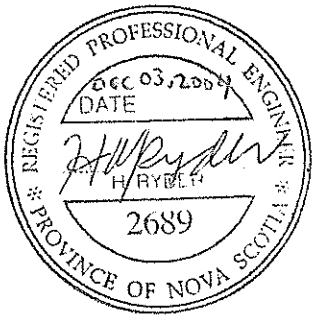
ENVIRONMENTAL REGISTRATION

POINT ACONI PHASE - 3 SURFACE COAL MINE

POINT ACONI, NOVA SCOTIA

Prepared for:
THOMAS BROGAN & SONS CONSTRUCTION LIMITED

Submitted to:
N.S. ENVIRONMENT AND LABOUR



By:
SGE Acres Limited
Author:
Mr. H. W. Ryder, P. Eng.

December, 2004
P14009.05

Thomas Brogan and Sons Construction Limited

792 Main Street, Sydney Mines, Nova Scotia B1V 2L4

December 8, 2004
P14009.05

Nova Scotia Environment and Labour
5151 Terminal Road 5th Floor
Halifax, Nova Scotia

Attention: Mr. Peter Geddes
Environmental Assessment Officer

Dear Sir:

We hereby request registration of the attached document "Environmental Registration, Point Aconi Phase-3, Surface Coal Mine" as a requirement for Environmental Assessment under Part IV of the Environment Act and regulations made pursuant to Part IV. If you have any questions or require clarification please do not hesitate to call.

Yours very truly,

Thomas Brogan Sr.
President - Thomas Brogan & Sons Construction Limited

encl/attach

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1.0 Undertaking

1.1 Name of the Undertaking

Point Aconi Phase - 3 Surface Coal Mine

1.2 Location of the Undertaking

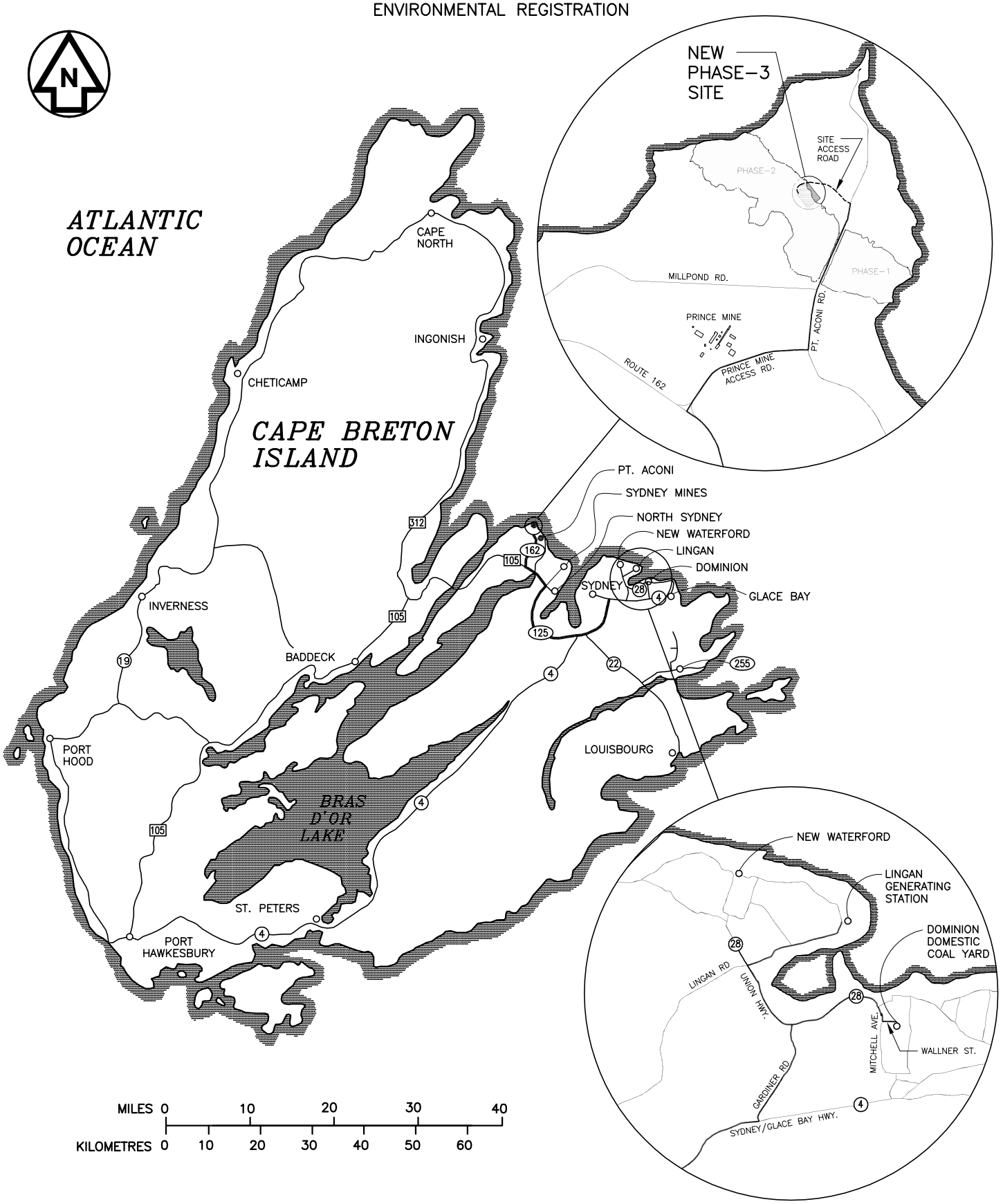
Thomas Brogan & Sons Construction Limited is proposing to continue to mine coal from the Upper and Lower Bonar coal seams at Point Aconi in County of Cape Breton. (See Location Map)

The proposed site will be an extension to the former Phase-2 Brogan Mine site which is located on the west side of Point Aconi Road in the northern extremity of the community of Point Aconi. (See Photos # 1 and 2)

THOMAS BROGAN & SONS CONSTRUCTION LIMITED

POINT ACONI PHASE–3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION



SGE Acres

SK–14009.05–C–001 AUG./04

LOCATION MAP

2.0 Proponent Description

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Name: Thomas Brogan & Sons Construction Limited
Address: 792 Main Street
Sydney Mines, Nova Scotia
B1V 2L4
Telephone: (902) 578-5411
Fax: (902) 736-3594
President: Thomas Brogan Sr.
Contact: Richard Brogan

Thomas Brogan & Sons Construction Limited was incorporated in 1974 with Thomas Brogan as President and has been in the coal producing industry for over 30 years. During this time it has applied for and successfully received permits to operate. It has conformed and adapted to the many changes and demands brought through by labour and environmental considerations. It has successfully campaigned public support for the operation of these mine sites even through the ever increasing opposition to surface mining. It has remained a strong corporate citizen with generous support to the public in investment and donation. It has consulted and advised government agencies on change of rules and regulation for environmental and labor safety regulations. It has presented policy change for Energy and Strategy for Nova Scotia regarding coal and its role in the future.

This company has a long tradition of successfully supplying the demand to their domestic, commercial and industrial customers. Yearly production has ranged from 35,000 tonnes to a high of 100,000 tonnes. T. Brogan and Sons has enjoyed a large customer base including such customers as the Cape Breton Development Corporation, Springhill Penitentiary, various local companies, CFB Summerside and Nova Scotia Power Inc.

T. Brogan and Sons have operated the two previous Point Aconi Sites and the Toronto Road Site. Their staff and equipment have been used on other sites since these projects. The company has the experience and technical knowledge to make applications necessary for the operation of surface mines. The company is also aware of the ever increasing guidelines set forth by regulatory agencies in the approval process.

The company has worked on sites in close proximity to houses, garages and other structures. The company has the experience to handle the many and varied problems associated with recovering coal from previously worked areas. Numerous crop pits have been encountered on the Toronto Road site and in each case the coal was recovered from the area, the pits filled and the surface returned to a totally reclaimed condition.

T. Brogan & Sons Construction Ltd has a strong relationship with local communities and their social and political representatives.

The company is a major employer in the Northside area with a total of 29 permanent employees in addition to many others involved in supplying goods and services to the company.

The company takes great pride in their relationship with the community by fulfilling their commitments to local residents. The corporation has excellent relations with concerned community groups and has established successful liaison committees to address problems and concerns. This approach has met with the approval and endorsement of representatives of Municipal and Provincial Government.

Thomas Brogan and Sons and it's affiliated companies have had a lifelong attachment to the Community and has developed an unmatched record for successful completion of surface mining projects in the area. Their in-depth knowledge of the local community, it's history and culture make them uniquely qualified to carry out this project. The company has the will, experience and the resources to ensure the success of this undertaking.

The Proponent is familiar with the requirements to obtain environmental approvals for mining projects and has the ability to meet the requirements. T. Brogan and Sons Limited has operated surface mines for over twenty-five years and has consistently demonstrated an in-depth knowledge of the Acts and the accompanying Regulations.

President Thomas Brogan has been the leader and owner of the company from its very beginning. Maintaining a close watch on the management of the company "by his sons" for the past twenty years he has ensured the success and endurance through hard times. With daily observance and consultation, decisions are made.

CEO Richard Brogan has been with the company for thirty years except for a duration of University where he received education in Civil and Construction Technology. Richard has been chief consultant for project application and development, contract negotiation for sale of coal and contact person for all government regulatory agencies. In recent years public relations has been a top priority with him acting as a liaison with special interest community groups. Research and development are also Richard's background with extensive knowledge of the Cape Breton coalfield.

Project Management Lee Brogan has been with the Company for 22 years starting as Dragline Operator and progressed up to project management for the last 3 years. Day to day activities include the delegation of duties to equipment operators, maintenance staff and consultation with technical and administrative personnel. Production analysis and meeting required deadlines are a main priority of Lee's function.

Technical Administrator Dana MacEachern has been with the Company for two years. Experience has been the control of all purchases and expenses using up to date computer software. Originally a draftsman by trade has extended post secondary education towards environmental technician. Duties include project manager and environmental supervisor on the monitoring of day-to-day activities.

3.0 Nature of the Undertaking

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The Upper and Lower Bonar coal seams in the Point Aconi area have experienced surface mining operations from the early 1970's to 1994.

Two consecutive mine sites extracted coal to 5' above mean sea level, Pt. Aconi Phase-1 and Pt. Aconi Phase-2. The Phase-1 site was on the east side of Point Aconi Road while the second was on the west side.

The 5' above mean sea level was a restriction due to the underground operations of the Prince Mine on the Hub Seam below. There was also a later restriction prohibiting coal removal from above the Prince Mine access slopes. The Prince Mine has since been closed and the underground workings abandoned.

The proposed mine site will extract a 50,000 tonne block of coal from above the access slopes of the former Prince Mine (60m± below). Excavation will expose the highwall and coalface of the former Phase-2 operation and extend in a northerly direction.

The mining operation will take place almost totally within the site of the previous operation and on land mostly owned by the proponent.

As the site is developed and coal is extracted, there will be a continuous operation of topsoil, overburden and rock removal, ditching, berm construction, water treatment and surface reclamation. Once the coal is removed from an area it will be backfilled with rock and overburden. Surface reclamation will be ongoing.

3.1 Purpose of the Undertaking

Thomas Brogan and Sons Construction Limited have a commitment to the Brogan Coal Venture to maintain Domestic coal supply and a commitment to supply coal to NSPI for thermal electrical power generation. It is the intention of Thomas Brogan and Sons to extract coal from the Point Aconi Phase-3 site to fulfill these commitments.

3.2 Project Benefits

While the mine is in operation there will be significant benefits in several areas:

Electrical Generation: A portion of the 50,000 tonne thermal quality natural resource will be used to produce electrical energy for the residents of Nova Scotia.

Employment: Direct employment will be in the order of 30 jobs for the term of the project.

Economic: This project will be opportunity for Thomas Brogan & Sons Construction Limited to continue their 30 year support of more than 100 local businesses within a 20 mile radius. This support will be by way of trucking, fuelling, maintenance and repairs, legal fees, accounting, small equipment purchases, and community sponsorship.

Home Heating: The benefit to seniors, pensioners and ex CBDC employees who rely on local coal supply as a reasonably priced means of domestic winter heating.

Other benefits will be realized in terms of direct and indirect expenditures relating to wages, capital expenditures, goods and services purchases, taxes and royalties.

3.3 Project Schedule

Site preparation is anticipated to start immediately following regulatory approval. Coal extraction is expected to continue approximately one full year. Reclamation activities, while ongoing, will be completed one year following completion of coal recovery. Monitoring of the reclamation process will continue for a period of not less than one year and continue until full acceptance by government agencies and private landowners.

4.0 Description of the Undertaking

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4.1 Location and Access

The proposed Phase-3 project is located on the former Phase-2 Brogan Mine site off Point Aconi Road in the northern extremity of the community of Point Aconi.

Local access to the site will be via the existing former Phase-2 site access road. It is off of the graveled portion of the Point Aconi Road.

Trucking will be to the Trans Canada Highway via the graveled portion of Point Aconi Road, Point Aconi Road, Prince Mine Access Road and Route 162. (See Location Map in Section 1.2)

4.2 Surface Rights

Thomas Brogan & Sons Construction Limited owns the majority of land upon which the development will take place. The proponent also owns adjacent land to the north while the bordering land to the south is owned by N.S. Department of Natural Resources. To the west the land is bound by the Atlantic ocean and Point Aconi Road to the east. Thomas Brogan & Sons Construction Limited also own adjacent land on the east side of Point Aconi Road. (See Drawing 14009.05-C-008 Appendix-2)

Thomas Brogan and Sons have agreements in place respecting activities that will take place on the two properties which are privately owned. These two properties are owned by Jason Pattengale/ Pamalla MacKenzie PID#15298254 and John Munroe PID#15298292.

4.3 Mineral Rights

Coal exploration and development rights in Nova Scotia are issued by the Minister of Natural Resources through a Special Lease approved by the Governor In Council (N.S. Cabinet). Thomas Brogan & Sons Construction Limited have acquired the mineral claims as necessary and indicated on dwg. No. 14009.05-C-001 as issued by N.S. Natural Resources under Special (Mining) Lease #03-04.

4.4 Geology

The Bonar (Lloyd Cove) Seam occurs near the top of the productive coal measures of the Sydney Mines Formation, Morien Group, of the Sydney Coalfield. Drill holes in the Point Aconi area indicate that the stratigraphic separation between it and the underlying Hub (Stubbart) Seam is 55 to 88 metres.

In the resource block, the Upper Bonar averages about 0.77m thick while the Lower Bonar averages about 1.18m.

The Bonar Seam at Point Aconi is characterized by a significant parting which is lens-shaped in cross-section (viewed down-dip). The parting, about 2.1m thick west of the site at SM-26 increases to 7.6 m near Point Aconi Road at D-37. After increasing to a maximum of about 9m at the east shore of Pt. Aconi, it again rapidly decreases to 1m at Alder Point and disappears further Southeast. Data suggests that the axis of this parting trends North-East, and this conforms to the dominant paleocurrent direction in the coalfield.

Lithologically, the parting consists of interbedded fine-medium grained sandstones, siltstones, and mudstones, with distinct coarsening-upward tendencies and common "petrified wood". These features conform to the interpretation of part of this sequence as a levee deposit by Gibling & Rust (1984). Clearly, the thick, axial zone represents the proximal channel and the thin mudstone (eg. SM-26) the distal fringe of the levee complex. With respect to its influence on mining, the parting has three effects:

1. The amount of rock which must be removed to recover the Lower Bonar increases significantly with parting thickness (ie., as mining proceeds eastward toward the Point Aconi Road).
2. The proportion of hard sandstone increases directly with the parting thickness.
3. More subtly, the Upper Bonar Seam appears to thin toward the axis of the parting. This probably reflects differential compaction of the off-axis mudstones which, in turn, allowed thicker peat deposits to form.

The Upper and Lower Bonar structure contours indicate a discordance of 10° to 15° in the strike of the seams. This is due to draping of the Upper Bonar over the lensoid parting. The dip of the seams is consistently 3.8° to 4° North.

Borehole logs within and adjacent to the mine area indicate the rock strata above the Upper Bonar has individual sandy layers rarely greater than 1m thick.

Core-logs indicate that about two-thirds of the seam parting is hard sandstone.

4.5 Coal Seams

The Sydney Coal Fields extend approximately 45km from east to west and 20km north to south from the Sydney Area. The Sydney coal basin is a Pennsylvanian type of Morien series consisting of predominately gray sandstone, shale and coal.

Ten seams, varying in thickness from eight feet to a few inches, are located on Boularderie Island. The coal seams strike approximately east-west across Boularderie Island and dip between 3°and 7° to the northeast.

The sandstone, shale and mudstone are not consistently massive and no difficulty has been experienced by past surface mining operators in ripping these beds. No explosives have been required in stripping to a depth of 60 feet.

All of the beds have been folded in a shallow anticline, the Boisdale anticline, which strikes N30°E across the center of the island and plunges at a low angle, about 4°, northeast, under the Atlantic Ocean. The anticline crosses the existing highwall coalface of the former Phase-2 site at about 70m east of the shoreline. It is not considered to have any major impact.

4.5.1 Structure and Thickness

Overburden in the immediate subject area is fairly consistent with thickness of 4.4m, 5.0m and 5.5m at boreholes R90, SM-24 and SM-26 respectively. The strata between the overburden and the Upper Bonar consists of alternating layers of siltstone, sandstone and mudstone, thickness range from 0.1m to 7.0m.

Between the Upper and Lower Bonar Seams the strata again alternates siltstone, sandstone and mudstone. The Upper Bonar seam is on average .77m thick where as the Lower Bonar Seam is 1.18m thick. The seams are approximately 3.5m apart. Although the seam thickness appears consistent the separation varies from 4.07 at borehole SM-24 to 2.1m at borehole SM-26. The dip to the northwest or parallel with the strike. Between boreholes SM-24 and SM-26 the Upper Seam slopes at 0.8° or 1.3% and the bottom slightly flatter at 0.4° or 0.7%.

4.5.2 Coal Quality

The coal is anticipated to have the following average qualities

Upper Bonar	average sulphur……5.0% Average ash……10.2% Average calorific value. 11,787 BTU
Lower Bonar	average sulphur…….. 8.1% Average ash…… 17.6% Average calorific value...11,171 BTU

4.6 Coal Resource Estimate

It is estimated that there is some 193,000 tonnes of mineable coal on the site to a depth of 28m. The intent of the proponent is to mine only 50,000 tonnes at this time.

4.7 Site Development

Initial site work will consist of establishing necessary infrastructure required to accommodate the mining activities. Such infrastructure will be access roads and water management features. The existing former Phase-2 access road will be reestablished and upgraded to handle the anticipated on site truck and equipment traffic. (Photos 3 & 4)

The drainage culvert under Point Aconi Road will be regraded and a portion of former Phase-1 watercourse reditched (Photos 5 & 6). This will assist in minimizing the runoff flows entering the new site.

The watercourse diversion ditch south of the excavation will be laid out and constructed. The sediment ponds, associated ditching and silt fencing will also be constructed at this time. The north watercourse diversion ditch will be constructed later as required.

Mine development will be in a series of 10 parallel box cuts, each extracting 5000 tonnes of coal. Excavation will start in the west corner of the site with Block #1. When the coal of Block #1 is extracted, the excavation of Block #2 will proceed and so on until all 10 Blocks of coal are extracted. (see dwg. 14009.05-C-004). Approximate stripping ratios vary from 8.6 m^3/tonne at Block # 4 to 13.8m^3/tonne in Block # 1.

This anomaly of Block#1 having the highest stripping ratio and Block#4 the lowest ratio is due to a number of reasons. 1) Each block will yield the same tonnage of coal where as the volume of material removal will vary. 2) The highwall has been previously excavated. 3) The back slope for Blocks 1 & 2 will be at a 1V to 1H slope. 4) Blocks 1 & 2 will require removing material for no coal below it. (See Section A-004 Drawing 005). The same situation occurs in the east/west direction as indicated in Section-001 Drawing 005. This increases the amount of material to be removed for each of the odd number blocks. A combination of this, the slope of the coal and the surface gradients result in Block#4 having the lowest stripping ratio.

Backfilling with rock topped with subsoil and topsoil will be a progressive operation with reclamation being accomplished as coal is being mined.

During the initial block excavations it will be necessary to temporarily stockpile topsoil, subsoil and rock.

Some appropriate overburden materials will be consumed in the building of roads and preparation of the coal transfer station.

Local access roads, ditches, safety and silt fencing will be constructed and revised on an ongoing basis to suit the layout of the excavation.

Brush clearing will advance ahead of excavation as required. Topsoil and root mass will remain insitu until its removal is necessary so as not to disturb more surface area than is necessary at any given time.

There is no significant amount of timber or merchantable wood to be harvested from the site and as many trees as possible will be transplanted to areas throughout Phase-2.

4.8 Surface Coal Mining Operations

Site preparation will first be completed. This includes site layout surveys, access road upgrades, construction of surface water control features, sediment ponds, silt fencing, brush clearing and grubbing, temporary office, lunchroom and sanitary facilities. Next the surface mine excavation will begin.

The surface mining method to be used on the Point Aconi Phase-3 site involves a series of 10 parallel box cuts. Each box cut yields 5000 tonnes of coal. (See dwg.14009.05-C-005).

Excavation will begin in the west corner of the site at Block #1. Excavation will be accomplished utilizing a large dozer complete with ripper, a large hydraulic excavator, and rock trucks.

Topsoil and subsoil will be removed and stored in respective stockpiles. Rock and/or appropriate overburden will be used to upgrade access roads and prepare an area for the coal transfer station. The two coal seams the Upper and Lower Bonar Seams will be extracted as they are encountered and cleaned off. Coal will be hauled to the Coal Transfer Station in 35 tonne rock trucks where it will be screened and/or prepared for shipment. (See Drawing 14009.05-C-006)

During the excavation of Block #2 the topsoil and subsoil will again be directed to respective stockpiles, rock will be utilized to backfill Block #1 with excess placed in the Rock Stockpile. Potential dust sources will be managed on a daily basis.

This sequence will continue until sufficient topsoil and subsoil is accumulated for final reclamation. The anticipated excess subsoil may be used for deep backfill in combination with the rock.

The surface of the final lift of rock will be contoured as it is placed. Elevations will be slightly higher than original elevations but will be sloped to gradually blend with surrounding grades and elevations.

The placing of subsoil over the contoured rock will be introduced during excavation of Block #5. It will be placed in the reclamation area of Block #1 and continue to progress as excavation continues through each consecutive block.

The placing of topsoil over the subsoil will be introduced during the excavation of Block #6. It will be placed in the reclamation area of Block #1 and continue to progress as excavation, backfilling, subsoiling continues through each consecutive block.

Drawing 14009.05-C-007 portrays the sequence of operations at the stage of coal recovery at Block #7.

When the excavation and coal recovery of Block #10 is complete the accumulation in the rock stockpile will be used to backfill the remainder of the open excavation. The subsoil and topsoil stockpiled materials will be hauled to the remaining areas and spread accordingly. The coal transfer station and rock stockpile will be reclaimed in the same manner as the excavation areas.

Revegetation will be by means of seeding and hydro seeding as sufficient topsoiled areas become available. Existing trees and brush will also be transplanted from adjacent areas of growth.

The recovered coal will be hauled to the transfer station in the off-road rock trucks. At the transfer station the coal will be stockpiled for shipping and domestic coal production. The domestic coal production will consist of screening of 10,000 tonne annual production. The site will maintain a 500 tons maximum stockpile of stoker and lump coal for local sale. The remaining domestic coal will be shipped to Dominion.

The thermal coal will be shipped to Lingan on a regular basis.

4.9 Surface Water Control

Thomas Brogan & Sons Construction Limited will conform to all environmental guidelines and regulations as set out by the Nova Scotia and Federal governments. With respect to effluent discharge of mine water and surface water runoff, the following guidelines for pH, alkalinity, iron and suspended solids will be met;

pH	- 6.0 to 9.0 (authorized grab sample)
Alkalinity	- the discharge will register positive net alkalinity, the total alkalinity must exceed the total acidity.
Iron	- Fe+1 7mg/l (maximum)

Suspended Solids - 25 mg/l maximum monthly arithmetic mean
- 50 mg/l maximum in a grab sample

The above guidelines will be met by limiting the overland flow through the site and controlling the discharge of contaminated waters.

To limit the overland flow through the site two watercourse rerouting ditches will be constructed and some remedial culvert work accomplished. See dwg. 14009.05-C-003.

Silt fencing will be installed prior to any disturbance on the site. The silt fencing will be erected on downstream side of areas in which the vegetation will be removed. The design of the watercourse rerouting will incorporate rock check dams to prevent ditch bottom erosion and to trap sediment. The disturbed areas of the watercourse rerouting will be stabilized by the immediate use of straw mulch.

The first rerouting ditch will be south of the main excavation. It will be approximately 370m in length and about 1.5m deep (see Section B dwg. 14009.05-C-002). The present watercourse carries runoff water from the southern and eastern areas of the former Phase-2 site. Although dry in the summer months the new route will divert the surface water runoff of approximately half of the 33 hectares watershed on the west side of Point Aconi Road. The water course rerouting ditch will be lined with clay/till and crushed stone.

The 12-hectare watershed on the east side of the Point Aconi Road also contributes to the watercourse running through the Phase-2 site. This watershed will be diverted through the Phase-1 site on the east side of Point Aconi Road.

The 12 hectare watershed rerouting will be accomplished by changing the grade of a culvert pipe under the Point Aconi Road and re-excavating or lowering the elevation of an existing ditch on the east side of Point Aconi Road (Photos 5 & 6). This ditch slopes in an easterly direction from a small pond toward the ocean.

The second watercourse rerouting ditch will be constructed north of the main excavation. The present watercourse is a roadway ditch which exists along the north side of a former Phase-2 access road (Photo # 7). Although dry in summer months it carries surface water runoff from a 5± hectare watershed area north of the access road. This diversion ditch will be about 170m long and 1.5m deep.

It will be arc shaped to accommodate the northern most corner of the excavation of Block #9. It will be lined with clay and washed stone. It will discharge into the existing Phase-2 watercourse approximately 40m from its present discharge point (Photo # 8).

Local ditches will be constructed with each block excavation to route on site water to pumping sumps. Pumping sumps will pump water from within the mine excavation to a ditch leading to the sediment ponds.

A combination of local ditches and/or silt fencing will be constructed around the coal transfer station and stockpiles. Runoff from the stockpiles will be collected and directed to sediment ponds prior to discharge.

Sediment ponds will be constructed to control the discharge of effluents. They will be constructed in the early stages of site development in conjunction with the watercourse rerouting and will be in place prior to the disturbance of any major areas. The ponds will be constructed in the northeastern area of the site (Photo # 8) where contaminated water can be directed by a combination of gravity ditches and pumping.

The ponds will be sized to take account for peak predicted storm flows consistent with the design life of the mine. The ponds will also accommodate the time necessary to adequately settle the suspended solids. Effluent monitoring will be on a regular basis through a program established in conjunction with the Nova Scotia Department of the Environment and Labour (NSDEL). Design criteria will be based on a one in ten year return criteria.

The mining operations will proceed in block stages limiting the amount of disturbed areas. Areas of future development will remain undisturbed and have the existing vegetation left in place until that area is scheduled for development. Clean runoff waters will be directed around the active mining site so as to limit the amount of water passing through the area of disturbance. The combination of these activities assists in limiting the amount of suspended sediment entering the sediment ponds.

All drainage from within the active mining site will be directed to the sediment ponds to provide time for settling of sediments and to allow the opportunity for water treatment required. Drainage ditches will be sized to accommodate expected flows with gradients accommodating gravity flow to the sediment ponds. Drainage ditches will be revamped as required as the mine operation advances.

Considering the ultimate depths of 28m it is expected that the excavation will be extending below the water table. Past experience on site indicates an expected groundwater flow in the order of 60gpm.

The water encountered within the mine excavation will be pumped to the sediment ponds but not during time of peak storm flow. This water will be contained, controlled and monitored on a regular basis. The water will receive treatment within the sediment ponds and possibly under extreme conditions

pretreated for pH adjustment with lime within the mine excavations prior to pumping to the sediment ponds.

All discharge from the sediment ponds will be monitored and treated as required prior to release to the downstream environment.

The effluent monitoring program will include:

- Discharge pH (daily)
- Iron and other metals such as arsenic, manganese, aluminum, zinc, lead and copper (weekly)
- TSS, alkalinity and sulphate (weekly)
- Standard 96hr acute lethality bioassay testing using rainbow trout (quarterly)

The methods and equipment necessary for the treatment of the sediment pond effluent will be established in conjunction with the design of the sediment ponds. Lime suppliers will be consulted with respect to dosage rates and retention times required for their products. The final design will be completed for the permitting stage of the project.

The water quality of the diversion ditches will also be monitored for pH, metals and TSS during periods of overland flow.

The discharge from the ponds will enter the existing downstream watercourse of former Phase-2 (Photos 8 to 15) site which passes through a number of flat and sloping areas and ultimately over a gravelly beach to the ocean. Fish species are not known to exist in the watercourse.

The sediment ponds will be maintained until such time that their function is not required. At that point in time they will be backfilled and the area revegetated.

4.10 Reclamation

Site reclamation will be an integral part of the mining process. It will progress as the excavation advances through the sequence of operations (See Drawing 006 and 007).

The site will be reinstated in a segregated manner; rock, subsoil and topsoil.

The topsoils and subsoils will be temporarily stored in a stockpile until areas are prepared to receive it. The rock and heavy former backfill materials will be utilized to upgrade the former coal transfer station. Rock from remaining areas or blocks will be used to backfill the consecutive previously excavated areas with the excess being placed in a stockpile. The rock accumulated in the rock stockpile will be used to backfill the excavation for the last or 10^{th} block of coal.

During the excavation of Block #5 the rock backfill of Block #1 will have been graded off and contoured and it will begin receiving subsoil. This process will continue with each consecutive Block. Bulking effects due to the excavation/backfill process will cause some increase in elevation in the backfill areas.

During excavation of Block #6 the topsoil will be placed on the prepared subsoil of Block #1. This will begin the process of top soiling each consecutive Block. Topsoil will be raked and contoured with farm type equipment.

When the coal from Block #10 is removed from site the laydown coal in the Coal Transfer Station will be removed and this area together with the rock stockpile area will be covered with subsoil & topsoil and revegetated.

The reclaimed site will be hydro seeded as sufficient areas become prepared. The hydro seed applied will be one that is not invasive and designed to give early food to wildlife and stabilize the site to prevent erosion. The seed mix will be as follows:

40%	-	creeping red fescue
20%	-	birds foot trefoil
10%	-	orchard grass
10%	-	Kentucky bluegrass
10%	-	alsike cover
10%	-	white clover

Lime and soil amendments will be applied as recommended based on analysis of soil samples which will be taken at the time of placing topsoil.

Native trees will also be transplanted from adjacent forested areas and placed in random locations throughout the reestablished areas of Phase –2 and 3. It is the goal of the reclamation plan to replace the soil stratum in the same order as existed. The seeding and transplanting at the earliest possible dates will encourage the natural regeneration. It is expected that previous habitat will begin to resume in a 2 - 3 year period.

The resultant reclamation will provide a stable site. The overall drainage pattern will be generally the same with the exception of the raised elevations in the backfilled and coal transfer areas. The watercourse reroutings will remain in place. A regular water sampling program will monitor the overland flow for sediment and pH levels, with appropriate corrective measures implemented as required.

Temporary structures and stockpiles will be removed. Some access roads will be maintained for the purpose of site access and monitoring.

4.11 Equipment

All work on the site will be done using equipment presently owned and operated by Thomas Brogan & Sons Construction Limited. The mining operation will use various combinations of the following equipment as circumstances dictate:

- 1 dozer – Komatsu D475 c/w Ripper
- 1 excavator
- 2 rock trucks
- 1 front end loader
- 1 water truck
- Screening Plant –MK11 Powerscreen
- Diesel water pumps
- Highway trucks – 30 ton tractor trailers (subcontracted for highway transport)
- Miscellaneous small tools – as required

4.12 Sanitary Waste

Sanitary facilities will be by use of "porta potties" which will be pumped on a regular basis by a licensed company.

4.13 Equipment Fuel and Waste Oil Disposal

Fueling of equipment will be done by an independent mobile fueling vehicle in the coal transfer station and not within 30m of any environmentally sensitive area. No fuel will be stored on site. Minor servicing of equipment will also take place in the coal transfer area.

Waste oil will be stored in an approved waste oil storage tank which will be emptied by a licensed disposal company by an approved method.

4.14 Transportation of Coal

Coal will be 1) stockpiled on site for domestic sales, 2) transported and stockpiled in Dominion for domestic sales and 3) transported to Lingan Generating Station for use in electrical power generation (See Location Map in Section 1.0).

The transportation route to Dominion will be:

- Point Aconi Road
- Prince Mine Access Road
- Route 162

- Highway 105
- Highway 125
- Sydney/Glace Bay Highway (Trunk 4)
- Gardiner Road
- Union Highway
- Mitchell Avenue
- Wallner Street

The transportation route to Lingan will be:

- Point Aconi Road
- Prince Mine Road
- Route 162
- Highway 105
- Highway 125
- Sydney/Glace Bay Highway (Trunk 4)
- Gardiner Road
- Union Highway
- Lingan Road

4.15 Employment

The expected daily manpower requirements during peak operational status is as follows:

10 - equipment operators
5 - truck drivers (contracted)
2 - labour
1 - mechanic
1 - foreman
1 - superintendent
1 - environmental technician
1 - management
1 - office staff

On site manpower will fluctuate during winter and mid summer periods due to Christmas Holidays, winter weather conditions and vacations.

4.16 Hours of Operation

The mine will operate 12 hours per day, 6 days per week Monday to Saturday. Staffing would be for 2-6 hour shifts per day. Sunday will be used as a maintenance day with a limited number of staff accomplishing minor maintenance and repairs to equipment. The schedule is based on economics and necessary production rates. Night time operation will be limited to a minimum equipment

selection.Weather, delivery dates and actual production may cause minor variations in work schedule.

4.17 Explosives

Thomas Brogan & Sons Construction Limited will not be blasting on the Point Aconi Phase-3 site. Therefore no need for explosives nor will explosives be stored on site.

4.18 Hazardous Materials

As per the company's "Hazardous Materials Policy" (Appendix-9) all hazardous material will be kept to a minimum. Employees will be aware of the hazards and will be provided appropriate PPE and educated as to the risks.

5.0 Description of the Environment

5.0 Description of the Environment

5.1 Land Ownership

The property ownership boundaries are shown on the enclosed drawing 14009.05-C-008 which were produced from recent LRIS property mapping.

Thomas Brogan and Sons Construction Limited is the owner of the majority of the lands upon which the project will be carried out.

To the south of the project the adjacent property is owned by the Nova Scotia Department of Natural Resources (DNR). Two properties upon which mining activities may take place and are not owned by Thomas Brogan and Sons Construction Limited are the Munroe Property (PID15298292) and the Pattengale/MacKenzie property (PID15298284). Agreements are place with regards to these properties and activities. (Appendix 8)

PID Reports are included in Appendix 6 as a historic record of property ownership. These records were the most up to date available at the time of writing this report and as the report disclaimer indicates they are not an official record.

A copy of the deed with respect to the ownership of property PID#15298177 is also included in Appendix 6. The land was formerly owned by George Melvin, then Francis MacLean and now, Thomas Brogan and Sons Construction Limited. The PID Reports also indicate nearby property ownership and contact addresses.

5.2 Land Use

5.2.1 Prior Mining Activities

The Point Aconi Phase-3 mine site is an extension to Phase-2 previously carried out on the site. Phases-2 and 3 are on the west side of Point Aconi Road whereas Phase-1 was on the east side.

Portion of the proposed site was previously used as a coal laydown area. (Photo #'s 16 to 20) The coal laydown area was previously covered with 150mm of topsoil. Approximately .5m of coal residue still exists under the topsoil.

Both Phase-1 and 2 sites had the surface materials removed to approximately 18m (60') and the coal extracted. The sites have been

acceptably restored and the reclamation bonding released by Nova Scotia Department of Environment. Phase-1 operated from 1968 to 1975 and produced approximately 600,000 tonnes of coal. Phase-2 operated from 1975 to 1994 and produced some 400,000 tonnes of coal.

Phase-1 site was approximately 22 hectares; Phase-2 approximate 50 hectares, whereas Phase-3 is expected to be approximately 7.5 hectares. A large portion of the Phase-3 site was previously disturbed by the Phase-2 operation.

Phase-1 site has re-established wildlife and vegetation with a variety of grasses, shrubbery and trees in the order of 2.5m tall. Phase-2 is the larger site and re-vegetation is not as advanced with smaller trees and some amount of balding and exposed subsoil. (Photo # 21)

The now closed CBDC underground Prince Mine is approximately 1.2km to the south. The 3 main slopes of the former Prince Mine on the Hub seam extend in a north/south direction approximately 60m below the proposed Phase-3 site.

There is a ventilation complex for the former Prince Mine approximately .9 km north of the site. The early stages of Prince Mine development included a surface mine operation occupying approximately 15 hectares.

From late 1970's to mid 1980's 2.4km to the south, the Nova surface mine operated on the Harbour Coal Seam.

5.2.2 Residential Property Use

There is a total of 6 residential dwellings in the vicinity of the proposed mine site. (See Photo # 1 and Drawing 008)

One residence is on the proposed mine site property. It is owned by the Brogan family and occupied by a tenant. To the north and on the same side of the road there are 2 dwellings. The mine will be approximately 170m from these dwellings. Three dwellings exist north of the site and on the opposite side of Pt. Aconi Road. The nearest of these 3 would be approximately 200 m from the site. The next closest dwelling is approximately 0.5 km to the south.

The project can function without any major impacts on the 6 nearest dwellings.

5.2.3 Public Facilities

The general setting of the Community of the proposed site is sparsely populated remote rural with agricultural and industrial influence. The graveled section of the Point Aconi Road terminates at an unmanned lighthouse approximately 1km north of the site.

There are no public facilities adjacent to or north of the proposed mine site.

5.2.4 Recreational Uses

The immediate site of the proposed mine is on property privately owned by the Brogan family. Public recreation is not entertained.

The adjacent former Phase-2 site is partially owned by Nova Scotia Natural Resources and is occasionally visited by 4 x 4 recreational vehicles and fishermen accessing the shoreline to retrieve lost fishing equipment. These activities will not be affected.

5.2.5 Industrial/Architectural/Commercial

Industrial

There has been industrial activities in the area since the 1960's with the development of the Phase-1 mine site. Phase-1 concluded in 1975 and Phase-2 in 1994. These areas are in final stages of rehabilitation.

The Prince Mine underground coal mine 1.2 km to the south began operating in the mid 70's. It has closed and is presently in stages of demolition. There is a ventilation complex (fan house) approximately .9km north of the proposed site and it will likely also be demolished.

Approximately 2.3 km to the southwest of the site is the NSPI coal fired Pt. Aconi Generating Station. It was commissioned in the early 1990's and is presently fully operational.

Agricultural

There is no agricultural use of the immediate sites. There is minimal agricultural use in general vicinity with hay being removed from a 3-hectare field 50m ± north of the site and an 8-hectare field to the northeast and on the opposite side of Pt. Aconi Road. These locations will not be disturbed by the proposed mining operations.

Commercial

There are no commercial businesses in the vicinity of the proposed mine site. An unmanned lighthouse exists about 1.2km north of the site at the end of Pt. Aconi Road.

5.3 Physical Environment

The proposed Phase-3 project is located in Cape Breton County in the northern extremity of the village of Point Aconi. It is on a point of land with the ocean approximately .7 km away in 3 directions (east/west/north). The site is immediately north of and is an extension to the former Phase-2 mine site.

The mine excavation will be a further advancement of the coalface in a northeasterly direction. Portion of it will be in a previously excavated area while the remainder is in a lightly treed area.

The previously excavated area slopes to the south and is lightly vegetated with grasses and low growing shrubbery. (Photo 21)

The lightly treed area of about 1.2 hectares is bound by the previously excavated area to the south and a former coal laydown area to the north. There is much evidence of the previous activities with traveled ways transversing the site. (Photos 16 to 18 and 22 to 24)

The vegetation in the lightly treed area consists of common evergreen and conifers and lower growing shrubs and bushes. It is typical support system for locally known wildlife. No significant wildlife habitat have been determined in the more densely vegetated area of the Phase-3 foot print and the mining activities on the small treed area are not expected to have any significant impact on the general wildlife. The inclusion of tree and brush transplanting as part of reclamation will encourage the reinstatement of the stable environment.

The former coal laydown area was previously lightly covered with soil and is also lightly revegetated. The copperish colour staining of the surface in the downstream runoff areas is a result of the remaining coal residue in the former laydown area. (Photos 16 to 20)

The site is accessed by way of the former east/west running graveled access road forming the north boundary of the former and new mine site.

Beyond the site access road in the north direction is a 30m ± wide band of mature trees followed by a hay field. To the east the site is isolated from the graveled Pt. Aconi Road by 200m± of trees. There is a residential dwelling to the east of the site. It is owned by the Brogan family.

To the immediate south and west is the former Phase-2 site.

The additional disturbances of 2 to 3 hectares are not expected to have any significant impact on the physical environment of this site.

5.4 Surface Waters

The proposed site is on the north side of a man made valley formed by the backfilling of the previously excavated mine site. The valley forms the watercourse of the local watershed, which drains northwesterly to the Atlantic Ocean about 0.6 km away.

The watershed consists of 33± hectares on the west side of Pt. Aconi Road and 12± hectares on the east side of Pt. Aconi Road.

The watershed on the east side of Pt. Aconi Road had previously drained to the ocean to the east through the former Phase-1 Site. Due to flooding issues of the Pt. Aconi Road, the local Nova Scotia Department of Transportation (with the permission of the Brogan family) installed a culvert across the roadway, erected a berm isolating the roadway ditches from a small pond on the east side of the road and redirected the ditch flow to the west side of the street. (Photo 25) Thomas Brogan and Sons Construction will regrade the culvert and berm and remediate the Phase-1 area ditching. (Photo 6) The new ditching will slope to the east in a manner that will prevent further rise in the elevation of the existing pond on the east side of Pt. Aconi Road and direct the east side watershed to the ocean through the former Phase-1 Site.

This remedial measure will not overload the former Phase-1 site drainage patterns and will reduce the overland flow on the west side.

The present watercourse on the west side of the Pt. Aconi Road will have to be rerouted to accommodate the excavation necessary to expose the coal resource. Watercourse rerouting will also accommodate an area for stockpiling of excavated material immediately adjacent to the excavation.

Up hill of the watercourse diversion and approximately 40m to the south of the topsoil/subsoil stockpile is an existing wetland area. This area is not to be disturbed. Traffic in this location will be kept to a minimum and the area will be barricaded with fencing

The watercourse scheduled for rerouting is in the previously disturbed areas of the Phase-2 site.

The watercourse is dry in normal summer months with a few small ponding areas.

The rerouted section will be lined with clay and crushed stone, and have appropriate check dams throughout.

Overland flow in the immediate area of the proposed mine site will be directed into the mine excavation and/or a ditch leading to a sediment pond. As water in the sediment pond meets discharge requirements, it will be released to the existing watercourse, which flows westward across the former Phase-2 site to the ocean.

Background water samples have been taken through out the existing Phase 2 watercourse and results of laboratory analysis are pending. Representatives of DFO have been invited to the site and their recommendations are also pending.

5.5 Hydrogeological Environment – Water Supply

In the community of Point Aconi public water is available from the Pottle Lake Water Supply in North Sydney. The public water mains presently terminate at the intersection of Mill Pond Road and Point Aconi Road about 650m from the Site. The six residences near the proposed mine site are serviced by water wells.

Three of the six dwellings experienced water supply difficulties during the excavation of Phase-2. The inadequate wells were replaced as required with deeper drilled water wells by the proponent. One of the six residences (Pitts) is a newer home and the drilled well is of today's standard.

The proponent also drilled a new water well for the Beaton residence at the corner of Mill Pond Road and Pt. Aconi Road. This water supply issue was felt to be unrelated to the mine excavation.

The nearest water well to the site belongs to the Brogan family and will be closely monitored to determine the net effect the excavation has on the local groundwater resource.

Under Phase-3 there will be no blasting. The water supply remedial measures resolved the Phase-2 water supply issues. The Phase-3 excavation is not expected to have any effect on the water supply to the local residences.

5.6 Atmospheric Conditions

The mine site is located within a cool, humid, temperate climatic zone. This zone is influenced by prevailing westerly winds which cause many of the low-pressure systems moving across North America to pass over Atlantic Canada. The frequent passage of these systems, plus its maritime location, result in a moderate precipitation of approximately 1300mm/year.

The study area experiences a modified continental climate, exhibiting variability in all seasons. This results from the interaction of continental and marine air

masses and, because most of the weather systems originate in the interior and the south, continental influences often dominate the marine influence. The continental influence in the area produces a wide range in annual temperatures. Winters are typically cold with frequent snowfalls; springs are late, cold and cloudy; summers warm and relatively humid. In general, rainfall is most abundant during the fall months. The prevailing winds are north and northwesterly in the winter months and south to southwesterly during the summer months.

The main influence moderates the climate by reducing the temperature range resulting in milder winters, cooler summers, and longer frost-free periods.

Basic meteorological data was obtained from the Atmospheric Environment Service of Environment Canada.

Average annual precipitation at Point Aconi is 1300±mm, 1100 mm of which is in rain and 200mm as snow. A tabulation of temperature and precipitation data based on 1990 to 2003 data is provided in Appendix 3.

5.7 Socio-Economic Environment

Cape Breton County has recently experienced a rapid decline in it's economy due to the closure of the cod fishing industry, closure of Sysco steel making facility and the closing of the CBDC coal mining industry.

The community of Pt. Aconi was directly affected with the closure of the local Prince Mine. Pt. Aconi is also a fishing community of local fishermen and employees of fish plants in other communities.

Statistics from 1993 to 2003 indicated on the web site of "Target Nova Scotia" indicate the consistent decline in county population of some 1200 to 1300 residents per year. This is likely a result of the decline of 3 primary industries. The median age is 41.

Unemployment Statistics from the same source compiled from 1995 to 2003 indicate a peak of 22.7% in 1996 and more stable rates in the order of 15 – 17% from 1999 to 2003. The provincial average for 1999 to 2003 is 9.5%. The Point Aconi Phase-3 project will employ an estimated 18 full time workers or 3% of the total 610 position workforce.

6.0 Environmental Impacts and Impact Mitigation

6.0 Environmental Impacts and Impact Mitigation

6.1 Direct Impact on Local Residents

As described in Section 5.1 there are six (6) residences in the vicinity of the site. One approximately 50m from the excavation, the others at 200m or more away from the excavation. The residence approximately 50m from the excavation is owned by the Brogan family and occupied by a tenant. Three of the remaining five residences are separated from the site by Point Aconi Road.

The site is on a dead end road and there are no more residences beyond the six noted above. In the southern direction the next nearest residences are at the intersection of Pt. Aconi Road and Mill Pond Road and are ½ km away.

The six residences near the site would likely drive by the site on a daily basis and therefore be aware of the general project activities. The area will experience an increase in traffic during periods of coal shipping. Coal shipping will be daytime only.

A treed barrier will be maintained between the site and the closest residence. The existing trees adjacent to the roadway will also remain.

6.2 Visual Impact

As the Phase-3 site is an extension to the Phase-2 site it will be visible from the southeast. On the eastern or Point Aconi Road side of the site, above grade equipment will be visible from the roadway, as was the Phase-2 site from time to time. However, the existing tree barrier on the north side will be maintained thus protecting the site from being viewed from the north and the nearest residences.

The view of the disturbed site will become inhibited as the trees along the roadway ditches mature.

6.3 Noise Level

The proposed undertaking is not a large-scale mining operation. The anticipated noise levels are not considered to be a problem due to the size of the operation, equipment type, operating practices and the forest buffer zone on the north or residential side of the site. There will be no blasting carried out and the mine will only operate during the daylight hours.

Sound levels at the property boundaries will be maintained within the provincial guidelines of 55-dBA night, 60 dBA evenings, 65-dBA daytime.

6.4 Air Quality

Dust generation is an issue of concern with regards to air quality. The mining operation has the potential of producing fugitive dust emissions. The sources of dust will be managed on a daily basis in ways of minimizing and controlling dust production by using tarps on haulage trucks, graveling the surface of site roadways and implementing the use of water trucks. Large quantities of coal will not normally be stockpiled on site other than 500 tonne ± domestic coal stockpile. There will only be temporary piles made during coal excavation periods for the purpose of transferring coal from on site rock trucks to tractor-trailer type highway trucks.

The small-scale screening and weighing operation of the domestic coal yard is not expected to generate any amount of nuisance dust.

Selective stockpiling of overburden will be done to keep the coarser materials on the surface thereby reducing the amount of dust released by the piles. The natural forest growth on the north side of the site will also help reduce wind-eroded particles.

The proponent will closely monitor the potential of dust generation on the graveled portion of Pt. Aconi Road and will ensure there is prompt notification to the local Department of Transportation and Public Works as necessary.

Dust levels will be kept within provincial guidelines of 60-70 ug/m3 annual geometric mean and 0-120 ug/m3 average concentration over a 24 hour period.

The coal T.Brogan and Sons will be supplying to NSP will meet their contractual requirements to NSP with respect to sulphur content. These strict requirements assist NSP in meeting 2005 emissions regulations.

Fugitive emissions from fossil fuels are intentional or unintentional releases of Greenhouse Gases (GHG's) from the production, processing, transmission, storage and delivery of fossil fuels. Coal in its natural state contains varying amounts of CH_4 (methane) which is released to the atmosphere during mining activities. Based on the Emission Factor of 0.13 t/kt of coal as provided by Environment Canada's Greenhouse Gas Inventory it is estimated that 6.5 tonne of CH_4 will be generated by the Pt. Aconi Phase-3 site. This amount is not considered to be significant as the same amount of coal produced by underground mining would produce 650 tonnes of CH_4. Presently, T. Brogan and Sons Construction are not aware of any means of reducing this natural emission.

6.5 Local Water Supply Wells & Underground Monitoring

The six residences in the vicinity of the proposed site are serviced by water wells. Public water supply is available to residents south of Mill Pond Rd. It will be determined as to whether or not all of these residents are connected to the public system. Any residences which are not connected and have water wells, will have their well included in the water well monitoring program.

Prior to work on the site, a complete survey of domestic wells in the area of the surface mine site will be undertaken and catalogued. Water sampling schedule, protocol and monitoring plan will be established under the direction of a qualified hydrologist licensed to practice in Nova Scotia in consultation with NSDEL.

The monitoring plan will continue on a routine basis for the duration of the project through to reclamation of the site.

If any substantial reduction in water levels or quality is noted one or more of the following actions will be taken with costs paid by the proponent:

1. Water will be supplied to the residents from temporary water storage tanks installed at the residence and connected to their water system. These portable supplies will conform to Canadian Drinking Water Standards. A constant supply will be provided by qualified water haulers. These measures will continue until permanent corrective measures can be taken and completed.
2. Deepen existing well to correct the water quality or shortage problem to the resident.
3. Drill and put in operation new well to supply water to affected residences.
4. Connect the affected residences to the existing domestic water supply where the residence is in close proximity to this service.

The selection of which above noted options are to be implemented will be done with the full input and approval of the homeowner.

All expenses incurred to supply temporary water and requirements to satisfactorily correct and assure the water quality or supply at any affected residence will be done fully at the cost of the proponent.

Well water agreements are in place (Appendix-8) with local residents. Application has been made for water well construction data for these wells and it will be reviewed as part of the well water monitoring program.

The previous excavation from Phase-2 has had no ill effect on the neighboring deepened wells. Although slightly deeper, the proposed excavation will be very small in comparison with the previous excavation. It is not anticipated that the proposed excavation will have long-term negative affects on the existing wells.

6.6 Removal of Surface Materials

Topsoil overburden and rock will be excavated and stockpiled throughout the site. Stockpiling will be accomplished in a manner so as to backfill the excavation in a reverse manner to which it was excavated. The rock will be placed in the bottom of the excavation followed by the overburden and topped with topsoil.

During the period of the excavation process the immediate ecosystems will temporarily be disrupted. The restoration and revegetation of the site will return naturally occurring ecosystems.

The backfilling and contouring of the site will be done in a manner such that the overall drainage basins and watershed areas will contribute the same volumes of runoff to the downstream watercourses.

Erosion and sedimentation control measures such as proper sloping, sediment ponds, sediment check dams and revegatation will be implemented to provide adequate protection against soil erosion. All work will be carried out in a manner so as to meet the requirements of NSDEL.

6.7 Acid Generation Potential

The exposed coal and excess coals in laydown areas have the potential of producing acid if allowed to oxidize.

Pumping of the excavation and runoff from coal laydown area will be directed to sediment ponds where the pH levels will be monitored. Lime will be used to correct pH levels prior to release to downstream watercourses.

Rock samples from Phase-2 have been collected and forwarded to a lab for acid generation potential analysis. Results are as indicated in Appendix-10.

Preliminary testing of rock (Appendix-10) indicates no anomalies with respect to acid generation. The run off from rock and rock stockpiles will also be directed to the open excavation and/or sediment ponds where the acid generation potential will be addressed by way of pH correction.

6.8 Residual Impacts

No long-term negative impacts are anticipated as a result of the additional coal mining on this site. Once drainage patterns are re-established and the site revegetated wildlife will also return.

6.9 Truck Traffic

Truck traffic will be necessary to transport the coal to market. The coal will be excavated in 5000 tonne blocks and sold to the local domestic market and shipped to the Nova Scotia Power facility in Lingan and the domestic coal yard in Dominion.

Local domestic sales will be carried out Monday to Saturday. Domestic sales are normally transported on privately owned vehicles ranging mostly from ½ trucks to 8 to 14 ton tandem trucks.

The heavy truck traffic generated will be the transporting of the domestic supply to Dominion and the industrial supply to Lingan Generating Station. This shipment will equate to an estimated 10 tractor trailer loads per day for 150 days over the one year period of coal production. Shipment by tractor-trailer will occur during daylight hours from Monday to Friday.

A number of tractor-trailer deliveries will be necessary during the first week of activity as equipment is brought in from other sites and mobilized. This traffic would be less than 10 trips per day.

The trucks will travel south along the Pt. Aconi Road to the Prince Mine Road and then onto Route 162 to the Trans Canada Highway. A commonly used truck route.

The tractor-trailer type trucks will be well maintained, cleaned regularly and be equipped with well fitted tarps.

6.10 Oceanic Environment

Runoff from the existing site ultimately enters the ocean via a single watercourse in the northern most area of the former mine site. Flow is thru a man-made valley of varying grades and across a gravelly beach to the tidal zone.

Runoff from the new site and groundwater accumulated in the excavation will be directed to a sediment/treatment pond. The pond water will be tested and treated as required prior to release to the existing site watercourse. Testing will be that which is necessary to confirm the effluent will meet regulatory guidelines. (See Section 4.9).

Volumes of flow to the ocean will be the same as exists now with the exception of the addition of groundwater produced in the excavation and the diversion due to regrading the culvert under Pt. Aconi Road. The groundwater production in the excavation is not expected to be significant relative to the overland flows during periods of rain. Sediment pond design will accommodate estimated groundwater production with the option of being expanded if necessary.

7.0 Proposed Mitigation, Contingency Plans

7.0 Proposed Mitigation, Contingency Plans

7.1 Community Relations and Liaisons

Thomas Brogan & Sons Construction Limited has worked on surface mine sites for the past 35 years. During this time T. Brogan & Sons was successful in producing coal from a variety of different sites. Production moderated at 35,000± tonnes per year with a peak in the order of 100,000± tonnes per year. The sites ranged from the remote rural Point Aconi Phase-1 & 2 to within the backyards of the more densely populated community of Alder Point.

Over this period of time T. Brogan & Sons have not received penalties or infractions from government or regulatory agencies.

T. Brogan & Sons ability and expertise in dealing with area residents has resulted in reaching its commitment to local residents. T. Brogan & Sons cooperation with concerned community groups has established successful liaison committees with most favorable results and approval by representatives of Municipal Government and the NSDEL.

T. Brogan & Sons is a third generation, family owned and operated company, which operates within the communities in which the family lives. They have provided annual employment to an average of 29 employees and have contributed generously to sports teams, fire departments and many valued community projects such as the 1.5 km Toronto Road public water line. In doing so they have earned the respect of their peers and support for the work they carry out. Their performance has redirected the energy of vivacious opposition groups to groups that actively meet with and offer input and ideas to improve process and final land use, etc.

T. Brogan & Sons will assist in forming a Community Liaison Group and will provide space for regular meetings.

T. Brogan & Sons office is located on Main Street in the heart of Sydney Mines and is open to the general public on a daily basis.

7.2 Accidental Discharge of Untreated Water

During and/or immediately after a greater than normal storm event there is a possibility of discharge of sediment laden water. During normal events erosion and sediment controls will ensure sediment laden water is not discharged into the local watercourse.

With the regrading of the culvert and ditching as outlined in section 5.4 the runoff through the site is expected to be reduced.

If an extreme event occurs within the life of the project and the sediment pond capacity is exceeded the number of existing sediment traps upstream of Phase 2 check dams will act as buffers before the water eventually makes its way to the ocean. The existing sediment traps will also provide opportunity to hand broadcast liming agent as necessary to control pH levels.

7.3 Spill Contingency Planning

Tom Brogan and Sons Construction Limited have a company Spill Contingency Plan in place (Appendix-9). Appropriate spill response equipment is always maintained and in a readily accessible location. Spills and/or releases will be promptly contained and cleaned up and entered into a proper reporting system.

7.4 Equipment Generated Noise

The proposed undertaking is a small-scale mining operation. Noise levels are not considered to be a problem due to the size of the operation, equipment type, operating practices and general remoteness of the site.

The natural forested tree barrier to the northeast and south of the site will have deadening effect to operational noise from the mine site.

Some placing of overburden stockpiles and the fact that most of the equipment will be working in a pit below the surface of the surrounding land will again reduce the operation noise impacting on the local community.

Under normal mining operation and considering both the natural and manmade sound buffers on this site it is considered that the actual noise levels will be low. Noise levels will be kept within the following recommended limits as laid out by NSDEL for surface mining operations. Sound level limits at the property boundaries 55 dBA Night, 60 dBA Evening, 65 dBA Day.

7.5 Arbitration Process and Policies

Thomas Brogan & Sons Construction Limited is prepared to deal with any and all problems which may arise during the operation and reclamation of the Point Aconi Phase-3 Project.

In such situation when both parties are not in full agreement and can not resolve the dispute, Thomas Brogan & Sons Construction Limited will assign a third party arbitrator to resolve the dispute.

The arbitrator will be acceptable to both parties before arbitration will start and both parties must agree that its decision will be binding.

7.6 Performance/Rehabilitation Bonding

Thomas Brogan & Sons Construction Limited will upon approval of the undertaking put in place a bond which will remain in place for the duration of the mining and reclamation period to cover any and all financial obligations associated with the undertaking. The amount of the bond will be that which is determined by the N.S. Dept. of Environment and Labour and N.S. Dept. of Natural Resources.

8.0 Approvals and Permits Required

8.0 Approvals and Permits Required

There are various approvals required. Thomas Brogan & Sons Construction Limited will submit additional detailed site and operational information to meet requirements listed below and any others that are necessary.

NS Department of Natural Resources

- Special (Mining) Lease (Acquired)
- Mining Registration

NS Department of Environment and Labour

- Environmental Registration
- Environmental Assessment Approval
- Industrial Approval
- Water Approval

9.0 Funding

9.0 Funding

No government funding is sought for this undertaking. The undertaking is totally funded by the proponent Thomas Brogan & Sons Construction Limited

10.0 References

10.0 References

1. David S. Robertson & Associates Limited
"Cape Breton Development Corporation
Assessment of Coal Reserves for
Strip Mining at Point Aconi, Cape Breton Island"

2. Nova Scotia Department of Mines and Energy
SM Series Diamond Drill Records

3. Environment Canada
Climatic Data

4. Nova Scotia Housing and Municipal Affairs
Land Information Services
Topographic Drawings (1) 10 46 3000 60 200
(2) 10 46 3000 60 300

5. Nova Scotia Geomatic Center
Property Management Unit 0315

6. Nova Scotia Department of Mines & Energy
Coal Section
Report on Drilling at Brogan No. 2 Mine
Point Aconi, Cape Breton
(March, 1985) by Donald J. MacNeil

7. Target Nova Scotia.com

Appendix - 1 Photographs

0 500M 1000M

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-1

AERIAL VIEW

THOMAS BROGAN & SONS CONSTRUCTION LTD.

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-2

SITE LAYOUT PANORAMIC VIEW

(LOOKING NORTHEAST)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-3

EXISTING ACCESS ROAD

(LOOKING EAST)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-4

EXISTING ACCESS ROAD

(LOOKING WEST)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-5

EXISTING CULVERT UNDER POINT ACONI ROAD

(LOOKING EAST)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-6

AREA OF PHASE-1 TO BE REDITCHED

(LOOKING SOUTHEAST)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-7

EXISTING ACCESS ROAD DITCH TO BE REROUTED

(LOOKING WEST)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-8

DISCHARGE POINT FOR NORTH WATERCOURSE REROUTING

(LOOKING SOUTH)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-9

DOWNSTREAM WATERCOURSE

(LOOKING NORTH)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-10

DOWNSTREAM WATERCOURSE

(LOOKING NORTH)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-11

DOWNSTREAM WATERCOURSE

(LOOKING SOUTH)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-12

DOWNSTREAM WATERCOURSE

(LOOKING NORTH)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-13

DOWNSTREAM WATERCOURSE

(LOOKING SOUTHWEST)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-14

DOWNSTREAM WATERCOURSE

(LOOKING SOUTH)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-15

WATERCOURSE & DISCHARGE AT OCEAN

(LOOKING WEST)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-16

FORMER COAL LAYDOWN AREA IN FOREGROUND AND COAL RESOURCE BLOCK IN BACKGROUND

(WESTERN PANORAMIC)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-17

FORMER COAL LAYDOWN AREA IN FOREGROUND AND COAL RESOURCE BLOCK IN BACKGROUND

(WESTERN PANORAMIC)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-18

FORMER COAL LAYDOWN AREA IN FOREGROUND AND COAL RESOURCE BLOCK IN BACKGROUND

(WESTERN PANORAMIC)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-19

FORMER COAL LAYDOWN AREA IN FOREGROUND AND COAL RESOURCE BLOCK IN BACKGROUND

(WESTERN PANORAMIC)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-20

FORMER COAL LAYDOWN AREA IN FOREGROUND AND COAL RESOURCE BLOCK IN BACKGROUND

(WESTERN PANORAMIC)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-21

PHASE-2 RECLAMATION

(LOOKING WEST)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-22

BOUNDARY BETWEEN PHASE 2 & 3

(LOOKING NORTH)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-23

BOUNDARY BETWEEN PHASE 2 & 3

(LOOKING SOUTHWEST)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-24

BOUNDARY BETWEEN PHASE 2 & 3

(LOOKING NORTHEAST)

POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PHOTO-25

EXISTING DITCH ALONG EAST SIDE OF PT. ACONI ROAD

(LOOKING SOUTH)

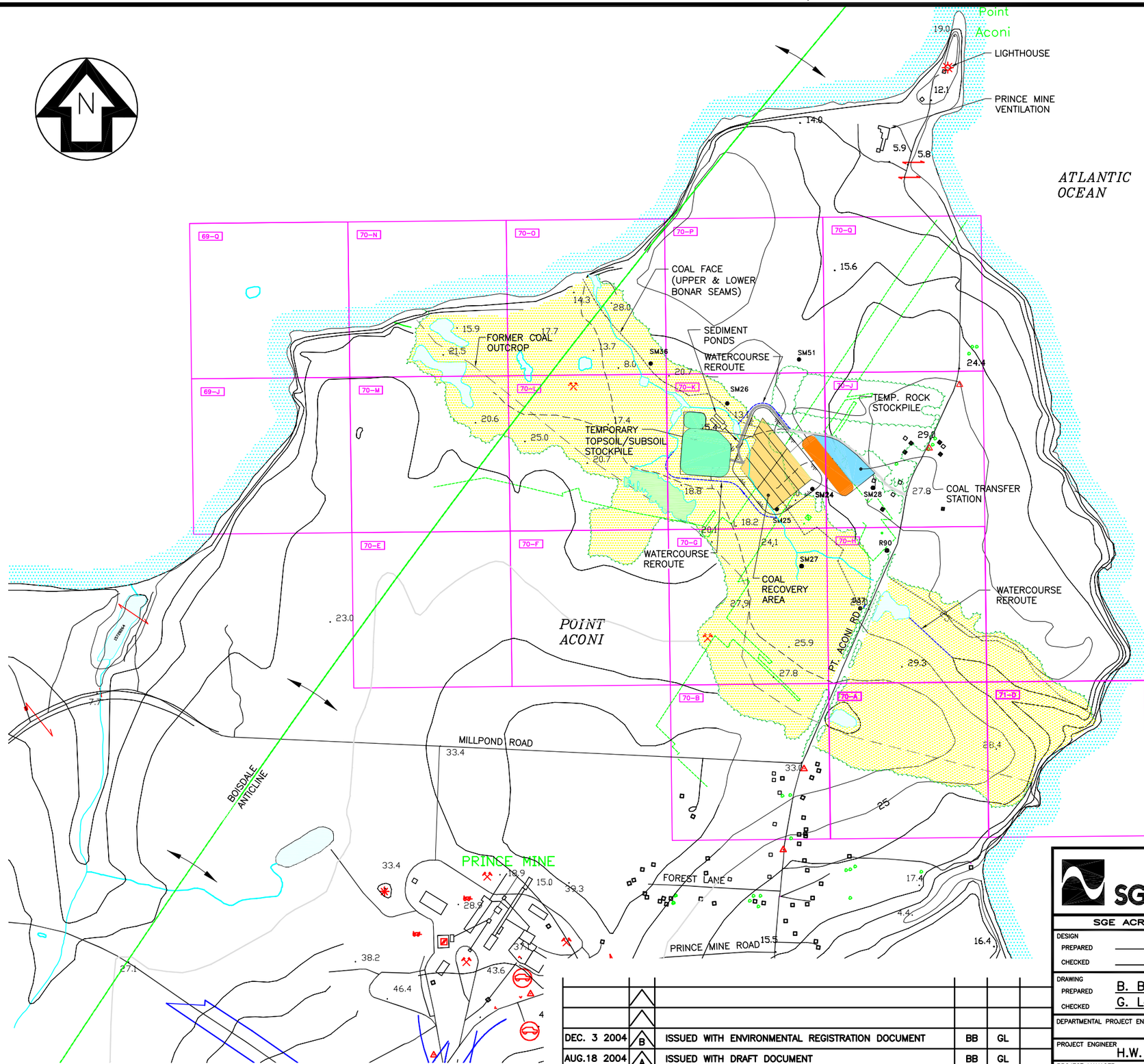
Appendix - 2 Drawings

Drawing Index

Point Aconi Phase-3 Surface Coal Mine

Environmental Registration

	Drawing No.	Title
1.	14009.05-C-001	General Arrangement
2.	14009.05-C-002	Sections
3.	14009.05-C-003	Water Shed
4.	14009.05-C-004	Mine Development Site Preparation
5.	14009.05-C-005	Mine Development Sections
6.	14009.05-C-006	Mine Development Stages
7.	14009.05-C-007	Mine Operation Sequence at Stage 7C
8.	14009.05-C-008	Property Ownership



LEGEND

- WATERCOURSE
- APPROX FORMER COAL OUTCROP
- TRACT BOUNDARY
- COAL FACE
- POTENTIAL COAL RECOVERY
- TOPSOIL/SUBSOIL STOCKPILE
- ROCK STOCKPILE
- COAL TRANSFER STATION
- WETLAND TO BE PROTECTED
- BOREHOLE (SM28)
- TRACT/CLAIM IDENTIFICATION (71-D)
- PRINCE MINE UNDERGROUND WORKINGS
- ROAD
- TREE LINE
- BUILDING OR DWELLING
- DWELLING

DATE	NO.	REVISIONS	CH.	APP.	APP.
DEC. 3 2004	B	ISSUED WITH ENVIRONMENTAL REGISTRATION DOCUMENT	BB	GL	
AUG.18 2004	A	ISSUED WITH DRAFT DOCUMENT	BB	GL	

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PROJECT ENGINEER H.W. RYDER

PROJECT MANAGER

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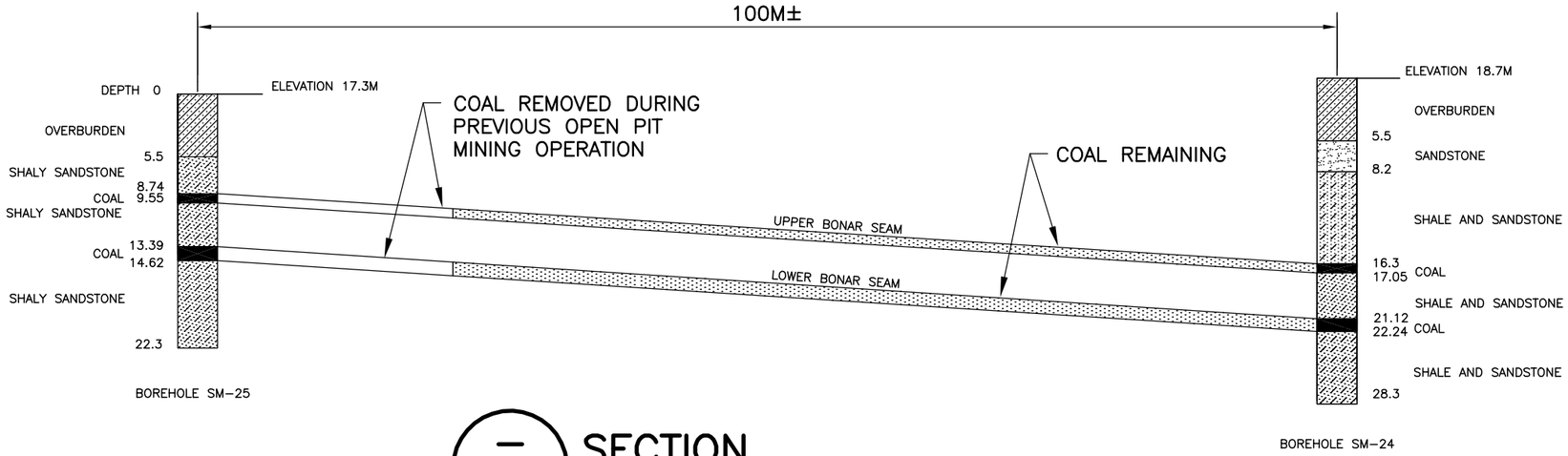
POINT ACONI PHASE-3 SURFACE COAL MINE
ENVIRONMENTAL REGISTRATION

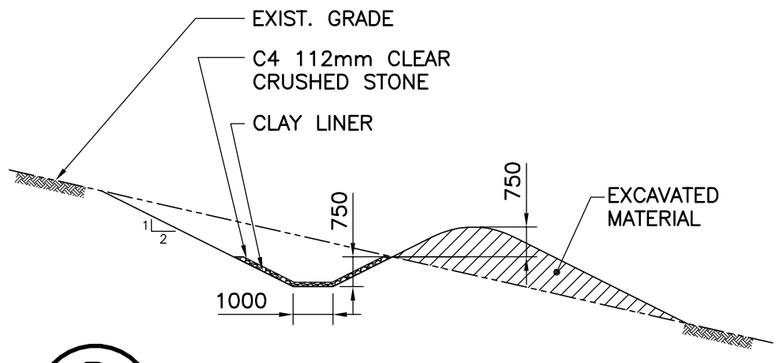
GENERAL ARRANGEMENT

SCALE 1:10,000
ACRES PROJECT NO. P14009.05
DRAWING NO. 14009.05-C-001
SHEET OF
REVISION B

DEC 03 2004 - 13:32:23



– / 001 SECTION
THROUGH SM–25 & SM–24
SCALE 1:500



B / 003 SECTION
TYPICAL WATERCOURSE REROUTING
SCALE 1:150

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ENVIRONMENTAL REGISTRATION

SECTIONS

SCALE AS NOTED
ACRES PROJECT NO. P14009.05
DRAWING NO. 14009.05–C–002
SHEET X OF X
REVISION B

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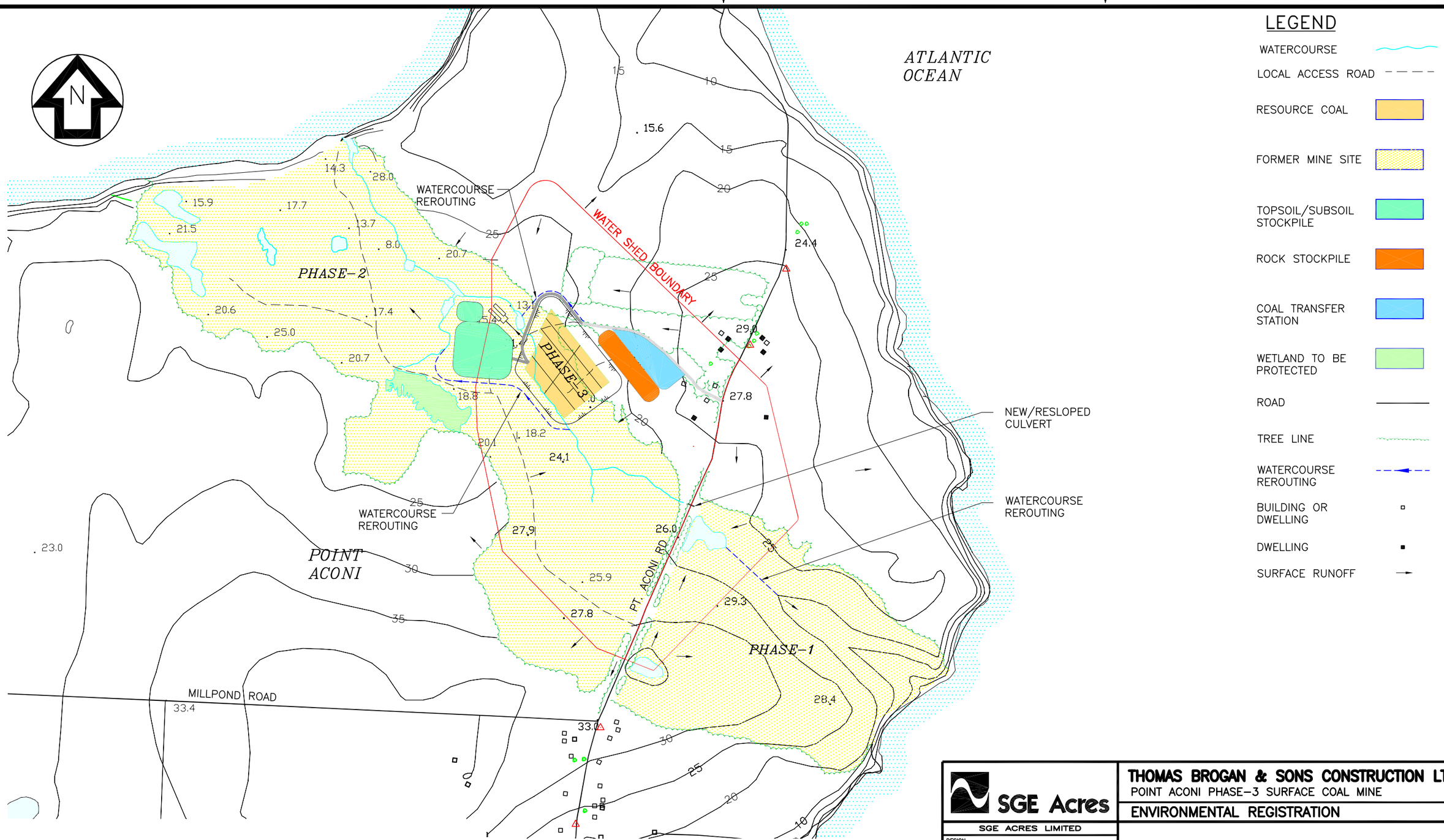

LEGEND

- WATERCOURSE
- LOCAL ACCESS ROAD
- RESOURCE COAL
- FORMER MINE SITE
- TOPSOIL/SUBSOIL STOCKPILE
- ROCK STOCKPILE
- COAL TRANSFER STATION
- WETLAND TO BE PROTECTED
- ROAD
- TREE LINE
- WATERCOURSE REROUTING
- BUILDING OR DWELLING
- DWELLING
- SURFACE RUNOFF

DATE	NO.	REVISIONS	CH.	APP.	APP.
DEC. 3 2004	B	ISSUED WITH ENVIRONMENTAL REGISTRATION DOCUMENT	BB	GL	
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POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

WATER SHED

SCALE 1:7500

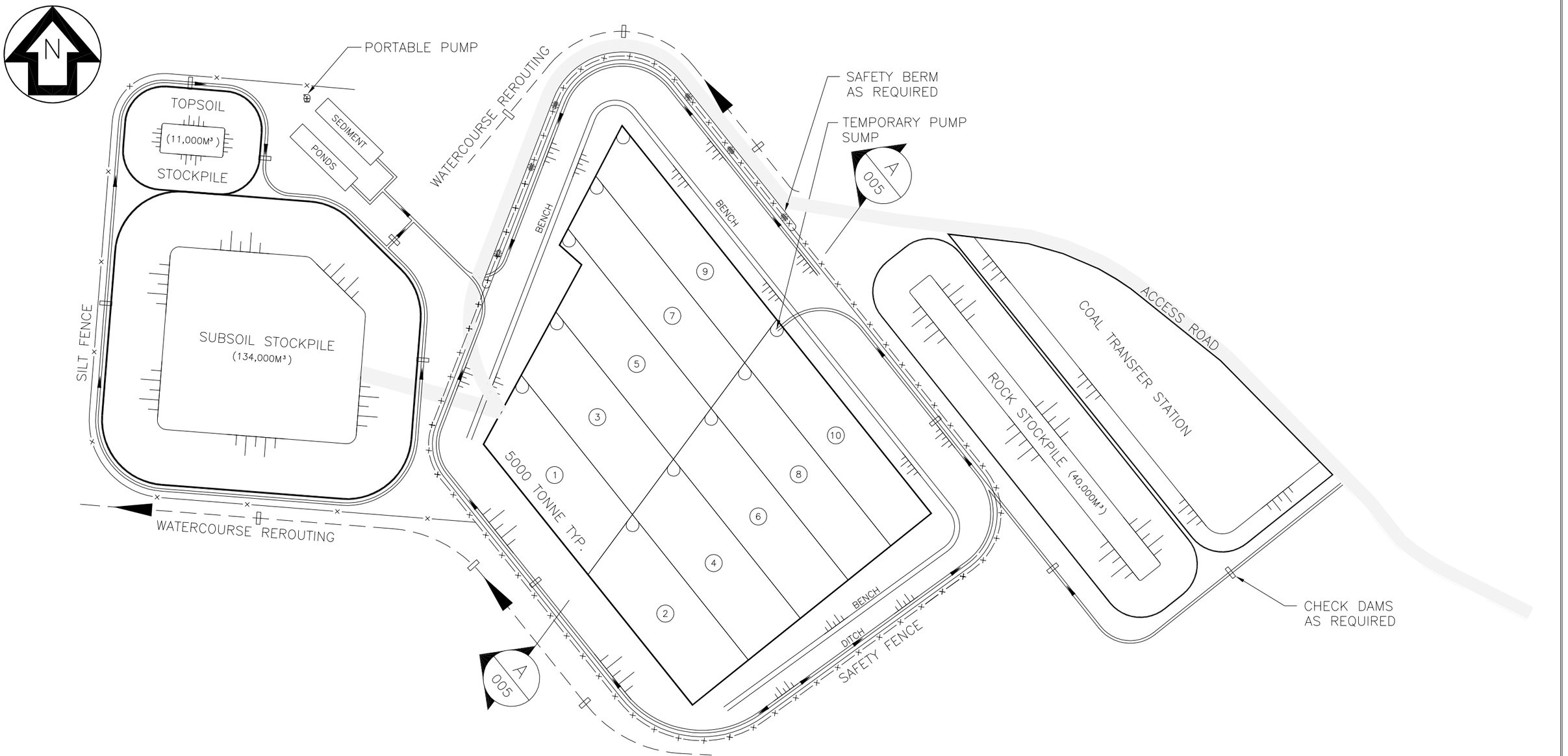
ACRES PROJECT NO. P14009.05

DRAWING NO. 14009.05-C-003

SHEET OF

REVISION B

DEC 03 2004 - 13:42:18



1 PLAN
SCALE 1:1500

DATE	NO.	REVISIONS	CH.	APP.	APP.
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POINT ACONI PHASE-3 SURFACE COAL MINE
ENVIRONMENTAL REGISTRATION

MINE DEVELOPMENT SITE PREPARATION

SCALE 1:1500
ACRES PROJECT NO. P14009.05
DRAWING NO. 14009.05-C-004
SHEET OF
REVISION B

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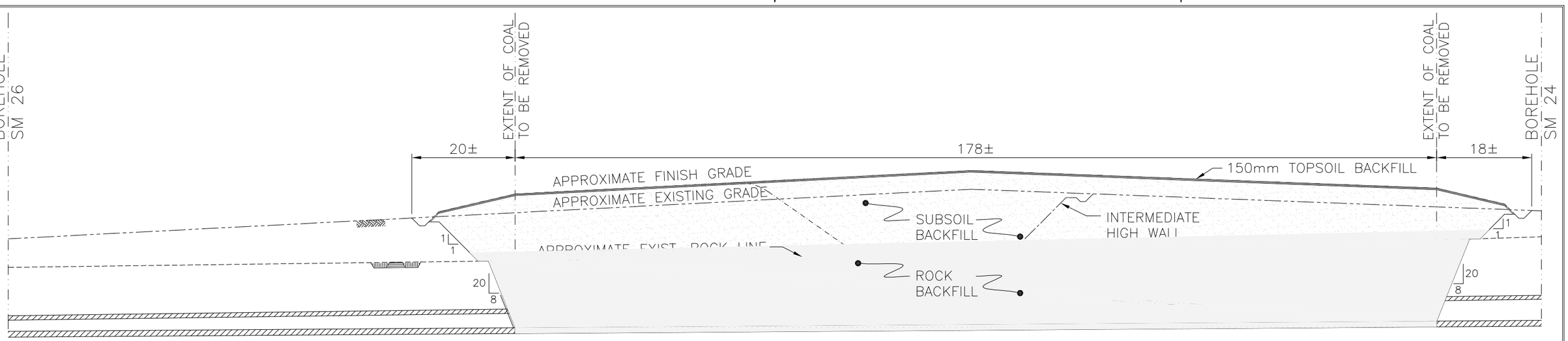
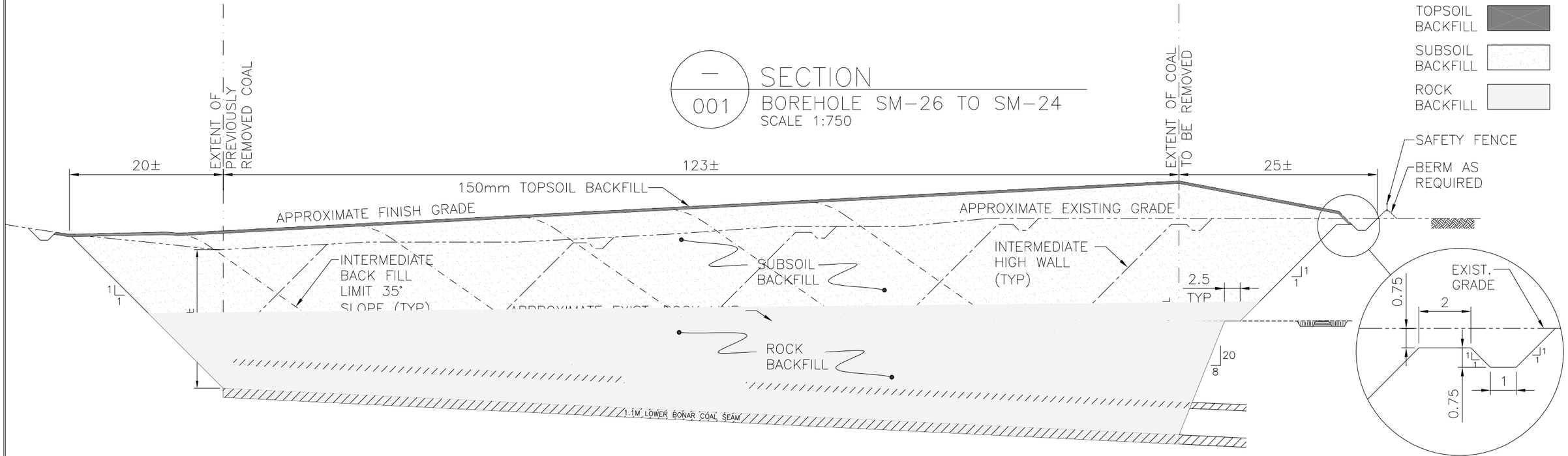


SECTION
001
BOREHOLE SM–26 TO SM–24
SCALE 1:750



SECTION
A
004
UPPER & LOWER BONAR SEAMS
SCALE 1:500

TOPSOIL BACKFILL
SUBSOIL BACKFILL
ROCK BACKFILL

DATE	NO.	REVISIONS	CH.	APP.	APP.
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POINT ACONI PHASE–3 SURFACE COAL MINE

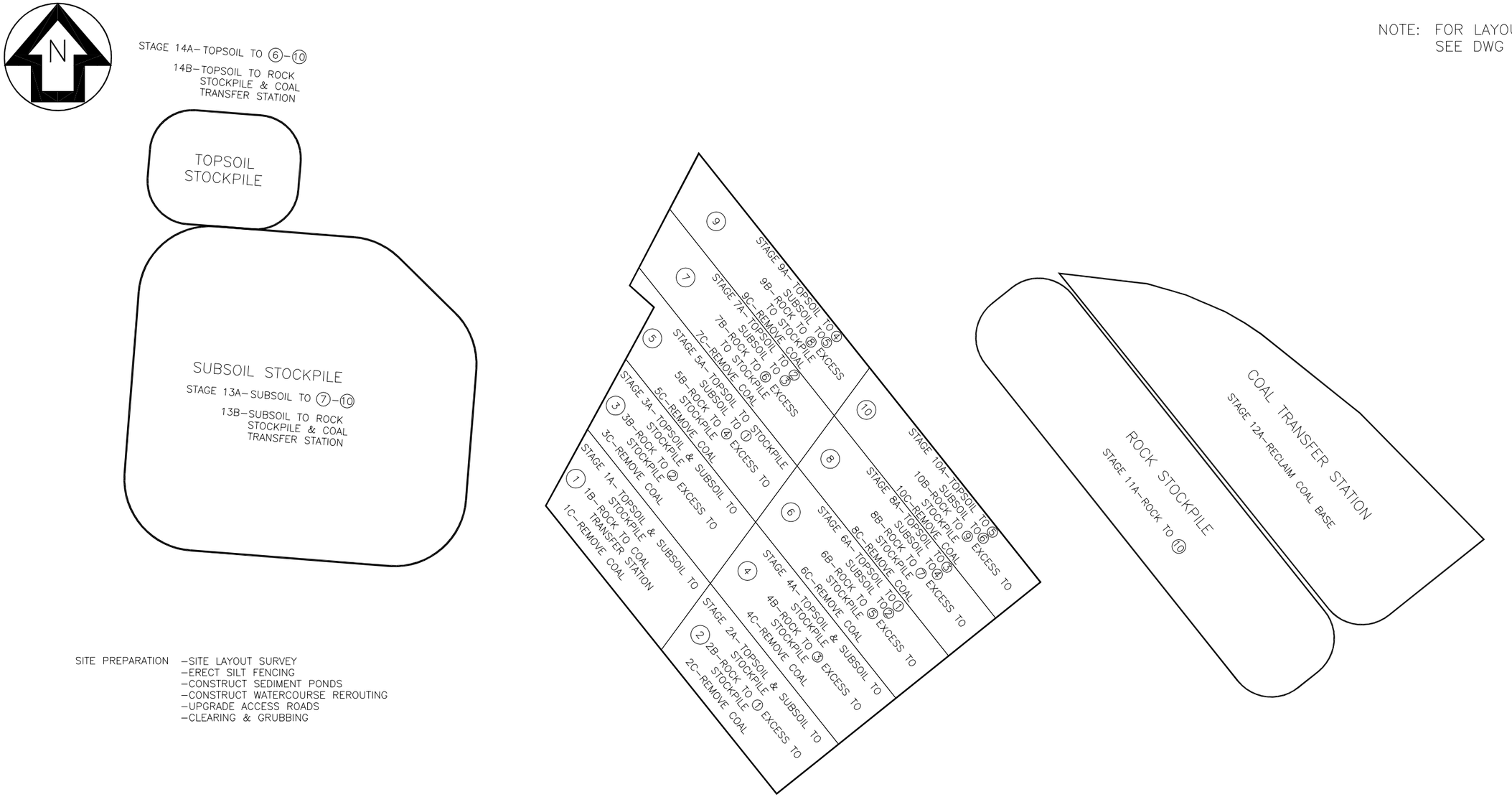
ENVIRONMENTAL REGISTRATION

MINE DEVELOPMENT SECTIONS

SCALE AS NOTED
ACRES PROJECT NO. P14009.05
DRAWING NO. 14009.05–C–005
SHEET OF
REVISION B

DEC 03 2004 – 09:18:07

NOTE: FOR LAYOUT AT STAGE 7C
SEE DWG 007



SITE PREPARATION
- –SITE LAYOUT SURVEY
- –ERECT SILT FENCING
- –CONSTRUCT SEDIMENT PONDS
- –CONSTRUCT WATERCOURSE REROUTING
- –UPGRADE ACCESS ROADS
- –CLEARING & GRUBBING

1/– PLAN
SCALE 1:1500

DATE	NO.	REVISIONS	CH.	APP.	APP.
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AUG.18 2004	A	ISSUED WITH DRAFT DOCUMENT	BB	GL	

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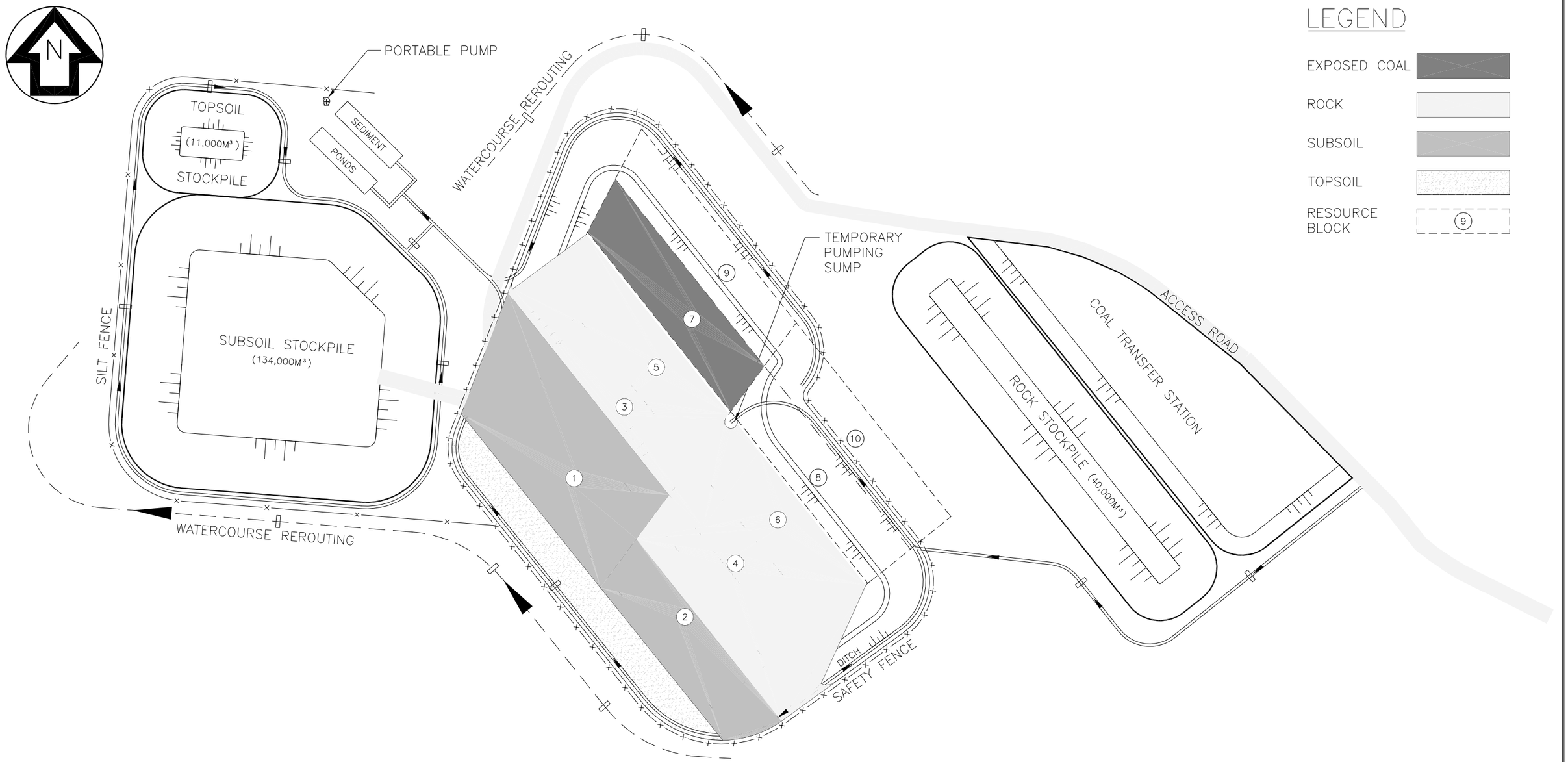
PROJECT ENGINEER H.W. RYDER
PROJECT MANAGER

THOMAS BROGAN & SONS CONSTRUCTION LTD.
POINT ACONI PHASE–3 SURFACE COAL MINE
ENVIRONMENTAL REGISTRATION

MINE DEVELOPMENT STAGES

SCALE 1:1500
ACRES PROJECT NO. P14009.05
DRAWING NO. 14009.05–C–006
SHEET OF
REVISION B

DEC 03 2004 – 13:44:49



— 006 PLAN
SCALE 1:1500

DATE	NO.	REVISIONS	CH.	APP.	APP.
DEC. 3 2004	B	ISSUED WITH ENVIRONMENTAL REGISTRATION DOCUMENT	BB	GL	
AUG.18 2004	A	ISSUED WITH DRAFT DOCUMENT	BB	GL	

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CHECKED G. LeBLANC

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PROJECT ENGINEER H.W. RYDER

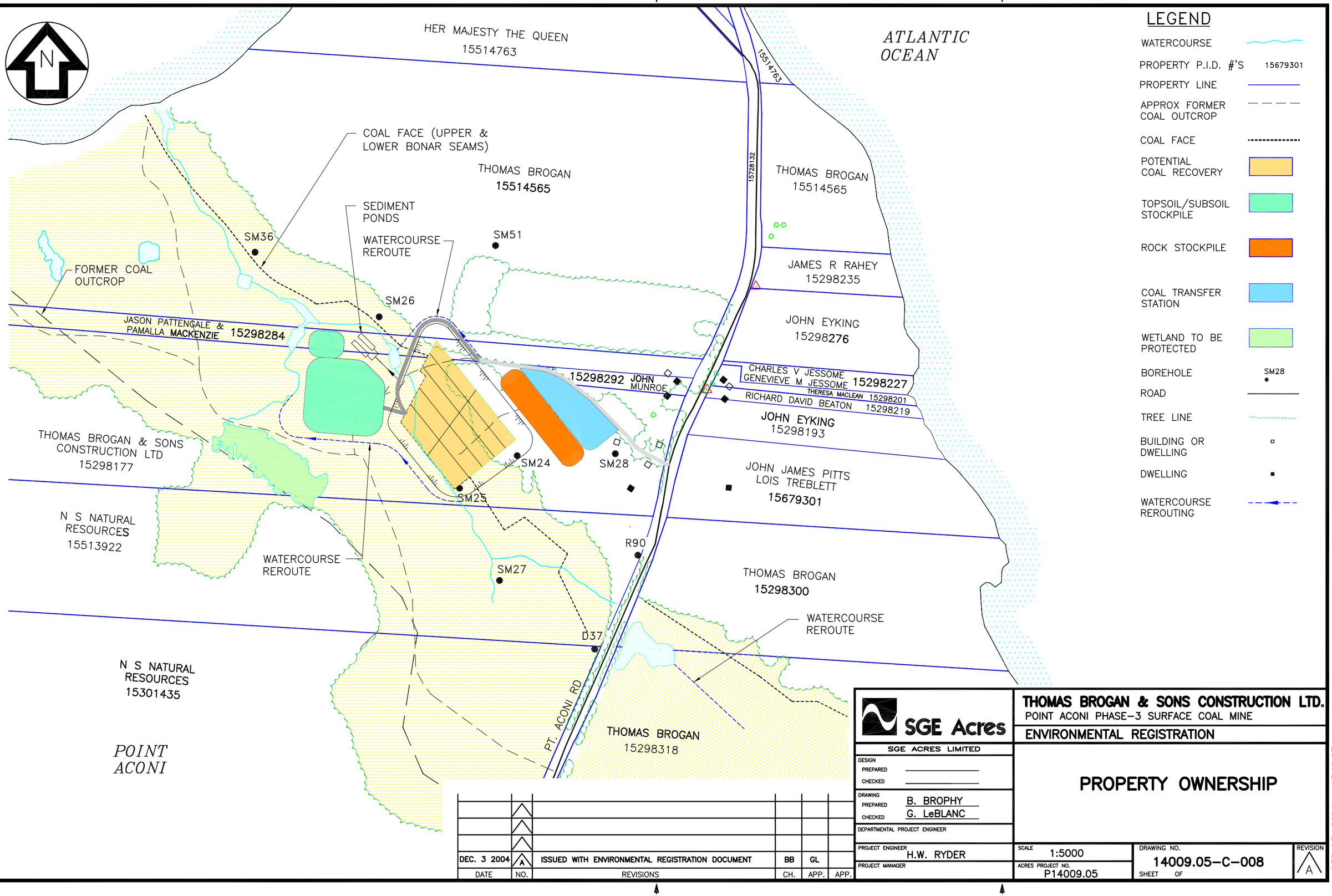
PROJECT MANAGER

THOMAS BROGAN & SONS CONSTRUCTION LTD.
POINT ACONI PHASE-3 SURFACE COAL MINE
ENVIRONMENTAL REGISTRATION

MINE OPERATION SEQUENCE AT STAGE 7C

SCALE 1:1500
ACRES PROJECT NO. P14009.05
DRAWING NO. 14009.05-C-007
SHEET OF
REVISION B

AUG 18 2004 - 14:50:26



LEGEND

- WATERCOURSE
- PROPERTY P.I.D. #'S 15679301
- PROPERTY LINE
- APPROX FORMER COAL OUTCROP
- COAL FACE
- POTENTIAL COAL RECOVERY
- TOPSOIL/SUBSOIL STOCKPILE
- ROCK STOCKPILE
- COAL TRANSFER STATION
- WETLAND TO BE PROTECTED
- BOREHOLE SM28
- ROAD
- TREE LINE
- BUILDING OR DWELLING
- DWELLING
- WATERCOURSE REROUTING

DATE	NO.	REVISIONS	CH.	APP.	APP.
DEC. 3 2004	A	ISSUED WITH ENVIRONMENTAL REGISTRATION DOCUMENT	BB	GL	

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POINT ACONI PHASE-3 SURFACE COAL MINE

ENVIRONMENTAL REGISTRATION

PROPERTY OWNERSHIP

SCALE 1:5000
ACRES PROJECT NO. P14009.05
DRAWING NO. 14009.05-C-008
SHEET OF
REVISION A

DEC 03 2004 - 13:46:07

Appendix - 3 Climatic Data

[cliarch Home | cm Home | Station Inventory | cmmymt]
[SOG | Mean Min T]

Point Aconi — Mean Max Temperature (deg C) — Page: 1

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1990										13.9	7.3	4.4
1991	-2.9	-1.3	2.9	5.7	12.4	18.9	24.0	22.8	17.5	13.6	8.6	1.6
1992	-1.7	-1.4	-0.2	4.4	14.0	18.3	20.2	23.4	20.4	12.8	5.3	1.6
1993	-2.6	-4.4	1.8	6.7	11.5	19.3	20.2	22.5	19.8	12.2	7.6	2.7
1994	-3.0	-3.4	2.2	8.1	12.2	20.5	26.4	23.8	18.3	13.1	8.2	1.8
1995	1.3	-1.3	1.1	6.0	9.9	20.1	26.0	24.3	18.1	14.4	7.6	0.9
1996	-0.2	0.6	1.8	6.8	11.7	20.6	22.9	23.0	18.0	11.7	6.4	5.8
1997	-0.2	-1.5	-1.2	3.3	12.7	17.0	24.9	21.5	18.7	11.1	6.3	2.0
1998		-0.5	3.6	6.8	15.0	18.0	23.8	24.5	19.4	12.1	6.5	1.9
1999	1.1	1.1	5.8	6.3	17.4	22.4	24.5	23.9	23.0	12.2	8.2	3.7
2000	1.5	1.3	4.5	7.4	11.3	20.3	22.1	24.0	19.2	14.5	6.8	1.5
2001	-1.4	-2.3	1.5	4.5	12.6	19.6	23.6	26.3	21.5	16.1	8.0	3.9
2002	-0.8	0.7	2.8	6.2	14.5	16.6	22.1	25.5	20.5	11.6	6.9	
2003	-2.8	-3.9	1.5									
Max	1.5	1.3	5.8	8.1	17.4	22.4	26.4	26.3	23.0	16.1	8.6	5.8
Year	2000	2000	1999	1994	1999	1999	1994	2001	1999	2001	1991	1996
Mean	-1.0	-1.3	2.2	6.0	12.9	19.3	23.4	23.8	19.5	13.0	7.2	2.7
Min	-3.0	-4.4	-1.2	3.3	9.9	16.6	20.2	21.5	17.5	11.1	5.3	0.9
Year	1994	1993	1997	1997	1995	2002	1992*	1997	1991	1997	1992	1995
StDev	1.7	1.9	1.8	1.4	2.0	1.6	2.0	1.3	1.6	1.4	0.9	1.5

A * to the right of a year indicates the first of several occurrences.

[cliarch Home | cm Home | Station Inventory | cmmymt]
[Mean Max T | Mean Monthly T]

Point Aconi — Mean Min Temperature (deg C) — Page: 1

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1990										8.7	2.0	-3.3
1991	-12.2	-9.5	-3.8	-1.8	3.0	8.7	12.7	14.1	10.5	6.6	3.7	-5.8
1992	-8.5	-10.1	-9.3	-2.8	2.7	8.2	11.5	14.4	12.0	5.0	0.2	-4.1
1993	-9.7	-14.3	-8.0	-1.3	3.5	8.8	12.2	13.8	11.2	4.5	0.2	-3.5
1994	-13.3	-14.4	-5.5	-0.7	3.0	9.8	15.8	14.9	9.7	5.5	1.7	-3.1
1995	-5.4	-10.9	-4.4	-1.6	2.0	8.7	16.0	15.0	9.4	7.5	1.5	-3.7
1996	-7.7	-6.9	-5.3	-0.4	3.2	8.5	13.9	14.8	10.5	4.6	1.3	-0.9
1997	-8.2	-9.9	-9.3	-1.8	2.4	7.2	13.1	13.2	11.1	5.0	1.0	-3.7
1998		-5.7	-3.0	0.3	4.7	9.7	14.2	14.0	10.3	6.2	1.2	-4.2
1999	-7.4	-5.5	-1.3	-0.5	6.1	11.7	15.2	14.9	13.7	4.4	0.5	-2.0
2000	-7.4	-8.1	-3.0	0.5	2.7	8.6	13.2	15.4	10.1	6.0	3.7	-4.8
2001	-7.2	-9.6	-5.1	-1.8	3.9	9.7	13.0	15.6	12.5	6.7	1.1	-1.4
2002	-6.6	-7.6	-4.9	-0.2	4.0	7.8	12.8	15.3	11.5	4.6	0.3	
2003	-10.3	-11.2	-7.6									
Max	-5.4	-5.5	-1.3	0.5	6.1	11.7	16.0	15.6	13.7	8.7	3.7	-0.9
Year	1995	1999	1999	2000	1999	1999	1995	2001	1999	1990	1991*	1996
Mean	-8.7	-9.5	-5.4	-1.0	3.4	8.9	13.6	14.6	11.0	5.8	1.4	-3.4
Min	-13.3	-14.4	-9.3	-2.8	2.0	7.2	11.5	13.2	9.4	4.4	0.2	-5.8
Year	1994	1994	1992*	1992	1995	1997	1992	1997	1995	1999	1992*	1991
StDev	2.3	2.8	2.5	1.0	1.1	1.2	1.4	0.7	1.2	1.3	1.2	1.4

A * to the right of a year indicates the first of several occurrences.

[cliarch Home | cm Home | Station Inventory | cmmymt]
[Mean Min T | Mon Temp diff fm Nrml]

Point Aconi — Mean Monthly Temp. (deg C) — Page: 1

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1990										11.3	4.7	0.6
1991	-7.6	-5.4	-0.5	2.0	7.7	13.8	18.4	18.5	14.0	10.1	6.1	-2.1
1992	-5.1	-5.9	-4.8	0.8	8.4	13.3	15.9	18.9	16.2	8.9	2.8	-1.2
1993	-6.2	-9.4	-3.1	2.7	7.5	14.1	16.2	18.1	15.5	8.4	3.9	-0.4
1994	-8.1	-8.9	-1.7	3.7	7.6	15.2	21.0	19.2	14.1	9.4	5.0	-0.7
1995	-2.0	-6.1	-1.7	2.2	5.9	14.4	21.0	19.7	13.8	11.0	4.6	-1.4
1996	-4.0	-3.2	-1.8	3.3	7.4	14.6	18.4	19.0	14.3	8.2	3.8	2.4
1997	-4.2	-5.7	-5.3	0.7	7.6	12.1	19.0	17.4	14.9	8.1	3.7	-0.8
1998		-3.1	0.3	3.6	9.9	13.9	19.0	19.3	14.9	9.2	3.8	-1.2
1999	-3.2	-2.2	2.3	2.9	11.8	17.1	19.8	19.4	18.3	8.3	4.3	0.9
2000	-3.0	-3.4	0.7	4.0	7.1	14.5	17.7	19.7	14.7	10.3	5.3	-1.7
2001	-4.3	-6.0	-1.8	1.3	8.2	14.6	18.3	21.0	17.0	11.4	4.6	1.2
2002	-3.7	-3.4	-1.1	3.0	9.3	12.2	17.5	20.4	16.1	8.2	3.6	
2003	-6.6	-7.6	-3.1									
Max	-2.0	-2.2	2.3	4.0	11.8	17.1	21.0	21.0	18.3	11.4	6.1	2.4
Year	1995	1999	1999	2000	1999	1999	1994*	2001	1999	2001	1991	1996
Mean	-4.8	-5.4	-1.7	2.5	8.2	14.2	18.5	19.2	15.3	9.4	4.3	-0.4
Min	-8.1	-9.4	-5.3	0.7	5.9	12.1	15.9	17.4	13.8	8.1	2.8	-2.1
Year	1994	1993	1997	1997	1995	1997	1992	1997	1995	1997	1992	1991
StDev	1.9	2.3	2.1	1.1	1.5	1.3	1.6	1.0	1.4	1.2	0.9	1.4

A * to the right of a year indicates the first of several occurrences.

[cliarch Home | cm Home | Station Inventory | cmmymt]
[Date Xtrm Min | Total Snowfall]

Point Aconi — Total Rainfall (mm) — Page: 1

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1990										182.9	95.0	265.2
1991	27.5	57.8	98.2	54.8	48.8	50.9	87.3	110.6	173.6	174.7	190.3	40.8
1992	52.5	40.0	114.0	57.3	90.9	88.1	92.6	78.7	79.9	193.8	57.8	70.9
1993	27.7	67.7	58.2	60.7	113.5	50.8	79.4	54.4	73.2	173.0	85.2	126.4
1994	58.4	TR	167.2	109.6	195.1	84.6	36.6	59.2	108.7	95.6	96.6	46.6
1995	19.9	16.2	28.5	14.3	97.9	123.5	67.2	65.0	78.8	126.7	131.9	81.2
1996	87.3	133.1	93.7	105.2	100.2	39.3	213.0	56.2	283.5	114.1	127.4	160.9
1997	95.4	33.9	59.2	34.2	113.1	51.2	52.0	156.7	95.2	53.3	179.8	83.6
1998		116.3	84.7	127.7	136.7	101.3	144.9	59.6	137.3	144.4	109.8	63.9
1999	124.5	128.3	188.7	164.4	72.1	46.0	155.1	92.1	68.2	175.9	81.0	149.7
2000	135.8	58.7	85.5	79.9	103.4	74.7	84.0	50.8	55.5	348.8	339.0	85.6
2001	36.7	11.4	37.7	117.6	42.7	60.8	66.5	33.5	117.4	96.2	79.8	68.1
2002	38.4	64.9	125.0	97.2	74.3	95.7	58.5	54.6	162.5	169.7	192.3	
2003	93.8	70.9	115.2									
Total	797.9	799.2	1255.8	1022.9	1188.7	866.9	1137.1	871.4	1433.8	2049.1	1765.9	1242.9
Max	135.8	133.1	188.7	164.4	195.1	123.5	213.0	156.7	283.5	348.8	339.0	265.2
Year	2000	1996	1999	1999	1994	1995	1996	1997	1996	2000	2000	1990
Mean	66.5	61.5	96.6	85.2	99.1	72.2	94.8	72.6	119.5	157.6	135.8	103.6
Min	19.9	TR	28.5	14.3	42.7	39.3	36.6	33.5	55.5	53.3	57.8	40.8
Year	1995	1994	1995	1995	2001	1996	1994	2001	2000	1997	1992	1991
StDev	39.7	43.1	46.7	42.9	40.6	26.4	51.0	33.4	63.8	71.3	75.4	63.5

[cliarch Home | cm Home | Station Inventory | cmmymt]
[Total Rainfall | Total Precip]

Point Aconi — Total Snowfall (cm) — Page: 1

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1990									0.0	0.0	3.0	5.5
1991	51.9	20.0	52.0	12.0	TR	0.0	0.0	0.0	0.0	TR	TR	57.8
1992	49.3	140.0	67.0	42.0	3.0	0.0	0.0	0.0	0.0	0.0	17.8	67.4
1993	42.0	44.0	87.7	14.0	0.0	0.0	0.0	0.0	0.0	TR	TR	36.0
1994	10.0	64.0	7.0	TR	0.0	0.0	0.0	0.0	0.0	0.0	6.4	2.0
1995	29.0	46.0	6.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	TR	20.0
1996	32.0	30.0	25.0	19.0	TR	0.0	0.0	0.0	0.0	TR	3.0	15.0
1997	38.0	49.0	34.0	51.0	0.0	0.0	0.0	0.0	0.0	TR	20.0	20.0
1998		1.0	37.0	22.0	0.0	0.0	0.0	0.0	0.0	TR	7.0	38.0
1999	21.0	15.0	18.0	36.0	TR	0.0	0.0	0.0	0.0	TR	8.0	20.0
2000	55.0	20.0	31.0	15.0	1.0	0.0	0.0	0.0	0.0	0.0	3.0	60.0
2001	68.0	118.0	47.0	43.0	0.0	0.0	0.0	0.0	0.0	TR	7.0	26.0
2002	99.0	97.0	50.0	30.0	TR	0.0	0.0	0.0	0.0	TR	21.0	
2003	100.0	46.0	30.0									
Total	595.2	690.0	491.7	286.0	4.0	0.0	0.0	0.0	0.0	0.0	96.2	367.7
Max	100.0	140.0	87.7	51.0	3.0	0.0	0.0	0.0	0.0	TR	21.0	67.4
Year	2003	1992	1993	1997	1992	1991*	1991*	1991*	1990*	1991*	2002	1992
Mean	49.6	53.1	37.8	23.8	0.3	0.0	0.0	0.0	0.0	0.0	7.4	30.6
Min	10.0	1.0	6.0	TR	0.0	0.0	0.0	0.0	0.0	0.0	TR	2.0
Year	1994	1998	1995	1994	1993*	1991*	1991*	1991*	1990*	1990*	1991*	1994
StDev	28.1	41.7	23.1	16.5	0.9	0.0	0.0	0.0	0.0	0.0	7.5	21.5

A * to the right of a year indicates the first of several occurrences.

[cliarch Home | cm Home | Station Inventory | cmmymt]
[Total Snowfall | Precip. diff fm Nrml]

Point Aconi — Total Precipitation (mm) — Page: 1

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1990										182.9	98.0	270.7
1991	79.4	77.8	150.2	66.8	48.8	50.9	87.3	110.6	173.6	174.7	190.3	98.6
1992	101.8	180.0	181.0	99.3	93.9	88.1	92.6	78.7	79.9	193.8	75.6	138.3
1993	69.7	111.7	145.9	74.7	113.5	50.8	79.4	54.4	73.2	173.0	85.2	162.4
1994	68.4	64.0	174.2	109.6	195.1	84.6	36.6	59.2	108.7	95.6	103.0	48.6
1995	48.9	62.2	34.5	16.3	97.9	123.5	67.2	65.0	78.8	126.7	131.9	101.2
1996	119.3	163.1	118.7	124.2	100.2	39.3	213.0	56.2	283.5	114.1	130.4	175.9
1997	133.4	82.9	93.2	85.2	113.1	51.2	52.0	156.7	95.2	53.3	199.8	103.6
1998		117.3	121.7	149.7	136.7	101.3	144.9	59.6	137.3	144.4	116.8	101.9
1999	145.5	143.3	206.7	200.4	72.1	46.0	155.1	92.1	68.2	175.9	89.0	169.7
2000	190.8	78.7	116.5	94.9	104.4	74.7	84.0	50.8	55.5	348.8	342.0	145.6
2001	104.7	129.4	84.7	160.6	42.7	60.8	66.5	33.5	117.4	96.2	86.8	94.1
2002	137.4	161.9	175.0	127.2	74.3	95.7	58.5	54.6	162.5	169.7	208.1	
2003	193.8	116.9	145.2									
Total	1393.1	1489.2	1747.5	1308.9	1192.7	866.9	1137.1	871.4	1433.8	2049.1	1856.9	1610.6
Max	193.8	180.0	206.7	200.4	195.1	123.5	213.0	156.7	283.5	348.8	342.0	270.7
Year	2003	1992	1999	1999	1994	1995	1996	1997	1996	2000	2000	1990
Mean	116.1	114.6	134.4	109.1	99.4	72.2	94.8	72.6	119.5	157.6	142.8	134.2
Min	48.9	62.2	34.5	16.3	42.7	39.3	36.6	33.5	55.5	53.3	75.6	48.6
Year	1995	1995	1995	1995	2001	1996	1994	2001	2000	1997	1992	1994
StDev	46.6	39.7	46.6	48.3	40.6	26.4	51.0	33.4	63.8	71.3	75.2	57.1

Appendix - 4 Company Registry

Service NS Home

Registry of Joint Stock Companies

- Search Our Database
- Who Needs to Register?
- How to Register
- Forms Download
- Name Reservation

Request Status

- Definitions
- Fee Notice
- ULC Tax Bulletins
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Registry of Joint Stock Companies - All Information

Profile Info | People Info | Activities Info | Related Reg's Info | View All Info

PROFILE - THOMAS BROGAN & SONS CONSTRUCTION LIMITED - as of 2004-07-27 10p.m.

Company/Society Name:	THOMAS BROGAN & SONS CONSTRUCTION LIMITED
Registry ID:	1060801
Type:	N.S. Limited Company
Nature Of Business:	
Status:	Active
Jurisdiction:	Nova Scotia
Registered Office:	8 QUEEN ST. SYDNEY MINES NS B1V 1X4
Mailing Address:	8 QUEEN ST. SYDNEY MINES NS B1V 1X4

PEOPLE

Name	Position	Civic Address	Mailing Address
CORDELIA REASHORE	Director	831 LITTLE POND ROAD FLORENCE NS B1Y 1T2	
RICHARD M. BROGAN	Director	8 QUEEN STREET SYDNEY MINES NS B1V 1X4	
LEE BROGAN	Director	811 LITTLE POND FLORENCE NS B1Y 1S6	
LEE BROGAN	SECRETARY	811 LITTLE POND FLORENCE NS B1Y 1S6	
PATRICK BROGAN	Director	790 LITTLE POND FLORENCE NS B1Y 1S6	
THOMAS SR. BROGAN	Recognized Agent	790 LITTLE POND ROAD FLORENCE NS B1Y 1S6	790 LITTLE POND ROAD FLORENCE NS B1Y 1S6
THOMAS (SR.) BROGAN	Director	790 LITTLE POND ROAD FLORENCE NS B1Y 1S6	
THOMAS (SR.) BROGAN	PRESIDENT	790 LITTLE POND ROAD FLORENCE NS B1Y1S6	
	VICE	790 LITTLE POND	

PATRICK BROGAN	PRESIDENT	FLORENCE NS B1Y 1S6	

ACTIVITIES

Activity	Date
Registered	1974-01-15
Incorporated	1974-01-15
Agent Filed	1974-02-25
Status Report Filed	1974-03-28
Registered Office Change	1986-02-17
Change of Directors	1989-10-24
Special Resolution	1989-10-25
Annual Report Filed	1996-01-09
Annual Renewal	1997-01-31
Annual Renewal	1998-02-27
Annual Renewal	1999-02-04
Revoked for Non-Payment	2000-03-02
Reinstated	2000-07-04
Revoked for Non-Payment	2001-03-03
Reinstated	2001-04-23
Annual Renewal	2001-07-11
Change of Directors	2001-09-14
Change Address for Agent	2001-09-14
Address Change	2001-09-14
Change of Directors	2002-09-13
Annual Renewal	2003-02-06
Annual Statement Filed	2003-02-06
Appoint an Agent	2003-05-27
Change of Directors	2003-05-27
Annual Renewal	2003-12-15
Annual Statement Filed	2003-12-15

RELATED REGISTRATIONS

This Company ...

Registered BROGAN COAL VENTURE

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Please use the online inquiry form if you have any questions, comments or suggestions.

Appendix - 5 Borehole Logs

David S. Robert & Associates Limited

DIAMOND DRILL LOG

Bonar

Hole No. R-91

Property Pt. Aconi

Location Pt. Aconi — Core Size NQ

Co-ordinates of Collar: Lat. 81+60N — Long. 42+10W

Elevation — Azimuth — Inclination -90°

Total Depth 56.0'

DIP TEST		

DATE BEGUN 21-1-75

DATE COMPLETED 21-1-75

DRILLER Longyear Dia. Drill Co.

LOGGED BY J. Reeves

FOOTAGE FROM	FOOTAGE TO	LENGTH	DESCRIPTION	SAMPLE NUMBER	ASSAY FROM	ASSAY TO	ASSAY LENGTH	ASSAY
0	14.3	14.3	Overburden					
14.3	17.7	3.4	Grey mudstone with trace of sandy mudstone core is blocky fractures approximately 1 core axis					
17.7	22.9	5.2	Interbedded grey sandstone and mudstone sandstone is fine grained core is blocky					
22.9	27.6	6.5	Grey mudstone Rx is competent fractures approximately 1 core axis					
27.6	28.8	1.2	Grey sandy mudstone Rx is competent fractures approximately 1 core axis					
28.8	30.0	1.2	Grey mudstone Rx is competent fractures approximately 1 core axis					
30.0	32.5	2.5	Coal bright and clean with approximately 5% pyrite approximately 25% core recovery					
32.5	36.5	4.0	Grey mudstone Rx is competent fractures approximately 1 core axis					
36.5	38.0	1.5	Interbedded grey sandstone and mudstone Rx is competent					
38.0	42.2	4.2	Grey mudstone Rx is competent fractures approximately 1 core axis					
42.2	46.2	4.0	Coal bright and clean with approximately 5% pyrite approximately 20% core recovery					
46.2	56.0	9.8	Grey sandy mudstone Rx is competent fractures approximately 1 core axis					
			END HOLE 56.0'					

Nova Scotia
Department of Mines and Energy
Coal Section

DIAMOND DRILL RECORD

HOLE No. SM-24 SHEET No.: 1 of 2
DATE BEGUN: February 28/85 CORE SIZE: NQ BEARING: GRID: 3°MTM NAD-27
DATE FINISHED: March 1/85 ELEV. COLLAR: 18.7m TOTAL DEPTH: 28.3m NORTHING: 5,132,352.41m
DATE LOGGED: March 20/85 HOLE ANGLE: -90° LOGGED BY: D. MacNeil EASTING: 397,390.62m

UNIT From	UNIT To	SAMPLE NUMBER		DESCRIPTION	BOX	MARKER	RECOV. m Rec.
0	5m			Overburden			
5	9.4			Siltstone - sandy, grey, lensy laminations (siderite). Badly broken, trace tiny (1-2mm) globular nodules, possibly replacing organic trash. Grades to...	1		1.0m
				Sandstone - pale-grey, silty, lensy bedding. Trace siderite			.18
				Silty mudstone - grey-green to grey. Broken, laminated			1.4
9.4	9.55			Shaly coal - pulverized			.03
9.55	10.4			Carbonaceous shale - black, plant remains along bedding			.70
				Mudstone - dark-grey, massive, pulverized, listric surfaces throughout. Seat-earth?			.12
						37'	
				As above - solid to broken			.28
10.4	12.8			Sandstone - fine to medium grained, pale grey, massive at top to lenticular bedding with depth; fining down. Minor siderite nodules. Grades to..... Solid core			.75
				Silty mudstone - dark grey, broken	1-2		1.58
12.8	14.2			Sandstone - grey, laminated to irregular bedding			.51
						47'	
				As above			.19
14.2	16.3			Mudstone - grey, silty in top half, soft, broken to solid			2.1
16.30m	17.05m			Upper Bonar Seam:			
		CB-85-1		Coal: Dull banded			.20
		CB-85-2		" : Bright & Dull			.43
						57'	
		CB-85-3		Coal: Bright & dull			.12
17.05	17.95			Mudstone - dark grey, laminated, solid-soft in part. Plant impressions common on bedding			.58
				Coaly shale			.04
				Mudseam - grey			.04
				Siltstone - dark grey, massive			.10
17.95	19.0			Sandstone - pale grey, fine/medium grained, grading down to inter-bedded fine sandstone, muddy siltstone with lensy	2-3		1.9

Nova Scotia
Department of Mines and Energy
Coal Section

2008

DIAMOND DRILL RECORD

HOLE No. SM-24 SHEET No.: 2 of 2
DATE BEGUN: CORE SIZE: BEARING: GRID:
DATE FINISHED: ELEV. COLLAR: TOTAL DEPTH: NORTHING:
DATE LOGGED: HOLE ANGLE: LOGGED BY: EASTING:

UNIT From	UNIT To	SAMPLE NUMBER	DESCRIPTION	BOX	MARKER	RECOV. m Rec.
			bedding, some bioturbation, fine cross-bedding, soft-sediment deformation. Solid.			
19.0m	21.12m		Mudstone - grey, silty, laminated. Solid			.60
					67'	
			As above - silty in top 40cm. Minor siderite nodules. Broken. 10cm above seam is soft, sheared			1.08
21.12m	22.24m		Lower Bonar Seam			
		CB-85-4	Coal - dull banded			.23
		CB-85-5	Coaly shale			.23
		CB-85-6	Coal - dull & bright. Pyrite seams along bedding			.20
		CB-85-7	Coal - bright banded. Pyrite along cleat			.65
		CB-85-8				
22.24	22.7		Mudstone - grey, massive, listric surfaces and plant remains throughout.			.45
22.7	24.0		Grades into fine grained, massive, silty sandstone with minor muddy lenses.			.20
					77'	
24.0	26.7		Sandstone - grey, medium-grained, massive. Vaguely x-bedded at base			.50
			Silty mudstone - grey/green, massive to laminated, trace sandy in part.			2.43
					87'	
			As above			.30
			Abrupt contact with:			
26.7	28.3		Sandstone - fine grained, coarsens down to medium-grained, grey to pale grey x-bedded sandstone.			1.45
					93'	
			End of Hole @ 93'			

Department of Mines and Energy
Coal Section

DIAMOND DRILL RECORD

HOLE No. SM-25 SHEET No.: 1 of 2
DATE BEGUN: March 5/85 CORE SIZE: NQ BEARING: - GRID: 3°MTM NAD-27
DATE FINISHED: March 6/85 ELEV. COLLAR: 17.3m TOTAL DEPTH: 22.3m NORTHING: 5,132,304.22m
DATE LOGGED: March 20/85 HOLE ANGLE: -90° LOGGED BY: D. MacNeil EASTING: 397,304.20m

UNIT From	UNIT To	SAMPLE NUMBER	DESCRIPTION	BOX	MARKER	RECOV. m Rec.
0	5m		Overburden			
5	6.4		Sandstone - grey, fine to medium grained, cross-bedded, in top half to laminated to rippled with depth. Broken	1		1.05
6.4	7.6		Mudstone - dark grey, silty in part; soft laminated to massive. Plant impressions occasionally on bedding. Siderite nodules near bottom. Broken. Mudseam at base.			1.4
					27'	
7.6	8.2		Sandstone - grey, carbonaceous, soft sediment deformation. Badly broken.			.26
8.2	8.74		Mudstone - silty near top, dark grey to black, soft, plant impressions common - broken to pulverized. Soft.			.60
8.74m	9.55m		Coal: Upper Bonar seam - Pulverized, muddy			.03
9.55	10.5		Mudstone - soft, dark-grey, laminated. Broken. Mudseam at base			.65
10.5	12.2		Interlaminated fine sandstone - black siltstone; lensy laminations; fine cross-bedding.			.40
					37'	
			As above - calamites cast; grades to			.62
			Muddy siltstone - grey black. Sharp base.			.20
			Sandstone - pale grey, medium grained. Fine cross-bedding; ripple-drift?	1		.44
12.2	13.39		Mudstone - silty in part, dark grey, laminated. Minor siderite nodules. Slightly carbonaceous. Mudseams.	2		1.25
13.39	14.62m		Lower Bonar Seam			
			Coal: dull banded, pulverized			.20
			Coaly shale			.10
					47'	
			As above			.08
			Coal - dull & bright			.23
			Coal - bright banded			.25
14.62	16.7		Mudstone - grey, massive, with abundant chaotic plant remains, grading down to.....			.70
			Sandstone - silty, thin bedded, grades to....			.40

Department of Mines and Energy
Coal Section

DIAMOND DRILL RECORD

HOLE No. SM-25 SHEET No.: 2 of 2
DATE BEGUN: CORE SIZE: BEARING: GRID:
DATE FINISHED: ELEV. COLLAR: TOTAL DEPTH: NORTHING:
DATE LOGGED: HOLE ANGLE: LOGGED BY: EASTING:

UNIT From	UNIT To	SAMPLE NUMBER		DESCRIPTION	BOX	MARKER	RECOV. m Rec.
				Mudstone - grey, soft, muddy to laminated			.60
16.7m	17.1m			Grades to very fine grained micaceous sandstone			.37
						57'	
17.1	18.1			Grades to grey, thin bedded mudstone - solid			1.0
18.1	22.3			Back to grey. Sandstone - cross bedded, medium grained with minor interbeds of grey mudstone.			2.0
						67'	
				As above			2.0
						73'	
				End of Hole @ 73'			

Department of Mines and Energy
Coal Section

DIAMOND DRILL RECORD

HOLE No. SM-26 SHEET No. 1 of 2
DATE BEGUN: March 7/85 CORE SIZE: NQ BEARING: - GRID: 3°MTM NAD-27
DATE FINISHED: March 11/85 ELEV. COLLAR: 13.3m TOTAL DEPTH: 25.3m NORTHING: 5,132,556.89m
DATE LOGGED: March 21/85 HOLE ANGLE: -90° LOGGED BY: D. MacNeil EASTING: 397,180.00m

UNIT From	UNIT To	SAMPLE NUMBER	DESCRIPTION	BOX	MARKER	RECOV. m Rec.
0 m	5.5m		Overburden			
5.5	8.6		Sandy siltstone - grey-black, thinly wavy bedded, grading down to black mudstone. Broken to pulverized.	1		.75
					27'	
			Mudstone - slightly carbonaceous (plant remains) very soft, pulverized.			.70
8.6	9.4		Sandstone - pale grey, medium grained, soft sediment deformation, grades down to silty, laminated sandstone - muddy in part. Solid.			.80
9.4	10.1		Mudstone - grey-black, laminated, soft, rare siderite nodules. Grades into			.62
10.1	12.2		Sandstone - fine grained, grey, grading rapidly to siltstone - black, massive. Solid.			.66
					37'	
			Siltstone - sandy in part, grey-black, solid to broken. Muddy at base.			.90
			Sandstone - grey, medium grained, massive to wavy laminated.			.45
12.2	14.82		Mudstone - grey-black to black, laminated, soft. Solid. Minor small siderite nodules.			1.80
					47'	
			As above: Softer, sheared, plant impressions on bedding as approach roof of seam.			.80
14.82m	15.70m		Upper Bonar Seam			
			Shaly coal			.03
		CB-85-14	Coal - dull & bright. Pulverized			.15
15.70	17.84		Mudstone - grey, massive (underclay); plant impressions throughout Broken, becoming laminated with depth.			1.35
					57'	
			Mudstone - grey, laminated with siderite bands along bedding			.50
			Solid to broken.			
			Mudstone - carbonaceous, sheared-abundant plant impressions			.32
17.84	18.95		Lower Bonar Seam			

Department of Mines and Energy
Coal Section

DIAMOND DRILL RECORD

HOLE No. SM-26 SHEET No.: 2 of 2
DATE BEGUN: CORE SIZE: BEARING: GRID:
DATE FINISHED: ELEV. COLLAR: TOTAL DEPTH: NORTHING:
DATE LOGGED: HOLE ANGLE: LOGGED BY: EASTING:

UNIT From	UNIT To	SAMPLE NUMBER	DESCRIPTION	BOX	MARKER	RECOV. m Rec.
		CB-85-15	Coal: dull banded. Pulverized			.17
		CB-85-16	Parting; Coaly shale with 8cm irregular band of massive pyrite			.15
		CB-85-17	Coal: bright banded - pyritic			.35
		CB-85-18	Coal: bright & dull			.35
18.95m	21.0m		Mudstone - grey, massive, fractured, plant remains. (Seat earth)	2-3		.80
			Broken.			
					67'	
			As above - but becoming solid			.60
			Mudstone - grey, laminated. Solid. Grades imperceptibly into...			.70
21.0	22.3		Siltstone - grey, similar to above. Grades to.....			1.25
22.3	22.7		Sandstone - fine to medium grained, thin lensy bedding			.45
					77'	
22.7	23.6		Silty mudstone - finely laminated, dark grey. Solid. Grades to...			.80
23.6	25.3		Silty sandstone, grey, massive with faint cross-bedding.			1.05
			End of hole @ 83'			

Appendix - 6 Property Ownership

This Indenture

made this 8th day of June in the year of Our Lord One Thousand Nine Hundred and eighty-two.

Between

FRANCES MacLEAN of Point Aconi, in the County of Cape Breton, Province of Nova Scotia.
(Formerly owned by George Melvin)

hereinafter called the "Grantor"

of the One Part

—and—

THOMAS BROGAN & SONS CONSTRUCTION LIMITED, of Sydney Mines, in the County of Cape Breton, Province of Nova Scotia.

hereinafter called the "Grantee"

of the Other Part

IN THE MATTER OF property formerly owned by George Melvin and occupied by Frances MacLean.

Witnesseth:

that the said Grantor for and in consideration of the sum of one dollar ($1.00)---------- of lawful money of the Dominion of Canada, and other good and valuable consideration to the said Grantor in hand well and truly paid by the said Grantee, at or before the ensealing and delivery of These Presents, the receipt whereof is hereby acknowledged hath remised, released and forever quitted claim to, and by these Presents doth remise, release and forever quit claim, unto the said Grantee

Heirs and assigns, to ALL that lot, piece or parcel of land situated on the north-east end of Boulardarie Island near Saint Anne's Bay in our said Island of Cape Breton, being the Lot number seven, on the sea shore, between the Little Bras d'Or entrance and Point Aconi, and bounded as follows: that is to say,

BY A LINE BEGINNING on the shore aforesaid at the northern boundary of the lot number six, grantee to the General Mining Association of

THENCE running by the magnet in the year of our Lord, one-thousand, seven-hundred and ninety north sixty-five degrees west ninety chains, more or less to the opposite seashore;

THENCE northeasterly along the shore to the southern boundary of the lot number eight, sold to John Stubbard being at a distance form the lot number six of ten chains measured at right angles with the side line.

THENCE parallel with the first described boundary line, south sixty-five east. eighty-one chains, more or less to the seashore first above named;

THENCE southerly along the shore to the place of commencement, containing eighty-five acres more or less but reserving therefore the road leading across the front of the said lot number seven from the little Bras d'Or to Point Aconi.

together with all and singular the Buildings, Easements, Tenements, Hereditaments and Appurtenances to the same belonging, or in anywise appertaining, with the reversion and reversions, remainder and remainders, rents, issues and profits thereof, and all the estate, right, title, interest, claim, property and demand, both at law and in Equity of the said Grantor of, in, to or out of the same, or any part thereof.

To Have and to Hold, the said Land and Premises with the appurtenances, and every part thereof, unto the said Grantee Thomas Brogan & Sons Construction Limited, and Assigns to their sole use, benefit and behoof forever.

In Witness Whereof, the said Grantor to these Presents has hereunto set his Hand and affixed his Seal the day and year first above written.

Signed, Sealed and Delivered,
IN THE PRESENCE OF

Paula Toro
WITNESS

Frances A. MacLean
FRANCES MacLEAN

CANADA
PROVINCE OF NOVA SCOTIA

IN THE MATTER OF The Canada Evidence Act

- and -

IN THE MATTER OF the Declaration of Frances MacLean of Point Aconi, Cape Breton, Province of Nova Scotia

TO WIT:

STATUTORY DECLARATION

I, Frances MacLean, of Point Aconi, in the Town of Sydney Mines, County of Cape Breton, Province of Nova Scotia, do hereby solemnly declare:

1. THAT I am 66 years of age and have resided in Point Aconi for the past 30 years.

2. THAT I am familiar with the lands described in Schedule "A" hereto attached as being lands formerly owned by George Melvin.

3. THAT I have used and occupied the lands described in Schedule "A" attached hereto openly and continually for the past 30 years.

4. THAT I have mined crop pits, cut firewood and hunted on said property during the 30 year period.

AND I make this solemn declaration conscientiously believing the same to be true and knowing that it is of the same force and effect as if made under oath and by virtue of The Canada Evidence Act.

DECLARED before me at Sydney Mines, in the County of Cape Breton, Province of Nova Scotia, this 9th day of June, A.D., 1982.

Frances A. MacLean
FRANCES MacLEAN

A BARRISTER OF THE SUPREME COURT
OF NOVA SCOTIA

Dated June 8th A.D., 1982

FRANCES MacLEAN

—TO—

THOMAS BROGAN AND SONS CONSTRUCTION LIMITED

Quit Claim Deed

NASLTD.—613

Consideration $ 1.00

Province of Nova Scotia,
COUNTY OF CAPE BRETON S.S

On this 8TH day of June A.D. 1982
before me, the subscriber personally came and appeared , Paula Pero,
a subscribing Witness to the foregoing Indenture, who having been by me duly sworn, made oath
and said that , Frances MacLean, one of

the parties thereto, signed, sealed and delivered the same in her presence.

NASH T. BROGAN
BARRISTER & SOLICITOR

NASH T. BROGAN
A Barrister of the Supreme Court
of Nova Scotia

Form 502-P. 1

Page 516

This Indenture made this -----21st.--------

day of February------ , A. D., 19 73 .

Between

JOHN HOBEN of Yarmouth, Province of Nova Scotia and ANNIE HOBEN of the same place, his wife, and CHARLES POWER of Bras D'Or, in the County of Cape Breton, Province of Nova Scotia, and VINETA POWER of the same place, his wife,

hereinafter called the "GRANTORS "

of the One Part

— and —

THOMAS BROGAN of Little Pond Road, Florence, in the County of Cape Breton, Province of Nova Scotia,

hereinafter called the "GRANTEE "

of the Other Part

Witnesseth that in consideration of ------ONE---------- Dollar of lawful money of Canada.

The Grantors hereby convey to the Grantee the lands described in the Schedule marked "A" hereto annexed.

SCHEDULE "A"

ALL that certain piece, parcel or lot of land situate, lying and being at Point Aconi, in the County of Cape Breton, and bounded and described as follows:-

BOUNDED on the North by the lands of the Estate of Donald Walker;

ON the South by the Main Highway;

ON the West by the waters of the Big Bras D'Or;

AND ON the Southwest by the Melvin property, containing 47 acres more or less.

BEING the property owned by the late Neil J. Walker, Deceased.

AND BEING the same land conveyed to John Hoben and Charles Power by Catherine Burke, Michael Walker and Gladys Walker by deed dated the 13th day of January, A.D., 1971 and registered at the Registry of Deeds, Sydney, N. S. in Book 857, Page 816.

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Form 602 - P3

THE GRANTORS

covenant with the Grantee that the Grantee shall have quiet enjoyment of the lands, that the said Grantors have a good title in fee simple to the lands and the right to convey them as hereby conveyed, that they are free from encumbrances and that the said Grantors will procure such further assurances as may be reasonably required.

IN WITNESS WHEREOF THE SAID GRANTORS To These Presents have hereunto set their Hands and affixed their Seals the day and year first above written.

IN THE PRESENCE OF
Louise Delaney
Witness to the signatures of
John & Annie Hoben
Sharon Robertson

John Hoben

Annie Hoben

Charles Power

Vineta Power

PROVINCE OF NOVA SCOTIA
COUNTY OF CAPE BRETON S.S.

ON THIS 26th day of February, A. D. 1973, before me, the subscriber personally came and appeared Sharon Robertson, a subscribing witness to the foregoing Indenture, who having been by me duly sworn, made oath and said that CHARLES POWER and VINETA POWER, two---------- of the parties thereto, signed, sealed and delivered the same in h[illegible] presence.

Murray J. Ryan
A Commissioner of the Supreme Court of Nova Scotia.
MURRAY J. RYAN

PROVINCE OF NOVA SCOTIA
COUNTY OF S.S.

I CERTIFY that on this day of A. D. 19 , of the parties mentioned in the foregoing and annexed Indenture, signed and executed the said Indenture in my presence and I have signed as a witness to such execution.

A Commissioner of the Supreme Court of Nova Scotia.

PROVINCE OF NOVA SCOTIA)
COUNTY OF YARMOUTH S.S.)

ON THIS 23rd day of February, A.D., 1973 before me, the subscriber personally came and appeared Louise Delaney, a subscribing witness to the foregoing Indenture, who having been by me duly sworn, made oath and said that JOHN HOBEN and ANNIE HOBEN, two of the parties thereto, signed, sealed and delivered the same in h[illegible] presence.

JAMES D. REARDON Q.C.
COMMISSIONER OF THE SUPREME COURT OF NOVA SCOTIA

A Commissioner of the Supreme Court of Nova Scotia

Province of Nova Scotia
Cape Breton S. S.
I certify that the within instrument was registered in this office at 9:53 o'clock this day
in Book 924 pages 516 on faith of the
foregoing certificate
Office of Registry of Deeds
Sydney, February 27/73
Registrar of Deeds

Appendix - 7 Author's Certificate

Authors Certificate
For
Environmental Registration
Point Aconi Phase – 3 Surface Coal Mine
Point Aconi, Nova Scotia

Author:

Name: Harry W. Ryder, P. Eng.

Address: 325 Vulcan Avenue
Sydney, Nova Scotia
B1P 5X1

Occupation: SGE Acres
Senior Engineering Consultant

Qualifications:

Education: University of New Brunswick, Fredericton, New Brunswick
B.Sc. Civil Engineering, 1954

Professional Associations: Association of Professional Engineers of Newfoundland, Nova Scotia and New Brunswick - Member
Professional Engineers of Ontario - Member
Order of Engineers of Quebec - Member

Relevant Work Experience:

I am a Civil Engineer with more than 45 years experience gained from a wide variety of projects across Canada and have extensive experience in geotechnical, civil and mechanical engineering disciplines including some 25 years work in the Cape Breton Coal Fields. Some more recent similar relevant projects accomplished for a variety of clients include:

Cape Crushing Company Ltd.

(1) Application for Excavation Permit, Letter of Authority, Nova Scotia Department of the Environment Application for Approval for Extraction of Bulk Coal Sample from Collins and Stony Coal Seams at Halfway Road, Sydney Mines, Nova Scotia.

Authors Certificate
For
Environmental Registration
Point Aconi Phase – 3 Surface Coal Mine
Point Aconi, Nova Scotia

Thomas Brogan & Sons Construction Limited

(1) Proposal to N.S. Natural Resources
for Exploration, Development and Reclamation
of the Point Aconi Resource Block

(2) Application for Special (Mining) Lease (Lease #0303)
Point Aconi Phase-3

(3) Point Aconi:
- Strip mining plans and rehabilitation plan for the area.

(4) Toronto Road Surface Mine:
- Prepared Mining Permit Application, Industrial Waste Disposal Permit Application, Environmental Assessment Registration, Environmental Assessment Preliminary Report

Brogan Mining Company Limited

(1) Merritt Point Surface Mine
- Mining Permit Application

(2) Sullivan Creek:
- Prepared Mining Permit Application and Industrial Approval for the project and the rehabilitation plans

(3) Extension Across Sullivan Creek:
- Mining and rehabilitation plans.

(4) Stellarton Surface Mine:
- Engineering services required to prepare a proposal concerning the activation and operation of a surface mine for the purposes of coal extraction as requested by the Province of Nova Scotia. This proposal was not selected by the Department of Natural Resources.

Pioneer Coal Limited

(1) Reserve Mines Open Pit Rehabilitation
- Environmental reports and mining plans for a new open pit coal mine site at Stellarton, Nova Scotia.

(2) St. Rose (Mining License Application and Application for Industrial Approval)

- Open Pit Mine, Mining License Application and Application for Industrial Approval

- Included preparation of surface mine registration, environmental mine plan and description of mine sequence documents.

H.W. Phillips & Son Limited

(1) Proposal to N.S. Natural Resources for Exploration, Development and Reclamation of the Broughton Resource Block.

(1) Extraction of Bulk Coal Sample from Tracey Coal Seam at Broughton.

- Application for Excavation Permit, Letter of Authority and Application for Industrial Approval.

Selminco

(1) Sydney Mines Rehabilitation

- Engineering of the plant and operation of the plant including plant demolition and site rehabilitation.

(2) Summit Dump Rehabilitation, Daley Road, New Waterford

- Engineering of the plant and operation of the plant including plant demolition and site rehabilitation.

Authors Certificate
For
Environmental Registration
Point Aconi Phase – 3 Surface Coal Mine
Point Aconi, Nova Scotia

Personal Examination:

I have not recently visited this site but am familiar as I have been on the site numerous times in the past. I have been assisted by Mr. Gordon LeBlanc, a Senior CET with whom I have worked with for over 20 years on similar assignments. Mr. LeBlanc has first hand knowledge of this site. In the preparation of the proposal, I have reviewed and gained knowledge of the coal seams overburden and surface features from aerial photographs, site plans, former mine workings, borehole logs and other sources. I have vast previous experience (20 years ±) with the site from being involved with numerous Brogan Mine projects such as Phases 1 and 2.

Property Interests:

I have no direct or indirect interest in the properties or proponents involved.

This Registration Document has been prepared to meet the requirements of the Nova Scotia Department of Natural Resources and Nova Scotia Environment and Labour with the User's Guide to the One Window Process for "Mine Development Approvals" as a guide.

H. W. Ryder, P. Eng.

December 3, 2004
Date

REGISTERED PROFESSIONAL ENGINEER * PROVINCE OF NOVA SCOTIA *
DATE Dec 03, 2004
H RYDER
2689

Appendix - 8 Agreements

THIS AGREEMENT made this 6 day of Dec A.D. 2004

Between: ***THOMAS BROGAN & SONS CONSTRUCTION LIMITED,*** a body Corporate

OF THE FIRST PART

-and –

of

John MUNRO

in the Province of Nova Scotia

OF THE SECOND PART

WHEREAS John MUNRO, is the owner of land situated at POINT ACONI, identified by Property Identification Number (PIN) 15298292 in the County of Cape Breton. Province of Nova Scotia;

AND WHEREAS ***THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED*** intends to operate a surface mine on said lands for the purpose of surface mining coal.

AND WHEREAS John MUNRO has been fully informed as to the scope of the proposed mining activity that is to occur on said lands;

AND WHEREAS ***THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED*** shall be responsible for complying with all regulatory requirements of the Province Of Nova Scotia in obtaining permits, site management, and final reclamation of said lands;

AND WHEREAS ***THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED*** and John MUNRO have agreed upon the terms, conditions and covenants under which John MUNRO Grants ***THOMAS BROGAN & SONS CONSTRUCTION COMPANY LIMITED PERMISSION*** to carry out surface mining on said lands.

(witness)

(Landowners signature)

(witness)

(Company's Authority Signature)

THIS AGREEMENT made this 6 th.day of November, A.D., 2004

BETWEEN:

THOMAS BROGAN & SONS CONSTRUCTION LIMITED LTD.

- and –

WILLIAM MUNROE PID 15298292

WHEREAS Thomas Brogan & Sons Construction Company Limited intends to surface mine coal in Point Aconi area;

AND WHEREAS the above-mentioned land owners wish to acknowledge that they have been fully informed by Thomas Brogan & Sons Construction Company Limited as to the full impact of the surf mine;

THIS AGREEMENT WITNESSETH that for and in consideration of the legal covenants contained h the landowners hereby acknowledge:

THAT they have had the opportunity to review draft mining proposal submitted to the Department of Environment.

THAT they are aware that a Community Liaison Committee will be appointed to handle the grievanc

THAT they are satisfied that proper procedures will be set up to deal with any potential damage clain

IN WITNESS WHEREOF the parties hereto have hereunto executed the day and year first above mentioned

SIGNED, SEALED AND DELIVERED
In the presence of:

Thomas Brogan & Sons Construction Company Limited

Per:

Witness

Witness

Witness

Witness

Resident

Resident

Resident

THIS AGREEMENT made this 30 day of Nov A.D. 2004

Between: ***THOMAS BROGAN & SONS CONSTRUCTION LIMITED,*** a body Corporate

OF THE FIRST PART

-and –

of

---

in the Province of Nova Scotia

OF THE SECOND PART

WHEREAS Jason PattenGale, is the owner of land situated at Point Aconi, identified by Property Identification Number (PIN) 15298284 in the County of Cape Breton. Province of Nova Scotia;

AND WHEREAS ***THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED*** intends to operate a surface mine on said lands for the purpose of surface mining coal.

AND WHEREAS JASON PattenGale has been fully informed as to the scope of the proposed mining activity that is to occur on said lands;

AND WHEREAS ***THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED*** shall be responsible for complying with all regulatory requirements of the Province Of Nova Scotia in obtaining permits, site management, and final reclamation of said lands;

AND WHEREAS ***THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED*** and JASON PattenGale have agreed upon the terms, conditions and covenants under which JASON PATTENGALE. Grants ***THOMAS BROGAN & SONS CONSTRUCTION COMPANY LIMITED PERMISSION*** to carry out surface mining on said lands.

(witness)

(witness)

(Landowners signature)

Pam Mac Kenzie

(Company's Authority Signature)

THIS AGREEMENT made this 30th.day of November, A.D., 2004

BETWEEN:

THOMAS BROGAN & SONS CONSTRUCTION LIMITED LTD.

- and –

Cindy Young PID 15298292

Floyd Pattersgale. PID 15298177

THERESA MACLEAN PID 15298201

WHEREAS Thomas Brogan & Sons Construction Company Limited intends to surface mine coal the Point Aconi area;

AND WHEREAS the above-mentioned land owners wish to acknowledge that they have been ful informed by Thomas Brogan & Sons Construction Company Limited as to the full impact of the surface mine;

THIS AGREEMENT WITNESSETH that for and in consideration of the legal covenants contain herein, the landowners hereby acknowledge:

THAT they have had the opportunity to review draft mining proposal submitted to the Departmen of Environment.

THAT they are aware that a Community Liaison Committee will be appointed to handle the grievances,

THAT they are satisfied that proper procedures will be set up to deal with any potential damage claims.

IN WITNESS WHEREOF the parties hereto have hereunto executed the day and year first above mentioned.

SIGNED, SEALED AND DELIVERED
In the presence of:

Witness

Witness

Witness

Witness

Thomas Brogan & Sons Construction Company Limited

Per:

Resident

Resident

Resident

THIS AGREEMENT made this 30 th.day of November, A.D., 2004

BETWEEN:

THOMAS BROGAN & SONS CONSTRUCTION LIMITED LTD.

- and –

LAURA BEATON PID 15298219

JOANIE-LYNN BEATON PID 15298284

WHEREAS Thomas Brogan & Sons Construction Company Limited intends to surface mine coal the Point Aconi area;

AND WHEREAS the above-mentioned land owners wish to acknowledge that they have been ful informed by Thomas Brogan & Sons Construction Company Limited as to the full impact of the surface mine;

THIS AGREEMENT WITNESSETH that for and in consideration of the legal covenants contain herein, the landowners hereby acknowledge:

THAT they have had the opportunity to review draft mining proposal submitted to the Departmen of Environment.

THAT they are aware that a Community Liaison Committee will be appointed to handle the grievances,

THAT they are satisfied that proper procedures will be set up to deal with any potential damage claims.

IN WITNESS WHEREOF the parties hereto have hereunto executed the day and year first above mentioned.

SIGNED, SEALED AND DELIVERED
In the presence of:

Witness

Witness

Witness

Witness

Thomas Brogan & Sons Construction Company Limited

Per:

Resident

Resident

Resident

THIS AGREEMENT made this 30 th.day of November, A.D., 2004

BETWEEN:

THOMAS BROGAN & SONS CONSTRUCTION LIMITED LTD.

- and –

John Pitts PID 15679301

WHEREAS Thomas Brogan & Sons Construction Company Limited intends to surface mine coal the Point Aconi area;

AND WHEREAS the above-mentioned land owners wish to acknowledge that they have been ful informed by Thomas Brogan & Sons Construction Company Limited as to the full impact of the surface mine;

THIS AGREEMENT WITNESSETH that for and in consideration of the legal covenants contain herein, the landowners hereby acknowledge:

THAT they have had the opportunity to review draft mining proposal submitted to the Departmen of Environment.

THAT they are aware that a Community Liaison Committee will be appointed to handle the grievances,

THAT they are satisfied that proper procedures will be set up to deal with any potential damage claims.

IN WITNESS WHEREOF the parties hereto have hereunto executed the day and year first above mentioned.

SIGNED, SEALED AND DELIVERED
In the presence of:

Witness

Witness

Witness

Witness

Thomas Brogan & Sons Construction Company Limited

Per:

Resident

Resident

Resident

PID 15298284

WELL WATER AGREEMENT

THIS AGREEMENT made this 30 of NOV, A.D., 2004,

Between ***THOMAS BROGAN & SONS CONSTRUCTION COMPANY LIMITED*** and residents of Point Aconi area, in the Province Of Nova Scotia,

Whereas ***THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED*** intends to mine coal in the Point Aconi are and the below mentioned residents use a water well for domestic water.

AND WHEREAS ***THOMAS BROGAN & SONS CONSTRUCTION LIMITED*** would like to resolve all and any potential problems related to domestic water use that may be caused by mining activities.

This agreement witnesseth that for in consideration of the mutual covenants contained herein both parties agree as follows:

1. Should any resident suffer loss of water directly or indirectly related to surface coal mining by Thomas Brogan and Sons Construction Limited, the company agrees at its own option to install a new well or connect residents to existing water lines if available.
2. Any problems affecting local water shall be referred to the community liaison committee, who shall review material and hear oral or other evidence and after hearing such evidence shall decide the issue by vote of simple majority. Should the decision be unfavorable to Thomas brogan & sons construction company limited, the company at its own option, shall install a new well or connect residents to existing water lines unless the resident affected agree that the matter maybe resolved in a manner satisfactory to both parties.

Signed sealed and delivered

THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED

(Witness)

per

(Witness)

(RESIDENT)

JASON PATTENGALE.

WELL WATER AGREEMENT PID 15290292

THIS AGREEMENT made this 30 of Nov, A.D., 2004,

Between ***THOMAS BROGAN & SONS CONSTRUCTION COMPANY LIMITED*** and residents of Point Aconi area, in the Province Of Nova Scotia,

Whereas ***THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED*** intends to mine coal in the Point Aconi are and the below mentioned residents use a water well for domestic water.

AND WHEREAS ***THOMAS BROGAN & SONS CONSTRUCTION LIMITED*** would like to resolve all and any potential problems related to domestic water use that may be caused by mining activities.

This agreement witnesseth that for in consideration of the mutual covenants contained herein both parties agree as follows:

1. Should any resident suffer loss of water directly or indirectly related to surface coal mining by Thomas Brogan and Sons Construction Limited, the company agrees at its own option to install a new well or connect residents to existing water lines if available.
2. Any problems affecting local water shall be referred to the community liaison committee, who shall review material and hear oral or other evidence and after hearing such evidence shall decide the issue by vote of simple majority. Should the decision be unfavorable to Thomas brogan & sons construction company limited, the company at its own option, shall install a new well or connect residents to existing water lines unless the resident affected agree that the matter maybe resolved in a manner satisfactory to both parties.

Signed sealed and delivered

THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED

(Witness)

per

(Witness)

(RESIDENT)

WELL WATER AGREEMENT PID 15298292

THIS AGREEMENT made this 6 of Dec, A.D., 20___,

Between ***THOMAS BROGAN & SONS CONSTRUCTION COMPANY LIMITED*** and residents of Point Aconi area, in the Province Of Nova Scotia,

Whereas ***THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED*** intends to mine coal in the Point Aconi are and the below mentioned residents use a water well for domestic water.

AND WHEREAS ***THOMAS BROGAN & SONS CONSTRUCTION LIMITED*** would like to resolve all and any potential problems related to domestic water use that may be caused by mining activities.

This agreement witnesseth that for in consideration of the mutual covenants contained herein both parties agree as follows:

1. Should any resident suffer loss of water directly or indirectly related to surface coal mining by Thomas Brogan and Sons Construction Limited, the company agrees at its own option to install a new well or connect residents to existing water lines if available.
2. Any problems affecting local water shall be referred to the community liaison committee, who shall review material and hear oral or other evidence and after hearing such evidence shall decide the issue by vote of simple majority. Should the decision be unfavorable to Thomas brogan & sons construction company limited, the company at its own option, shall install a new well or connect residents to existing water lines unless the resident affected agree that the matter maybe resolved in a manner satisfactory to both parties.

Signed sealed and delivered

THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED

(Witness)

per

(Witness)

(RESIDENT)

WELL WATER AGREEMENT PID 15298219

THIS AGREEMENT made this 30 of NOV, A.D., 2004,

Between ***THOMAS BROGAN & SONS CONSTRUCTION COMPANY LIMITED*** and residents of Point Aconi area, in the Province Of Nova Scotia,

Whereas ***THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED*** intends to mine coal in the Point Aconi are and the below mentioned residents use a water well for domestic water.

AND WHEREAS ***THOMAS BROGAN & SONS CONSTRUCTION LIMITED*** would like to resolve all and any potential problems related to domestic water use that may be caused by mining activities.

This agreement witnesseth that for in consideration of the mutual covenants contained herein both parties agree as follows:

1. Should any resident suffer loss of water directly or indirectly related to surface coal mining by Thomas Brogan and Sons Construction Limited, the company agrees at its own option to install a new well or connect residents to existing water lines if available.
2. Any problems affecting local water shall be referred to the community liaison committee, who shall review material and hear oral or other evidence and after hearing such evidence shall decide the issue by vote of simple majority. Should the decision be unfavorable to Thomas brogan & sons construction company limited, the company at its own option, shall install a new well or connect residents to existing water lines unless the resident affected agree that the matter maybe resolved in a manner satisfactory to both parties.

Signed sealed and delivered

THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED

Richard Boyce
(Witness)

per Thomas Brogan

Joanie Lynn Beaton
(Witness)

Laura Beaton
(RESIDENT)

WELL WATER AGREEMENT PID 15298201

THIS AGREEMENT made this 30 of Nov, A.D., 2004,

Between ***THOMAS BROGAN & SONS CONSTRUCTION COMPANY LIMITED*** and residents of Point Aconi area, in the Province Of Nova Scotia,

Whereas ***THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED*** intends to mine coal in the Point Aconi are and the below mentioned residents use a water well for domestic water.

AND WHEREAS ***THOMAS BROGAN & SONS CONSTRUCTION LIMITED*** would like to resolve all and any potential problems related to domestic water use that may be caused by mining activities.

This agreement witnesseth that for in consideration of the mutual covenants contained herein both parties agree as follows:

1. Should any resident suffer loss of water directly or indirectly related to surface coal mining by Thomas Brogan and Sons Construction Limited, the company agrees at its own option to install a new well or connect residents to existing water lines if available.
2. Any problems affecting local water shall be referred to the community liaison committee, who shall review material and hear oral or other evidence and after hearing such evidence shall decide the issue by vote of simple majority. Should the decision be unfavorable to Thomas brogan & sons construction company limited, the company at its own option, shall install a new well or connect residents to existing water lines unless the resident affected agree that the matter maybe resolved in a manner satisfactory to both parties.

Signed sealed and delivered

(Witness)

(Witness)

THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED

per

Theresa MacLean
(RESIDENT)
THERESA MacLEAN

WELL WATER AGREEMENT PID 15679301

THIS AGREEMENT made this 30 of Nov, A.D., 2004,

Between ***THOMAS BROGAN & SONS CONSTRUCTION COMPANY LIMITED*** and residents of Point Aconi area, in the Province Of Nova Scotia,

Whereas ***THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED*** intends to mine coal in the Point Aconi are and the below mentioned residents use a water well for domestic water.

AND WHEREAS ***THOMAS BROGAN & SONS CONSTRUCTION LIMITED*** would like to resolve all and any potential problems related to domestic water use that may be caused by mining activities.

This agreement witnesseth that for in consideration of the mutual covenants contained herein both parties agree as follows:

1. Should any resident suffer loss of water directly or indirectly related to surface coal mining by Thomas Brogan and Sons Construction Limited, the company agrees at its own option to install a new well or connect residents to existing water lines if available.
2. Any problems affecting local water shall be referred to the community liaison committee, who shall review material and hear oral or other evidence and after hearing such evidence shall decide the issue by vote of simple majority. Should the decision be unfavorable to Thomas brogan & sons construction company limited, the company at its own option, shall install a new well or connect residents to existing water lines unless the resident affected agree that the matter maybe resolved in a manner satisfactory to both parties.

Signed sealed and delivered

Lois Tremblett
(Witness)

(Witness)

THOMAS BROGAN & SON'S CONSTRUCTION COMPANY LIMITED

per Thomas Brogan

(RESIDENT)

Appendix – 9

Occupational Health and Safety Policy
Occupational Health and Safety Program
Personal Protective Equipment Policy
Hazardous Materials Policy
Spill Contingency Plan
Wildlife Contingency Plan

T. BROGAN & SONS LTD.

OCCUPATIONAL HEALTH AND SAFETY POLICY

T. BROGAN & SONS LTD.

HAZARDOUS MATERIALS POLICY

T. BROGAN & SONS LTD.

Thomas Brogan & Sons Ltd. is a duly registered and incorporated Nova Scotia Company actively engaged in surface mining and reclamation work. The role of the company is to supply coal to the buyers effectively and efficiently in a manner that is both environmentally safe and to ensure the safety of its employees. Thomas Brogan & Sons Ltd. also deals with concerns of the local public as well as various Government divisions and works with them to develop and follow all regulations required.

T. BROGAN & SONS LTD.

General Responsibilities and Accountability

We accept the responsibility for providing the leadership of the safety program, for its effectiveness and improvements, and for providing the proper safeguards required to ensure safe conditions.

Foremen are responsible for developing the proper attitudes toward safety and health in them and to those they are directly responsible for.

Employees are responsible for their cooperation in all aspects of the health and safety program and for continually practicing safety while performing their duties.

Management Responsibilities

Management shall provide a statement of policy relating to the safety program. The statement provides a commitment and philosophy that sets all levels of expectations for safety performance throughout the company.

Maintain overall control and direction of the safety program.

Ensure all safety policies, safe work practices and procedures are followed by shop and field employees as described in the company safety policy.

Ensure all new hired employees are introduced to the safety rules and regulations prior to starting work.

Forman responsibilities

Foremen shall ensure that the pertinent safety policies and regulations are implemented on specific jobs within their jurisdiction.

Foreman shall ensure that the proper supervision, information, instruction, training and equipment are used as is necessary to ensure the health and safety of employees in their charge.

Reports of minor accidents are filed before the end of each shift.

Conduct accident/incident investigations in conjunction with the safety officer and the health and safety committee into serious accidents.

Forman shall in conjunction with the safety officer perform hazard assessments on projects that are not regularly performed in the workplace.

General Responsibilities and Accountability (Cont'd)

All employees must ensure that they are wearing their personal protective equipment and that they are provided with any additional personal protective equipment that the workplace may require.

Foreman Responsibilities

Any required work permits that are required, are obtained prior to starting the project and the work procedures on these permits are followed.

All necessary guards and protective equipment are available prior to start up.

Employees are only assigned jobs, which they are capable of doing.

Immediate steps are taken to correct any safety violation observed or reported to them. Employees violating the rules could be subject to disciplinary action.

The Occupational Health and Safety Act and The Company's Safety Policy are available to all employees.

Safety Officer's Responsibilities

The Safety Officer shall be responsible for developing, distributing and updating the Company's safety policy.

Ensure all new hired employees are put through the company's safety orientation program.

Ensure all safety rules, regulations and minutes of all safety meetings and toolbox meetings are posted.

Ensure all requirements of the current Occupational Health and Safety Act are complied with in the Company Safety Policy in addition to implementing any new developments in the field of health and safety that may benefit the employee or the company.

Develop quarterly audits on the company's loss control plan.

Act as resource person for shop and site supervisors.

Conduct all accident/incident investigations and prepare summary reports in conjunction with supervisors and health and safety committee.

General Responsibilities and Accountability (Cont'd)

Conduct regular inspections for unsafe work conditions and work practices, identify unsafe work practices, identify unsafe conditions and undertake the proper actions to ensure prompt corrective solutions to eliminate cause for accidents.

The Safety Officer shall ensure hazard assessments are conducted on a regular basis and before any major undertaking is commenced.

Hold safety meetings with safety committee members and to ensure toolbox meetings are conducted regularly.

Employees Responsibilities

All employees shall comply with the Occupational Health and Safety Act.

Make themselves aware of Company Policies, Rules and Regulations.

Be aware of all job hazards and to know how to recognize the hazards.

Carry out their work in a manner that will not create a hazard to their own safety and health or the safety and health of other employees.

Assist foremen in the reduction of controlling of accident producing conditions and sub-standard acts found in the workplace.

To ensure all personal report any accidents, near misses and/or other injuries to their foremen or safety officer.

Report any anticipated loss of work time to the foremen as soon as possible after being treated by a physician following injury.

Wear appropriate personal protective equipment.

All personal shall be familiar with the proper operation of the equipment they are using and be able to detect faults and unsafe conditions and ensure that defective equipment are taken out of service and reported to proper authority.

Most importantly, all employees shall exercise common sense and set good examples for their fellow employees.

T. BROGAN & SONS LTD.

Assignment of Responsibility and Accountability for Safety

Manager

1. Establish a safety policy
2. Provide a safe workplace
3. Maintain a safety program
4. Ensure proper training of workers
5. Ensure PPE are available
6. Ensure regular inspections are done
7. Correct unsafe conditions
8. Provide first aid
9. Investigate all accidents
10. Report injuries to W.C.B.
11. Ensure compliance
12. Set a good example

Supervisor/Foreman

1. Promote safety awareness
2. Establish safe work procedures
3. Instruct workers
4. Correct unsafe practices
5. Detect troubled employees
6. Correct unsafe conditions
7. Enforce safety rules
8. Inspect for hazards
9. Investigate all accidents
10. Ensure proper maintenance
11. Comply with regulations
12. Set a good example

Worker

1. Use safe work procedures
2. Report unsafe conditions
3. Correct unsafe conditions
4. Report unsafe acts
5. Report any injury
6. Comply with rules and regulations
7. Make safety suggestions
8. Set a good example

T. BROGAN & SONS LTD.

OCCUPATIONAL HEALTH AND SAFETY PROGRAM

T. BROGAN & SONS LTD. Safety Training Policy

Purpose

The purpose of this policy is to ensure that all employees receive adequate safety training.

Policy

The company will provide and ensure that all employees participate in the following safety training.

-Safety orientations for all new hires;
-Job specific training as required.

In addition, safety meeting involving all employees will be held on a regular basis.

Signed: _____ Date: 08-08-02

President

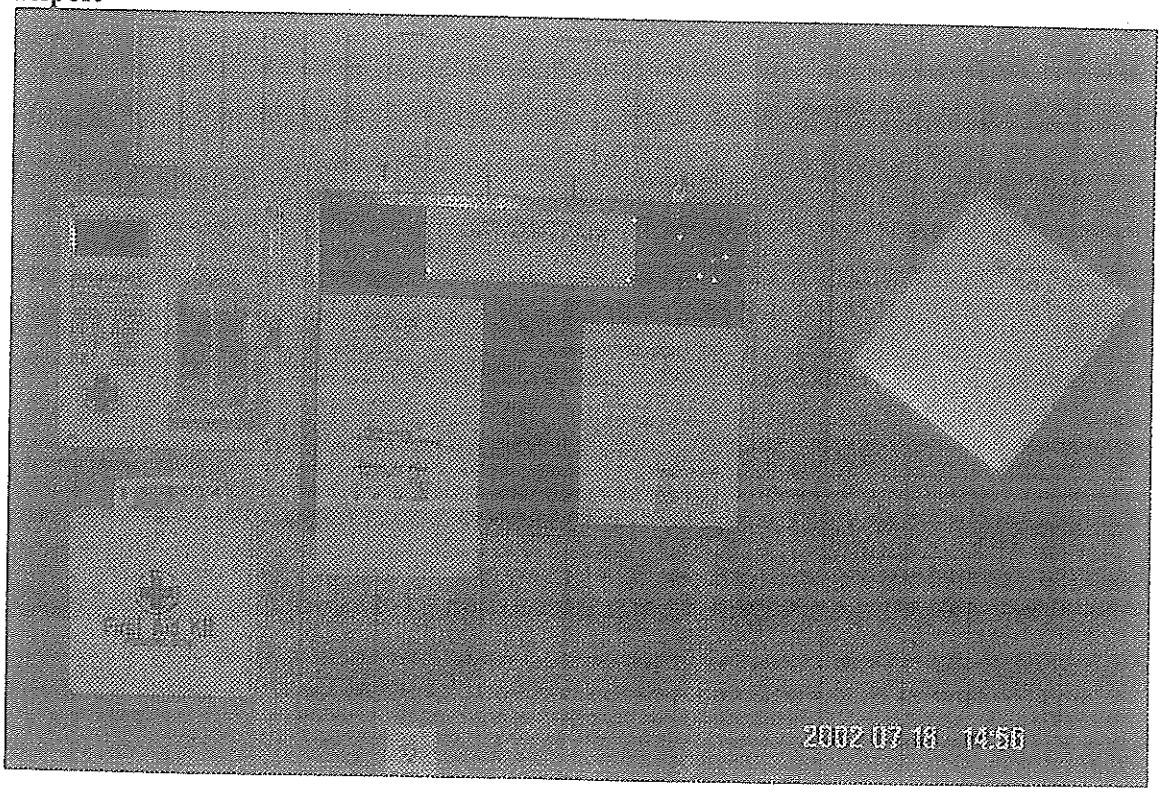
Signed: _____ Date: 08-08-02

Safety Officer

T. BROGAN & SONS LTD. Required Postings

The construction site will house a job trailer and in it in a designated area, the following will be posted and located.

1. First aid kit
2. Eye wash station
3. M.S.D.S.
4. Company Policy
5. Company Safety Policy
6. Minutes of Past Safety meetings
7. Remote Location Plan
8. Emergency Contacts
9. Policy for PPE
10. Work Site Safety Inspection Forms
11. Safety Committee/Tool Box Meeting Forms
12. Incident Investigation Report



T. BROGAN & SONS LTD.. Hazard Assessment

Introduction

The safety manual/program determines what hazards are present in the workplace. This is a critical step because the safety program deals primarily with controlling these hazards. It is through the control of hazards that the frequency and severity of accidents is reduced, resulting is a parallel reduction in human and financial costs.

Purpose

To establish the method to monitor, document and control the identification of hazards at the worksite or shop area.

Definitions

The following definitions are used in this manual:

Hazard: any circumstances or conditions, which pose the risk of an accident.

Incident: any unplanned and unwanted event which results in damage or injury, or which could have resulted in damage or injury.

Hazard Assessment: a thorough examination of an operation (jobsite, shop, etc.) for the purpose of identifying what actual and potential hazards exists. A hazard assessment is conducted with the direct involvement of the manager when starting a safety program. It should also be conducted when setting up on a new jobsite. In addition to new inspections, A formal assessment will be done periodically.

Audit: a comprehensive examination and evaluation of management's performance in establishing and maintaining a safety program. An audit is conducted periodically by a trained safety auditor either from within the organization or from outside.

Inspection: an observation tour of the workplace for the specific purpose of determining the levels of compliance with established safe work practices, procedures and safety rules. Inspections will be conducted on an ongoing basis to maintain the effectiveness of a safety program.

Procedure

The Safety Officer in conjunction with the supervisor, foreman and employees will conduct a thorough examination of an operation for the purpose of identifying what actual and potential hazards exist.

When a hazard has been identified, it shall be recorded on the Hazard Assessment Inspection form. In filling out the Hazard Assessment Inspection Report, the inspector shall pay careful attention to the priority of the hazard. The following contains four (4) priority ratings, which the inspector will use:

A. Probable	- Immediate action required
B. Reasonably Probable	- Likely to occur eventually
C. Remote	- Could occur at some point
D. Extremely Remote	- Unlikely to occur

Once the hazard has been identified and documented, a corrective action is then required to correct the problem. The Safety Officer is responsible for determining what kind of action is required. After the corrective action is determined it is the Safety Officer's responsibility to ensure this action is properly carried out. Once this is completed, only then can the supervisor or foreman and the Safety Officer sign off the Hazard Assessment Report.

T. BROGAN & SONS LTD. Hazard Assessment

Site Location _____
Date of Assessment _____
Assessment Team _____

	O-K	Action Required
Safety Program		
Company Safety Policy	____	____
Company Safety Manual	____	____
Safe Work Practices	____	____
Copies of OH & S Act And Regs. Available	____	____
Inspections	____	____
Investigations	____	____
Administration	____	____
Training		
Worker Training	____	____
Management Safety Training	____	____
Supervisory Safety Training	____	____
First Aid		
Facilities	____	____
Supplies	____	____
Personal	____	____
Records	____	____
Emergency Services Available	____	____
Fire Prevention		
Smoking/No Smoking Rules	____	____
Schedule Fire Inspections	____	____
Fire Extinguishers	____	____
Fire Alarm System	____	____
Fire Department Assistance	____	____
Personal Protective Equipment		
Potential Hazards	____	____
Specialized PPE Available	____	____
Equipment		
Mobile Equipment	____	____
Vehicles	____	____
Power Tools		

T. BROGAN & SONS LTD.

PERSONAL PROTECTIVE EQUIPMENT POLICY

T. BROGAN & SONS LTD.

PERSONAL PROTECTIVE EQUIPMENT

POLICY FOR PERSONAL PROTECTIVE EQUIPMENT

It is the policy of this company to have all workers use proper PPE when and where required.

All employees will wear hard hats, steel-toes boots, eye protection, reflective vest or equivalent, long pants, long sleeved shirts.

All other required PPE not mentioned above will be supplied by the company.

All PPE will be in good condition and maintained according to manufacturer's instructions.

No PPE will be tampered with or altered with in any way. PPE is designed for specific use and must be used to manufacturer's directions and specifications.

When required, the following PPE will be worn at all times by all personal who are involved in specialized work. This includes gloves, welder's goggles, face shields, special clothing, etc....

All company supplied PPE will confirm to O.H. & S. Regulations. All employees should be familiar with the O.H. & S. Act and Regulations.

Signed: _____ Date: 08-08-02
President

Signed: _____ Date: 08-08-02
Safety Officer

T. BROGAN & SONS LTD.

HAZARDOUS MATERIALS POLICY

Every worker and Forman has an Environmental responsibility role to play in handling and storing materials. All employees involved shall follow good housekeeping, proper lifting and loading practices. The following contains points, which shall be exercised by all employees who are involved in handling, storing and clean up of such materials.

It is company policy to have all workers use proper PPE when and where required when in contact with any hazardous material.

It is company policy to reduce as much on site hazardous materials as possible.

Any fuels and lubricants that are to be on site shall be stored in an approved container as well as enough spill kits and containers to contain such materials in case of a spill.

Where possible less harmful substances will be used when ever possible.

Always check the Material Safety Data Sheets before handling harmful substances.

All waste products should be removed from site as soon as possible and disposed of in the proper manner.

Signed: _____ Date: Oct 3, 2004
President

Signed: _____ Date: Oct 3rd 2004
Safety Officer

T. BROGAN & SONS LTD.

SPILL CONTINGENCY PLAN

T. BROGAN & SONS LTD.

SPILL CONTINGENCY PLAN

The best contingency plan is a plan that works but never has to be used unfortunately this is typically never the case. In this plan we the company have made a set of guidelines which when followed will allow for an effective and timely response should a spill be identified. Every worker and Forman has an Environmental responsibility role to play in handling and storing materials. All employees involved shall follow good housekeeping, proper lifting and loading practices. The following contains points, which shall be exercised by all employees who are involved in handling, storing and clean up of such materials.

It is company policy to have all workers use proper PPE when and where required when in contact with any hazardous material.

Steps to be taken once a spill is recognized:

1. Once a spill is recognized all machinery in the proximity of 100 meters is to halt production.
2. The site foreman or on site Environmental Technician is to be notified immediately by the operator of the spill.
3. The site foreman or technician will then take control of the situation at hand and access what measures to be taken; he will be classed as the controller from this point until remediation is complete.
4. At this point the controller will direct personal to the site trailer for, absorption packs, barrel over packs, shovels, PPE, etc.
5. Once the remediation is completed it is the sites Environmental Technicians duties to file a report and have it signed off to ensure that the remediation is done in a timely and environmentally safe manner.

Signed: _____ Date: Oct 3 2004
President

Signed: _____ Date: Oct 3rd 2004
Safety Officer

T. BROGAN & SONS LTD.

WILDLIFE CONTINGENCY PLAN

T. BROGAN & SONS LTD.

WILDLIFE POLICY PLAN

It is illegal to kill, take, or hunt any wildlife species at risk. It is Thomas Brogan & Sons policy to have all workers aware of the sensitivity of this and any other wildlife species at risk. Listed below are definitions and steps to help encourage a goal of zero mortality to all wildlife species at risk.

Definition:

Hunt "means chase, pursue, worry, follow after or on the trail of, lie in wait for, or attempt in any manner to capture, kill, injure or harass, whether or not the wildlife species at risk is captured, killed or injured".

Steps to be taken when a "Species at Risk" is located

1. At no time shall any employee attempt to go near a wildlife species at risk.
2. Stop any progress of construction.
3. Notify Persons in charge immediately.
4. Person in charge is to notify Nova Scotia Department of Natural Resources
5. Appropriate action to be taken will be based on Nova Scotia Department of Natural Resources response.

Signed: _____ Date: Dec 1 2004
President

Signed: _____ Date: Dec 1 2004
Environmental Technician

Appendix – 10 Rock Sample Analysis

Maxxam Analytics Inc & PSC ANALYTICAL SERVICES Inc.

Creating a New Kind of Company...

T. Brogan & Sons
792 Main St.
Sydney Mines, NS B1V 2L6
Ph:578-0633/736-6663Fax:736-3594

Sample Number:	9966838-01
Date Received:	11/17/04 16:32
Date Reported:	11/29/2004
Date Sampled:	11/17/2004
Matrix:	Rocks

Project Number:

Requested Analysis

Analysis	Method	Results	Units	Date
Pt Aconi				
Sulfate Sulfur	Acid Rock Drainage	0.019	% (w)	11/29/2004
Sulfide Sulfur	Acid Rock Drainage	0.11	% (w)	11/29/2004
Max. Potential Acidity	Acid Rock Drainage	3.5	ppt	11/29/2004
Neutral. Potential	Acid Rock Drainage	2	ppt	11/29/2004
Net Neutral. Potential	Acid Rock Drainage	-1	ppt	11/29/2004
Fizz Rating	Acid Rock Drainage	none	-	11/29/2004
Leach. Aqueous Prep	Acid Rock Drainage	5:1	-	11/29/2004
pH paste	Acid Rock Drainage	6.2	-	11/29/2004
Sulfur	Acid Rock Drainage	0.13	% (w)	11/29/2004
Iron - Soil	AOAC 990.08/EPA 6020	16000	mg/kg	11/29/2004
pH - soil/sed	slurry/meter	6.3	pH Units	11/29/2004

Analysis was subcontracted to PSC-Bedford.

Approved By:

Michelle Mombourquette
Lab Manager