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## **REPORT ON**

# **2006 EXPLORATION WORK**

# RAVEN PROJECT (TSABLE RIVER COALFIELD)

# COVERING COAL EXPLORATION LICENCE TENURE NO. 392561 and FEE SIMPLE COAL RIGHTS HOLDINGS (southern Comox Coal Basin)

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Section 6, Figures 22 & 23, and Appendix C contain coal quality data and remain confidential under the terms of the *Coal Act Regulation*, Section 2(1). They have been removed from the public version.

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## TABLE OF CONTENTS

#### Page No.

1.0	LOCATION1
2.0	LEASE INFORMATION
3.0	Table 1 - Raven Project Area – Crown Coal Licence1Table 2 - Raven Project Area - Fee Simple Coal Rights Holdings2HISTORY OF EXPLORATION3
4.0	Table 3 - History of Exploration and Development – Raven Project (Tsable River Coalfield). 5EXPLORATION BY COMPLIANCE ENERGY CORPORATION – 20066
4 4 4 4	.1       Drilling
5.0	GEOLOGY
6.0	Table 6 - Lithostratigraphy of Late Cretaceous Rocks with Within the Comox Basin
-	1       Raw Coal Quality       13         Table 7 - Seam Parameters of Seams 1 and 3 Upper at Raven Project area       13         Table 8 - Raw Coal Quality of Raven Project Area       14         2       Clean Coal Quality       15         Table 9 - Raven Bulk Sample Clean Analysis @1.45 S.G.       15         Table 10 - Petrographic Analysis on Raven Bulk Sample on product coal @ 1.45 s.g.       16         Table 11 - Raven Core Samples Average Clean Coal Analysis.       17         Table 12 - Potential Clean Coal Product Specs – Raven Project.       17         Table 13 - Average of Sulphur Forms on Core Composite Samples.       18         Table 15 - Audibert-Arnu Dilatometer Test on Core Composite Samples - Clean Coal at 9.5% Ash       18         Table 16 - Gieseler Plasticity on Core Composite Samples - Clean Coal at 9.5% Ash       18         Table 17 - Ash Fusion on Core Composite Samples - Clean Coal at 9.5% Ash       18         Table 18 - Ash Element Analysis on Core Composite Samples - Clean Coal at 9.5% Ash       18         Table 18 - Ash Element Analysis on Core Composite Samples - Clean Coal at 9.5% Ash       18         Table 18 - Ash Element Analysis on Core Composite Samples - Clean Coal at 9.5% Ash       18         Table 19 - Petrographics on Core Composite Samples - Clean Coal at 9.5% Ash       18         Table 19 - Petrographics on Core Composite Samples - Clean Coal at 9.5% Ash       18
7.0	COAL RESOURCES
	Table 20 - Criteria for Determining Resources for Potential Underground Mining

22

#### **APPENDICES**

- Appendix A Drillers and Geological Descriptive Logs, Cuttings and Core
- Appendix B Geophysical Logs of Drillholes
- Appendix C Coal Quality Keyed to Drillholes

## **FIGURES**

- Figure 1 Location Map Vancouver Island
- Figure 2 Location Map Comox Basin
- Figure 3 Location Map General Infrastructure and Site Layout
- Figure 4 Location Map Coal Licenses and Fee Simple Lease blocks
- Figure 5 Location of Baynes Sound Mine (Raven Project Area)
- Figure 6 Drillhole and Seismic Line Location Plan
- Figure 7 Raven Adit Location Plan
- Figure 8 Raven Adit Stratigraphic Sections
- Figure 9 Line of Section 1-1'
- Figure 10 Line of Section 2-2'
- Figure 11 Line of Section 3-3'
- Figure 12 Line of Section 4-4'
- Figure 13 Line of Section 5-5'
- Figure 14 Line of Section 6-6'
- Figure 15 Line of Section 7-7'
- Figure 16 Raven Project Location of Section Lines
- Figure 17 Generalized Stratigraphy of Raven Project Area Tsable Coal Field
- Figure 18 North South Correlation Section
- Figure 19 Location Map of North-South Correlation Section
- Figure 20 Profile of Seam 1, Raven Project
- Figure 21 Seam 1 Isopach, Raven Project

- Figure 22 Seam 1 Iso-Ash Plot, Raven Project
- Figure 23 Seam 1 Iso-Sulphur Plot, Raven Project Area
- Figure 24 Profile of Seam 3, Raven Project
- Figure 25 Seam 3 Upper Isopach, Raven Project
- Figure 26 Measured and Indicated Resource Area

## Exploration and Geology of The Raven Project

#### 1.0 Location

The Raven Project occurs in the Tsable Coalfield at the southern end of the Comox Coal Basin which lies parallel to and along the east coast of Vancouver Island. The property is directly west of Baynes Sound separating Denman Island from Vancouver Island and extends from Union Bay in the north to Fanny Bay in the south – Figures 1 and 2.

The area is located on NTS map sheets (1:50,000) 92F10W and 92F7W or within BCGS (1:20,000) map sheets 092F056 (north) and 092F046 (south). The area lies within the Nanaimo Mining Division and the Nanaimo; Nelson & Newcastle Land Districts.

The closest community is the city of Courtenay approximately 20 km to the north on the east coast of Vancouver Island. Access to the area is via the Inland Highway which runs parallel to and in part crosses the eastern limits of the area. Local access to all parts of the property is provided by forestry roads and private logging and resource roads. Figure 3 is a general infrastructure and site layout map.

#### 2.0 Lease Information

The Raven project area is at the southern end of the West Fraser (previously Weldwood) fee simple coal rights area under option to Compliance Energy Corporation and is part of the Tsable River coal field at the southern end of the Comox Basin (Figure 2). The present area of interest comprises about 3,100 ha (9 km by 3½ km) all of which is part of the West Fraser option except a small fraction (approximately 142 ha) held directly by Compliance Coal Corporation through crown coal licence tenure # 392561 (Figure 4). Information on the licence and fee simple coal rights are tabulated below:

#### Table 1 - Raven Project Area – Crown Coal Licence

Tenure #	Coal Licence/Application	Registered Owner	Area (ha)	Anniversary Date
392561	C.L.	Compliance Coal Corporation	142	April 8

Registration #	Reservation or Charge #	Block or Lot # (s)	Area (ha)
	325217-G		
	325218-G		
	325219-G		
	325220-G		
	325221-G		
	38-35-22501-F		
	38-35-22502-F		
	37-38-22505-F		
ED112818		L 88	1227
R46801 – R46818		BK 263E, BK 234E, BK 1362E, L 105, L 106, L 48E, BK198E, BK 267E, BK 256E, BK 223E, BK 799E, BK 385E	
R46801 – R46818		Parts of BK 33, BK 34, BK 324E, BK 296E, BK 299E,	
48649N		Part of Bk 527	

#### Table 2 - Raven Project Area - Fee Simple Coal Rights Holdings

The property boundaries have been obtained from government sources and compiled for West Fraser by McElhanney Associates (professional land surveyors) and others. The author of this report has accepted the outlines as presented.

The fee simple lands held at the Raven Project carry the right to explore for, develop, mine and win coal and fireclay but they do not convey the surface title. However, the surface rights owner is obliged to allow the undersurface fee simple owner unfettered access to the surface for purposes of exploring for, developing, mining and winning the coal resource.

Surface Rights over the property reside with timber companies with the exception of Lot 88 which resides with the Crown. Agreements were obtained with the timber companies for access and use of logging roads and permission to carry out exploration.

#### 3.0 History of Exploration

The Raven project area (Tsable River Coalfield) has a long history of exploration and development for coal mining dating back to the late 1800.s. Table 3 presents a summary of historical and present exploration and development activities.

The Comox Basin area has a history of coal mining centred around Cumberland some 20 km to the north of the Raven property. The only mine in the actual project area was the Baynes Sound Mine which was operated from 1875 – 1877 the location of which was only alluded to but not found on any maps. During field mapping and prospecting by Compliance in 2006 what is believed to be the Baynes Mine was located on the north bank of the Tsable River (Figure 5) by Berkshire Geological Services. There were two adits and considerable tonnes of coal and coal refuse in piles nearby. The area has been logged over at least twice and is still very overgrown. The author is unaware of actual coal tonnage mined and removed from the site – however, the mine operated for only a short time before economic conditions forced the closing and dismantling of the mine and support facilities.

The only other mine in the vicinity is the abandoned underground Tsable River Mine to the west of the project area on the north bank of the Tsable River (Figure 3). The Tsable River Mine was operated from 1949 – 1966 from which approximately 2.0 mt of coal were extracted.

Extensive drilling was done in the area by Canadian Collieries during the period 1905 to 1957 which outlined a potential resource base south of the Tsable River and guided the more recent exploration commencing in 1975. The pre-1975 drilling was done using both rotary and coring methods, however, only drillers' logs and/or summary geological descriptive logs are available for this drilling. Test aditing was done along the banks of the Tsable River and Cowie Creek during this phase. Due to the downturn in coal demand following the worldwide switch to petroleum and petroleum derivatives no further work was done until 1975.

In 1973 the B.C. government implemented a resource land tax which precipitated Weldwood engaging Michele Curcio to embark on a coal resource evaluation study to determine what fee simple lands they could relinquish to the crown in order to reduce the liability due to the new resource land tax. A regional drilling program was carried out including several drillholes in the current project area. The Tsable River project south of the river was again earmarked as a significant coal deposit. Results of Curcio's exploration is contained in a few reports 'Coal Resource Study of Comox-Nanaimo Series, Vancouver Island - British Columbia' and 'Summary Reports on Weldwood Coal Properties and on Topics Pertinent to Coal Development' and 'Preliminary Evaluation of Coal Reserves for Campbell River Area, Cumberland Area and Tsable River-Cowie Creek Area, Within the Comox Basin, Vancouver Island, British Columbia'. The author had access to these reports, however, some of the appendicies, maps and figures were not found.

No further exploratory work was done until 1990 when Consolidated Brinco acquired an option from Weldwood to explore for coal in the southern Comox Basin and specifically in the Tsable River coal field. Brinco carried out drilling, refractive seismic, VLF-EM and mapping in the area south of the Tsable River and outlined what they considered a mineable resource. Results of this work were documented in two reports '*Tsable River Project Report – 1991*' and '*Tsable River Property Conceptual Mining Plan*'. Both reports have been reviewed in detail by the author of this report.

In 1991 Consolidated Brinco merged with Hillsborough and in 1996/97 Hillsborough carried out further investigative drilling and reflective seismic over the Tsable River project extending the area of resources east and north including north across to the north side of the Tsable River. Results of this work are documented in a report *'Report on 1996 Exploration Work, Tsable River Coal* 

*Project*'. This report has been reviewed by the author, however, some of the appendicies and attachments most notably geophysical logs of the drilling were not available. In 1998 Hillsborough made plans to go underground with a test mine near Cowie Creek and obtained a mine permit in 1998. Due to a downturn in coal marketing opportunities nothing further was done until 2001 when Hillsborough re-activated their mine permit, did some additional drilling for ground water monitoring in the test mine area and completed a NI 43-101 compliant resource report *'Technical Report on the Tsable River Coal Property, Central Vancouver Island, British Columbia*'. The author has reviewed this report. No further work was done and Hillsborough relinquished their option with Weldwood in 2002.

Data collected since 1975 generally comprises drillers' logs, core descriptions over cored intervals, and downhole geophysical logs. Geophysical logs have been found for drilling carried out in 1975 and 1990/91. Some of the logs for drillholes drilled in 1996 have not yet been located; however, copies of sections of geophysical logs through the coal seams of economic significance are available for all of the 1996 drill holes which intersected significant coal seams. Only summary coal intercepts have been located on the ground – all appear to have been drilled for ground water studies and have piezometers installed, however, records as to depth and lithology encountered have not been found.

Surface mapping has been done variously over the history of the area, however, current mapping has been derived from mapping done by Michele Curcio circa 1975 and by Steve Gardner and Gwyneth Cathyl-Bickford in the 1990's. The Gardner and Cathyl-Bickford maps were obtained from the B.C. Ministry of Mines and Petroleum Resources (BCMEMPR) (OF 1999-8 and OF 1998-7 respectively).

	HISTORY OF EX	pioration and Development – Ra	ven Project				
					illing		rilling
				Rotary			Rotary Core
Company / Entity	Date	Work Done	Surface	# Holes	Total metres	# Holes	Total metres
Baynes Sound Coal Co.	1875 - 1877						
	1075 - 1077	Mapping, Drifting and Adit Mining					
Canadian Collieries (Dunsmuir) Ltd.	1900 - 1966	Mapping, Dritting and Adit Minning					
[Wellington Collieries Ltd.] & [Comox							
Mining Co.]	1905 - 1910	Mapping & drilling		4	921		
	1920's to '40's	Drilling - north of Tsable R.		41	5900		
	1947	Drifting & Portal Construction - Tsable River			0000		
	1948	Drifting & Portal Construction - Cowie Creek					
	1949 -1966	Mining - Tsable River Mine (north) (approx. 2.0r	n st mined)				
	1950 - 1957	Drilling - north of Tsable R		9	2200		
	1950 - 1957	Drilling - south of Tsable R. to Cowie Crk		25	3637		
	1956	Adits put in by US Steel		25	3031		
Weldwood [now West Fraser]	1965 - present						
	1974	Dolmage Campbell Rpt					
	1974	Regional Mapping					
	1975	Drilling - nrth of Tsable R		6	750		
	1975	Drilling - sth of Tsable R		10	1000		
	1975	Adit on Cowie Creek		10	1000		
	1988	Smokey River Coal study					
Consolidated Brinco / Western	Optioned 1989-	Sinokey Niver Coal study					
Canadian Mining	2002						
Canadian Mining	1990 - 1991	Diamond Drilling				20	3614
	1991	Seismic (refractive)	1.5 km lines			20	3014
	1991	VLM-EM	41 km lines				
	1991	Conceptual Mining Plan	41 KIII IIIIES				
Hillsborough / Tsable River Coal	Brinco merged with						
Corp.	Hillsborough 1991						
00ip.	1996	Drilling				27	6543
	1996	Seismic (reflectance)	13.6 km lines			21	0040
	1990	Drilling	15.0 KITI III IES			5	770
	1997	Planned Drilling and Bulk Sampling / permitting	Tost Mino			5	110
	2001	Drilling / re-permitting Test Mine				5	880
	2001	Hillsborough relinquished Tsable River property	/ontion			5	800
Compliance Energy Corp	Option Agreement 2005 - Present	Data Raview, Assessment					
Compliance Energy Corp.	2005 - Present 2006	Data Review, Assessment	21 km lines				
	2006	Seismic Drilling	21 km lines			12	2950
	2006	Bulk sampling	12 toppo ocma			12	2850
l	2000	Duix sampling	13 tonne samp	e			

## Table 3 - History of Exploration and Development – Raven Project (Tsable River Coalfield)

#### 4.0 Exploration by Compliance Energy Corporation – 2006

Exploration over the Raven Project was carried out by Compliance Energy Corporation from May through October, 2006. The exploration consisted of drilling, seismic and bulk sampling.

#### 4.1 Drilling

Drilling commenced June 6, 2006 and was terminated October 27, 2006, after drilling 12 holes for a total of 2,850 metres. The drilling was done by Drillwell Enterprises Limited out of Duncan, Vancouver Island, using a rotary core truck-mounted drill. The holes initially were rotary hammered to core point using air and then switching to coring also using air. Poor core recovery and drilling difficulties plagued the first five holes and a decision was made to bring in mud tanks and equipment to enable coring with mud. Drillhole stability and core recovery improved significantly with the introduction of drilling mud. Starting with hole RAV-06-06 a dual rotary drill equipped with a drill-thru downhole air hammer was used to case holes through the overburden and to drill ahead to core point. The dual rotary rig was brought in primarily to set casing through thick deposits of glacial drift and alluvial sands and gravel and was extremely successful. Once core point had been reached the truck-mounted drill equipped to core was moved onto the drillhole to complete the drilling. The following table is a summary of drilling results; drillholes are located by Figure 6:

												Volcanic
	Total Depth	Overburden	Se	eam 3 Uppe	er	S	eam 3 Lowe	er		Seam 1		Basement
DRILLHOLE	depth (m)	Depth (m)	from (m)	to (m)	thick (m)	from (m)	to (m)	thick (m)	from (m)	to (m)	thick (m)	depth (m)
RAV-06-001	194.00	20.80	143.20	143.60	0.40	144.10	145.50	1.40	170.00	173.00	3.00	180.98
RAV-06-002	204.00	2.13				134.20	135.60	1.40	173.00	177.00	4.00	188.50
RAV-06-003	161.70	30.50					Aban	doned				
RAV-06-004	389.20	10.40	297.61	298.00	0.39	298.17	298.79	0.62	357.81	361.97	4.16	
RAV-06-005	320.20	6.10	317.32	320.20	2.88				Abandoned			
RAV-06-006	421.50	95.10				357.10	359.40	2.30	403.20	406.00	2.80	
RAV-06-007	127.50	55.17							83.00	86.25	3.25	117.39
RAV-06-008	287.00	61.60	224.10	225.25	1.15	225.55	227.00	1.45	251.35	254.15	2.80	284.50
RAV-06-009	168.60	89.60		Casing set and drilled to core point								
RAV-06-010	97.50	54.30		Casing set and drilled to core point								
RAV-06-011	115.80	103.60		Casing set								
RAV-06-012	361.00	16.76	286.50		-286.50		288.35	288.35	314.15	317.45	3.30	358.52

Table 4 -	Drillhole Summary Table
RAVEN PRO	JECT - Summary of 2006 Drilling

Drillholes were geophysically logged with gamma, neutron, resistivity, density, caliper and sonic tools. Also deviation surveys were run in all holes and dip meter was run in two holes only as a check on measured core dips. It should be noted that due to hole stability problems, drillhole RAV-06-04 was only partially logged and RAV-06-05 was not logged at all.

Drillholes RAV-06-09, 10 and 11 were drilled and casing set however were not completed. Sites 2, 4, 6, 7, 8, 9, 11 and 13 were prepared but not drilled. Drillsites were not reclaimed; the exploration work was curtailed before the program was complete and it is planned to resume drilling and complete the required drillhole reclamation in 2007.

Drillhole descriptive logs are attached as Appendix A and geophysical logs for the drillholes are included as Appendix B.

Drilling supervision and geological logging was done using the services of Mr. Ernest Popyk of ResourceEye Services Inc.

#### 4.2 Seismic

A high resolution seismic reflection investigation of the Raven Property was conducted over approximately 21 line kilometers in a series of seven (7) parallel lines by Emerald Exploration Consultants (Emex). The seismic lines run over the prospect area are shown by Figure 6. The objective was to help interpret and map geological structure such as folds and faults and the continuity, depth and thickness of coal seams. Interpretation of the seismic reflections was accomplished through correlation to drillholes by comparing reflection characteristics against synthetic seismograms developed from sonic and density logs run in approximately 50 drillholes (90/91, 96/97 and 06 drilling programs) and actual check shots run in 3 drillholes RAV-06-01, RAV-06-02 and RAV-06-09. The data shows that the various coal seams produce strong reflections; weak reflections exist in the seismic data related to rock/rock interfaces where the coal is deep enough to see a moderate thickness of sedimentary strata. The resultant reflectance characteristics were then used to correlate coal seams between drill holes and extrapolate beyond drillholes. The seismic thus demonstrated the continuity of the coal seams over most of the current project area and showed the potential for the property to be open to the north and south. Conclusions drawn by Dr. Ernest Berkman of Emex are reproduced below:

The reflectors are interpreted to be caused by coal/rock interfaces with reflections from rock/rock interfaces being infrequent. The data indicates the presence of thick seam 3 and seam 1 coal, their depth, configuration, and faulting with beds dipping regionally to the northeast. Erosional surfaces and lithologic changes related to thickening, thinning, and variations in the coal zone are present. The presence of several sonic logs makes correlation of the seismic reflectors to specific coal seams clear cut in those area and more conjectural in others. Based upon all the available seismic data in the Raven Property there is evidence for complex thrust faults in the coal zone in some areas while other areas are virtually free of faulting, as shown in the interpretation of the various seismic lines.

We have met the goal of this program by characterizing the subsurface features such as faults and/or changes that might be present and might affect future surface and/or underground mining in the area. The presence of shallow coal amenable to strip mining is noted. The seismic data is clear cut and easily interpretable. It is felt that mining should be initiated. The seismic data shows thick coal seams, their depth, configuration, and thickness variations, faults where present, and stratigraphic features. It should be used to guide the coal mining in these areas.

Horizon interpretation was based on recognizable reflection character and continuity on an individual line basis. The lateral extent of the seams 1 and 3 was clearly evident on each line and the correlation from line to line was almost without doubt. The interpretation of the seismic along the lines in conjunction with drilling results has been used to infer the continuity of coal resources throughout the property area.

Seismic lines have been reclaimed.

## 4.2 Bulk Sampling

An adit site for bulk sampling was selected based on knowledge of Seam 1 subcrop from drillhole information and the existence of an adit previously excavated prior to Curcio's work in 1975. The actual site was located by Berkshire Geological Services while prospecting for Compliance in April, 2006.

The bulk sample at the Raven Adit site (Figure 7) commenced Sunday May 21 with mobilization to the site and portal construction. Adit construction and excavation was carried out by Devrial Resources Inc., of Grande Cache, Alberta.

The adit was advanced 6.5 m until it was ascertained to be free from oxidation. Sodium hydroxide and coke button field tests were done to monitor when the adit had advanced through the oxidised zone into hard non-oxidized coal. A 13 tonne bulk sample was extracted from a crosscut in the adit and the whole job was completed by May 30. Sixteen - 1metre bulk bags were filled with coal extracted from what was believed to be a representative mineable section including out of seam dilution. The mineable section has a stratigraphic thickness of 2.0m at the sample point (Figure 8).

The sample was shipped to Hazen Research in Golden, Colorado for washability analysis and bulk washing at their pilot plant. Initial washability and head raw analyses were received from Hazen/SGS on July 25. Results of the washability and testing are presented in Section 6.

The adit site has been secured but not reclaimed at this time.

#### 4.3 Site Supervision and Logistical Support

Dan Berkshire of Berkshire Geological Services supervised drillhole site preparation and access; seismic line layout, construction and reclamation; and, adit site location, site preparation and access. All access roads were constructed with little disturbance and followed old roads wherever possible and generally avoided cutting or destroying any trees. All drillholes were located along pre-existing roads except for RAV-06-07 which required 350 metres of new road.

Seismic lines were constructed using a policy of "avoidance" – meaning, obstacles and trees were left inplace as much as possible and the seismic line "jogged" around the obstacles. Seismic lines were cleared only enough to allow ATV access and all seismic activity was conducted using ATV's for transport. Where terrain was encountered which proved to difficult to use ATV's, hand held augers were used and the lines were run from walkable trails only.

Dan also looked after safety and security and provided logistical support for the duration of the exploration. Berkshire Geological was also the main liaison support with the timber companies active in the area and who also control the surface rights and local access rights.

Berkshire also provided a prospecting service and was instrumental in locating old adit workings, old drill site locations and coal outcrops. Dan Berkshire was instrumental in locating the Raven adit site and also what is believed to be the Baynes Mine.

Berkshire Geological also provided mapping and GIS support for the project.

## 4.4 Survey Control

Surveying for seismic control, locating drilloles and locating the bulk sample point was done by Pacific Land Surveying Ltd., of Nanaimo, Vancouver Island. Surveying was done to conform to the NAD 83 survey base system. Mapping of access roads, seismic lines and prospecting control was accomplished using state of the art hand held GPS units (Garmin 60 csx) and tied to survey control points established by Pacific Land Surveying Ltd. Control along the seismic lines was achieved using a Garmin GPS 76 System with a high gain external GPS antenna.

#### 4.5 Statement of Expenditures

Table 6 summarizes exploration expenditures at the Raven Project during 2006.

Geological Consulting	<sup>1</sup> 743,082			
Seismic	422,881			
Drilling	<sup>2</sup> 864,069			
Sampling & Testing	3 127,099			
Total Costs	\$ 2,157,131			
Notes: <sup>1</sup> includes geological and engineering planning, supervision and assessment (including travel, vehicle rentals and room and board); casual labour; access road and drillsite preparation; seismic line construction; reclamation; safety and security and miscellaneous.				
<sup>2</sup> includes geophysical logging <sup>3</sup> includes adit construction, coal sampling, coal transportation, coal processing and analysis (bulk sample and core).				

Table 5 -	Raven Project -	<ul> <li>Statement of Ex</li> </ul>	penditures for 2006 E	xploration
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#### 5.0 Geology

Coal is present in the Upper Cretaceous Nanaimo Group which outcrops extensively on the eastern side of Vancouver Island. The Comox coalfield comprises the lower most Comox Formation, which dips north-east with the regional dip complicated by broad folds, thrusts and normal faults. The regional dip is 10 to 15 degrees northeast with dips locally steepening to 25 – 30 degrees especially in the west adjacent to the erosional edge. Generally deformation is more intense along the western margin of the basin where the erosional edge of the basin abuts the underlying uplifted volcanics forming the Beaufort mountains.

Cathyl-Bickford<sup>1</sup> has identified 3 sets of faults as characterizing the structure in the Tsable River area: (i) sub-parallel, northwest striking faults with "various combinations of extensional and dextral strike slip displacement"; (ii) easterly to northeasterly striking cross faults; and (iii)bedding-plane shear zones. The coalfield structure as depicted by Cathyl-Bikford is portrayed on 1:20,000 scale maps <sup>2</sup> as part of the BCMMPR Open File Report 1998-7. Some of the faults have been recognized on the property and others are inferred from drilling and areal photography.

VLF-EM run in 1991 and high resolution reflective seismic run in 1996 and 2006 has assisted in interpreting the fault structures over the property and has helped define the property structure. The general deposit geology is depicted by a series of cross sections drawn at 1200 m intervals and coinciding with seismic lines run in 2006. The sections are attached as Figures 9 through 15. Locations of the sections are shown on Figure 16.

Depositional sequences are well covered in the literature and the author has relied extensively on the work done by Cathyl-Bickford et al<sup>3</sup> to define the stratigraphy and structural setting of the Comox coal basin. Table 5 following shows the typical lithologic assemblages and suggested Formation names to be applied to the basin.

<sup>&</sup>lt;sup>1</sup> Bickford, C.G.C., 1992

<sup>&</sup>lt;sup>2</sup> Bickford, C.G.C., Hoffman, G., 1998

<sup>&</sup>lt;sup>3</sup> Bickford, C.G.C., 1992

<sup>•</sup> Page 10

Formation:	Member:	Description Unit:
Lambert	M	udstone and siltstone, minor sandstone and argillaceous limestone. > 115 m
		Abrupt contact
Denman	Norman Point	Sandstone; minor sandstone and siltstone. 25 to 40 m
		Intertonguing Contact
	Graham	Conglomerate; minor sandstone and siltstone. 65 to 80 m
		Erosional contact
	Madigan	Sandstone; minor conglomerate and siltstone. 55 to 75m
		Intertonguing contact
Trent River	Willow Point	Mudstone and siltstone; minor sandstone. 120 to 150 m
		Abrupt contact
	BaynesSound	Sandstone and siltsone; minor conglomerate 10 to 60 m
		Abrupt contact
	Royston	Mudstone and siltstone; minor sandstone. 150 to 220m
	-	Intertonguing contact
	Tsable	Mud-matrix conglomerate and pebbly siltstone. 5 to 140m.
		Erosional contact
	Browns	Sandstone. 10 to 45 m
	<b>B</b> (1)	Intertonguing contact
	Puntledge	Mudstone and siltstone; minor sandstone. 100 to 130 m
	Cowie	Abrupt contact Sandstone. 12 to 15 m
	••••••	Abrupt contact
	Cougarsmith	Mudstone and siltstone; minor sandstone. 18 to 22m.
		Intertonguing contact
Comox	Dunsmuir	Sandstone; minor siltstone and coal. 120 to 190 m
	Cumberland	<i>Erosional contact</i> Siltstone, shale and coal; minor sandstone and gritstone. 30 to 90 m.
	_	Intertonguing contact
	Benson	Conglomerate; minor red shale and siltstone. 0 to 220m Erosional contact
Pre-Cretaceou	s Basement Complex	
Karmutsen	·	Basalt, basaltic breccias and tuff

#### Table 6 - Lithostratigraphy of Late Cretaceous Rocks with Within the Comox Basin<sup>4</sup>

The significant assemblage over the Raven Project is the Comox Formation. The Trent River Formation occurs over the eastern area of the property.

The Comox Formation is deposited unconformably on basalts, gabbros and volcanic breccias of the Triassic Karmutsen Formation. The Triassic volcanics form an irregular basement topography which strongly influenced the deposition of the coal bearing sediments causing relatively rapid lateral and vertical facies changes and variable coal thicknesses.

• Page 11

O.R.Cullingham Resource Consultant Ltd.

<sup>&</sup>lt;sup>4</sup> After Bickford, C.G.C., 1992

The Comox Formation is subdivided into three Members from oldest to youngest:

- o Benson Member
- Cumberland Member
- Dunsmuir Member

The Benson Member is comprised of coarse sediments siltstones to conglomerates and occur over a relatively restricted areal extent. Thickness of this member is reported as varying up to 200m.

The Cumberland Member is the main coal bearing member and is comprised of siltstone, shale, and coal and contains the only economically significant coal on the Raven property.

The Dunsmuir Member consists of sandstone, conglomerates, with minor shales and thin coals.

The Comox Formation is locally intruded with sills and dikes although none are reported for the immediate area nor have any been observed.

Up to 10 coal seams have been variously described in the Comox basin, although, most literature refer to four seams or seam zones. The thickest coal and most persistent occurs in the Cumberland Member and usually occur as two seam zones. Coals are generally thin to medium thickness and individually coal seam zones rarely exceed 3.0 m; aggregate seam thickness varies from 2.0 to 8.0m with occasional isolated data points showing greater than 8.0m.

There are five coal seams – coal zones - identified as occurring in the prospect area; two coal seams are considered to be of economic interest. Both are contained in the Cumberland Member of the Comox Formation (Figure 17). Continuity of the Comox Formation and included coal zones are established from drilling and seismic and despite inter and intra variability the seam zones are relatively persistent throughout the deposit area. Figure 18 is a north-south correlation section (hung on Seam 1) using gamma/density log signatures (where available) to demonstrate correlation. Figure 19 shows the line of section.

Surficial material over the property varies in thickness from less than 2m with infrequent outcropping of bedrock along ridges in the west, to over 100m in the south. Surficial material is comprised of glacial drift to glacio-fluvial deposits of sand and gravel; the latter are especially prevalent in the south and south-east areas of the project area. Other bedrock outcrops are limited to periodic exposures along creek and river valleys.

Section 6 contains coal quality data and remains confidential under the terms of the *Coal Act Regulation*, Section 2(1). It has been removed from the public version.

http://www.bclaws.ca/EPLibraries/bclaws\_new/document/ID/f reeside/10\_251\_2004#section2

#### 7.0 Coal Resources

Coal resources underlying the Raven Project area have been determined in accordance with *National Instrument (NI) 43-101*, and the referenced documents *Definition Standards on Mineral Resources and Reserves* adopted by the Canadian Institute of Mining, Metallurgy and Petroleum, December 11, 2005, and, as appropriate, *A Standardized Coal Resource/Reserve Reporting System for Canada*, published as Paper 88-21 by the Geological Survey of Canada.

The following is a discussion of the parameters and criteria that are considered in a resource estimate as presented in GSC Paper 88-21.

The rank of coal underlying the Raven project area is classified as *High Volatile A Bituminous* (*ASTM*) and has an average mean maximum reflectance of 0.92%.

The *geology type* at the Raven Project is considered by the author to be *'moderate'* bordering on 'complex'. The Vancouver Island coal deposits are omitted from the discussion of the complexity of coal deposits in Paper 88-21, however, from analogy, the Comox coal field is not that dissimilar to the structural style of Obed, Bullmoose and McLeod River in the mountains and foothills of Alberta and British Columbia described as moderate in Paper 88-21.

The Raven project area should be considered as an underground mining *deposit type*. All resources determined for the Raven Project are considered for exploitation using underground mining, however, the writer notes that there may be small areas localized along the western subcrop limits of the deposit amenable to surface mining. There has been no attempt to delineate surface mining potential in the project area at this time.

A guideline for determining acceptable minimum seam thickness, included partings and coal to rock ratios is provided by GSC Paper 88-21:

,	<u> </u>
	Resources of immediate interest
Maximum rock partings included in thickness	0.3m
Minimum coal bed thickness to be included	0.6 m
Minimum aggregate seam thickness	1.5 m
Coal to rock thickness ratio	2:1 or greater
Maximum depth from surface	600m

 Table 20 - Criteria for Determining Resources for Potential Underground Mining

All available data has been reviewed to make sure only those data points selected for use in a resource estimate adhere to the recommended requirements listed in paper 88-21.

All resources determined for the Raven project area are less than 600 metres depth from surface.

Areal extent of the coal deposit and seam continuity used for calculating resources has been provided from drillholes and high resolution reflection seismic. Drillholes and seismic together have been used to enhance geological interpretation of the structure and to provide assurance of seam continuity. Sections constructed perpendicular to strike at 600 m intervals were used to confirm seam subcrop boundaries and or fault controlled deposit boundaries.

Drillholes have been used to determine data points for classification of resources. For a 'moderate' *geology type* deposit Paper 88-21 recommends the following drillhole/data spacing for categorizing coal resources in assurance of existence categories:

Table 21 -	<ul> <li>Assurance of Existence Criteria (from GSC Paper 88-21)</li> </ul>	)
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	Measured	Indicated	Inferred
Distance from closest data point	0 – 450 m	450 – 900 m	900 – 2400 m

For the purposes of defining measured and indicated resources only data from drillholes supported by geophysical logs has been used to confirm thickness and coal to rock ratio. Maximum distances from data points used are within the range suggested by GSC Paper 88-21 and are:

Table 22 - Assurance of Existence Criteria Used for the Raven Project

	Measured	Indicated	Inferred
Maximum Distance from data point	150 m	300 m	1800 m

The measured and indicated resource classification area for Seam 1 is shown by Figure 26.

For the purpose of defining inferred resources all drillholes have been used. The maximum distance from a data point is 1800 m however rarely exceeds 1200 m and therefore is well within the guidelines suggested by Paper 88-21. Extrapolation of resource continuity along strike to the north and south has been projected a maximum of 600 m from the most northerly and southerly seismic lines both of which have a minimum of 2 drillholes. Down-dip projection to the east is within the seismic control area and is within 1200 m of a drillhole data point. The eastern limit is also a minimum of 200m west from the property coal rights boundary and/or the Inland Highway which parallels and in part cuts across the property.

All data was input into a database and resources calculated using inverse distance squared calculations to interpolate and/or extrapolate thickness data to a 25 m grid. Filters were applied for areal and thickness restrictions and resources were output as volumes. A bulk density factor of 1.50 tonnes per cubic metre was applied to volumes to obtain tonnage. *Rockworks 2004<sup>™</sup>* software was used to capture and manipulate data and calculate resources.

Resources are summarized below:

Area		ASTM Rank	Coal Zone	In Situ Coal Resources (kt)		
∀ Type		Classification	/ Seam	Measured	Indicated	Inferred
p	Surface	Not Detern		nined for Thi	s Report	
Raven Coal Project sable River Coal Field Comox Basin	σ	Underground high volatile A bituminous	Seam 1	12,917	19,892	56,424
	erground		Seam 3 Upper	1,754	4,430	2,580
	Und	Totals	Totals		Measured and Indicated	
T.				39,093		59,004

Table 23 - In Situ Coal Resources for Raven Project - Tsable Coal Field

The calculated coal resources are in situ resources and are considered a resource base for underground mining. The resources as reported have not been subject to a detailed economic analysis nor do they have demonstrated economic viability. Localized complex structure (frequency and nature of faulting) suggested from seismic, variability of seam and roof and floor conditions, and localized wash-outs or wash-ins will complicate mining and may contribute to reductions in 'mineable coal reserves'.

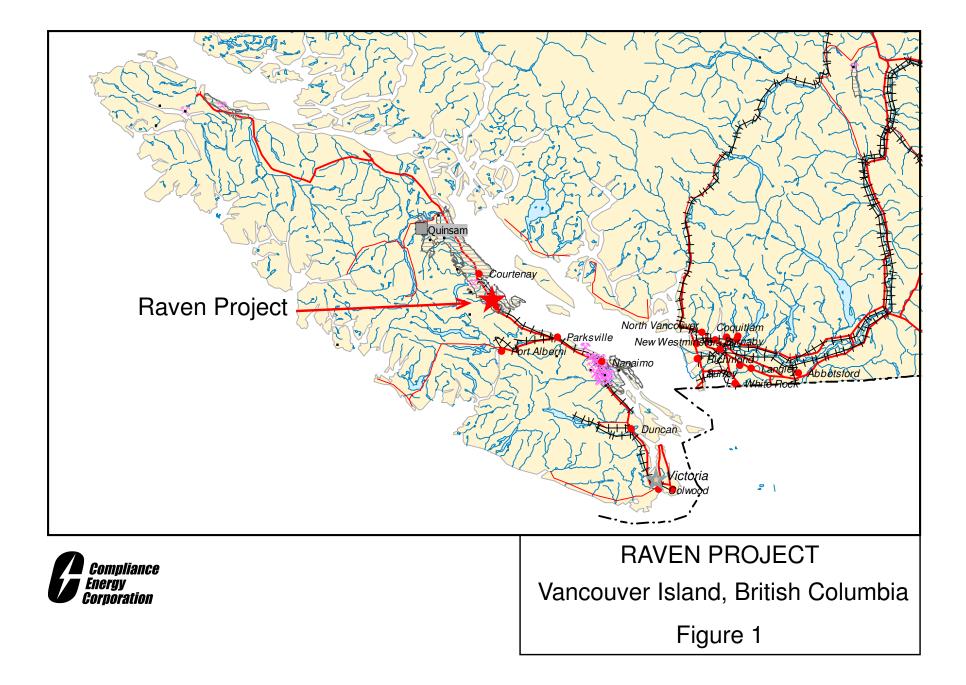
#### 8.0 References Year Title Author 1992 Bickford, C.G.C. Geology and Resource Potential of the Tsable River and Denman Island (92F/10, 11). British Columbia Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork, 1991. Paper 1992-1, pages 419-425 2001 Bickford, C.G.C. Lithostratigraphy of the Comox and Trent River Formations in the Comox Coalfield, Vancouver Island (92F/7, 10, 11, 14). British Columbia Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork, 2000. Paper 2001-1, pages 363-370 1998 Bickford, C.G.C. Geological maps of the Nanaimo and Comox and Hoffman, G. Coalfields, B.C. Ministry of Energy and Mines, Open File 1998-7. ,Map Sheets 1 to 8 1988 Bickford, C.G.C. Coalfield Geology of Eastern Vancouver Island (92F). British Columbia Ministry of Energy, Mines and and Kenyon, C. Petroleum Resources, Geological Fieldwork, 1987. Paper 1988-1, pages 441-450 2001 British Columbia Mineral Exploration Review 2001 -British Columbia Ministry of Energy, Exploration Projects - Vancouver Island. British Mines and Columbia Geological Survey Information Circular 2002-1, page 13 Petroleum Resources 1991 Butterworth, B.P. Tsable River Project - 1991 - Text, Maps and and Casselman, Appendices - NTS 92F/7 and 10 - Nanaimo Mining S.G. Division 2001 Canadian National Instrument 43-101 - Standards of Disclosure Securities for Mineral Projects Administrators 2004 CIM Standing CIM Definition Standards on Mineral Resources and Committee on Mineral Reserves Reserve Definitions 1991 Consolidated Summary Report on the Tsable River Property Brinco Limited, Exploration Department 1973 Curcio, M.P. Preliminary Evaluation of Coal Reserves for Campell River Area, Cumberland Area and Tsable River-Cowie Creek Area, Within the Comox Basin,

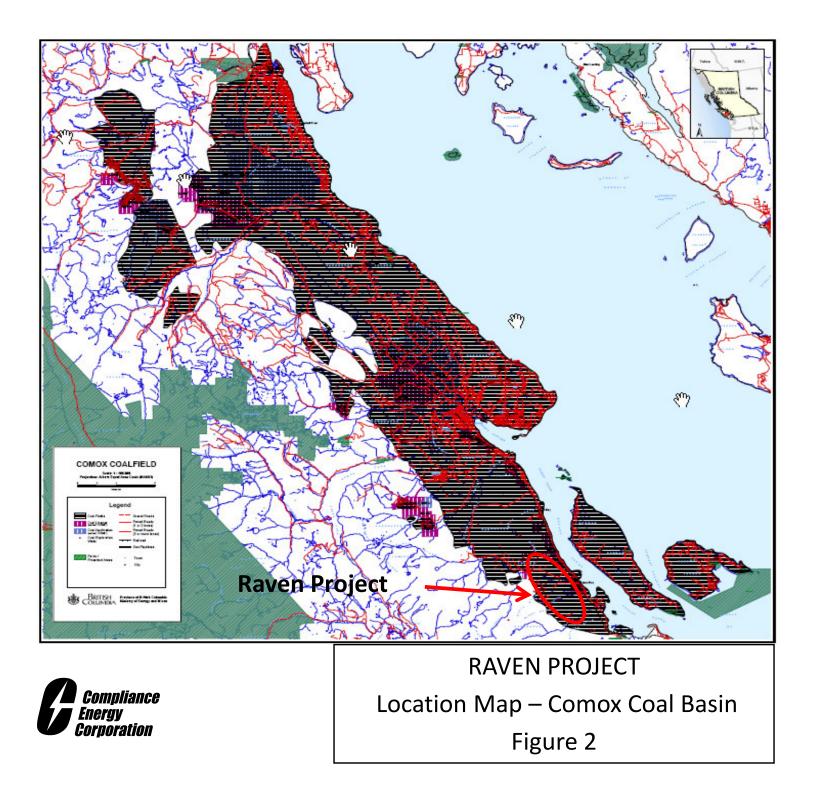
		Vancouver Island, British Columbia
1974	Curcio, M.P.	Summary Reports on Weldwood Coal Properties and on Topics Pertinent to Coal Development
1975	Curcio, M.P.	Coal Resource Study of Comox-Nanaimo Series, Vancouver Island - British Columbia
1976	Dolmage Campbell and Associates Ltd.	Part 2 - Comox Coalfield
1997	Emerald Exploration Consultants Inc.	High Resolution Seismic Survey, Tsable River and Quinsam Mine
1997	Emerald Exploration Consultants Inc.	Tsable River Seismic Data (Raw Data in Two Brown Envelopes)
2006	Emerald Exploration Consultants Inc.	High Resolution Seismic Survey, Raven Property, Vancouver Island, British Columbia, Private Report prepared for Compliance Energy Corporation
1975	EPEC Consulting Western Ltd.	Coal Resource Study, Preliminary Environmental Assessment
1995	Gardener Exploration Consultants Ltd.	Tsable River / Allen Lake Exploration Proposal
1997	Gardener Exploration Consultants Ltd.	Geology and Methane Desorption (Tsable River)
2001	Gardener Exploration Consultants Ltd.	Overview - Tsable River Seismic Data
2001	Gardener, S. / McMillan, J.	Examination of Potential Entry Points for a 100,000 t. Bulk Sample
1983	Gardner, S.L.	A Summary of the Geology of the Tsable River Coal License, Comox Basin, Vancouver Island, British Columbia
1996	Gardner, S.L.	Tsable River Coal Project - Drillhole Intersections (1996) and Proposed Work (1st Quarter 1997)
1997	Gardner, S.L.	Report on 1996 Exploration Work - Tsable River Coal Project
1999	Gardner, S.L.	Vancouver Island Coal Study. British Columbia Ministry of Energy, Mines and Petroleum Resources; Geological Survey Branch Open File 1999-8
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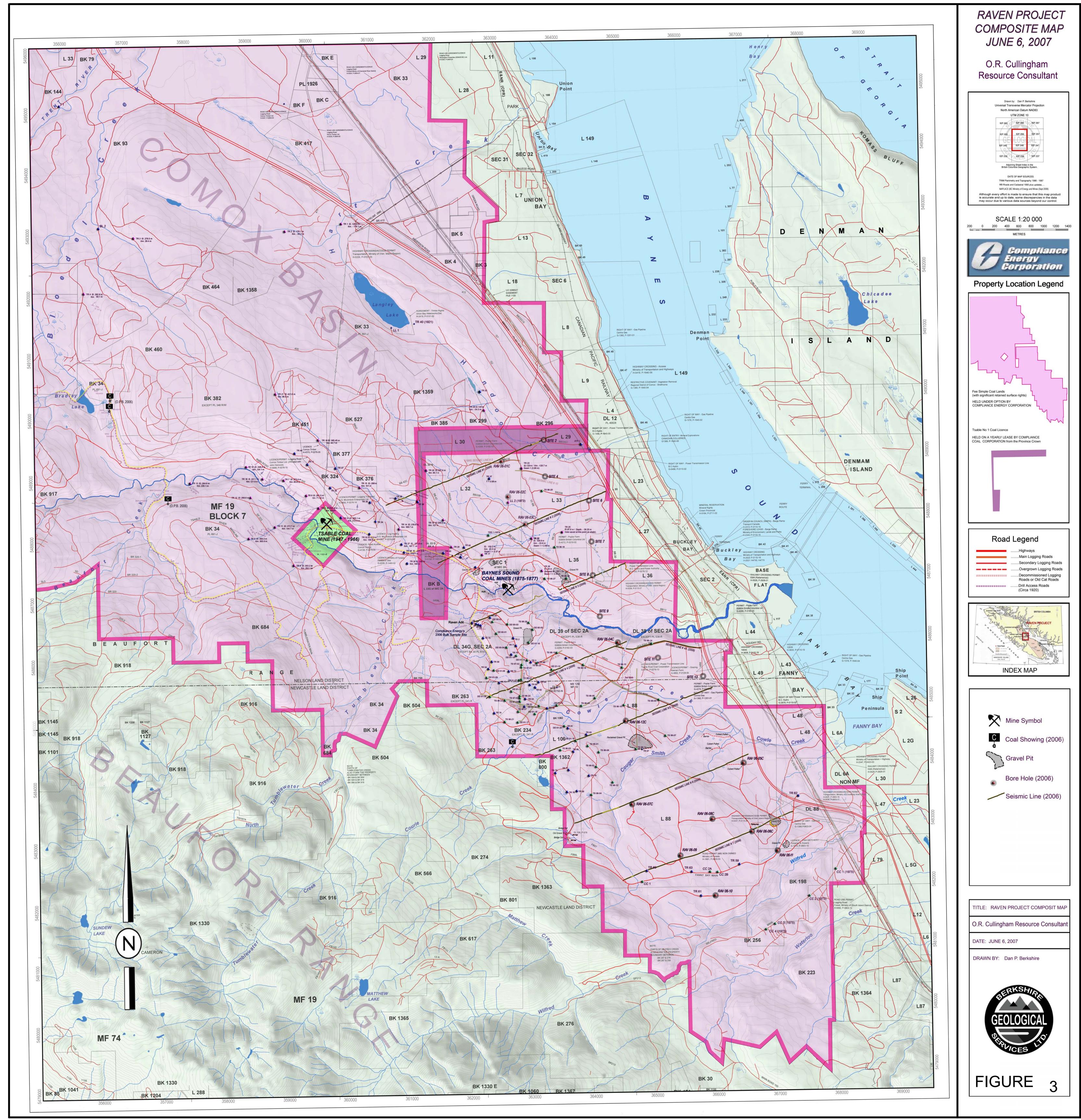
2001	Gardner, S.L.	Technical Report on the Tsable River Coal Property, Central Vancouver Island, British Columbia
2001	Golder Associates	Acid Rock Drainage (ARD) Review and Waste Rock Disposal Strategy, Proposed Tsable River Bulk Sample Project, Fanny Bay
2001	Hermann, F.W.	Amendment to Coal Exploration Permit Approving Work System and Reclamation Program
1996	Hillsborough	Tsable River Project 1996 Exploration Program
1997	Resources Limited Hillsborough Resources Limited	Annual Information Form for the Fiscal Year Ended December 31, 1996
1997	Hillsborough Resources Limited	Preliminary Feasibility Study, Sept.1997
1997	Hillsborough Resources Limited	Tsable River Coal Corporation, Application for Bulk Sample
1997	Hillsborough Resources Limited	Tsable River Coal Load-out Facility, Pre-Planning Study
1998	Hillsborough Resources Limited	Annual Information Form for the Fiscal Year Ended December 31, 1997
1999	Hillsborough Resources Limited	Annual Information Form for the Fiscal Year Ended
2000	Hillsborough Resources Limited	December 31, 1998 Annual Information Form for the Fiscal Year Ended December 31, 1999
2001	Hillsborough Resources Limited	Annual Information Form for the Fiscal Year Ended December 31, 2000
2002	Hillsborough Resources Limited	Annual Information Form for the Fiscal Year Ended December 31, 2001
2003	Hillsborough Resources Limited	Annual Information Form for the Fiscal Year Ended December 31, 2002
1997	Hillsborough Resources Ltd.	Tsable River Coal Corporation, Application for Bulk Sample
1989	Hughes, J.D., Klatzel-Mudry, L. and Nikols, D.J.	A Standardized Coal Resource/Reserve Reporting System for Canada. GSC Paper 88-21
2006	Khan, M.A.	Quality Evaluation of Raven Project
1996	Loring Laboratories	Tsable River Analytical Work (1996 Program)
1997	M.R. Renauld Associates	Tsable River Coal Load-out Facility, Pre-Planning Study
1997	Mraz, D.	Tsable River Coal Corporation - Application for Bulk
• Pa	age 25	O.R.Cullingham Resource Consultant Ltd.

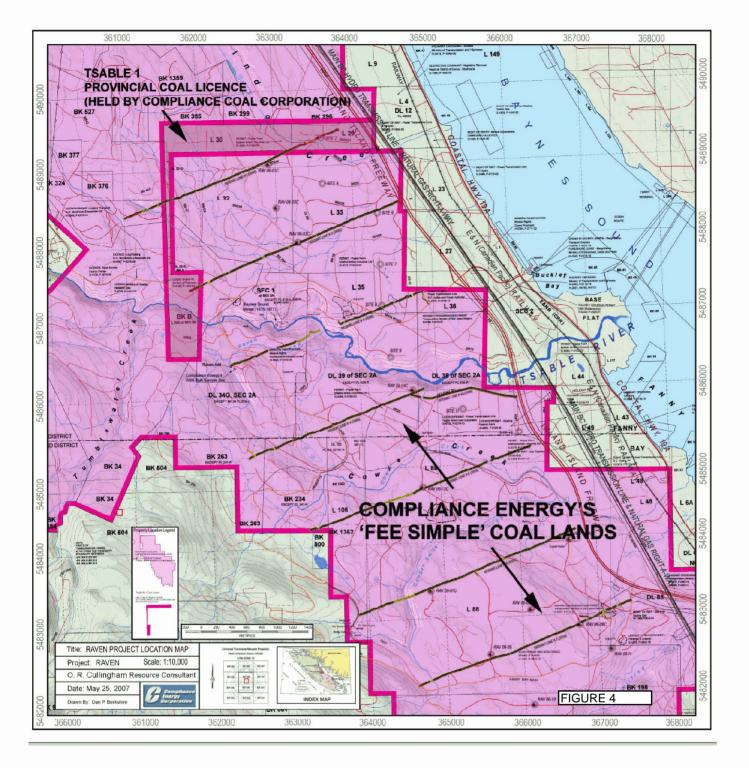
		Sample Program at the Tsable River Coal Property, Newcastle and Nelson District, Vancouver Island
1995	Parkes, D.M.	Review of Mining Operation and Planning of the Quinsam Coal Corporation, Campbell River, B.C.
1991	Parkes, D.M.	Tsable River Property - A Conceptual Mining Plan for Consolidated Brinco Limited
1996	Quinsam Coal Corporation	Tsable Mine - Surface Drawing of Road and Borehole Locations
1995	Ryan, B. D.	Calcite in Coal from the Quinsam Mine, British Columbia, Canada; Its Origin, Distribution and Effects on Coal Utilization (92F/13, 14). British Columbia Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork, 1994. Paper 1995-1, pages 243-259
1997	Ryan, B. D.	Coalbed Methane in the Comox Formation - Tsable River Area, Vancouver Island. British Columbia Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork, 1996. Paper 1997-1, pages 353-361
2002	Ryan, B. D.	Note on Desorption Results of Comox Formation Coals from the Courtenay Area, Vancouver Island, British Columbia. British Columbia Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork, 2001. Paper 2002-1, pages 319-328
2003	Ryan, B. D.	A Summary of Coalbed Methane Potential in British Columbia; Canadian Society of Exploration Geophysicists Recorder, Vol.28, No.9, November 2003, pages 32-40.
2003	Ryan, B. D.	Cleat Development in Some British Columbia Coals; in Geological Fieldwork 2002, B.C. Ministry of Energy and Mines, Paper 2003-1, pages 237-256.
2004	Ryan, B. D.	Coalbed Gas Potential in British Columbia, Petroleum Geology Paper 2004, 76 pages
1994	Ryan, B.D. and Dawson, F.M.	Coalbed Methane Desorption Results from the Quinsam Coal Mine and Coalbed Methane Resource of the Quinsam Coalfield, British Columbia, Canada (92F/13, 14); in Geological Fieldwork 1993, B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 1994-1, pages 215-224.
2002	Slater, D.J.	Tsable River Coal Property
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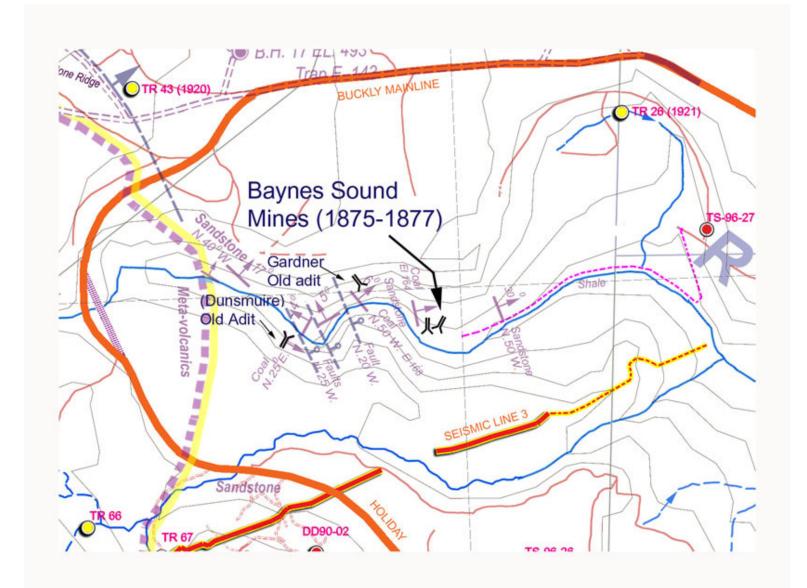
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2002	Standbrook, M.	Tsable River Coal Property
1960	Tibbetts, T.E. and Montgomery, W.J.	Analysis Directory of Canadian Coals, Supplement No.2 - 1960; page 52
2001	VWVulcan Energy of Canada, Ltd.	Owners of Coal Rights in the Comox Coal Field
1975	Weldwood of Canada Limited	Coal Resource Study, Maps and Sections
1975	Weldwood of Canada Ltd.	Weldwood of Canada Ltd., Coal Resource Study, Maps and Sections
2006	West Fraser / VWVulcan Energy of Canada, Ltd.	Exhibit A - Description of Leased Premises
1975		Coal Resource Study, Preliminary Environmental Assessment





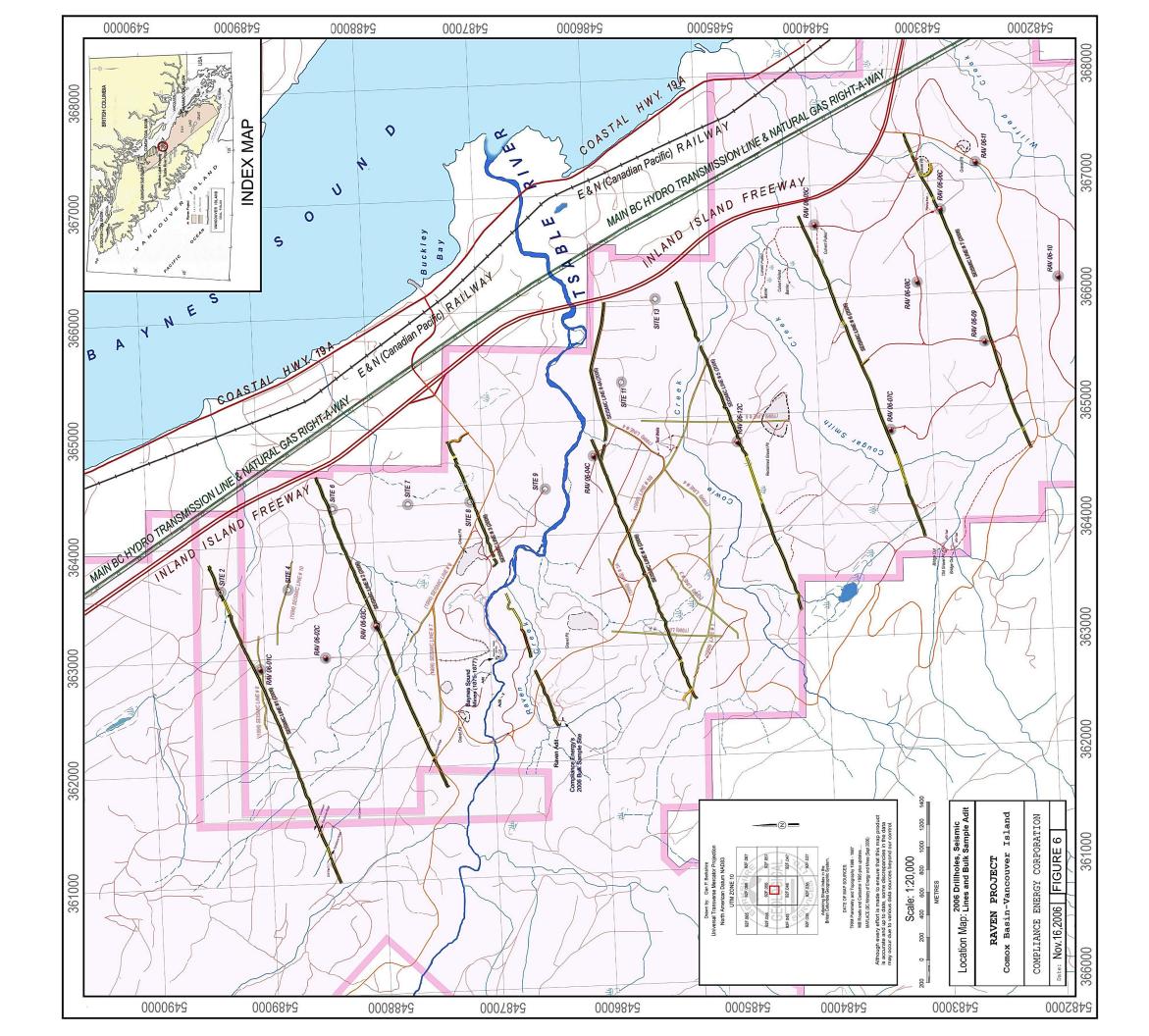


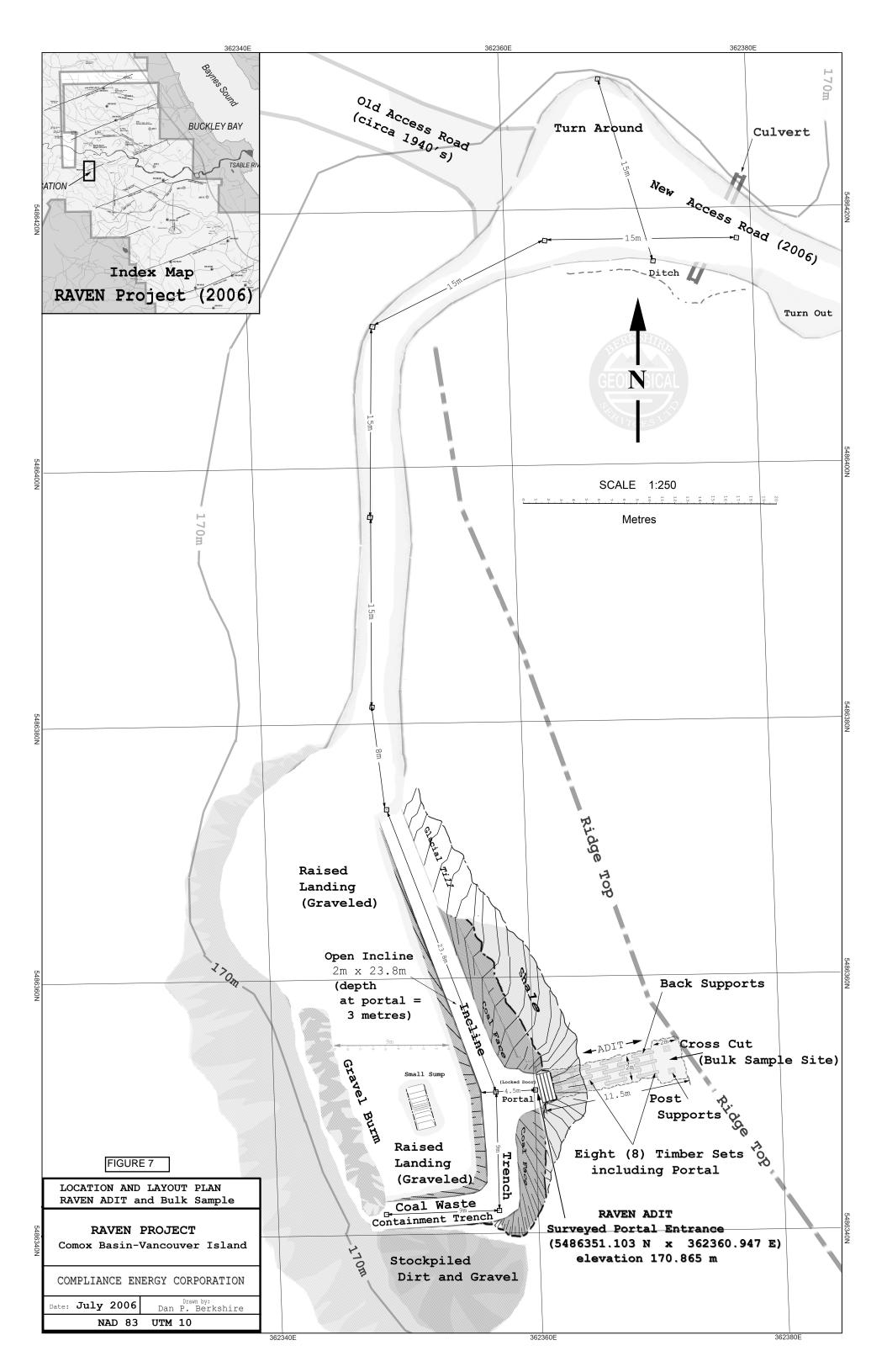






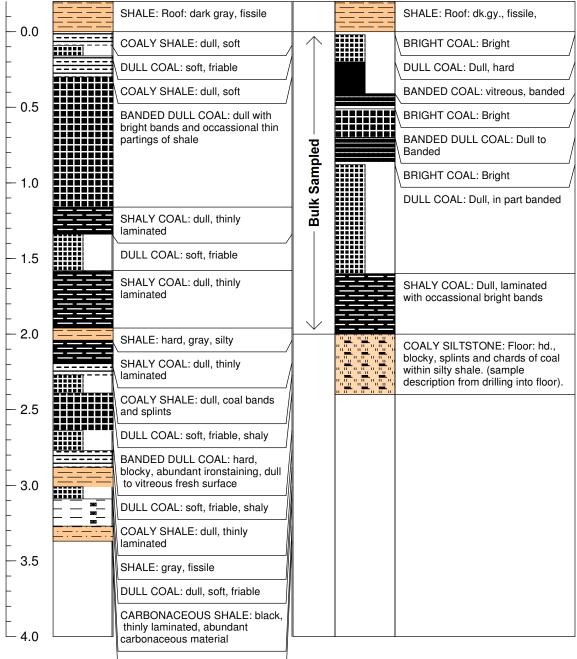
RAVEN PROJECT Baynes Sound Mine Location Map Figure 5



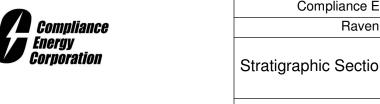


#### Section at Portal

#### Section at Sample Point



SANDY SHALE: medium gray

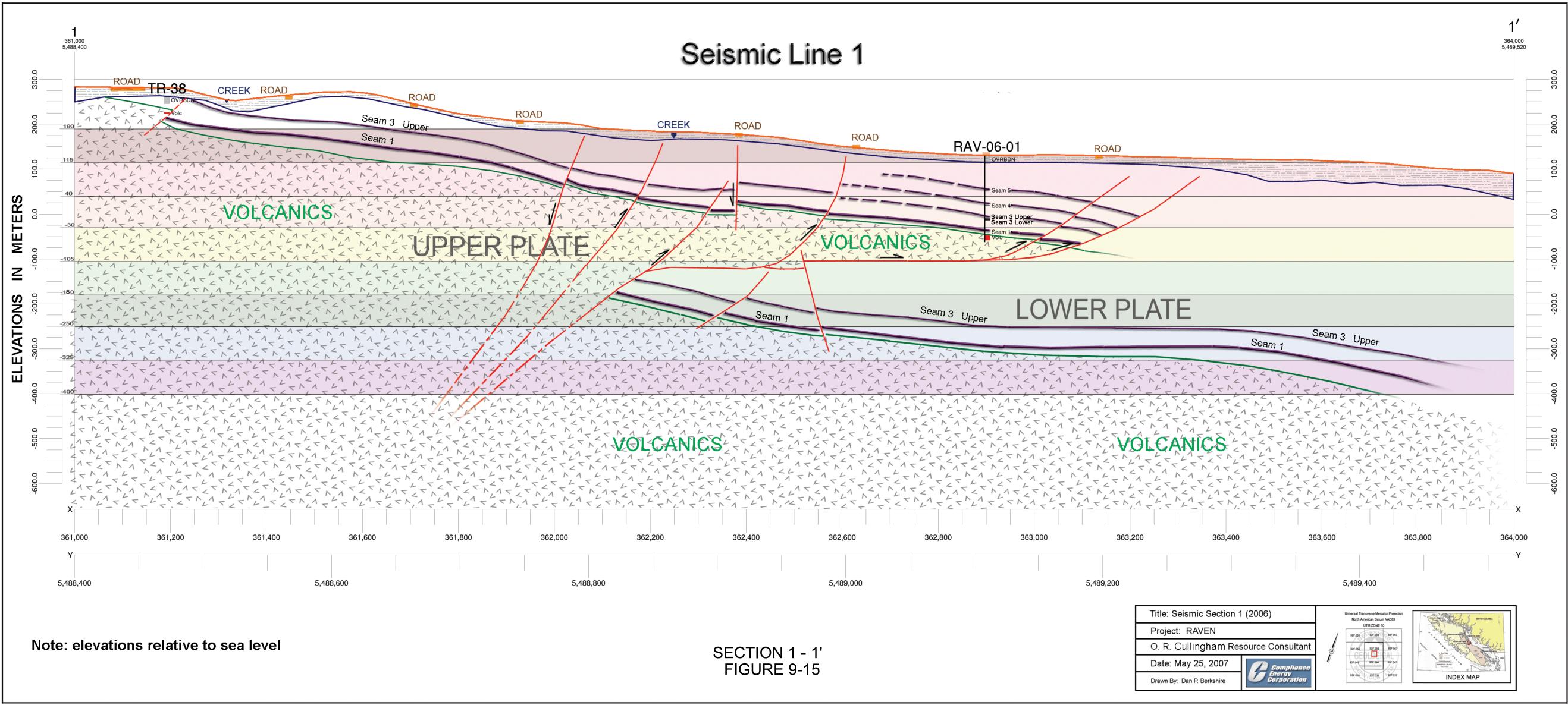


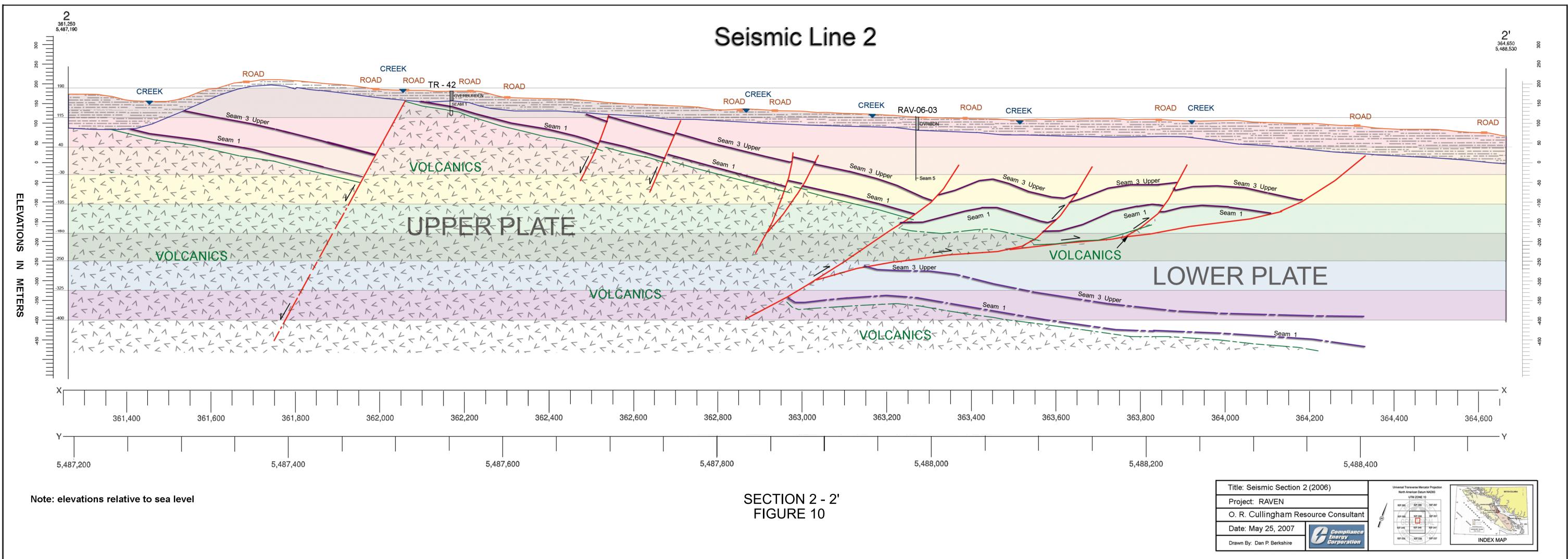
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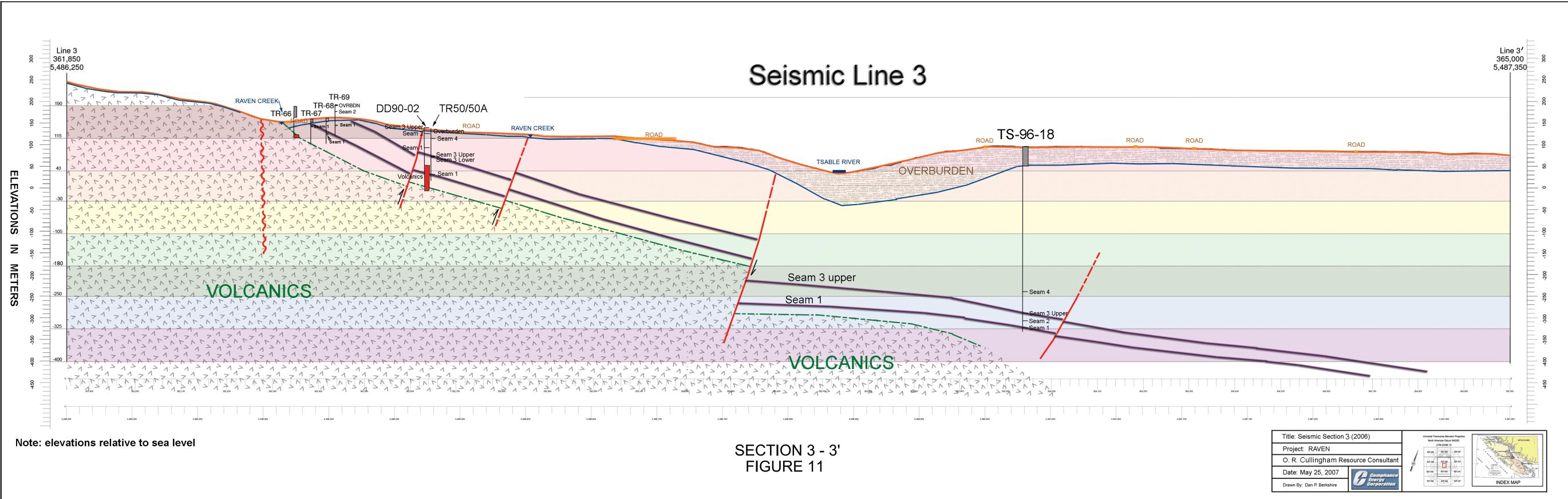
 Raven Project

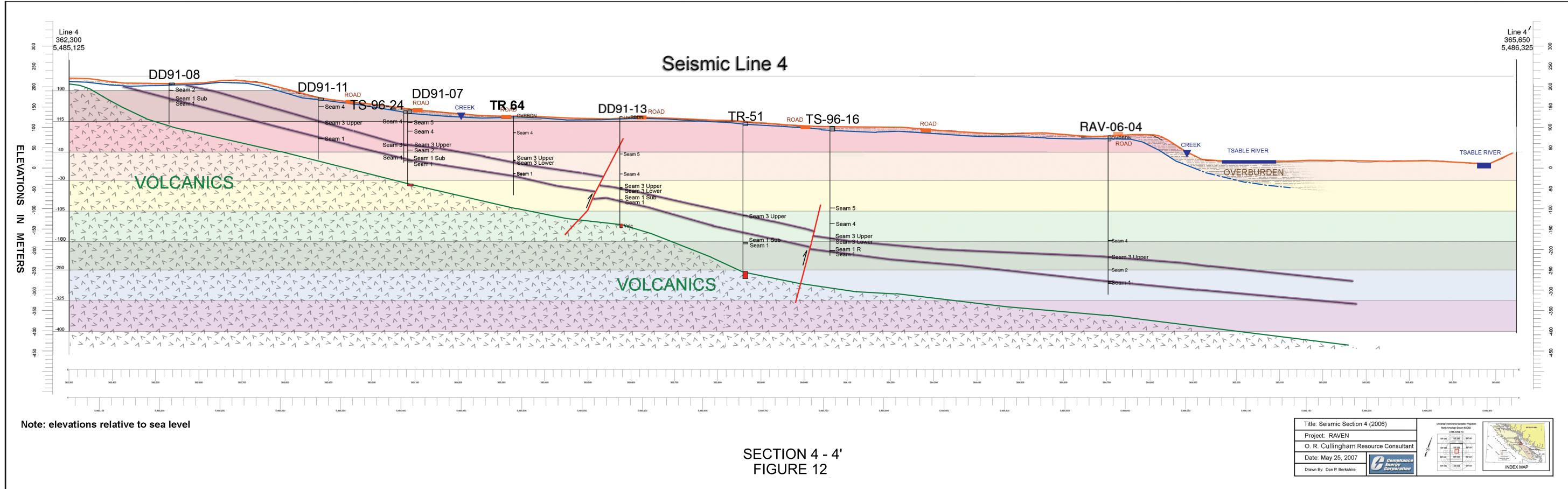
 Stratigraphic Sections at Bulk Sample Point

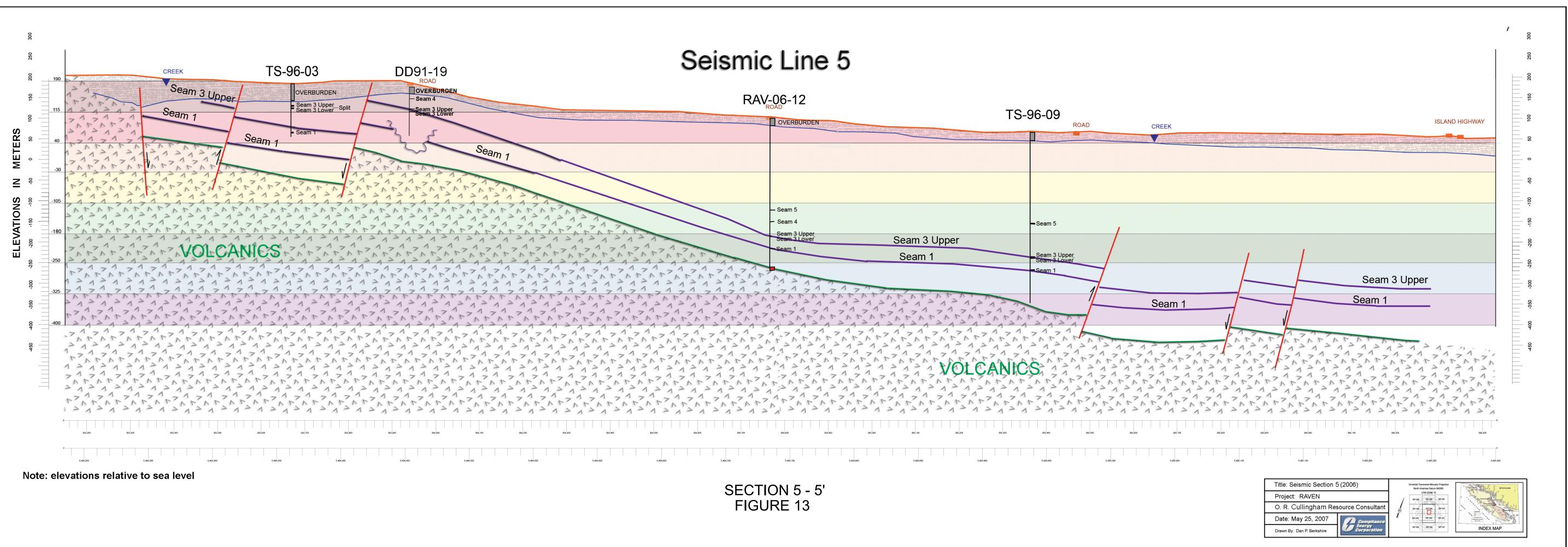
 May, 2007
 Figure 8

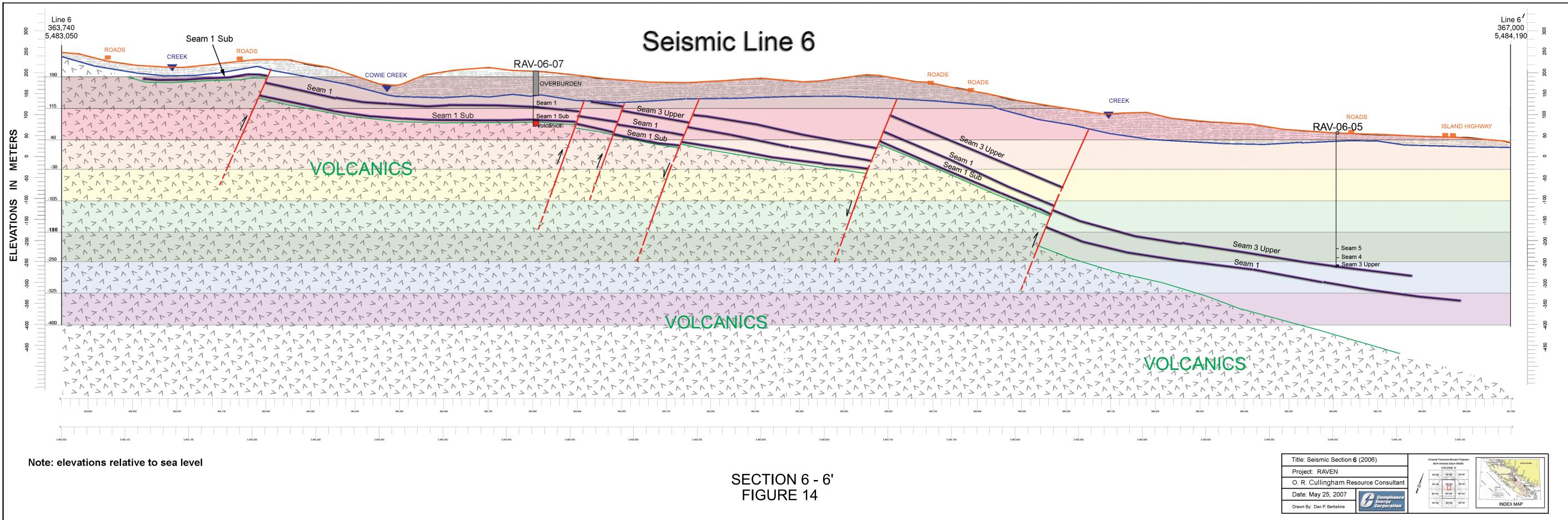


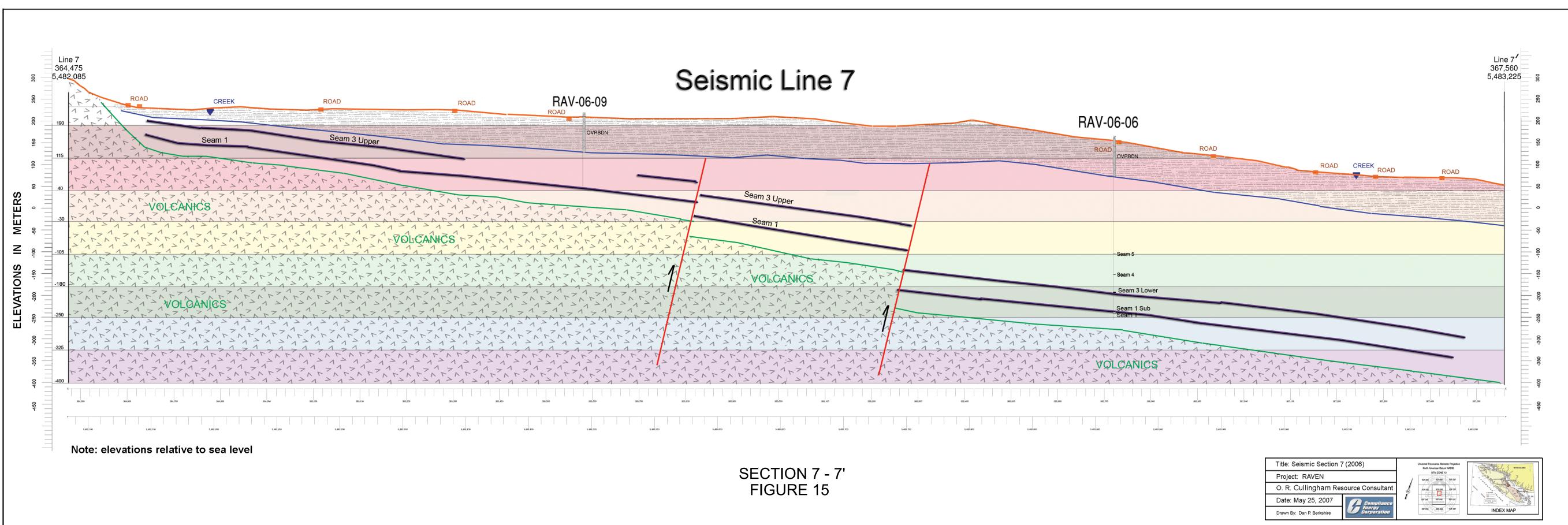


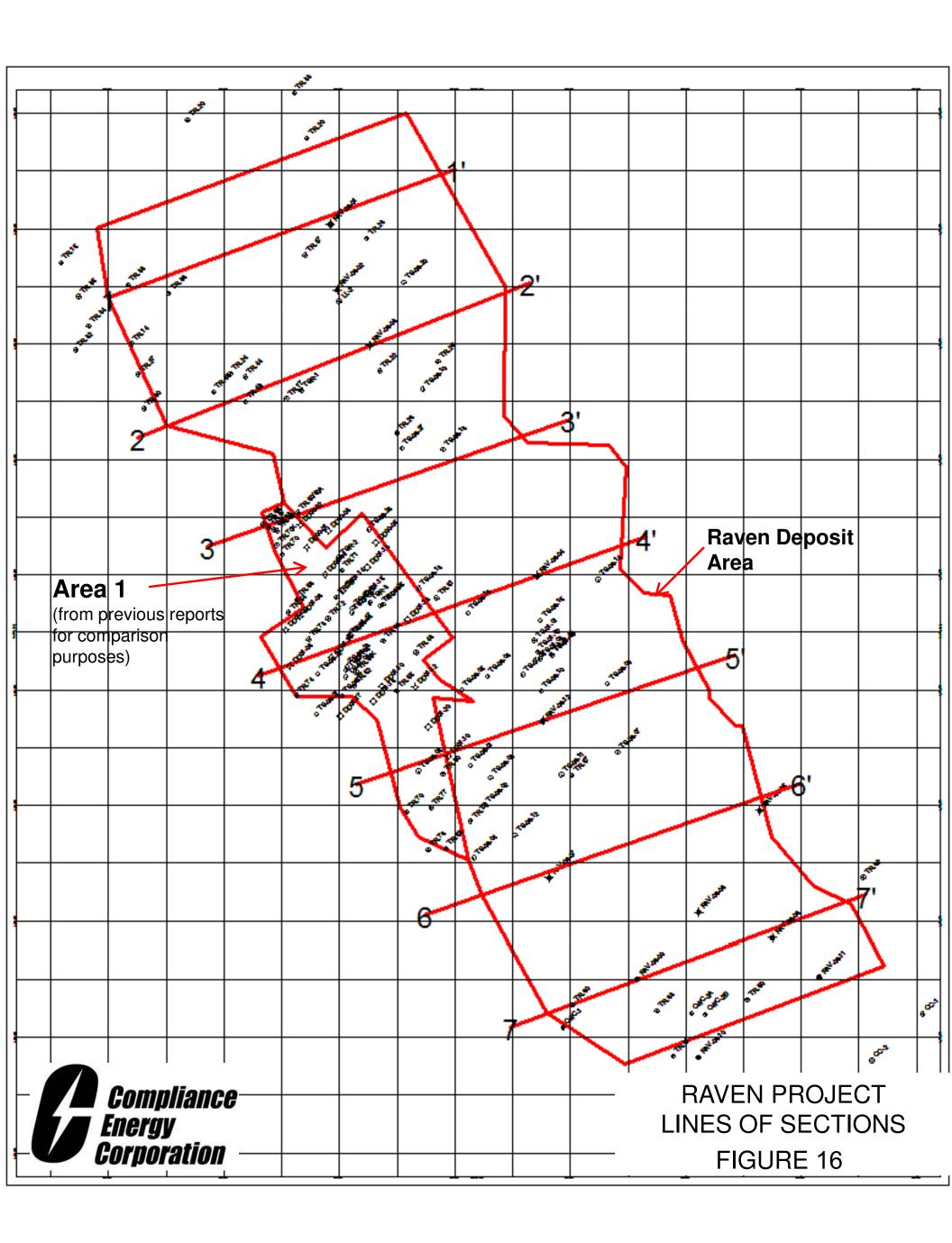


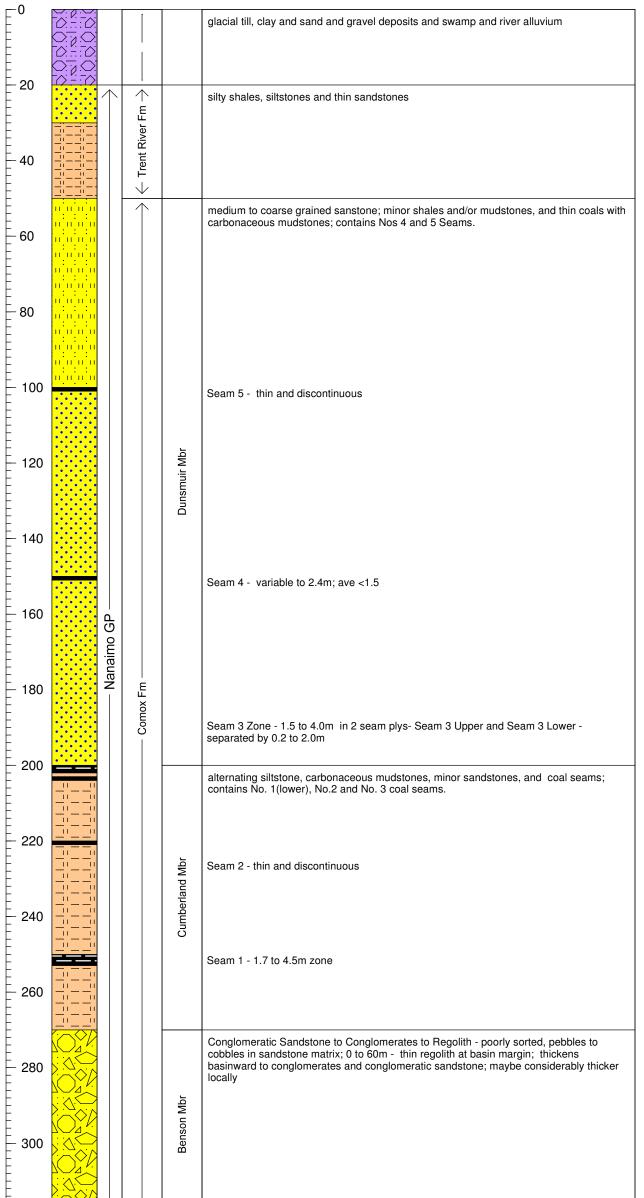












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380 Compliance Energy Corporation		Compliance Energy Corp. Raven Project Generalized Stratigraphic Section	
		May, 2007	Figure 17

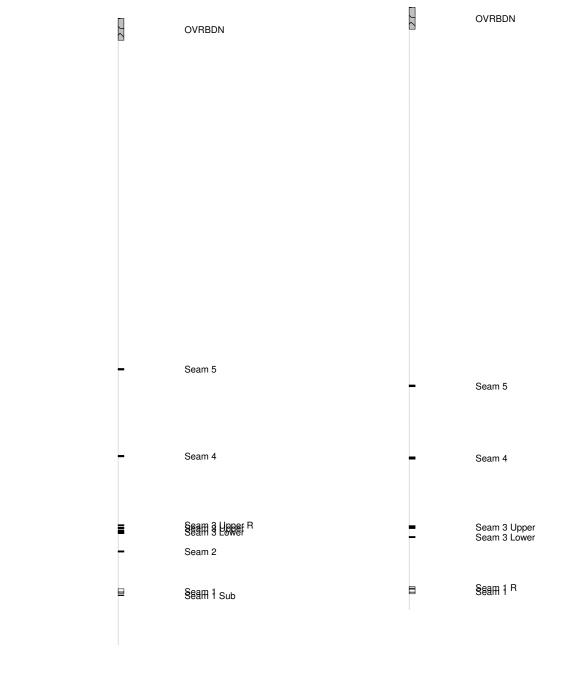


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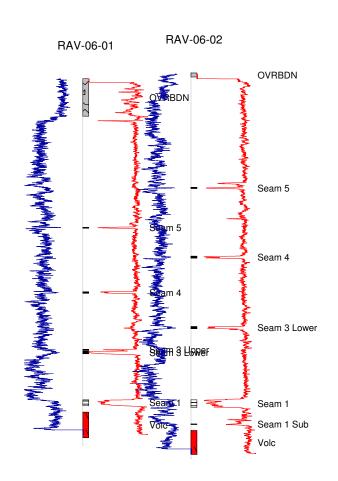
Correlation Section North - South

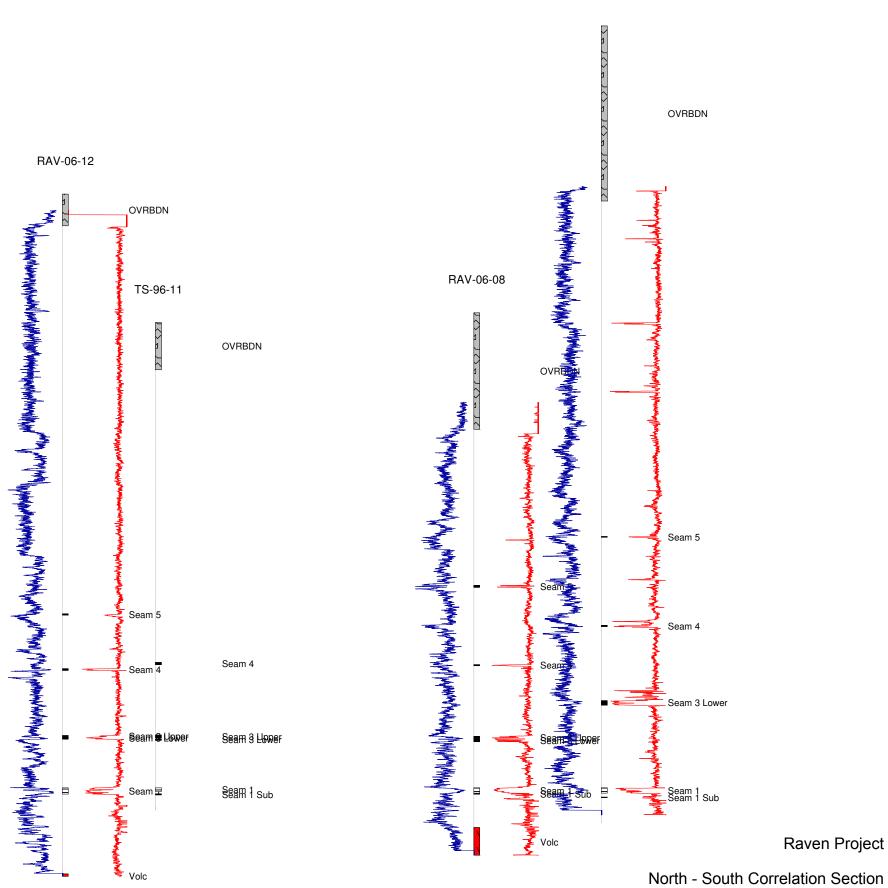
TS-96-16

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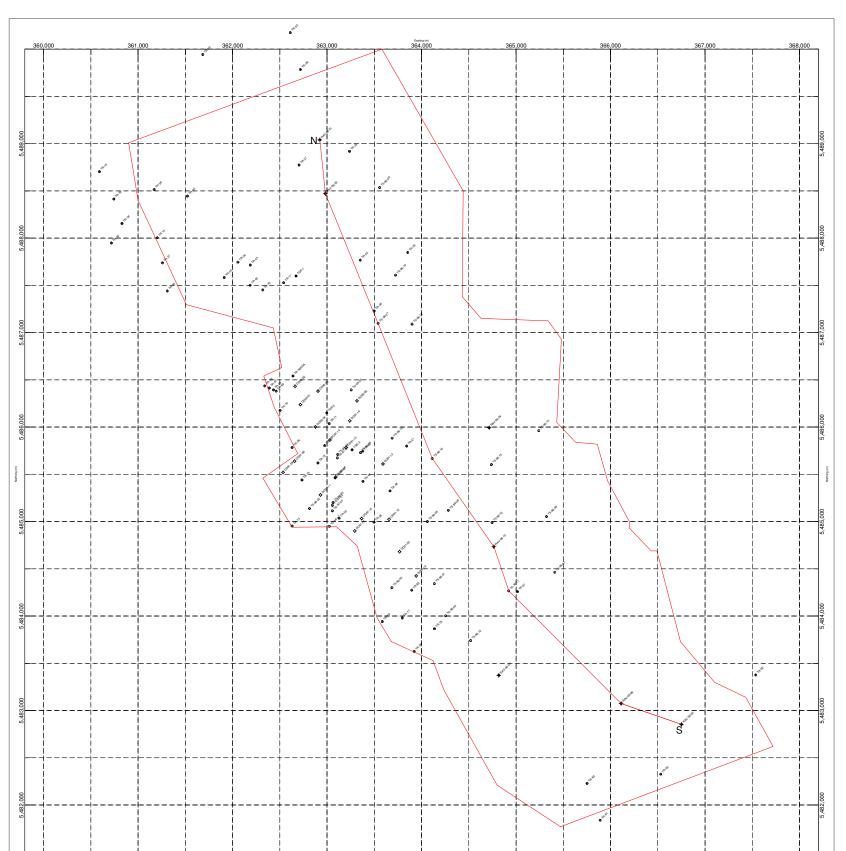
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S RAV-06-06

Figure 18



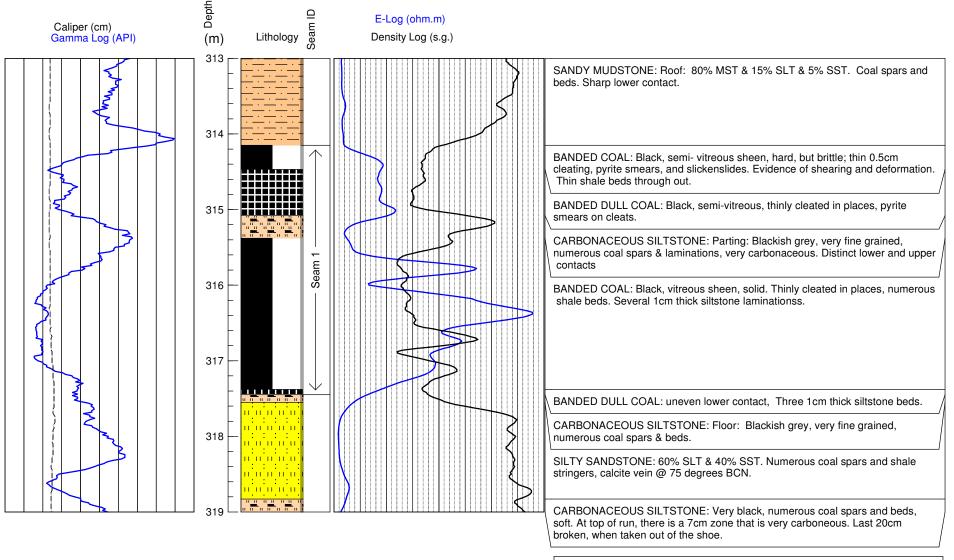




**RAVEN PROJECT** 

LOCATION OF N - S CORRELATION SECTION

FIGURE 19



Compliance Energy Corporation

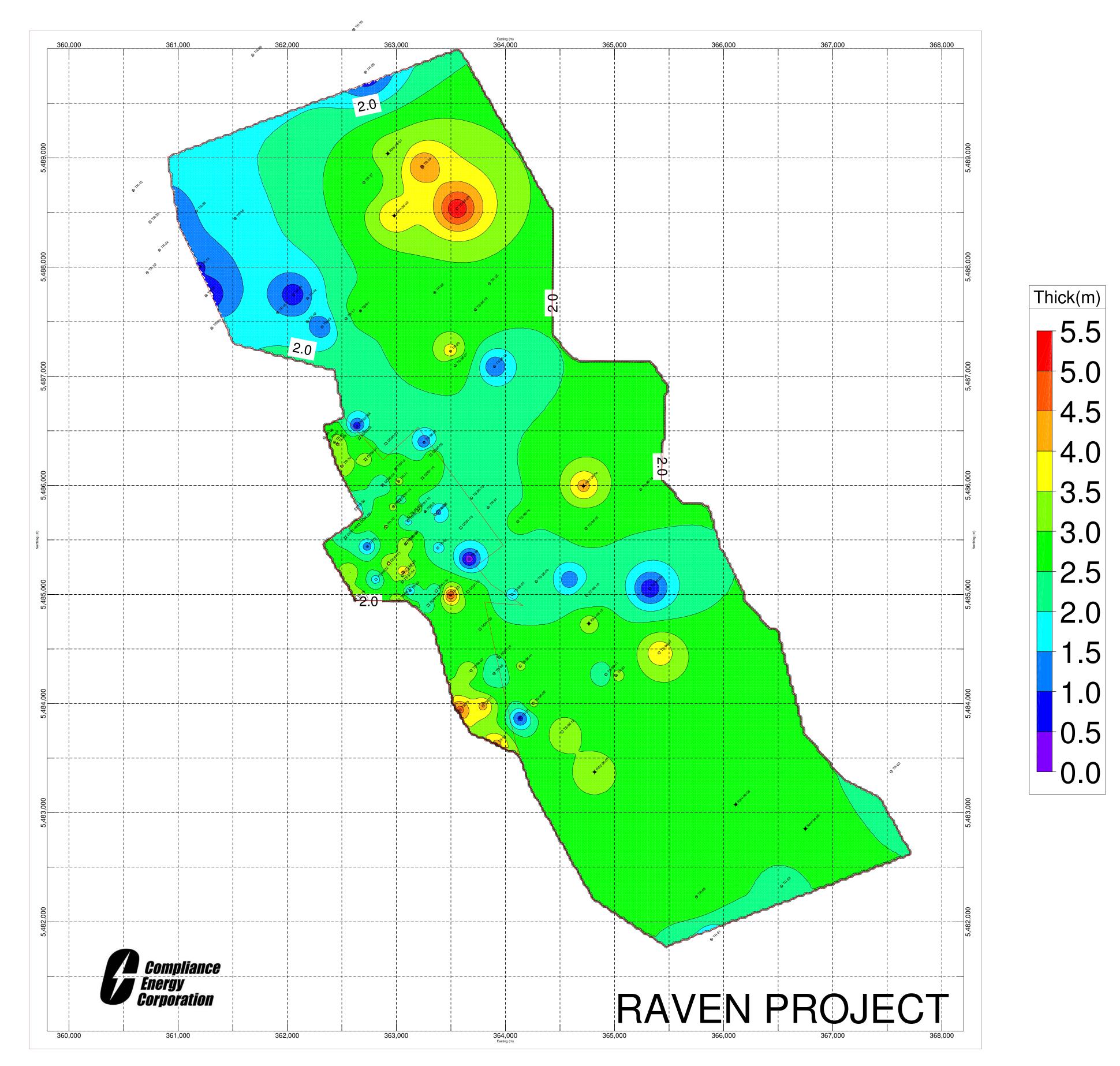
**Raven Project** 

Seam 1 Stratigraphy (after DHL RAV-06-12)

May, 2007

FIGURE 20

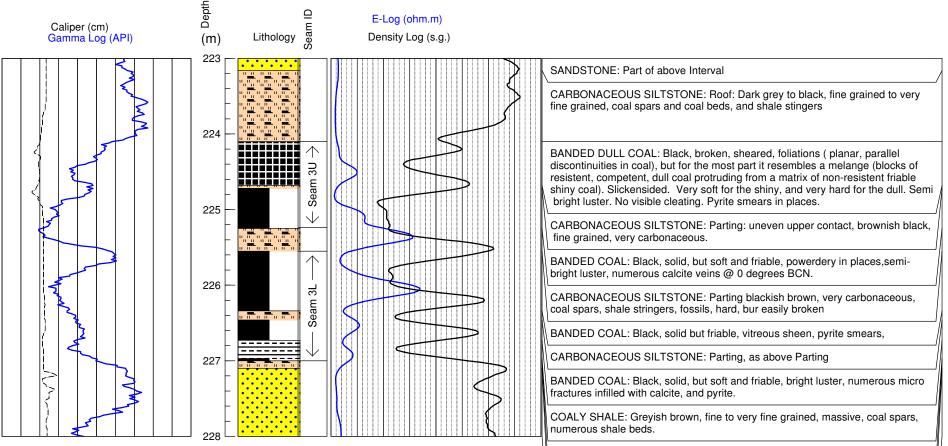




SEAM 1 ISOPACH FIGURE 21

Figures 22 and 23 contain coal quality data and remain confidential under the terms of the *Coal Act Regulation*, Section 2(1). The have been removed from the public version.

http://www.bclaws.ca/EPLibraries/bclaws\_new/document/ID/f reeside/10\_251\_2004#section2



BANDED COAL: dull, shale partings and enses

CARBONACEOUS SILTSTONE: Floor: whitish grey, Shale stringers, coal spars,

SANDSTONE: Greyish white, very coarse to coarse grained, massive.

Compliance Energy Corporation

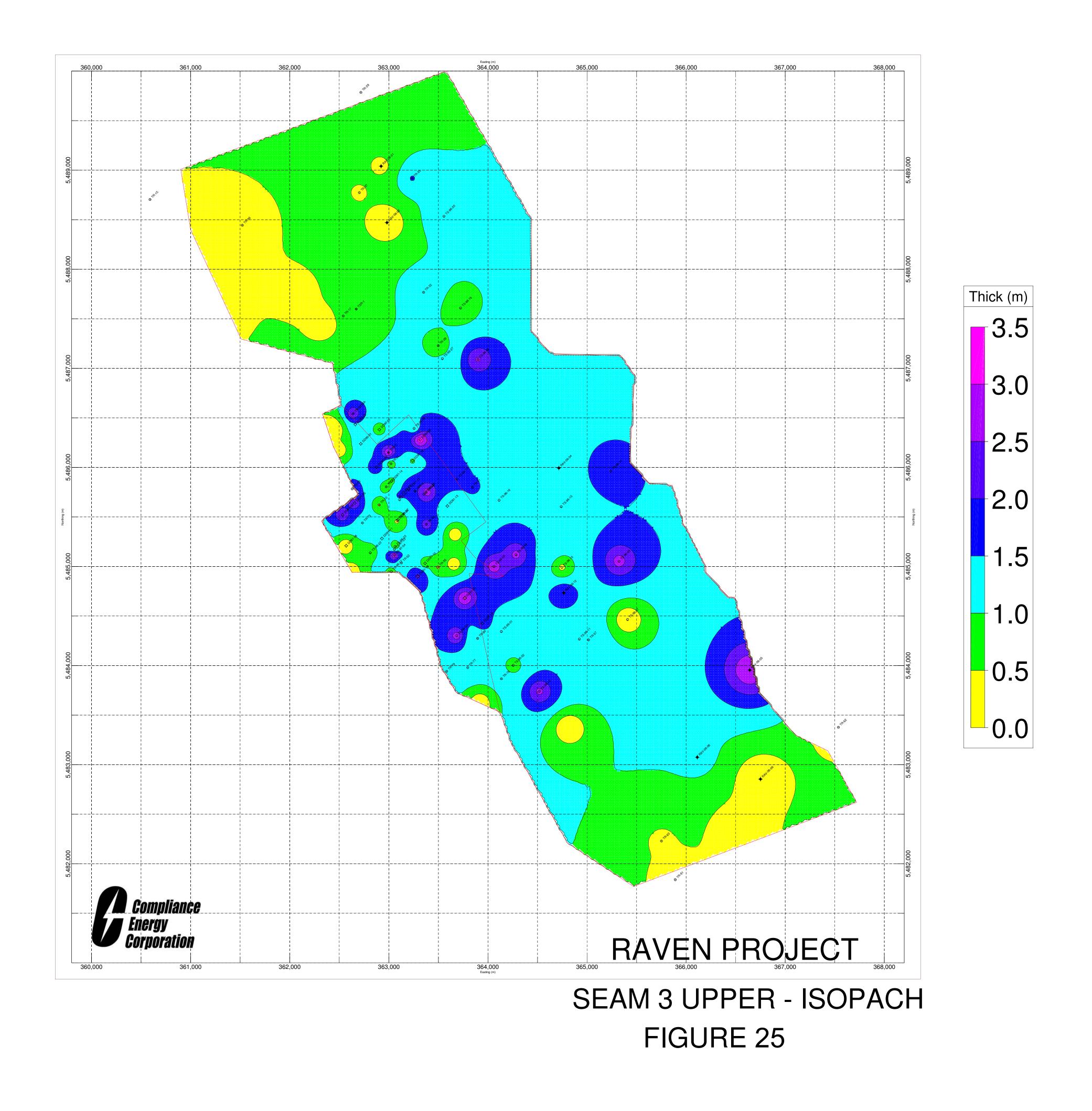
Raven Project

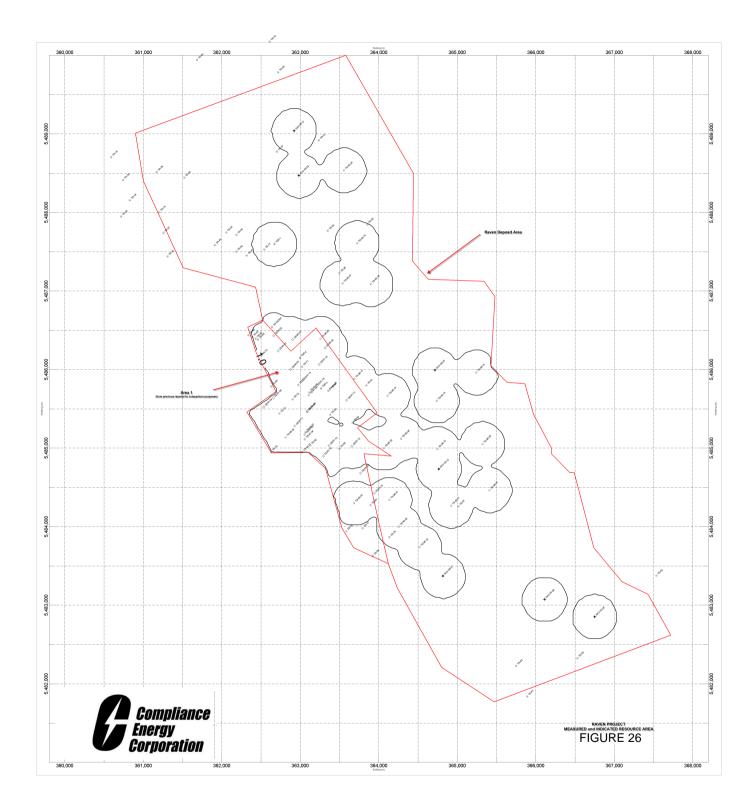
Seam 3 Stratigraphy (after dhl RAV-06-08)

May, 2007

FIGURE 24







## **APPENDIX A**

## DRILLERS AND GEOLOGICAL DESCRIPTIVE LOGS CUTTINGS AND CORE

# **APPENDIX B**

## **GEOPHYSICAL LOGS OF DRILLHOLES**

# APPENDIX C

## COAL QUALITY KEYED TO DRILLHOLES

Appendix C contains coal quality data and remains confidential under the terms of the *Coal Act Regulation*, Section 2(1). It has been removed from the public version.

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