

Final Well Report

Revision:	Version 0
Operating Company:	Vulcan Minerals Inc. (Investcan Energy Corp)
Hole Name:	Flat Bay Test Hole #2
Rig:	Duralite 800
Field:	Flat Bay
Location:	Western Newfoundland, Canada
Date:	March 20, 2009
Revised On:	N/A

Prepared by: David Walsh Vulcan Minerals	Reviewed by: Patrick Laracy, P.Geo. Vulcan Minerals
Date:	Date:

Table of Contents

1.0	Introduction	6
2.0	General Information	6
2.1	Map	6
2.2	Difficulties and Delays.....	8
3.00	Drilling Operations.....	10
3.1	Elevation.....	10
3.2	Total Depth.....	10
3.3	Spud Date	10
3.4	Date Drilling Completed.....	10
3.5	Rig Release Date.....	10
3.6	Well Status	10
3.7	Hole Sizes and Depth.....	10
3.8	Bit Records	11
3.9	Casing and Cementing Record	11
3.10	Side-tracked Hole	11
3.11	Drilling Fluid	11
3.12	Fluid Disposal	11
3.13	Fishing Operations	11
3.14	Well Kicks	11
3.15	Formation Leak – Off Tests	12
3.16	Time Distribution	12
3.17	Deviation Plot.....	12
3.18	Suspension Program	12
3.19	Well Schematic.....	14
3.20	Fluid Samples	14
3.21	Composite Well Record.....	14
4.00	Geology	16
4.1	Drill Cuttings.....	16
4.2	Cores	16

4.3	Lithology.....	16
4.4	Stratigraphic Column.....	16
4.5	Biostratigraphic Data.....	16
5.0	Well Evaluation.....	18
5.1	Downhole Logs.....	18
5.2	Other Logs.....	18
5.3	Synthetic Seismogram.....	18
5.4	Vertical Seismic Profile.....	18
5.5	Velocity Surveys.....	18
5.6	Formation Stimulation.....	18
5.7	Formation Flow Tests.....	18
6.0	Other Data.....	20
6.1	Mud Loggers Report.....	20
6.2	Directional and Deviation Survey.....	20
6.3	Final Legal Survey.....	20
6.4	Core Photos.....	20
6.5	Core Analysis Report.....	20
6.6	Fluid Analysis Report(s).....	20
6.7	Oil, Gas and Water Analysis Report(s).....	20
6.8	Geochemical, Biostratigraphic, Petrological, Palynological Paleontological Reports.....	20
6.9	Well Termination Report.....	20
Appendicis		
	Appendix I Authority to Drill Well.....	21
	Appendix II Daily Reports.....	27
	Appendix III Bit Record.....	38
	Appendix IV Composite Well Record.....	40
	Appendix V Stratigraphic Column.....	42
	Appendix VI Core Box Depths.....	44
	Appendix VII Lithological Descriptions.....	46
	Appendix VIII Legal Survey.....	51
	Appendix IX Core Photos.....	54
	Appendix X Core Analysis Report.....	60

Appendix XI Well Termination Record 62

List of Figures

Figure 1. Well location. 7

Figure 2. Deviation Plot..... 13

1.0 Introduction

Flat Bay Test Hole #2 was operated by Vulcan Minerals Inc. - Investcan Energy Corp. Joint Venture and drilled by Logan Drilling Limited utilizing a Duralite 800 Core Drilling Rig. The test hole was spudded on February 14, 2009 and the rig was subsequently released February 22, 2009 upon completion of the hole.

The purpose of the hole was to acquire reservoir information in regards to the commercial viability of a hydrocarbon bearing formation identified in the Flat Bay area from the previous drilling at Flat Bay #1 and Flat Bay #3 wells. In particular, oriented and preserved core is desired to measure and/or determine reservoir parameters such as in-situ fluid contents and physical properties, rock properties such as porosity, permeability and any related information available from laboratory analysis regarding reservoir properties of the cored interval. Other wells drilled within the basin by Vulcan Minerals Inc. (i.e. Flat Bay #1) had encountered significant oil in a relatively thick sequence of sandstone and conglomerate (Fishell's Brook Formation).

As predicted the hole penetrated a thin interval of gypsum, a thick sequence of anhydrite and into the target reservoir formation, a thin interval of Ship Cove limestone followed by conglomerate and sandstone of the Anguille Group. Hydrocarbon shows, varying from excellent to minor, were detected throughout the entire reservoir section. Live oil was observed weeping out around clast boundaries and some sections of coarse grained matrix. Because of the relatively low porosity/permeability of the core, oil would weep from the core many hours after the core was retrieved. Some core had no obvious oil shows when taken from the core barrel but wept oil later. As a result the reservoir sections may contain more significant oil than originally described upon core retrieval.

2.0 General Information

The drill site is located within the former gypsum quarry located 6.8 km west on route 403. The hole is located on the north side of the tailings pile approximately 100 m northwest of Well FB#3. Stephenville, the regional service center for the area is approximately 30 km from the site.

2.1 Map

Figure 1.

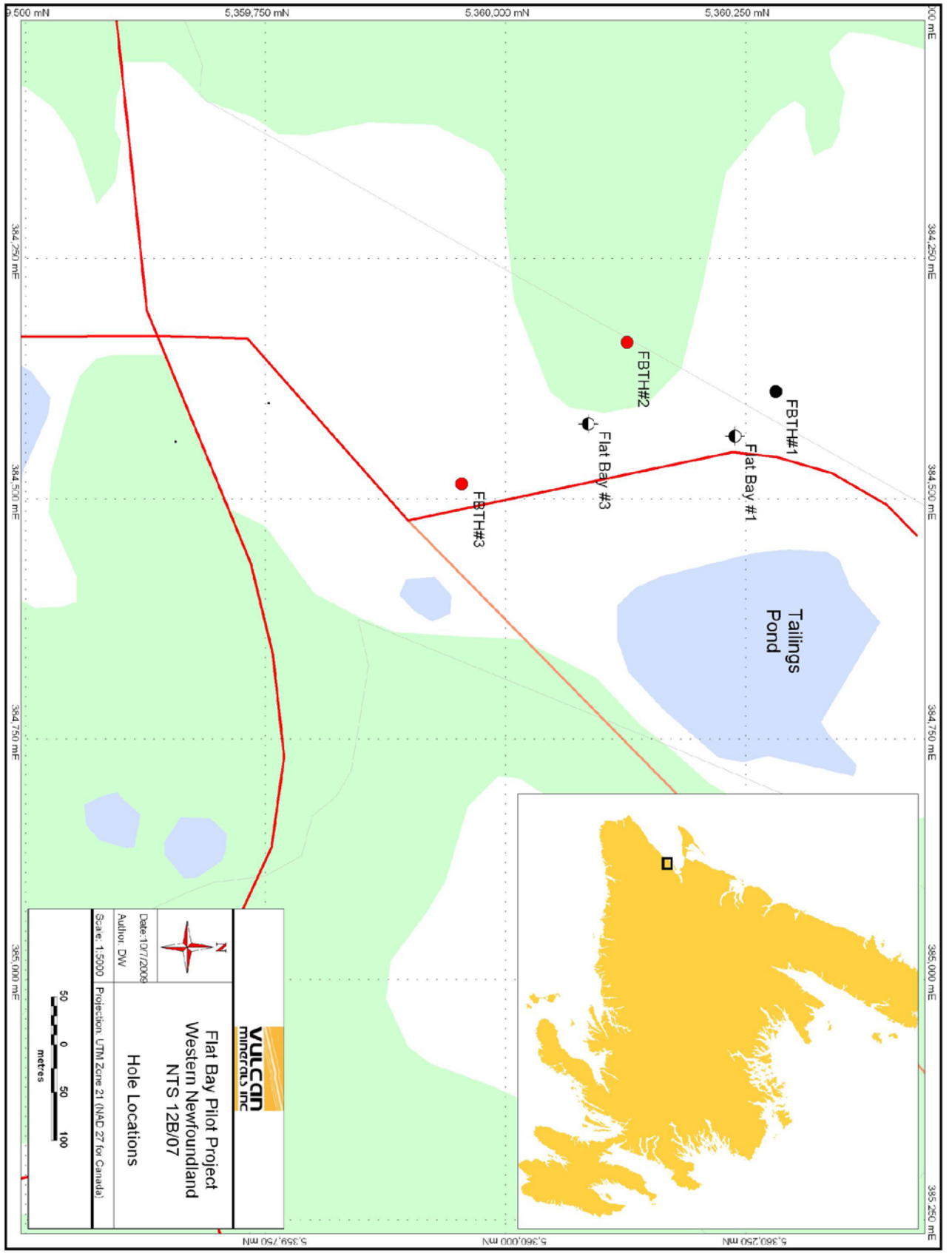


Figure 1. Well location.

Well Name

Vulcan - Investcan Flat Bay Test Hole #2

Exploration Permit

The well was drilled on exploration Permit 96 – 105 under the authority of Drilling Program Approval (DPA) # 2009-116-01 and Authority to Drill a Well (ADW) # 2009-116-01-01, both issued on February 10, 2009 (Appendix I).

Location Co-ordinates

The NAD 27 UTM co-ordinates of the well are as follows:

 Northing: 5360126.450 m N
 Easting: 384337.292 m E
 Elevation: 43.64 m

The survey was carried out by R. Davis Surveys Ltd. of Stephenville Crossing using differential GPS surveying equipment and techniques (Appendix VIII).

2.2 Difficulties and Delays

Difficulties encountered while drilling were as follows:

- Minor rig up delays prior to drilling out surface casing
- Minor delays waiting on parts to repair drill rig

Vulcan Minerals Inc.
Flat Bay Test Hole #2

Drilling Operations
3.00

3.00 Drilling Operations

A summary of the daily drilling operations are contained in Appendix II – Daily Drilling Reports.

3.1 Elevation

Elevations for the entire hole were measured from the bottom edge of the surface casing and are above mean sea level as follows:

Ground - 43.54 m
Casing – 43.64 m

3.2 Total Depth

The following depths are measured from the top of casing:

Total drilled depth – 213.5 m
Total Vertical Depth – 150.9 m

3.3 Spud Date

The well was spudded February 13, 2009 at 20:00 hrs.

3.4 Date Drilling Completed

The well ceased drilling on February 21, 2009 at 21:30 hrs.

3.5 Rig Release Date

The drilling rig was released on February 22, 2009 @ 00:00 hrs.

3.6 Well Status

The well was abandoned at 213.5m. The hole was completely filled with cement while the rods were pulled out of the hole from 213.5 to surface. The casing was cut 1 m below ground level. The well head was then marked by a large boulder. A location rod will be emplaced at the site.

3.7 Hole Sizes and Depth

The following depths are measured from top of surface casing and hole sizes are outside diameters (O.D. (mm)).

<u>Hole Section</u>	<u>Size (mm)</u>	<u>Depth (m)</u>
---------------------	------------------	------------------

Surface	91.7 (NW)	30
Main	75.7 (NQ)	213.5

3.8 Bit Records

The surface hole was drilled with one 91.7 mm (NW) diamond casing shoe bit. The main hole was drilled with two 75.7 mm (NQ) diamond-drilling bits. Depths in and out of each bit as well as type and serial # are outlined in Appendix III.

3.9 Casing and Cementing Record

The proposed HQ core was impractical, NW casing could not be installed due to caving down hole. The drilling program was switched to NW shoe bit, advanced with NW core. This may be the preferred drilling method for future test holes. The casing used for the surface/conductor pipe was NW casing, 88.9 mm – 12.8 kg/m³ with a NW shoe placed at 30 m. Thirty meters (10 joints) of NW casing set in hole (Appendix XI).

The NW casing was cemented with 0.1 m³ of Class A Portland Cement at a density of 1820 kg/m³, no cement returns were observed at surface, additional cement was poured from surface to stabilize the top of the casing. Cement was tagged in the casing at 28 m.

3.10 Side-tracked Hole

Not applicable (N/A)

3.11 Drilling Fluid

The drilling fluids consisted of fresh water and drilling polymers (PolyPlus). Entirety of the hole was drilled with fluid densities approximately equal to fresh water 1000 kg/m³.

3.12 Fluid Disposal

Approximately 2800L of drilling fluid contained in mud tanks following drilling completion were transported to Pasadena for processing and disposal at Parady's Waste Management and Industrial Services in compliance with government regulations.

3.13 Fishing Operations

No fishing operations were conducted on this particular well.

3.14 Well Kicks

There were no kicks encountered during drilling of test hole.

3.15 Formation Leak – Off Tests

There was no Formation Leak – Off Tests performed during drilling of hole.

3.16 Time Distribution

<u>Activity</u>	<u>Total Hours</u>
Drilling	85
Rig Up / Down	12
Rig Repairs	12
Circulating	5
Tripping	2
Cementing	5
Wait on Cement	12
Drill Out Cement	2
Survey	2
Casing Preparation	2
BOP Rig Up / Tests	2
Wait on Parts	73
Stand By	0

3.17 Deviation Plot

Two directional / deviation surveys were conducted at various intervals in the well utilizing a conventional down hole magnetic survey compass - reflex instrument. All surveys measured within 1 degree of deviation and within 4 degrees of azimuth – straight hole (Figure 2).

<u>Depth (meters)</u>	<u>Deviation (degrees)</u>	<u>Azimuth (degrees)</u>
100	-44.0	291.5
213	-44.3	293.4

3.18 Suspension Program

Not applicable

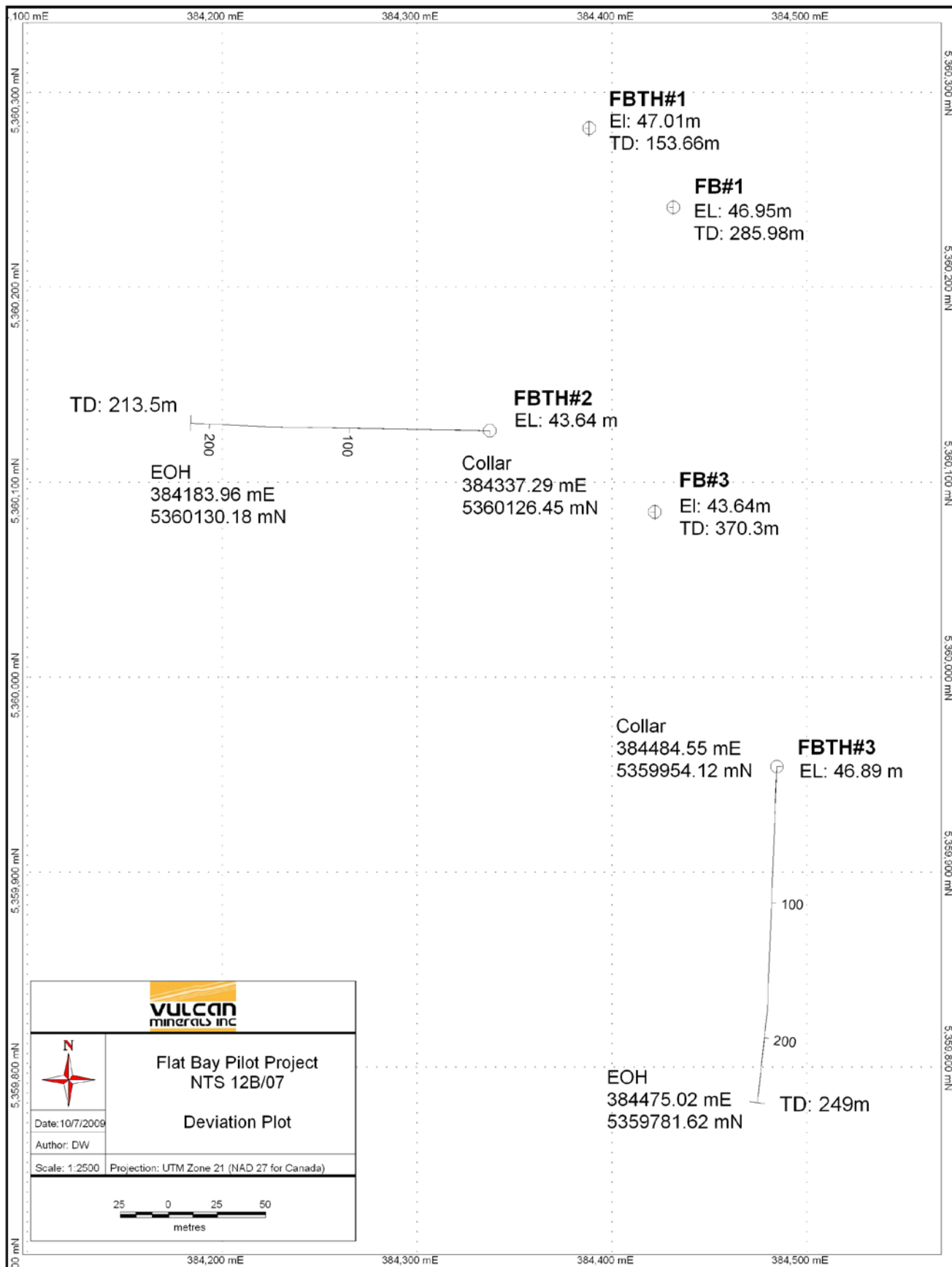


Figure 2. Deviation Plot.

3.19 Well Schematic

A detailed well schematic containing pertinent well bore information is attached (Appendix XI).

3.20 Fluid Samples

No formation fluid samples were taken.

3.21 Composite Well Record

A composite Well Record is included as Appendix IV.

Vulcan Minerals Inc.
Flat Bay Test Hole #2

Geology

4.00

4.00 Geology

4.1 Drill Cuttings

No cuttings were taken because entire hole from bedrock surface to total depth was cored.

4.2 Cores

The entire hole from bedrock surface to total depth was cored. Practically one hundred percent core recovery was achieved. All drill core is stored at Vulcan Minerals Inc. storage warehouse in Stephenville, Newfoundland and Labrador. All core boxes are numbered sequentially and marked with respective depth intervals (Appendix VI).

4.3 Lithology

A detailed description of drill core was compiled and is included in Appendix VII. Robert Cuthbert and David Walsh of Vulcan Minerals Inc. provided geological descriptions of all drill cores.

4.4 Stratigraphic Column

A stratigraphic column chart is attached as Appendix V.

4.5 Biostratigraphic Data

No biostratigraphic analysis has been carried out on core samples.

Vulcan Minerals Inc.
Flat Bay Test Hole #2

Well Evaluation

5.00

5.0 Well Evaluation

5.1 Downhole Logs

There were no downhole logging operations conducted.

5.2 Other Logs

There were no other downhole logging operations conducted.

5.3 Synthetic Seismogram

Not applicable

5.4 Vertical Seismic Profile

Not applicable

5.5 Velocity Surveys

Not applicable

5.6 Formation Stimulation

Not applicable

5.7 Formation Flow Tests

Not applicable

Vulcan Minerals Inc.
Flat Bay Test Hole #2

Other Data

6.00

6.0 Other Data

6.1 Mud Loggers Report

Not applicable

6.2 Directional and Deviation Survey

See 3.17.

6.3 Final Legal Survey

The final legal survey as carried out by R. Davis Surveys Ltd. is contained in Appendix VIII.

6.4 Core Photos

Core photos are contained in Appendix IX.

6.5 Core Analysis Report

Core analysis report is contained in Appendix X.

6.6 Fluid Analysis Report(s)

Not Applicable.

6.7 Oil, Gas and Water Analysis Report(s)

Not Applicable.

6.8 Geochemical, Biostratigraphic, Petrological, Palynological Paleontological Reports

The stratigraphic control of this well is considered excellent with 100% core recovery and geological descriptions of lithologies intersected paired with known lithological data from offset wells.

6.9 Well Termination Report

A well termination program is included in Appendix XI of this report.

Appendix I
Authority to Drill Well



Government of Newfoundland and Labrador
Department of Natural Resources

February 10th, 2009

Mr. Patrick Laracy, President
Vulcan Minerals Inc.
333 Duckworth Street
St. John's, NL, A1C 1G9

Dear Mr. Laracy:

**RE: Drilling Program Approval and Authority to Drill a Well for
Vulcan Minerals – Flat Bay Test Hole #2 and Flat Bay Test Hole #3**

Please find attached the following executed documents:

- (1) Drilling Program Approval (DPA 2009-116-01);
- (2) Authority to Drill a Well (ADW 2006-116-01-01); and
- (3) Authority to Drill a Well (ADW 2006- 116-01-02).

These documents contain attached conditions. Please ensure that they are prominently displayed at the wellsite at all times.

Thank you for your interest in western Newfoundland and good luck with your exploration efforts.

Yours sincerely,

A handwritten signature in black ink that reads "Keith Hynes".

Keith Hynes, P. Eng.
Director
Petroleum Engineering



Government of Newfoundland and Labrador
Department of Natural Resources
Energy Branch

DRILLING PROGRAM APPROVAL - APPLICATION

Pursuant to sections 8 and 9 of the *Petroleum and Natural Gas Act*(1), Vulcan Minerals Inc.
as operator on behalf of _____, holding a
subsisting licence, permit or lease issued pursuant to the *Petroleum Regulations*(2), namely; 96-105 & 03-106
(licence, permit, or lease #)

hereby applies for approval to conduct a drilling program using the drilling rig Logan Drilling Limited, Duralite 800
and equipment and procedures described in the detailed program dated January 14, 2009

The undersigned operator's Representative hereby declares that, to the best of the operator's knowledge, the information contained herein and in the attached detailed program is true, accurate and complete.

Signed: [Signature] Date: January 19/09
Operator's Representative
APPROVAL

Pursuant to sections 8 and 9 of the *Petroleum and Natural Gas Act*, the operator named in the Application is hereby authorized to conduct the proposed drilling program subject to the following conditions:

1. This Drilling Program Approval shall, unless otherwise extended or terminated, expire upon the 28 day of Feb, 2011
2. This Authorization shall be prominently displayed at the well site at all times during which operations are being conducted;
3. Evidence of financial responsibility, as required pursuant to Section 14 of the *Petroleum Drilling Regulations* (3), shall be provided by the operator to the Minister of Natural Resources;
4. The operator shall use the equipment and procedures described in the detailed program dated 2 February 2009 unless a change in the equipment or procedures is approved in writing by the Director; and
5. The operator shall comply with such other conditions as are appended to this Approval.

Signed: [Signature] Effective Date: 2009-02-10

Drilling Program Approved No. 2009-116-01

(1) - (R.S.N.L. 1990, c. P-10)
(2) - CNR 1151/96
(3) - CNR 1150/96

SCHEDULE "A"
TO
DRILLING PROGRAM APPROVAL #2009-116-01
OTHER CONDITIONS

1. Notwithstanding condition # 4 of the Approval (see previous page), the Operator shall comply with the requirements of the *Petroleum Drilling Regulations* (the Regulations) unless the Operator has received written approval from the Director to deviate from the Regulations.
2. It is a condition of approval of this DPA, that the Operator ensure that the insurance policy No. AMWCA099363 is in effect for the duration of these operations. Upon receipt of the attachments to the Certificate of Insurance which detail the Amount of Coverage, the Policy Conditions and Policy Exclusions, the Operator will supply same to the Director without delay.
3. Pursuant to Section 154 of the Regulations, the director shall release to the public, general information including the name, classification, location, identity of the drilling contractor and rig used by the Operator, depth and operational status of the drilling program.
4. It is a condition of approval of this DPA that the Operator, pursuant to Section 52(2)(a) of the *Petroleum Regulations*, (CNR1151/96) provide to the director on a weekly basis a benefits monitoring report as well as a cost summary report showing AFE costs, costs to date and variances for all major cost categories.
5. Prior to commencement of any drilling operations, the Operator must have on site a finalized Contingency / Emergency Response Plan meeting the requirements of Section 11 of the Regulations. As per communications regarding this plan, all leaks are reportable and all spills in excess of 70 liters are reportable.
6. The core acquired under this DPA shall be submitted to the Director upon expiration of Exploration Permit 96-105.
7. The detailed program referenced in Approval condition #4 attached consists of the following documents supplied by the Operator:

Title	Date Issued	Date Revised	Revision
Authority to Drill Test Holes	14 January 2009	2 February 2009	Version 1.1
Emergency Response Plan	5 September 2006	10 February 2009	N/A

February 10th, 2009



Government of Newfoundland and Labrador
 Department of Natural Resources
 Energy Branch

AUTHORITY TO DRILL A WELL - APPLICATION

Pursuant to sections 8 and 9 of the *Petroleum and Natural Gas Act (R.S.N.L. 1990, c. P-10)* and in compliance with section 29 of the *Petroleum Drilling Regulations, (CNR 1150/96)* Vulcan Minerals Inc., as operator, hereby applies for Authority to Drill a Well to be known as Flat Bay Test Holes #2 using the equipment and procedures described in the well program dated January 14, 2009 Permit, Licence or Lease to which this Program applies: 96-105 & 03-106

Area: Bay St. George	CO-ORDINATES	
Field/Pool: Flay Bay	Long:	UTM (N A D 27)
Drilling Rig: Duralite 800	Lat:	Northing: 5 360 103
Rig Type: Diamond Core Exploration Rig		Easting: 384 283
Drilling Contractor: Logan Drilling Limited	ELEVATION	
	<input type="checkbox"/> RT <input type="checkbox"/> KB <input type="checkbox"/> RF <input type="checkbox"/> m	DEPTH
	G.L.:	T.D.: 200 m
		TVD: 150 m
ESTIMATES		TARGET HORIZONS
Spud Date: February 1, 2009	Well Cost: \$100 000	Spout Falls Formation, Fischell's Brook Conglomerate
Days on Location: 7		

EVALUATION PROGRAM

Ten-metre sample intervals:	Conventional cores at: Continuous Core
Five-metre sample intervals:	Logs and Tests: Oriented core, detailed core and formation fluid analysis
Canned sample intervals:	

CASING AND CEMENTING PROGRAM

O.D. (mm)	Weight (kg/m)	Grade	Setting Depth (m)	Cementing Program
88.9	12.8	NW	40	Type G cement

Other Equipment:

The undersigned operator's Representative hereby declares that, to the best of the Representative's knowledge, the information contained herein and in the attached detailed program is true, accurate and complete.

Signed: [Signature] Date: Jan 19/09
 Operator's Representative [Signature] AUTHORIZATION

Whereas the Minister of Natural Resources has jurisdiction under the *Petroleum Drilling Regulations*, ("the Regulations"). In accordance with section 32 of the Regulations, the operator named in the Application is authorized to undertake the proposed well program described above subject to the following conditions:

1. This Authorization shall be prominently displayed at the well site at all times during which operations are being conducted;
2. Copies of all logs and well test data shall be submitted to the director by the operator promptly after their acquisition;
3. The operator shall comply with all conditions of the Drilling Program Approval No. 2009-116-01 under which the above well is to be drilled;
4. No change in the well program hereby approved may be made unless it is first approved by the director in writing;
5. This Authorization is conditional on the operator commencing drilling within 120 days of the effective Authorization date; and
6. The operator shall comply with such other conditions as are appended to this Authorization.

Signed: [Signature] Effective Date: 2009-02-10

Authority to Drill a Well No. 2009-116-01-01

Revised: March, 2008 FRM-63

SCHEDULE "A" TO
AUTHORITY TO DRILL A WELL #2009-116-01-01
OTHER CONDITIONS

1. The Operator shall, prior to commencement of major site operations, ensure that an approved Operator's representative is on site to supervise all site operations.
2. Notwithstanding condition #3 of the Authorization (see previous page), the Operator shall comply with the requirements of the *Petroleum Drilling Regulations, (CNR 1150/96)* (the Regulations) unless the Operator has received written approval from the Director to deviate from the Regulations.
3. The Operator shall ensure that the test hole is drilled in a prudent and reasonable manner, consistent with good oilfield practices and with due consideration for the safety of personnel, property and the environment.
4. The Operator shall be liable for its actions and the actions of its agents, contractors, employees and any others acting under the Operator's authority in drilling the test hole.
5. The Operator's liability for the actions of its agents, contractors, employees and any others acting under the Operator's authority in drilling the test hole does not limit any liability that those agents, contractors, employees or others acting under the Operator's authority may have to the Operator.
6. The Operator shall ensure that all necessary approvals have been acquired from other government agencies and other rights holders, in respect of access to and use of land for the purpose of the drilling operations, and disposal of all materials.
7. The Operator shall attorn to the jurisdiction of the courts of the Province of Newfoundland and Labrador.
8. As per section 142(b) of the Regulations, 24 hour notice shall be provided to the Director prior to spud-in.
9. A summary report of all operations performed during drilling (daily drilling report and daily geological report) shall be submitted on a daily basis via email to mikestoyles@gov.nl.ca.
10. A termination record signed by the operator's representative must be submitted within 21 days of the rig release date. Down-hole schematic and digital images showing the final condition of the site are to be included.
11. Prior to the end of drilling operations, the Operator shall provide a legal survey of the site acceptable to the Director to confirm the location of the well.

Feb 10th, 2009



Government of Newfoundland and Labrador
 Department of Natural Resources
 Energy Branch

AUTHORITY TO DRILL A WELL - APPLICATION

Pursuant to sections 8 and 9 of the *Petroleum and Natural Gas Act (R.S.N.L. 1990, c. P-10)* and in compliance with section 29 of the *Petroleum Drilling Regulations, (CNR 1150/96)* Vulcan Minerals Inc., as operator, hereby applies for Authority to Drill a Well to be known as Flat Bay Test Holes #3 using the equipment and procedures described in the well program dated January 14, 2009.
 Permit, Licence or Lease to which this Program applies: 96-105 & 03-106

Area: Bay St. George	CO-ORDINATES	
Field/Pool: Flat Bay	Long:	UTM (N A D 27)
Drilling Rig: Duralite 800	Lat:	Northing: 5 360 001
Rig Type: Diamond Core Exploration Rig	ELEVATION DEPTH	
Drilling Contractor: Logan Drilling Limited	<input type="checkbox"/> RT <input type="checkbox"/> KB <input type="checkbox"/> RF <input type="checkbox"/> m	T.D.: 200 m
	G.L.:	TVD: 150 m
ESTIMATES		TARGET HORIZONS
Spud Date: February 1, 2009	Well Cost: \$100 000	Spout Falls Formation, Fischell's Brook Conglomerate
Days on Location: 7		

EVALUATION PROGRAM

Ten-metre sample intervals:	Conventional cores at: Continuous Core
Five-metre sample intervals:	Logs and Tests: Oriented core, detailed core and formation fluid analysis
Canned sample intervals:	

CASING AND CEMENTING PROGRAM

O.D. (mm)	Weight (kg/m)	Grade	Setting Depth (m)	Cementing Program
88.9	12.8	NW	40	Type G cement

Other Equipment:

The undersigned operator's Representative hereby declares that, to the best of the Representative's knowledge, the information contained herein and in the attached detailed program is true, accurate and complete.

Signed: [Signature] Date: Jan 19 / 09.
 Operator's Representative AUTHORIZATION

Whereas the Minister of Natural Resources has jurisdiction under the *Petroleum Drilling Regulations*, ("the Regulations"). In accordance with section 32 of the Regulations, the operator named in the Application is authorized to undertake the proposed well program described above subject to the following conditions:

1. This Authorization shall be prominently displayed at the well site at all times during which operations are being conducted;
2. Copies of all logs and well test data shall be submitted to the director by the operator promptly after their acquisition;
3. The operator shall comply with all conditions of the Drilling Program Approval No. 2009-116-01 under which the above well is to be drilled;
4. No change in the well program hereby approved may be made unless it is first approved by the director in writing;
5. This Authorization is conditional on the operator commencing drilling within 120 days of the effective Authorization date; and
6. The operator shall comply with such other conditions as are appended to this Authorization.

Signed: [Signature] Effective Date: 2009-02-10
 Authority to Drill a Well No. 2009-116-01-02 Revised: March, 2008 FRM-63

SCHEDULE "A" TO
AUTHORITY TO DRILL A WELL #2009-116-01-02
OTHER CONDITIONS

1. The Operator shall, prior to commencement of major site operations, ensure that an approved Operator's representative is on site to supervise all site operations.
2. Notwithstanding condition #3 of the Authorization (see previous page), the Operator shall comply with the requirements of the *Petroleum Drilling Regulations, (CNR 1150/96)* (the Regulations) unless the Operator has received written approval from the Director to deviate from the Regulations.
3. The Operator shall ensure that the test hole is drilled in a prudent and reasonable manner, consistent with good oilfield practices and with due consideration for the safety of personnel, property and the environment.
4. The Operator shall be liable for its actions and the actions of its agents, contractors, employees and any others acting under the Operator's authority in drilling the test hole.
5. The Operator's liability for the actions of its agents, contractors, employees and any others acting under the Operator's authority in drilling the test hole does not limit any liability that those agents, contractors, employees or others acting under the Operator's authority may have to the Operator.
6. The Operator shall ensure that all necessary approvals have been acquired from other government agencies and other rights holders, in respect of access to and use of land for the purpose of the drilling operations, and disposal of all materials.
7. The Operator shall attorn to the jurisdiction of the courts of the Province of Newfoundland and Labrador.
8. As per section 142(b) of the Regulations, 24 hour notice shall be provided to the Director prior to spud-in.
9. A summary report of all operations performed during drilling (daily drilling report and daily geological report) shall be submitted on a daily basis via email to mikestoyles@gov.nl.ca.
10. A termination record signed by the operator's representative must be submitted within 21 days of the rig release date. Down-hole schematic and digital images showing the final condition of the site are to be included.
11. Prior to the end of drilling operations, the Operator shall provide a legal survey of the site acceptable to the Director to confirm the location of the well.

Feb 10th, 2009

Appendix II Daily Reports



Daily Report: 1

Date: Friday 13, February 2009 (0000 hrs – 24000 hrs)

Hole Number: Flat Bay Test Hole #2 (FBTH#2)
UTM Nad 27 Zone 21
5360131 m N, 0384310 m E

Elevation: Surface (approximately) 43 m (asl)
Casing (approximately) 43.2 m (asl)

Weather: Overcast, light wind (30km/hr), temperature -10°C

Depth Start: 0 m

Depth End: 0 m

Drilling Fluid: N/A (Not applicable)

Bit: N/A

Survey: N/A

Lithology: N/A

Formation: N/A

Operations: Unloading drill rig and rigging up

Comments: Transport truck arrived on site, drilling rig and ancillary equipment unloaded and transported to the location of FBTH#2. Drill rig set up and levelled, water lines run, flare pit constructed and tank installed. Light plant, site trailer, generator, porta-potty and remote heater delivered and installed.



Daily Report: 2

Date: Saturday 14, February 2009 (0000 hrs – 24000 hrs)

Hole Number: Flat Bay Test Hole #2 (FBTH#2)
 UTM Nad 27 Zone 21 Azumith: 270 degrees
 5360131 m N, 0384310 m E Inclinatio**n:** 45 degrees

Elevation: Surface (approximately) 43 m (asl)
 Casing (approximately) 43.2 m (asl)

Weather: Snow (heavy at times) 40 cm accumulation, light wind (30km/hr), temperature -5°C

Depth Start: 0 m

Depth End: 30 m (drilled) **TVD:** 21.2 m (actual)

Drilling Fluid: Water with some water based polymer for increased viscosity and hole stability.

Bit: Casing Shoe (Fordia CN-ST-5-1C4, serial # 77712-10)
 NQ Core Bit (Fordia NWL 4-6, serial # 69920-7)

Survey: N/A

Lithology: 0 - 26 m Overburden, cobbles and boulders of various lithology, silty-sand matrix.
 26 - 30 m Gypsum, white to light grey, massive to nodular, some thin, light to medium grey, irregular laminations

Formation: Codroy Road Formation (Gypsum)

Operations: NQ size core to casing point, ream hole open, install NW casing to 30 m. Prepare to cement casing in hole.

Comments: Bedrock (Gypsum) encountered at 26 m. Due to length of casing (3 m sections), bedrock cored and reamed to 30 m to install casing. 10 lengths of NW casing with shoe bit installed in hole, reamed through several tight spots.



Daily Report: 3

Date: Sunday 15, February 2009 (0000 hrs – 24000 hrs)

Hole Number: Flat Bay Test Hole #2 (FBTH#2)
 UTM Nad 27 Zone 21 Azumith: 270 degrees
 5360131 m N, 0384310 m E Inclination: 45 degrees

Elevation: Surface (approximately) 43 m (asl)
 Casing (approximately) 43.2 m (asl)

Weather: Overcast, light flurries, light wind (15km/hr), temperature -1°C

Depth Start: 30 m

Depth End: 30 m (drilled) **TVD:** 21.2 m (actual)

Drilling Fluid: Water with some water based polymer for increased viscosity and hole stability.

Bit: Casing Shoe (Fordia CN-ST-5-1C4, serial # 77712-10)
 NQ Core Bit (Fordia NWL 4-6, serial # 69920-7)

Survey: N/A

Lithology: 26 - 30 m Gypsum, white to light grey, massive to nodular, some thin, light to medium grey, irregular laminations.

Formation: Codroy Road Formation (Gypsum)

Operations: Cement casing in hole at 30 m. 3 bags of cement mixed to 1820 kg/m³, including 30% excess.
 Cement job finished at 0300 hrs.
 Waiting on cement and some drilling equipment.

Comments: Cement pumped through casing, no returns to surface. Cement poured from surface around surface casing. Cement settled and setup just below grade.



Daily Report: 4

Date: Monday 16, February 2009 (0000 hrs – 24000 hrs)

Hole Number: Flat Bay Test Hole #2 (FBTH#2)
 UTM Nad 27 Zone 21 Azumith: 270 degrees
 5360131 m N, 0384310 m E Inclinaton: 45 degrees

Elevation: Surface (approximately) 43 m (asl)
 Casing (approximately) 43.2 m (asl)

Weather: Sunny with cloudy periods, light wind (10km/hr), temperature -6°C

Depth Start: 30 m

Depth End: 30 m (drilled) **TVD:** 21.2 m (actual)

Drilling Fluid: N/A.

Bit: N/A

Survey: N/A

Lithology: 26 - 30 m Gypsum, white to light grey, massive to nodular, some thin, light to medium grey, irregular laminations.

Formation: Codroy Road Formation (Gypsum)

Operations: Waiting on drilling equipment.

Comments: Flare line and gas monitoring equipment installed.



Daily Report: 5

Date: Tuesday 17, February 2009 (0000 hrs – 24000 hrs)

Hole Number: Flat Bay Test Hole #2 (FBTH#2)
 UTM Nad 27 Zone 21 Azumith: 270 degrees
 5360131 m N, 0384310 m E Inclination: 45 degrees

Elevation: Surface (approximately) 43 m (asl)
 Casing (approximately) 43.2 m (asl)

Weather: Sunny with cloudy periods, light wind (10km/hr), temperature -8°C

Depth Start: 30 m

Depth End: 44 m (drilled) **TVD:** 31 m (actual)

Drilling Fluid: Water with some water based polymer for increased viscosity and hole stability.

Bit: NQ Core Bit (Fordia NWL 4-6, serial # 69920-7)

Survey: N/A

Lithology: 26 – 34.1 m Gypsum, white to light grey, massive to nodular, some thin, light to medium grey, irregular laminations.
 34.1 – 44 m Anhydrite, greyish blue, massive microcrystalline, to entrolithic

Formation: Codroy Road Formation (Anhydrite)

Operations: Coring NQ.

Comments: Tagged cement in casing at 28 m. Pressure test casing at 1000 kPa for 5 minutes. Drill out cement and start coring NQ.



Daily Report: 6

Date: Wednesday 18, February 2009 (0000 hrs – 24000 hrs)

Hole Number: Flat Bay Test Hole #2 (FBTH#2)
 UTM Nad 27 Zone 21 Azumith: 270 degrees
 5360131 m N, 0384310 m E Inclination: 45 degrees

Elevation: Surface (approximately) 43 m (asl)
 Casing (approximately) 43.2 m (asl)

Weather: Overcast, light wind (20km/hr), temperature -15°C

Depth Start: 44 m

Depth End: 81 m (drilled) **TVD:** 57 m (actual)

Drilling Fluid: Water with some water based polymer for increased viscosity and hole stability.

Bit: NQ Core Bit (Fordia NWL 4-6, serial # 69920-7)

Survey: N/A

Lithology: 34.1 – 81 m Anhydrite, greyish blue, massive microcrystalline. Thin zones (1 to 2 m thick) of finely laminated limestone from 53 to 66 m drilled depth.

Formation: Codroy Road Formation (Anhydrite)

Operations: Coring NQ.

Comments: Hydraulic motor on drill failed early morning. Motor replaced, and resume coring NQ by late afternoon.



Daily Report: 7

Date: Thursday 19, February 2009 (0000 hrs – 24000 hrs)

Hole Number: Flat Bay Test Hole #2 (FBTH#2)
 UTM Nad 27 Zone 21 Azumith: 270 degrees
 5360131 m N, 0384310 m E Inclination: 45 degrees

Elevation: Surface (approximately) 43 m (asl)
 Casing (approximately) 43.2 m (asl)

Weather: Light snow, high wind (60km/hr), temperature -5°C

Depth Start: 81 m

Depth End: 141 m (drilled) **TVD:** 99 m (actual)

Drilling Fluid: Water with some water based polymer for increased viscosity and hole stability.

Bit: NQ Core Bit (Fordia NWL 4-6, serial # 69920-7)

Survey: Depth 100 m
 Azimuth 291° (270° corrected for magnetic declination)
 Inclination -44°

Lithology: 81 - 134 m Anhydrite, greyish blue, massive microcrystalline. Thin zones (1 to 2 m thick) of finely laminated limestone from 121 to 131 m drilled depth.
 134 - 141 m Limestone, light brown, thinly laminated, wavy and irregular, some anhydrite nodules along bedding planes.

Formation: Ship Cove Formation

Operations: Coring NQ.

Comments: Started oriented core at 132 m.



Daily Report: 8

Date: Friday 20, February 2009 (0000 hrs – 24000 hrs)

Hole Number: Flat Bay Test Hole #2 (FBTH#2)
 UTM Nad 27 Zone 21 Azumith: 270 degrees
 5360131 m N, 0384310 m E Inclination: 45 degrees

Elevation: Surface (approximately) 43 m (asl)
 Casing (approximately) 43.2 m (asl)

Weather: Cloudy with sunny breaks, moderate wind (30km/hr), temperature -7°C

Depth Start: 141 m

Depth End: 153 m (drilled) **TVD:** 108 m (actual)

Drilling Fluid: Water with some water based polymer for increased viscosity and hole stability.

Bit: NQ Core Bit (Longyear, AlphaBit 7, serial # 144345-7)

Survey: Depth 100 m
 Azimuth 291° (270° corrected for magnetic declination)
 Inclination -44°

Lithology: 134 - 142 m Limestone, light brown, thinly laminated, wavy and irregular, some anhydrite nodules along bedding planes.
 142 - 153 m Conglomerate; multi-coloured; pebble to cobble sized, sub-rounded, clasts; supported in a sandy to silty matrix. First six metres is blocky and fractured. Oil weeping out of core around clast boundaries.

Formation: Spout Falls Formation, Fischell's Brook Conglomerate

Operations: Coring NQ.

Comments: Down for 12 hour for rig repair. Pull out of hole to change bit. Drilling fluid system changed over to "closed system", return fluid re-circulated back down the hole.



Daily Report: 9

Date: Saturday 21, February 2009 (0000 hrs – 24000 hrs)

Hole Number: Flat Bay Test Hole #2 (FBTH#2)
 UTM Nad 27 Zone 21 Azumith: 270 degrees
 5360131 m N, 0384310 m E Inclination: 45 degrees

Elevation: Surface (approximately) 43 m (asl)
 Casing (approximately) 43.2 m (asl)

Weather: Overcast with light snow, high wind (40 - 60 km/hr), temperature -8°C

Depth Start: 153 m

Depth End: 213.5 m (drilled) **TVD:** 150.9 m (actual)

Drilling Fluid: Water with some water based polymer for increased viscosity and hole stability.

Bit: NQ Core Bit (Longyear, AlphaBit 7, serial # 144345-7)

Survey: Depth 213 m
 Azimuth 293° (272° corrected for magnetic declination)
 Inclination -44°

Lithology: 153 – 213.5 m Conglomerate; multi-coloured; pebble to cobble sized, sub-rounded, clasts; supported in a sandy to silty matrix. Oil weeping out around clast boundaries, various intervals throughout section.

Formation: Spout Falls Formation, Fischell's Brook Conglomerate

Operations: Abandon hole.

Comments: Cored hole to 213.5 m, total depth. Survey; abandon hole with three cement pours on way out of hole, total of 30 bags of cement. Topped up cement when all rods out of hole. Preparing to move drill rig to next hole.

**Appendix III
Bit Record**



Bit Record Flat Bay Test Hole #2

Bit Number	Size (mm)	Type (Serial #)	Depth In (mRC)	Depth Out (mRC)	Meterage (m)	Hours (h)	ROP (m/hr)	Pulled Condition
1	91.7	Fordia CN-ST-5-1C4	0	30	30	16	1.9	Stayed in hole
2	75.7	Fordia 4-6 (69920-7)	0	164	164	51	3.2	Diamond surface worn out
3	75.7	AlphaBit 7 (144345-7)	164	213.5	49.5	17	2.9	Good

Appendix IV
Composite Well Record



Flat Bay Test Hole #2, February 2009

Position: projection NAD 27: 384337.292-mE, 5360126.450-mN, Casing + 43.64-m

All depths are MD Casing

Depth	Lithology Description	Lithology Column	ROP		Casing Scheme	Drilling Data			DF & Cementing			Remarks
			0 (min/m)	ROP 10		Deviation:	Bit:	Comments:	Drilling Fluid:	Cement:	Comments:	
0	Overburden 0m to 27.5m				88.9-mm 12.8-kg/m @ 30-m		#1. 0 m to 30 m 91.7 mm NW Casing Shoe: Fordia CN-ST-5-1C4; meterage: 30 m; 16 hrs; ROP: 1.9 m/h		Type: Water based polymer (Poly Plus); MW ~1000-kg/m3	One stage cement job. Pump 0.3-m ³ H ₂ O preflush. Pump 0.1-m ³ Class A 1820 kg/m ³ cement slurry.	* 30% open hole excess * 0.03-m ³ cement topped up at surface * Tag TOC at 28-m	
25	Gypsum 27.5m to 35.1m						#2. 0 m to 30 m 75.5 mm NQ Core: Fordia 4-6 (s/n 69920-7); meterage: 21 m; 10 hrs; ROP: 2.1 m/hr					
50	Codroy Road Formation, Anhydrite						#3. 30 m to 44 m 75.5 mm NQ Core: Fordia 4-6 (s/n 69920-7); meterage: 14 m; 8 hrs; ROP: 1.8 m/hr	Wait on parts, repair	Type: Water based polymer (Poly Plus); MW ~1000-kg/m3			
75						#4. 44 m to 90 m 75.5 mm NQ Core: Fordia 4-6 (s/n 69920-7); meterage: 46 m; 12 hrs; ROP: 3.8 m/hr	Wait on parts, repair					
100	Ship Cove 134.7m to 141.74m						#5. 90 m to 141 m 75.5 mm NQ Core: Fordia 4-6 (s/n 69920-7); meterage: 51 m; 15 hrs; ROP: 3.4 m/hr	Wait on parts, repair				
125						#6. 141 m to 164 m 75.5 mm NQ Core: Fordia 4-6 (s/n 69920-7); meterage: 23 m; 6 hrs; ROP: 3.8 m/hr	Wait on parts, repair					
150	Spout Falls Formation 165m to 186.5m Conglomerate 141.74 to 213.5 m						#7. 164 m to 213.5 m 75.5 mm NQ Core: AlphaBit 7 (s/n 144345-7); meterage: 49.5 m; 17 hrs; ROP: 2.9 m/hr	Trip to change bit				
175												
200						Deviation -44.0 degrees Azimuth 291.5 degrees @ 100 m Reflex						
225						Deviation -44.3 degrees Azimuth 293.4 degrees @ 213 m Reflex				Abandonment Cement, 3 stages from 213.5 m to surface; pump 0.8 m3 class		Reach TD: intersect 72 m of Spout Fall's Formation, Fischell's
Remarks: Licence 96-105 Rig: Logan Drilling Inc. Duralite 800 Spud Date: Feb 13, 2009 @ 20:00 Total Operational Hours: 214.00 Rig Release: Feb 22, 2009 @ 00:00 Percentage Operational NPT: 50.0%												

Appendix V
Stratigraphic Column

Flat Bay Test Hole #2

Age	Depth (m)	Lithology	Description	Unit	Oil Show	Porosity	
Viséan	0.0		Overburden, glacial till or fill material, consisting of cobbles, boulders with a matrix of sand and clay.				
	25.0		Gypsum: White, nodular with thin irregular wisps of calcareous mudstone (micrite) surrounding nodules. 27.6 - 28 m, soft unconsolidated calcareous clay.	Codroy Road Formation			
	50.0		Anhydrite: Steel blue, massive, sugary texture; thin (cm) irregular, light brown wisps and laminations of micrite.				
	75.0		Limestone: light brown to tan, thin beds to laminated at 70° to Core Axis (CA); some vuggy porosity with calcite crystal growth; petroliferous odour.				
	100.0		Anhydrite: Steel blue, massive, sugary texture; thin (cm) irregular, increasing amounts of light brown wisps and laminations of micrite with depth.				
	125.0		Limestone: Light gray beds of to 1 cm thick with thin medium to dark gray organic rich? Laminations. Small (mm) nodules of anhydrite in organic laminations. Petroliferous odour. Sharp basal contact at 60° to core axis.		Ship Cove		
	150.0		Conglomerate: Rounded to sub-rounded, point supported, pebble to cobble size, clasts of micrite/limestone/dolostone, igneous, and quartz arenite; coarse sand matrix with calcareous cement; blocky core from 146 - 148 m, rare slick en sided surfaces @ 50° to CA (147.5 m); porosity visually estimated at 5-10%.		Spout Falls Formation - Fischells Brook Cong.		12.3
	175.0						11.1
	200.0						13.7
							8.3
Tournaisian							2.4
						8	

Appendix VI
Core Box Depths



Core Box Depths

Flat Bay Test Hole #2

Box #	Start depth	End Depth (m)
1	27.50	31.95
2	31.95	36.10
3	36.10	40.35
4	40.35	44.70
5	44.70	48.95
6	48.95	53.30
7	53.30	57.55
8	57.55	61.98
9	61.98	66.42
10	66.42	70.65
11	70.65	74.92
12	74.92	79.22
13	79.22	83.69
14	83.69	87.90
15	87.90	92.32
16	92.32	96.67
17	96.67	101.06
18	101.06	105.45
19	105.45	109.75
20	109.75	114.18
21	114.18	118.46
22	118.46	122.82
23	122.82	127.16
24	127.16	131.47
25	131.47	135.68
26	135.68	139.98
27	139.98	144.03
28	144.03	148.30
29	148.30	152.33
30	152.33	156.62
31	156.62	160.90
32	160.90	165.10
33	165.10	169.30
34	169.30	173.39
35	173.39	177.50
36	177.50	181.52
37	181.52	184.93
38	184.93	189.90
39	189.90	196.20
40	196.20	201.10
41	201.10	205.32
42	205.32	209.50
43	209.50	213.50

Appendix VII
Lithological Descriptions

Depth (m)		Thickness (m)	Description	Lineation	Porosity	Oil/gas show	Rock quality
From	To						
0	27.5	27.5	Overburden, glacial till or fill material, consisting of cobbles, boulders with a matrix of sand and clay.				
27.5 - 35.1 m, Codroy Road Formation, Gypsum unit							
27.5	35.1	7.6	Gypsum: White, nodular with thin irregular wisps of calcareous mudstone (micrite) surrounding nodules. 27.6 - 28 m, soft unconsolidated calcareous clay.				Consolidated
35.1 - 134.7 m, Codroy Road Formation, Anhydrite unit							
35.1	53	17.9	Anhydrite: Steel blue, massive, sugary texture; thin (cm) irregular, light brown wisps and laminations of micrite.				Consolidated
53	54.5	1.5	Limestone: light brown to tan, thin beds to laminated at 70° to Core Axis (CA); some vuggy porosity with calcite crystal growth; petroliferous odour.	70° CA			Consolidated
54.5	63.9	9.4	Anhydrite: Steel blue, massive, sugary texture; thin (cm) irregular, light brown wisps and laminations of micrite.				Consolidated
63.9	66.1	2.2	Limestone: light brown to tan, thin beds to laminated at 70° to Core Axis (CA); some vuggy porosity with calcite crystal growth; petroliferous odour.	70° CA			Consolidated
66.1	121.41	55.31	Anhydrite: Steel blue, massive, sugary texture; thin (cm) irregular, increasing amounts of light brown wisps and laminations of micrite (15-20%).				Consolidated
121.41	123.2	1.79	Anhydrite: Steel blue, massive, sugary texture; thin beds of light brown limestone dipping at 55° to CA. Small (mm) nodules of anhydrite along bedding plane.	55° CA			Consolidated
123.2	129	5.8	Anhydrite: Steel blue, massive, sugary texture with wisps of micrite throughout.				Consolidated

Depth (m)		Thickness (m)	Description	Lineation	Porosity	Oil/gas show	Rock quality
From	To						
129	131	2	Limestone: light brown to tan, thin wavy beds and laminations of anhydrite at 50° to Core Axis (CA); petroliferous odour; rubble zone at 129.35 m.	50° CA			Consolidated
131	134.7	3.7	Anhydrite: Steel blue, massive, sugary texture; thin wispy and irregular beds/laminations of light brown limestone.				Consolidated
134.7 - 141.74 m, Ship Cove Formation							
134.7	141.54	6.84	Limestone: Light gray beds of to 1 cm thick with thin medium to dark gray organic rich? Laminations. Small (mm) nodules of anhydrite in organic laminations. Petroliferous odour. Sharp basal contact at 60° to core axis.	50° CA		petroliferous (+) sulphur odour	Consolidated
141.54	141.74	0.2	Micrite: greenish gray, very fine grained, thin bedded to laminated, irregular contact down to.				Consolidated
141.74 - , Spout Falls Formation, Fischell's Brook Conglomerate							
141.74	142.04	0.3	Conglomerate: Greenish gray; sub-angular to angular, pebble sized, clasts of limestone, dolostone and igneous clasts; matrix of fine to coarse sand, low porosity (1-3% estimated)		1-3%	minor oil show on grain boundaries	Consolidated
142.04	143.93	1.89	Conglomerate: alternating pebble and cobble/boulder conglomerate; medium to coarse sand matrix, porosity 5-10%, oil weeping out from pebble conglomerate zones with coarse matrix.		5-10%	oil weeping from clast boundaries in pebble cgl.	Consolidated
143.93	148	4.07	Conglomerate: Rounded to sub-rounded, point supported, pebble to cobble size, clasts of micrite/limestone/dolostone, igneous, and quartz arenite; coarse sand matrix with calcareous cement; blocky core from 146 - 148 m, rare slick en sided surfaces @ 50° to CA (147.5 m); porosity visually estimated at 5-10%; some oil weeping out at clast boundaries (approximately 10% of core).	50° CA	5-10%	oil weeping from clast boundaries in pebble cgl.	Blocky

Depth (m)		Thickness (m)	Description	Lineation	Porosity	Oil/gas show	Rock quality
From	To						
148	148.3	0.3	Sandstone: coarse sandstone; some cobble sized clasts; calcareous cement; porosity estimated at 8-12%; good oil show over entire section.		8-12%	Good oil show, oil bleeding out of sandstone	Consolidated
148.3	150.5	2.2	Conglomerate: Pebble to cobble conglomerate, point to matrix supported; medium to coarse grained sand matrix, calcareous cement, blocky broken core, porosity visually estimated at 5-10%, possibly higher due to blocky core; oil weeping out from pebble conglomerate zones.		5-10%	Good oil show, oil bleeding out of matrix in pebble cgl zone	Blocky
150.5	153.55	3.05	Conglomerate: Cobble conglomerate, matrix supported; medium to coarse grained sand matrix, calcareous cement, consolidated core, breaks along large clast boundaries, porosity visually estimated at 3-5%; minor oil weeping around moderate sized cobble clast boundaries.		3-5%	very minor oil show at base	Consolidated
153.55	155.85	2.3	Conglomerate: Pebble conglomerate, matrix supported; coarse grained sand matrix, consolidated; good oil show, weeping out of matrix and around clast boundaries; porosity visually estimated at 8-12%.		8-12%	Good oil show, oil weeping out of matrix and clast boundaries.	Consolidated
155.85	169.3	13.45	Conglomerate: Cobble to pebble conglomerate, matrix to point supported; medium to coarse grained sand matrix, calcareous cement, consolidated core, breaks along large clast boundaries, porosity visually estimated at 3-5%; rare oil weeping around moderate sized cobble clast boundaries (3-5%).		3-5%	very minor oil show around some clast boundaries	Consolidated

Depth (m)		Thickness (m)	Description	Lineation	Porosity	Oil/gas show	Rock quality
From	To						
169.3	174.5	5.2	Conglomerate: Cobble to pebble conglomerate, matrix to point supported; medium to coarse grained sand matrix, calcareous cement; blocky core, rubbly @ 170.8 m, porosity visually estimated at 4-6%; large open vug with some calcite crystal growth at 169.7 - 169.8 m, oil bleeding out from and adjacent to vug; oil weeping around clasts in pebble conglomerate from 171 - 171.2 m.		4-6%	Oil show adjacent to vugs from 169.7 - 169.8 m; minor oil show from 171.0 - 171.2 m	Blocky
174.5	174.7	0.2	Sandstone: medium to coarse sandstone; porosity visually estimated at 10-15%, oil weeping out at base of section.		10-15%	oil show at base of section	Consolidated
174.7	175.5	0.8	Conglomerate: Pebble conglomerate, matrix to point supported; coarse grained sand matrix with pebble sized clasts; good oil show, oil bleeding out of matrix and around clast boundaries.		8-12%	Good oil show, oil bleeding out of matrix.	Consolidated
175.5	189.5	14	Conglomerate: Pebble to cobble conglomerate, rounded to sub-rounded, point to matrix supported; medium to coarse sand matrix, matrix weakly fizzes with acid, porosity visually estimated at 4-6%; light petroliferous odour, some oil weeping out from clast boundaries.		4-6%	rare	Consolidated
189.5	192.5	3	Conglomerate: Pebble sized clasts; coarse to very coarse sand sized grains; Poor recovery from 189.5 - 192.5, rubbly core, some loose sand grains, irregular fractures, driller reported low head pressure through this zone, probably fault zone, however no obvious slick en sided surfaces.		fractured	Odour, rare oil at clast boundaries	Blocky
192.5	213.5	21	Conglomerate: Pebble and cobble conglomerate; coarse grained sand matrix; no visible oil or odour; porosity visually estimated at 3-5%.		3-5%	rare	Consolidated
213.5 m		End of Hole					

Appendix VIII Legal Survey

POINT #	MTM, NAD83, ZONE 3			DESC.	UTM, NAD83, ZONE 21			UTM, NAD27, ZONE 21		
	NORTHING	EASTING	ELEV.		NORTHING	EASTING	ELEV	NORTHING	EASTING	ELEV
1	5362261.793	298354.05	25.87	CM84G4148	5361866.032	382530.02	25.87	5361647.393	382471.398	25.87
4	5360608.033	300400.255	46.89	FBTH#3	5360172.762	384543.191	46.89	5359954.12	384484.551	46.89
6	5360737.377	300335.05	45.73	FB#3	5360303.338	384480.541	45.73	5360084.697	384421.902	45.73
8	5360777.474	300249.629	43.64	FBTH#2	5360345.092	384395.93	43.64	5360126.45	384337.292	43.64
10	5360891.886	300344.843	42.49	FB#1	5360457.604	384493.351	42.482	5360238.964	384434.713	42.49



42.49
 FB #1 N 5360891.886
 E 300344.843
 (MTM,NAD83,ZONE3)
 N 5360457.604
 E 384493.351
 (UTM,NAD83,ZONE21)
 N 5360238.964
 E 384434.713
 (UTM,NAD27,ZONE21)

83.64
 FBTH #2 N 5360777.472
 E 300249.630
 (MTM,NAD83,ZONE3)
 N 5360345.092
 E 384395.93
 (UTM,NAD83,ZONE21)
 N 5360126.450
 E 384337.292
 (UTM,NAD27,ZONE21)

45.73
 FB #3 N 5360737.377
 E 300335.050
 (MTM,NAD83,ZONE3)
 N 5360303.338
 E 384480.541
 (UTM,NAD83,ZONE21)
 N 5360084.697
 E 384421.902
 (UTM,NAD27,ZONE21)

46.89
 FBTH #3 N 5360608.039
 E 300400.258
 (MTM,NAD83,ZONE3)
 N 5360172.762
 E 384543.191
 (UTM,NAD83,ZONE 21)
 N 5359954.120
 E 384484.551
 UTM,NAD27,ZONE21)

	PLAN SHOWING FBTH#2, FBTH#3, FB#1 & FB#3 FLAT BAY, NL FOR VULVAN MINERALS INC.	DWG. NO.: 9010-1
		SCALE: 1 : 1500
	R. DAVIS SURVEYS LTD. P.O. BOX 449 STEPHENVILLE CROSSING, NL	DRAWN BY: R.D.
		DATE: MAR. 3, 2009

**Appendix IX
Core Photos**



Plate 1. 27.50 - 53.30 metres



Plate 2. 53.30 - 74.92 metres.



Plate 3. 74.92 - 96.67 metres.



Plate 4. 96.67 - 118.46 metres.



Plate 5. 118.46 - 139.98 metres.



Plate 6. 139.98 - 160.90 metres.



Plate 7. 160.90 - 181.52 metres.



Plate 8. 181.52 - 205.32 metres.



Plate 9. 205.32 - 213.50 metres.

Appendix X
Core Analysis Report

TABLE 1
WELLS: FLAT BAY TEST HOLE # 2; FLAT BAY TEST HOLE # 3
FLAT BAY AREA, SHIP COVE / SPOUT FALLS FORMATION
SUMMARY OF MAIN PARAMETERS OF CORE SAMPLES SELECTED

Sample ID	Depth (m)	Depth (ft)	Grain Density (kg/m)	Porosity (fraction)	Air Permeability (mD)	Water Saturation (fraction)	Oil Saturation (fraction)	Gas Saturation (fraction)	Comments
Well: Flat Bay Test Hole #2									
1	140.10	459.65	2700	0.033	0.003	0.353	0.440	0.208	crystalline limestone
2	140.78	461.88	2700	0.065	0.002	0.117	0.383	0.500	crystalline limestone
3	143.30	470.14	2850	0.009	0.001	0.072	0.214	0.714	calcite dolomite , Hg Bulk
4	145.30	476.71	2620	0.004	0.000	0.130	0.210	0.661	Hg Bulk
5	148.77	488.09	2620	0.027	0.039	0.040	0.763	0.197	irregular size grains calcite
6	153.35	503.12	2670	0.071	0.112	0.290	0.386	0.324	irregular size grains
7	153.65	504.10	2680	0.045	0.118	0.376	0.201	0.423	irregular size grains
8	154.75	507.71	2680	0.030	0.123	0.711	0.289	0.000	irregular size grains
9	175.00	574.15	2660	0.137	3.73	0.298	0.148	0.554	fine grains
10	175.25	574.97	2660	0.097	2.44	0.415	0.140	0.446	fine grains
11	175.40	575.46	2670	0.083	0.456	0.450	0.117	0.433	fine to medium grains
12	176.10	577.76	2630	0.011	0.430	0.503	0.013	0.484	very fine sandstone / infill frags
13	200.77	658.69	2640	0.009	0.024	0.860	0.008	0.133	from individual meters
14	210.16	689.50	2730	0.080	0.100	0.563	0.047	0.389	from individual meters
16	163.08	535.04	2670	0.111	0.539	0.386	0.101	0.513	fine to medium grains, from individual meters
Well: Flat Bay Test Hole #3									
1	198.62	651.64	2710	0.038	0.002	0.144	0.294	0.562	limestone
2	199.55	654.69	2700	0.039	0.050	0.319	0.423	0.258	limestone bedded
3	200.00	656.17	2700	0.015	0.001	0.145	0.248	0.607	Hg bulk
4	200.88	659.06	2710	0.010	0.000	0.595	0.184	0.221	limestone
5	201.68	661.68	2680	0.059	0.037	0.346	0.346	0.309	calcite sandstone
6	202.59	664.67	2840	0.016	0.000	0.214	0.280	0.506	calcite dolomite
7	202.69	664.99	2700	0.046	0.067	0.188	0.452	0.361	mix sandstone /calcite nodule
8	207.48	680.71	2700	0.047	0.067	0.301	0.321	0.378	mix sandstone /calcite nodule
9	209.32	686.75	2710	0.032	0.064	0.407	0.301	0.292	mix sandstone /calcite nodule
10	209.66	687.86	2670	0.069	0.129	0.281	0.292	0.427	mix sandstone /calcite nodule
11	211.92	695.28	2640	0.008	0.000	0.256	0.526	0.218	sandstone
12	246.64	809.19	2670	0.149	4.74	0.339	0.131	0.529	fine sandstone
13	248.08	813.91	2660	0.103	1.28	0.363	0.233	0.404	fine calcite nodule
14	248.36	814.83	2670	0.095	0.768	0.317	0.194	0.489	fine calcite nodule
15	239.15	784.61	2660	0.061	0.100	0.481	0.051	0.469	from individual meters

Appendix XI
Well Termination Record

WELL TERMINATION RECORD

WELL DATA

Well Name: Flat Bay Test Hole #2		CO-ORDINATES	
Operator: Vulcan Minerals Inc.	Long:	UTM (NAD27)	
Drilling Rig: Duralite 800	Lat:	Northing: 5360126.450	Eastings: 384337.292
Rig Type: Core Drill	ELEVATION		DEPTH
Drilling Contractor: Logan Drilling Limited	<input type="checkbox"/> RT <input type="checkbox"/> KB <input type="checkbox"/> RF	m	M.D.: 213.5
Spud Date: February 14, 2009		G.L.: 43.64	T.V.D.: 150.9
T.D. Date: February 21, 2009		FOR INTERNAL USE ONLY	
Rig Release Date: February 22, 2009		For the purpose of interpreting subsection 154 (5) of the Petroleum Drilling Regulations, the rig release date is deemed to be:	
Well Termination Date: February 21, 2009		Feb 22, 2009	
Purpose of Termination: <input type="checkbox"/> Suspension <input checked="" type="checkbox"/> Abandonment <input type="checkbox"/> Completion Other:			

CASING AND CEMENTING PROGRAM

O.D. (mm)	WEIGHT (kg/m)	GRADE	SETTING DEPTH (m)	CEMENTING DETAILS
88.9	12.8	NW	30	0.1 m3, 1820 kg/m3, Type A

PLUGGING PROGRAM

Approval of the following program was obtained by (person) Robert Cuthbert
 from (person) _____ of the Department of Natural Resources by means of
 as per Authority to Drill a Well Application _____ dated 2009-02-10

Type of Plug	Interval	Felt/Pressure Tested	Cement and Additives
Cement	0-213.5 m	observed at surface	0.8 m3, 1820 kg/m3, Type A

Lost Circulation/Overpressure Zones: None encountered

Downhole Completion/Suspension Equipment (Describe Below and Attach Sketch of Wellbore)

Cement from surface to TD - see attached sketch
 Casing cut off 1 m below grade, sign to be erected once weather improves.

DECLARATION

The undersigned **OPERATOR'S REPRESENTATIVE** hereby declares that on the basis of personal knowledge of operations undertaken at the above named well, the above information is true, accurate and complete.

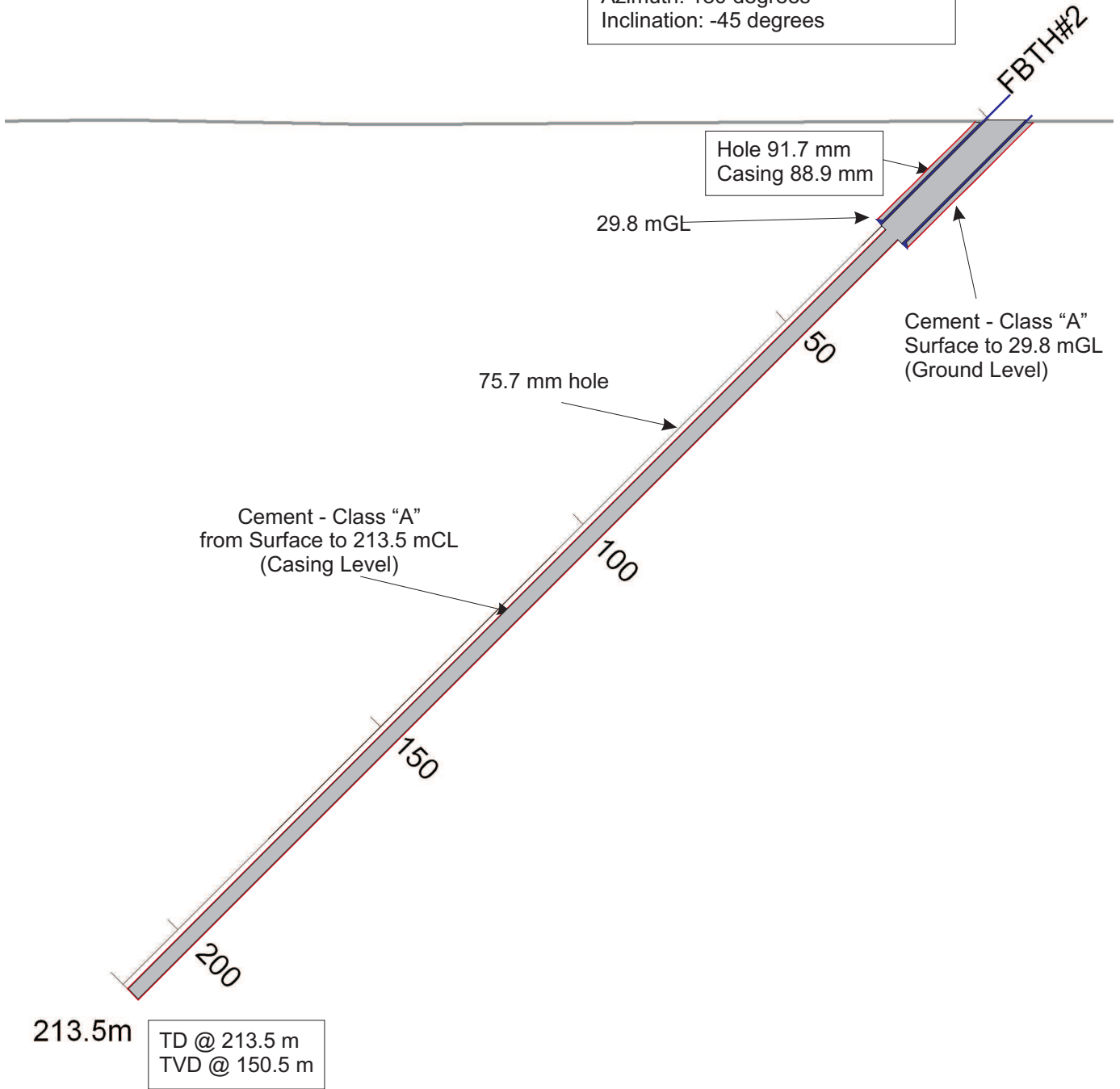
Name: Robert Cuthbert Title: Geologist (Vulcan Minerals Inc.)
 Signed: [Signature] Date: March 20, 2009

ACKNOWLEDGEMENT

Acknowledged by: [Signature] Date: April 2, 2009

Director

UTM NAD 27, Zone 21 Coordinates
N 5360126.450 m
E 0384337.292 m
Casing Elevation: 43.64 m
Azimuth: 180 degrees
Inclination: -45 degrees



Abandonment
Operations
February 21, 2009



Vulcan Minerals Inc.
Flat Bay Test Hole #2
Abandonment Configuration

Scale: Not to Scale
Drawn By: R. Cuthbert
Date: March 11, 2009
Drawing #: FBTH#2 Abandon
Revision: 0