

Final Well Report

| | |
|---------------------------|-----------------------------------------------------|
| Revision: | Version 0 |
| Operating Company: | Vulcan Minerals Inc. (Investcan Energy Corp) |
| Hole Name: | Flat Bay Test Hole # 9 |
| Rig: | Duralite 800 |
| Field: | Flat Bay |
| Location: | Western Newfoundland, Canada |
| Date: | March 27th, 2012 |
| Revised On: | N/A |

| | |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Prepared by: Elliott Stuckless Vulcan Minerals | Reviewed by: Patrick Laracy, P.Geo. Vulcan Minerals |
| Date: | Date: |

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1.0 Introduction

Flat Bay Test Hole #9 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 November 1st, 2011 and the rig was subsequently released November 4th, 2011 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. In particular, 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 thick sequence of anhydrite, a thin interval of Ship Cove limestone followed by the target reservoir formation, conglomerate and sandstone of the Anguille Group. No oil shows were visible in the reservoir section, however minor Live oil was observed weeping out of fractures in the basement rock.

2.0 General Information

The drill site is located just northwest of the former gypsum quarry. Stephenville, the regional service center for the area is approximately 30 km from the site.

Well Name

Vulcan - Investcan Flat Bay Test Hole #9

2.1 Map

377,500mE 380,000mE 382,500mE 385,000mE 387,500mE

CORE HOLE LOCATIONS

| | | |
|--------|------------|-----------|
| FBTH-2 | 5360126 mN | 384337 mE |
| FBTH-3 | 5359954 mN | 384485 mE |
| FBTH-4 | 5359906 mN | 383431 mE |
| FBTH-5 | 5360935 mN | 383174 mE |
| FBTH-6 | 5358294 mN | 384555 mE |
| FBTH-7 | 5357591 mN | 384810 mE |
| FBTH-8 | 5360379 mN | 385041 mE |
| FBTH-9 | 5360177 mN | 383667 mE |

5,362,500mN

5,360,000mN

5,357,500mN

5,355,000mN




5,362,500mN

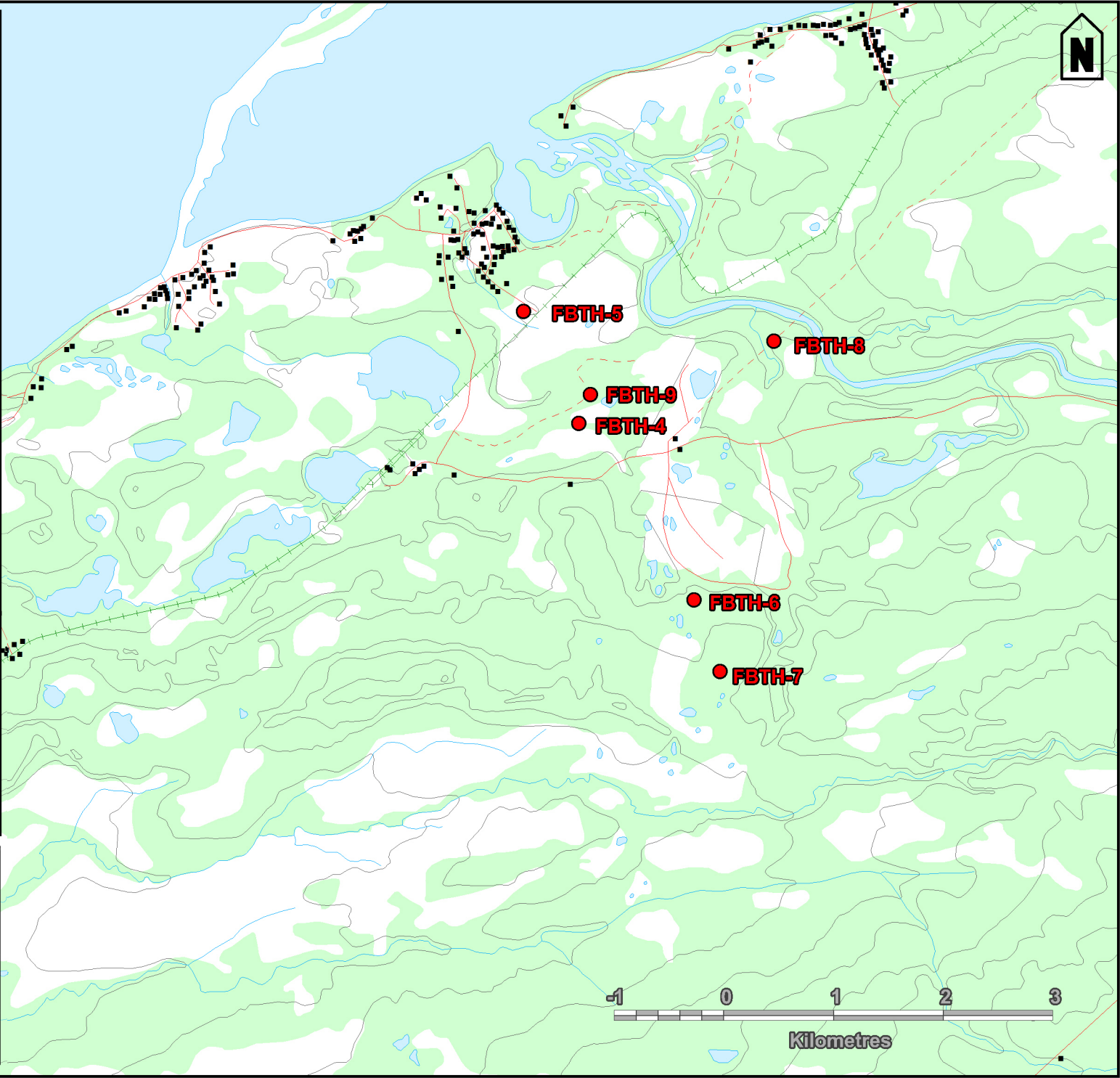
5,360,000mN

5,357,500mN

5,355,000mN



| | |
|-----------------------------------------------------------------------------------------------|------------------|
|  TSX V:VUL | |
| 2011 CORE HOLE PROGRAM LOCATION MAP | |
| NTS: 12B/07 | NAD 27 - Zone 21 |
| Scale 1: 50,000 | Figure: 1 |



377,500mE 380,000mE 382,500mE 385,000mE 387,500mE

Exploration Permit

The well was drilled on exploration Permit 03 – 106 under the authority of Drilling Program Approval (DPA) # 2011-116-02 and Authority to Drill a Well (ADW) # 2011-116-02-03, both issued on October 18th, 2011 (Appendix I).

Location Co-ordinates

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

 Northing: 5360176.766 m N
 Easting: 383666.632 m E
 Elevation: 16.39m

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:

- No difficulties or delay were encountered while drilling FBTH # 9.

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 – 16.39 m
 Casing – 17.39 m

3.2 Total Depth

The following depths are measured from the top of casing:

 Total drilled depth – 159.0 m
 Total Vertical Depth – 159.0 m

3.3 Spud Date

The well was spudded November 1st, 2011

3.4 Date Drilling Completed

The well ceased drilling on November 4th, 2011

3.5 Rig Release Date

The drilling rig was released on November 5th, 2011

3.6 Well Status

The well was abandoned at 159.0m. The hole was completely filled with cement while the rods were pulled out of the hole from 159.0m to surface. The casing was cut 1 m below ground level. The well head was then marked by a large boulder.

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) | 28.0 |
| Main | 75.7 (NQ) | 159.0 |

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 drilling program used NW shoe bit, advanced with NW core. The casing used for the surface/conductor pipe was NW casing, 88.9 mm – 12.8 kg/m³ with a NW shoe placed at 28m. 28 meters 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 from 23-28 m.

3.10 Side-tracked Hole

Not applicable (N/A)

3.11 Drilling Fluid

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

3.12 Fluid Disposal

Drilling fluid was disposed of by Logan Drilling 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 | 42 |
| Site Mob/Demob | 16.5 |
| Rig Repairs | 1.5 |
| Circulating | 0 |
| Tripping | 0 |
| Cementing | 7.5 |
| Wait on Cement | 12 |
| Drill Out Cement | 2 |
| Survey | 0 |
| Casing Preparation | 2.5 |
| BOP Rig Up / Tests | 1 |
| Wait on Parts | 0 |
| Stand By | 0 |

3.17 Deviation Plot

Not applicable (N/A)

3.18 Suspension Program

Not applicable

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.

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. Drill core not sent for analysis 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. Roland Strickland under contract to 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.

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

6.0 Other Data

6.1 Mud Loggers Report

Not applicable

6.2 Directional and Deviation Survey

Not applicable

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

August 19th, 2011

Elliot - copies need to be made to have at rig site.

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 Holes #4, #5, #6, #7 and #8**

Please find attached the following executed documents:
Drilling Program Approval (DPA 2011-116-01);
Authority to Drill a Well (ADW 2011-116-01-01);
Authority to Drill a Well (ADW 2011-116-01-02);
Authority to Drill a Well (ADW 2011-116-01-03);
Authority to Drill a Well (ADW 2011-116-01-04);
Authority to Drill a Well (ADW 2011-116-01-05).

These documents contain attached conditions. Please review these conditions and 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,



Keith Hynes, P. Eng.
Director
Petroleum Engineering



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 Vulcan Minerals Inc. & Investcan Energy Corp. Joint Venture, holding a
subsisting licence, permit or lease issued pursuant to the *Petroleum Regulations(2)*, namely: 03-106 & 96-105
(licence, permit, or lease #)

hereby applies for approval to conduct a drilling program using the drilling rig Duralite 800
and equipment and procedures described in the detailed program dated 13-Jun-2011

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]
Operator's Representative

Date: 16-Jun-2011

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 31 day of August, 2012
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 2011-06-13 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: 2011-08-19

Drilling Program Approved No. 2011-116-01

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

SCHEDULE "A"
TO
DRILLING PROGRAM APPROVAL #2011-116-01
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. 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.
3. 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.
4. The core acquired under this DPA may be requested under Section 149 of the Petroleum Drilling Regulations but shall otherwise be submitted to the Director upon expiration of the relevant Exploration Permit 03-106 or 96-105.
5. Crew certificates are to be supplied upon confirmation of rig contracts. The Operator shall also ensure that the crew is familiar with diverting procedures and related equipment.
6. The Operator shall, prior to commencement of drilling operations, supply to the Department a security deposit for the amount of \$18,000 to ensure abandonment, reclamation, and reporting requirements are met. The security deposit secures the Operator's commitments to comply with the *Petroleum and Natural Gas Act*, the regulations under this Act and the terms and conditions of the Vulcan Minerals Test Holes #4, #5, #6, #7 and #8 Authority to Drill a Well and Drilling Program Approval.
7. The Minister may use the security deposit to compensate the Province for any losses, costs, demands or other charges that the Province incurs as a result of the Operator's non-compliance with the *Petroleum and Natural Gas Act*, the regulations under this Act and the terms and conditions of this approval.
8. The submission of the security deposit and any usage of that deposit by the Minister shall not limit or restrict the liability of the Operator for its actions or the actions of its agents, contractors, employees and other acting under the Operator's authority, or limit or restrict the Operator's obligation to indemnify the Province pursuant to the Newfoundland and Labrador Petroleum Regulations.

9. The security deposit or any unexpended balance shall be refunded without interest to the applicant
10. If, during this drilling program, all or part of the security deposit is expended by the Minister, the Operator shall, on request by the Director, provide further security so that the security deposit is replenished to its original amount.
11. The detailed program referenced in Approval condition #4 attached consists of the following documents supplied by the Operator:

| Title | Date Issued | Date Revised |
|------------------------------------------------------|--------------------|---------------------|
| 2011 Flat Bay Test Hole Drilling Program Information | 13 June 2011 | 16 June 2011 |
| Emergency Response Plan | 18 June 2010 | 30 May 2011 |

August 19th, 2011



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 Hole #4

using the equipment and procedures described in the well program dated June 13th, 2011

Permit, Licence or Lease to which this Program applies: Exploration Permit #03-106

| | | |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------|
| Area: Western Newfoundland, Bay St. George Basin | CO-ORDINATES | |
| Field/Pool: Flat Bay | Long: | UTM (N A D 27) |
| Drilling Rig: Duralite 800 | Lat: | Northing: 5 359 930 m |
| Rig Type: Duralite Diamond Drill | | Easting: 383 525 m |
| Drilling Contractor: Logan Drilling Ltd. | ELEVATION | |
| | DEPTH | |
| | <input type="checkbox"/> RT <input type="checkbox"/> KB <input type="checkbox"/> RF <input type="checkbox"/> m | T.D.: 150 m |
| | G.L.: +47 m rel. MSL | TVD: 150 m |
| ESTIMATES | | TARGET HORIZONS |
| Spud Date: 15-Jul-2011 | Well Cost: \$100k | Fischell's Brook Conglomerate |
| Days on Location: 3 days | | |

EVALUATION PROGRAM

| | |
|----------------------------------|----------------------------------------------------------|
| Ten-metre sample intervals: n/a | Conventional cores at: continuous wireline core drilling |
| Five-metre sample intervals: n/a | Logs and Tests: n/a |
| Canned sample intervals: n/a | |

CASING AND CEMENTING PROGRAM

| O.D. (mm) | Weight (kg/m) | Grade | Setting Depth (m) | Cementing Program |
|------------------|---------------|----------|-------------------|---------------------------------------------|
| 88.9 | 12.8 | 4130CrMo | 40 | 1821 kg/m Class 'A' to surface (30% excess) |
| | | | | |
| | | | | |
| | | | | |
| 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]
 Operator's Representative

Date: 13-Jun-2011

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. 2011-116-01 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: 2011-08-19

Authority to Drill a Well No. 2011-116-01-01

SCHEDULE "A" TO
AUTHORITY TO DRILL A WELL #2011-116-01-01
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. Daily drilling and daily geological reports shall be submitted on a daily basis via email to petroleum_development@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 test hole.

August 19, 2011



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 Hole #5

using the equipment and procedures described in the well program dated June 13th, 2011

Permit, Licence or Lease to which this Program applies: Exploration Permit #96-105

| | | |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------|
| Area: Western Newfoundland, Bay St. George Basin | CO-ORDINATES | |
| Field/Pool: Flat Bay | Long: | UTM (N A D 27) |
| Drilling Rig: Duralite 800 | Lat: | Northing: 5 361 123 m |
| Rig Type: Duralite Diamond Drill | | Easting: 383 208 m |
| Drilling Contractor: Logan Drilling Ltd. | ELEVATION | |
| | DEPTH | |
| | <input type="checkbox"/> RT <input type="checkbox"/> KB <input type="checkbox"/> RF <input type="checkbox"/> m | T.D.: 150 m |
| | G.L.: +35 m rel. MSL | TVD: 150 m |
| ESTIMATES | | TARGET HORIZONS |
| Spud Date: 15-Jul-2011 | Well Cost: \$100k | Fischell's Brook Conglomerate |
| Days on Location: 3 days | | |

EVALUATION PROGRAM

| | |
|----------------------------------|----------------------------------------------------------|
| Ten-metre sample intervals: n/a | Conventional cores at: continuous wireline core drilling |
| Five-metre sample intervals: n/a | Logs and Tests: n/a |
| Canned sample intervals: n/a | |

CASING AND CEMENTING PROGRAM

| O.D. (mm) | Weight (kg/m) | Grade | Setting Depth (m) | Cementing Program |
|-----------|---------------|----------|-------------------|---------------------------------------------|
| 88.9 | 12.8 | 4130CrMo | 40 | 1821 kg/m Class 'A' to surface (30% excess) |
| | | | | |
| | | | | |
| | | | | |

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: 13-Jun-2011
 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. 2011-116-01 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: 2011-08-19

Authority to Drill a Well No. 2011-116-01-02

SCHEDULE "A" TO
AUTHORITY TO DRILL A WELL #2011-116-01-02
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. Daily drilling and daily geological reports shall be submitted on a daily basis via email to petroleum_development@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 test hole.

August 19, 2011



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 Hole #6

using the equipment and procedures described in the well program dated June 13th, 2011

Permit, Licence or Lease to which this Program applies: Exploration Permit #03-106

| | | |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------|
| Area: Western Newfoundland, Bay St. George Basin | CO-ORDINATES | |
| Field/Pool: Flat Bay | Long: | UTM (N A D 27) |
| Drilling Rig: Duralite 800 | Lat: | Northing: 5 358 513 m |
| Rig Type: Duralite Diamond Drill | | Easting: 384 606 m |
| Drilling Contractor: Logan Drilling Ltd. | ELEVATION | |
| | DEPTH | |
| | <input type="checkbox"/> RT <input type="checkbox"/> KB <input type="checkbox"/> RF <input type="checkbox"/> m | T.D.: 150 m |
| | G.L.: +87 m rel. MSL | TVD: 150 m |
| ESTIMATES | | TARGET HORIZONS |
| Spud Date: 15-Jul-2011 | Well Cost: \$100k | Fischell's Brook Conglomerate |
| Days on Location: 3 days | | |

EVALUATION PROGRAM

| | |
|----------------------------------|----------------------------------------------------------|
| Ten-metre sample intervals: n/a | Conventional cores at: continuous wireline core drilling |
| Five-metre sample intervals: n/a | Logs and Tests: n/a |
| Canned sample intervals: n/a | |

CASING AND CEMENTING PROGRAM

| O.D. (mm) | Weight (kg/m) | Grade | Setting Depth (m) | Cementing Program |
|-----------|---------------|----------|-------------------|---------------------------------------------|
| 88.9 | 12.8 | 4130CrMo | 40 | 1821 kg/m Class 'A' to surface (30% excess) |
| | | | | |
| | | | | |
| | | | | |

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]
 Operator's Representative

Date: 13-Jun-2011

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. 2011-116-01 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: 2011-08-19

Authority to Drill a Well No. 2011-116-01-03

SCHEDULE "A" TO
AUTHORITY TO DRILL A WELL #2011-116-01-03
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. Daily drilling and daily geological reports shall be submitted on a daily basis via email to petroleum_development@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 test hole.

August 19, 2011



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 Hole #7

using the equipment and procedures described in the well program dated June 13th, 2011

Permit, Licence or Lease to which this Program applies: Exploration Permit #03-106

| | | |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------|
| Area: Western Newfoundland, Bay St. George Basin | CO-ORDINATES | |
| Field/Pool: Flat Bay | Long: | UTM (N A D 27) |
| Drilling Rig: Duralite 800 | Lat: | Northing: 5 357 644 m |
| Rig Type: Duralite Diamond Drill | | Easting: 384 746 m |
| Drilling Contractor: Logan Drilling Ltd. | ELEVATION | |
| | DEPTH | |
| | <input type="checkbox"/> RT <input type="checkbox"/> KB <input type="checkbox"/> RF <input type="checkbox"/> m | T.D.: 150 m |
| | G.L.: +107 m rel. MSL | TVD: 150 m |
| ESTIMATES | | TARGET HORIZONS |
| Spud Date: 15-Jul-2011 | Well Cost: \$100k | Fischell's Brook Conglomerate |
| Days on Location: 3 days | | |

EVALUATION PROGRAM

| | |
|----------------------------------|----------------------------------------------------------|
| Ten-metre sample intervals: n/a | Conventional cores at: continuous wireline core drilling |
| Five-metre sample intervals: n/a | Logs and Tests: n/a |
| Canned sample intervals: n/a | |

CASING AND CEMENTING PROGRAM

| O.D. (mm) | Weight (kg/m) | Grade | Setting Depth (m) | Cementing Program |
|-----------|---------------|----------|-------------------|---------------------------------------------|
| 88.9 | 12.8 | 4130CrMo | 40 | 1821 kg/m Class 'A' to surface (30% excess) |
| | | | | |
| | | | | |
| | | | | |

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]
 Operator's Representative

Date: 13-Jun-2011

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. 2011-116-01 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: 2011-08-19

Authority to Drill a Well No. 2011-116-01-04

SCHEDULE "A" TO
AUTHORITY TO DRILL A WELL #2011-116-01-04
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. Daily drilling and daily geological reports shall be submitted on a daily basis via email to petroleum_development@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 test hole.

August 19, 2011



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 Hole #8

using the equipment and procedures described in the well program dated June 13th, 2011

Permit, Licence or Lease to which this Program applies: Exploration Permit #96-105

| | | |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------|
| Area: Western Newfoundland, Bay St. George Basin | CO-ORDINATES | |
| Field/Pool: Flat Bay | Long: | UTM (N A D 27) |
| Drilling Rig: Duralite 800 | Lat: | Northing: 5 360 651 m |
| Rig Type: Duralite Diamond Drill | | Easting: 385 323 m |
| Drilling Contractor: Logan Drilling Ltd. | ELEVATION | |
| | DEPTH | |
| | <input type="checkbox"/> RT <input type="checkbox"/> KB <input type="checkbox"/> RF <input type="checkbox"/> m | T.D.: 150 m |
| | G.L.: +28 m rel. MSL | TVD: 150 m |
| ESTIMATES | | TARGET HORIZONS |
| Spud Date: 15-Jul-2011 | Well Cost: \$100k | Fischell's Brook Conglomerate |
| Days on Location: 3 days | | |

EVALUATION PROGRAM

| | |
|----------------------------------|----------------------------------------------------------|
| Ten-metre sample intervals: n/a | Conventional cores at: continuous wireline core drilling |
| Five-metre sample intervals: n/a | Logs and Tests: n/a |
| Canned sample intervals: n/a | |

CASING AND CEMENTING PROGRAM

| O.D. (mm) | Weight (kg/m) | Grade | Setting Depth (m) | Cementing Program |
|-----------|---------------|----------|-------------------|---------------------------------------------|
| 88.9 | 12.8 | 4130CrMo | 40 | 1821 kg/m Class 'A' to surface (30% excess) |
| | | | | |
| | | | | |
| | | | | |

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]
 Operator's Representative

Date: 13-Jun-2011

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. 2011-116-01 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: 2011-08-19

Authority to Drill a Well No. 2011-116-01-05

SCHEDULE "A" TO
AUTHORITY TO DRILL A WELL #2011-116-01-05
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. Daily drilling and daily geological reports shall be submitted on a daily basis via email to petroleum_development@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 test hole.

August 19, 2011



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 Hole #9

using the equipment and procedures described in the well program dated June 13th, 20 11

Permit, Licence or Lease to which this Program applies: Exploration Permit #96-105

| | | |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------|
| Area: Western Newfoundland, Bay St. George Basin | CO-ORDINATES | |
| Field/Pool: Flat Bay | Long: | UTM (N A D 27) |
| Drilling Rig: Duralite 800 | Lat: | Northing: 5 360 190 m |
| Rig Type: Duralite Diamond Drill | | Easting: 383 640 m |
| Drilling Contractor: Logan Drilling Ltd. | ELEVATION | |
| | DEPTH | |
| | <input type="checkbox"/> RT <input type="checkbox"/> KB <input type="checkbox"/> RF <input type="checkbox"/> m | T.D.: 300 m |
| | G.L.: +39 m rel. MSL | TVD: 300 m |
| ESTIMATES | | TARGET HORIZONS |
| Spud Date: 20-Oct-2011 | Well Cost: \$100k | Fischell's Brook Conglomerate |
| Days on Location: 3 days | | |

EVALUATION PROGRAM

| | |
|----------------------------------|----------------------------------------------------------|
| Ten-metre sample intervals: n/a | Conventional cores at: continuous wireline core drilling |
| Five-metre sample intervals: n/a | Logs and Tests: n/a |
| Canned sample intervals: n/a | |

CASING AND CEMENTING PROGRAM

| O.D. (mm) | Weight (kg/m) | Grade | Setting Depth (m) | Cementing Program |
|-----------|---------------|----------|-------------------|---------------------------------------------|
| 88.9 | 12.8 | 4130CrMo | 40 | 1821 kg/m Class 'A' to surface (30% excess) |
| | | | | |
| | | | | |
| | | | | |

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:
 Operator's Representative

Date: 18-Oct-2011

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. 2011-116-02 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:

Effective Date: 2011-10-21

Authority to Drill a Well No. 2011-116-02-03

SCHEDULE "A" TO
AUTHORITY TO DRILL A WELL #2011-116-02-03
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. Daily drilling and daily geological reports shall be submitted on a daily basis via email to petroleum_development@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 test hole.

October 18, 2011

Appendix II
Daily Reports

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|---------------------------------|------------------|---------------------------|--------------------------|
| Flat Bay Test Hole # CH7 | | REPORT #: 6 | DATE: Sept 27,2011 |
| DEPTH 24:00: 0m | PROGRESS: 43.0 m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: clear | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 8°C | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | | | PUMPS | | | |
|-----------------|----|--|--|----------------|----------------------|--|--|----------|--|--|--|
| Bit No. | NQ | | | 1.00 ° | Time | | | Pump No. | | | |
| Size (mm) | | | | | Make | | | | | | |
| Mfg. | | | | | Model | | | | | | |
| Type | | | | | Liner X Stk | | | | | | |
| Serial # | | | | | SPM | | | | | | |
| Nozzles | | | | | Pump Eff. | | | | | | |
| From (mKB) | | | | | Pump Rate | | | | | | |
| To (mKB) | | | | | Pump Press. kPa | | | | | | |
| Hrs on Bit | | | | | Drillpipe AV m/min | | | | | | |
| WOB (daN) | | | | | Drillcollar AV m/min | | | | | | |
| RPM | | | | | Nozzle Vel m/sec | | | | | | |
| Condition | | | | | | | | | | | |
| Pulled For? | | | | | | | | | | | |
| Meters m/hr | | | | | | | | | | | |
| Cum Hrs | | | | | | | | | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

| | | | |
|-----------------|--------------|----------|-----|
| BHA Length: | Hook Load: | DP size | XXX |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | WO Materials |
| Drill w/ air | | Run Casing | | WO Services |
| Reaming | | Cementing | | Safety Meeting |
| Rm Rathole | | WOC | | Mix mud |
| Cond / Circ | | NU BOP's | | Install Wellhead |
| Tripping | | Test BOP's | | |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Hndle Tools | | Total Hrs |

| MUD & CHEMICALS | |
|-----------------|-----|
| Mud Cycle | min |
| Bottoms Up | min |
| Tanks | m3 |
| Hole Volume | m3 |
| System Vol. | m3 |

| VOLUMES M ³ | | WELL CONTROL | | SOLIDS CONTROL | |
|------------------------|--|----------------|-----|----------------|------------|
| Water added | | RSPP | N/A | Shaker Make | N/A |
| Losses | | ST/Min | | Shaker Mesh | N/A |
| | | MACP(kPa) | N/A | Desilter | Centrifuge |
| | | Calc Hole Fill | | Vol UF (l/min) | N/A |
| | | Act Hole Fill | N/A | U.F. (kg/m3) | N/A |
| | | Lst BOP Drill: | | O.F. (kg/m3) | N/A |
| | | Calc Hole Fill | | Hours/Days | N/A |
| | | Act Hole Fill | | Boiler Hrs: | (to 24:00) |

24 HOUR SUMMARY FOR THE DATE : Sept 27 2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|-------------------------------------------------------------------------------------|
| 0700 | 0700 | 24.00 | DRILL FROM 52m TO 58m with nq rods |
| | | | drill FROM 51m to 57m with nw casing |
| | | | drill from 58m to 64m with nq rods |
| | | | drill from 57m to 63m with nw casing |
| | | | drill from 64m to 70m with nq rods |
| | | | drill from 63m to 69m with nw casing |
| | | | The hole is at 73m Casing is at 69m at this point in time. |
| | | | 0m to 46.4m overburden/ (sand, clay, pebbles, boulders) |
| | | | 46.4m to 52.0m Gypsum |
| | | | 52.0m to 64.0m/ overburden (sand, clay, cobbles, boulders) |
| | | | 56.0m to 70.0m/ Gypsum |
| | | | 70.0m to 73.0m/ Anhydrate |
| | | | Hole is drilled to 73.0m Casing is presently at 69m Currently been drilled to 73.0m |
| | | | We will cement casing at 72m |

24 HOUR Forecast :
 Run NW Casing down to 72m, cement casing and while waiting on cement to harden, nipple up deverter, drill out and pressure test prior to coring.

Vulcan Minerals

DAILY DRILLING REPORT

| | | | | | |
|-------------------------------------------|-------------------------|---------------------------|--|---------------------------------|---------------------------------|
| Flat Bay Test Hole # CHF-B T-H # 7 | | | | REPORT #: 6 | DATE: September 28, 2011 |
| DEPTH 24:00: 0m | PROGRESS: 73.0m | Last 24 Hr Rotating Time: | | Ave ROP: | |
| OPER 09:00: | FOREMAN: H.HYNES | | | MOBILE NO.: 780-667-8775 | |
| DAILY COST: | HOLE CND.: | WEATHER: clear | | TOOLPUSH: | |
| CUM COST: | RIG / RIG #: | TEMP.: 8°C | | T.P. MOBILE: | |
| FORMATION: | K.B. ELEV.: | ROADS: rough | | | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | PUMPS | |
|-----------------|--|--|--|----------------|--|-----------------------------|--|
| Bit No. | | | | Time | | Pump No. | |
| Size (mm) | | | | Depth(m) | | Make | |
| Mfg. | | | | Density | | Model | |
| Type | | | | Mud Grad | | Liner X Stk | |
| Serial # | | | | Vis | | SPM | |
| Nozzles | | | | PV | | Pump Eff. | |
| From (mKB) | | | | YP | | Pump Rate | |
| To (mKB) | | | | Gels | | Pump Press. kPa | |
| Hrs on Bit | | | | pH | | Drillpipe AV m/min | |
| WOB (daN) | | | | WL (cc's) | | Drillcollar AV m/min | |
| RPM | | | | Filter Cake | | Nozzle Vel m/sec | |
| Condition | | | | Sand (%) | | MUD & CHEMICALS | |
| Pulled For? | | | | Oil (%) | | Mud Cycle min | |
| Meters | | | | Pf/Mf | | Bottoms Up min | |
| m/hr | | | | MBT | | Tanks m3 | |
| Cum Hrs | | | | Cl (ppm) | | Hole Volume m3 | |
| | | | | Ca (ppm) | | System Vol. m3 | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|--------------|----------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| BHA Length: | Hook Load: | DP size | XXX | |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX | |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX | |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | |
| Drill w/ air | | Run Casing | | WO Materials |
| Reaming | | Cementing | | WO Services |
| Rm Rathole | | WOC | | Safety Meeting |
| Cond / Circ | | NU BOP's | | Mix mud |
| Tripping | | Test BOPs | | Install Wellhead |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Handle Tools | | Total Hrs |

| | | | |
|---------------------|-----|-----------------------|------------|
| WELL CONTROL | | SOLIDS CONTROL | |
| Water added | | Mud Daily Cost | |
| Losses | | Mud Cum Cost | |
| RSPP | N/A | Shaker Make | N/A |
| ST/Min | | Shaker Mesh | N/A |
| MACP(kPa) | N/A | Desilter | Centrifuge |
| Calc Hole Fill | | Vol UF (l/min) | N/A N/A |
| Act Hole Fill | N/A | U.F. (kg/m3) | N/A N/A |
| Lst BOP Drill: | | O.F. (kg/m3) | N/A N/A |
| Calc Hole Fill | | Hours/Days | N/A N/A |
| Act Hole Fill | | Boiler Hrs: | (to 24:00) |

| 24 HOUR SUMMARY FOR THE DATE : | | | Sept 28 2011 | (0000 hrs - 2400 hrs) |
|---------------------------------------|------|----------|-----------------------------------------------------------------------|------------------------------|
| From | To | Duration | Event | |
| 0700 | 0700 | 24.00 | REAM CASING FROM 69m TO 72m | |
| | | | CEMENT HOLE AT 72m WAIT ON CEMENT PRIOR TO DRILL OUT | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | safety meeting with crew and onsite supervisors to prior to drill out | |
| | | | | |
| | | | | |
| | | | | |

| |
|-------------------------------------------------------------------------|
| 24 HOUR Forcast : |
| DRILL OUT CEMENT PRESSURE TEST RIG UP DIVERTER AND RUN in HOLE AND CORE |

Vulcan Minerals

DAILY DRILLING REPORT

| | | | | | | | |
|--------------------------------------------------------------------------------|-----------|-----------------|-------------------------------------------------------------------------------|------------------------------|--------------------------|----------------------------|--|
| Flat Bay Test Hole # CH7 | | | | REPORT #: 9 | DATE: September 29, 2011 | | |
| DEPTH 24:00: 100m | | PROGRESS: 150m | | Last 24 Hr Rotating Time: | Ave ROP: | | |
| OPER 09:00: | | | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 | | |
| DAILY COST: | | HOLE COND.: | | WEATHER: clear | TOOLPUSH: | | |
| CUM COST: | | RIG / RIG #: | | TEMP.: 10c | T.P. MOBILE: | | |
| FORMATION: | | K.B. ELEV.: | | ROADS: rough | | | |
| BIT PERFORMANCE | | | | DRILLING FLUID | PUMPS | | |
| Bit No. | NQ | | 1.00 ° | | Time | Pump No. | |
| Size (mm) | | | | | Depth(m) | Make | |
| Mfg. | | | | | Density | Model | |
| Type | | | | | Mud Grad | Liner X Stk | |
| Serial # | | | | | Vis | SPM | |
| Nozzles | | | | | PV | Pump Eff. | |
| From (mKB) | | | | | YP | Pump Rate | |
| To (mKB) | | | | | Gels | Pump Press. kPa | |
| Hrs on Bit | | | | | pH | Drillpipe AV m/min | |
| WOB (daN) | | | | | WL (cc's) | Drillcollar AV m/min | |
| RPM | | | | | Filter Cake | Nozzle Vel m/sec | |
| Condition | | | | | Sand (%) | | |
| Pulled For? | | | | | | MUD & CHEMICALS | |
| Meters | | | | | Oil (%) | Mud Cycle min | |
| m/hr | | | | | Pf/Mf | Bottoms Up min | |
| Cum Hrs | | | | | MBT | Tanks m3 | |
| BOTTOMHOLE ASSEMBLY | | | | CI (ppm) | Hole Volume m3 | | |
| No. | Item | Max OD | Min ID | Connection Size & Type | System Vol. m3 | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| BHA Length: | | Hook Load: | | DP size | XXX | | |
| Avail WOB: | | Jts DP Racks | | DC Conn: | XXX | | |
| Jts DP in hole: | | DP on Loc: | | DP Conn: | XXX | | |
| | | | | VOLUMES M³ | | | |
| DRILLING OPERATIONS TIME BREAKDOWN | | | | Water added | Mud Daily Cost | | |
| RU / TO | | Survey | | Move Rig | Mud Cum Cost | | |
| Drill w/ fluid | | Logging | | WO Materials | | | |
| Drill w/ air | | Run Casing | | WO Services | | | |
| Reaming | | Cementing | | Safety Meeting | | | |
| Rm Rathole | | WOC | | Mix mud | | | |
| Cond / Circ | | NU BOP's | | Install Wellhead | | | |
| Tripping | | Test BOP's | | | | | |
| Lubricate Rig | | Drill Out Cmt | | | | | |
| Repair Rig | | DST | | | | | |
| Fishing | | Hndle Tools | | Total Hrs | | | |
| | | | | WELL CONTROL | SOLIDS CONTROL | | |
| | | | | RSPG | Shaker Make | | |
| | | | | ST/Min | N/A | | |
| | | | | MACP(kPa) | Shaker Mesh | | |
| | | | | Calc Hole Fill | Desilter Centrifuge | | |
| | | | | Act Hole Fill | N/A | | |
| | | | | Lst BOP Drill: | Vol UF (l/min) | | |
| | | | | Calc Hole Fill | N/A | | |
| | | | | Act Hole Fill | U.F. (kg/m3) | | |
| | | | | | N/A | | |
| | | | | | O.F. (kg/m3) | | |
| | | | | | N/A | | |
| | | | | | Hours/Days | | |
| | | | | | N/A | | |
| | | | | | N/A | | |
| | | | | | Boiler Hrs: (to 24:00) | | |
| 24 HOUR SUMMARY FOR THE DATE : September 29, 2011 (0000 hrs - 2400 hrs) | | | | | | | |
| From | To | Duration | Event | | | | |
| 0700 | 0700 | 24.00 | pressure test up to 500 PSI held pressure for 10 mins, no leaks | | | | |
| | | | held safety meeting with crew and on site supervisors prior to drilling ahead | | | | |
| | | | drill nq rods from 73m to 150m | | | | |
| | | | stopped drilling wait until word from office to go ahead to drill deeper | | | | |
| | | | | | | | |
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| | | | | | | | |
| 24 HOUR Forecast : | | | | | | | |
| Continue to wait on orders to drill ahead | | | | | | | |

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|-------------------------------------------|----------------|---------------------------|--------------------------|
| Flat Bay Test Hole # CHF-B T-H # 7 | | REPORT #: 8 | DATE: september 30 2011 |
| DEPTH 24:00: 150.0 m | PROGRESS: 220m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: sunny | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 22c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | PUMPS | |
|-----------------|--|--|--|----------------|--|----------------|-------|
| Bit No. | | | | Time | | Pump No. | |
| Size (mm) | | | | Depth(m) | | Make | |
| Mfg. | | | | Density | | Model | |
| Type | | | | Mud Grad | | Liner X Stk | |
| Serial # | | | | Vis | | SPM | |
| Nozzles | | | | PV | | Pump Eff. | |
| From (mKB) | | | | YP | | Pump Rate | |
| To (mKB) | | | | Gels | | Pump Press. | kPa |
| Hrs on Bit | | | | pH | | Drillpipe AV | m/min |
| WOB (daN) | | | | WL (cc's) | | Drillcollar AV | m/min |
| RPM | | | | Filter Cake | | Nozzle Vel | m/sec |
| Condition | | | | Sand (%) | | | |
| Pulled For? | | | | | | | |
| Meters | | | | Oil (%) | | | |
| m/hr | | | | Pf/Mf | | | |
| Cum Hrs | | | | MBT | | | |
| | | | | Cl (ppm) | | | |
| | | | | Ca (ppm) | | | |

| MUD & CHEMICALS | | | |
|---------------------|--|-----|--|
| Mud Cycle | | min | |
| Bottoms Up | | min | |
| Tanks | | m3 | |
| Hole Volume | | m3 | |
| System Vol. | | m3 | |
| 28 bags of portland | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

| | | | |
|-----------------|--------------|----------|-----|
| BHA Length: | Hook Load: | DP size | XXX |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | VOLUMES M ³ | |
|------------------------------------|--|---------------|------------------|------------------------|--|
| RU / TO | | Survey | | Water added | |
| Drill w/ fluid | | Logging | Move Rig | Losses | |
| Drill w/ air | | Run Casing | | | |
| Reaming | | Cementing | WO Materials | | |
| Rm Rathole | | WOC | WO Services | | |
| Cond / Circ | | NU BOP's | Safety Meeting | | |
| Tripping | | Test BOPs | Mix mud | | |
| Lubricate Rig | | Drill Out Cmt | Install Wellhead | | |
| Repair Rig | | DST | | | |
| Fishing | | Handle Tools | Total Hrs | | |

| WELL CONTROL | | SOLIDS CONTROL | |
|----------------|-----|----------------|------------|
| RSPP | N/A | Shaker Make | N/A |
| ST/Min | | Shaker Mesh | N/A |
| MACP(kPa) | N/A | Desilter | Centrifuge |
| Calc Hole Fill | | Vol UF (l/min) | N/A |
| Act Hole Fill | N/A | U.F. (kg/m3) | N/A |
| Lst BOP Drill: | | O.F. (kg/m3) | N/A |
| Calc Hole Fill | | Hours/Days | N/A |
| Act Hole Fill | | Boiler Hrs: | (to 24:00) |

24 HOUR SUMMARY FOR THE DATE : sept 29 2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|--------------------------------------------------------------------------------------------------------------------------|
| 0700 | 0700 | 24.00 | WAIT ON WORD FROM OFFICE TO CONTINUE.DRILL NQ RODS FROM 150m TO 199m PULL OUT RUN BACK TO BOTTOM DRILL FROM 199m to 220m |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | safety meeting with crew and on site supervisors |
| | | | |
| | | | |
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| | | | |

24 HOUR Forcast :
drill to td cement and demobilize rig to next location

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|-------------------------------------------|----------------|---------------------------|--------------------------|
| Flat Bay Test Hole # CHF-B T-H # 7 | | REPORT #: 11 | DATE: OCTOBER 1 2011 |
| DEPTH 24:00: 150M | PROGRESS: 220M | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: RANING | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 6C | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | PUMPS | |
|-----------------|--|--|--|----------------|--|----------------------|--|
| Bit No. | | | | Time | | Pump No. | |
| Size (mm) | | | | Depth(m) | | Make | |
| Mfg. | | | | Density | | Model | |
| Type | | | | Mud Grad | | Liner X Stk | |
| Serial # | | | | Vis | | SPM | |
| Nozzles | | | | PV | | Pump Eff. | |
| From (mKB) | | | | YP | | Pump Rate | |
| To (mKB) | | | | Gels | | Pump Press. kPa | |
| Hrs on Bit | | | | pH | | Drillpipe AV m/min | |
| WOB (daN) | | | | WL (cc's) | | Drillcollar AV m/min | |
| RPM | | | | Filter Cake | | Nozzle Vel m/sec | |
| Condition | | | | Sand (%) | | | |
| Pulled For? | | | | Oil (%) | | | |
| Meters | | | | Pf/Mf | | | |
| m/hr | | | | MBT | | | |
| Cum Hrs | | | | Cl (ppm) | | | |
| | | | | Ca (ppm) | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------------|----------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| BHA Length: | | Hook Load: | DP size | XXX |
| Avail WOB: | | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | | DP on Loc: | DP Conn: | XXX |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | |
| Drill w/ air | | Run Casing | | WO Materials |
| Reaming | | Cementing | | WO Services |
| Rm Rathole | | WOC | | Safety Meeting |
| Cond / Circ | | NU BOP's | | Mix mud |
| Tripping | | Test BOP's | | Install Wellhead |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Handle Tools | | Total Hrs |

| MUD & CHEMICALS | |
|-----------------|----------------------|
| Mud Cycle | min |
| Bottoms Up | min |
| Tanks | m3 |
| Hole Volume | m3 |
| System Vol. | m3 |
| Mud Co. | |
| Mud Man | |
| Mud Up @ | |
| VOLUMES | M³ |
| Water added | |
| Losses | |
| Mud Daily Cost | |
| Mud Cum Cost | |
| WELL CONTROL | |
| RSPP | N/A |
| ST/Min | |
| MACP(kPa) | N/A |
| Calc Hole Fill | |
| Act Hole Fill | N/A |
| Lst BOP Drill: | |
| Calc Hole Fill | |
| Act Hole Fill | |
| SOLIDS CONTROL | |
| Shaker Make | N/A |
| Shaker Mesh | N/A |
| | Desilter |
| | Centrifuge |
| Vol UF (l/min) | N/A |
| U.F. (kg/m3) | N/A |
| O.F. (kg/m3) | N/A |
| Hours/Days | N/A |
| Boiler Hrs: | (to 24:00) |

24 HOUR SUMMARY FOR THE DATE : OCTOBER 1 2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|---------------------------------------------------------------------------------------------------------------------------|
| 0700 | 0700 | 24.00 | FINISHED DRILLING@ 0430hrs pull out of hole get ready for cement job |
| | | | cement hole back to surface with 1800kgm3 get ready to demolize rig to next location |
| | | | good oil shows bubbling from matrix and clast boundaries at 220m; porosity visually estimated at 8-10% 100% core recovery |
| | | | held safety meeting with crew prior to cementing |

24 HOUR Forecast :
core

Vulcan Minerals

DAILY DRILLING REPORT

| | | | | | |
|-------------------------------------------|-----------|-----------------|-------------------------------------------------------------------------------------------|---------------------------|-------------------------------|
| FB TH-6 | | | | REPORT #: 12 | DATE: Oct 2/ 2011 |
| DEPTH 24:00: 100m | | PROGRESS: 150m | | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | | HOLE CND.: | | WEATHER: rain | TOOLPUSH: |
| CUM COST: | | RIG / RIG #: | | TEMP.: 6c | T.P. MOBILE: |
| FORMATION: | | K.B. ELEV.: | | ROADS: rough | |
| BIT PERFORMANCE | | | 1.00 ° | DRILLING FLUID | PUMPS |
| Bit No. | NQ | | | Time | Pump No. |
| Size (mm) | | | | Depth(m) | Make |
| Mfg. | | | | Density | Model |
| Type | | | | Mud Grad | Liner X Stk |
| Serial # | | | | Vis | SPM |
| Nozzles | | | | PV | Pump Eff. |
| From (mKB) | | | | YP | Pump Rate |
| To (mKB) | | | | Gels | Pump Press. kPa |
| Hrs on Bit | | | | pH | Drillpipe AV m/min |
| WOB (daN) | | | | WL (cc's) | Drillcollar AV m/min |
| RPM | | | | Filter Cake | Nozzle Vel m/sec |
| Condition | | | | Sand (%) | |
| Pulled For? | | | | Oil (%) | MUD & CHEMICALS |
| Meters | | | | Pf/Mf | Mud Cycle min |
| m/hr | | | | MBT | Bottoms Up min |
| Cum Hrs | | | | CI (ppm) | Tanks m3 |
| | | | | Ca (ppm) | Hole Volume m3 |
| | | | | | System Vol. m3 |
| BOTTOMHOLE ASSEMBLY | | | | Mud Co. | |
| No. | Item | Max OD | Min ID | Connection Size & Type | Mud Man |
| 1 | | | | | Mud Up @ |
| 2 | | | | | |
| 3 | | | | | |
| BHA Length: | | Hook Load: | DP size | XXX | VOLUMES M ³ |
| Avail WOB: | | Jts DP Racks | DC Conn: | XXX | Water added |
| Jts DP in hole: | | DP on Loc: | DP Conn: | XXX | Losses |
| DRILLING OPERATIONS TIME BREAKDOWN | | | | | Mud Daily Cost |
| RU / TO | | Survey | | Move Rig | Mud Cum Cost |
| Drill w/ fluid | | Logging | | WO Materials | |
| Drill w/ air | | Run Casing | | WO Services | SOLIDS CONTROL |
| Reaming | | Cementing | | Safety Meeting | Shaker Make N/A |
| Rm Rathole | | WOC | | Mix mud | Shaker Mesh N/A |
| Cond / Circ | | NU BOP's | | Install Wellhead | Desilter Centrifuge |
| Tripping | | Test BOP's | | | Vol UF (l/min) N/A N/A |
| Lubricate Rig | | Drill Out Cmt | | | U.F. (kg/m3) N/A N/A |
| Repair Rig | | DST | | | O.F. (kg/m3) N/A N/A |
| Fishing | | Hndle Tools | | Total Hrs | Hours/Days N/A N/A |
| 24 HOUR SUMMARY FOR THE DATE : | | | | Oct 2/2011 | (0000 hrs - 2400 hrs) |
| From | To | Duration | Event | | |
| 0700 | 0700 | 24.00 | continue to demobilize rig to new location | | |
| | | | safety meeting with crew to discuss hazards of moving equipment around on muddy locations | | |
| | | | | | |
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| | | | | | |
| 24 HOUR Forecast : | | | | | |
| continue to demobilize rig and drill | | | | | |

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|-----------------|---------------|---------------------------|--------------------------|
| FB TH-6 | | REPORT #: 13 | DATE: Oct 3/2011 |
| DEPTH 24:00: 0m | PROGRESS: 19m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: rain | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 6c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | PUMPS |
|-----------------|----------|--|--|----------------|----------------------|
| Bit No. | NQ | | | 1.00 ° | |
| Size (mm) | | | | Time | Pump No. |
| Mfg. | | | | Depth(m) | Make |
| Type | | | | Density | Model |
| Serial # | | | | Mud Grad | Liner X Stk |
| Nozzles | | | | Vis | SPM |
| From (mKB) | | | | PV | Pump Eff. |
| To (mKB) | | | | YP | Pump Rate |
| Hrs on Bit | | | | Gels | Pump Press. kPa |
| WOB (daN) | | | | pH | Drillpipe AV m/min |
| RPM | | | | WL (cc's) | Drillcollar AV m/min |
| Condition | | | | Filter Cake | Nozzle Vel m/sec |
| Pulled For? | | | | Sand (%) | |
| Meters | | | | Oil (%) | |
| m/hr | | | | Pf/Mf | |
| Cum Hrs | | | | CI (ppm) | |
| | | | | Ca (ppm) | |
| | Mud Co. | | | | |
| | Mud Man | | | | |
| | Mud Up @ | | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

| | | | |
|-----------------|--------------|----------|-----|
| BHA Length: | Hook Load: | DP size | XXX |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | WO Materials |
| Drill w/ air | | Run Casing | | WO Services |
| Reaming | | Cementing | | Safety Meeting |
| Rm Rathole | | WOC | | Mix mud |
| Cond / Circ | | NU BOP's | | Install Wellhead |
| Tripping | | Test BOP's | | |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Handle Tools | | Total Hrs |

| MUD & CHEMICALS | |
|------------------------|-----|
| Mud Cycle | min |
| Bottoms Up | min |
| Tanks | m3 |
| Hole Volume | m3 |
| System Vol. | m3 |
| VOLUMES M ³ | |
| Water added | |
| Losses | |

| WELL CONTROL | | SOLIDS CONTROL | |
|----------------|-----|----------------|------------|
| RSPP | N/A | Shaker Make | N/A |
| ST/Min | | Shaker Mesh | N/A |
| MACP(kPa) | N/A | Desilter | Centrifuge |
| Calc Hole Fill | | Vol UF (l/min) | N/A |
| Act Hole Fill | N/A | U.F. (kg/m3) | N/A |
| Lst BOP Drill: | | O.F. (kg/m3) | N/A |
| Calc Hole Fill | | Hours/Days | N/A |
| Act Hole Fill | | Boiler Hrs: | (to 24:00) |

24 HOUR SUMMARY FOR THE DATE : Oct 3/ 2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|--------------------------------------------------------------------------------|
| 0700 | 0700 | 24.00 | Safety meeting held with crew and on site supervisors prior to drilling ahead. |
| | | | Drill NW casing from 0m to 11m overburden |
| | | | drill from 11m to 19m bedrock and hydrate |
| | | | Set casing at 19m and cement approximately 8m into bedrock |
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24 HOUR Forecast :
 Wait on cement and drill out cement, pressure test, nipple up diverter, and drill ahead.

Vulcan Minerals

DAILY DRILLING REPORT

| | | | | | |
|-------------------------------------------------------------------------|--------------|-----------------|----------------------------------------------------------------------------------------------------|---------------------------|--------------------------|
| FB test hole #6 | | | | REPORT #: 1 | DATE: Oct 4th 2011 |
| DEPTH 24:00: | 11m | PROGRESS: | 121m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | | HOLE CND.: | | WEATHER: rain | TOOLPUSH: |
| CUM COST: | | RIG / RIG #: | | TEMP.: 6c | T.P. MOBILE: |
| FORMATION: | | K.B. ELEV.: | | ROADS: rough | |
| BIT PERFORMANCE | | | | 1.00 ° | |
| Bit No. | | | | | |
| Size (mm) | | | | | |
| Mfg. | | | | | |
| Type | | | | | |
| Serial # | | | | | |
| Nozzles | | | | | |
| From (mKB) | | | | | |
| To (mKB) | | | | | |
| Hrs on Bit | | | | | |
| WOB (daN) | | | | | |
| RPM | | | | | |
| Condition | | | | | |
| Pulled For? | | | | | |
| Meters | | | | | |
| m/hr | | | | | |
| Cum Hrs | | | | | |
| BOTTOMHOLE ASSEMBLY | | | | | |
| No. | Item | Max OD | Min ID | Connection Size & Type | |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| BHA Length: | Hook Load: | DP size | XXX | | |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX | | |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX | | |
| DRILLING OPERATIONS TIME BREAKDOWN | | | | | |
| RU / TO | | Survey | | Move Rig | |
| Drill w/ fluid | | Logging | | Fishing | |
| Drill w/ air | | Run Casing | | WO Materials | |
| Reaming | | Cementing | | WO Services | |
| Rm Rathole | | WOC | | Safety Meeting | |
| Cond / Circ | | NU BOP's | | Mix mud | |
| Tripping | | Test BOP's | | Install Wellhead | |
| Lubricate Rig | | Drill Out Cmt | | | |
| Repair Rig | | DST | | | |
| Fishing | | Hndle Tools | | Total Hrs | |
| DRILLING FLUID | | | | | |
| Time | | | | | |
| Depth(m) | | | | | |
| Density | | | | | |
| Mud Grad | | | | | |
| Vis | | | | | |
| PV | | | | | |
| YP | | | | | |
| Gels | | | | | |
| pH | | | | | |
| WL (cc's) | | | | | |
| Filter Cake | | | | | |
| Sand (%) | | | | | |
| Solids (%) | | | | | |
| Oil (%) | | | | | |
| Pf/Mf | | | | | |
| MBT | | | | | |
| Cl (ppm) | | | | | |
| Ca (ppm) | | | | | |
| Mud Co. | | | | | |
| Mud Man | | | | | |
| Mud Up @ | | | | | |
| PUMPS | | | | | |
| Pump No. | | | | | |
| Make | | | | | |
| Model | | | | | |
| Liner X Stk | | | | | |
| SPM | | | | | |
| Pump Eff. | | | | | |
| Pump Rate | | | | | |
| Pump Press. | | | | kPa | |
| Drillpipe AV | | | | m/min | |
| Drillcollar AV | | | | m/min | |
| Nozzle Vel | | | | m/sec | |
| MUD & CHEMICALS | | | | | |
| Mud Cycle | | | | min | |
| Bottoms Up | | | | min | |
| Tanks | | | | m3 | |
| Hole Volume | | | | m3 | |
| System Vol. | | | | m3 | |
| VOLUMES | | | | M ³ | |
| Water added | | | | | |
| Losses | | | | | |
| Mud Daily Cost | | | | | |
| Mud Cum Cost | | | | | |
| WELL CONTROL | | | | | |
| RSPP | N/A | | | | |
| ST/Min | | | | | |
| MACP(kPa) | N/A | | | | |
| Calc Hole Fill | | | | | |
| Act Hole Fill | N/A | | | | |
| Lst BOP Drill: | | | | | |
| Calc Hole Fill | | | | | |
| Act Hole Fill | | | | | |
| SOLIDS CONTROL | | | | | |
| Shaker Make | | | | N/A | |
| Shaker Mesh | | | | N/A | |
| Desilter | | | | | |
| Centrifuge | | | | | |
| Vol UF (l/min) | | | | N/A | N/A |
| U.F. (kg/m3) | | | | N/A | N/A |
| O.F. (kg/m3) | | | | N/A | N/A |
| Hours/Days | | | | N/A | N/A |
| Boiler Hrs: | | | | | (to 24:00) |
| 24 HOUR SUMMARY FOR THE DATE : Oct 4th 201 (0000 hrs - 2400 hrs) | | | | | |
| From | To | Duration | Event | | |
| 0700 | 0700 | 24hr | safety meeting with crew and on site supervisors discussed weather conditions and safety hazzards, | | |
| | | | Drilled out cement from 8m to 11m | | |
| | | | Pressure test to 500 psi for 10 mins good test | | |
| | | | Nipple up deverter prior to drilling ahead | | |
| | | | Drill NQ rods from 11m to 43m | | |
| | | | Drill NQ rods from 43m to 121m | | |
| | | | | | |
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| | | | | | |
| 24 HOUR Forecast : | | | | | |
| Drill ahead to find conglomerate | | | | | |

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------|----------------|---------------------------|--------------------------|
| FB test hole #6 | | REPORT #: 1 | DATE: Oct 5th 2011 |
| DEPTH 24:00: 121m | PROGRESS: 202m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: rain | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 6c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | PUMPS | |
|-----------------|--|--|--------|----------------|--|----------------------|--|
| Bit No. | | | 1.00 ° | Time | | Pump No. | |
| Size (mm) | | | | Depth(m) | | Make | |
| Mfg. | | | | Density | | Model | |
| Type | | | | Mud Grad | | Liner X Stk | |
| Serial # | | | | Vis | | SPM | |
| Nozzles | | | | PV | | Pump Eff. | |
| From (mKB) | | | | YP | | Pump Rate | |
| To (mKB) | | | | Gels | | Pump Press. kPa | |
| Hrs on Bit | | | | pH | | Drillpipe AV m/min | |
| WOB (daN) | | | | WL (cc's) | | Drillcollar AV m/min | |
| RPM | | | | Filter Cake | | Nozzle Vel m/sec | |
| Condition | | | | Sand (%) | | | |
| Pulled For? | | | | Solids (%) | | | |
| Meters | | | | Oil (%) | | | |
| m/hr | | | | Pf/Mf | | | |
| Cum Hrs | | | | MBT | | | |
| | | | | Cl (ppm) | | | |
| | | | | Ca (ppm) | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

| | | | |
|-----------------|--------------|----------|-----|
| BHA Length: | Hook Load: | DP size | XXX |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX |

| MUD & CHEMICALS | |
|-----------------|--------------------|
| Mud Cycle | min |
| Bottoms Up | min |
| Tanks | m3 |
| Hole Volume | m3 |
| System Vol. | m3 |
| Mud Co. | 3 bags of portland |
| Mud Man | |
| Mud Up @ | |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | Fishing |
| Drill w/ air | | Run Casing | | WO Materials |
| Reaming | | Cementing | | WO Services |
| Rm Rathole | | WOC | | Safety Meeting |
| Cond / Circ | | NU BOP's | | Mix mud |
| Tripping | | Test BOPs | | Install Wellhead |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Hndle Tools | | Total Hrs |

| VOLUMES | | M ³ | |
|----------------|-----|----------------|------------|
| Water added | | | |
| Losses | | | |
| Mud Daily Cost | | | |
| Mud Cum Cost | | | |
| WELL CONTROL | | SOLIDS CONTROL | |
| RSPG | N/A | Shaker Make | N/A |
| ST/Min | | Shaker Mesh | N/A |
| MACP(kPa) | N/A | Desilter | Centrifuge |
| Calc Hole Fill | | Vol UF (l/min) | N/A |
| Act Hole Fill | N/A | U.F. (kg/m3) | N/A |
| Lst BOP Drill: | | O.F. (kg/m3) | N/A |
| Calc Hole Fill | | Hours/Days | N/A |
| Act Hole Fill | | Boiler Hrs: | (to 24:00) |

24 HOUR SUMMARY FOR THE DATE : Oct 5,2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|------------------------------------------------------------------------------------------------------------------------|
| 0700 | 0700 | 24hr | Safety meeting with crew and weatherford and on site supervisors, discussed the importance of wrapping and waxing core |
| | | | Drill NQ rods from 121m to 190m |
| | | | From 190m to 202m collected 6 core sections from the conglomerate |
| | | | Waxed all 6 cores, |
| | | | |
| | | | Core intervals collected 193.0m to 193.44m |
| | | | 193.7m to 194.10m |
| | | | 195.58m to 196.0m |
| | | | 198.0m to 198.40m |
| | | | 199.89m to 200.28m |
| | | | 201.5m to 202.0m |
| | | | |
| | | | |
| | | | |

24 HOUR Forecast :

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|----------------|---------------------------|--------------------------|
| Flat bay Test Hole #4 | | REPORT #: 15 | DATE: Oct 7th, 2011 |
| DEPTH 24:00: 43m | PROGRESS: 103m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: clear | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 5c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | PUMPS | |
|-----------------|-----------|------|------|----------------|----------------------|--|
| Bit No. | Size (mm) | Mfg. | Type | Time | Pump No. | |
| Serial # | | | | Depth(m) | Make | |
| Nozzles | | | | Density | Model | |
| From (mKB) | | | | Mud Grad | Liner X Stk | |
| To (mKB) | | | | Vis | SPM | |
| Hrs on Bit | | | | PV | Pump Eff. | |
| WOB (daN) | | | | YP | Pump Rate | |
| RPM | | | | Gels | Pump Press. kPa | |
| Condition | | | | pH | Drillpipe AV m/min | |
| Pulled For? | | | | WL (cc's) | Drillcollar AV m/min | |
| Meters | | | | Filter Cake | Nozzle Vel m/sec | |
| m/hr | | | | Sand (%) | | |
| Cum Hrs | | | | Solids (%) | MUD & CHEMICALS | |
| | | | | Oil (%) | Mud Cycle min | |
| | | | | Pf/Mf | Bottoms Up min | |
| | | | | CI (ppm) | Tanks m3 | |
| | | | | Ca (ppm) | Hole Volume m3 | |
| | | | | | System Vol. m3 | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

| | | | |
|-----------------|--------------|----------|-----|
| BHA Length: | Hook Load: | DP size | XXX |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX |

| | |
|-------------------------------|--|
| Mud Co. | |
| Mud Man | |
| Mud Up @ | |
| VOLUMES M ³ | |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | WELL CONTROL | | SOLIDS CONTROL | |
|------------------------------------|--|---------------|--|----------------|-----|----------------|------------|
| RU / TO | | Survey | | Water added | | Shaker Make | N/A |
| Drill w/ fluid | | Logging | | Losses | | Shaker Mesh | N/A |
| Drill w/ air | | Run Casing | | RSPP | N/A | Desilter | Centrifuge |
| Reaming | | Cementing | | ST/Min | | Vol UF (l/min) | N/A |
| Rm Rathole | | WOC | | MACP(kPa) | N/A | U.F. (kg/m3) | N/A |
| Cond / Circ | | NU BOP's | | Calc Hole Fill | | O.F. (kg/m3) | N/A |
| Tripping | | Test BOP's | | Act Hole Fill | N/A | Hours/Days | N/A |
| Lubricate Rig | | Drill Out Cmt | | Lst BOP Drill: | | | |
| Repair Rig | | DST | | Calc Hole Fill | | | |
| Fishing | | Hndle Tools | | Act Hole Fill | | | |
| | | | | | | Boiler Hrs: | (to 24:00) |

24 HOUR SUMMARY FOR THE DATE : oct 7, 2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|------------------------------------------------------------------------------------------------|
| 0700 | 0700 | 24hr | Safety meeting with crew and on site supervisor, discussed pinch points and good communication |
| | | | Drill NQ rods from 43m to 73m |
| | | | Drill NW casing currently at 73m |
| | | | Drill NQ rods from 73m to 103m at 0700 hrs |
| | | | |
| | | | At 103m still in overburden |
| | | | |
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24 HOUR Forecast :
 Continue to drill to find bedrock, set casing and cement.

| | | | |
|------------------------------|------|--------------------------|---------------------------|
| Flat bay Test Hole #4 | | REPORT #: 16 | DATE: Oct 8th,2011 |
| DEPTH 24:00: | 103m | PROGRESS: 11510c | Last 24 Hr Rotating Time: |
| OPER 09:00: | | | FOREMAN: H.HYNES |
| DAILY COST: | | HOLE CND.: | WEATHER: clear |
| CUM COST: | | RIG / RIG #: | TEMP.: 10c |
| FORMATION: | | K.B. ELEV.: | ROADS: rough |
| Ave ROP: | | MOBILE NO.: 780-667-8775 | |
| TOOLPUSH: | | T.P. MOBILE: | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | | PUMPS | | |
|-----------------|--|--|--|----------------|-------------|--|----------------|-------|--|
| Bit No. | | | | 1.00 ° | Time | | Pump No. | | |
| Size (mm) | | | | | Depth(m) | | Make | | |
| Mfg. | | | | | Density | | Model | | |
| Type | | | | | Mud Grad | | Liner X Stk | | |
| Serial # | | | | | Vis | | SPM | | |
| Nozzles | | | | | PV | | Pump Eff. | | |
| From (mKB) | | | | | YP | | Pump Rate | | |
| To (mKB) | | | | | Gels | | Pump Press. | kPa | |
| Hrs on Bit | | | | | pH | | Drillpipe AV | m/min | |
| WOB (daN) | | | | | WL (cc's) | | Drillcollar AV | m/min | |
| RPM | | | | | Filter Cake | | Nozzle Vel | m/sec | |
| Condition | | | | | Sand (%) | | | | |
| Pulled For? | | | | | Solids (%) | | | | |
| Meters | | | | | Oil (%) | | | | |
| m/hr | | | | | Pf/Mf | | | | |
| Cum Hrs | | | | | MBT | | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

| | | | |
|-----------------|--------------|----------|-----|
| BHA Length: | Hook Load: | DP size | XXX |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | | |
|------------------------------------|--|---------------|--|------------------|--|
| RU / TO | | Survey | | Move Rig | |
| Drill w/ fluid | | Logging | | Fishing | |
| Drill w/ air | | Run Casing | | WO Materials | |
| Reaming | | Cementing | | WO Services | |
| Rm Rathole | | WOC | | Safety Meeting | |
| Cond / Circ | | NU BOP's | | Mix mud | |
| Tripping | | Test BOP's | | Install Wellhead | |
| Lubricate Rig | | Drill Out Cmt | | | |
| Repair Rig | | DST | | | |
| Fishing | | Hndle Tools | | Total Hrs | |

| | |
|-----------------------|----------------------|
| Mud Co. | |
| Mud Man | |
| Mud Up @ | |
| VOLUMES | M³ |
| Water added | |
| Losses | |
| Mud Daily Cost | |
| Mud Cum Cost | |
| WELL CONTROL | |
| RSPP | N/A |
| ST/Min | |
| MACP(kPa) | N/A |
| Calc Hole Fill | |
| Act Hole Fill | N/A |
| Lst BOP Drill: | |
| Calc Hole Fill | |
| Act Hole Fill | |
| SOLIDS CONTROL | |
| Shaker Make | N/A |
| Shaker Mesh | N/A |
| | Desilter |
| | Centrifuge |
| Vol UF (l/min) | N/A |
| U.F. (kg/m3) | N/A |
| O.F. (kg/m3) | N/A |
| Hours/Days | N/A |
| Boiler Hrs: | (to 24:00) |

24 HOUR SUMMARY FOR THE DATE : Oct8th,2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|------------------------------------------------------------------------|
| 0700 | 0700 | 24hr | Safety meeting with crew and onsite supervisors to discuss proper PPE. |
| | | | Drill NQ rods from 103m to 109m |
| | | | Pull out of hole to change out bit |
| | | | Make up new bit, run in hole, ream down from 83m to 103m |
| | | | Drill NQ rods from 109m to 115m |
| | | | Drill NW casing from 109m to 115m to set casing and cement |
| | | | |
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24 HOUR Forecast :
 Continue to drill to find bedrock, set casing and cement.

| | | | | |
|------------------------------|----------------|---------------------------|--------------|--------------------------|
| Flat bay Test Hole #4 | | | REPORT #: 16 | DATE: Oct 9th,2011 |
| DEPTH 24:00: 103m | PROGRESS: 115m | Last 24 Hr Rotating Time: | | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: clear | | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 10c | | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | | |

| BIT PERFORMANCE | | | | DRILLING FLUID | PUMPS | |
|-----------------|--|--|--------|----------------|----------------------------|--|
| Bit No. | | | 1.00 ° | Time | Pump No. | |
| Size (mm) | | | | Depth(m) | Make | |
| Mfg. | | | | Density | Model | |
| Type | | | | Mud Grad | Liner X Stk | |
| Serial # | | | | Vis | SPM | |
| Nozzles | | | | PV | Pump Eff. | |
| From (mKB) | | | | YP | Pump Rate | |
| To (mKB) | | | | Gels | Pump Press. kPa | |
| Hrs on Bit | | | | pH | Drillpipe AV m/min | |
| WOB (daN) | | | | WL (cc's) | Drillcollar AV m/min | |
| RPM | | | | Filter Cake | Nozzle Vel m/sec | |
| Condition | | | | Sand (%) | MUD & CHEMICALS | |
| Pulled For? | | | | Solids (%) | | |
| Meters | | | | Oil (%) | Mud Cycle min | |
| m/hr | | | | Pf/Mf | Bottoms Up min | |
| Cum Hrs | | | | MBT | Tanks m3 | |
| | | | | Cl (ppm) | Hole Volume m3 | |
| | | | | Ca (ppm) | System Vol. m3 | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------------|----------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| BHA Length: | | Hook Load: | DP size | XXX |
| Avail WOB: | | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | | DP on Loc: | DP Conn: | XXX |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | Fishing |
| Drill w/ air | | Run Casing | | WO Materials |
| Reaming | | Cementing | | WO Services |
| Rm Rathole | | WOC | | Safety Meeting |
| Cond / Circ | | NU BOP's | | Mix mud |
| Tripping | | Test BOPs | | Install Wellhead |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Hndle Tools | | Total Hrs |

| | |
|------------------------------|---------------------|
| Mud Co. | |
| Mud Man | |
| Mud Up @ | |
| VOLUMES M³ | |
| Water added | |
| Losses | |
| Mud Daily Cost | |
| Mud Cum Cost | |
| WELL CONTROL | |
| RSPD | N/A |
| ST/Min | |
| MACP(kPa) | N/A |
| Calc Hole Fill | |
| Act Hole Fill | N/A |
| Lst BOP Drill: | |
| Calc Hole Fill | |
| Act Hole Fill | |
| SOLIDS CONTROL | |
| Shaker Make | N/A |
| Shaker Mesh | N/A |
| | Desilter Centrifuge |
| Vol UF (l/min) | N/A N/A |
| U.F. (kg/m3) | N/A N/A |
| O.F. (kg/m3) | N/A N/A |
| Hours/Days | N/A N/A |
| Boiler Hrs: (to 24:00) | |

24 HOUR SUMMARY FOR THE DATE : Oct9th,2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0700 | 0700 | 24hr | safety meeting prior to cementing with crew and onsite supervisor prior to cement casing at 115m cement job went good pumped down 85 L of 1850KGM3 cement |
| | | | wait on cement for 8hr run in hole from 0m to 111m tagged cement |
| | | | drilled out cement from 111m to 115m |
| | | | pressured test to 500 psi good test |
| | | | drill nq rods from 115m to 120m |
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24 HOUR Forecast :
drill ahead recover core

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|----------------|---------------------------|--------------------------|
| Flat bay Test Hole #4 | | REPORT #: 17 | DATE: Oct 10,2011 |
| DEPTH 24:00: 120m | PROGRESS: 184m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: clear | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 10c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | PUMPS | |
|-------------------------------------------|---------------|------------------|--------|------------------------|-------------------------------|----------------------------|------------|
| Bit No. | | | | 1.00 ° | Time | Pump No. | |
| Size (mm) | | | | | Depth(m) | Make | |
| Mfg. | | | | | Density | Model | |
| Type | | | | | Mud Grad | Liner X Stk | |
| Serial # | | | | | Vis | SPM | |
| Nozzles | | | | | PV | Pump Eff. | |
| From (mKB) | | | | | YP | Pump Rate | |
| To (mKB) | | | | | Gels | Pump Press. kPa | |
| Hrs on Bit | | | | | pH | Drillpipe AV m/min | |
| WOB (daN) | | | | | WL (cc's) | Drillcollar AV m/min | |
| RPM | | | | | Filter Cake | Nozzle Vel m/sec | |
| Condition | | | | | Sand (%) | MUD & CHEMICALS | |
| Pulled For? | | | | | Solids (%) | | |
| Meters | | | | | Oil (%) | Mud Cycle min | |
| m/hr | | | | | Pf/Mf | Bottoms Up min | |
| Cum Hrs | | | | | MBT | Tanks m3 | |
| BOTTOMHOLE ASSEMBLY | | | | | CI (ppm) | Hole Volume m3 | |
| No. | Item | Max OD | Min ID | Connection Size & Type | Ca (ppm) | System Vol. m3 | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| BHA Length: | Hook Load: | DP size | XXX | | Mud Co. | | |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX | | Mud Man | | |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX | | Mud Up @ | | |
| DRILLING OPERATIONS TIME BREAKDOWN | | | | | VOLUMES M ³ | | |
| RU / TO | Survey | Move Rig | | | Water added | Mud Daily Cost | |
| Drill w/ fluid | Logging | Fishing | | | Losses | Mud Cum Cost | |
| Drill w/ air | Run Casing | WO Materials | | | WELL CONTROL | | |
| Reaming | Cementing | WO Services | | | RSPP | Shaker Make | N/A |
| Rm Rathole | WOC | Safety Meeting | | | ST/Min | Shaker Mesh | N/A |
| Cond / Circ | NU BOP's | Mix mud | | | MACP(kPa) | Desilter | Centrifuge |
| Tripping | Test BOPs | Install Wellhead | | | Calc Hole Fill | Vol UF (l/min) | N/A |
| Lubricate Rig | Drill Out Cmt | | | | Act Hole Fill | U.F. (kg/m3) | N/A |
| Repair Rig | DST | | | | Lst BOP Drill: | O.F. (kg/m3) | N/A |
| Fishing | Handle Tools | Total Hrs | | | Calc Hole Fill | Hours/Days | N/A |
| | | | | | Act Hole Fill | Boiler Hrs: | (to 24:00) |

| 24 HOUR SUMMARY FOR THE DATE : Oct 10,2011 | | | | (0000 hrs - 2400 hrs) |
|--------------------------------------------|------|----------|-------------------------------------------------------------------------------------------|-----------------------|
| From | To | Duration | Event | |
| 0700 | 0700 | 24hr | Safety meeting with crew and on site supervisors, discussed driving to and from work site | |
| | | | Drill NQ rods from 120m to 148m | |
| | | | Total depth for hole is 148m due to drilling in granite nise. | |
| | | | Pull out of hole from 148m to 0m | |
| | | | Cement hole back to surface. | |
| | | | Rig out rig and demob to next location | |
| | | | Test hole #8 | |
| | | | | |
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| | | | | |
| | | | | |

24 HOUR Forecast :
 Cement, rig out rig and move to hole #8

Vulcan Minerals

DAILY DRILLING REPORT

| | | | | |
|------------------------------|--------------|---------------------------|--------------|--------------------------|
| Flat bay Test Hole #8 | | | REPORT #: 18 | DATE: Oct 11th,2011 |
| DEPTH 24:00: 0m | PROGRESS: 9m | Last 24 Hr Rotating Time: | | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: clear | | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 10c | | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | | |

| BIT PERFORMANCE | | | | DRILLING FLUID | PUMPS | | | |
|-------------------------------------------|--|---------------|--------|------------------|----------------------|--------|--------|------------------------|
| Bit No. | | | 1.00 ° | Time | Pump No. | | | |
| Size (mm) | | | | Depth(m) | Make | | | |
| Mfg. | | | | Density | Model | | | |
| Type | | | | Mud Grad | Liner X Stk | | | |
| Serial # | | | | Vis | SPM | | | |
| Nozzles | | | | PV | Pump Eff. | | | |
| From (mKB) | | | | YP | Pump Rate | | | |
| To (mKB) | | | | Gels | Pump Press. kPa | | | |
| Hrs on Bit | | | | pH | Drillpipe AV m/min | | | |
| WOB (daN) | | | | WL (cc's) | Drillcollar AV m/min | | | |
| RPM | | | | Filter Cake | Nozzle Vel m/sec | | | |
| Condition | | | | Sand (%) | | | | |
| Pulled For? | | | | Solids (%) | | | | |
| Meters | | | | Oil (%) | | | | |
| m/hr | | | | Pf/Mf | | | | |
| Cum Hrs | | | | MBT | | | | |
| BOTTOMHOLE ASSEMBLY | | | | Ca (ppm) | | | | |
| | | | | No. | Item | Max OD | Min ID | Connection Size & Type |
| | | | | 1 | | | | |
| | | | | 2 | | | | |
| BHA Length: | | | | Hook Load: | DP size | XXX | | |
| Avail WOB: | | | | Jts DP Racks | DC Conn: | XXX | | |
| Jts DP in hole: | | | | DP on Loc: | DP Conn: | XXX | | |
| DRILLING OPERATIONS TIME BREAKDOWN | | | | | | | | |
| RU / TO | | Survey | | Move Rig | | | | |
| Drill w/ fluid | | Logging | | Fishing | | | | |
| Drill w/ air | | Run Casing | | WO Materials | | | | |
| Reaming | | Cementing | | WO Services | | | | |
| Rm Rathole | | WOC | | Safety Meeting | | | | |
| Cond / Circ | | NU BOP's | | Mix mud | | | | |
| Tripping | | Test BOP's | | Install Wellhead | | | | |
| Lubricate Rig | | Drill Out Cmt | | | | | | |
| Repair Rig | | DST | | | | | | |
| Fishing | | Handle Tools | | Total Hrs | | | | |
| DRILLING FLUID | | | | VOLUMES | M³ | | | |
| Water added | | | | | | | | |
| Losses | | | | | | | | |
| WELL CONTROL | | | | | | | | |
| RSPP | | | | N/A | | | | |
| ST/Min | | | | | | | | |
| MACP(kPa) | | | | N/A | | | | |
| Calc Hole Fill | | | | | | | | |
| Act Hole Fill | | | | N/A | | | | |
| Lst BOP Drill: | | | | | | | | |
| Calc Hole Fill | | | | | | | | |
| Act Hole Fill | | | | | | | | |
| SOLIDS CONTROL | | | | | | | | |
| Shaker Make | | | | | N/A | | | |
| Shaker Mesh | | | | | N/A | | | |
| | | | | Desilter | Centrifuge | | | |
| Vol UF (l/min) | | | | N/A | N/A | | | |
| U.F. (kg/m3) | | | | N/A | N/A | | | |
| O.F. (kg/m3) | | | | N/A | N/A | | | |
| Hours/Days | | | | N/A | N/A | | | |
| Boiler Hrs: | | | | | (to 24:00) | | | |

24 HOUR SUMMARY FOR THE DATE : Oct11,2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|----------------------------------------------------------------------------------------------|
| 0700 | 0700 | 24hr | Safety meeting with crew and on site supervisors, discussed pinched points prior to rig move |
| | | | Continue to move rig to new location |
| | | | Rig up on new location |
| | | | Set up pump shack, string out hose, etc. |
| | | | Drill NQ rods from 0m to 9m. |
| | | | |
| | | | |
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24 HOUR Forecast :
 Drill overburden.

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|---------------|---------------------------|--------------------------|
| Flat bay Test Hole #8 | | REPORT #: 19 | DATE: Oct 12th, 2011 |
| DEPTH 24:00: 9m | PROGRESS: 46m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: clear | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 1c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | | | PUMPS | | | | | |
|-----------------|--|--|--|----------------|-------------|--|--|----------------------------|--|-------|--|--|--|
| Bit No. | | | | 1.00 ° | Time | | | Pump No. | | | | | |
| Size (mm) | | | | | Depth(m) | | | Make | | | | | |
| Mfg. | | | | | Density | | | Model | | | | | |
| Type | | | | | Mud Grad | | | Liner X Stk | | | | | |
| Serial # | | | | | Vis | | | SPM | | | | | |
| Nozzles | | | | | PV | | | Pump Eff. | | | | | |
| From (mKB) | | | | | YP | | | Pump Rate | | | | | |
| To (mKB) | | | | | Gels | | | Pump Press. | | kPa | | | |
| Hrs on Bit | | | | | pH | | | Drillpipe AV | | m/min | | | |
| WOB (daN) | | | | | WL (cc's) | | | Drillcollar AV | | m/min | | | |
| RPM | | | | | Filter Cake | | | Nozzle Vel | | m/sec | | | |
| Condition | | | | | Sand (%) | | | MUD & CHEMICALS | | | | | |
| Pulled For? | | | | | Solids (%) | | | Mud Cycle | | min | | | |
| Meters | | | | | Oil (%) | | | Bottoms Up | | min | | | |
| m/hr | | | | | Pf/Mf | | | Tanks | | m3 | | | |
| Cum Hrs | | | | | CI (ppm) | | | Hole Volume | | m3 | | | |
| | | | | | Ca (ppm) | | | System Vol. | | m3 | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

| | | | |
|-----------------|--------------|----------|-----|
| BHA Length: | Hook Load: | DP size | XXX |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | | | VOLUMES M ³ | | MUD & CHEMICALS | | | | | |
|------------------------------------|--|---------------|--|------------------|--|------------------------|-----|-----------------------|-----|------------|--|--|--|
| RU / TO | | Survey | | Move Rig | | Water added | | Mud Daily Cost | | | | | |
| Drill w/ fluid | | Logging | | Fishing | | Losses | | Mud Cum Cost | | | | | |
| Drill w/ air | | Run Casing | | WO Materials | | WELL CONTROL | | SOLIDS CONTROL | | | | | |
| Reaming | | Cementing | | WO Services | | RSPP | N/A | Shaker Make | N/A | | | | |
| Rm Rathole | | WOC | | Safety Meeting | | ST/Min | | Shaker Mesh | N/A | | | | |
| Cond / Circ | | NU BOP's | | Mix mud | | MACP(kPa) | N/A | Desilter | | Centrifuge | | | |
| Tripping | | Test BOP's | | Install Wellhead | | Calc Hole Fill | | Vol UF (l/min) | N/A | N/A | | | |
| Lubricate Rig | | Drill Out Cmt | | | | Act Hole Fill | N/A | U.F. (kg/m3) | N/A | N/A | | | |
| Repair Rig | | DST | | | | Lst BOP Drill: | | O.F. (kg/m3) | N/A | N/A | | | |
| Fishing | | Handle Tools | | Total Hrs | | Calc Hole Fill | | Hours/Days | N/A | N/A | | | |
| | | | | | | Act Hole Fill | | Boiler Hrs: | | (to 24:00) | | | |

| 24 HOUR SUMMARY FOR THE DATE : Oct12,2011 | | | | (0000 hrs - 2400 hrs) |
|-------------------------------------------|------|----------|----------------------------------------------------------------------------------|-----------------------|
| From | To | Duration | Event | |
| 0700 | 0700 | 24hr | Safety meeting with crew, discussed working tight hole, and reaming | |
| | | | Drilled overburden with NQ rods from 9m to 33m | |
| | | | Drilled NW casing from 9m to 33m | |
| | | | Drill NQ rods from 33m to 46m | |
| | | | Very tight intervals from 40m to 46m with clay seams and pebbles of glacial Till | |
| | | | Begin reaming with NW casing from 33m | |
| | | | Pooh with NW casing and change bit , very tight, worked casing from 33m to 42m, | |
| | | | | |
| | | | | |
| | | | Mechanical problem with rig, (transmission failure) | |
| | | | Unable to drill ahead at this time, wait on replacement parts | |
| | | | | |
| | | | | |
| | | | | |

24 HOUR Forecast :
 Wait on Logan to install new transmission

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|---------------|---------------------------|--------------------------|
| Flat bay Test Hole #8 | | REPORT #: 20 | DATE: Oct 13th,2011 |
| DEPTH 24:00: 33m | PROGRESS: 67m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: sunny | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 12c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | | | PUMPS | | | | | |
|-----------------|--|--|--------|----------------|--|--|--|----------------------------|--|-------|--|--|--|
| Bit No. | | | 1.00 ° | Time | | | | Pump No. | | | | | |
| Size (mm) | | | | Depth(m) | | | | Make | | | | | |
| Mfg. | | | | Density | | | | Model | | | | | |
| Type | | | | Mud Grad | | | | Liner X Stk | | | | | |
| Serial # | | | | Vis | | | | SPM | | | | | |
| Nozzles | | | | PV | | | | Pump Eff. | | | | | |
| From (mKB) | | | | YP | | | | Pump Rate | | | | | |
| To (mKB) | | | | Gels | | | | Pump Press. | | kPa | | | |
| Hrs on Bit | | | | pH | | | | Drillpipe AV | | m/min | | | |
| WOB (daN) | | | | WL (cc's) | | | | Drillcollar AV | | m/min | | | |
| RPM | | | | Filter Cake | | | | Nozzle Vel | | m/sec | | | |
| Condition | | | | Sand (%) | | | | MUD & CHEMICALS | | | | | |
| Pulled For? | | | | Solids (%) | | | | Mud Cycle | | min | | | |
| Meters | | | | Oil (%) | | | | Bottoms Up | | min | | | |
| m/hr | | | | Pf/Mf | | | | Tanks | | m3 | | | |
| Cum Hrs | | | | CI (ppm) | | | | Hole Volume | | m3 | | | |
| | | | | Ca (ppm) | | | | System Vol. | | m3 | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|--------------|----------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| BHA Length: | Hook Load: | DP size | XXX | |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX | |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX | |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | | | VOLUMES M ³ | | MUD DAILY COST | |
|------------------------------------|--|---------------|--|------------------|--|------------------------|-----|-----------------------|------------|
| RU / TO | | Survey | | Move Rig | | Water added | | Mud Daily Cost | |
| Drill w/ fluid | | Logging | | Fishing | | Losses | | Mud Cum Cost | |
| Drill w/ air | | Run Casing | | WO Materials | | WELL CONTROL | | | |
| Reaming | | Cementing | | WO Services | | RSPP | N/A | SOLIDS CONTROL | |
| Rm Rathole | | WOC | | Safety Meeting | | ST/Min | N/A | Shaker Make | N/A |
| Cond / Circ | | NU BOP's | | Mix mud | | MACP(kPa) | N/A | Shaker Mesh | N/A |
| Tripping | | Test BOP's | | Install Wellhead | | Calc Hole Fill | | Desilter | Centrifuge |
| Lubricate Rig | | Drill Out Cmt | | | | Act Hole Fill | N/A | Vol UF (l/min) | N/A |
| Repair Rig | | DST | | | | Lst BOP Drill: | | U.F. (kg/m3) | N/A |
| Fishing | | Hndle Tools | | Total Hrs | | Calc Hole Fill | | O.F. (kg/m3) | N/A |
| | | | | | | Act Hole Fill | | Hours/Days | N/A |
| | | | | | | | | Boiler Hrs: | (to 24:00) |

| 24 HOUR SUMMARY FOR THE DATE : Oct13,2011 | | | | (0000 hrs - 2400 hrs) | |
|-------------------------------------------|------|----------|------------------------------------------------------------------------------------------------|-----------------------|--|
| From | To | Duration | Event | | |
| 0700 | 0700 | 24hr | Safety meeting with crew, discussed installing new transmission, pinch points and proper tools | | |
| | | | Drilled overburden with NQ rods from 33m to 58m | | |
| | | | Drilled NW casing from 33m to 58m | | |
| | | | Drill NQ rods from 58m to 67m | | |
| | | | Currently drilling NW rods down to 66m, to cement casing | | |
| | | | Hit bedrock at 58m, drilled into bedrock 8m | | |
| | | | Mechanical problem with rig, (transmission failure) | | |
| | | | Unable to drill ahead at this time, wait on replacement parts | | |

| 24 HOUR Forecast : | | | |
|------------------------------------------------------------|--|--|--|
| Cement casing, while waiting on cement nipple up deverter. | | | |

Vulcan Minerals

DAILY DRILLING REPORT

| | | | | |
|------------------------------|----------------|---------------------------|--------------|--------------------------|
| Flat bay Test Hole #8 | | | REPORT #: 21 | DATE: Oct 14th, 2011 |
| DEPTH 24:00: 66m | PROGRESS: 148m | Last 24 Hr Rotating Time: | | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: rain | TOOLPUSH: | |
| CUM COST: | RIG / RIG #: | TEMP.: 12c | T.P. MOBILE: | |
| FORMATION: | K.B. ELEV.: | ROADS: rough | | |

| BIT PERFORMANCE | | | | DRILLING FLUID | PUMPS | |
|-----------------|--|--|--------|----------------|----------------------|-----|
| Bit No. | | | 1.00 ° | Time | Pump No. | |
| Size (mm) | | | | Depth(m) | Make | |
| Mfg. | | | | Density | Model | |
| Type | | | | Mud Grad | Liner X Stk | |
| Serial # | | | | Vis | SPM | |
| Nozzles | | | | PV | Pump Eff. | |
| From (mKB) | | | | YP | Pump Rate | |
| To (mKB) | | | | Gels | Pump Press. kPa | |
| Hrs on Bit | | | | pH | Drillpipe AV m/min | |
| WOB (daN) | | | | WL (cc's) | Drillcollar AV m/min | |
| RPM | | | | Filter Cake | Nozzle Vel m/sec | |
| Condition | | | | Sand (%) | | |
| Pulled For? | | | | Solids (%) | | |
| Meters | | | | Oil (%) | MUD & CHEMICALS | |
| m/hr | | | | Pf/Mf | Mud Cycle | min |
| Cum Hrs | | | | CI (ppm) | Bottoms Up | min |
| | | | | Ca (ppm) | Tanks | m3 |
| | | | | | Hole Volume | m3 |
| | | | | | System Vol. | m3 |
| | | | | | 3 bags of portland | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|--------------|----------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| BHA Length: | Hook Load: | DP size | XXX | |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX | |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX | |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | Fishing |
| Drill w/ air | | Run Casing | | WO Materials |
| Reaming | | Cementing | | WO Services |
| Rm Rathole | | WOC | | Safety Meeting |
| Cond / Circ | | NU BOP's | | Mix mud |
| Tripping | | Test BOPs | | Install Wellhead |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Hndle Tools | | Total Hrs |

| VOLUMES | | M ³ |
|----------------|-----|------------------------|
| Water added | | |
| Losses | | |
| WELL CONTROL | | SOLIDS CONTROL |
| RSP | N/A | Shaker Make |
| ST/Min | | Shaker Mesh |
| MACP(kPa) | N/A | Desilter |
| Calc Hole Fill | | Centrifuge |
| Act Hole Fill | N/A | Vol UF (l/min) |
| Lst BOP Drill: | | U.F. (kg/m3) |
| Calc Hole Fill | | O.F. (kg/m3) |
| Act Hole Fill | | Hours/Days |
| | | Boiler Hrs: (to 24:00) |

24 HOUR SUMMARY FOR THE DATE : Oct14,2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|------------------------------------------------------------------|
| 0700 | 0700 | 24hr | Safety meeting with crew, discussed pressure testing |
| | | | cement job went good, wait on cement prior to drill out for 8hrs |
| | | | run in hole, tagged cement at 62m |
| | | | Drilled cement from 62m to 67m |
| | | | Pressure test up to 500 psi for 10 mins, good test |
| | | | drill NQ rods from 67m to 115m |
| | | | Currently drilling ahead from 145m |
| | | | |
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24 HOUR Forecast :
Drill ahead, recover core, and wax core.

Vulcan Minerals

DAILY DRILLING REPORT

| | | | | | |
|-------------------------------------------------------------|-----------|------------------|---------------------------------------------------------|-------------------------------|--------------------|
| Flat bay Test Hole #8 | | | | REPORT #: 22 | DATE: Oct15th,2011 |
| DEPTH 24:00: 148m | | PROGRESS: 208m | | Last 24 Hr Rotating Time: | |
| OPER 09:00: | | FOREMAN: H.HYNES | | Ave ROP: | |
| DAILY COST: | | HOLE CND.: | | WEATHER: rain | |
| CUM COST: | | RIG / RIG #: | | TEMP.: 8c | |
| FORMATION: | | K.B. ELEV.: | | ROADS: rough | |
| BIT PERFORMANCE | | | 1.00 ° | DRILLING FLUID | |
| Bit No. | | | | Time | |
| Size (mm) | | | | Depth(m) | |
| Mfg. | | | | Density | |
| Type | | | | Mud Grad | |
| Serial # | | | | Vis | |
| Nozzles | | | | PV | |
| From (mKB) | | | | YP | |
| To (mKB) | | | | Gels | |
| Hrs on Bit | | | | pH | |
| WOB (daN) | | | | WL (cc's) | |
| RPM | | | | Filter Cake | |
| Condition | | | | Sand (%) | |
| Pulled For? | | | | Solids (%) | |
| Meters | | | | Oil (%) | |
| m/hr | | | | Pf/Mf | |
| Cum Hrs | | | | MBT | |
| | | | | Cl (ppm) | |
| | | | | Ca (ppm) | |
| | | | | Mud Co. | |
| | | | | Mud Man | |
| | | | | Mud Up @ | |
| | | | | VOLUMES M ³ | |
| BOTTOMHOLE ASSEMBLY | | | | | |
| No. | Item | Max OD | Min ID | Connection Size & Type | |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| BHA Length: | | Hook Load: | | DP size | XXX |
| Avail WOB: | | Jts DP Racks | | DC Conn: | XXX |
| Jts DP in hole: | | DP on Loc: | | DP Conn: | XXX |
| DRILLING OPERATIONS TIME BREAKDOWN | | | | | |
| RU / TO | | Survey | | Move Rig | |
| Drill w/ fluid | | Logging | | Fishing | |
| Drill w/ air | | Run Casing | | WO Materials | |
| Reaming | | Cementing | | WO Services | |
| Rm Rathole | | WOC | | Safety Meeting | |
| Cond / Circ | | NU BOP's | | Mix mud | |
| Tripping | | Test BOP's | | Install Wellhead | |
| Lubricate Rig | | Drill Out Cmt | | | |
| Repair Rig | | DST | | | |
| Fishing | | Hndle Tools | | Total Hrs | |
| 24 HOUR SUMMARY FOR THE DATE : Oct15,2011 | | | | (0000 hrs - 2400 hrs) | |
| From | To | Duration | Event | | |
| 0700 | 0700 | 24hr | Safety meeting with crew, discussed good hand placement | | |
| | | | drill nq rods from 148m to 208m | | |
| | | | Still in anhydrate at 208m | | |
| | | | Due to government regulations, not able to drill ahead | | |
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| 24 HOUR Forecast : | | | | | |
| Rig out rig, cap casing, demob rig to flat bay test hole #5 | | | | | |

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|------------------------------|------------------|---------------------------|--------------------------|--------------------|
| Flat bay Test Hole #5 | | | REPORT #: 22 | DATE: Oct16th,2011 |
| DEPTH 24:00: | PROGRESS: 15.0 m | Last 24 Hr Rotating Time: | | Ave ROP: |
| OPER 09:00: | FOREMAN: H.HYNES | | MOBILE NO.: 780-667-8775 | |
| DAILY COST: | HOLE CND.: | WEATHER: rain | TOOLPUSH: | |
| CUM COST: | RIG / RIG #: | TEMP.: 8c | T.P. MOBILE: | |
| FORMATION: | K.B. ELEV.: | ROADS: rough | | |

| BIT PERFORMANCE | | | | | DRILLING FLUID | | | PUMPS | | |
|-----------------|--|--|--|--------|----------------|--|--|----------------------------|-------|--|
| Bit No. | | | | 1.00 ° | Time | | | Pump No. | | |
| Size (mm) | | | | | Depth(m) | | | Make | | |
| Mfg. | | | | | Density | | | Model | | |
| Type | | | | | Mud Grad | | | Liner X Stk | | |
| Serial # | | | | | Vis | | | SPM | | |
| Nozzles | | | | | PV | | | Pump Eff. | | |
| From (mKB) | | | | | YP | | | Pump Rate | | |
| To (mKB) | | | | | Gels | | | Pump Press. | kPa | |
| Hrs on Bit | | | | | pH | | | Drillpipe AV | m/min | |
| WOB (daN) | | | | | WL (cc's) | | | Drillcollar AV | m/min | |
| RPM | | | | | Filter Cake | | | Nozzle Vel | m/sec | |
| Condition | | | | | Sand (%) | | | MUD & CHEMICALS | | |
| Pulled For? | | | | | Solids (%) | | | | | |
| Meters | | | | | Oil (%) | | | Mud Cycle | min | |
| m/hr | | | | | Pf/Mf | | | Bottoms Up | min | |
| Cum Hrs | | | | | MBT | | | Tanks | m3 | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------------|----------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| BHA Length: | | Hook Load: | DP size | XXX |
| Avail WOB: | | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | | DP on Loc: | DP Conn: | XXX |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | | VOLUMES M ³ | |
|------------------------------------|---------------|--|------------------|--|------------------------|------------|
| RU / TO | Survey | | Move Rig | | Water added | |
| Drill w/ fluid | Logging | | Fishing | | Losses | |
| Drill w/ air | Run Casing | | WO Materials | | Mud Daily Cost | |
| Reaming | Cementing | | WO Services | | Mud Cum Cost | |
| Rm Rathole | WOC | | Safety Meeting | | WELL CONTROL | |
| Cond / Circ | NU BOP's | | Mix mud | | | |
| Tripping | Test BOP's | | Install Wellhead | | RSPP | N/A |
| Lubricate Rig | Drill Out Cmt | | | | ST/Min | |
| Repair Rig | DST | | | | MACP(kPa) | N/A |
| Fishing | Hndle Tools | | Total Hrs | | Calc Hole Fill | |
| | | | | | Act Hole Fill | N/A |
| | | | | | Lst BOP Drill: | |
| | | | | | Calc Hole Fill | |
| | | | | | Act Hole Fill | |
| | | | | | SOLIDS CONTROL | |
| | | | | | Shaker Make | N/A |
| | | | | | Shaker Mesh | N/A |
| | | | | | Desilter | Centrifuge |
| | | | | | Vol UF (l/min) | N/A |
| | | | | | U.F. (kg/m3) | N/A |
| | | | | | O.F. (kg/m3) | N/A |
| | | | | | Hours/Days | N/A |
| | | | | | Boiler Hrs: | (to 24:00) |

| 24 HOUR SUMMARY FOR THE DATE : Oct16,2011 (0000 hrs - 2400 hrs) | | | | |
|-----------------------------------------------------------------|------|----------|-----------------------------------------------------------------|--|
| From | To | Duration | Event | |
| 0700 | 0700 | 24hr | Safety meeting with crew, discussed rig move and overhead lines | |
| | | | continue rig out rig float move and equipment to new location | |
| | | | skid drill with tractor and equipment to set up | |
| | | | supply pump and string out water hose. | |
| | | | drill overburden nw casing from 0m to 15m | |
| | | | | |
| | | | | |
| | | | currently drilling ahead@ 25m | |
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24 HOUR Forecast :
drill ahead

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|---------------|---------------------------|--------------------------|
| Flat bay Test Hole #5 | | REPORT #: 22 | DATE: Oct17th,2011 |
| DEPTH 24:00: 15m | PROGRESS: 61m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: rain | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 8c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | PUMPS |
|-----------------|--|--|--------|----------------|----------------------|
| Bit No. | | | 1.00 ° | Time | Pump No. |
| Size (mm) | | | | Depth(m) | Make |
| Mfg. | | | | Density | Model |
| Type | | | | Mud Grad | Liner X Stk |
| Serial # | | | | Vis | SPM |
| Nozzles | | | | PV | Pump Eff. |
| From (mKB) | | | | YP | Pump Rate |
| To (mKB) | | | | Gels | Pump Press. kPa |
| Hrs on Bit | | | | pH | Drillpipe AV m/min |
| WOB (daN) | | | | WL (cc's) | Drillcollar AV m/min |
| RPM | | | | Filter Cake | Nozzle Vel m/sec |
| Condition | | | | Sand (%) | |
| Pulled For? | | | | Solids (%) | |
| Meters | | | | Oil (%) | |
| m/hr | | | | Pf/Mf | |
| Cum Hrs | | | | MBT | |
| | | | | CI (ppm) | |
| | | | | Ca (ppm) | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|--------------|----------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| BHA Length: | Hook Load: | DP size | XXX | |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX | |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX | |

| MUD & CHEMICALS | |
|-----------------|-----|
| Mud Cycle | min |
| Bottoms Up | min |
| Tanks | m3 |
| Hole Volume | m3 |
| System Vol. | m3 |
| Mud Co. | |
| Mud Man | |
| Mud Up @ | |
| 1 pail 1200 | |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | Fishing |
| Drill w/ air | | Run Casing | | WO Materials |
| Reaming | | Cementing | | WO Services |
| Rm Rathole | | WOC | | Safety Meeting |
| Cond / Circ | | NU BOP's | | Mix mud |
| Tripping | | Test BOPs | | Install Wellhead |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Hndle Tools | | Total Hrs |

| VOLUMES M ³ | | WELL CONTROL | | SOLIDS CONTROL | |
|------------------------|--|----------------|-----|----------------|------------|
| Water added | | RSPP | N/A | Shaker Make | N/A |
| Losses | | ST/Min | | Shaker Mesh | N/A |
| | | MACP(kPa) | N/A | Desilter | Centrifuge |
| | | Calc Hole Fill | | Vol UF (l/min) | N/A |
| | | Act Hole Fill | N/A | U.F. (kg/m3) | N/A |
| | | Lst BOP Drill: | | O.F. (kg/m3) | N/A |
| | | Calc Hole Fill | | Hours/Days | N/A |
| | | Act Hole Fill | | Boiler Hrs: | (to 24:00) |

24 HOUR SUMMARY FOR THE DATE : Oct17,2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|--------------------------------------------------|
| 0700 | 0700 | 24hr | Safety meeting with crew, discussed pinch points |
| | | | drill overburden nw casing from 15m to 30m |
| | | | move pump shack to new water hole |
| | | | pooh change shoe bit |
| | | | ream casing from 22m to 30m |
| | | | drill overburden nw casing from 30 to 61m |
| | | | |
| | | | currently drilling ahead@ 74m |
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24 HOUR Forecast :
drill ahead in overburden

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|---------------|---------------------------|--------------------------|
| Flat bay Test Hole #5 | | REPORT #: 23 | DATE: Oct18th,2011 |
| DEPTH 24:00: 15m | PROGRESS: 61m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: good | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 12c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | PUMPS | |
|-------------------------------------------|---------------|------------------|--------|-------------------------------|----------|----------------------------|------------|
| Bit No. | | | 1.00 ° | Time | | Pump No. | |
| Size (mm) | | | | Depth(m) | | Make | |
| Mfg. | | | | Density | | Model | |
| Type | | | | Mud Grad | | Liner X Stk | |
| Serial # | | | | Vis | | SPM | |
| Nozzles | | | | PV | | Pump Eff. | |
| From (mKB) | | | | YP | | Pump Rate | |
| To (mKB) | | | | Gels | | Pump Press. | kPa |
| Hrs on Bit | | | | pH | | Drillpipe AV | m/min |
| WOB (daN) | | | | WL (cc's) | | Drillcollar AV | m/min |
| RPM | | | | Filter Cake | | Nozzle Vel | m/sec |
| Condition | | | | Sand (%) | | MUD & CHEMICALS | |
| Pulled For? | | | | Solids (%) | | Mud Cycle | min |
| Meters | | | | Oil (%) | | Bottoms Up | min |
| m/hr | | | | Pf/Mf | | Tanks | m3 |
| Cum Hrs | | | | CI (ppm) | | Hole Volume | m3 |
| BOTTOMHOLE ASSEMBLY | | | | Ca (ppm) | | System Vol. | m3 |
| No. | Item | Max OD | Min ID | Connection Size & Type | | 3 pail 1200 | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| BHA Length: | Hook Load: | DP size | XXX | | Mud Co. | | |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX | | Mud Man | | |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX | | Mud Up @ | | |
| DRILLING OPERATIONS TIME BREAKDOWN | | | | VOLUMES M ³ | | | |
| RU / TO | Survey | Move Rig | | Water added | | Mud Daily Cost | |
| Drill w/ fluid | Logging | Fishing | | Losses | | Mud Cum Cost | |
| Drill w/ air | Run Casing | WO Materials | | WELL CONTROL | | SOLIDS CONTROL | |
| Reaming | Cementing | WO Services | | RSPP | N/A | Shaker Make | N/A |
| Rm Rathole | WOC | Safety Meeting | | ST/Min | | Shaker Mesh | N/A |
| Cond / Circ | NU BOP's | Mix mud | | MACP(kPa) | N/A | Desilter | Centrifuge |
| Tripping | Test BOPs | Install Wellhead | | Calc Hole Fill | | Vol UF (l/min) | N/A |
| Lubricate Rig | Drill Out Cmt | | | Act Hole Fill | N/A | U.F. (kg/m3) | N/A |
| Repair Rig | DST | | | Lst BOP Drill: | | O.F. (kg/m3) | N/A |
| Fishing | Hndle Tools | Total Hrs | | Calc Hole Fill | | Hours/Days | N/A |
| | | | | Act Hole Fill | | Boiler Hrs: | (to 24:00) |

| 24 HOUR SUMMARY FOR THE DATE : Oct18,2011 | | | | (0000 hrs - 2400 hrs) | | | |
|--------------------------------------------------|------|----------|-------------------------------------------------------------------|-----------------------|--|--|--|
| From | To | Duration | Event | | | | |
| 0700 | 0700 | 24hr | Safety meeting with crew, discussed driving to and from location. | | | | |
| | | | Drill overburden nw casing from 61m to 78m | | | | |
| | | | Drill overburden nq rods from 78m to 82m | | | | |
| | | | Ream nw casing from 78m to 82m | | | | |
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24 HOUR Forecast :
drill ahead in overburden

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|---------------|---------------------------|--------------------------|
| Flat bay Test Hole #5 | | REPORT #: 23 | DATE: Oct19th,2011 |
| DEPTH 24:00: 61m | PROGRESS: 82m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: good | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 12c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | | | PUMPS | | | | | |
|-----------------|--|--|--------|----------------|--|--|--|----------------------------|--|-------|--|--|--|
| Bit No. | | | 1.00 ° | Time | | | | Pump No. | | | | | |
| Size (mm) | | | | Depth(m) | | | | Make | | | | | |
| Mfg. | | | | Density | | | | Model | | | | | |
| Type | | | | Mud Grad | | | | Liner X Stk | | | | | |
| Serial # | | | | Vis | | | | SPM | | | | | |
| Nozzles | | | | PV | | | | Pump Eff. | | | | | |
| From (mKB) | | | | YP | | | | Pump Rate | | | | | |
| To (mKB) | | | | Gels | | | | Pump Press. | | kPa | | | |
| Hrs on Bit | | | | pH | | | | Drillpipe AV | | m/min | | | |
| WOB (daN) | | | | WL (cc's) | | | | Drillcollar AV | | m/min | | | |
| RPM | | | | Filter Cake | | | | Nozzle Vel | | m/sec | | | |
| Condition | | | | Sand (%) | | | | MUD & CHEMICALS | | | | | |
| Pulled For? | | | | Solids (%) | | | | Mud Cycle | | min | | | |
| Meters | | | | Oil (%) | | | | Bottoms Up | | min | | | |
| m/hr | | | | Pf/Mf | | | | Tanks | | m3 | | | |
| Cum Hrs | | | | CI (ppm) | | | | Hole Volume | | m3 | | | |
| | | | | Ca (ppm) | | | | System Vol. | | m3 | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

| | | | |
|-----------------|--------------|----------|-----|
| BHA Length: | Hook Load: | DP size | XXX |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | Fishing |
| Drill w/ air | | Run Casing | | WO Materials |
| Reaming | | Cementing | | WO Services |
| Rm Rathole | | WOC | | Safety Meeting |
| Cond / Circ | | NU BOP's | | Mix mud |
| Tripping | | Test BOP's | | Install Wellhead |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Hndle Tools | | Total Hrs |

| | |
|-----------------------|----------------------|
| Mud Co. | |
| Mud Man | |
| Mud Up @ | |
| VOLUMES | M³ |
| Water added | |
| Losses | |
| Mud Daily Cost | |
| Mud Cum Cost | |
| WELL CONTROL | |
| RSPP | N/A |
| ST/Min | |
| MACP(kPa) | N/A |
| Calc Hole Fill | |
| Act Hole Fill | N/A |
| Lst BOP Drill: | |
| Calc Hole Fill | |
| Act Hole Fill | |
| SOLIDS CONTROL | |
| Shaker Make | N/A |
| Shaker Mesh | N/A |
| | Desilter |
| | Centrifuge |
| Vol UF (l/min) | N/A |
| U.F. (kg/m3) | N/A |
| O.F. (kg/m3) | N/A |
| Hours/Days | N/A |
| Boiler Hrs: | (to 24:00) |

| 24 HOUR SUMMARY FOR THE DATE : Oct19,2011 | | | (0000 hrs - 2400 hrs) |
|--------------------------------------------------|------|----------|-----------------------------------------------------|
| From | To | Duration | Event |
| 0700 | 0700 | 24hr | Safety meeting with crew, discussed muddy location. |
| | | | Currently hole is drilled to 82m |
| | | | Problems occurred with motor, waiting on parts |
| | | | Equipment went down at 0400 hrs on the 19th |
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| | | | Currently waiting on mechanic or new parts |
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|------------------------------|
| 24 HOUR Forecast : |
| waiting on replacement parts |

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|---------------|---------------------------|--------------------------|
| Flat bay Test Hole #5 | | REPORT #: 24 | DATE: Oct20th,2011 |
| DEPTH 24:00: 61m | PROGRESS: 82m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: good | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 12c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | | | PUMPS | | | |
|-------------------------------------------------------------------------|-----------|-----------------|-----------------------------------------------|------------------------|-------------|---------------------|----------------------|----------------------------|----------|------------|------------|
| Bit No. | | | | 1.00 ° | Time | | | Pump No. | | | |
| Size (mm) | | | | | Depth(m) | | | Make | | | |
| Mfg. | | | | | Density | | | Model | | | |
| Type | | | | | Mud Grad | | | Liner X Stk | | | |
| Serial # | | | | | Vis | | | SPM | | | |
| Nozzles | | | | | PV | | | Pump Eff. | | | |
| From (mKB) | | | | | YP | | | Pump Rate | | | |
| To (mKB) | | | | | Gels | | | Pump Press. | kPa | | |
| Hrs on Bit | | | | | pH | | | Drillpipe AV | m/min | | |
| WOB (daN) | | | | | WL (cc's) | | | Drillcollar AV | m/min | | |
| RPM | | | | | Filter Cake | | | Nozzle Vel | m/sec | | |
| Condition | | | | | Sand (%) | | | MUD & CHEMICALS | | | |
| Pulled For? | | | | | Solids (%) | | | Mud Cycle | min | | |
| Meters | | | | | Oil (%) | | | Bottoms Up | min | | |
| m/hr | | | | | Pf/Mf | | | Tanks | m3 | | |
| Cum Hrs | | | | | CI (ppm) | | | Hole Volume | m3 | | |
| BOTTOMHOLE ASSEMBLY | | | | | Ca (ppm) | | | System Vol. | m3 | | |
| No. | Item | Max OD | Min ID | Connection Size & Type | | | | | | | |
| 1 | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| BHA Length: | | Hook Load: | | DP size | XXX | | | | | | |
| Avail WOB: | | Jts DP Racks | | DC Conn: | XXX | | | | | | |
| Jts DP in hole: | | DP on Loc: | | DP Conn: | XXX | | | | | | |
| DRILLING OPERATIONS TIME BREAKDOWN | | | | | | VOLUMES | M³ | | | | |
| RU / TO | | Survey | | Move Rig | | Water added | | Mud Daily Cost | | | |
| Drill w/ fluid | | Logging | | Fishing | | Losses | | Mud Cum Cost | | | |
| Drill w/ air | | Run Casing | | WO Materials | | WELL CONTROL | | SOLIDS CONTROL | | | |
| Reaming | | Cementing | | WO Services | | RSPG | N/A | Shaker Make | | N/A | |
| Rm Rathole | | WOC | | Safety Meeting | | ST/Min | | Shaker Mesh | | N/A | |
| Cond / Circ | | NU BOP's | | Mix mud | | MACP(kPa) | N/A | | Desilter | | Centrifuge |
| Tripping | | Test BOP's | | Install Wellhead | | Calc Hole Fill | | Vol UF (l/min) | N/A | | N/A |
| Lubricate Rig | | Drill Out Cmt | | | | Act Hole Fill | N/A | U.F. (kg/m3) | N/A | | N/A |
| Repair Rig | | DST | | | | Lst BOP Drill: | | O.F. (kg/m3) | N/A | | N/A |
| Fishing | | Hndle Tools | | Total Hrs | | Calc Hole Fill | | Hours/Days | N/A | | N/A |
| | | | | | | Act Hole Fill | | Boiler Hrs: | | (to 24:00) | |
| 24 HOUR SUMMARY FOR THE DATE : Oct 20,2011 (0000 hrs - 2400 hrs) | | | | | | | | | | | |
| From | To | Duration | Event | | | | | | | | |
| 0700 | 0700 | 24hr | mechanic is arriving at 1900hr to fix problem | | | | | | | | |
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| | | | Currently waiting on mechanic or new parts | | | | | | | | |
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| 24 HOUR Forecast : | | | | | | | | | | | |
| waiting on repacement parts | | | | | | | | | | | |

| | | | |
|------------------------------|---------------|---------------------------|--------------------------|
| Flat bay Test Hole #5 | | REPORT #: 25 | DATE: Oct21th,2011 |
| DEPTH 24:00: 61m | PROGRESS: 82m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: good | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 12c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | 1.00 ° | DRILLING FLUID | | PUMPS | |
|-----------------|--|--|--|-------------|----------------|----------------------------|----------|--|
| Bit No. | | | | | Time | | Pump No. | |
| Size (mm) | | | | Depth(m) | | Make | | |
| Mfg. | | | | Density | | Model | | |
| Type | | | | Mud Grad | | Liner X Stk | | |
| Serial # | | | | Vis | | SPM | | |
| Nozzles | | | | PV | | Pump Eff. | | |
| From (mKB) | | | | YP | | Pump Rate | | |
| To (mKB) | | | | Gels | | Pump Press. kPa | | |
| Hrs on Bit | | | | pH | | Drillpipe AV m/min | | |
| WOB (daN) | | | | WL (cc's) | | Drillcollar AV m/min | | |
| RPM | | | | Filter Cake | | Nozzle Vel m/sec | | |
| Condition | | | | Sand (%) | | MUD & CHEMICALS | | |
| Pulled For? | | | | Solids (%) | | Mud Cycle min | | |
| Meters | | | | Oil (%) | | Bottoms Up min | | |
| m/hr | | | | Pf/Mf | | Tanks m3 | | |
| Cum Hrs | | | | CI (ppm) | | Hole Volume m3 | | |
| | | | | Ca (ppm) | | System Vol. m3 | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

| | | | |
|-----------------|--------------|----------|-----|
| BHA Length: | Hook Load: | DP size | XXX |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX |

| | |
|----------------|----------------------|
| Mud Co. | |
| Mud Man | |
| Mud Up @ | |
| VOLUMES | M³ |
| Water added | |
| Losses | |
| Mud Daily Cost | |
| Mud Cum Cost | |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | | | WELL CONTROL | | SOLIDS CONTROL | | |
|------------------------------------|--|---------------|--|------------------|--|----------------|-----|--------------------|------------|----------------|
| RU / TO | | Survey | | Move Rig | | RSP | N/A | Shaker Make | N/A | |
| Drill w/ fluid | | Logging | | Fishing | | ST/Min | | Shaker Mesh | N/A | |
| Drill w/ air | | Run Casing | | WO Materials | | MACP(kPa) | N/A | Desilter | Centrifuge | |
| Reaming | | Cementing | | WO Services | | Calc Hole Fill | | | | Vol UF (l/min) |
| Rm Rathole | | WOC | | Safety Meeting | | Act Hole Fill | N/A | U.F. (kg/m3) | N/A | N/A |
| Cond / Circ | | NU BOP's | | Mix mud | | Lst BOP Drill: | | O.F. (kg/m3) | N/A | N/A |
| Tripping | | Test BOPs | | Install Wellhead | | Calc Hole Fill | | Hours/Days | N/A | N/A |
| Lubricate Rig | | Drill Out Cmt | | | | Act Hole Fill | | Boiler Hrs: | | |
| Repair Rig | | DST | | Total Hrs | | | | (to 24:00) | | |
| Fishing | | Hndle Tools | | | | | | | | |

| 24 HOUR SUMMARY FOR THE DATE : Oct 21,2011 (0000 hrs - 2400 hrs) | | | |
|------------------------------------------------------------------|------|----------|-----------------------------------------------------|
| From | To | Duration | Event |
| 0700 | 0700 | 24hr | Going to change motor due to warrenty issues |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
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| | | | |
| | | | |
| | | | |
| | | | Currently waiting on new motor to arrive to install |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

24 HOUR Forecast :
waiting on replacement parts

Vulcan Minerals

DAILY DRILLING REPORT

| | | | | |
|------------------------------|---------------|---------------------------|--------------|--------------------------|
| Flat bay Test Hole #5 | | | REPORT #: 26 | DATE: Oct22th,2011 |
| DEPTH 24:00: 61m | PROGRESS: 82m | Last 24 Hr Rotating Time: | | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: good | | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 12c | | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | | | PUMPS | | | | | |
|-----------------|--|--|--------|----------------|--|--|--|----------------------------|--|-------|--|--|--|
| Bit No. | | | 1.00 ° | Time | | | | Pump No. | | | | | |
| Size (mm) | | | | Depth(m) | | | | Make | | | | | |
| Mfg. | | | | Density | | | | Model | | | | | |
| Type | | | | Mud Grad | | | | Liner X Stk | | | | | |
| Serial # | | | | Vis | | | | SPM | | | | | |
| Nozzles | | | | PV | | | | Pump Eff. | | | | | |
| From (mKB) | | | | YP | | | | Pump Rate | | | | | |
| To (mKB) | | | | Gels | | | | Pump Press. | | kPa | | | |
| Hrs on Bit | | | | pH | | | | Drillpipe AV | | m/min | | | |
| WOB (daN) | | | | WL (cc's) | | | | Drillcollar AV | | m/min | | | |
| RPM | | | | Filter Cake | | | | Nozzle Vel | | m/sec | | | |
| Condition | | | | Sand (%) | | | | MUD & CHEMICALS | | | | | |
| Pulled For? | | | | Solids (%) | | | | | | | | | |
| Meters | | | | Oil (%) | | | | Mud Cycle | | min | | | |
| m/hr | | | | Pf/Mf | | | | Bottoms Up | | min | | | |
| Cum Hrs | | | | MBT | | | | Tanks | | m3 | | | |
| | | | | CI (ppm) | | | | Hole Volume | | m3 | | | |
| | | | | Ca (ppm) | | | | System Vol. | | m3 | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------------|----------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| BHA Length: | | Hook Load: | DP size | XXX |
| Avail WOB: | | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | | DP on Loc: | DP Conn: | XXX |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | Fishing |
| Drill w/ air | | Run Casing | | WO Materials |
| Reaming | | Cementing | | WO Services |
| Rm Rathole | | WOC | | Safety Meeting |
| Cond / Circ | | NU BOP's | | Mix mud |
| Tripping | | Test BOP's | | Install Wellhead |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Hndle Tools | | Total Hrs |

| VOLUMES | | M ³ | |
|----------------|-----|----------------|------------|
| Water added | | | |
| Losses | | | |
| | | Mud Daily Cost | |
| | | Mud Cum Cost | |
| WELL CONTROL | | SOLIDS CONTROL | |
| RSPP | N/A | Shaker Make | N/A |
| ST/Min | | Shaker Mesh | N/A |
| MACP(kPa) | N/A | Desilter | Centrifuge |
| Calc Hole Fill | | Vol UF (l/min) | N/A |
| Act Hole Fill | N/A | U.F. (kg/m3) | N/A |
| Lst BOP Drill: | | O.F. (kg/m3) | N/A |
| Calc Hole Fill | | Hours/Days | N/A |
| Act Hole Fill | | Boiler Hrs: | (to 24:00) |

| 24 HOUR SUMMARY FOR THE DATE : Oct 22,2011 (0000 hrs - 2400 hrs) | | | | |
|------------------------------------------------------------------|------|----------|-----------------------------------------------------|--|
| From | To | Duration | Event | |
| 0700 | 0700 | 24hr | Going to change motor due to warrenty issues | |
| | | | | |
| | | | | |
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| | | | | |
| | | | | |
| | | | | |
| | | | | |
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| | | | | |
| | | | | |
| | | | Currently waiting on new motor to arrive to install | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| 24 HOUR Forecast : | | | | |
|------------------------------|--|--|--|--|
| waiting on replacement parts | | | | |

Vulcan Minerals

DAILY DRILLING REPORT

| | | | | |
|------------------------------|---------------|--------------|---------------------------|--------------------------|
| Flat bay Test Hole #5 | | | REPORT #: 27 | DATE: Oct23th,2011 |
| DEPTH 24:00: 82m | PROGRESS: 91m | | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | | HOLE CND.: | WEATHER: good | TOOLPUSH: |
| CUM COST: | | RIG / RIG #: | TEMP.: 10c | T.P. MOBILE: |
| FORMATION: | | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | | DRILLING FLUID | | PUMPS | |
|-----------------|--|--|--|--------|----------------|--|----------------------|--|
| Bit No. | | | | 1.00 ° | Time | | Pump No. | |
| Size (mm) | | | | | Depth(m) | | Make | |
| Mfg. | | | | | Density | | Model | |
| Type | | | | | Mud Grad | | Liner X Stk | |
| Serial # | | | | | Vis | | SPM | |
| Nozzles | | | | | PV | | Pump Eff. | |
| From (mKB) | | | | | YP | | Pump Rate | |
| To (mKB) | | | | | Gels | | Pump Press. kPa | |
| Hrs on Bit | | | | | pH | | Drillpipe AV m/min | |
| WOB (daN) | | | | | WL (cc's) | | Drillcollar AV m/min | |
| RPM | | | | | Filter Cake | | Nozzle Vel m/sec | |
| Condition | | | | | Sand (%) | | | |
| Pulled For? | | | | | Solids (%) | | | |
| Meters | | | | | Oil (%) | | | |
| m/hr | | | | | Pf/Mf | | | |
| Cum Hrs | | | | | MBT | | | |
| | | | | | CI (ppm) | | | |
| | | | | | Ca (ppm) | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

| | | | |
|-----------------|--------------|----------|-----|
| BHA Length: | Hook Load: | DP size | XXX |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX |

| MUD & CHEMICALS | |
|-----------------|-----|
| Mud Cycle | min |
| Bottoms Up | min |
| Tanks | m3 |
| Hole Volume | m3 |
| System Vol. | m3 |

| |
|----------|
| Mud Co. |
| Mud Man |
| Mud Up @ |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | Fishing |
| Drill w/ air | | Run Casing | | WO Materials |
| Reaming | | Cementing | | WO Services |
| Rm Rathole | | WOC | | Safety Meeting |
| Cond / Circ | | NU BOP's | | Mix mud |
| Tripping | | Test BOP's | | Install Wellhead |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Hndle Tools | | Total Hrs |

| | | |
|-------------|--|----------------|
| Water added | | Mud Daily Cost |
| Losses | | Mud Cum Cost |

| VOLUMES M ³ | |
|------------------------|--|
| | |

| WELL CONTROL | | SOLIDS CONTROL | |
|----------------|-----|----------------|------------|
| RSPP | N/A | Shaker Make | N/A |
| ST/Min | | Shaker Mesh | N/A |
| MACP(kPa) | N/A | Desilter | Centrifuge |
| Calc Hole Fill | | Vol UF (l/min) | N/A |
| Act Hole Fill | N/A | U.F. (kg/m3) | N/A |
| Lst BOP Drill: | | O.F. (kg/m3) | N/A |
| Calc Hole Fill | | Hours/Days | N/A |
| Act Hole Fill | | Boiler Hrs: | (to 24:00) |

24 HOUR SUMMARY FOR THE DATE : Oct 23,2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|----------------------------------------------------------------------------------------------|
| 0700 | 0700 | 24hr | safety meeting with crew and on site supervisors discussed the safety of operating machinery |
| | | | Drill overburden from 82m to 91m |
| | | | Pull out of hole, change out shoe bit |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | Currently tripping to change out shoe bit, run back in and drill |
| | | | |
| | | | |
| | | | |

24 HOUR Forecast :
 Drill ahead

Vulcan Minerals

DAILY DRILLING REPORT

| | | | | | | |
|---------------------------------------------------|----------------|---------------------------|-------------------------------------------------------------------------------------------------------|------------------------------|----------------------------|------------------------|
| Flat bay Test Hole #5 | | | | REPORT #: 28 | DATE: Oct24th,2011 | |
| DEPTH 24:00: 91m | PROGRESS: 118m | Last 24 Hr Rotating Time: | | Ave ROP: | | |
| OPER 09:00: | | FOREMAN: H.HYNES | | MOBILE NO.: 780-667-8775 | | |
| DAILY COST: | HOLE CND.: | WEATHER: good | | TOOLPUSH: | | |
| CUM COST: | RIG / RIG #: | TEMP.: 8c | | T.P. MOBILE: | | |
| FORMATION: | K.B. ELEV.: | ROADS: rough | | | | |
| BIT PERFORMANCE | | | 1.00 ° | DRILLING FLUID | | |
| Bit No. | | | | Time | Pump No. | |
| Size (mm) | | | | Depth(m) | Make | |
| Mfg. | | | | Density | Model | |
| Type | | | | Mud Grad | Liner X Stk | |
| Serial # | | | | Vis | SPM | |
| Nozzles | | | | PV | Pump Eff. | |
| From (mKB) | | | | YP | Pump Rate | |
| To (mKB) | | | | Gels | Pump Press. kPa | |
| Hrs on Bit | | | | pH | Drillpipe AV m/min | |
| WOB (daN) | | | | WL (cc's) | Drillcollar AV m/min | |
| RPM | | | | Filter Cake | Nozzle Vel m/sec | |
| Condition | | | | Sand (%) | MUD & CHEMICALS | |
| Pulled For? | | | | Solids (%) | Mud Cycle min | |
| Meters | | | | Oil (%) | Bottoms Up min | |
| m/hr | | | | Pf/Mf | Tanks m3 | |
| Cum Hrs | | | | CI (ppm) | Hole Volume m3 | |
| BOTTOMHOLE ASSEMBLY | | | | Ca (ppm) | System Vol. m3 | |
| No. | Item | Max OD | Min ID | Connection Size & Type | | |
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| BHA Length: | | Hook Load: | DP size | XXX | | |
| Avail WOB: | | Jts DP Racks | DC Conn: | XXX | | |
| Jts DP in hole: | | DP on Loc: | DP Conn: | XXX | | |
| DRILLING OPERATIONS TIME BREAKDOWN | | | | VOLUMES M³ | | |
| RU / TO | | Survey | | Water added | Mud Daily Cost | |
| Drill w/ fluid | | Logging | | Losses | Mud Cum Cost | |
| Drill w/ air | | Run Casing | | WELL CONTROL | | SOLIDS CONTROL |
| Reaming | | Cementing | | RSP | N/A | Shaker Make N/A |
| Rm Rathole | | WOC | | ST/Min | | Shaker Mesh N/A |
| Cond / Circ | | NU BOP's | | MACP(kPa) | N/A | Desilter Centrifuge |
| Tripping | | Test BOP's | | Calc Hole Fill | | Vol UF (l/min) N/A |
| Lubricate Rig | | Drill Out Cmt | | Act Hole Fill | N/A | U.F. (kg/m3) N/A |
| Repair Rig | | DST | | Lst BOP Drill: | | O.F. (kg/m3) N/A |
| Fishing | | Hndle Tools | | Calc Hole Fill | | Hours/Days N/A |
| | | | | Act Hole Fill | | Boiler Hrs: (to 24:00) |
| 24 HOUR SUMMARY FOR THE DATE : Oct 24,2011 | | | | (0000 hrs - 2400 hrs) | | |
| From | To | Duration | Event | | | |
| 0700 | 0700 | 24hr | safety meeting with crew and on site supervisors discussed the safety of driving to and from location | | | |
| | | | Drill overburden from 91m to 99m | | | |
| | | | Pull out of hole, change out shoe bit | | | |
| | | | Ream down from 81m to 91m | | | |
| | | | Drill NW casing from 91m to 103m | | | |
| | | | Drill NQ rods from 103m to 118m | | | |
| | | | | | | |
| | | | Currently drilling NW casing down to 118m to set casing 9m of bedrock | | | |
| | | | | | | |
| | | | | | | |
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| | | | | | | |
| 24 HOUR Forecast : | | | | | | |
| cement and wait on | | | | | | |

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|----------------|---------------------------|--------------------------|
| Flat bay Test Hole #5 | | REPORT #: 29 | DATE: Oct25th,2011 |
| DEPTH 24:00: 91m | PROGRESS: 118m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: good | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 8c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | 1.00 ° | DRILLING FLUID | | PUMPS | |
|-----------------|--|--|--|-------------|----------------|----------------------|----------|--|
| Bit No. | | | | | Time | | Pump No. | |
| Size (mm) | | | | Depth(m) | | Make | | |
| Mfg. | | | | Density | | Model | | |
| Type | | | | Mud Grad | | Liner X Stk | | |
| Serial # | | | | Vis | | SPM | | |
| Nozzles | | | | PV | | Pump Eff. | | |
| From (mKB) | | | | YP | | Pump Rate | | |
| To (mKB) | | | | Gels | | Pump Press. kPa | | |
| Hrs on Bit | | | | pH | | Drillpipe AV m/min | | |
| WOB (daN) | | | | WL (cc's) | | Drillcollar AV m/min | | |
| RPM | | | | Filter Cake | | Nozzle Vel m/sec | | |
| Condition | | | | Sand (%) | | | | |
| Pulled For? | | | | Solids (%) | | MUD & CHEMICALS | | |
| Meters | | | | Oil (%) | | Mud Cycle min | | |
| m/hr | | | | Pf/Mf | | Bottoms Up min | | |
| Cum Hrs | | | | MBT | | Tanks m3 | | |
| | | | | CI (ppm) | | Hole Volume m3 | | |
| | | | | Ca (ppm) | | System Vol. m3 | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

| | | | |
|-----------------|--------------|----------|-----|
| BHA Length: | Hook Load: | DP size | XXX |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | Fishing |
| Drill w/ air | | Run Casing | | WO Materials |
| Reaming | | Cementing | | WO Services |
| Rm Rathole | | WOC | | Safety Meeting |
| Cond / Circ | | NU BOP's | | Mix mud |
| Tripping | | Test BOP's | | Install Wellhead |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Hndle Tools | | Total Hrs |

VOLUMES M³

| Water added | |
|----------------|-----|
| Losses | |
| WELL CONTROL | |
| RSPP | N/A |
| ST/Min | |
| MACP(kPa) | N/A |
| Calc Hole Fill | |
| Act Hole Fill | N/A |
| Lst BOP Drill: | |
| Calc Hole Fill | |
| Act Hole Fill | |

| Mud Daily Cost | | |
|----------------|------------|------------|
| Mud Cum Cost | | |
| SOLIDS CONTROL | | |
| Shaker Make | N/A | |
| Shaker Mesh | N/A | |
| | Desilter | Centrifuge |
| Vol UF (l/min) | N/A | N/A |
| U.F. (kg/m3) | N/A | N/A |
| O.F. (kg/m3) | N/A | N/A |
| Hours/Days | N/A | N/A |
| Boiler Hrs: | (to 24:00) | |

24 HOUR SUMMARY FOR THE DATE : Oct 25,2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|-----------------------------------------------------------------------------------|
| 0700 | 0700 | 24hr | safety meeting with crew and on site supervisors discussed the weather conditions |
| | | | Currently drilled down to 119m with NW casing |
| | | | 9m in bedrock |
| | | | Getting ready to cement casing and wait on cement |
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24 HOUR Forecast :
cement and wait on

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|----------------|---------------------------|--------------------------|
| Flat bay Test Hole #5 | | REPORT #: 30 | DATE: Oct26th,2011 |
| DEPTH 24:00: 91m | PROGRESS: 118m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: good | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 8c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | PUMPS | | |
|-----------------|--|--|--------|----------------|--|----------------------------|--|----------------|
| Bit No. | | | 1.00 ° | Time | | Pump No. | | |
| Size (mm) | | | | Depth(m) | | Make | | |
| Mfg. | | | | Density | | Model | | |
| Type | | | | Mud Grad | | Liner X Stk | | |
| Serial # | | | | Vis | | SPM | | |
| Nozzles | | | | PV | | Pump Eff. | | |
| From (mKB) | | | | YP | | Pump Rate | | |
| To (mKB) | | | | Gels | | Pump Press. kPa | | |
| Hrs on Bit | | | | pH | | Drillpipe AV m/min | | |
| WOB (daN) | | | | WL (cc's) | | Drillcollar AV m/min | | |
| RPM | | | | Filter Cake | | Nozzle Vel m/sec | | |
| Condition | | | | Sand (%) | | MUD & CHEMICALS | | |
| Pulled For? | | | | Solids (%) | | | | |
| Meters | | | | Oil (%) | | | | Mud Cycle min |
| m/hr | | | | Pf/Mf | | | | Bottoms Up min |
| Cum Hrs | | | | MBT | | Tanks m3 | | |
| | | | | CI (ppm) | | Hole Volume m3 | | |
| | | | | Ca (ppm) | | System Vol. m3 | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

BHA Length: Hook Load: DP size: XXX

Avail WOB: Jts DP Racks: DC Conn: XXX

Jts DP in hole: DP on Loc: DP Conn: XXX

| DRILLING OPERATIONS TIME BREAKDOWN | | | | | VOLUMES M ³ | | |
|------------------------------------|--|---------------|--|------------------|------------------------|--------------|-------------|
| RU / TO | | Survey | | Move Rig | Water added | | |
| Drill w/ fluid | | Logging | | Fishing | Losses | | |
| Drill w/ air | | Run Casing | | WO Materials | Mud Daily Cost | | |
| Reaming | | Cementing | | WO Services | Mud Cum Cost | | |
| Rm Rathole | | WOC | | Safety Meeting | SOLIDS CONTROL | | |
| Cond / Circ | | NU BOP's | | Mix mud | | | Shaker Make |
| Tripping | | Test BOPs | | Install Wellhead | Shaker Mesh | N/A | |
| Lubricate Rig | | Drill Out Cmt | | | Desilter | Centrifuge | |
| Repair Rig | | DST | | | Vol UF (l/min) | N/A | |
| Fishing | | Handle Tools | | Total Hrs | U.F. (kg/m3) | N/A | |
| | | | | | Act Hole Fill | O.F. (kg/m3) | N/A |
| | | | | | Act Hole Fill | Hours/Days | N/A |
| | | | | | | Boiler Hrs: | (to 24:00) |

| 24 HOUR SUMMARY FOR THE DATE : Oct 26,2011 | | | | (0000 hrs - 2400 hrs) |
|--------------------------------------------|------|----------|------------------------------------------------------------------------------|-----------------------|
| From | To | Duration | Event | |
| 0700 | 0700 | 24hr | safety meeting with crew and on site supervisors discussed pinch points | |
| | | | Currently casing is cemented rigged up deverter prior to drilling out cement | |
| | | | mechanical problem with spider gear on the main drive at 2200hrs | |
| | | | Replacement part arrived at 1630pm | |
| | | | Currently installing new part | |
| | | | Should be up and running at 2300hrs | |
| | | | | |
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24 HOUR Forecast :
 cement and wait on

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|----------------|---------------------------|--------------------------|
| Flat bay Test Hole #5 | | REPORT #: 30 | DATE: Oct27th,2011 |
| DEPTH 24:00: 118m | PROGRESS: 148m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: rain | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 8c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | PUMPS | |
|-----------------|--|--|--------|----------------|--|----------------------------|--|
| Bit No. | | | 1.00 ° | Time | | Pump No. | |
| Size (mm) | | | | Depth(m) | | Make | |
| Mfg. | | | | Density | | Model | |
| Type | | | | Mud Grad | | Liner X Stk | |
| Serial # | | | | Vis | | SPM | |
| Nozzles | | | | PV | | Pump Eff. | |
| From (mKB) | | | | YP | | Pump Rate | |
| To (mKB) | | | | Gels | | Pump Press. kPa | |
| Hrs on Bit | | | | pH | | Drillpipe AV m/min | |
| WOB (daN) | | | | WL (cc's) | | Drillcollar AV m/min | |
| RPM | | | | Filter Cake | | Nozzle Vel m/sec | |
| Condition | | | | Sand (%) | | MUD & CHEMICALS | |
| Pulled For? | | | | Solids (%) | | Mud Cycle min | |
| Meters | | | | Oil (%) | | Bottoms Up min | |
| m/hr | | | | Pf/Mf | | Tanks m3 | |
| Cum Hrs | | | | MBT | | Hole Volume m3 | |
| | | | | Cl (ppm) | | System Vol. m3 | |
| | | | | Ca (ppm) | | 6 bags of portland | |
| | | | | | | 2 pails of DD 1200 | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|--------------|----------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| BHA Length: | Hook Load: | DP size | XXX | |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX | |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX | |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | Fishing |
| Drill w/ air | | Run Casing | | WO Materials |
| Reaming | | Cementing | | WO Services |
| Rm Rathole | | WOC | | Safety Meeting |
| Cond / Circ | | NU BOP's | | Mix mud |
| Tripping | | Test BOP's | | Install Wellhead |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Hndle Tools | | Total Hrs |

| VOLUMES M ³ | | WELL CONTROL | | SOLIDS CONTROL | |
|------------------------|--|----------------|-----|----------------|------------|
| Water added | | RSPP | N/A | Shaker Make | N/A |
| Losses | | ST/Min | | Shaker Mesh | N/A |
| | | MACP(kPa) | N/A | Desilter | Centrifuge |
| | | Calc Hole Fill | | Vol UF (l/min) | N/A |
| | | Act Hole Fill | N/A | U.F. (kg/m3) | N/A |
| | | Lst BOP Drill: | | O.F. (kg/m3) | N/A |
| | | Calc Hole Fill | | Hours/Days | N/A |
| | | Act Hole Fill | | Boiler Hrs: | (to 24:00) |
| | | | | Mud Daily Cost | |
| | | | | Mud Cum Cost | |

24 HOUR SUMMARY FOR THE DATE : Oct 27,2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|---------------------------------------------------------------------------------------|
| 0700 | 0700 | 24hr | safety meeting with crew and on site supervisors discussed well control with deverter |
| | | | Prior to drill out |
| | | | Tagged cement at 113m |
| | | | Drilled cement from 113m to 118m |
| | | | Pressure test deverter up to 500psi for 10mins, test was good |
| | | | Drilled NQ rods from 118m to 148m |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | Currently drilling ahead from 148m |
| | | | |
| | | | |
| | | | |
| | | | |

24 HOUR Forecast :
 Drill ahead and recover core

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|----------------|---------------------------|--------------------------|
| Flat bay Test Hole #5 | | REPORT #: 31 | DATE: Oct28th,2011 |
| DEPTH 24:00: 148m | PROGRESS: 350m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: rain | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 8c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | | | PUMPS | | | |
|-----------------|--|--|--|----------------|-------------|--|--|----------------------------|-------|--|--|
| Bit No. | | | | 1.00 ° | Time | | | Pump No. | | | |
| Size (mm) | | | | | Depth(m) | | | Make | | | |
| Mfg. | | | | | Density | | | Model | | | |
| Type | | | | | Mud Grad | | | Liner X Stk | | | |
| Serial # | | | | | Vis | | | SPM | | | |
| Nozzles | | | | | PV | | | Pump Eff. | | | |
| From (mKB) | | | | | YP | | | Pump Rate | | | |
| To (mKB) | | | | | Gels | | | Pump Press. | kPa | | |
| Hrs on Bit | | | | | pH | | | Drillpipe AV | m/min | | |
| WOB (daN) | | | | | WL (cc's) | | | Drillcollar AV | m/min | | |
| RPM | | | | | Filter Cake | | | Nozzle Vel | m/sec | | |
| Condition | | | | | Sand (%) | | | MUD & CHEMICALS | | | |
| Pulled For? | | | | | Solids (%) | | | | | | |
| Meters | | | | | Oil (%) | | | Mud Cycle | min | | |
| m/hr | | | | | Pf/Mf | | | Bottoms Up | min | | |
| Cum Hrs | | | | | MBT | | | Tanks | m3 | | |
| | | | | | Cl (ppm) | | | Hole Volume | m3 | | |
| | | | | | Ca (ppm) | | | System Vol. | m3 | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|--------------|----------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| BHA Length: | Hook Load: | DP size | XXX | |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX | |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX | |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | Fishing |
| Drill w/ air | | Run Casing | | WO Materials |
| Reaming | | Cementing | | WO Services |
| Rm Rathole | | WOC | | Safety Meeting |
| Cond / Circ | | NU BOP's | | Mix mud |
| Tripping | | Test BOPs | | Install Wellhead |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Hndle Tools | | Total Hrs |

| VOLUMES M ³ | | SOLIDS CONTROL | |
|------------------------|--|----------------|------------|
| Water added | | Shaker Make | N/A |
| Losses | | Shaker Mesh | N/A |
| | | Desilter | Centrifuge |
| | | Vol UF (l/min) | N/A |
| | | U.F. (kg/m3) | N/A |
| | | O.F. (kg/m3) | N/A |
| | | Hours/Days | N/A |
| | | Boiler Hrs: | (to 24:00) |

| 24 HOUR SUMMARY FOR THE DATE : Oct 28,2011 (0000 hrs - 2400 hrs) | | | | |
|------------------------------------------------------------------|------|----------|---------------------------------------------------------------------------------------------|--|
| From | To | Duration | Event | |
| 0700 | 0700 | 24hr | safety meeting with crew and on site supervisors discussed driving through town to location | |
| | | | Drill NQ rods from 148m to 300m | |
| | | | Due to government regulation wait on orders to contonue to drill deeper | |
| | | | Drill NQ rods from 300m to 350m | |
| | | | At 350m still in massive anhydrate | |
| | | | Currently preparing to pull rods and cement to surface | |

| 24 HOUR Forecast : | | | | |
|--------------------|--|--|--|--|
| Cement and rig out | | | | |

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|--------------|---------------------------|---------------------------|
| Flat bay Test Hole #5 | | REPORT #: 32 | DATE: Oct29th,2011 |
| DEPTH 24:00: | PROGRESS: | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: snow | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 2c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | PUMPS |
|-----------------|--|--|--------|----------------|----------------------|
| Bit No. | | | 1.00 ° | Time | Pump No. |
| Size (mm) | | | | Depth(m) | Make |
| Mfg. | | | | Density | Model |
| Type | | | | Mud Grad | Liner X Stk |
| Serial # | | | | Vis | SPM |
| Nozzles | | | | PV | Pump Eff. |
| From (mKB) | | | | YP | Pump Rate |
| To (mKB) | | | | Gels | Pump Press. kPa |
| Hrs on Bit | | | | pH | Drillpipe AV m/min |
| WOB (daN) | | | | WL (cc's) | Drillcollar AV m/min |
| RPM | | | | Filter Cake | Nozzle Vel m/sec |
| Condition | | | | Sand (%) | |
| Pulled For? | | | | Solids (%) | |
| Meters | | | | Oil (%) | |
| m/hr | | | | Pf/Mf | |
| Cum Hrs | | | | MBT | |
| | | | | Cl (ppm) | |
| | | | | Ca (ppm) | |
| | | | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|--------------|----------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| BHA Length: | Hook Load: | DP size | XXX | |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX | |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX | |

| | | | | | |
|--|--|--|--|----------------|----------------------|
| | | | | VOLUMES | M³ |
| | | | | Mud Co. | |
| | | | | Mud Man | |
| | | | | Mud Up @ | |
| | | | | Mud Daily Cost | |
| | | | | Mud Cum Cost | |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | | | WELL CONTROL | | SOLIDS CONTROL | |
|------------------------------------|--|---------------|--|------------------|--|----------------|-----|----------------|------------|
| RU / TO | | Survey | | Move Rig | | RSP | N/A | Shaker Make | N/A |
| Drill w/ fluid | | Logging | | Fishing | | ST/Min | | Shaker Mesh | N/A |
| Drill w/ air | | Run Casing | | WO Materials | | MACP(kPa) | N/A | Desilter | Centrifuge |
| Reaming | | Cementing | | WO Services | | Calc Hole Fill | | Vol UF (l/min) | N/A |
| Rm Rathole | | WOC | | Safety Meeting | | Act Hole Fill | N/A | U.F. (kg/m3) | N/A |
| Cond / Circ | | NU BOP's | | Mix mud | | Lst BOP Drill: | | O.F. (kg/m3) | N/A |
| Tripping | | Test BOP's | | Install Wellhead | | Calc Hole Fill | | Hours/Days | N/A |
| Lubricate Rig | | Drill Out Cmt | | | | Act Hole Fill | | Boiler Hrs: | (to 24:00) |
| Repair Rig | | DST | | | | | | | |
| Fishing | | Handle Tools | | Total Hrs | | | | | |

| 24 HOUR SUMMARY FOR THE DATE : Oct 29,2011 | | | | (0000 hrs - 2400 hrs) |
|--------------------------------------------|------|----------|-------------------------------------------------------------------------------------------------|-----------------------|
| From | To | Duration | Event | |
| 0700 | 0700 | 24hr | safety meeting with crew and on site supervisors discussed good communication operating tractor | |
| | | | Finish cement job, cemented back to surface | |
| | | | Rig out rig to demobe to test hole 8 | |
| | | | Skid equipment out to entrance to load on flatbed to demobe in the morning | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | Move to next location in the am with Harvey Gale | |
| | | | | |
| | | | | |
| | | | | |

24 HOUR Forecast :
moving rig

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|----------------|---------------------------|--------------------------|
| Flat bay Test Hole #8 | | REPORT #: 33 | DATE: Oct30th,2011 |
| DEPTH 24:00: 208m | PROGRESS: 211m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: snow | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 2c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | PUMPS | |
|-----------------|--|--|--------|----------------|--|----------------|-------|
| Bit No. | | | 1.00 ° | Time | | Pump No. | |
| Size (mm) | | | | Depth(m) | | Make | |
| Mfg. | | | | Density | | Model | |
| Type | | | | Mud Grad | | Liner X Stk | |
| Serial # | | | | Vis | | SPM | |
| Nozzles | | | | PV | | Pump Eff. | |
| From (mKB) | | | | YP | | Pump Rate | |
| To (mKB) | | | | Gels | | Pump Press. | kPa |
| Hrs on Bit | | | | pH | | Drillpipe AV | m/min |
| WOB (daN) | | | | WL (cc's) | | Drillcollar AV | m/min |
| RPM | | | | Filter Cake | | Nozzle Vel | m/sec |
| Condition | | | | Sand (%) | | | |
| Pulled For? | | | | Solids (%) | | | |
| Meters | | | | Oil (%) | | | |
| m/hr | | | | Pf/Mf | | | |
| Cum Hrs | | | | CI (ppm) | | | |
| | | | | Ca (ppm) | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------------|----------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| BHA Length: | | Hook Load: | DP size | XXX |
| Avail WOB: | | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | | DP on Loc: | DP Conn: | XXX |

| MUD & CHEMICALS | |
|-----------------|----------------------|
| Mud Cycle | min |
| Bottoms Up | min |
| Tanks | m3 |
| Hole Volume | m3 |
| System Vol. | m3 |
| Mud Co. | |
| Mud Man | |
| Mud Up @ | |
| VOLUMES | M³ |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | Fishing |
| Drill w/ air | | Run Casing | | WO Materials |
| Reaming | | Cementing | | WO Services |
| Rm Rathole | | WOC | | Safety Meeting |
| Cond / Circ | | NU BOP's | | Mix mud |
| Tripping | | Test BOP's | | Install Wellhead |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Hndle Tools | | Total Hrs |

| WELL CONTROL | | SOLIDS CONTROL | |
|----------------|-----|----------------|------------|
| Water added | | Mud Daily Cost | |
| Losses | | Mud Cum Cost | |
| RSPP | N/A | Shaker Make | N/A |
| ST/Min | | Shaker Mesh | N/A |
| MACP(kPa) | N/A | Desilter | Centrifuge |
| Calc Hole Fill | | Vol UF (l/min) | N/A |
| Act Hole Fill | N/A | U.F. (kg/m3) | N/A |
| Lst BOP Drill: | | O.F. (kg/m3) | N/A |
| Calc Hole Fill | | Hours/Days | N/A |
| Act Hole Fill | | Boiler Hrs: | (to 24:00) |

24 HOUR SUMMARY FOR THE DATE : Oct 30,2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|-------------------------------------------------------------------------------------------------------|
| 0700 | 0700 | 24hr | safety meeting with crew and on site supervisors discussed the importance of moving heavy equipment & |
| | | | Demobe rig to new location |
| | | | Skid equipment into test hole #8 |
| | | | Rig up equipment to reenter test hole #8 to drill deeper |
| | | | Run NQ rods to 208m |
| | | | Drill NQ rods to 211m |
| | | | |
| | | | |
| | | | Currently drilling ahead from 211m |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| |
|--------------------------------|
| 24 HOUR Forecast : |
| Drill ahead to find conglorate |

Vulcan Minerals

DAILY DRILLING REPORT

| Flat bay Test Hole #8 | | | | REPORT #: 34 | DATE: Oct 31st,2011 | | | |
|---------------------------------------------------|--------------|----------------|-------------------------------------------------------------------------|------------------------------|---------------------|----------------------------|------------|-----|
| DEPTH 24:00: 211m | | PROGRESS: 349m | | Last 24 Hr Rotating Time: | | | | |
| OPER 09:00: | | | | FOREMAN: H.HYNES | | | | |
| DAILY COST: | | HOLE CND.: | | WEATHER: cold | | | | |
| CUM COST: | | RIG / RIG #: | | TEMP.: 5c | | | | |
| FORMATION: | | K.B. ELEV.: | | ROADS: rough | | | | |
| Ave ROP: | | MOBILE NO.: | | TOOLPUSH: | | | | |
| T.P. MOBILE: | | | | | | | | |
| BIT PERFORMANCE | | | DRILLING FLUID | | | PUMPS | | |
| Bit No. | | | 1.00 ° | Time | | Pump No. | | |
| Size (mm) | | | | Depth(m) | | Make | | |
| Mfg. | | | | Density | | Model | | |
| Type | | | | Mud Grad | | Liner X Stk | | |
| Serial # | | | | Vis | | SPM | | |
| Nozzles | | | | PV | | Pump Eff. | | |
| From (mKB) | | | | YP | | Pump Rate | | |
| To (mKB) | | | | Gels | | Pump Press. | kPa | |
| Hrs on Bit | | | | pH | | Drillpipe AV | m/min | |
| WOB (daN) | | | | WL (cc's) | | Drillcollar AV | m/min | |
| RPM | | | | Filter Cake | | Nozzle Vel | m/sec | |
| Condition | | | | Sand (%) | | MUD & CHEMICALS | | |
| Pulled For? | | | | Solids (%) | | Mud Cycle | min | |
| Meters | | | | Oil (%) | | Bottoms Up | min | |
| m/hr | | | | Pf/Mf | | Tanks | m3 | |
| Cum Hrs | | | | CI (ppm) | | Hole Volume | m3 | |
| BOTTOMHOLE ASSEMBLY | | | | Ca (ppm) | | System Vol. | m3 | |
| No. | Item | Max OD | Min ID | Connection Size & Type | | | | |
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| BHA Length: | Hook Load: | DP size | XXX | Mud Co. | | | | |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX | Mud Man | | | | |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX | Mud Up @ | | | | |
| DRILLING OPERATIONS TIME BREAKDOWN | | | | VOLUMES M³ | | | | |
| RU / TO | | Survey | | Water added | | Mud Daily Cost | | |
| Drill w/ fluid | | Logging | | Losses | | Mud Cum Cost | | |
| Drill w/ air | | Run Casing | | WELL CONTROL | | SOLIDS CONTROL | | |
| Reaming | | Cementing | | RSPP | N/A | Shaker Make | N/A | |
| Rm Rathole | | WOC | | ST/Min | | Shaker Mesh | N/A | |
| Cond / Circ | | NU BOP's | | MACP(kPa) | N/A | Desilter | Centrifuge | |
| Tripping | | Test BOPs | | Calc Hole Fill | | Vol UF (l/min) | N/A | N/A |
| Lubricate Rig | | Drill Out Cmt | | Act Hole Fill | N/A | U.F. (kg/m3) | N/A | N/A |
| Repair Rig | | DST | | Lst BOP Drill: | | O.F. (kg/m3) | N/A | N/A |
| Fishing | | Hndle Tools | | Calc Hole Fill | | Hours/Days | N/A | N/A |
| | | Total Hrs | | Act Hole Fill | | Boiler Hrs: (to 24:00) | | |
| 24 HOUR SUMMARY FOR THE DATE : Oct 31,2011 | | | | (0000 hrs - 2400 hrs) | | | | |
| From | To | Duration | Event | | | | | |
| 0700 | 0700 | 24hr | safety meeting with crew and on site supervisors discussed pince points | | | | | |
| | | | Drill NQ rods from 211m to 314m | | | | | |
| | | | conglomerate came in at 311m | | | | | |
| | | | Drill NQ rods from 311m to 349m | | | | | |
| | | | Wax14 cores with WEATHERFORD technician | | | | | |
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| 24 HOUR Forecast : | | | | | | | | |
| cement and demobe | | | | | | | | |

Vulcan Minerals

DAILY DRILLING REPORT

| | | | | |
|------------------------------|------------------|---------------------------|--------------------------|---------------------|
| Flat bay Test Hole #9 | | | REPORT #: 36 | DATE: Nov 1st, 2011 |
| DEPTH 24:00: 0m | PROGRESS: 28m | Last 24 Hr Rotating Time: | | Ave ROP: |
| OPER 09:00: | FOREMAN: H.HYNES | | MOBILE NO.: 780-667-8775 | |
| DAILY COST: | HOLE CND.: | WEATHER: cold | TOOLPUSH: | |
| CUM COST: | RIG / RIG #: | TEMP.: 5c | T.P. MOBILE: | |
| FORMATION: | K.B. ELEV.: | ROADS: rough | | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | | | PUMPS | | | |
|-----------------|--|--|--|----------------|-------------|--|--|----------------------------|-------|--|--|
| Bit No. | | | | 1.00 ° | Time | | | Pump No. | | | |
| Size (mm) | | | | | Depth(m) | | | Make | | | |
| Mfg. | | | | | Density | | | Model | | | |
| Type | | | | | Mud Grad | | | Liner X Stk | | | |
| Serial # | | | | | Vis | | | SPM | | | |
| Nozzles | | | | | PV | | | Pump Eff. | | | |
| From (mKB) | | | | | YP | | | Pump Rate | | | |
| To (mKB) | | | | | Gels | | | Pump Press. | kPa | | |
| Hrs on Bit | | | | | pH | | | Drillpipe AV | m/min | | |
| WOB (daN) | | | | | WL (cc's) | | | Drillcollar AV | m/min | | |
| RPM | | | | | Filter Cake | | | Nozzle Vel | m/sec | | |
| Condition | | | | | Sand (%) | | | MUD & CHEMICALS | | | |
| Pulled For? | | | | | Solids (%) | | | Mud Cycle | min | | |
| Meters | | | | | Oil (%) | | | Bottoms Up | min | | |
| m/hr | | | | | Pf/Mf | | | Tanks | m3 | | |
| Cum Hrs | | | | | MBT | | | Hole Volume | m3 | | |
| | | | | | Cl (ppm) | | | System Vol. | m3 | | |
| | | | | | Ca (ppm) | | | | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|------------------------------|--------------|----------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| BHA Length: | Hook Load: | DP size | XXX | |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX | |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX | |
| VOLUMES M³ | | | | |
| Mud Co. 2 pairs of DD1200 | | | | |
| Mud Man 5 bags of cement | | | | |
| Mud Up @ | | | | |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | | WELL CONTROL | | SOLIDS CONTROL | | |
|------------------------------------|--|---------------|--|------------------|----------------|-----|----------------|------------|------------|
| RU / TO | | Survey | | Move Rig | Water added | | Mud Daily Cost | | |
| Drill w/ fluid | | Logging | | Fishing | Losses | | Mud Cum Cost | | |
| Drill w/ air | | Run Casing | | WO Materials | RSP | N/A | Shaker Make | N/A | |
| Reaming | | Cementing | | WO Services | ST/Min | | Shaker Mesh | N/A | |
| Rm Rathole | | WOC | | Safety Meeting | MACP(kPa) | N/A | Desilter | Centrifuge | |
| Cond / Circ | | NU BOP's | | Mix mud | Calc Hole Fill | | Vol UF (l/min) | N/A | N/A |
| Tripping | | Test BOP's | | Install Wellhead | Act Hole Fill | N/A | U.F. (kg/m3) | N/A | N/A |
| Lubricate Rig | | Drill Out Cmt | | | Lst BOP Drill: | | O.F. (kg/m3) | N/A | N/A |
| Repair Rig | | DST | | | Calc Hole Fill | | Hours/Days | N/A | N/A |
| Fishing | | Hndle Tools | | Total Hrs | Act Hole Fill | | Boiler Hrs: | | (to 24:00) |

| 24 HOUR SUMMARY FOR THE DATE : Nov2,2011 (0000 hrs - 2400 hrs) | | | | |
|----------------------------------------------------------------|------|----------|-----------------------------------------------------------------------------|--|
| From | To | Duration | Event | |
| 0700 | 0700 | 24hr | safety meeting with crew and on site supervisors discussed using proper PPE | |
| | | | Continue to skid equipment into new location | |
| | | | Rig up equipment | |
| | | | Drill overburden from 0m to 19m | |
| | | | Drilled gypsum from 19m to 22m | |
| | | | Drilled Anhydrate from 22m to 28m | |
| | | | Drill NW casing down to 28m | |
| | | | Cement casing at 28m | |
| | | | Wait on cement from 1900 hrs | |
| | | | | |
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24 HOUR Forecast :
 Wait on cement, rig up diverter, drill out cement and pressure test

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|------------------------------|---------------|---------------------------|--------------------------|
| Flat bay Test Hole #9 | | REPORT #: 37 | DATE: Nov 2nd,2011 |
| DEPTH 24:00: 28m | PROGRESS: 62m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: cold | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 5c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | PUMPS | |
|-----------------|--|--|--------|----------------|----------------------|--|
| Bit No. | | | 1.00 ° | Time | Pump No. | |
| Size (mm) | | | | Depth(m) | Make | |
| Mfg. | | | | Density | Model | |
| Type | | | | Mud Grad | Liner X Stk | |
| Serial # | | | | Vis | SPM | |
| Nozzles | | | | PV | Pump Eff. | |
| From (mKB) | | | | YP | Pump Rate | |
| To (mKB) | | | | Gels | Pump Press. kPa | |
| Hrs on Bit | | | | pH | Drillpipe AV m/min | |
| WOB (daN) | | | | WL (cc's) | Drillcollar AV m/min | |
| RPM | | | | Filter Cake | Nozzle Vel m/sec | |
| Condition | | | | Sand (%) | | |
| Pulled For? | | | | Solids (%) | | |
| Meters | | | | Oil (%) | MUD & CHEMICALS | |
| m/hr | | | | Pf/Mf | Mud Cycle min | |
| Cum Hrs | | | | MBT | Bottoms Up min | |
| | | | | Cl (ppm) | Tanks m3 | |
| | | | | Ca (ppm) | Hole Volume m3 | |
| | | | | | System Vol. m3 | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

| | | | |
|-----------------|--------------|----------|-----|
| BHA Length: | Hook Load: | DP size | XXX |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | |
|------------------------------------|--|---------------|--|------------------|
| RU / TO | | Survey | | Move Rig |
| Drill w/ fluid | | Logging | | Fishing |
| Drill w/ air | | Run Casing | | WO Materials |
| Reaming | | Cementing | | WO Services |
| Rm Rathole | | WOC | | Safety Meeting |
| Cond / Circ | | NU BOP's | | Mix mud |
| Tripping | | Test BOP's | | Install Wellhead |
| Lubricate Rig | | Drill Out Cmt | | |
| Repair Rig | | DST | | |
| Fishing | | Hndle Tools | | Total Hrs |

| | |
|----------------|----------------------|
| VOLUMES | M³ |
|----------------|----------------------|

| | | |
|-------------|--|----------------|
| Water added | | Mud Daily Cost |
| Losses | | Mud Cum Cost |

| WELL CONTROL | | SOLIDS CONTROL | |
|----------------|-----|----------------|------------|
| RSPP | N/A | Shaker Make | N/A |
| ST/Min | | Shaker Mesh | N/A |
| MACP(kPa) | N/A | Desilter | Centrifuge |
| Calc Hole Fill | | Vol UF (l/min) | N/A |
| Act Hole Fill | N/A | U.F. (kg/m3) | N/A |
| Lst BOP Drill: | | O.F. (kg/m3) | N/A |
| Calc Hole Fill | | Hours/Days | N/A |
| Act Hole Fill | | Boiler Hrs: | (to 24:00) |

24 HOUR SUMMARY FOR THE DATE : Nov3,2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|-----------------------------------------------------------------------------|
| 0700 | 0700 | 24hr | safety meeting with crew and on site supervisors discussed pressure testing |
| | | | Drill out cement from 23m to 28m |
| | | | Pressure test to 500psi for 10 mins, good test |
| | | | Drill NQ rods from 28m to 62m |
| | | | |
| | | | |
| | | | Currently drilling ahead at 62m |
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24 HOUR Forecast :
Drilling ahead

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|--------------------------------|----------------|---------------------------|--------------------------|
| Flat bay 1 Test Hole #9 | | REPORT #: 38 | DATE: Nov 3rd, 2011 |
| DEPTH 24:00: 62m | PROGRESS: 159m | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: cold | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 5c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | | DRILLING FLUID | | | | | PUMPS | | | | |
|-----------------|--|--|--|--------|----------------|--|--|--|--|----------------------------|-------|--|--|--|
| Bit No. | | | | 1.00 ° | Time | | | | | Pump No. | | | | |
| Size (mm) | | | | | Depth(m) | | | | | Make | | | | |
| Mfg. | | | | | Density | | | | | Model | | | | |
| Type | | | | | Mud Grad | | | | | Liner X Stk | | | | |
| Serial # | | | | | Vis | | | | | SPM | | | | |
| Nozzles | | | | | PV | | | | | Pump Eff. | | | | |
| From (mKB) | | | | | YP | | | | | Pump Rate | | | | |
| To (mKB) | | | | | Gels | | | | | Pump Press. | kPa | | | |
| Hrs on Bit | | | | | pH | | | | | Drillpipe AV | m/min | | | |
| WOB (daN) | | | | | WL (cc's) | | | | | Drillcollar AV | m/min | | | |
| RPM | | | | | Filter Cake | | | | | Nozzle Vel | m/sec | | | |
| Condition | | | | | Sand (%) | | | | | MUD & CHEMICALS | | | | |
| Pulled For? | | | | | Solids (%) | | | | | | | | | |
| Meters | | | | | Oil (%) | | | | | Mud Cycle | min | | | |
| m/hr | | | | | Pf/Mf | | | | | Bottoms Up | min | | | |
| Cum Hrs | | | | | MBT | | | | | Tanks | m3 | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|--------------|----------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| BHA Length: | Hook Load: | DP size | XXX | |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX | |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX | |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | | VOLUMES M ³ | | WELL CONTROL | | SOLIDS CONTROL | | |
|------------------------------------|--|---------------|--|------------------|------------------------|--|----------------|-----|----------------|------------|-----|
| RU / TO | | Survey | | Move Rig | Water added | | RSPP | N/A | Shaker Make | N/A | |
| Drill w/ fluid | | Logging | | Fishing | Losses | | ST/Min | | Shaker Mesh | N/A | |
| Drill w/ air | | Run Casing | | WO Materials | | | MACP(kPa) | N/A | Desilter | Centrifuge | |
| Reaming | | Cementing | | WO Services | | | Calc Hole Fill | | Vol UF (l/min) | N/A | N/A |
| Rm Rathole | | WOC | | Safety Meeting | | | Act Hole Fill | N/A | U.F. (kg/m3) | N/A | N/A |
| Cond / Circ | | NU BOP's | | Mix mud | | | Lst BOP Drill: | | O.F. (kg/m3) | N/A | N/A |
| Tripping | | Test BOP's | | Install Wellhead | | | Calc Hole Fill | | Hours/Days | N/A | N/A |
| Lubricate Rig | | Drill Out Cmt | | | | | Act Hole Fill | | Boiler Hrs: | (to 24:00) | |
| Repair Rig | | DST | | | | | | | | | |
| Fishing | | Hndle Tools | | Total Hrs | | | | | | | |

| 24 HOUR SUMMARY FOR THE DATE : Nov4, 2011 | | | | (0000 hrs - 2400 hrs) |
|-------------------------------------------|------|----------|---------------------------------------------------------------------------|-----------------------|
| From | To | Duration | Event | |
| 0700 | 0700 | 24hr | safety meeting with crew and on site supervisors discussed muddy location | |
| | | | Drill NQ rods from 62m to 137m | |
| | | | Pull out of hole to change out bit | |
| | | | Drill NQ rods from 137m to 159m | |
| | | | Currently rigging up hole to cement back to surface | |
| | | | | |
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| 24 HOUR Forecast : | |
|------------------------|--|
| Rig out rig and demobe | |

Vulcan Minerals

DAILY DRILLING REPORT

| | | | |
|--------------------------------|--------------|---------------------------|---------------------------|
| Flat bay 1 Test Hole #9 | | REPORT #: 39 | DATE: Nov 4th,2011 |
| DEPTH 24:00: | PROGRESS: | Last 24 Hr Rotating Time: | Ave ROP: |
| OPER 09:00: | | FOREMAN: H.HYNES | MOBILE NO.: 780-667-8775 |
| DAILY COST: | HOLE CND.: | WEATHER: cold | TOOLPUSH: |
| CUM COST: | RIG / RIG #: | TEMP.: 5c | T.P. MOBILE: |
| FORMATION: | K.B. ELEV.: | ROADS: rough | |

| BIT PERFORMANCE | | | | DRILLING FLUID | | | | PUMPS | | | | | |
|-----------------|--|--|--------|----------------|--|--|--|----------------------------|--|-------|--|--|--|
| Bit No. | | | 1.00 ° | Time | | | | Pump No. | | | | | |
| Size (mm) | | | | Depth(m) | | | | Make | | | | | |
| Mfg. | | | | Density | | | | Model | | | | | |
| Type | | | | Mud Grad | | | | Liner X Stk | | | | | |
| Serial # | | | | Vis | | | | SPM | | | | | |
| Nozzles | | | | PV | | | | Pump Eff. | | | | | |
| From (mKB) | | | | YP | | | | Pump Rate | | | | | |
| To (mKB) | | | | Gels | | | | Pump Press. | | kPa | | | |
| Hrs on Bit | | | | pH | | | | Drillpipe AV | | m/min | | | |
| WOB (daN) | | | | WL (cc's) | | | | Drillcollar AV | | m/min | | | |
| RPM | | | | Filter Cake | | | | Nozzle Vel | | m/sec | | | |
| Condition | | | | Sand (%) | | | | MUD & CHEMICALS | | | | | |
| Pulled For? | | | | Solids (%) | | | | | | | | | |
| Meters | | | | Oil (%) | | | | | | | | | |
| m/hr | | | | Pf/Mf | | | | Mud Cycle | | min | | | |
| Cum Hrs | | | | CI (ppm) | | | | Bottoms Up | | min | | | |
| | | | | Ca (ppm) | | | | Tanks | | m3 | | | |
| | | | | | | | | Hole Volume | | m3 | | | |
| | | | | | | | | System Vol. | | m3 | | | |

| BOTTOMHOLE ASSEMBLY | | | | |
|---------------------|------|--------|--------|------------------------|
| No. | Item | Max OD | Min ID | Connection Size & Type |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

| | | | |
|-----------------|--------------|----------|-----|
| BHA Length: | Hook Load: | DP size | XXX |
| Avail WOB: | Jts DP Racks | DC Conn: | XXX |
| Jts DP in hole: | DP on Loc: | DP Conn: | XXX |

| DRILLING OPERATIONS TIME BREAKDOWN | | | | | | VOLUMES | | M ³ | |
|------------------------------------|--|---------------|--|------------------|--|---------------------|-----|-----------------------|------------|
| RU / TO | | Survey | | Move Rig | | Water added | | Mud Daily Cost | |
| Drill w/ fluid | | Logging | | Fishing | | Losses | | Mud Cum Cost | |
| Drill w/ air | | Run Casing | | WO Materials | | WELL CONTROL | | | |
| Reaming | | Cementing | | WO Services | | | | | |
| Rm Rathole | | WOC | | Safety Meeting | | RSP | N/A | SOLIDS CONTROL | |
| Cond / Circ | | NU BOP's | | Mix mud | | ST/Min | N/A | | |
| Tripping | | Test BOP's | | Install Wellhead | | MACP(kPa) | N/A | Shaker Make | N/A |
| Lubricate Rig | | Drill Out Cmt | | | | Calc Hole Fill | | Shaker Mesh | N/A |
| Repair Rig | | DST | | | | Act Hole Fill | N/A | Desilter | Centrifuge |
| Fishing | | Hndle Tools | | Total Hrs | | Lst BOP Drill: | | Vol UF (l/min) | N/A |
| | | | | | | Calc Hole Fill | | U.F. (kg/m3) | N/A |
| | | | | | | Act Hole Fill | | O.F. (kg/m3) | N/A |
| | | | | | | | | Hours/Days | N/A |
| | | | | | | | | Boiler Hrs: | (to 24:00) |

24 HOUR SUMMARY FOR THE DATE : Nov 5,2011 (0000 hrs - 2400 hrs)

| From | To | Duration | Event |
|------|------|----------|-----------------------------------------------------------------------------------------|
| 0700 | 0700 | 24hr | safety meeting with crew and on site supervisors discussed moving rig |
| | | | Finish cement job, rig out diverter and line. |
| | | | Rig out rig , cut casing off at ground level and weld on cap. |
| | | | Skid equipment out with tractor to be loaded to take to Deer Lake |
| | | | Rig released |
| | | | |
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| | | | |
| | | | Waiting on float to come from Deer Lake to load equipment to be shipped to Logans yard. |
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24 HOUR Forecast :

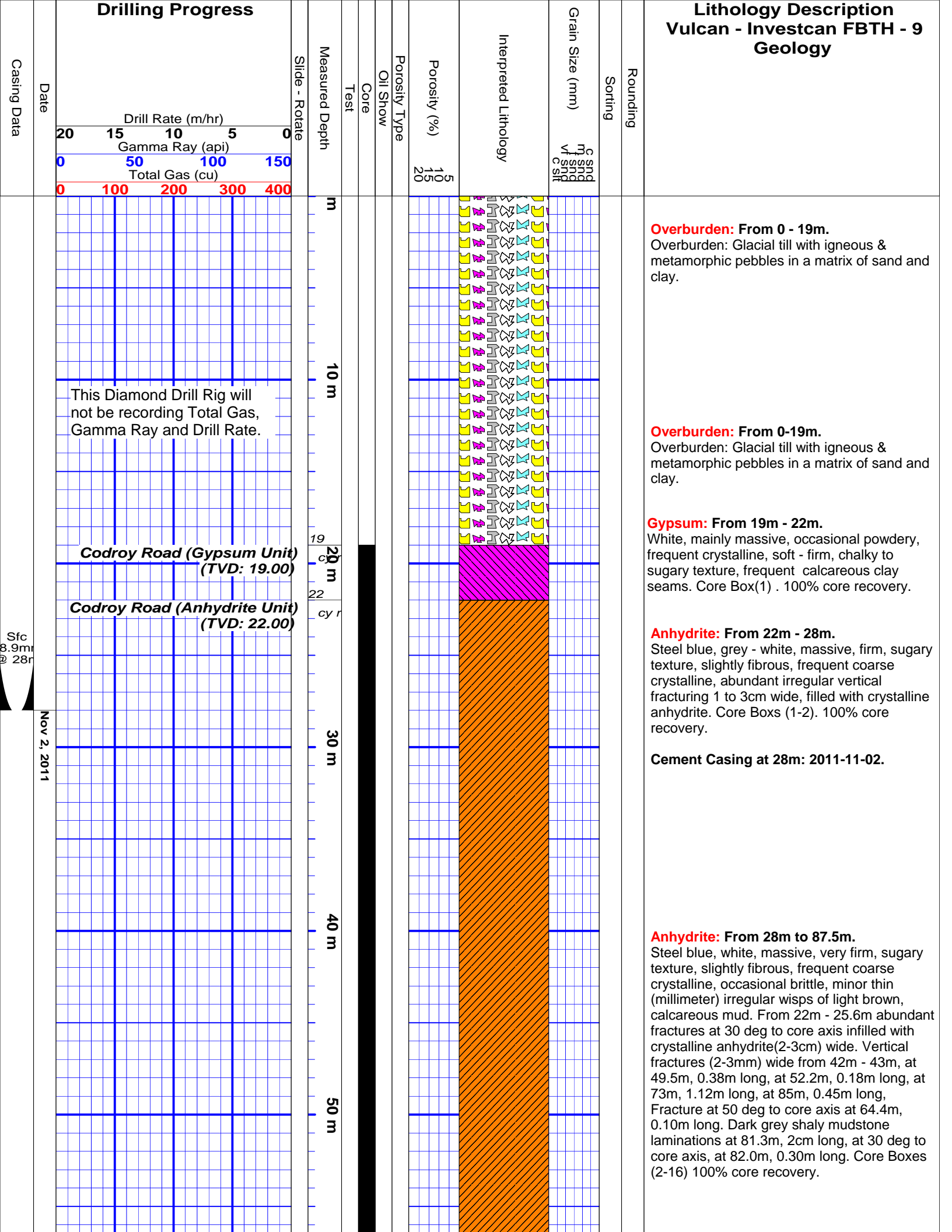
Appendix III
Bit Record

BIT RECORD

| BIT ID | Date |
|---------------|-------------|
| 79260-11 | 10/02/2011 |
| 79316-10 | 10/06/2011 |
| 57863-09 | 10/07/2011 |
| 660186-04 | 10/10/2011 |
| 103236-08 | 10/16/2011 |
| 103235-08 | 10/17/2011 |
| 103236-09 | 10/20/2011 |
| 656116-01 | 10/23/2011 |
| 647247-04 | 10/24/2011 |

Appendix IV
Composite Well Record

Lithology Description Vulcan - Investcan FBTH - 9 Geology



Overburden: From 0 - 19m.
Overburden: Glacial till with igneous & metamorphic pebbles in a matrix of sand and clay.

Overburden: From 0-19m.
Overburden: Glacial till with igneous & metamorphic pebbles in a matrix of sand and clay.

Gypsum: From 19m - 22m.
White, mainly massive, occasional powdery, frequent crystalline, soft - firm, chalky to sugary texture, frequent calcareous clay seams. Core Box(1) . 100% core recovery.

Anhydrite: From 22m - 28m.
Steel blue, grey - white, massive, firm, sugary texture, slightly fibrous, frequent coarse crystalline, abundant irregular vertical fracturing 1 to 3cm wide, filled with crystalline anhydrite. Core Boxes (1-2). 100% core recovery.

Cement Casing at 28m: 2011-11-02.

Anhydrite: From 28m to 87.5m.
Steel blue, white, massive, very firm, sugary texture, slightly fibrous, frequent coarse crystalline, occasional brittle, minor thin (millimeter) irregular wisps of light brown, calcareous mud. From 22m - 25.6m abundant fractures at 30 deg to core axis infilled with crystalline anhydrite(2-3cm) wide. Vertical fractures (2-3mm) wide from 42m - 43m, at 49.5m, 0.38m long, at 52.2m, 0.18m long, at 73m, 1.12m long, at 85m, 0.45m long, Fracture at 50 deg to core axis at 64.4m, 0.10m long. Dark grey shaly mudstone laminations at 81.3m, 2cm long, at 30 deg to core axis, at 82.0m, 0.30m long. Core Boxes (2-16) 100% core recovery.

| Drilling Progress | | | | |
|-------------------|----|-----|-----|-----|
| Drill Rate (m/hr) | 15 | 10 | 5 | 0 |
| 20 | 15 | 10 | 5 | 0 |
| Gamma Ray (api) | 50 | 100 | 150 | |
| Total Gas (cu) | 0 | 100 | 200 | 300 |
| | 0 | 100 | 200 | 300 |

This Diamond Drill Rig will not be recording Total Gas, Gamma Ray and Drill Rate.

Codroy Road (Gypsum Unit)
(TVD: 19.00)

Codroy Road (Anhydrite Unit)
(TVD: 22.00)

Sfc
8.9m
@ 28m

Nov 2, 2011

Nov 3, 2011

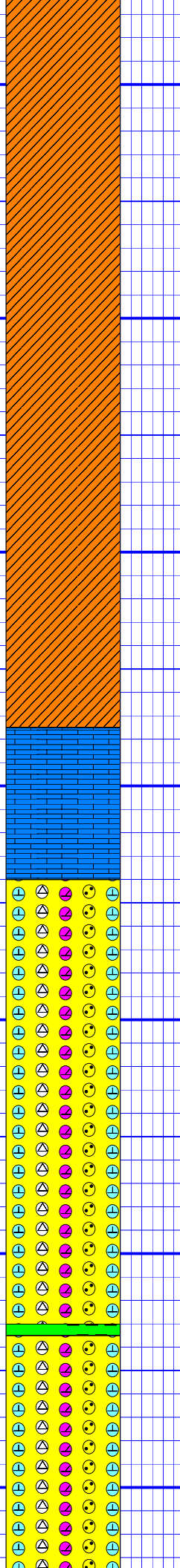
60 m
70 m
80 m
87.5
90 m
93.6
100 m
110 m
120 m

1 (120.43%)

2 (90%)

Ship Cove
(TVD: 87.50)

Spout Falls Fishells Bk Cg
(TVD: 83.60)



Anhydrite: From 28m-87.5m.

Steel blue, white, massive, very firm, sugary texture, slightly fibrous, frequent coarse crystalline, occasional brittle, minor thin (millimeter) irregular wisps of light brown, calcareous mud. From 22m - 25.6m abundant fractures at 30 deg to core axis infilled with crystalline anhydrite(2-3cm) wide. Vertical fractures (2-3mm) wide from 42m - 43m, at 49.5m, 0.38m long, at 52.2m, 0.18m long, at 73m, 1.12m long, at 85m, 0.45m long, Fracture at 50 deg to core axis at 64.4m, 0.10m long. Dark grey shaly mudstone laminations at 81.3m, 2cm long, at 30 deg to core axis, at 82.0m, 0.30m long. Core Boxes (1-16) 100% core recovery.

Limestone: From 87.5m-93.6m.

Light to medium gray, microcrystalline to crystalline, frequent light brown wavy beds (1-5mm thick) at 30 deg to core axis, laminated, hard, algae like structure. Frequent dark grey shaly mudstone laminations parallel to bedding from 90.3m to 91.7m, 1-2cm long. Porous sections filled with white crystalline calcite at 88.9m, 0.45m wide, and at 91.1m, 0.5cm long. No Oil shows. Core Boxes (16-17) 100% core recovery.

Conglomerate: From 93.6m-112m.

Mainly medium grey, cobble - pebble conglomerate with clasts mainly sized (4-16cm), sub-rounded to sub-angular, matrix supported, abundant large clasts mainly grey limestone, red quartzite, dolomite, red granite and lithic fragments. Approximately 10% of this interval is coarse to very coarse grained sand matrix, quartz, frequent red arkosic, quartzitic and red granitic, angular to rounded, very poorly sorted, well indurated, calcareous cemented, very hard. Red coarse grained granite, rich in K-feldspar at 110.6m, 0.20m long. Quartzite, off white, very hard, at 111.0m, 0.3m long. No Oil weeping from sandstone matrix or around clast boundaries. Porosity visually estimated at 1-2%. Core Boxes (17-22). 100% core recovery.

Conglomeratic - Sandstone: From 112m-120.3m.

Red, orange yellow, light green, coarse to very coarse grained, frequent pebbles and boulders, poorly sorted, subrounded to angular, predominately quartz, firm to friable, consolidated to un-consolidated with calcareous cement, arkosic, with brecciated fragments of orange feldspar, green mafics, and chlorite schist, frequent boulder size (5mm-12mm) clasts of grey limestone, buff dolomite and hematized quartzites. at 113.2m to 113.7m, Claystone, red, strongly hematized, soft to firm, frequent dark red,

Nov 4, 2011

Basement Granite Mafic Gneiss
(TVD: 147.00)

Final Total Depth
(TVD: 159.00)

130 m

140 m

150 m

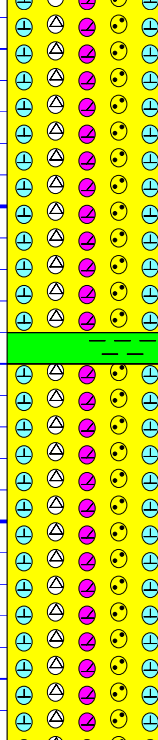
160 m

170 m

3 (100%)

4 (60%)

○ ○ ○



orange brown, consolidated, at 30 deg to core axis. No visible porosity. Core Boxes(22-24). 90% Core Recovery.

Conglomerate: From 120.3m-123.1m.

Mainly medium grey, boulder - pebble conglomerate with clasts size (4-12cm), sub-rounded to sub-angular, matrix supported, abundant clasts mainly grey limestone, red quartzite, dolomite, red granite and lithic fragments. Approximately 10% of this interval is coarse to very coarse grained sand matrix, quartz, frequent red arkosic, off white quartzitic, angular to rounded, very poorly sorted, well indurated, calcareous cemented, very hard. No Oil weeping from sandstone matrix or around clast boundaries. Porosity visually estimated at 1-2%. Core Box (24). 100% recovery.

Conglomeratic - Sandstone: From 123.1m-147m.

Red, orange yellow, light to dark green, coarse to very coarse grained, occasional pebbles and boulders, poorly sorted, subrounded to angular, predominately quartz, firm to friable, consolidated to un-consolidated with calcareous cement, coarse arkosic rich, with brecciated fragments of orange K-feldspar, green mafics, and chlorite schist, some boulder size (5mm-9mm) clasts of grey limestone, buff dolomite and hematized quartzites. Claystone, red, strongly hematized, soft to firm, frequent dark red, orange brown, silty, consolidated to un-consolidated, at 125.3m, 0.60m long, at 127.3m, 0.31m long, at 128.7m, 0.92m long, at 133.9m, 1.46m long, at 135.9m, 0.25m long, at 136.6m, 0.29m long, at 138.1m, 0.38m long, and at 142.6m, 0.38m long at 35 deg to core axis., No visible porosity. Core Boxes(25-30). 100% Core Recovery.

Granite - Mafic Gneiss: From 147m-159m.

Mainly Granite Gneiss with abundant white to glassy quartz and red orange K-feldspar, coarse to medium grained, massive to foliated, highly fractured. Frequent quartz carbonate streaks, frequent sections of dark green mafic gneiss with green chlorite and light green epidote alterations, well developed schistosity at 45 deg to Core Axis. Massive off white quartzite, very hard, from 147.0m-147.2m. Live Oil weeping from fractures at 153.0m, 153.4m-153.5m, 154.1m-154.4m and 155.0m. Core intervals put in PVC tubing for detailed analyses: 154.1m - 154.4m, 153.4m-153.5m. Core Boxes(30-34). 60% Core Recovery. Final Total Depth at 159m. 2011-11-04.

Appendix V
Stratigraphic Column

Appendix VI
Core Box Depths

| Hole # | Box # | DEPTH | |
|--------|-------|----------|--------|
| | | From (m) | to (m) |
| 9 | 1 | 19.00 | 22.50 |
| 9 | 2 | 22.50 | 26.97 |
| 9 | 3 | 26.97 | 31.43 |
| 9 | 4 | 31.43 | 35.90 |
| 9 | 5 | 35.90 | 40.37 |
| 9 | 6 | 40.37 | 44.83 |
| 9 | 7 | 44.83 | 49.30 |
| 9 | 8 | 49.30 | 53.77 |
| 9 | 9 | 53.77 | 58.23 |
| 9 | 10 | 58.23 | 62.70 |
| 9 | 11 | 62.70 | 67.17 |
| 9 | 12 | 67.17 | 71.63 |
| 9 | 13 | 71.63 | 76.10 |
| 9 | 14 | 76.10 | 80.57 |
| 9 | 15 | 80.57 | 85.03 |
| 9 | 16 | 85.03 | 89.50 |
| 9 | 17 | 89.50 | 94.30 |
| 9 | 18 | 94.30 | 98.44 |
| 9 | 19 | 98.44 | 102.58 |
| 9 | 20 | 102.58 | 106.72 |
| 9 | 21 | 106.72 | 110.86 |
| 9 | 22 | 110.86 | 115.00 |
| 9 | 23 | 115.00 | 119.05 |
| 9 | 24 | 119.05 | 123.10 |
| 9 | 25 | 123.10 | 125.49 |
| 9 | 26 | 125.49 | 127.88 |
| 9 | 27 | 127.88 | 130.27 |
| 9 | 28 | 130.27 | 132.66 |
| 9 | 29 | 132.66 | 135.05 |
| 9 | 30 | 135.05 | 137.44 |
| 9 | 31 | 137.44 | 139.83 |
| 9 | 32 | 139.83 | 142.22 |
| 9 | 33 | 142.22 | 144.61 |
| 9 | 34 | 144.61 | 147.00 |

Appendix VII
Lithological Descriptions

Vulcan - Investcan FB TH - 9: 2011-11-06

| Depth (m) | | Thickness (m) | Description | Lineations | Porosity | Oil/gas show | Rock quality |
|---------------------------------------------------------------|------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|--------------|----------------|
| From | To | | | | | | |
| 0.0 | 19.0 | 19.0 | Overburden: Glacial till with some boulders and pebbles of igneous & metamorphic origin in a matrix of mainly sand and clay. | | | | unconsolidated |
| 19.0 - 22.0 m, Codroy Road Formation, Gypsum Unit | | | | | | | |
| 19.0 | 22.0 | 3.0 | Gypsum: White, mainly massive, soft, occasional powdery, minor crystalline, chalky to sugary texture, minor calcareous dark grey clay seams. Core Box (1). 100% core recovery. | | | | Consolidated |
| 22.0 - 87.5.0 m, Codroy Road Formation, Anhydrite Unit | | | | | | | |
| 22.0 | 87.5 | 65.5 | Anhydrite: Steel blue, white, massive, very firm, sugary texture, slightly fibrous, frequent coarse crystalline, occasional brittle, minor thin (millimeter) irregular wisps of light brown, calcareous mud. From 22m - 25.6m abundant fractures at 30 deg to core axis infilled with crystalline anhydrite(2-3cm) wide. Vertical fractures (2-3mm) wide from 42m - 43m, at 49.5m, 0.38m long, at 52.2m, 0.18m long, at 73m, 1.12m long, at 85m, 0.45m long, Fracture at 50 deg to core axis at 64.4m, 0.10m long. Dark grey shaly mudstone laminations at 81.3m, 2cm long, at 30 deg to core axis, at 82.0m, 0.30m long. Core Boxes (1-16) 100% core recovery. | 30° CA | | | Consolidated |
| 87.5 - 93.6 m, Ship Cove Limestone Formation | | | | | | | |
| 87.5 | 93.6 | 6.1 | Limestone: Light to medium gray, microcrystalline to crystalline, frequent light brown wavy beds (1-5mm thick) at 30 deg to core axis, laminated, hard, algae like structure. Frequent dark grey shaly mudstone laminations parallel to bedding from 90.3m to 91.7m, 1-2cm long. Porous sections filled with white crystalline calcite at 88.9m, 0.45m wide, and at 91.1m, 0.5cm long. No Oil shows. Core Boxes (16-17) 100% core recovery. | 30° CA | | No Oil shows | Consolidated |

| 93.6 - 147.0m Spout Falls Formation, Fishell's Brook Conglomerate | | | | | | | |
|-------------------------------------------------------------------|-------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--|---------------------------------------------------------------------|---------------------------------|
| 93.6 | 112 | 18.4 | Conglomerate: Mainly medium grey, cobble - pebble conglomerate with clasts mainly sized (4-16cm), sub-rounded to sub-angular, matrix supported, abundant large clasts mainly grey limestone, red quartzite, dolomite, red granite and lithic fragments. Approximately 10% of this interval is coarse to very coarse grained sand matrix, quartz, frequent red arkosic, quartzitic and red granitic, angular to rounded, very poorly sorted, well indurated, calcareous cemented, very hard. Red coarse grained granite, rich in K-feldspar at 110.6m, 0.20m long. Quartzite, off white, very hard, at 111.0m, 0.3m long. No Oil weeping from sandstone matrix or around clast boundaries. Porosity visually estimated at 1-2%. Core Boxes (17-22). 100% core recovery. | 1 - 2% | | No oil shows from sandstone matrix or from around clast boundaries. | Consolidated |
| 112 | 120.3 | 8.3 | Conglomeratic Sandstone: Red, orange yellow, light green, coarse to very coarse grained, frequent pebbles and boulders, poorly sorted, subrounded to angular, predominately quartz, firm to friable, consolidated to un-consolidated with calcareous cement, arkosic, with brecciated fragments of orange feldspar, green mafics, and chlorite schist, frequent boulder size (5mm-12mm) clasts of grey limestone, buff dolomite and hematized quartzites. At 113.2m to 113.7m, Claystone, red, strongly hematized, soft to firm, frequent dark red, orange brown, consolidated to un-consolidated, at 30 deg to core axis. No visible porosity. Core Boxes(22-24). 90% Core Recovery. | 30 ⁰ CA | | No Oil shows | Consolidated to Un-consolidated |
| 120.3 | 123.1 | 2.8 | Conglomerate: Mainly medium grey, boulder - pebble conglomerate with clasts size (4-12cm), sub-rounded to sub-angular, matrix supported, abundant clasts mainly grey limestone, red quartzite, dolomite, red granite and lithic fragments. Approximately 10% of this interval is coarse to very coarse grained sand matrix, quartz, frequent red arkosic, off white quartzitic, angular to rounded, very poorly sorted, well indurated, calcareous cemented, very hard. No Oil weeping from sandstone matrix or around clast boundaries. Porosity visually estimated at 1-2%. Core Box (24). 100% recovery. | 1 - 2% | | No oil shows from sandstone matrix or from around clast boundaries. | Consolidated |
| 123.1 | 147.0 | 23.9 | Conglomeratic Sandstone: Red, orange yellow, light to dark green, coarse to very coarse grained, occasional pebbles and boulders, poorly sorted, subrounded to angular, predominately quartz, firm to friable, consolidated to un-consolidated with calcareous cement, coarse arkosic rich, with brecciated fragments of orange K-feldspar, green mafics, and chlorite schist, some boulder size (5mm-9mm) clasts of grey limestone, buff dolomite and hematized quartzites. Claystone, red, strongly hematized, soft to firm, frequent dark red, orange brown, silty, consolidated to un-consolidated, at 125.3m, 0.60m long, at 127.3m, 0.31m long, at 128.7m, 0.92m long, at 133.9m, 1.46m long, at 135.9m, 0.25m long, at 136.6m, 0.29m long, at 138.1m, 0.38m long, and at 142.6m, 0.38m long at 35 deg to core axis,. No visible porosity. Core Boxes(25-30). 100% Core Recovery. | 35 ⁰ CA | | No Oil shows | Consolidated to Un-consolidated |

Appendix VIII
Legal Survey



GRID NORTH
NAD27
NTM ZONE 21

▲ C.M. 84G4148

○ FBTH5
N 5360934.748
E 383173.511

○ FBTH9
N 5360176.766
E 383666.632

○ FBTH8
N 5360379.149
E 385040.549

○ FBTH4
N 5359905.747
E 383431.320

○ FBTH6
N 5358293.931
E 384555.284

○ FBTH7
N 5357590.861
E 384810.480

Surveyor's Report
Drill Hole locations
Flat Bay area

| <u>#</u> | <u>Northing</u> | <u>Easting</u> | <u>Elev</u> | <u>Description</u> |
|----------|-----------------|----------------|-------------|--------------------|
| 120 | 5360176.766 | 383666.632 | 16.390 | FBTH9 |
| 122 | 5359905.747 | 383431.320 | 20.414 | FBTH4 |
| 124 | 5360379.149 | 385040.549 | 18.464 | FBTH8 |
| 126 | 5358293.931 | 384555.284 | 65.992 | FBTH6 |
| 128 | 5357590.861 | 384810.480 | 80.448 | FBTH7 |
| 130 | 5360934.748 | 383173.511 | 7.369 | FBTH5 |

R. Davis Surveys Ltd.
November 15, 2011



**Appendix IX
Core Photos**

150.35 m

150.85 m

151.35 m



150.35 m

150.85 m

151.35 m



148.83 m

149.33 m

149.83 m



148.83 m

149.33 m

149.83 m



147.33 m

147.83 m

148.33 m



147.33 m

147.83 m

148.33 m



145.78 m

146.28 m

146.78 m



145.78 m

146.28 m

146.78 m



144.28 m

144.78 m

145.28 m



144.28 m

144.78 m

145.28 m



142.76 m

143.26 m

143.76 m



142.76 m

143.26 m

143.76 m



141.10 m

141.60 m

142.10 m



139.58 m

140.08 m

140.58 m



138.32 m

138.82 m

139.32 m



136.70 m

137.20 m

137.70 m



135.26 m

135.76 m

136.26 m



133.93 m

134.43 m

134.93 m



132.41 m

132.91 m

133.41 m



130.93 m

131.43 m

131.93 m



129.40 m

129.90 m

130.40 m



127.90 m

128.40 m

128.90 m



126.50 m

127.00 m

127.50 m



125.05 m

125.55 m

126.05 m



123.58 m

124.08 m

124.58 m



122.12 m

122.62 m

123.12 m



120.60 m

121.10 m

121.60 m



119.06 m

119.56 m

120.06 m



117.58 m

118.08 m

118.58 m



116.13 m

116.63 m

117.13 m



114.61 m

115.11 m

115.61 m



113.30 m

113.80 m

114.30 m



111.85 m

112.35 m

112.85 m



110.43 m

110.93 m

111.43 m



109.04 m

109.54 m

110.04 m



107.54 m

108.04 m

108.54 m



106.17 m

106.67 m

107.17 m



104.69 m

105.19 m

105.69 m



103.26 m

103.76 m

104.26 m



101.58 m

102.08 m

102.58 m



100.38 m

100.88 m

101.38 m



98.97 m

99.47 m

99.97 m



97.58 m

98.08 m

98.58 m



96.17 m

96.67 m

97.17 m



94.68 m

95.18 m

95.68 m



93.25 m

93.75 m

94.25 m



93.25 m

93.75 m

94.25 m



91.75 m

92.25 m

92.75 m



91.75 m

92.25 m

92.75 m



90.37 m

90.87 m

91.37 m



90.37 m

90.87 m

91.37 m



88.92 m

89.42 m

89.92 m



87.48 m



87.98 m



88.48 m



86.04 m

86.54 m

87.04 m



Appendix X
Core Analysis Report



SUMMARY OF CONVENTIONAL CORE ANALYSES RESULTS

Conventional Oven Dried at 95°C

Vulcan Minerals Inc.
 FBTH #9
 Robinson and Red Brooks Field

Newfoundland
 File:NF-55271
 Date: 3-7-12

| Sample Number | Sample Depth, m | Permeability, millidarcys to Air | Porosity, fraction | Grain Density, kg/m ³ | Residual Fluid Saturations | | Lithological Description |
|---------------|-----------------|----------------------------------|--------------------|----------------------------------|----------------------------|-------|--------------------------|
| | | | | | Oil | Water | |
| 9_1 | 92.32 | 0.0069 | 0.048 | 2770 | 0.233 | 0.050 | ls, anhy |
| 9_2 | 95.73 | 0.0444 | 0.064 | 2680 | 0.066 | 0.299 | ss, calc. |
| 9_3 | 100.65 | 0.190 | 0.059 | 2670 | 0.214 | 0.217 | cgl, calc |
| 9_4 | 105.10 | 0.478 | 0.091 | 2670 | 0.149 | 0.295 | cgl, calc |
| 9_5 | 110.12 | 0.458 | 0.082 | 2680 | 0.009 | 0.519 | cgl, calc |
| 9_6 | 115.68 | 0.873 | 0.140 | 2650 | 0.098 | 0.352 | cgl, sl calc |
| 9_7 | 120.18 | 0.803 | 0.127 | 2660 | 0.091 | 0.424 | ss, calc. |
| 9_8 | 121.45 | 1.97 | 0.124 | 2670 | 0.021 | 0.651 | ss, dol |
| 9_9 | 126.05 | 1.31 | 0.094 | 2670 | 0.250 | 0.707 | cgl, calc |
| 9_10 | 127.52 | 1.14 | 0.115 | 2750 | 0.065 | 0.867 | ss, dol |
| 9_11 | 132.35 | 0.233 | 0.112 | 2750 | 0.093 | 0.758 | ss, dol |
| 9_12 | 136.73 | 0.685 | 0.114 | 2760 | 0.009 | 0.946 | ss, dol |
| 9_13 | 140.81 | + | 0.115 | 2740 | 0.011 | 0.899 | ss, dol |
| 9_14 | 148.40 | 0.0175 | 0.033 | 2690 | 0.011 | 0.591 | cgl, calc |
| 9_15 | 149.70 | 0.0027 | 0.024 | 2700 | 0.006 | 0.493 | cgl, calc |
| 9_16 | 151.57 | 0.0311 | 0.016 | 2690 | 0.012 | 0.462 | cgl, sl calc |

+ indicates unsuitable for this testing

Appendix XI
Well Termination Record

WELL TERMINATION RECORD

WELL DATA

| | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------|-------------------------------------|-----------------------------|-------------|
| Well Name: | Flat Bay Test Hole 9 | CO-ORDINATES | | | |
| Operator: | Vulcan Minerals Inc | Long : | | UTM (NAD 27) | |
| Drilling Rig : | Duralite 800 | Lat. : | | Northing: | 5360176.766 |
| Rig Type : | Core Drill | | | Easting : | 383666.632 |
| Drilling Contractor : | Logan Drilling Limited | ELEVATION | | DEPTH | |
| | | <input type="checkbox"/> RT | <input type="checkbox"/> KB | <input type="checkbox"/> RF | m |
| | | G.L. : | 16.390 | M.D. : | 159 |
| | | T.V.D. : | | T.V.D. : | 159 |
| FOR INTERNAL USE ONLY | | | | | |
| For the purpose of interpreting subsection 154 (5) of the Petroleum Drilling Regulations, the rig release date is deemed to be: | | | | | |
| Spud Date: | November 1, 2011 | | | | |
| T.D. Date: | November 4, 2011 | | | | |
| Rig Release Date: | November 4, 2011 | | | | |
| Well Termination Date: | November 22, 2011 | | | | |
| 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 | | 19 | Cemented hole from EOH (159m) to surface. |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

PLUGGING PROGRAM

Approval of the following program was obtained by (person) Patrick Laracy
 from (person) Keith Hynes of the Department of Natural Resources by means of
Drilling Program Approval and Authority to Drill Well dated August 19, 2011

| Type of Plug | Interval | Felt/Pressure Tested | Cement and Additives |
|--------------|----------|----------------------|---------------------------------|
| Cement | 0-159m | Observed at Surface | 1820 kg-m ³ , type A |
| | | | |
| | | | |
| | | | |

Lost Circulation/Overpressure Zones: _____

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

Cement from surface to EOH - See attached sketch.
 Casing cut off 1m below grade.

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.

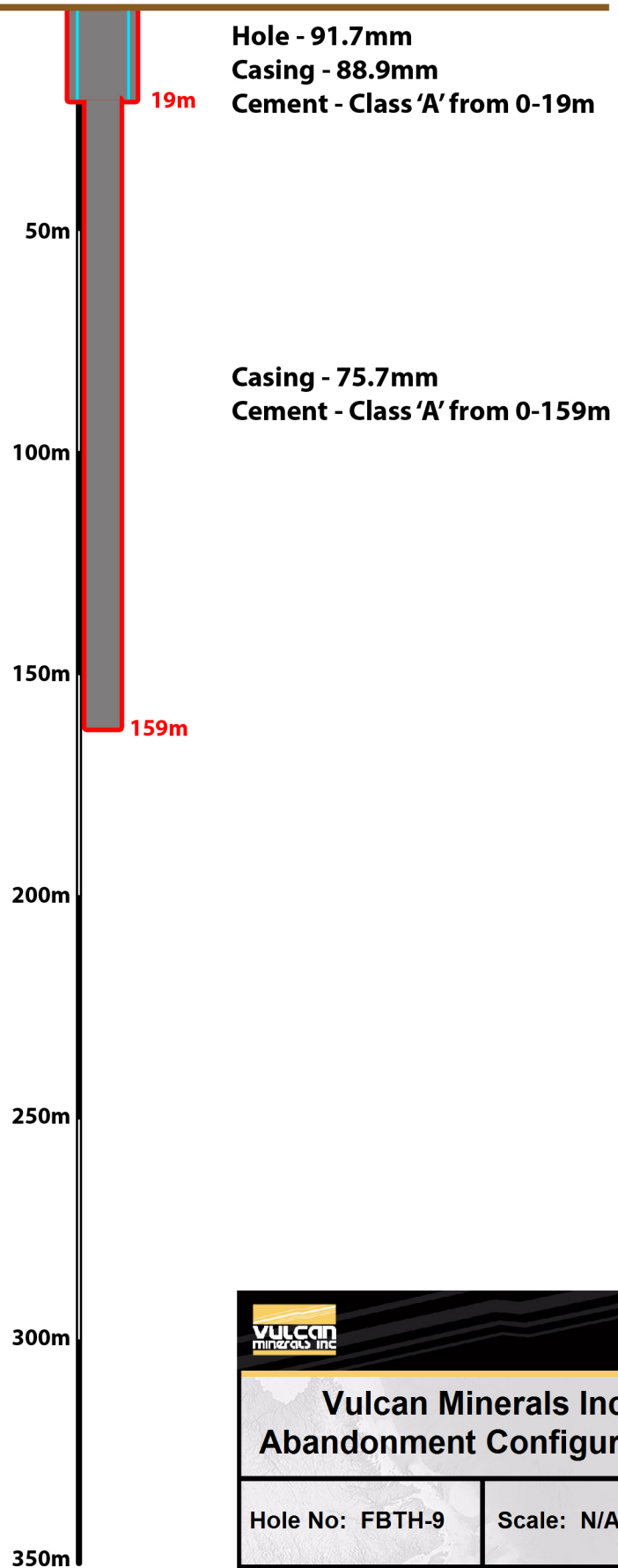
Name Elliott M. Stuckless **Title** Geologist
Signed _____ **Date** November 22, 2011

ACKNOWLEDGEMENT

Acknowledged by: _____ Date: _____

Director

FBTH-9




Hole - 91.7mm
Casing - 88.9mm
Cement - Class 'A' from 0-19m

Casing - 75.7mm
Cement - Class 'A' from 0-159m

50m
100m
150m
200m
250m
300m
350m

COORDINATES (NAD 27, Zone 21)
N 5360176.766m
E 0383666.632m
Casing Elevation 16.390m
Azimuth 0 degrees
Dip -90 degrees

| | |
|-----------------------------------------------------------------------------------------------------------------------------------|---------------|
|  TSX V:VUL | |
| Vulcan Minerals Inc. Abandonment Configuration | |
| Hole No: FBTH-9 | Scale: N/A |
| Date: 22-11-2011 | Drawn By: EMS |