pyrite 3-5% (Bone Coal)	Sample No. 64		77.0		0.84	
Carbonaceous Mudstone: Dark brown. Thin coal laminae. Pyrite 3-5%	Sample No. 65		78.0		0.30	
Coal: Dirty, banded coal. Mudstone: Coal 30:70			79.0		0.05	97
Carbonaceous Sandstone: White sand mixed with carbonaceous material.			80.0		0.68	
Coal: Banded, dirty coal. Coal: Mudstone 90:10. Calcite in fractures & cleat.	Sample No. 66		81.0		1.46	
Carbonaceous Mudstone: Dark brown. Minor coal bands. Pyrite up to 30%			82.0		0.10	
Sandstone: Gradational contact into light grey, well sorted, med grained sandstone.			83.0		0.42	
					0.62	
					0.28	100

QUINSAM
COAL LIMITED

Hole Number: 92-023 Pit Number:

Location: N 103223 · 846 Elevation: 308.903 ·
E 99998 · 840 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Mudstone: Dark green - brown-grey. Minor coalified material near base. Strongly fractured in basal section			71.0			
Coaly Mudstone: Interbedded dark grey mudstone and coal Coal: Mudstone 15:85					0.15	
Coal: Moderately fractured. Minor calcite					0.59	85
Mudstone: Moderately fractured. Med brown-grey. Weak faultplanes			72.0		1.36	
			73.0			
Faulted Mudstone: Intensely faulted +/or fracture foliated			74.0		2.5	54
			75.0			
Mudstone / Siltstone: Dark green-grey Very incompetent.			76.0			
			77.0			84

QUINSAM
COAL LIMITED

Hole Number: 92-024 Pit Number:

Location: N 102 982.20 Elevation: 309.218
E 100 346.15 Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Mudstone: Dark brown. Minor beige concretions						
Muddy Coal: Interbedded mudstone: coal; 40:60						86
Coal: Blocky, banded, pyritic (5%)			107.0		0.47	
Mudstone: Med. beige-grey			108.0		2.03	
	Sample No. 54					76
Coal: Competent, banded coal Calcite in seat Weak fracturing			109.0			
			110.0			
Bone Coal	Sample No. 55		111.0		0.04	3.55
Mudstone			112.0		0.05	92
Mudstone: Med-dark brown-grey Strongly fractured at top 30cm.	Sample No. 56		113.0			
Siltstone / Mudstone: Dark green & grey-green. Gradational contacts:			114.0			79
			115.0			

QUINSAM
COAL LIMITED

Hole Number: 92-025 Pit Number: _____

Location: _____ Elevation: _____

_____ Page 1 of 1

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
					CORE COLUMN Scale: 1:50	
Mudstone: Med-dark grey-brown minor beige concretions			127		1.43	
	Sample No. 67					
			128.0			98
Coal: Bright blocky coal minor calcite in fine stringers			129.0		0.08	
Bone Coal	Sample No. 68					
Bone Coal					0.01	3.05
Mudstone			130.0		0.02	
Coal: Minor mudstone laminae in basal 25 cm.						90
Coaly Mudstone: Strongly fractured and polished			131.0		0.12	
	Sample No. 69					
Muddy Siltstone: Med-dark green-grey mudstone and siltstone - Top 70 cm of brown-grey mudstone, Relatively incompetent.			132.0		2.9	
			133.0			100
			134.0			

QUINSAM
COAL LIMITED

Hole Number: 92-026 Pit Number: _____

Location: _____ Elevation: _____

_____ Page ___ of ___

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
35.0m - 52.63 Sandstone Light grey, medium to coarse grained. Competent					weak fracture	
			48.0			100
					weak fracture	
			49.0		Bed	
						49.6
			0.3m		Core Loss	
	70	0.09	50.0			
	71	0.17				
	72	0.06				
	73	0.63				
	74	0.09	51.0			76
	75	0.13				
	76	0.03				
	Core loss	0.20	0.2m		Core Loss ?	
	77	0.65				
	78	0.18	52.0		Bone Coal	
	79	0.32				
	80	0.09				52.6
	81	0.24	0.05m		Core Loss ?	
			53.0			
						92
			54.0			
			55.0			55.1
						100
			56.0			

- Rubbly Coal
- Muddy Coal with Pyrite
- Sandstone
- Coal - Pyrite 20%
- Coal - banded
- Sandstone
- Coal
- Bone Coal
- Coal
- Sandstone
- Coal
- Bone Coal
- Sandstone
- Muddy Coal
- Sandstone
- Coal
- Bone coal Band
- Dirty Coal
- Sandstone
- Coal.
- Bone Coal
- Sandstone
- Coal
- Bone Coal
- Sandstone
- Dirty Coal
- Siltstone
- Sandstone

QUINSAM
COAL LIMITED

Hole Number: 92-027 Pit Number:

Location: Elevation:

Page ___ of ___

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Lithologies from geophysical logs.			73.0			
Coal						
Sandstone			74.0			
Coal						
Sandstone						
Coal						
Sandstone						
Coal			75.0		3.5 m.	
sandstone						
Coal						
Sandstone						
Coal						
Sandstone			76.0			
Coal						
Sandstone						
Coal			77.0			
Sandstone			78.0			
Coal						
Sandstone						
Coal						
Sandstone			79.0			
Coal						
Sandstone						
Coal						
mudstone			80.0			
Sandstone						

QUINSAM
COAL LIMITED

Hole Number: 92-028 Pit Number: _____

Location: _____ Elevation: _____

_____ Page ___ of ___

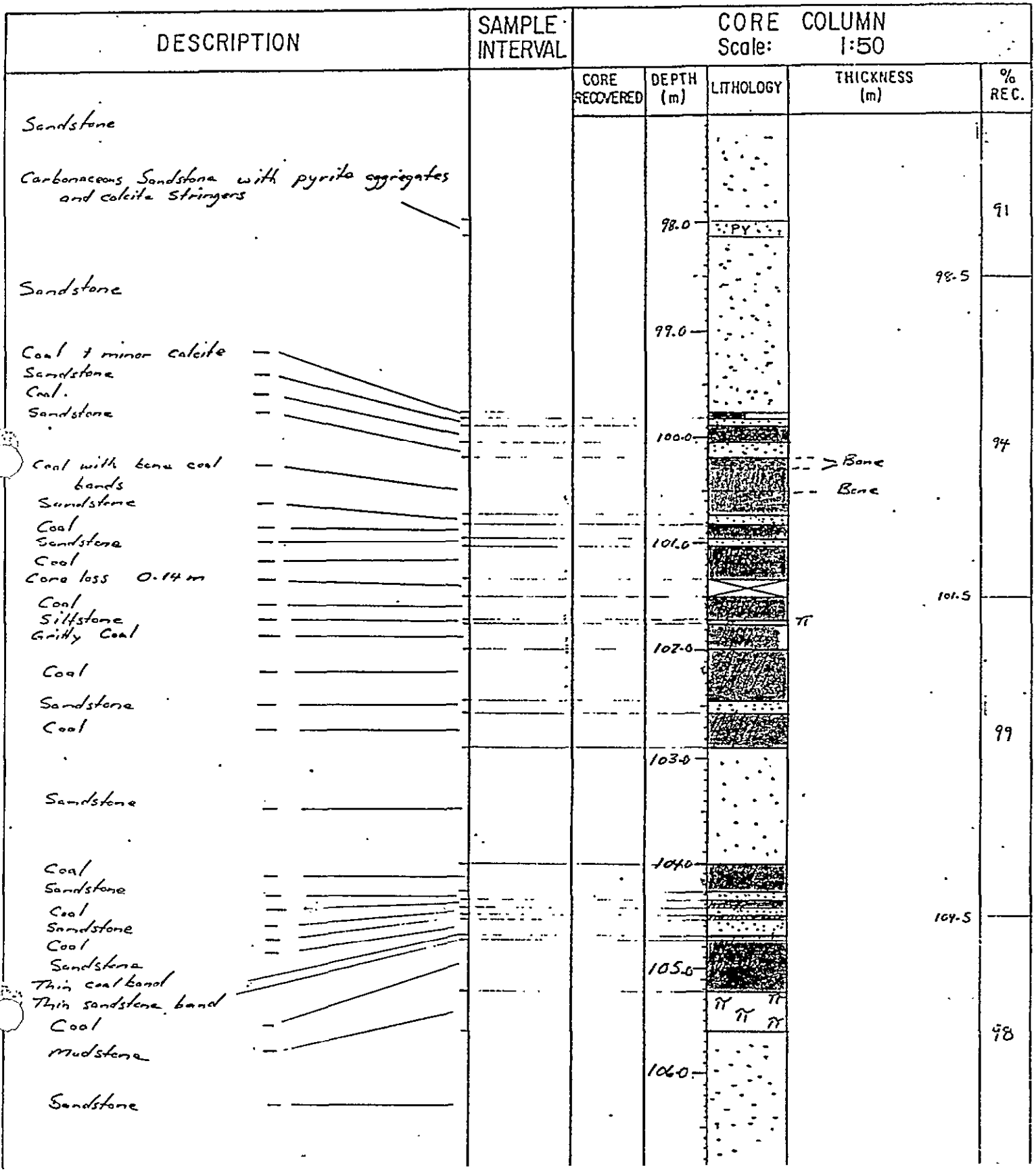
DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
				CORE COLUMN Scale: 1:50		
Sandstone			93.0			
Carbonaceous Sandstone with Pyrite and Calcite			94.0			90
Sandstone						
Coal					0.20	
Core loss 0.17m			95.0		0.17	
Coal						
Sandstone						
Coal						
Sandstone			96.0			
Coal					Bone	
Sandstone						94
Dirty Coal, Numerous Sandstone bands			97.0		Bone Bone Bone Bone Bone Bone	
			98.0			
Sandstone						
			99.0			92
Coal			100.0			
Sandstone						
Coal						
Sandstone			101.0			
Coal						
Siltstone / Sandstone / Mudstone						98

QUINSAM
COAL LIMITED

Hole Number: 92-029 Pit Number: _____

Location: _____ Elevation: _____

_____ Page ___ of ___



QUINSAM
COAL LIMITED

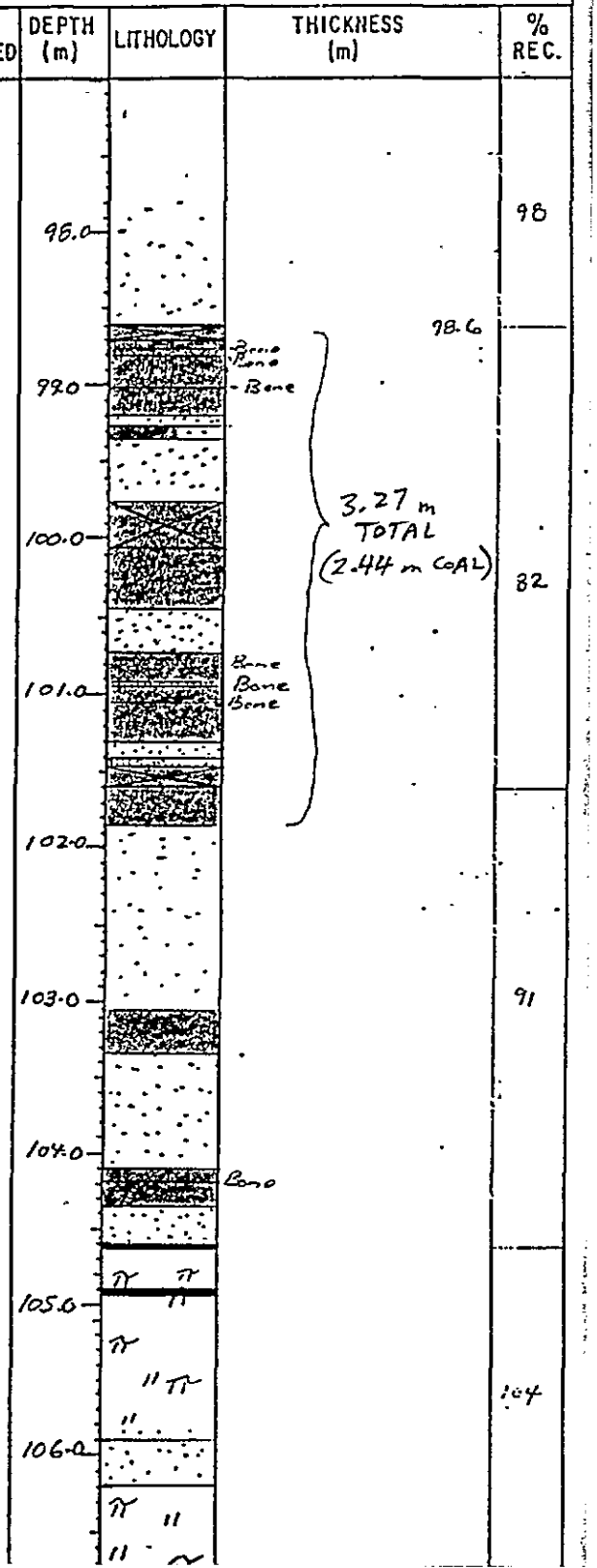
Hole Number: 92-030 Pit Number: _____

Location: _____ Elevation: _____

_____ Page ___ of ___

DESCRIPTION	SAMPLE INTERVAL
Sandstone	
Coal (11.0 cm at base of sandstone)	
Core loss (0.10 m)	
Coal - numerous bone coal bands	
Sandstone	
Gritty Coal	
Sandstone	
Core loss (0.30m)	
Coal	
Sandstone	
Coal - numerous bone coal bands	
Sandstone	
Coal - Dirty	
Core loss (0.13m)	
Coal	
Sandstone	
Coal	
Sandstone with minor coal bands	
Coal with boney bands.	
Sandstone - coal inclusions	
mudstone with coal bands	
Sandstone	
Interbedded Siltstone and mudstone	

CORE COLUMN Scale: 1:50



Quinsam
COAL LIMITED

Hole Number: 92-032 Pit Number:

Location: Elevation:

Page ___ of ___

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Sandstone			74.0			100
Core loss						
Interbedded sandstone and coal			75.0			
Coal						
Interbedded sandstone and coal						87
Sandstone			76.0			
Coal						
Interbedded sandstone and coal						
Core loss						
Coal						
Interbedded mudstone, coal, sandstone			77.0			
Sandstone			78.0			
Carbonaceous Sandstone						
Coal						99
Sandstone						
Coal			79.0		Bone Coal	
Sandstone						
Coal						
Sandstone						
Coal			80.0		mudstone	
Sandstone			81.0			99
			82.0			

CORE COLUMN Scale: 1:50

QUINSAM
COAL LIMITED

Hole Number: 92-033 Pit Number:

Location: Elevation:

Page ___ of ___

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
				CORE COLUMN Scale: 1:50		
Sandstone			131.0			
			132.0			
Coal - strongly broken			133.0			76
Core loss 0.35m						
coal (0.04m)						
mudstone			134.0		2.54 m.	
Coal						
Core loss 0.45m			135.0			
Muddy Coal						
Coaly mudstone			136.0			96
Mudstone			137.0			
Core loss 0.15m						
Interbedded Mudstone/Sandstone						
Mudstone			138.0			96
Sandstone						
			139.0			

QUINSAM
COAL LIMITED

Hole Number: 92-034 Pit Number: _____

Location: _____ Elevation: _____

NOTE: This hole tested for methane desorption Page ___ of _____

DESCRIPTION	SAMPLE INTERVAL	CORE COLUMN Scale: 1:50				
		CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Lithologies from geophysical logs.						
Sandstone			141.0			
Coal						
Mudstone			142.0			
Coal			143.0		4.32 m.	
			144.0			
Mudstone						
Coal			145.0			
Mudstone			146.0			
Sandstone			147.0			
			148.0			
			149.0			

QUINSAM
COAL LIMITED

Hole Number: 92-035 Pit Number: _____

Location: _____ Elevation: _____

_____ Page ___ of ___

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
			133.0			
Sandstone					133.25	
Coal / Pyrite band →						
mudstone					133.79	94
Coal			134.0		133.89	
					134.76	
Core loss (0.45m)			135.0		135.21	
Coal						
mudstone			136.0		136.14	
Coal					136.16	78
			137.0		137.13	
Core loss (0.24m)					137.37	
Mudstone			138.0			99
			139.0			

4.12

QUINSAM
COAL LIMITED

Hole Number: 92-036 Pit Number:

Location: Elevation:

Page ___ of ___

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Lithologies from geophysical logs.						
Sandstone			108.0			
Coal			109.0		2.21 m.	
muddy Coal			110.0			
Coal			111.0			
Mudstone			112.0			
Coal						
Mudstone			113.0			
			114.0			
			115.0			

CORE COLUMN Scale: 1:50

Quinsam
COAL LIMITED

Hole Number: 92-037 Pit Number:

Location: Elevation:

Page ___ of ___

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
			146.0			
Sandstone						100
Coal — core loss 0.06m			147.0			
Coal					147.34	
Mudstone — Core loss 0.05m					147.5	
Calcite						
Coal			148.0			
mudstone					148.4	91
Core loss 0.08m					148.47	
					148.55	
Coal			149.0			
					149.3	
mudstone						
					149.77	
Core loss 0.14m			150.0		149.91	
mudstone						
Coal						
					150.81	
Core loss 0.24m			151.0		151.05	
mudstone						85
					151.49	
Core loss 0.14m					151.64	
Mudstone			152.0			
Silty mudstone						
			153.0			
			154.0			

4.09 m

CORE COLUMN Scale: 1:50

QUINSAM
COAL LIMITED

Hole Number: 92-038 Pit Number: _____

Location: _____ Elevation: _____

_____ Page ___ of ___

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
			92.0			104
Sandstone			93.0			
Coal						76
Sandstone			94.0			
Coal						
Sandstone						
Coal						
Core loss 0.76m			95.0		3.03 m.	
Coal						
Coaly Mudstone Mudstone: Coal 90:10			96.0			93
Sandstone						
Coal			97.0			
Muddy Coal Coal: Mudstone 65:35						
Sandstone						
Core loss 0.10 m			98.0			
Sandstone						103
			99.0			
			100.0			

CORE COLUMN Scale: 1:50

QUINSAM
COAL LIMITED

Hole Number: 92-039 Pit Number:

Location: Elevation:

Page ___ of ___

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
			81.0			
Sandstone						
			82.0			
Coal						87
Core loss 0.37m			83.0			
Coal						
Sandstone						
Coal			84.0		4.12 m.	
						90
Sandstone			85.0			
Coal Sandstone						
Coal Mudstone>						
Core loss 0.31m			86.0			
Coaly Mudstone						
Sandstone						
			87.0			
Coal						75
Sandstone						
Coal -sandstone>						
Coal						
			88.0			
Core loss 0.73m						
Mudstone						

QUINSAM
COAL LIMITED

Hole Number: 92-040 Pit Number: _____

Location: _____ Elevation: _____

_____ Page ___ of ___

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Sandstone			61.0			98
Coal			62.0		4.14 m	
Sandstone Gritty Coal Sandstone			63.0			99
Coal			64.0			
Sandstone						
Coal			65.0			
Sandstone						
Coal Carbonaceous Grit Mudstone Coal Mudstone / Coal						
Mudstone / Siltstone			66.0			99
Sandstone			67.0			
Dirty Coal						
Coaly Mudstone						
Coal Sandstone Pyrite Band → PY			68.0			
Coal						
Mudstone			69.0			94
Sandstone						

QUINSAM
COAL LIMITED

Hole Number: 92-041 Pit Number:

Location: Elevation:

Page 1 of 2

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
Sandstone			49.0			94
mudstone						
Sandstone						
Mudstone						
Sandstone			50.0			
Mudstone						
Coal						
Sandstone						
Sandstone Coal						
mudstone Coal						83
Coal			51.0			
Core loss 0.47m			52.0			
Coal						
Mud :- unconsolidated			53.0		6.9 m.	
Coal						95
Bone Coal			54.0			
Coal						
Core loss 0.11 m			55.0			
Coal						
Bone Coal			56.0			
Coal						85
Sandstone			57.0			

QUINSAM
COAL LIMITED

Hole Number: 92-041 Pit Number:

Location: Elevation:

Page 2 of 2

DESCRIPTION	SAMPLE INTERVAL	CORE RECOVERED	DEPTH (m)	LITHOLOGY	THICKNESS (m)	% REC.
			57.0			
Sandstone						85
Core loss 0.40 m						
Sandstone			58.0			
Muddy Coal — Coal						
Sandstone						
Mudstone						
Coal						
Bone						
Coal						
			59.0			
Mudstone						73
			60.0			
Core Loss 0.80 m						
			61.0			
Mudstone						95
			62.0			
			63.0			
			64.0			
			65.0			

APPENDIX D

SEALING OF DRILL HOLE REPORTS

Report on the Sealing of Drillholes

Inspection District NANAIMO Date of Report April 4/92

Company BRINCO Coal Minc Land District Comox

Lot or Key Number _____ Licence Number _____

Number of Drillhole. Qu - 92 - 01c

Surface elevation

Type (Vertical, diamond, rotary, size etc.) Rotary, Vertical, 6¼

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco Coal Mining Corp.

Date of completion Mar 6/92

Date of Sealing April 4/92

Sealed by: Name of Contractor Hi-Rate

Name of Exploration Company " " Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions?
Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective?

(b) Details of any tests carried out.
Yes cement from bottom to top with 41 bags of cement + 2 gel

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Garry Kibel

Designation Drilling Supervisor

Date April 4/92

Countersignature Stephen Jardine
Surface Mine Manager

Designation _____

Date April 10/92

JUL 8

Report on Sealing of Drillhole

Inspection District Nanaimo Date of Report April 1/92

Company Brinco Coal mine Land District

Claim by Number Licence Number

1. Number of Drillhole. Qu-92-02
2. Surface elevation
3. Type (Vertical, diamond, rotary, size etc.) Vertical rotary 6¼
4. Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

   Name of Exploration Company Brinco Coal mining comp.
5. Date of completion Mar 8-/92
6. Date of Sealing April 1/92
7. Sealed by: Name of Contractor Hi-Rate Drilling 1985 LTD

   Name of Exploration Company Brinco Coal mining comp
8. (a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? Yes

   (b) If so, give details and location 12 m of 7" casing in hole

   (a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

   (b) If No, give reasons and details of variation.
10. (a) Was the sealing effective? Yes

    (b) Details of any tests carried out. cement with 4% cement + 2 gel from bottom to surface
11. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

    Signature Barry Kirkup

    Designation Drilling Supervisor

    Date

    Countersignature Barry Ansley

    Designation Driller

    Date April 10/92

Alyster Sanderson
SURFACE MINE MANAGER

JUL 6

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report April 3/92

Company Brinco Coal Mines Land District Comox

Lot by Number _____ Licence Number _____

Number of Drillhole. Qu # 92-006

Surface elevation

Type (Vertical, diamond, rotary, size etc.) Vertical rotary 6¾

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco Coal mining corp.

Date of completion Mar 12/92

Date of Sealing April 3/92

Sealed by: Name of Contractor Hi-Rate

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? Yes

(b) If so, give details and location 10.7m of 7" casing stuck in hole

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

10. (a) Was the sealing effective? Yes

(b) Details of any tests carried out. cemented from bottom to surface with 55 bags of cement + 3 gel

11. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Garry Kubel

Designation Drilling Supervisor

Date _____

Countersignature Barry Comeau

Designation Driller

Date April 10/92

Kept Sandum

SURFACE MINE MANAGER

port on the Sealing of Drillholes

spection District Nanaimo Date of Report April 1/92

mpany Brinco Coal mine Land District Comox

.1 by Number _____ Licence Number _____

Number of Drillhole. Bo +92- 3

Surface elevation

Type (Vertical, diamond, rotary, size etc.) Vertical, rotary, 6½)

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco Coal mining Comp

Date of completion Mar 9/92

Date of Sealing April 1/92

Sealed by: Name of Contractor Hi-Rate

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out. cement from bottom to surface with 48 cement & 2 gel

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Barry Kitch

Designation Drilling Supervisor

Date _____

Countersignature Barry Crumby

Designation Driller

Date April 10/92

Stephen Gardiner
SURFACE MINE MANAGER

JUL 8 19??

Report on the Sealing of Drillholes

spection District NANAIMO Date of Report MAR. 30/92

mpany BRINCO COAL MINING LTD. Land District COMOX

.1 by Number _____ Licence Number _____

Number of Drillhole. QU-92-04C

Surface elevation 311.66 m.

Type (Vertical, diamond, rotary, size etc.) ROTARY, VERTICAL, 6¼"

Drilled by: Name of Contractor HI-RATE DRILLING (1985) LTD.

Name of Exploration Company BRINCO COAL MINING LTD.

Date of completion 10 MAR. 92

Date of Sealing MAR. 29/92

Sealed by: Name of Contractor SAME

Name of Exploration Company SAME

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? Yes

(b) If so, give details and location 4.2m of 7" casing below ground surface

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out. Cement 49 bags + 1 bag gel from bottom to surface

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature [signature]

Designation Drilling Supervisor

Date _____

Countersignature [signature]

Designation Driller

Date April 10/92

[signature]

SURFACE MINE MANAGER

JUL

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report April 3/92

Company Brinco Coal Mine Land District Comox

Coal by Number _____ Licence Number _____

Number of Drillhole. Go-92-05c

Surface elevation

Type (Vertical, diamond, rotary, size etc.) Vertical rotary 6¼

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco Coal Mining Comp

Date of completion Mar 12/92

Date of Sealing April 3/92

Sealed by: Name of Contractor Hi-Rate

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? NO

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out. cemented from bottem to surface with 45 bags of cement & 2gel

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Gary Kubal

Designation Drilling Supervisor

Date April 3/92

Countersignature Barry Gardner

Designation SURFACE MINE MANAGER

Date April 10/92

port on the Sealing of Drillholes

spection District NANAIMO Date of Report MAR. 31/92

mpany BRINCO COAL CORPORATION Land District COMOX

.1 by Number _____ Licence Number _____

Number of Drillhole. QU-92-01

Surface elevation 321.85 m.

Type (Vertical, diamond, rotary, size etc.) ROTARY, VERTICAL, 6 1/4"

Drilled by: Name of Contractor HIRATE DRILLING (1985) LTD

Name of Exploration Company BRINCO GAL MINING CORPORATION

Date of completion MAR. 13/92

Date of Sealing MAR. 31/92

Sealed by: Name of Contractor HI-RATE DRILLING (1985) LTD

Name of Exploration Company SAME

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? Yes

(b) If so, give details and location 4.4 m of 7" casing below ground level

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out. cement with 46 cement + 2 gal from bottom to surface

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Henry Kulf

Designation Drilling Supervisor

Date _____

Countersignature Barry Arnold

Designation Driller

Date April 10/92

Hyatt Hudson

SURFACE MINE MANAGER

Report on the Sealing of Drillholes

Inspection District NANAIMO Date of Report MAR. 30/92

Company BRINCO COAL MINING CORPORATION Land District COMOX

Lot by Number _____ Licence Number _____

Number of Drillhole. QU-92-08

Surface elevation 328.56 m.

Type (Vertical, diamond, rotary, size etc.) ROTARY, VERTICAL, 6¼"

Drilled by: Name of Contractor HI-RATE DRILLING (1985) LTD.

Name of Exploration Company BRINCO COAL MINING CORP.

Date of completion MAR.

Date of Sealing MAR. 29/92

Sealed by: Name of Contractor SAME

Name of Exploration Company SAME

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? Yes

(b) If so, give details and location 2.4m of 8 5/8 stuck in hole

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective?

(b) Details of any tests carried out. Cement with 42 cement + 2gal from bottom to Top

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature [signature] [signature] SURFACE MINE MANAGER

Designation Drilling Supervisor

Date _____

Countersignature [signature]

Designation Driller

Date April 10/92

Report on ... Sealing of Drillholes

Inspection District Nanaimo Date of Report April 4/92

Company: Brinco Coal mine Land District Comox

Coal by Number _____ Licence Number _____

Number of Drillhole. Qu-92-4c

Surface elevation

Type (Vertical, diamond, rotary, size etc.) Vertical, rotary, 6 1/4

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco Coal Mining Comp.

Date of completion ~~April 4/92~~ Mar 14/92

Date of Sealing April 4/92

Sealed by: Name of Contractor Hi-Rate

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out. Cemented from bottom to surface with 38 bags of cement + 2 gel

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Barry Kubel

Designation Drilling Supervisor

Date April 4/92

Countersignature Barry Amundsen

Designation Driller

Date April 10/92

Hugh Gardner

SURFACE MINE MANAGER

JUL 6

eport on the Sealing of Drillholes

nspection District Nanaimo Date of Report April 4/93

ompany Brinco Coal Mine Land District Comox

.1 by Number _____ Licence Number _____

. Number of Drillhole. Qo - 92-10 c

. Surface elevation

. Type (Vertical, diamond, rotary, size etc.) Vertical, rotary, 6 1/4

. Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco Coal Mining Coop

. Date of completion Mar 15/92

. Date of Sealing April 4/92

. Sealed by: Name of Contractor Hi-Rate

Name of Exploration Company Brinco

. (a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? Yes

(b) If so, give details and location 4.2 m of 7" casing top below ground level couldn't hook on to pull

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

0. (a) Was the sealing effective? Yes

(b) Details of any tests carried out. cemented from bottom to surface with 45 bags of cement + 2 Gel

1. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Barry Kubal

Designation Drilling Supervision

Date _____

Countersignature Barry Gardner

SURFACE MINE MANAGER

Designation Drills

Date Oct 10/92

port on the Sealing of Drillholes

spection District Nanaimo Date of Report April 1/92

mpany Brinco Coal mine Land District Comox

.ley Number _____ Licence Number _____

Number of Drillhole. Go-92-12

Surface elevation

Type (Vertical, diamond, rotary, size etc.) Vertical rotary 6 ¼

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco coal mining comp

Date of completion Mar 17/92

Date of Sealing April 1/92

Sealed by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco Coal mining comp

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? Yes

(b) If so, give details and location 5.8 m of 7" casing stuck in hole couldn't pull

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out. Cement with 37 cement + 2 gel from bottom to surface

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Barry Kuhl

Designation Drilling Supervisor

Date _____

Countersignature Barry Crowley

Designation Owner

Date April 1/92

Stephen Sandon

SURFACE MINE MANAGER

port on the Sealing of Drillholes

spection District Nanaimo Date of Report April 2/92

mpany Brinco Coal Mines Land District Comox

.l by Number _____ Licence Number _____

Number of Drillhole. Qu-92-11

Surface elevation

Type (Vertical, diamond, rotary, size etc.) Vertical, rotary, 6 1/4

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco Coal mining comp

Date of completion Mar 16/92

Date of Sealing April 2/92

Sealed by: Name of Contractor Hi-Rate

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out. Cement from button to surface with 59 bags of cement + 2 gal

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Barry Kuhl

Designation Drilling Supervisor

Date _____

Countersignature Barry Annesley

Designation Driller

Date April 6/92

Hugh Gardner

SURFACE MINE MANAGER

Report on the Sealing of Drillholes

Inspection District *Nanaimo* Date of Report *April 2/92*

Company *Brinco Coal Mines* Land District *Comox*

Lobby Number ______ Licence Number ______

Number of Drillhole. *Qu-92-13*

Surface elevation

Type (Vertical, diamond, rotary, size etc.) *Vertical rotary 6 1/4*

Drilled by: Name of Contractor *Hi-Rate Drilling 1985 LTD*

Name of Exploration Company *Brinco Coal mining corp*

Date of completion *Mar 18/92*

Date of Sealing *April 2/92*

Sealed by: Name of Contractor *Hi-Rate*

Name of Exploration Company *Brinco*

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? *No*

(b) If so, give details and location ______

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? *Yes*

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? *Yes*

(b) Details of any tests carried out. *cement from botten to surface with 61 bags of cement + 3 gel*

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature *[signature]* *[signature]*

Designation *Drilling Supervisor* SURFACE MINE MANAGER

Date ______

Countersignature *[signature]*

Designation *Driller*

Date *Apr 10/92*

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report April 2/92

Company Brinco Coal Mines Land District Comox

Colliery Number ______ Licence Number ______

1. Number of Drillhole. QU-92-14

2. Surface elevation

3. Type (Vertical, diamond, rotary, size etc.) Vertical rotary 6 1/4

4. Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco Coal Mining corp

5. Date of completion Mar 19/92

6. Date of Sealing April 2/92

7. Sealed by: Name of Contractor Hi-Rate Drilling

Name of Exploration Company Brinco

8. (a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? Yes

(b) If so, give details and location ______

9. (a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

10. (a) Was the sealing effective? Yes

(b) Details of any tests carried out. cement from ~~surface to~~ bottom to top with 61 bags of cement + 3 gel

11. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature [signature]

Designation Drilling Supervisor

Date ______

[signature]

SURFACE MINE MANAGER

Countersignature [signature]

Designation Driller

Date April 10/92

port on the Sealing of Drillholes

spection District Nanaimo Date of Report April 4/92

mpany Brinco Coal Mine Land District Comox

.1 by Number _____ Licence Number _____

Number of Drillhole. Qu-92-17c

Surface elevation

Type (Vertical, diamond, rotary, size etc.) Rotary, Vertical, 6 1/4

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco Coal Mining Corp.

Date of completion Mar 19/92

Date of Sealing April 4/92

Sealed by: Name of Contractor Hi-Rate Drilling

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out. Cemented from Bottem to surface with 51 bags & 2 sel

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Garry Kulak

Designation Drilling Supervisor

Date April 4/92

Countersignature Barry Armstrong

Designation Driller

Date April 10/92

Hugh Gordon

SURFACE MINE MANAGER

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report Mar 29/92

Company Brinco Coal Mine Land District Comox

S ◯ by Number _____ Licence Number _____

1. Number of Drillhole. QV - 92 - 18

2. Surface elevation

3. Type (Vertical, diamond, rotary, size etc.) Vertical rotary 6¼

4. Drilled by: Name of Contractor Hi-Rate Drilling 1955 LTD

Name of Exploration Company Brinco coal mining comp.

5. Date of completion Mar 22/92

6. Date of Sealing Mar 29/92

7. Sealed by: Name of Contractor Hi-Rate

Name of Exploration Company Brinco

8. (a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

9 ◯ (a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

10. (a) Was the sealing effective? Yes

(b) Details of any tests carried out. cement with 52 cement + 2 gel from Button to Top

11. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Barry Kuhl

Designation Drilling Supervisor

Date _____

Countersignature Barry Kuhl

◯ Designation Driller

Date April 10/92

Agent Gordon

SURFACE MINE MANAGER

JUL 8

Report on the Sealing of Drillholes

Inspection District NANAIMO Date of Report MAR. 31/92

Company BRINCO COAL MINING Land District COMOX

Inquiry Number _____ Licence Number _____

Number of Drillhole. QU-92-19C

Surface elevation 313.56 m.

Type (Vertical, diamond, rotary, size etc.) ROTARY, VERTICAL, 6 1/4"

Drilled by: Name of Contractor HI-RATE DRILLING (1985) LTD.

Name of Exploration Company BRINCO COAL MINING CORPORATION

Date of completion MAR. 23/92

Date of Sealing MAR. 31/92

Sealed by: Name of Contractor SAME

Name of Exploration Company SAME

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out. Cement with 5% cement + 2 gel from bottom to surface

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Jerry Kuhl

Designation Drilling Supervisor

Date _____

Countersignature Barry Abernethy

Designation Driller

Date April 10/92

Stan Jardine
SURFACE MINE MANAGER

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report Mar 29/92

Company Brinco Coal mine Land District Comox

Map Number _____ Licence Number _____

. Number of Drillhole. DH # 92-20

. Surface elevation

. Type (Vertical, diamond, rotary, size etc.) Vertical rotary

. Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company _____

. Date of completion Mar 23/92

. Date of Sealing Mar 29/92

. Sealed by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

. (a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

0. (a) Was the sealing effective? Yes

(b) Details of any tests carried out. Cement with 55 bags cement + 2 gel

1. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Gary Kubal

Designation Drilling Supervisor

Date _____

Countersignature Barry Annesley

Designation Driller

Date April 10/92

Alistair Gardner
SURFACE MINE MANAGER

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report April 3/92

Company Brinco Coal Mine Land District

Lot by Number Licence Number

Number of Drillhole. # 92-22c

Surface elevation

Type (Vertical, diamond, rotary, size etc.) Vertical, no tang, 6¼.

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco coal mine compound

Date of completion Mar 25/92

Date of Sealing April 3/92

Sealed by: Name of Contractor Hi-Rate

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions?

(b) If No, give reasons and details of variation.

(a) Was the sealing effective?

(b) Details of any tests carried out.
cutting were shoveled in hole & topped with cement
There were no mineable coal in hole

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Garry Kubal

Designation Drilling Supervisor

Date

Countersignature Barry Gordon

Designation Driller

Date April 10/92

Hugh Gordon
SURFACE MINE MANAGER

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report April 4/92

Company Brinco Coal Mine Land District Comox

Coal by Number _____ Licence Number _____

Number of Drillhole. Qu - 92 - 23 c

Surface elevation

Type (Vertical, diamond, rotary, size etc.) Vertical, rotary, 6¼"

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco Coal Mining Coal

Date of completion Mar 28/92

Date of Sealing April 4/92

Sealed by: Name of Contractor Hi-Rate

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out. cemented from bottom to surface with 49 bags cement + 2 gel

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Danny Rubel

Designation Drilling Supervisor

Date April 4/92

Countersignature Barry Cinnis

Designation Driller

Date April 10/92

Stan Jardine
SURFACE MINE MANAGER

Report on the Sealing of Drillholes

Inspection District NANAIMO Date of Report MAR. 31/92

Company BRINCO COAL MINING Land District COMOX

by Number Licence Number

1. Number of Drillhole. QU-92-21C

2. Surface elevation

3. Type (Vertical, diamond, rotary, size etc.) ROTARY, VERTICAL, 6¼"

4. Drilled by: Name of Contractor HI-RATE DRILLING (1985) LTD.

Name of Exploration Company BRINCO COAL MINING CORPORATION

5. Date of completion MAR. 25/92

6. Date of Sealing MAR. 31 /92

7. Sealed by: Name of Contractor SAME

Name of Exploration Company SAME

8. (a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? NO

(b) If so, give details and location

9. (a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

10. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.
cement with 82 cement from bottom to surface

11. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature [signature] [signature]

SURFACE MINE MANAGER

Designation

Date

Countersignature [signature]

Designation Driller

Date Apr 10/92

eport on the Sealing of Drillholes

nspection District	Nanaimo	Date of Report	April 3/92
ompany	Brinco Coal Mines	Land District	Comox
.1 by Number		Licence Number	

Number of Drillhole.

Surface elevation Q. 92-024

Type (Vertical, diamond, rotary, size etc.) Vertical rotary 6 1/4

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco Coal Mining Corp.

Date of completion Mar 28/92

Date of Sealing April 3/92

Sealed by: Name of Contractor Hi-Rate

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

. (a) Was the sealing effective? Yes

(b) Details of any tests carried out. cemented from bottom to Top with 68 bags of cement + 3 gel

. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature [signature]

Designation Drilling Supervisor

[signature]

SURFACE MINE MANAGER

Date

Countersignature [signature]

Designation Dr. Ken

Date April 10/92

eport on the Sealing of Drillholes

Inspection District Nanaimo Date of Report _____

Company Quinsam Coal Land District Comox

Mine Number _____ Licence Number _____

Number of Drillhole. hole # 92-025

Surface elevation

Type (Vertical, diamond, rotary, size etc.) core 6 1/4

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

Date of completion April 5/92

Date of Sealing Oct 20/92

Sealed by: Name of Contractor Hi-Rate Drilling 1985/LTD

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.

. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Henry Kydd

Designation Drill Supervisor

Date Oct 20/92

Countersignature [illegible] Jordan

Designation Surface Mine Manager

Date Oct. 22/92

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report _____

Company Quinsam Coal Land District Comox

Log Number _____ Licence Number _____

Number of Drillhole. #92-026

Surface elevation

Type (Vertical, diamond, rotary, size etc.) _____

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

Date of completion Sept 10/92

Date of Sealing Oct 22/92

Sealed by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? NO

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out.

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Doug Kuhl

Designation Drill Supervisor

Date Oct 22/92

Countersignature _____

Designation Mine Manager

Date Oct. 24/92

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report _____

Company Ramsgate Coal Land District Comox

Mining Lease Number _____ Licence Number _____

Number of Drillhole. #92-027

Surface elevation

Type (Vertical, diamond, rotary, size etc.) core 6 1/4

Drilled by: Name of Contractor Hi-Rate Drilling 1985/LTD

Name of Exploration Company Brinco

Date of completion Sept 27/92

Date of Sealing Oct 22/92

Sealed by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out.

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Danny Koebel

Designation Drill Supervisor

Date Oct 22/92

Countersignature _____

Designation MINE MANAGER

Date Oct. 24/92

eport on the Sealing of Drillholes

Inspection District Nanaimo Date of Report

Company Ramsay Coal Land District Comox

1. Property Number Licence Number

Number of Drillhole. #92-028

Surface elevation

Type (Vertical, diamond, rotary, size etc.) core 6 1/4

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

Date of completion Sept 28/92

Date of Sealing Oct 22/92

Sealed by: Name of Contractor Hi-Rate Drilling

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? Yes

(b) If so, give details and location 26.2 m of 7" OD

11(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

9. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.

10. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Barry Kobel

Designation Drill Supervisor

Date Oct 22/92

Countersignature

Designation MINE MANAGER

Date Oct. 24/92

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report [illegible]

Company Quinsam Coal Land District Comox

Mining Lease Number _____ Licence Number _____

Number of Drillhole. # 92-029

Surface elevation

Type (Vertical, diamond, rotary, size etc.) core 6 1/4

Drilled by: Name of Contractor Hi-Bale Drilling 1985 LTD

Name of Exploration Company Brinco

Date of completion Sept 28/92

Date of Sealing Oct 21/92

Sealed by: Name of Contractor Hi-Bale

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out.

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Gary Kuhl

Designation Drill Supervisor

Date Oct 21/92

Countersignature [signature]

Designation MINE MANAGER

Date Oct. 24/92

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report _____

Company Quinsam Coal Land District Comox

Lot Number _____ Licence Number _____

Number of Drillhole. # 92-030

Surface elevation

Type (Vertical, diamond, rotary, size etc.) Core 6¼

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

Date of completion Sept 27/92

Date of Sealing Oct 21/92

Sealed by: Name of Contractor Hi-Rate

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? N

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out.

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Harry Kinkel

Designation Drill Supervisor

Date Oct 21/92

Countersignature Stephen Darden

Designation MINE MANAGER

Date Oct 24/92

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report

Company Quinsam Coal Land District Comox

Coal Number Licence Number

1. Number of Drillhole. 92-031
2. Surface elevation
3. Type (Vertical, diamond, (rotary) size etc.) core C4
4. Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

   Name of Exploration Company Brinco
5. Date of completion Sept 28/92
6. Date of Sealing Oct 17/92
7. Sealed by: Name of Contractor Hi-Rate Drilling

   Name of Exploration Company Brinco
8. (a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

   (b) If so, give details and location

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes, cemented

   (b) If No, give reasons and details of variation.

10. (a) Was the sealing effective? Yes

    (b) Details of any tests carried out.

11. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Tony Kubel

Designation Drill Supervision

Date Oct 17 92

Countersignature

Designation Mine Manager

Date Oct 24/92

eport on the Sealing of Drillholes

Inspection District Nanaimo Date of Report

Company Quinsam Coal Land District Campbell

Property Number Licence Number

Number of Drillhole. A92-031A

Surface elevation

Type (Vertical, diamond, rotary), size etc.) conc 6 1/4"

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

Date of completion Sept 29/92

Date of Sealing Oct 17/92

Sealed by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

10. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.

11. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Barry Kiebel

Designation Drill Supervisor

Date Oct 17/92

Countersignature

Designation Oct. 24/92

Date Mine Manager

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report

Company Quinsam Coal Land District Comox

Claim by Number Licence Number

Number of Drillhole. #92-032

Surface elevation

Type (Vertical, diamond, rotary, size etc.) core 6 1/4

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

Date of completion Sept 29/92

Date of Sealing Oct 20

Sealed by: Name of Contractor

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? No

(b) If No, give reasons and details of variation. Hole produces 200 plus g.p.m. & was filled from top with cement & gravel with a Transit mix

(a) Was the sealing effective? Yes

(b) Details of any tests carried out. 2 [redacted] lbs of cement

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Barry Kibble

Designation Drill Supervisor

Date Oct 20/92

Countersignature Alistair Hudson

Designation Mine Manager

Date Oct. 20/92

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report _____

Company Quinsam Coal Land District Comox

Lot by Number _____ Licence Number _____

Number of Drillhole. 92-033

Surface elevation

Type (Vertical, diamond, rotary, size etc.) core 6 1/4

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

Date of completion Oct 1/92

Date of Sealing Oct 17/92

Sealed by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes cemented

(b) If No, give reasons and details of variation.

10. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.

11. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Danny Kulcsf

Designation Drill Supervisor

Date Oct 17/92

Countersignature [signature] Jordan

Designation Mine Manager

Date Oct. 24/92

eport on the Sealing of Drillholes

Inspection District Nanaimo Date of Report

Company Quinsam Coal Land District Comox

Lease by Number Licence Number

Number of Drillhole. 92-034

Surface elevation

Type (Vertical, diamond, rotary, size etc.) Core 6 1/4

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

Date of completion Oct 2/92

Date of Sealing Oct 19/92

Sealed by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.

. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Danny Kubel

Designation Drill Supervisor

Date Oct 19/92

Countersignature Hugh Jardine

Designation Mine Manager

Date Oct. 24/92

eport on the Sealing of Drillholes

nspection District Nanaimo Date of Report

ompany Quinsam Coal Land District Comox

1 by Number Licence Number

. Number of Drillhole. 92-035

. Surface elevation

. Type (Vertical, diamond, rotary, size etc.) core C ¼

. Drilled by: Name of Contractor Hi-Rate Drilling 1985 Ltd

Name of Exploration Company Banco

. Date of completion Oct 4/92

. Date of Sealing Oct 26/92

. Sealed by: Name of Contractor Hi-Rate Drilling 1985 Ltd

Name of Exploration Company Banco

. (a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

0. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.

1. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature

Designation Chief Inspector

Date

Countersignature

esignation Mine Manager

Date Oct. 24/92

eport on the Sealing of Drillholes

nspection District Nanaimo Date of Report

ompany Quinsam Coal Land District Comox

l by Number Licence Number

. Number of Drillhole. 92-036

. Surface elevation

. Type (Vertical, diamond, rotary, size etc.) rotary cone 6 1/4

. Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

. Date of completion Oct 6/92

. Date of Sealing Oct 18/92

. Sealed by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

. (a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? Yes

(b) If so, give details and location bit ~~tw~~ came off at 125m

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

0. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.

1. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Danny Kiebel

Designation Drill Supervisor

Date Oct 18/92

Countersignature

Designation Mine Manager

Date Oct. 24/92

eport on the Sealing of Drillholes

Inspection District Nanaimo Date of Report _____

Company Quinsam Coal Land District Comox

Coy Number _____ Licence Number _____

Number of Drillhole. 92-036A

Surface elevation

Type (Vertical, diamond, rotary, size etc.) rotary ~~one~~ 6 1/4

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

Date of completion Oct 8/92

Date of Sealing Oct 18/92

Sealed by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

0. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.

1. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature R. Kelly

Designation Drilling Supervisor

Date Oct 22/92

Countersignature _____

Designation Mine Manager

Date Oct. 24/92

eport on the Sealing of Drillholes

Inspection District Nanaimo Date of Report

Company Quinsam Coal Land District Comox

Mine Number Licence Number

1. Number of Drillhole. # 92-037
2. Surface elevation
3. Type (Vertical, diamond, rotary, size etc.) Cone 6 1/4
4. Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

   Name of Exploration Company Brinco
5. Date of completion Oct 9/92
6. Date of Sealing Oct 20/92
7. Sealed by: Name of Contractor Hi-Rate Drilling 1985 LTD

   Name of Exploration Company Brinco
8. (a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

   (b) If so, give details and location

9. (a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

   (b) If No, give reasons and details of variation.

10. (a) Was the sealing effective? Yes

    (b) Details of any tests carried out.

11. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Gary Kibel

Designation Drill Supervisor

Date Oct 22/92

Countersignature Hugh Gordon

Designation Mine Manager

Date Oct. 24/92

Report on the Sealing of Drillholes

spection District Nanaimo Date of Report Feb. 11/93

mpany Quinsam Coal Land District Comox

.1 ◯ Number _____ Licence Number _____

Number of Drillhole. 92-038

Surface elevation +

Type (Vertical, diamond, rotary, size etc.) Core 6 1/4

Drilled by: Name of Contractor Hi-Rate Drilling 1985 Ltd.

Name of Exploration Company Quinsam Coal.

Date of completion Oct 9/92

Date of Sealing Oct. 19/92

Sealed by: Name of Contractor Hi-Rate Drilling 1985 Ltd.

Name of Exploration Company Quinsam Coal

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location

◯) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out.

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature J. Lehtinen P. Geo.

Designation Contract Geologist

Date Feb 11/93

◯ untersignature _____

Designation Mine Manager

Date Feb. 11/93

eport on the Sealing of Drillholes

nspection District Nanaimo Date of Report _____

ompany Quinsam Coal Land District Comox

. ...y Number _____ Licence Number _____

. Number of Drillhole. 92-039

. Surface elevation

. Type (Vertical, diamond, rotary, size etc.) core BQ

. Drilled by: Name of Contractor Hi-Rate Drilling

Name of Exploration Company Quinsam

. Date of completion Oct 19/92

. Date of Sealing Oct 26/92

. Sealed by: Name of Contractor Hi-Rate Drilling 1985 Ltd

Name of Exploration Company Quinsam

. (a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

0. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.

1. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Dave Kibble

Designation Drill Supervisor

Date Oct 26/92

Countersignature _____

Designation Mine Manager

Date Oct. 26/92

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report _____

Company Quinsam Coal Land District Comox

Property Number _____ Licence Number _____

1. Number of Drillhole. 92-040

2. Surface elevation

3. Type (Vertical, diamond, rotary, size etc.) Core NQ

4. Drilled by: Name of Contractor H-R-T Drilling (1985) Ltd

Name of Exploration Company Quinsam

5. Date of completion Oct 9/92

6. Date of Sealing Oct 26/92

7. Sealed by: Name of Contractor H-R-T Drilling (1985) Ltd

Name of Exploration Company Quinsam

8. (a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

9. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.

10. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature [signature]

Designation Chief Inspector

Date Oct 26/92

Countersignature [signature]

Designation Mine Manager

Date Oct. 26/92

eport on the Sealing of Drillholes

nspection District Nanaimo Date of Report

ompany Quinsam Coal Land District Comox.

by Number Licence Number

. Number of Drillhole. # 92-041

. Surface elevation

. Type (Vertical, diamond, rotary, size etc.) Core 6 1/4

. Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

. Date of completion Oct 8/92

. Date of Sealing Oct 19/92

. Sealed by: Name of Contractor Hi-Rate Drilling 1985/LTD

Name of Exploration Company Brinco

. (a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

0. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.

1. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Danny Kubal

Designation Drill Supervisor

Date Oct 22/92

Countersignature Stephen Jardine

Designation Oct. 26/92

Date Mine Manager

eport on the Sealing of Drillholes

Inspection District Nanaimo Date of Report

Company Quinsam Coal Land District Nanaimo

Log by Number Licence Number

Number of Drillhole. # 92-~~0~~ 042

Surface elevation

Type (Vertical, diamond, rotary, size etc.) core 6 1/4

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

Date of completion Oct 13/92

Date of Sealing Oct 24/92

Sealed by: Name of Contractor Hi-Rate Drilling

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

0. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.

1. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Danny Kuhel

Designation Drill Supervisor

Date Oct 24/92

Countersignature Stephen Gardner

Designation Mine Manager

Date Oct. 24/92

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report _____

Company Quinsam Coal Land District Comox

Property Number _____ Licence Number _____

Number of Drillhole. #92-043

Surface elevation

Type (Vertical, diamond, rotary, size etc.) Core 6 1/2

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

Date of completion Oct 14/92

Date of Sealing Oct 23/92

Sealed by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out.

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Doug Koibel

Designation Drill Supervisor

Date Oct 23/92

Countersignature _____

Designation Mine Manager

Date Oct. 26/92

Report on the Sealing of Drillholes

Inspection District Nanaimo Date of Report _____

Company Quinsam Coal Land District Comox

Map Number _____ Licence Number _____

Number of Drillhole. #92-044

Surface elevation

Type (Vertical, diamond, rotary, size etc.) Core 6 1/4

Drilled by: Name of Contractor Hi-Rate Drillers 1985 LTD

Name of Exploration Company Brinco

Date of completion Oct 14/92

Date of Sealing Oct 22/92

Sealed by: Name of Contractor Hi Rate Drillers

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

(a) Was the sealing effective? Yes

(b) Details of any tests carried out.

I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Gary Kulik

Designation Drill Supervisor

Date Oct 22/92

Countersignature [signature] Jordan

Designation Mine Manager

Date Oct. 26/92

eport on the Sealing of Drillholes

Inspection District Nanaimo Date of Report _____

Company Quinsam Coal Land District Comox

Mine Number _____ Licence Number _____

Number of Drillhole. #92-045

Surface elevation

Type (Vertical, diamond, rotary, size etc.) core 6 1/4

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

Date of completion Oct 15/92

Date of Sealing Oct 25/92

Sealed by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? No

(b) If so, give details and location _____

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.

. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Gary Kubel

Designation Drill Supervisor

Date Oct 25/92

Countersignature Hugh Gordon

Designation Mine Manager

Date Oct. 26/92

eport on the Sealing of Drillholes

Inspection District Nanaimo Date of Report

Company Quinsam Coal Land District Comox

Mine Number Licence Number

Number of Drillhole # 92-046

Surface elevation

Type (Vertical, diamond, rotary, size etc.) core 6¼

Drilled by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

Date of completion Oct 16/92

Date of Sealing Oct 25/92

Sealed by: Name of Contractor Hi-Rate Drilling 1985 LTD

Name of Exploration Company Brinco

(a) Has any casing, drill pipe, drill bits, core barrel, etc. been left in the hole? casing 14.0m

(b) If so, give details and location
14.0m of 7" casing stuck in hole

(a) Was the drillhole sealed in the manner outlined in the Chief Inspectors Instructions? Yes

(b) If No, give reasons and details of variation.

. (a) Was the sealing effective? Yes

(b) Details of any tests carried out.

. I certify that the above drillhole has been effectively sealed in accordance with the instructions of the Chief Inspector of Mines.

Signature Gary Kuhl

Designation Drill Supervisor

Date Oct 25/92

Countersignature Hyst Jackson

Designation Mine Manager

Date Oct. 26/92

PHOTOGRAPHIC PLATES

(DRILLCORE)

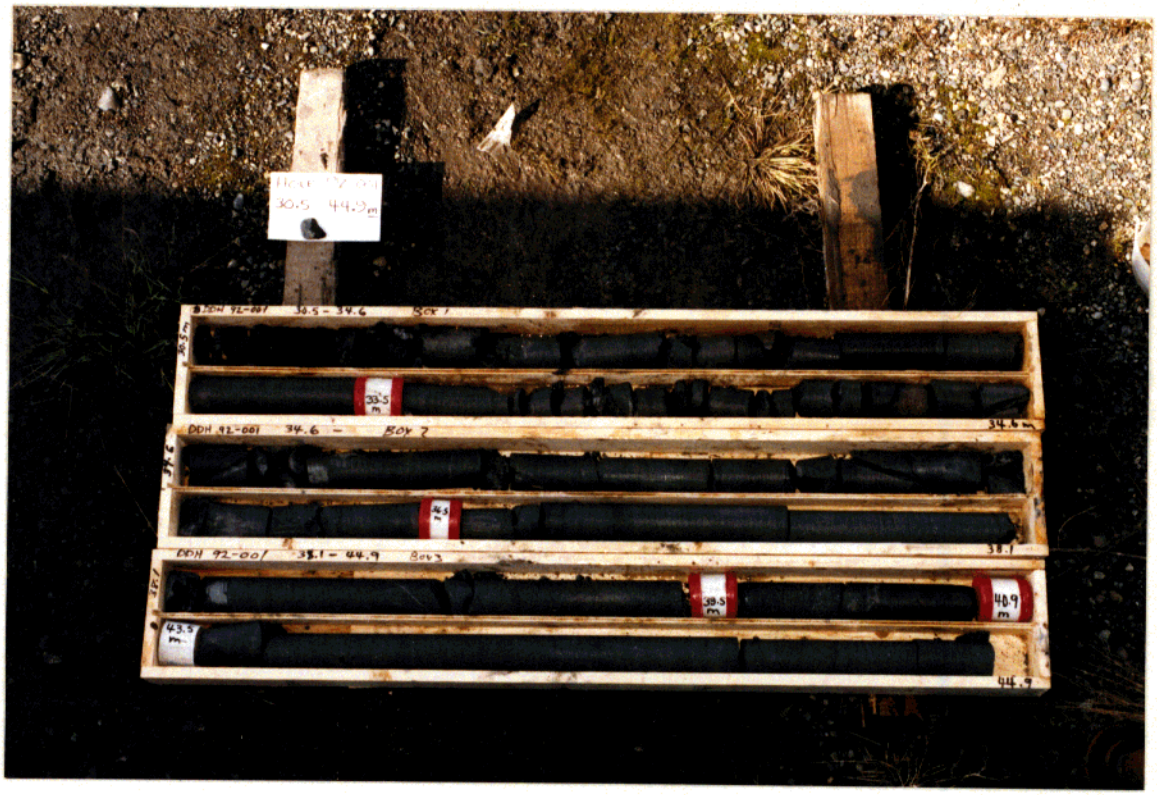


PLATE 1: Hole 92-001, 30.5 - 44.9m

PLATE 2: Hole 92-001, 44.9 - 57.0m

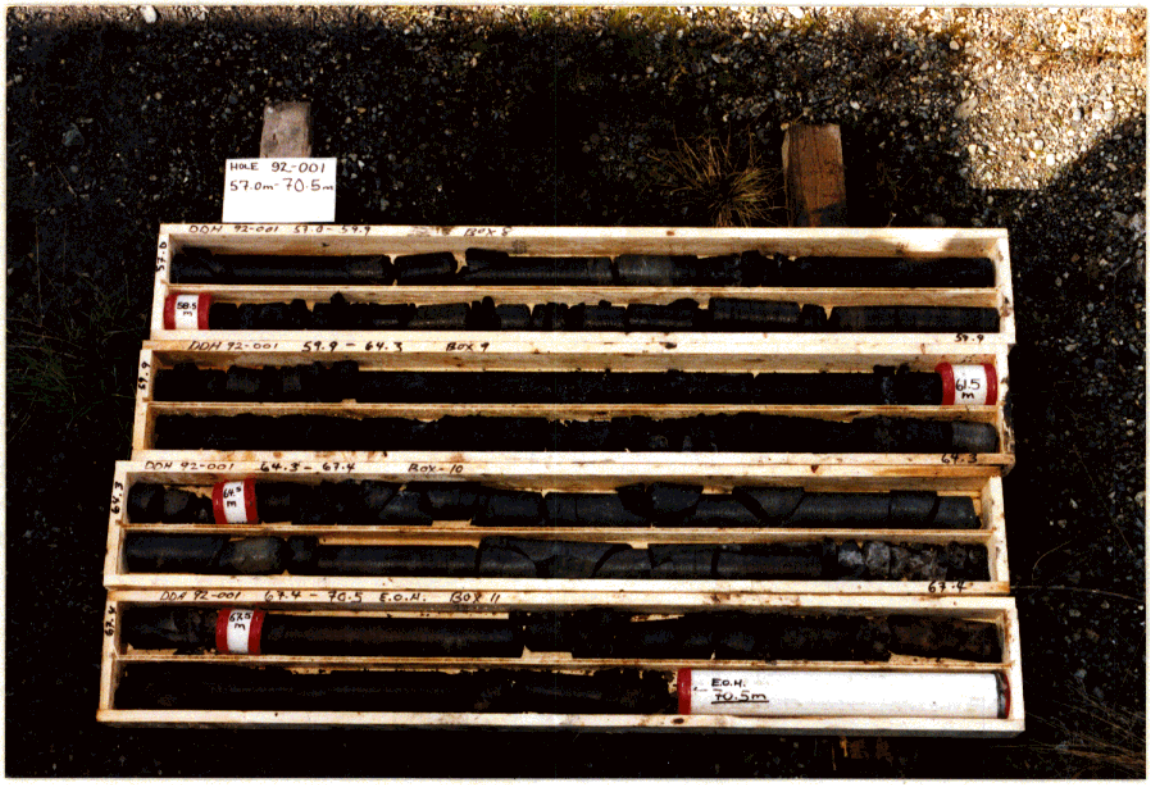


PLATE 3: Hole 92-001, 57.0 - 70.5m

PLATE 4: Hole 92-002, 13.0 - 28.2m

PLATE 5: Hole 92-002, 28.2 - 34.5m

PLATE 6: Hole 92-002, 34.5 - 46.6m

PLATE 7: Hole 92-002, 46.6 - 61.3m

PLATE 8: Hole 92-002, 61.3 - 70.0m

PLATE 9: Hole 92-002, 70.0 - 77.0m

PLATE 10: Hole 92-003, 38.4 - 53.67m

PLATE 11: Hole 92-003, 53.67 - 69.7m

PLATE 12: Hole 92-003, 69.7 - 83.5m

PLATE 13: Hole 92-004, 35.5 - 51.2m

PLATE 14: Hole 92-004, 51.2 - 66.5m

PLATE 15: Hole 92-004, 66.5 - 84.0m

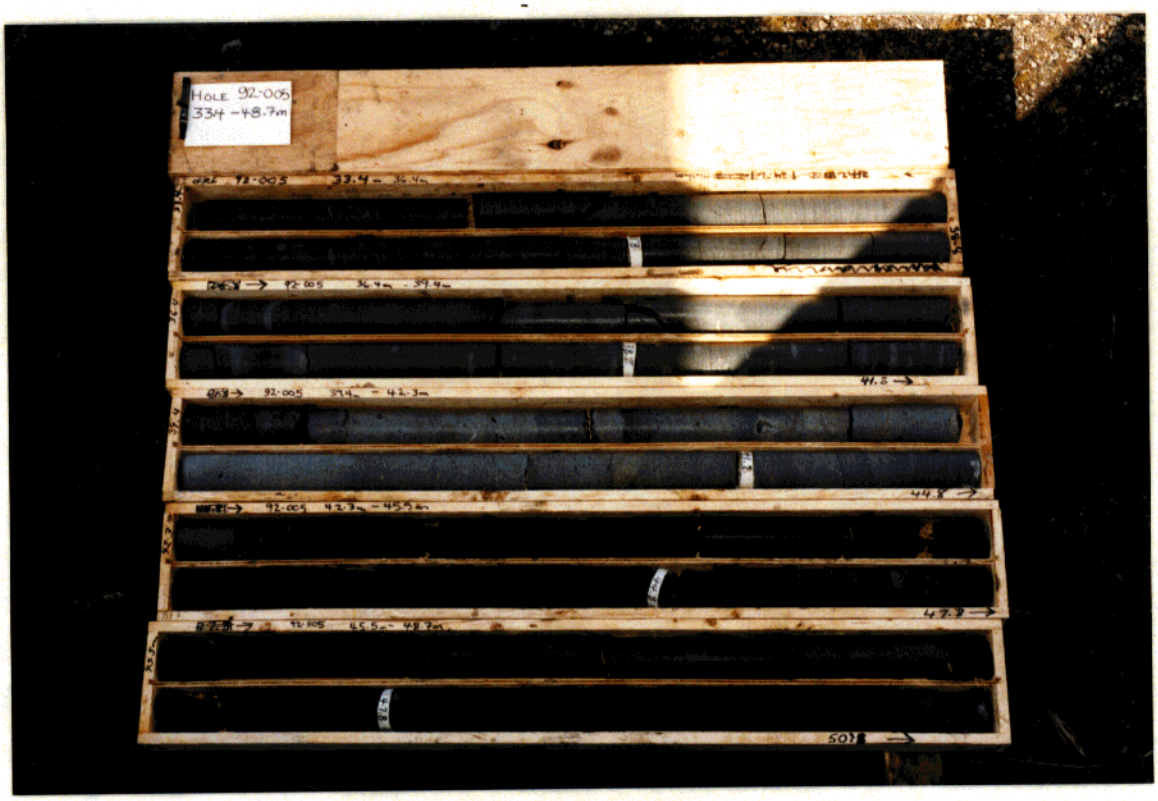


PLATE 16: Hole 92-005, 33.4 - 48.7m

PLATE 17: Hole 92-005, 48.7 - 63.1m

PLATE 18: Hole 92-005, 63.1 - 78.4m

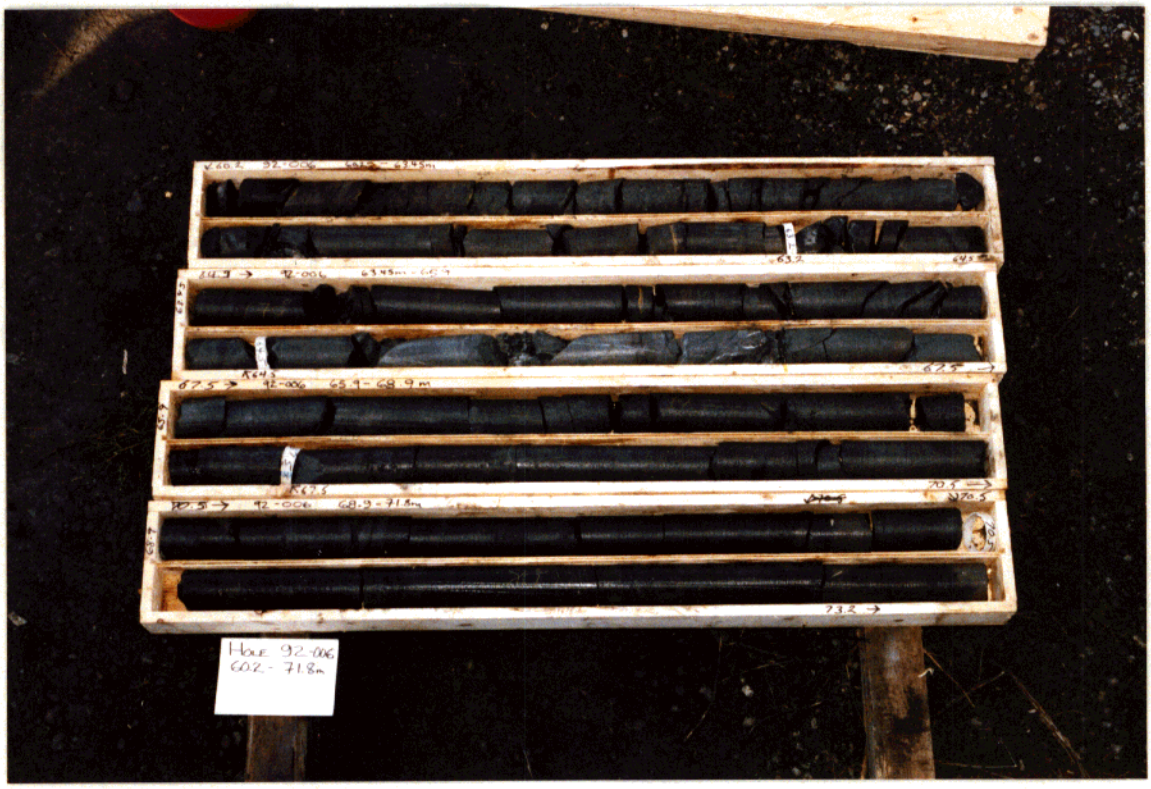


PLATE 19: Hole 92-006, 60.2 - 71.8m

PLATE 20: Hole 92-006, 74.6 - 84.55m

PLATE 21: Hole 92.006, 84.55 - 94.0m

PLATE 22: Hole 92-007, 52.8 - 66.2m

PLATE 23: Hole 92-007, 66.2 - 79.7m

PLATE 24: Hole 92-008, 58.0 - 72.3m

PLATE 25: Hole 92-009, 54.8 - 64.9m

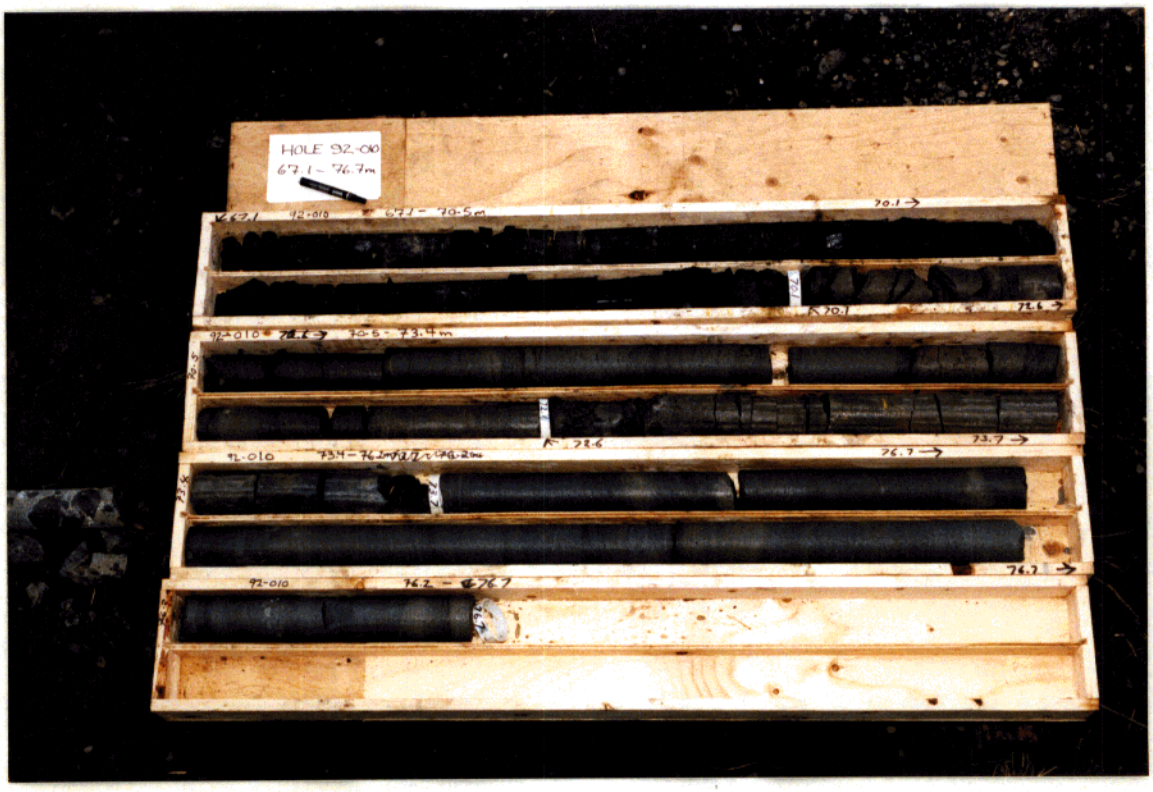


PLATE 26: Hole 92-010, 67.1 - 76.7m

PLATE 27: Hole 92-011, 74.7 - 84.10m

PLATE 28: Hole 92-011, 84.10 - 101.20m

PLATE 29: Hole 92-012, 7.90 - 22.2m

PLATE 30: Hole 92-012, 25.2 - 36.9m

PLATE 31: Hole 92-012, 36.9 - 49.0m

PLATE 32: Hole 92-012, 49.0 - 63.7m

PLATE 33: Hole 92-013, 96.6 - 106.0m

PLATE 34: Hole 92-014, 99.4 - 105.8m

PLATE 35: Hole 92-014, 105.8 - 116.3m

PLATE 36: Hole 92-017, 79.5 - 88.2m

PLATE 37: Hole 92-018, 80.9 - 90.0m

PLATE 38: Hole 92-019, 82.2 - 93.2m

PLATE 39: Hole 92-020, 83.2 - 93.9m

PLATE 40: Hole 92-021, 121.3 - 130.5m

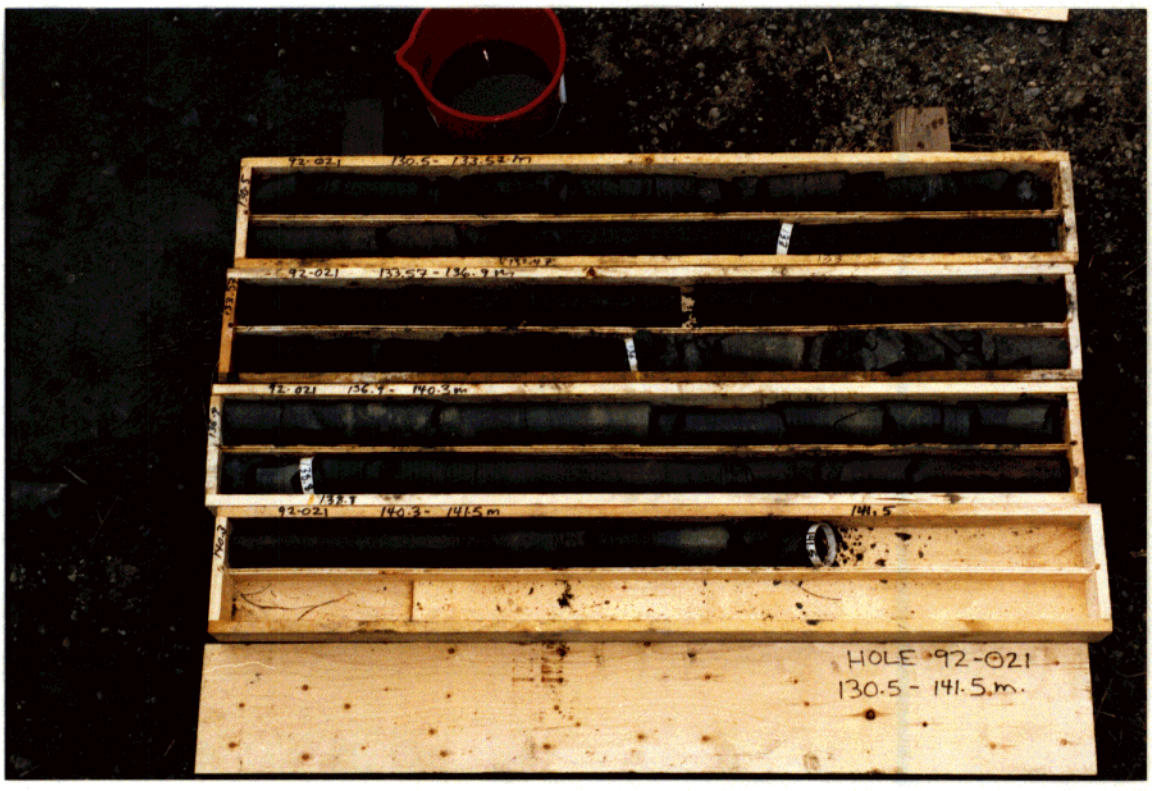


PLATE 41: Hole 92-021, 130.5 - 141.5m

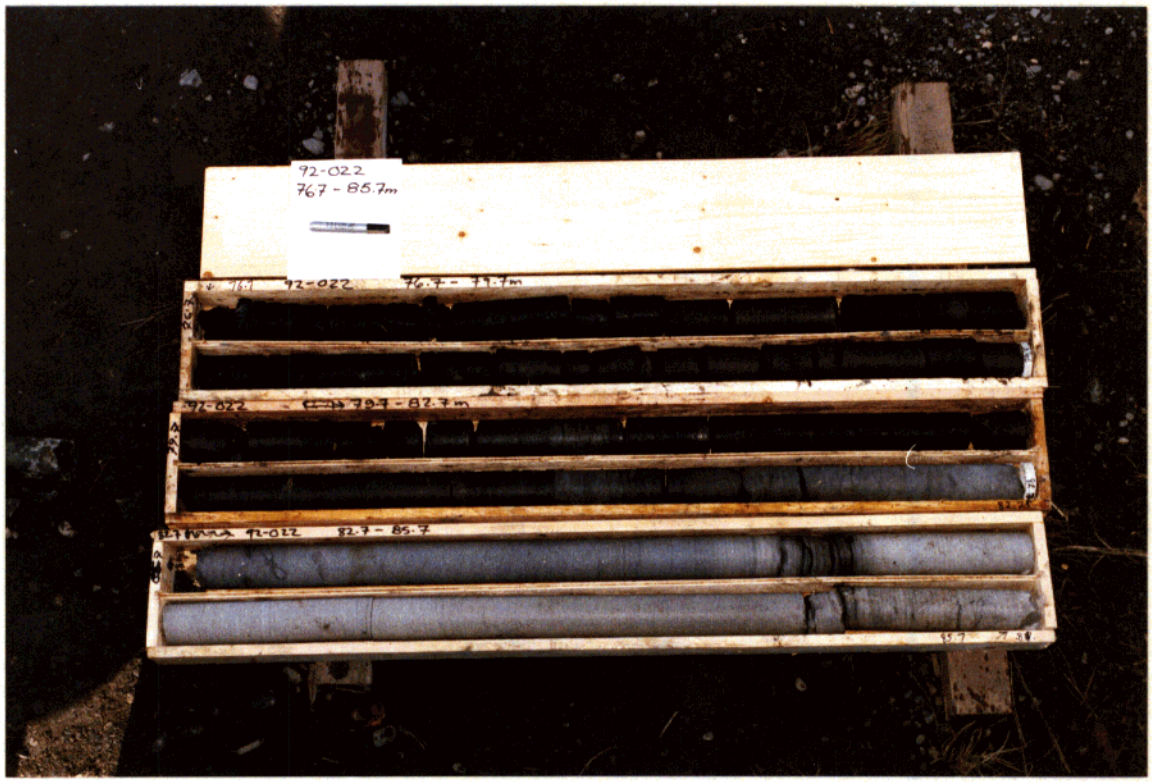


PLATE 42: Hole 92-022, 76.7 - 85.7m

PLATE 43: Hole 92-022, 124.7 - 134.4m

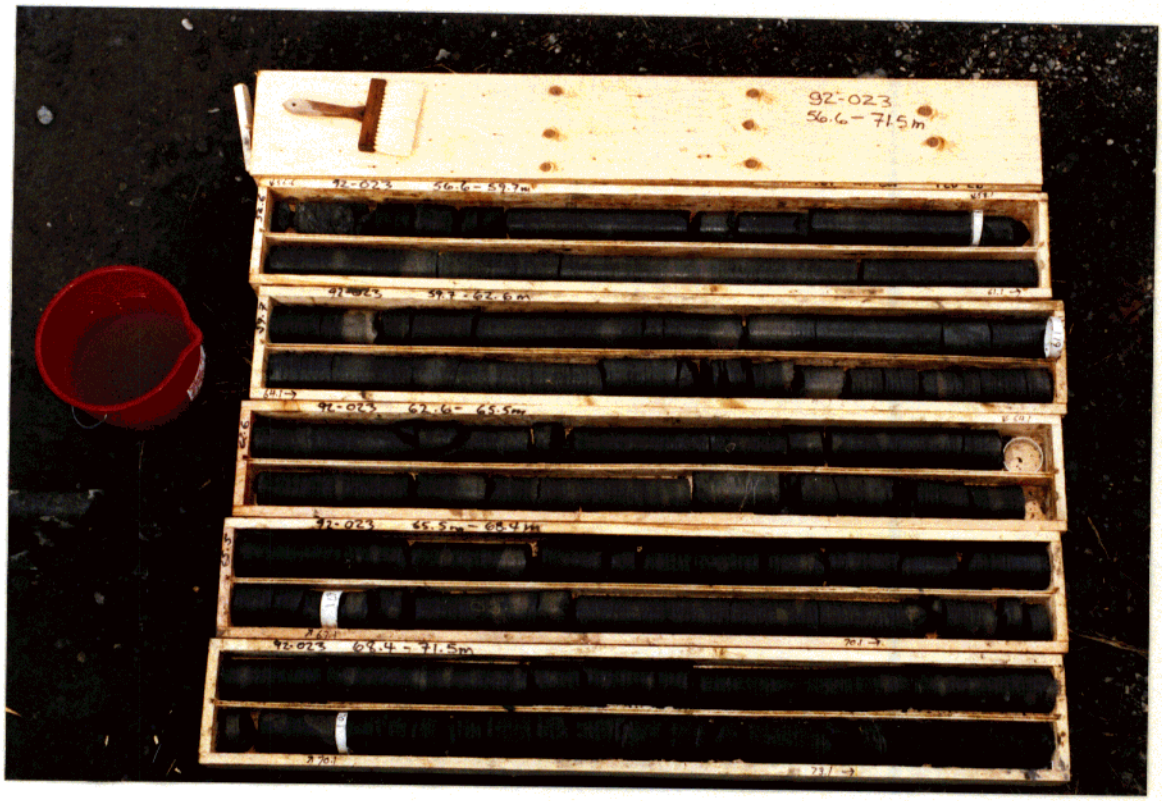


PLATE 44: Hole 92-023, 56.6 - 71.5m

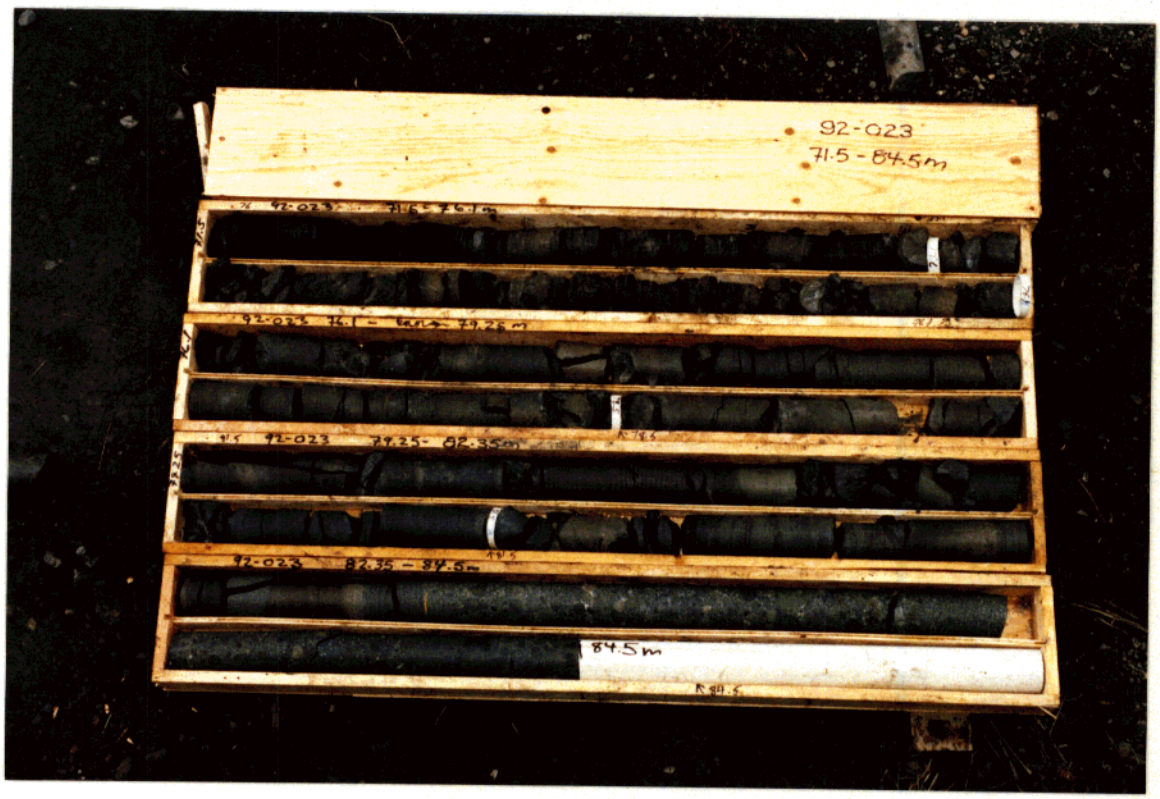


PLATE 45: Hole 92-023, 71.5 - 84.5m

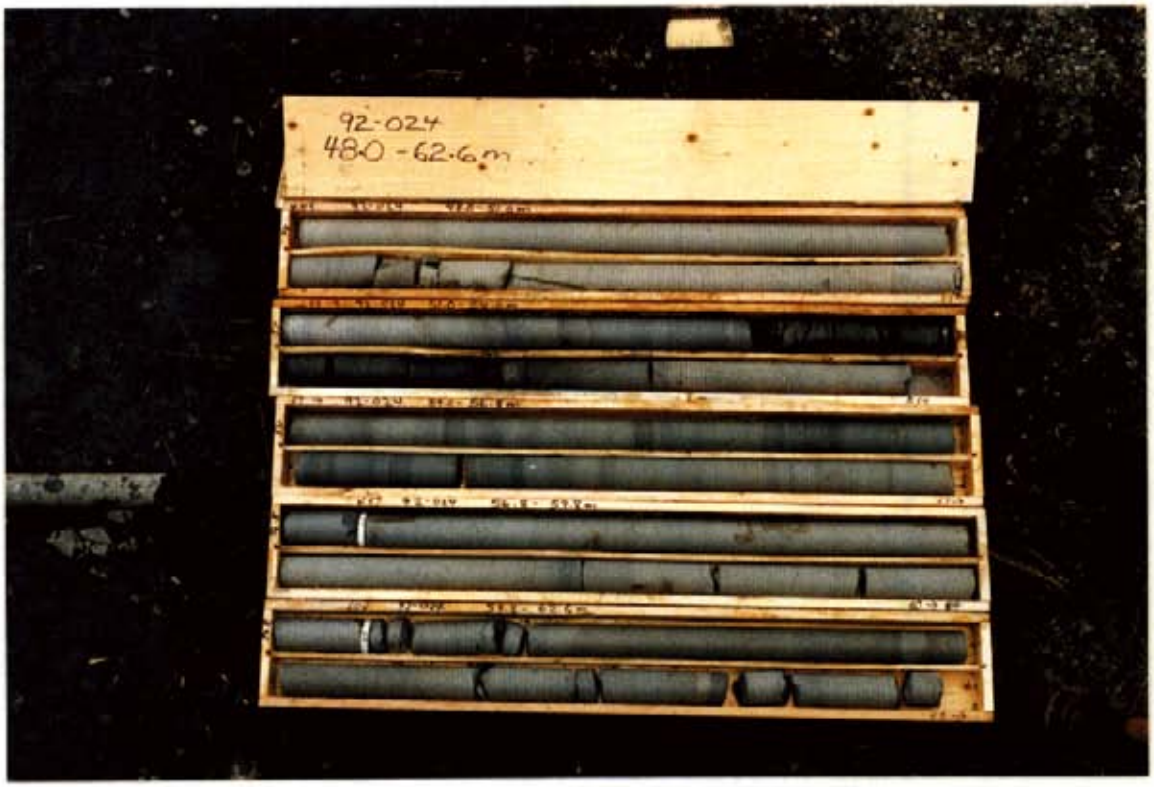


PLATE 46: Hole 92-024, 48.0 - 62.6m

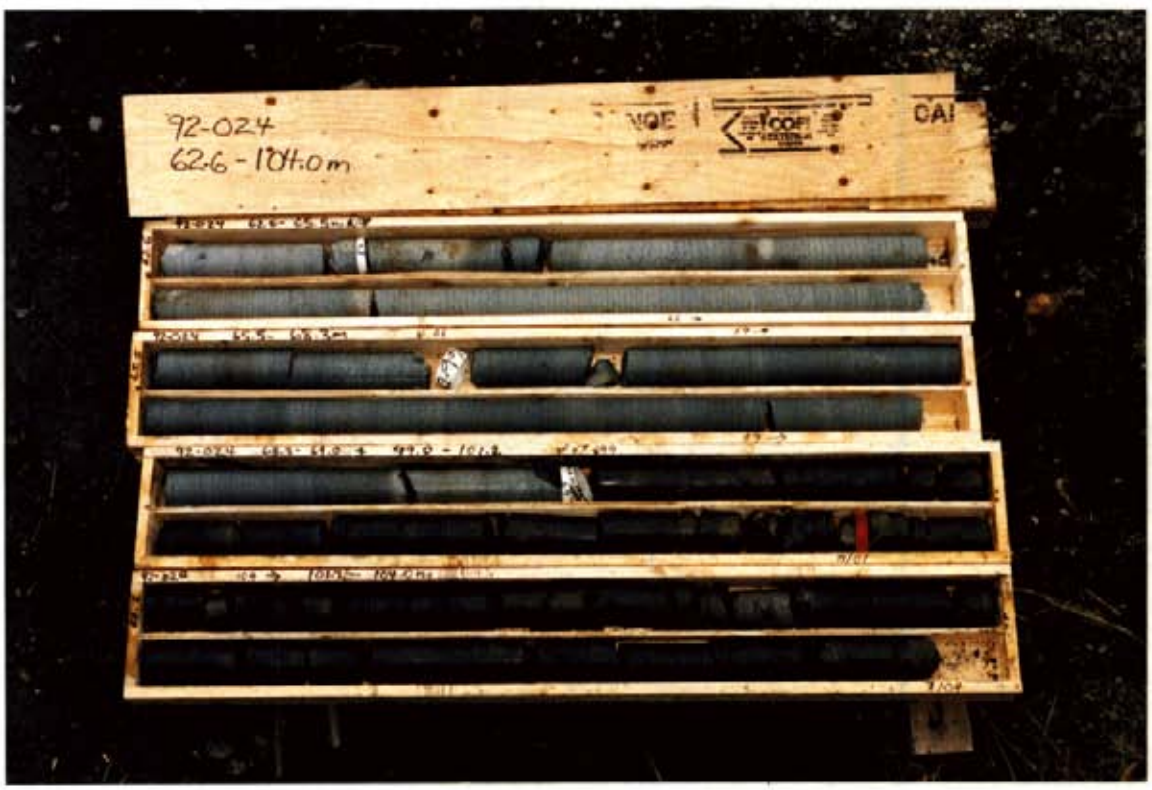


PLATE 47: Hole 92-024, 62.6 - 104m

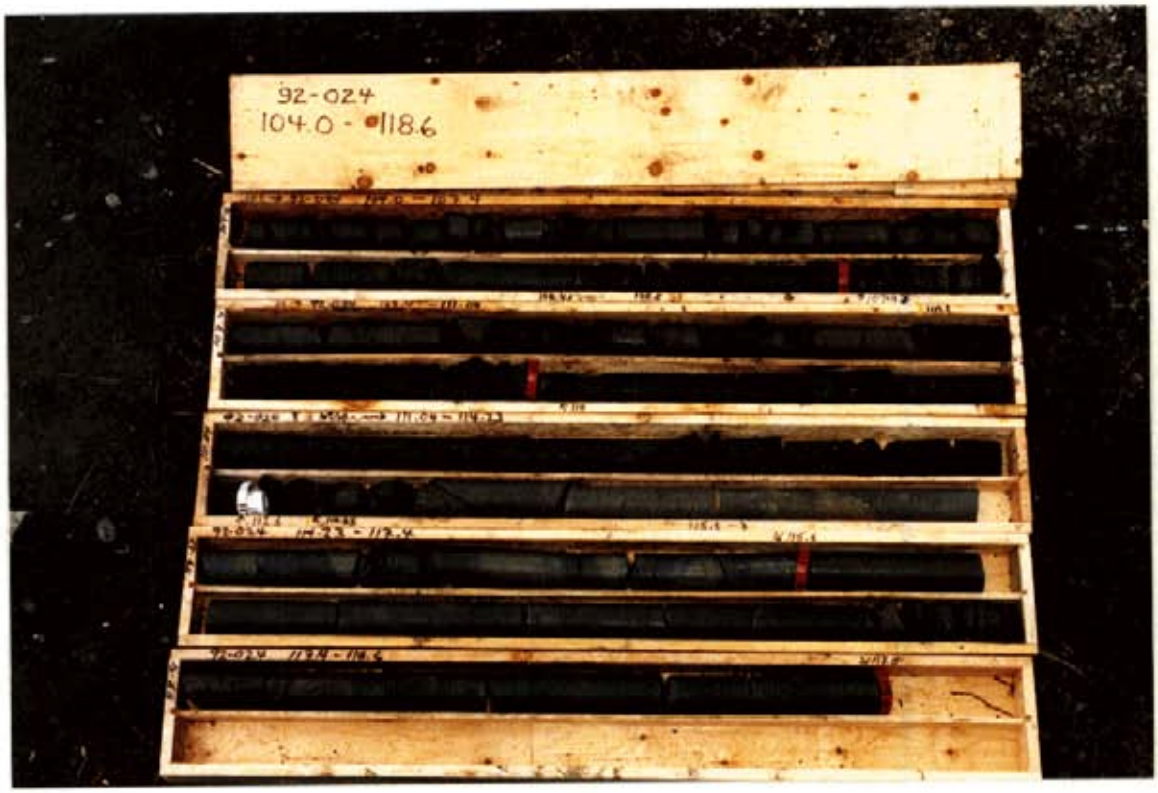


PLATE 48: Hole 92-024, 104.0 - 118.6m

PLATE 49: Hole 92-025, 117.7 - 126.4m

PLATE 50: Hole 92-025, 126.4 - 136.7m