Appendix 16

Engineering Drawings for the Doris Central Vent Raise Pad and Access Road (SRK, June 2011)

Engineering Drawings for the Doris Central Vent Raise Pad and Access Road, Hope Bay Project, Nunavut, Canada Water License Amendment

ACTIVE DRAWING STATUS

DWG NUMBER	DRAWING TITLE	REVISION	DATE	STATUS	OLD/REPLACE REVISIONS
DC-00	Engineering Drawings for the Doris Central Vent Raise Pad and Access Road- Hope Bay Project, Nunavut, Canada, Water License Amendment	B	June 7, 2011	Issued For Discussion	Rev. A Oct 22, 2010
DC-01	General Arrangement (with orthophoto)	B	June 7, 2011	Issued For Discussion	Rev. A Oct 22, 2010
DC-02	Arrangement and Access Road Profile	B	June 7, 2011	Issued For Discussion	Rev. A Oct 22, 2010
DC-03	Vent Raise Pad Sections	B	June 7, 2011	Issued For Discussion	Rev. A Oct 22, 2010
DC-04	Typical Sections and Details	B	June 7, 2011	Issued For Discussion	Rev. A Oct 22, 2010
DC-05	Overburden Storage Area and Sediment Control Berm	A	June 7, 2011	Issued For Discussion	

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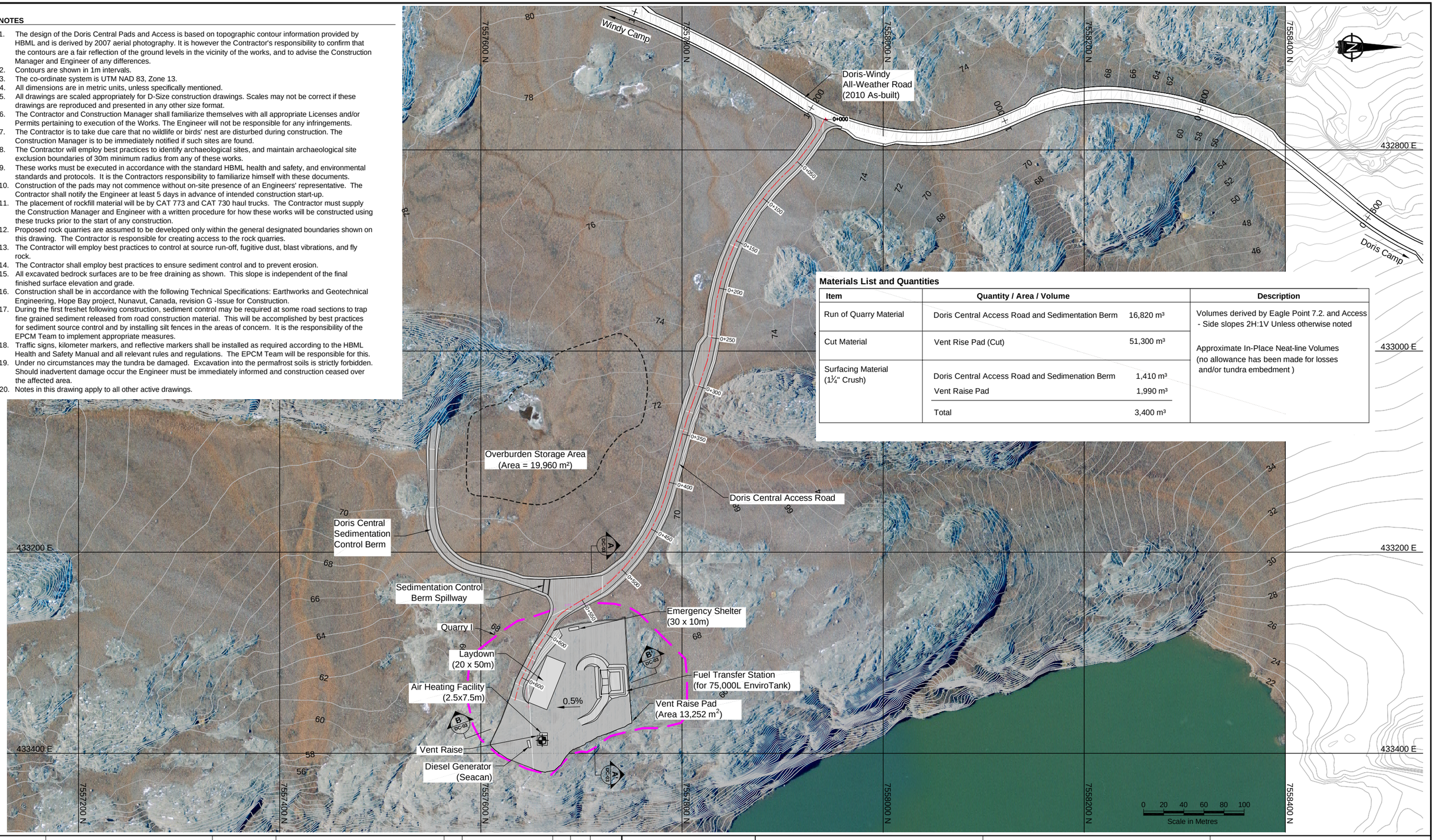
PROJECT NO: 1CH008.049
Revision B
June 7, 2011
Drawing DC-00

NOTES

1. The design of the Doris Central Pads and Access is based on topographic contour information provided by HBML and is derived by 2007 aerial photography. It is however the Contractor's responsibility to confirm that the contours are a fair reflection of the ground levels in the vicinity of the works, and to advise the Construction Manager and Engineer of any differences.
2. Contours are shown in 1m intervals.
3. The co-ordinate system is UTM NAD 83, Zone 13.
4. All dimensions are in metric units, unless specifically mentioned.
5. All drawings are scaled appropriately for D-Size construction drawings. Scales may not be correct if these drawings are reproduced and presented in any other size format.
6. The Contractor and Construction Manager shall familiarize themselves with all appropriate Licenses and/or Permits pertaining to execution of the Works. The Engineer will not be responsible for any infringements.
7. The Contractor is to take due care that no wildlife or birds' nest are disturbed during construction. The Construction Manager is to be immediately notified if such sites are found.
8. The Contractor will employ best practices to identify archaeological sites, and maintain archaeological site exclusion boundaries of 30m minimum radius from any of these works.
9. These works must be executed in accordance with the standard HBML health and safety, and environmental standards and protocols. It is the Contractors responsibility to familiarize himself with these documents.
10. Construction of the pads may not commence without on-site presence of an Engineers' representative. The Contractor shall notify the Engineer at least 5 days in advance of intended construction start-up.
11. The placement of rockfill material will be by CAT 773 and CAT 730 haul trucks. The Contractor must supply the Construction Manager and Engineer with a written procedure for how these works will be constructed using these trucks prior to the start of any construction.
12. Proposed rock quarries are assumed to be developed only within the general designated boundaries shown on this drawing. The Contractor is responsible for creating access to the rock quarries.
13. The Contractor will employ best practices to control at source run-off, fugitive dust, blast vibrations, and fly rock.
14. The Contractor shall employ best practices to ensure sediment control and to prevent erosion.
15. All excavated bedrock surfaces are to be free draining as shown. This slope is independent of the final finished surface elevation and grade.
16. Construction shall be in accordance with the following Technical Specifications: Earthworks and Geotechnical Engineering, Hope Bay project, Nunavut, Canada, revision G -Issue for Construction.
17. During the first freshet following construction, sediment control may be required at some road sections to trap fine grained sediment released from road construction material. This will be accomplished by best practices for sediment source control and by installing silt fences in the areas of concern. It is the responsibility of the EPCM Team to implement appropriate measures.
18. Traffic signs, kilometer markers, and reflective markers shall be installed as required according to the HBML Health and Safety Manual and all relevant rules and regulations. The EPCM Team will be responsible for this.
19. Under no circumstances may the tundra be damaged. Excavation into the permafrost soils is strictly forbidden. Should inadvertent damage occur the Engineer must be immediately informed and construction ceased over the affected area.
20. Notes in this drawing apply to all other active drawings.



Materials List and Quantities

Item	Quantity / Area / Volume		Description
Run of Quarry Material	Doris Central Access Road and Sedimentation Berm	16,820 m³	Volumes derived by Eagle Point 7.2. and Access - Side slopes 2H:1V Unless otherwise noted
Cut Material	Vent Rise Pad (Cut)	51,300 m³	Approximate In-Place Neat-line Volumes (no allowance has been made for losses and/or tundra embedment)
Surfacing Material ($1\frac{1}{4}$" Crush)	Doris Central Access Road and Sedimenation Berm	1,410 m³	
	Vent Raise Pad	1,990 m³	
	Total	3,400 m³	

NO.	DESCRIPTION	CHK'D	APP'D	DATE
B	Revisions Sed Berm Added	JK	EMR	7June11
A	Issued for Review	JK	EMR	220ct10

REFERENCE DRAWINGS | DRAWING NO. | DRAWING TITLE | DRAWING NO. | DRAWING TITLE

REVISIONS

Original Drawings Stamped and Signed by Engineer

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DESIGN:	DRAWN:	REVIEWED:
JBK	NV\MDDS	LW
CHECKED: JBK	APPROVED: EMR	DATE: June 7, 2011

FILE NAME: Doris Central Pads and Access Ramp DC-01_03.dwg

NEWMONT . NORTH AMERICA

HOPE BAY MINING LTD

SRK JOB NO.: 1CH008.049

Doris Central Pads and Access

DRAWING TITLE: General Arrangement (with Orthophoto)

DRAWING NO.	SHEET	REVISION NO.
DC-01	2 of 6	B

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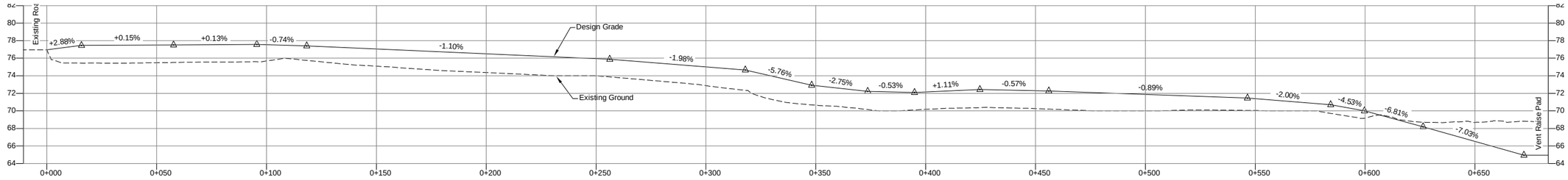
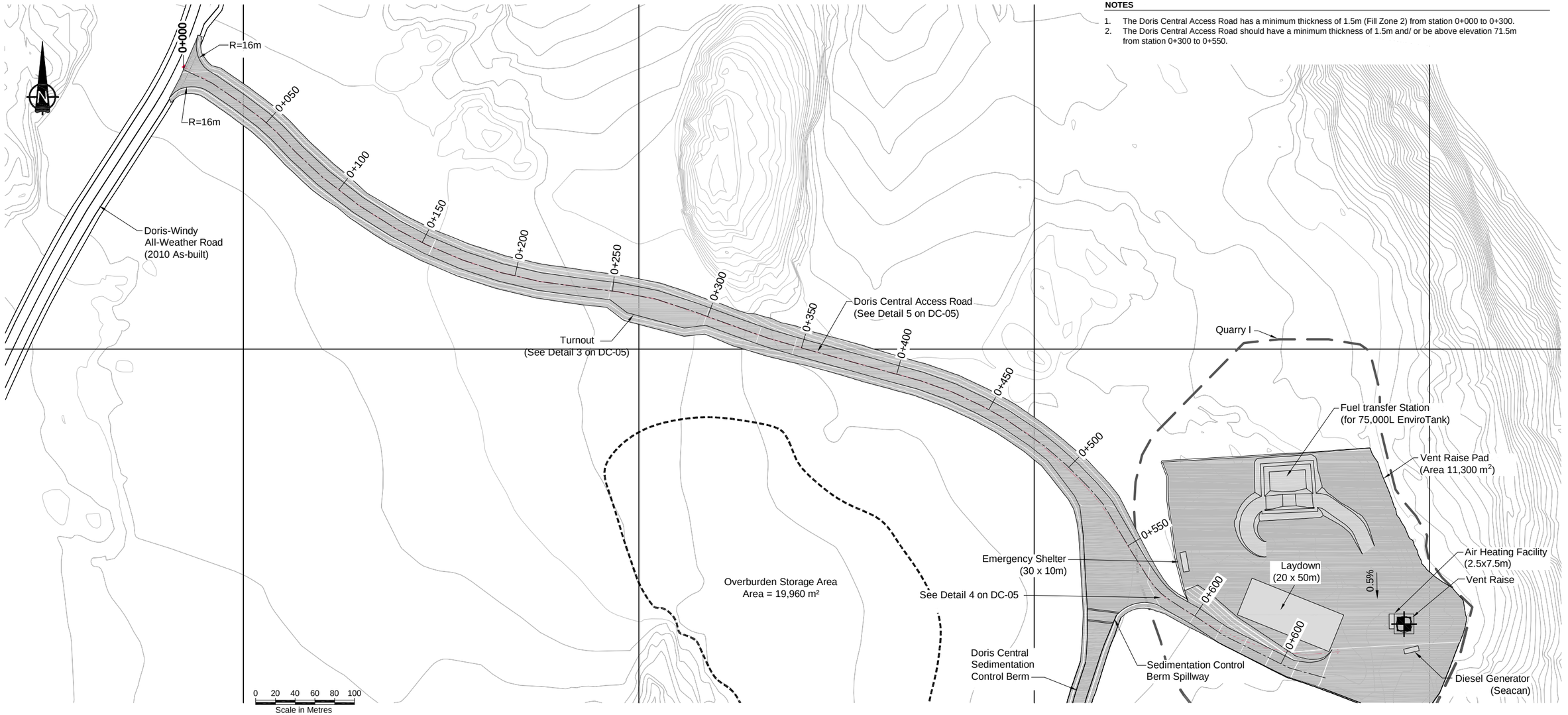


LEGEND

- Existing ground surface
- Point of Intersection
- 6.1% Grade

PROFILE DORIS CENTRAL ACCESS ROAD

Horizontal Scale in Metres: 0 10 20 30 40 50
Vertical Scale in Metres: 0 2 4 6 8 10
Vertical Exaggeration 4X



NOTES

1. The Doris Central Access Road has a minimum thickness of 1.5m (Fill Zone 2) from station 0+000 to 0+300.
2. The Doris Central Access Road should have a minimum thickness of 1.5m and/ or be above elevation 71.5m from station 0+300 to 0+550.

NO.	DESCRIPTION	CHK'D	APP'D	DATE
B	Revisions Sed Berm Added	JK	EMR	7June11
A	Issued for Review	JK	EMR	22Oct10

REFERENCE DRAWINGS (DRAWING NO. / DRAWING TITLE / DRAWING NO. / DRAWING TITLE)

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JBK	EMR	June 7, 2011

FILE NAME: Doris Central Pads and Access Ramp DC-01_03.dwg

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SRK JOB NO.: 1CH008.049

Doris Central Pads and Access

DRAWING TITLE: Arrangements and Access Road Profile

DRAWING NO.	SHEET	REVISION NO.
DC-02	3 of 6	B

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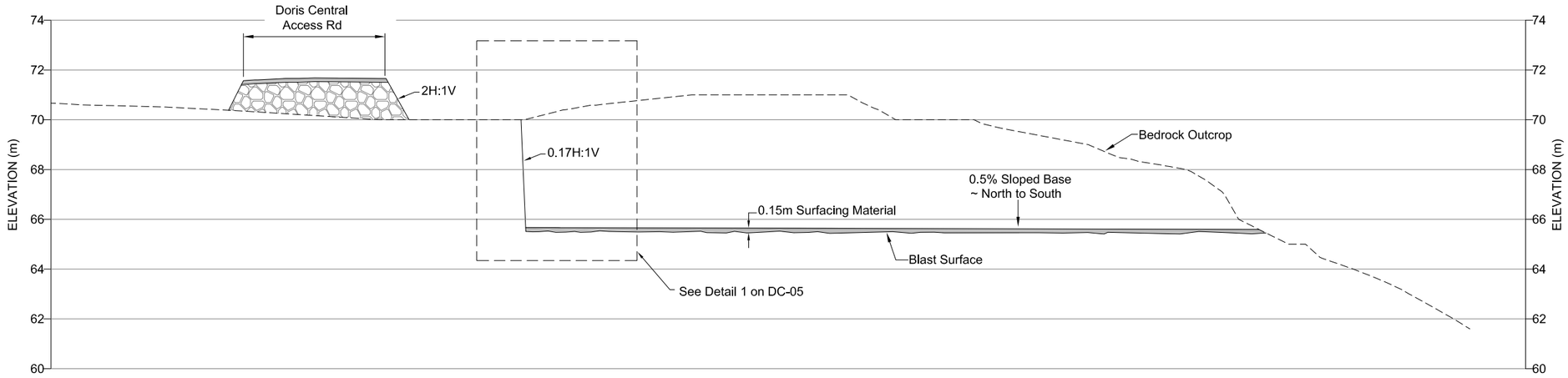
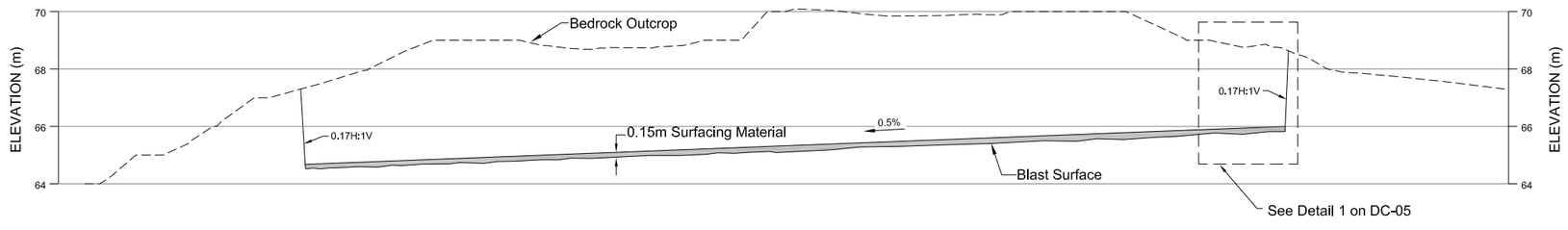


A DC-01 **VENT RAISE PAD CROSS SECTION**

0 4 8 12 16 20 Horizontal Scale In Metres

0 1 2 3 4 5 Vertical Scale in Metres

Vertical Exaggeration 4X



B DC-01 **VENT RAISE PAD Long Section**

0 4 8 12 16 20 Horizontal Scale In Metres

0 1 2 3 4 5 Vertical Scale in Metres

Vertical Exaggeration 4X

LEGEND

- Run of Quarry Material
- 1 ¼" Crushed Material
- Ground Surface

DRAWING NO.	DRAWING TITLE	DRAWING NO.	DRAWING TITLE

REFERENCE DRAWINGS

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A	Issued for Review	JK	EMR	22Oct10

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DESIGN: JBK | DRAWN: NV\MDDS | REVIEWED: LW

CHECKED: JBK | APPROVED: EMR | DATE: June 7, 2011

FILE NAME: Doris Central Pads and Access Ramp DC-04_05.dwg

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SRK JOB NO.: 1CH008.049

Doris Central Pads and Access

DRAWING TITLE: Vent Raise Pad Sections

DRAWING NO. DC-03 | SHEET 4 OF 6 | REVISION NO. B

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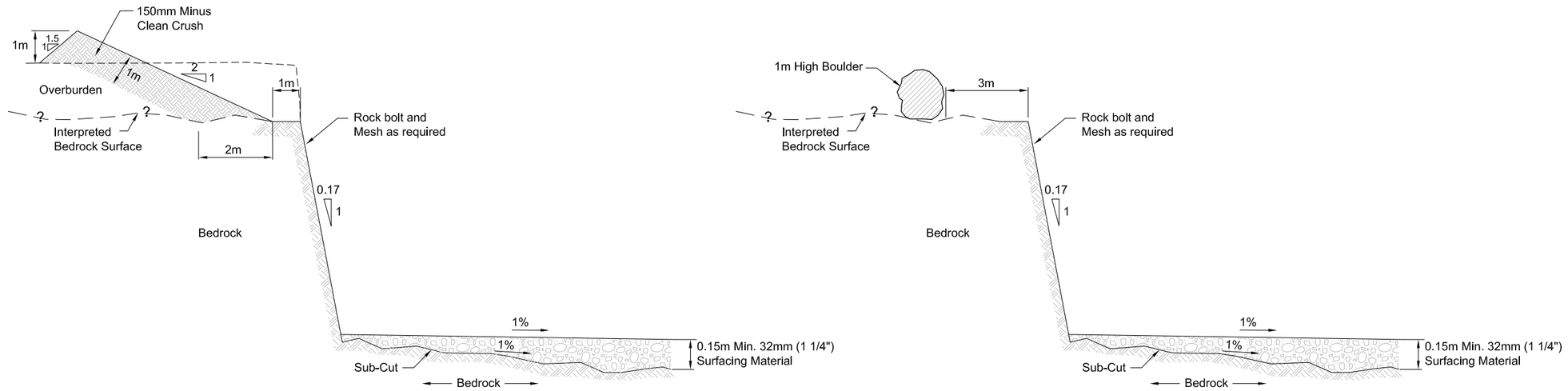
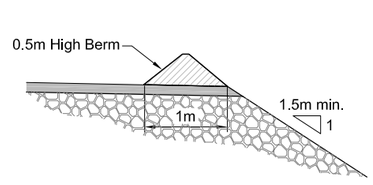
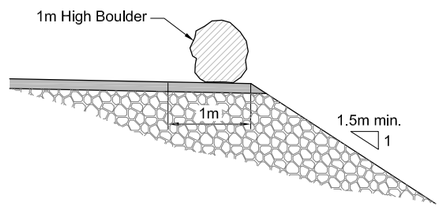


LEGEND

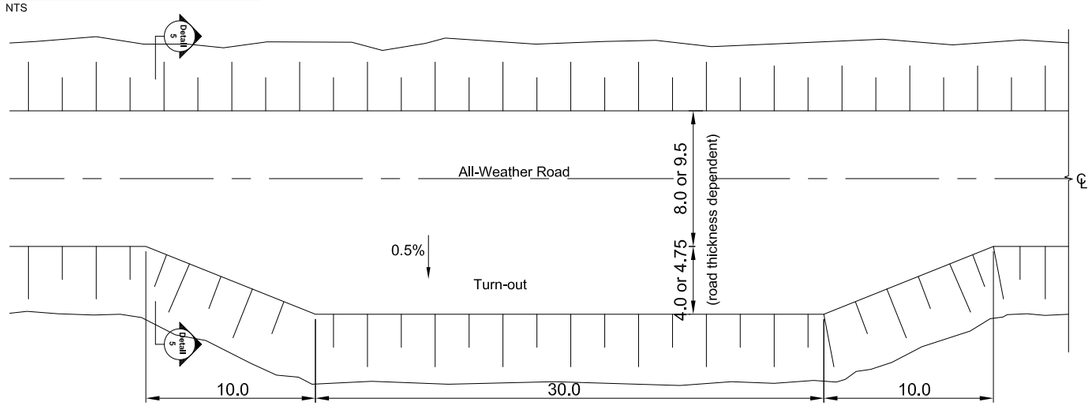
- Run of Quarry Material
- 1 ¼" Crushed Material
- Ground Surface

DETAIL 1
TYPICAL SECTIONS OF HIGHWALL SAFETY BERM/BARRIER
NTS

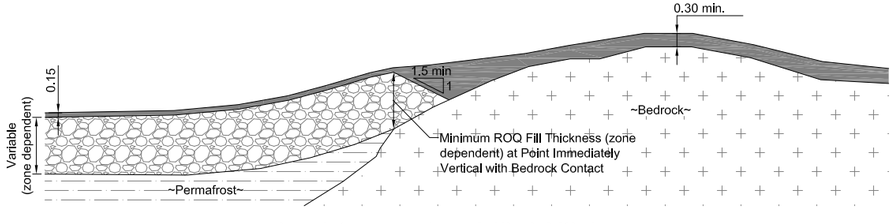




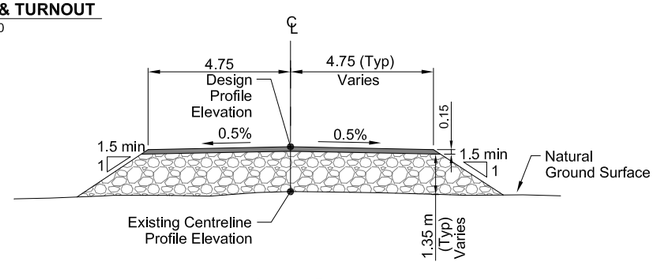
DETAIL 2
TYPICAL BERM BARRIER OPTIONS
NTS



DETAIL 3 - PLAN
TYPICAL ALL-WEATHER ROAD & TURNOUT
0 2 4 6 8 10
Scale In Metres



DETAIL 4 - ALL-WEATHER ROAD PROFILE
TRANSITION FROM PERMAFROST TO BEDROCK
0 1 2 3 4 5
Scale in Metres



DETAIL 5
TYPICAL ACCESS ROAD SECTION
0 1 2 3 4 5
Scale in Metres

NOTES

1. Where the thickness of the roads/berm is greater than 2.0m allow for the placement of barriers.
2. The barriers are to consist of boulders larger than 1m in diameter, or a rock fill berm 0.5m high. Maximum spacing between barriers is 3.3m.

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NO.	DESCRIPTION	CHK'D	APP'D	DATE
B	Revisions Sed Berm Added	JK	EMR	7June11
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JBK	EMR	June 7, 2011

FILE NAME:

NEWMONT NORTH AMERICA

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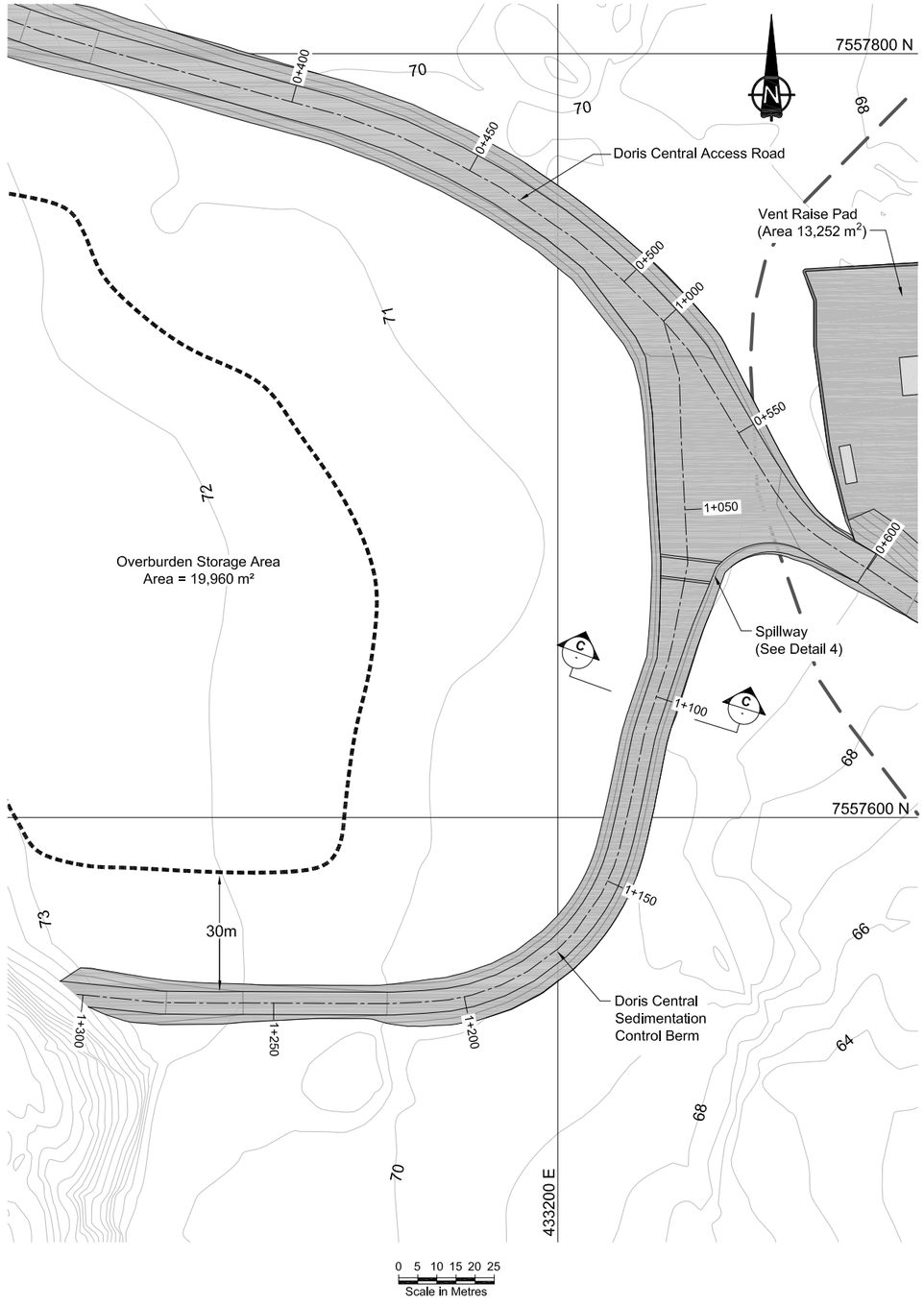
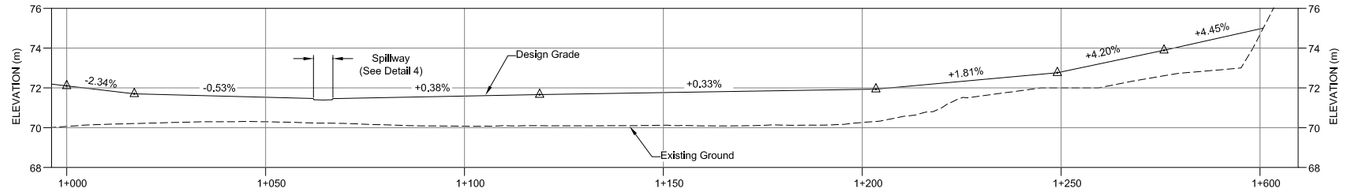
SRK JOB NO.: 1CH008.049

Doris Central Pads and Access

DRAWING TITLE:
Typical Sections and Details

DRAWING NO.	SHEET	REVISION NO.
DC-04	5 OF 6	B

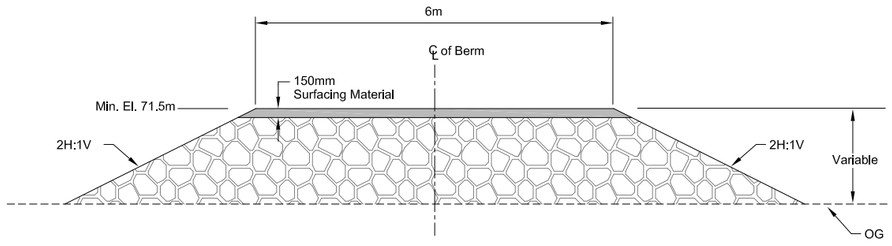




PROFILE DORIS CENTRAL SEDIMENTATION BERM

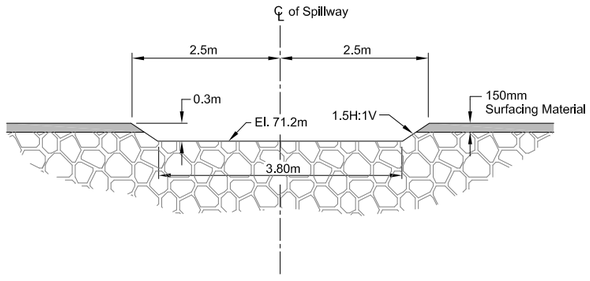
0 5 10 15 20 25
Horizontal Scale in Metres

0 1 2 3 4 5
5x Veritical Scale in Metres



C SECTION - SEDIMENTATION BERM

0 0.5 1.0 1.5 2.0 2.5 3.0
Scale In Metres



DETAIL 4
SPILLWAY SECTION
NTS

LEGEND

- 'Select' Run of Quarry Material
- 1 ¼" Crushed Material
- Ground Surface

NOTES:

1. Overburden material should be placed in lifts not exceeding 1.5m in thickness. The overall final slope of the overburden pile should not exceed 3H:1V.
2. The overburden storage shall have a minimum setback of 30m away from the Sedimentation Control Berm and/or above El. 71.5m.
3. The contractor shall employ best management practices to ensure sediment control and to prevent erosion from the overburden stockpile
4. The Doris central Sedimentation Berm is to be constructed of 'Select' ROQ material.

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DRAWING NO.	DRAWING TITLE	DRAWING NO.	DRAWING TITLE
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A	Issued for Discussion	JK	EMR	7June11
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JBK	MDDS	LW
CHECKED:	APPROVED:	DATE:
JBK	EMR	June 7, 2011

FILE NAME: Doris Central Pads and Access Ramp DC-06.dwg

NEWMONT NORTH AMERICA

HOPE BAY MINING LTD

SRK JOB NO.: 1CH008.049

Doris Central Pads and Access

DRAWING TITLE:
Overburden Storage Area and Sediment Control Berm

DRAWING NO.	SHEET	REVISION NO.
DC-05	6 of 6	A