APPENDIX 4A

JAY PIPE PROJECT
UNDERGROUND MINING CONCEPT STUDY
SEPTEMBER 2013

Project No. 169513545 **10 September 2013**

SUBMITTED TO:

Dominion Diamond Ekati Corporation

Attention: **Mr. Jon Carlson**
Head of Resource Planning and Development

CONCERNING:

Ekati Mine – Jay Pipe Project
Underground Mining Concept Study

~ *FINAL* ~

PREPARED BY:
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Mr. Jon Carlson
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Regarding: Ekati Mine – Jay Pipe Project
Underground Mining Concept Study
~ Final ~

Dear Jon,

Please find attached Stantec Consulting Ltd.'s (Stantec's) report concerning the Jay Pipe Project – Underground Mining Concept Study.

Jay Pipe is located below Lac du Sauvage. An earlier study (by others) has assessed the concept of mining by open pit techniques, following construction of a perimeter dyke.

The Underground Mining Concept Study considers the alternative of mining the deposit by underground techniques, leaving a crown pillar intact, such that the lake bottom is relatively undisturbed. The perimeter dyke is not envisaged in this scenario. Cemented backfill would be placed in the opened underground stopes to provide partial support for the crown pillar.

A fundamental risk with this approach relates to the integrity of the crown pillar and the potential for water and/or mud ingress to the mine workings. At this conceptual stage of study it has been assumed that the selected crown pillar size will be adequate. Thorough geomechanical analysis will be required to test this assumption before final mine designs may be prepared.

Primary access to the conceptual underground mine will involve dual ramps from the shore of the lake. One ramp will be equipped with an ore-transport conveyor and the second ramp will provide vehicle / personnel access. This configuration is similar to that of Panda and Koala mines. Infrastructure facilities have been assumed to be similar to those of Panda and Koala where feasible and with appropriate capacity adjustments.

Jay Pipe has been explored to the depth of ±400 metres, but is known to extend below this elevation. For this study, resources have been extrapolated to 600 metres depth.

We would like to express our appreciation to Dominion Diamond Ekati Corporation (DDEC) for the opportunity to be involved in this project. Once you have had an opportunity to review this report, please contact me regarding any questions and/or follow-up requirements.

Sincerely,
Stantec Consulting Ltd.

Jim Paynter, P. Eng.
Senior Consultant and Principal – Mining
Stantec – Mining Practice Area

cc: Mark Hatton, Mickey Murphy, Tom Corkal

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Appendices

1.0 SUMMARY AND COMMENTARY

The Jay kimberlite pipe is located under Lac du Sauvage approximately 30 km southeast from the main Ekati camp and processing complex.

A separate study considering open pit mining options for Jay Pipe was completed (by others) in 2010. This concept involves a perimeter dyke, of sufficient diameter to surround the pit, to be constructed in the lake.

Dominion Diamond Ekati Corporation (DDEC) has requested that Stantec Consulting Ltd. (Stantec) consider the alternative of underground mining and prepare this concept study.

The Base Case concepts selected for study include the following.

- A crown pillar to isolate the underground workings from the lake (no planned impact on Lac du Sauvage).
- Access to the mine via dual ramps from portals located on the southwest shore of the lake. One ramp will be equipped with ore handling conveyors. The second ramp will provide for vehicle and personnel travel.
- The primary mining method will be longhole (blasthole) stoping, similar to the primary underground method at Diavik, but using cemented rock backfill. The backfill is envisioned to provide partial support to the crown pillar.

A fundamental risk with this approach relates to the integrity of the crown pillar and the potential for water and/or mud ingress to the mine workings. At this conceptual stage of study it has been assumed that the selected crown pillar size will be adequate. Thorough geomechanical analysis will be required to confirm this assumption before subsequent mine studies/designs are prepared.

Estimated costs and financial analysis are provided in Section 12.0 of this report. The costs include mining, haulage to the Ekati processing plant and processing costs. Downstream costs for marketing and corporate overheads are not included.

A summary of strategic project metrics is presented in Table 1-1.

Table 1-1: Strategic Project Metrics

Item	Units	Value
NI 43-101 Resource Statement (Indicated and Inferred)	Tonnes (millions)	45.7
	Carats (millions)	91
Mineable Resource (includes Exploration potential)	Tonnes (millions)	65
	Carats (millions	131.7
Mine Production (after crown pillar, recovery and dilution)	Tonnes (millions)	31.9
	Carats (millions	54
Pre-production Project Period	Years	5
Project Period	Years	15
Project Capital (including 20% contingency)	2013 Cdn $M	688.5
Sustaining Capital	2013 Cdn $M	72.9
Operating Costs	2013 Cdn $M	3,633.0
Average Mining Cost per Tonne	2013 Cdn $	114.01
Net Present Value (7% discount rate, no inflation)	2013 Cdn $M	(355.1)
Internal Rate of Return (no inflation)	%	0

2.0 INTRODUCTION

The Ekati Diamond Mine is located north of Lac de Gras, approximately 300 km northeast of Yellowknife and 200 km south of the Arctic Circle in the Northwest Territories, Canada. Access is by air, or by winter road open from late January to early April.

DDEC (as the mine operator) currently mines several kimberlite pipes by both open pit and underground methods.

The Jay kimberlite pipe is located under Lac du Sauvage approximately 30 km southeast from the main Ekati camp and processing complex.

A separate study considering open pit mining options for Jay Pipe was completed (by others) in 2010.

DDEC has requested that Stantec consider the alternative of underground mining and prepare this concept study.

2.1 Geology and Geomechanical

The available geological and geomechanical data and relevant analysis pertaining to Jay Pipe are well presented in the document “Ekati Diamond Mine, Northwest Territories, Canada, NI 43-101 Technical Report”, prepared by Heimersson and Carlson, 24 May 2013 (the NI 43-101 report).

Geological Resource
DDEC provided the geological block model and the resource statement described in Section 5.1.

Geomechanical
The following italicized text is copied from the NI 43-101 report.

The major kimberlite lithologies in the production pipes have a wide range of measured strengths that range between very poor to upper fair rock mass (RMR) ratings. The granitic rocks and schist rocks at Ekati range between fair to excellent quality and the majority of the granite is good quality.

For this study, ground support requirements are assumed to be similar to those at Koala, due to the similar size and geometry of the kimberlite pipe.

Hydrogeological

The following italicized text is copied from the NI 43-101 report.

As host rocks have been faulted and overprinted there is potential for hydraulic conductivity or storage. Kimberlite has very low hydraulic conductivity (measured at Koala, Panda, Misery and Fox pits) and the intensity of kimberlite fracturing has little effect; however, kimberlite has a high storage capacity due to its porosity. The chemical properties of groundwater collected and pumped from the underground are monitored.

Studies conducted indicate that groundwater is currently not recharged from surface water bodies at an observable rate.

Since the Jay Pipe is located under Lac du Sauvage, the inflow rate is assumed to be higher and similar to that experienced at the neighboring Diavik Mine.

3.0 ASSIGNMENT APPROACH

DDEC personnel met with senior mining personnel from Stantec on 03 and 04 July 2013 for initial brainstorming meetings related to the Jay Pipe Project. During the brainstorming meetings certain Base Case concepts were identified for further evaluation.

During the brainstorming meetings, potential approaches to mining Jay Pipe were discussed.

- Open pit: this approach involves perimeter dyke construction followed by dewatering the lake inside the dyke.
- Open pit followed by underground mining (similar to Panda, Koala and Koala North).
- Underground mining with a crown pillar (no planned impact on Lac du Sauvage).

The open pit approach was the subject of a separate study (by others) in 2010.

Underground mining with a crown pillar is the Base Case approach assessed in this study report.

Open pit followed by underground mining may be considered at a later stage of study.

3.1 Scope of Work

Working from the Base Case concepts identified during the brainstorming meetings, Stantec has further developed and evaluated the potential project. The work includes the following.

- Preparation of conceptual layouts for mine access and production mining.
- Preparation of a production stope mining cycle (access, drill, blast, muck, backfill) and associated mining plan for the resources identified.
- Preparation of revenue forecasts.
- Preparation of conceptual drawings for associated infrastructure including ventilation, ore handling, backfill, mine services, etc.
- Preparation of a “life of mine” schedule, including access development, construction and production activities.
- Preparation of “Order of Magnitude” capital and operating cost estimates.
- Preparation of preliminary financial analysis (cash flow, IRR, NPV) based on discount rate and parameters as provided by DDEC.
- Preparation of this Concept Study report.

3.2 Battery Limits

The upstream battery limits include receipt of available resource block model and other project data from DDEC (received in preparation for the brainstorming session).

The downstream battery limits are delivery of waste rock to the Misery waste dump and delivery of ore to the Ekati processing plant.

3.3 Exclusions / Work by Others

The following items are excluded from the scope of work.

Legalities:

- Permitting.
- Environmental.
- Mine closure.

Resource:

- Resource modeling.

Processing:

- Metallurgical testing.
- Mill/Processing facilities.
- Tailings facilities.

External Engineering Requirements:

- Geomechanical investigations.
- Hydrogeological studies.
- Exploration and delineation drilling requirements.
- Evaluation of alternatives involving open pit mining or underground options with the orebody opening to surface (lake).

3.4 Assumptions

General

The following assumptions have been made.

- All previous study documents and data have been made available to the Stantec team as backup in preparing the deliverables for this project.
- Designs are based on proven technology and equipment used in the industry.
- All units are in the S.I. (Metric) system of measurement.

Schedules and Costs

- All costs are in Year 2013 Canadian currency (no escalation, HST exclusive).
- Final report deliverables reflect Order of Magnitude accuracy levels ("bottom line" accuracy of ±30 to 35%).
- Major construction, pre-production/ongoing access development and steady state operations will be completed by specialist service providers.
- Cost estimates are based on historical and available data, using prior project estimates, and Stantec's experience and knowledge based on similar projects and studies.
- Trade-off studies have not been prepared. Some sensitivities have been investigated following completion of the Base Case evaluations, and are presented in Section 12.4.

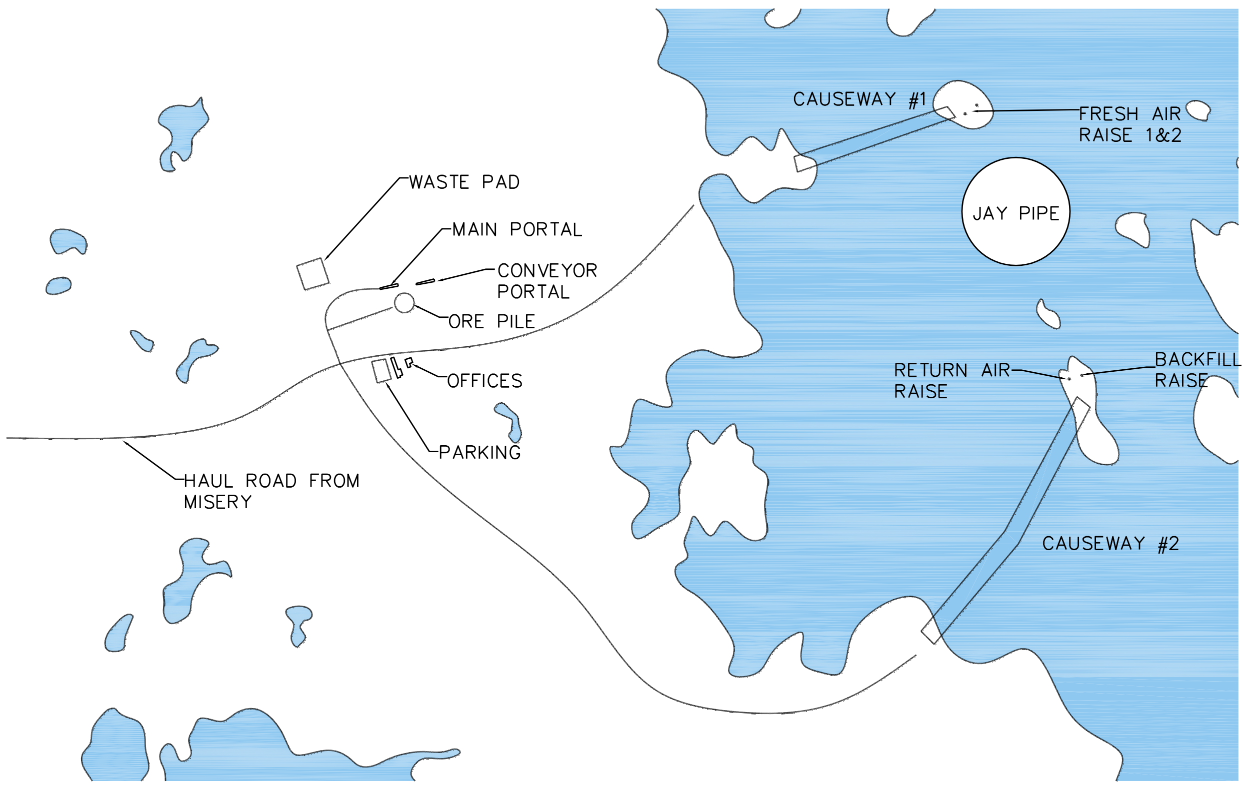
4.0 PRIMARY ACCESS

4.1 Surface Access Routes

The Jay site staging area, portals and general infrastructure will be located on the southwest shore of Lac du Sauvage. An access/haulage road will be constructed from the Misery Haul Road to this site.

Two causeways will be extended into the lake to provide access to two islands located northwest and southeast of the Jay Pipe lake bottom expression. The two fresh air heating plants and raise collars will be located on the northwest island. The return air raise collar and backfill raise collar/truck dump will be located on the southeast island.

Figure 4-1: Surface Plan



4.2 Underground Access

During the brainstorming meetings, three general concepts for providing primary access to the underground mine were discussed.

Shaft

A combination production/service shaft was envisioned with a second vertical opening (ventilation raise equipped as an auxiliary service shaft) for secondary egress.

Ramp and Shaft

The shaft was envisioned for production hoisting. The ramp would provide access for personnel and materials.

Dual Ramp

One ramp was envisioned to be equipped with a conveyor for ore transportation to surface. The second ramp would provide access for vehicles and personnel/materials. This configuration is similar to Panda and Koala.

The Dual Ramp concept was selected as the Base Case for this study, based on "whiteboard" comparisons. Further description of the rationale for this selection is provided in the meeting minutes in Appendix E.

As a preliminary design basis, the dual ramps will extend from portal locations on the shore of Lac du Sauvage southwest of Jay Pipe and will reach proximity with the pipe approximately at 2070 Level. An internal "spiral" ramp will provide access to mining levels above and below this horizon.

5.0 PRODUCTION MINING

5.1 Resource Analysis

Resource Statement

The 2013 NI 43-101 report listed a resource of 45.7 million tonnes with an average grade of 2.0 carats per tonne as shown in Table 5-1. The resource includes indicated and inferred classifications.

Table 5-1: Mineral Resource Statement (NI 43-101)

Resource Class	Mineral Resource Statement[1]		
	Tonnes (millions)	**Grade** (cpt)	**Carats** (millions)
Measured	0.0	0.0	0.0
Indicated	36.2	2.2	78.1
Inferred	9.5	1.4	12.9
Total	45.7	2.0	91.0

Mineable Resource

Stantec queried the block model independently to identify the mineable resource listed in Table 5-2.

In the absence of geomechanical data analysis, the crown pillar thickness was selected at 200 metres. This dimension corresponds to the transition from lower grade, pour quality kimberlite above to better grade, better quality kimberlite below.

The block model includes a resource classified as exploration potential of 7.5 million tonnes that is located outside the NI 43-101 resource above 1990 Level.

Since the resource model only extends to 410 metres depth (1990 Level), Stantec extrapolated a further exploration potential of 12.1 million tonnes, extending the mining limits to 1770 Level (630 metres depth) as shown in Table 5-2. This study is based on the assumption that the indicated, inferred and exploration potential resources (less the crown pillar) are all available.

Table 5-2: Mineral Resource Compared to Mineable Resource

Resource Class	Mineral Resource Statement[1]			Mineable Resource[1]		
	Tonnes (millions)	**Grade** (cpt)	**Carats** (millions)	**Tonnes** (millions)	**Grade** (cpt)	**Carats** (millions)
Measured	0.0	0.0	0.0	0.0	0.0	0.0
Indicated	36.2	2.2	78.1	36.2	2.2	78.1
Inferred	9.5	1.4	12.9	9.3	1.4	12.6
Sub-Total	**45.7**	**2.0**	**91.0**	**45.5**	**2.0**	**90.7**
Exploration Potential[2]				19.6	2.1	41.0
Total				**65.1**	**2.0**	**131.7**
Less Crown Pillar				32.4	1.8	59.5
Available Total				**32.7**	**2.2**	**72.2**

1-Undiluted Values
2-Includes 7.5 m tonnes in block model above 1990 Level plus 12.1 m tonnes extrapolated to 1770 Level

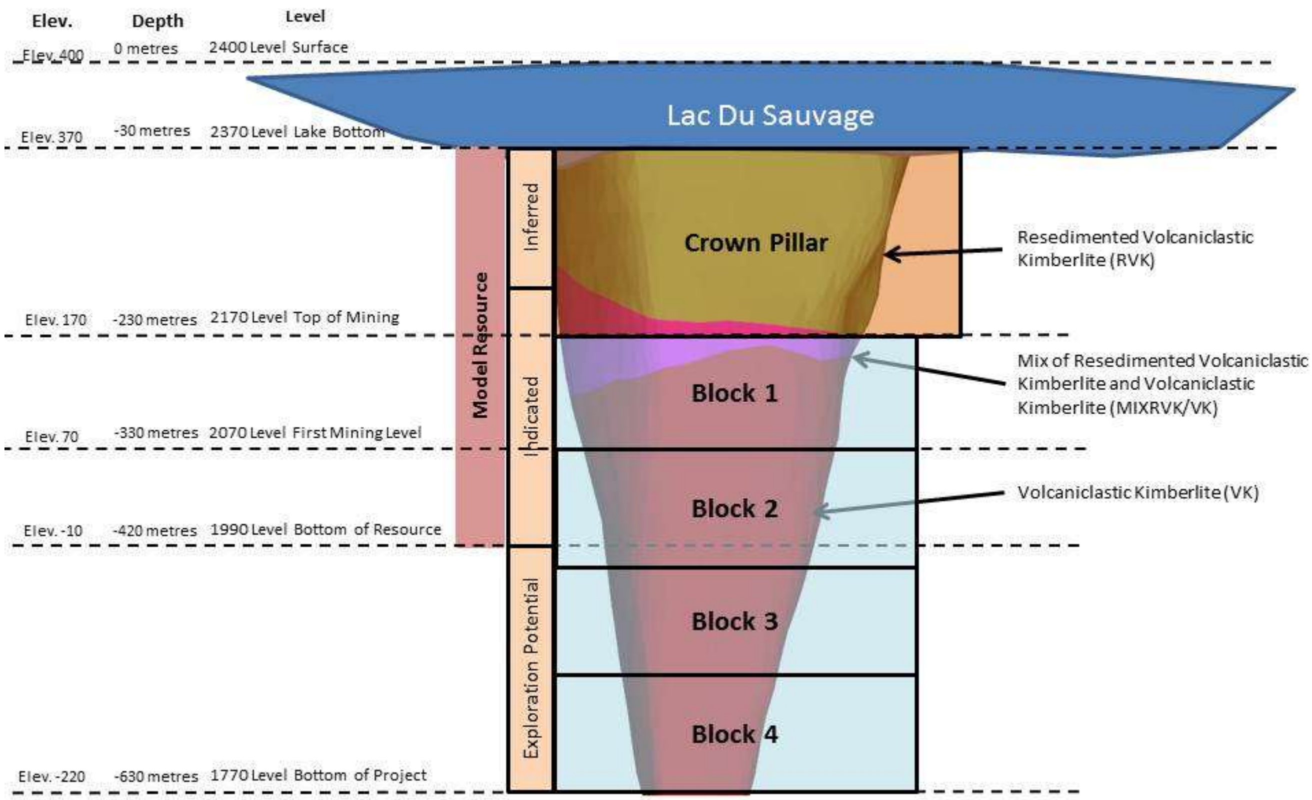
Mining Blocks

It was determined during the brainstorming session, that the mining heights between levels will be 20 metres (based on the dimensions of similar mining methods at Diavik Mine)

For production sequencing purposes, mining blocks of 100 metres (5 levels) in height were defined as shown in Figure 5-1. Stope sequencing begins at the bottom of each block (once the access ramp reaches that depth), and progresses upwards to the (backfilled) block above.

Similar to Koala and Panda, the levels naming convention involves the elevation above sea level plus 2,000 metres.

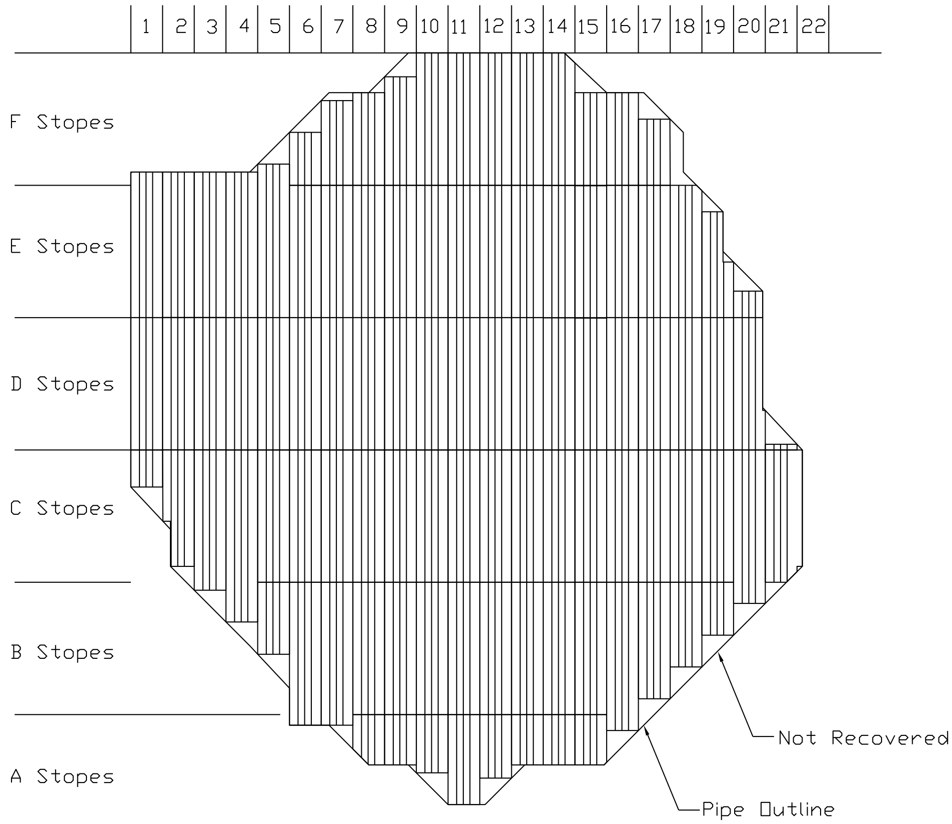
Figure 5-1: Defined Mining Blocks



Recovery

A mining zone between elevations 2100 Level and 2120 Level was evaluated (as a typical level) against detailed stope shapes to determine the “level recovery factor” as illustrated in Figure 5-2.

Figure 5-2: Typical Stope Shapes



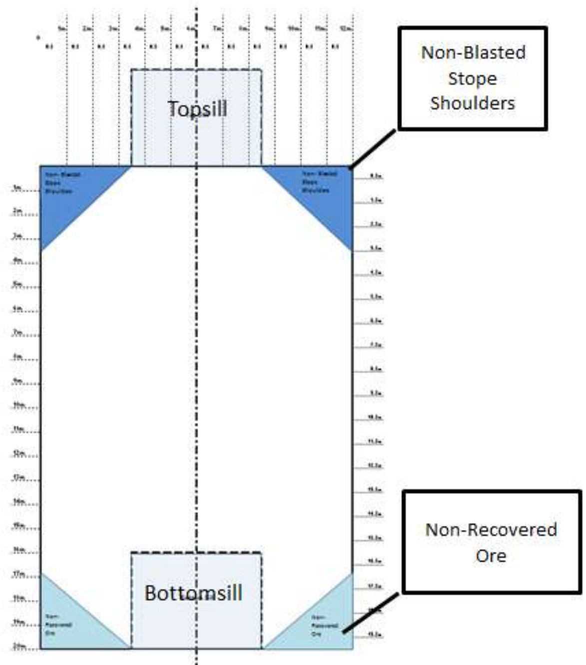
As shown in Table 5-3, it was estimated that 2% of the ore occurred outside the stope limits or involved stope shapes too small/irregular to be considered economic.

Table 5-3: Stope Mining Recovery

Stope Zone	Tonnes
A	105,453
B	401,036
C	592,900
D	569,711
E	502,882
F	289,480
Stope Total	**2,461,461**
Level Total	2,512,405
Variance	50,944
Mining Recovery	**2.0%**

When mining individual stopes, there are specific areas shown in Figure 5-3 that will not be recovered, either due to stope design or equipment capability.

Figure 5-3: Stope Cross-Section



Analysis of these areas (non-blasted stope shoulders and non-recovered ore) against a stope cross-section determined that 90% of a planned stope will be mechanically recoverable (Table 5-4).

Table 5-4: Mechanical Recoverability

	Height	Width	Length	Volume	Tonnes	% Tonnes of Total
Stope Total	20m	12m	50m	12,000	28,200	100.0%
Non-Blasted Stope Shoulders	3.5m	3.5m	50m	613	1,439	5.0%
Non-Recovered Ore	3.5m	3.5m	50m	613	1,439	5.0%
Mining Recovery				**10,775**	**25,321**	**90.0%**

When combined with the level recovery factor of 2%, a maximum recovery of the resource tonnes on a level is estimated at **88%**.

Dilution

For this study, external dilution in a stope is material that contains no diamonds being excavated from the stope during the mucking cycle. The source of this material may be either backfill or barren rock from the stope walls or stope face. Neighboring stope boundaries which are ore do not contribute to external dilution. To calculate the external dilution factor, a typical level was evaluated considering the number of different types of stope boundaries that occur. In each case, an assumed thickness of rock or backfill was assigned to either the stope wall or face, as detailed in Appendix B. The estimated total dilution is 11% (Table 5-5). The total Mining Recovery and Dilution factors used in preparation of the production forecasts are listed in Table 5-6.

Table 5-5: External Dilution Calculation

Dilution Type	Description	Number of Stopes	Location of Dilution	Rock	Backfill	Dilution Tonnes	Stope Tonnes	Percent Dilution
A	Primary/Secondary Corner Stopes	4	Stope Wall	1		11,779	101,408	12%
			Stope Face	1	1			
B	Primary/Secondary Starter Stopes	8	Stope Wall			4,860	184,118	3%
			Stope Face	1				
C	Primary/Secondary Finisher Stopes	8	Stope Wall			12,758	192,016	7%
			Stope Face	1	1			
D	Primary/Secondary Outside Stopes	6	Stope Wall	1		14,023	148,467	9%
			Stope Face		1			
E	Primary/Secondary Inside Stopes	24	Stope Wall			31,590	569,364	6%
			Stope Face		1			
F	Tertiary Starter Stopes	9	Stope Wall		2	29,160	230,825	13%
			Stope Face	1				
G	Tertiary Finisher Stopes	9	Stope Wall		2	41,690	243,355	17%
			Stope Face	1	1			
H	Tertiary Inside Stopes	27	Stope Wall		2	97,732	702,727	14%
			Stope Face		1			
	Total	95				**243,591**	**2,372,279**	**11%**

Table 5-6: Mining Recovery and Dilution

	Stoping	Development
Mining Recovery	88%	100%
Dilution	11%	0%

With mining recovery and dilution applied, and excluding the crown pillar, 31.9 million tonnes containing 63.6 million carats will be produced (Table 5-7). The crown pillar accounts for a reduction of 50% on the tonnes and 49% in carats.

Table 5-7: Recoverable Resource for Scheduling

Zone	Mineable Resource[1]			Recoverable Resource[2]		
	Tonnes[3] (millions)	**Grade[3]** (cpt)	**Carats[3]** (millions)	**Tonnes[3]** (millions)	**Grade[3]** (cpt)	**Carats[3]** (millions)
Crown	32.4	1.8	59.5	0.0	0.0	0.0
Block 1	12.9	2.4	31.3	12.6	2.2	27.5
Block 2	9.2	2.1	19.5	9.0	1.9	17.2
Block 3	6.5	2.0	13.2	6.3	1.8	11.7
Block 4	4.0	2.0	8.1	3.9	1.8	7.2
Total	**65.0**	**2.0**	**131.7**	**31.9**	**2.0**	**63.6**

1-Undiluted Values
2-Dilution (11%) and Mining Recovery (88%) applied to stopes
3-Part of Block 2 and all of Blocks 3 & 4 are exploration potential for projection of pipe down to 1770L

5.2 Mining Method Selection

During the brainstorming meeting three categories of mining methods were discussed.

Mass Mining
Block cave and sub-level cave were considered. Both methods would require a significant crown pillar to prevent subsidence through to the lake bottom. As a result, both methods were eliminated from this stage of study.

Selective Mining
Two methods reviewed were cut and fill and inverse cut and fill. As both methods typically incur higher cost and lower productivities than bulk stoping or mass mining, these were eliminated from further consideration at this stage of study.

Bulk Stoping
All bulk stoping methods would require cemented backfill for support of the crown pillar. The two methods reviewed were blasthole and modified Avoca.

As Diavik Mine is successfully using blasthole mining with cemented fill in similar circumstances, this method was selected for this conceptual evaluation.

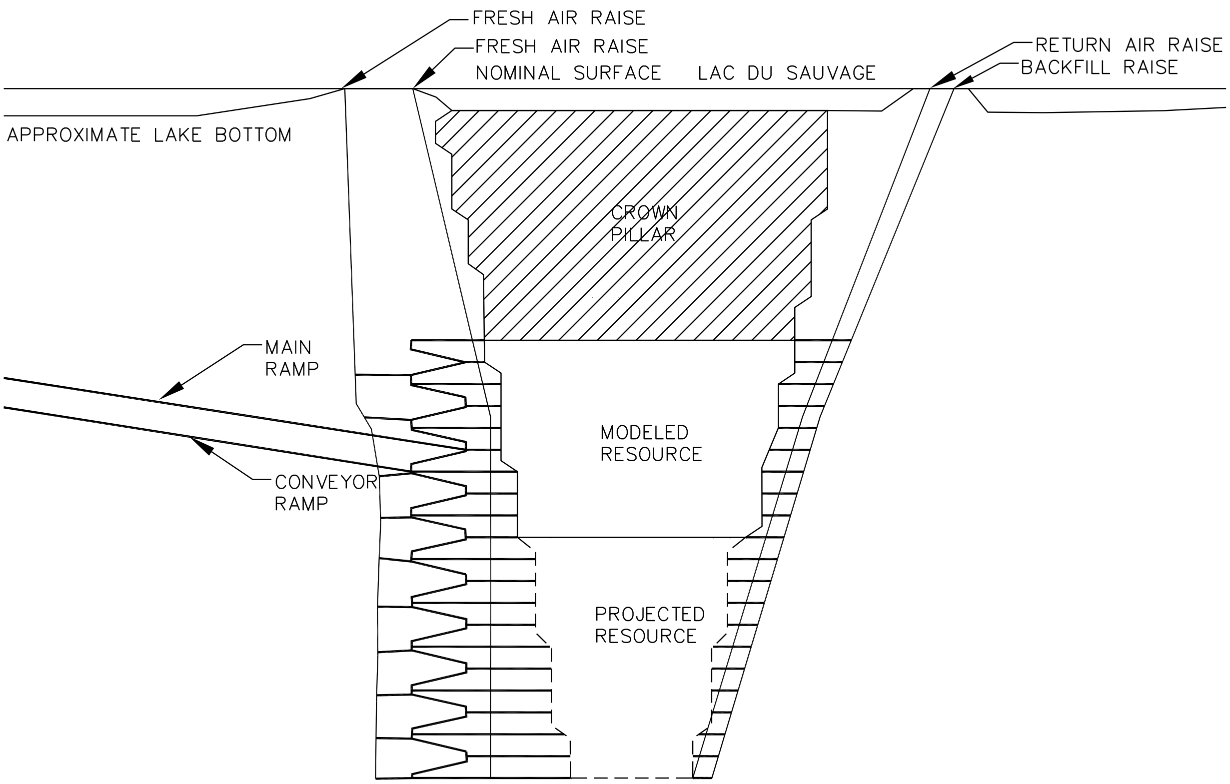
5.3 Mine Design

Mine Access

As described in Section 4.0, access to the pipe will be via a service ramp driven to 2070 Level and a conveyor ramp to 2050 Level. First production will be generated from this level. A general arrangement drawing was prepared to illustrate the design of a typical level, and then extrapolated to other levels for quantity take-offs and scheduling. Internal access ramps to production levels above and below will start from this location as presented in Appendix A, Drawings.

The conveyor ramp (which will act as a second means of egress from the mine) will reach 2050 Level situated 20 metres below the first production horizon. Additional infrastructure will be installed on these two levels to accommodate the sizer and conveying facilities. This study is based on the assumption that all ore below 2070 Level will be trucked up-ramp to a truck dump facility on 2070 Level. Future study work should include a trade-off study to optimize the conveyor system elevation versus trucking cost. A longitudinal section view is provided in Figure 5-4.

Figure 5-4: Long Section



Crown Pillar

Due to the location of Jay Pipe under Lac du Sauvage, a crown pillar is required to prevent fracturing of the ground through to the lake bottom. A thickness of 200 metres was selected for use in this study as this dimension corresponds to a change in geology from lower grade poor quality kimberlite above to better quality, better grade kimberlite below. Before a detailed mining plan can be completed, a thorough geomechanical study of the crown pillar is required. Any holes drilled through this crown pillar must be confirmed to be grouted. Risk assessment and development of mitigating strategies will be a necessary component of future detailed design.

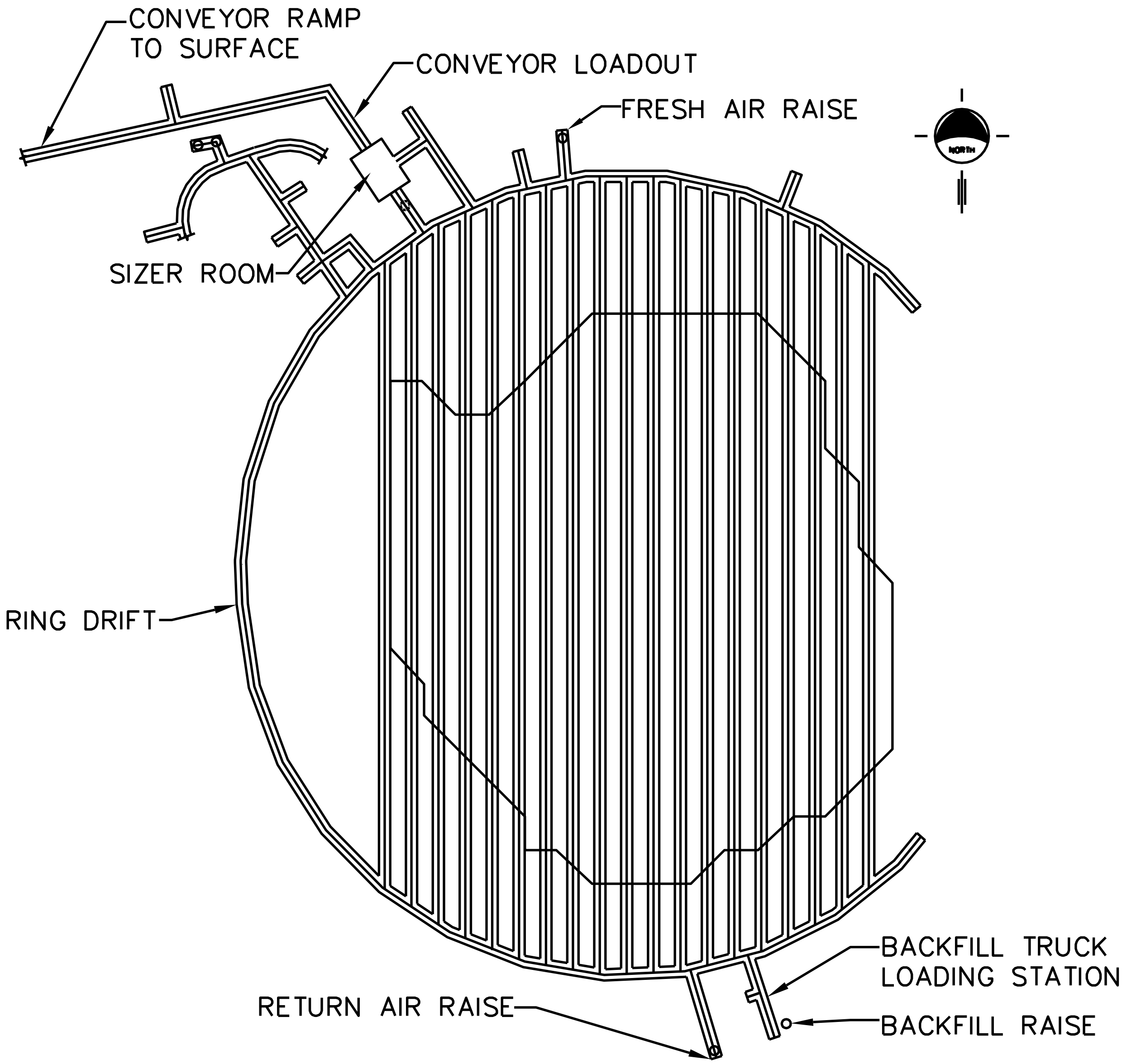
Level Design

To facilitate use of the islands on Lac du Sauvage for ventilation and backfill raises, mining on the level will proceed from the southern pipe contact to the north. As illustrated in Figure 5-5, access to the raises will be via a “ring” drift that is driven approximately ¾ around the pipe (in waste rock). In most instances, sills will be driven from the ring drift through to the opposite side of the pipe. This will allow for filling of stopes from the backside of the stope. There will be some instances (on the east and west sides of the pipe) where the sills will not connect to both sides directly, requiring a cross-cut driven from adjacent sills for filling.

For levels below the 2050 Level sizer, a truck loading area will be required for loading of ore and waste to be trucked up ramp. Levels above the sizer will be provided with an ore pass to transfer ore down to the sizer. Waste will be hauled by truck up the service ramp and recycled as backfill.

Backfill facilities will be located on the south side of the pipe to prevent interference with the ore movement on the north side. The return air raise, also located on the south side, will allow “flow through” ventilation on the production level and prevent exhaust air from entering the main ramp travel ways.

Figure 5-5: 2050 Level Plan

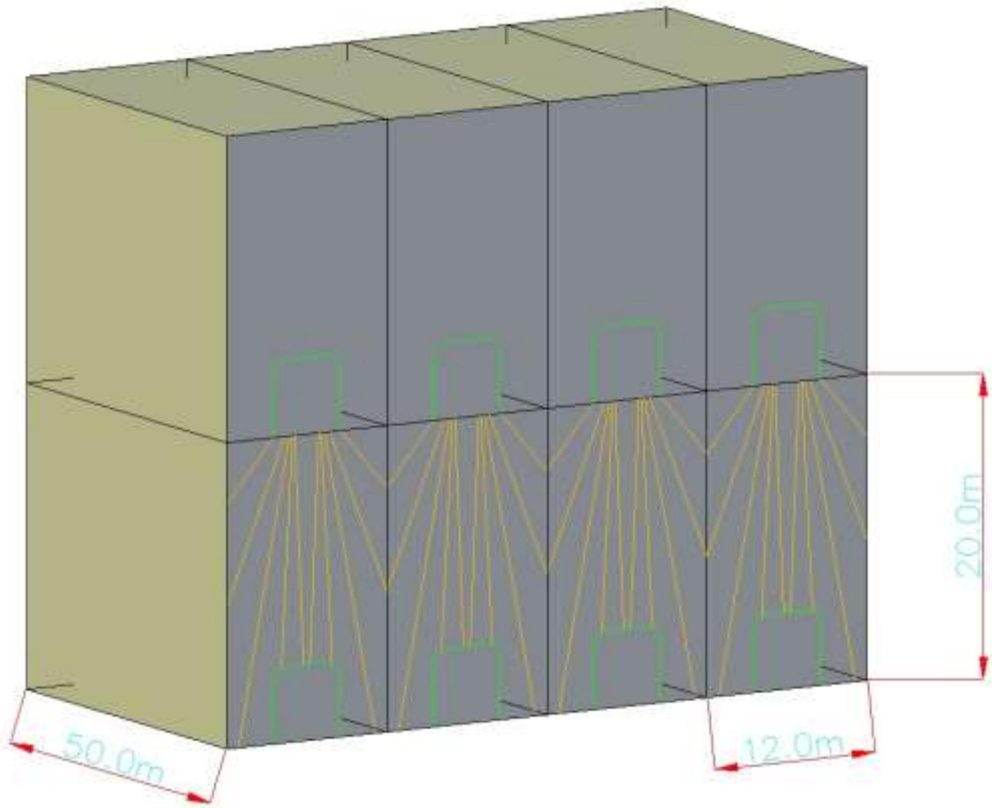


Stope Sequencing

The size of the pipe will enable a primary/secondary stope sequence. Primary mining will begin from the southern-most stope in the centre sill (splitting the pipe into east and west zones) and progress north along this sill and east and west on every second sill. Once primary stopes have been mined to the northern limits of the pipe, secondary stopes between the primary stopes can be extracted.

Mining of the level above can begin when all of the stopes from south to north of the first sill have been completed.

Figure 5-6: Stope 3-D



6.0 VENTILATION

6.1 Airflow Determination

The air volume requirements outlined in the NWT Mine Regulations Section 10.62 (2) state that “The ventilation quantity shall be at least 0.06 cubic metres per second for each kilowatt of diesel powered equipment at the worksite”.

Reasonable judgement has been used in determining what constitutes “equipment operating” and the estimation of equipment utilization. Equipment such as drill jumbos only operate on diesel power while moving from one workplace to the next and are therefore utilized much less than haulage equipment. Utilization factors were applied, including a conservative 80% for ore/waste haulage equipment and 50% or 25% for other pieces of equipment.

Table 6-1 lists the estimated mine ventilation requirements for equipment and allowances for proposed fixed installations.

Table 6-1: Jay Pipe Estimated Airflow Requirement

Equipment Type	No. Units	Engine Hp	Engine kW	Utilization %	CMS Required (0.06 CMS/kW)
Drills					
Development Jumbos	3	148	110	25%	5.0
Production Drills	3	148	110	25%	5.0
Secondary Blasting Jumbo	1	148	110	25%	1.7
Bolting Jumbo	1	148	110	25%	1.7
Ground Support Equipment					
Scissor Lift	2	174	130	25%	3.9
McLean Bolter	3	152	113	25%	5.1
IT-28 Loader c/w Platform	1	148	110	25%	1.7
Shotcrete Jumbo	3	94	70	25%	3.2
Shotcrete Carrier	2	174	130	25%	3.9
Scaler	1	161	120	25%	1.8
LHD's					
8 Cu M LHD	6	414	309	80%	89.0
6 Cu M LHD	3	308	230	80%	33.1
Haulage Trucks					
45 tonne truck	8	589	439	80%	168.6
Services and Supply Fleet					
U/G Personnel Carriers	2	134	100	25%	3.0
ANFO Truck	2	174	130	50%	7.8
Emulsion Truck	1	174	130	50%	3.9
Boom Trucks	2	174	130	50%	7.8
Cassette Truck	1	174	130	25%	2.0
Diesel Fork Lift	1	80	60	25%	0.9
Shifter's Vehicles	2	134	100	50%	6.0
Engineer's Vehicles	2	134	100	50%	6.0
Mechanic's Vehicles	2	134	100	50%	6.0
Electrician's Vehicles	2	134	100	50%	6.0
Lube and Fuel truck	1	174	130	50%	3.9
Fixed Installations					
Fuel Bay Area Allowance	1	589	439	100%	26.3
Conveyor Allowance	1			100%	16.5
Sizer Area Dust Control	1			100%	10.0
	55				**429.5**
		Contingency		15%	64.4
		Total CMS			**493.9**
		Total CFM			**1,046,478**

6.2 Ventilation System Configuration

The primary ventilation system will provide 519 m^3/s (1,100,000 cfm) of fresh air to the mine.

The conceptual system design is patterned after the Koala facilities with allowance for the higher required capacity. Two fresh air raises and a single return air raise will be provided. The service and conveyor ramps will up-cast.

The system will be a push system using two 4.9 metre (16 ft.) diameter fresh air raises. Parallel 447 KW (600 HP) fans on each raise will push 260 m^3/s (550,000 cfm) of air into the mine through each of the two raises. The raises will be larger in cross-section than the 4.0 metre diameter raises at Koala. At this stage of study it is assumed that the geomechanical conditions will be suitable for this diameter. Alternatively, multiple smaller raises, or use of a fully supported sinking method might be required.

A longitudinal section of the mine ventilation design concept is provided in Figure 6-1.

To maintain underground temperatures above freezing, allowing for the external arctic environment, a 6 MW (21 MMBTUH) indirect heating system (diesel fired) will be installed on each fan intake. The air heating systems are similar to those at Koala and designed to heat the intake air to a maximum temperature differential of 47^o C (85^o F). This criterion is derived from the worst-case scenario of – 45^o C (- 49^o F) intake air that must be heated to +2^o C (35.6^o F).

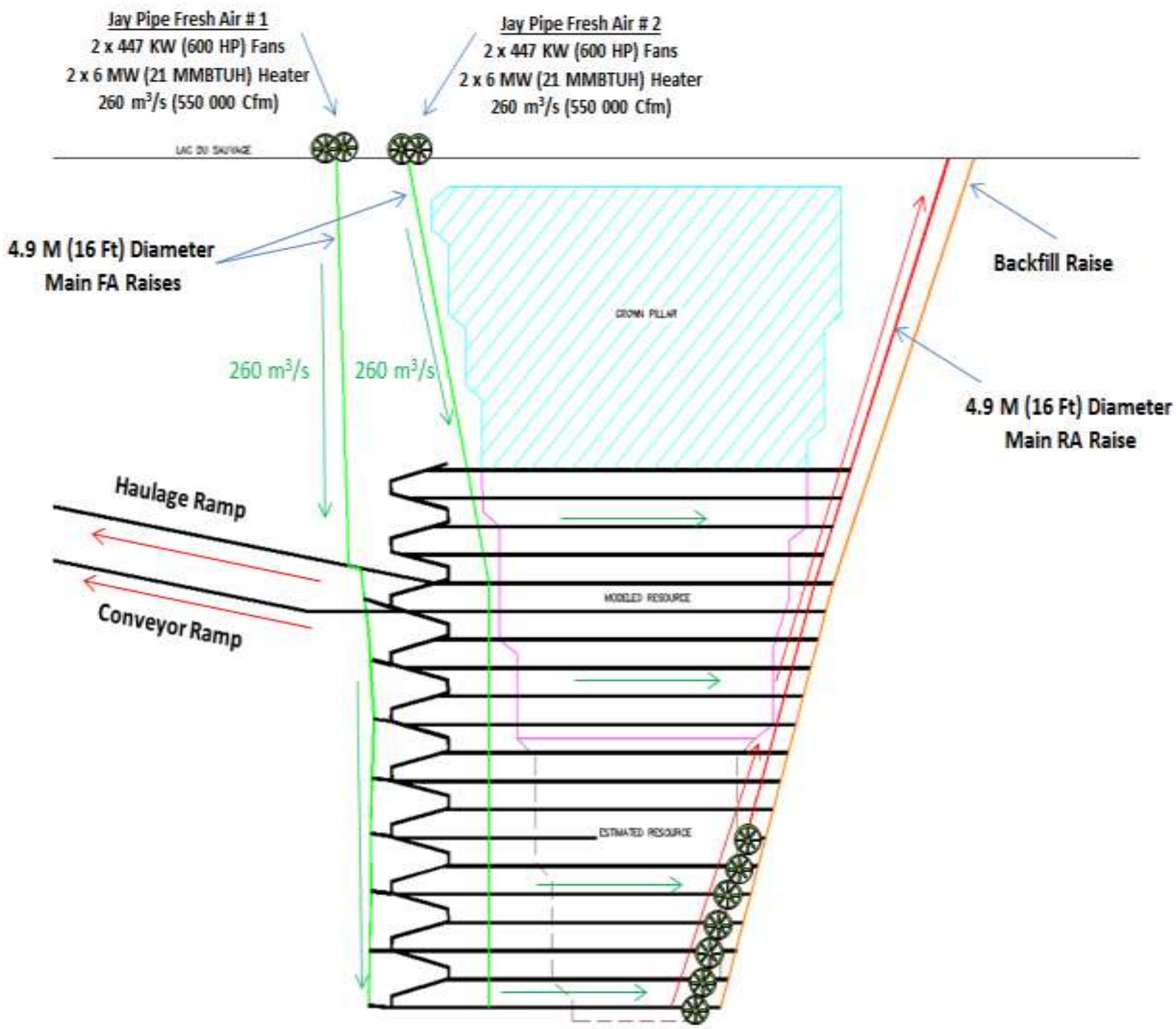
One fresh air raise system will provide fresh air to the mine production levels. The second fresh air raise system will supply air to the haulage ramp and fixed installations.

Exhaust air will be removed from the mining levels via a dedicated 4.9 metre (16 ft.) diameter return air raise to surface. The haulage and conveyor ramps will be up-cast.

The ventilation flow pattern on the production levels will follow standard design practices. Each level will have a controlled connection to the fresh air raise to allow regulation of the airflow in accordance with the local equipment requirements.

Each production level will have a connection to the return air raise providing an exhaust route to surface. Since there will be limited airflow in this raise and a short distance to surface during the early mine production stages, an adjustable regulator at the return air raise will be sufficient to control airflow on the upper levels. When mining activity reaches mid-depth, low-pressure, high volume, adjustable-pitch fans will need to be installed to exhaust the required volume of air from the level. This design will enable regulation of the air such that ventilation doors will not be required in the level access to control air flow between the production level and the ramp.

Figure 6-1: Ventilation Long Section



7.0 ORE AND WASTE ROCK HANDLING

Development in waste rock will primarily be completed prior to commissioning of the ore handling facilities and the associated waste will be hauled to a surface stockpile via truck. Waste generated from sustaining waste development during the production period will be hauled to surface in the same manner.

Ore Handling System

The ore handling system will include an ore pass from 2170 Level to 2070 Level, an ore dump for trucks at 2070 Level with a grizzly and rockbreaker, and a horizontal ore storage located nearby. The ore sizer and conveyor system will be similar to that used at Panda and Koala.

An ore handling system flow diagram is provided in Appendix A.

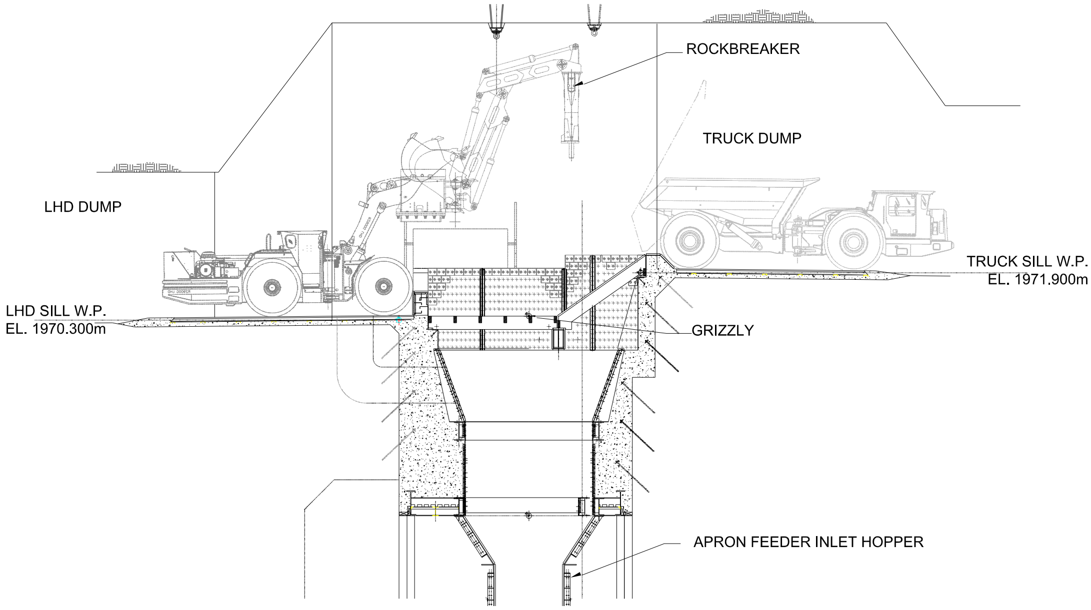
Ore Dump and Horizontal Ore Storage

The ore dump at 2070 Level will consist of an elevated truck dump complete with angled scalper bars to allow the finer material to pass through, thus minimizing the chance of plugging the grizzly. An LHD dump will be located directly across from the truck dump at the elevation of the grizzly. This will allow an LHD to be used to remove any large waste blocks or large pieces of scrap material from the grizzly. On the third side of the grizzly, a chute and control chains will feed ore directly from the ore pass onto the grizzly. The rockbreaker will be located on the fourth side of the grizzly, directly across from the chute.

Ore from levels above 2070 Level will feed directly from the ore pass by means of a chute and control chains to the 2070 Level grizzly. As well, underground haulage trucks and LHD's will transport ore to the ore dump. On the truck dump side, the trucks will dump onto the sloped 'scalper' grizzly.

The main grizzly will allow material smaller than 750 mm to pass through to the sizer, but will hold back larger material which can then be either broken with the rockbreaker (if ore), or moved to the side and collected using an LHD if waste or scrap material. The oversize waste rock that is removed from the grizzly will be picked up with an LHD and moved to a remuck for storage until it is hauled by truck to surface.

Figure 7-1: 2070 Level Ore Dump Arrangement



Ore Sizer

The ore sizer will be the same as the units installed at Panda and Koala (MMD 1000 Twin Roll Primary Ore Sizer). The apron feeder used to feed ore to the sizer, and the conveyor system removing ore from the sizer will be of the same general design, similar equipment, and the same capacity as the Panda and Koala designs. This consistency in equipment selection and installation will simplify design/construction as well as operating and maintenance functions, and will also minimize the site inventory for spare parts.

The sizer station will be located at the 2050 Level to the northwest of the orebody. Kimberlite ore will report to the sizer station after passing through a grizzly at the ore dump. The primary sizer will reduce the ore to a maximum size of 350 mm before it passes through onto the conveyor ('picking belt'). As with Panda and Koala, this type of size reduction unit was chosen over a gyratory or jaw crusher due to the unique plastic material characteristics in the Ekati kimberlite ore which can prevent consistent and reliable flow through these types of crushers.

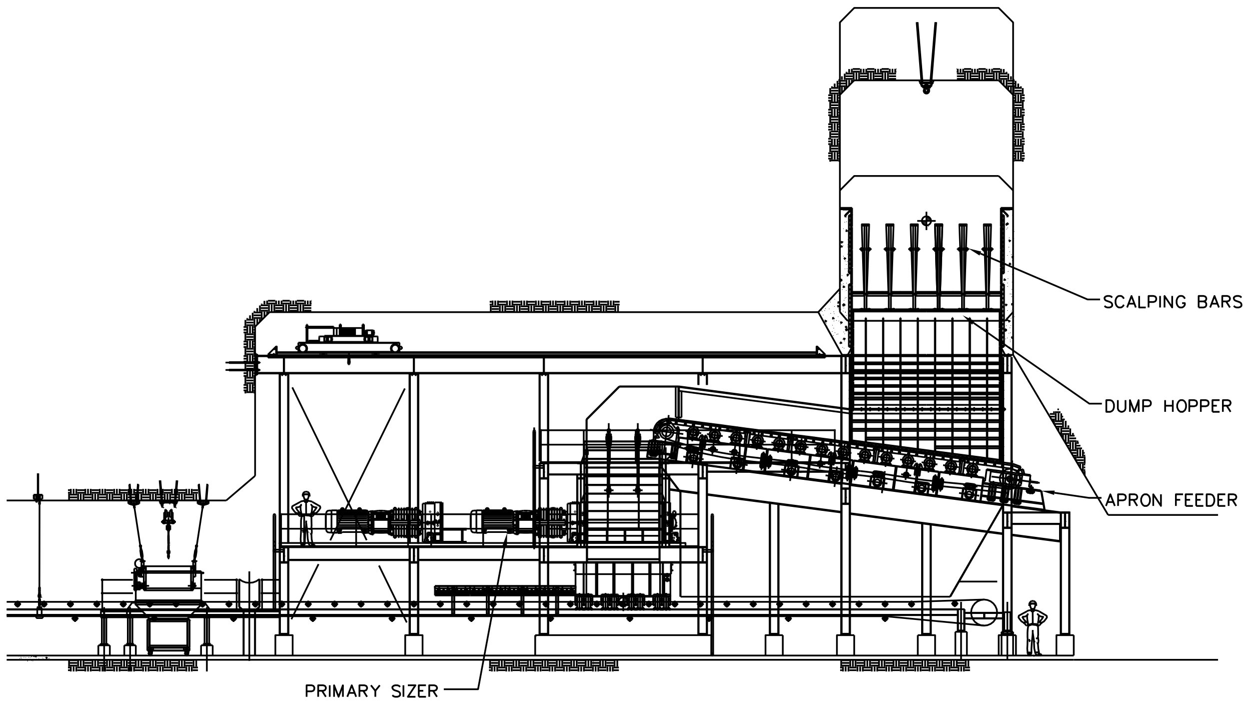
The sizer capacity is 500 tonnes per hour.

The sizer station is a significant excavation approximately 13 metres wide x 25 metres long x 12 metres high with the following major features:

- A truck/LHD ore dump with grizzly and rockbreaker located at 2070 Level.
- An apron feeder which accepts the dumped ore and provides controlled feed to the sizer.

- A primary mineral sizer (crusher).
- A picking conveyor belt.
- A belt magnet and steel detection equipment on the picking belt.

Figure 7-2: Ore Dump, Sizer, & Picking Belt Section View



Conveyor System

The conveyor system will involve the same basic design parameters (belt width and type, idler design, etc.) as Panda and Koala. The system will include:

- A “picking belt” at ±50 metres length equipped with a magnet facility for scrap removal.
- Two main conveyors at ±1,200 metres length. These will be similar in size to Koala conveyor CV-2.
- A surface stacker conveyor which will be the same as the unit at Panda.

Surface Ore Transportation

From a stockpile at the surface stacker conveyor the ore will be loaded using a front-end loader into surface haul trucks and transported to the Ekati processing plant.

8.0 BACKFILL

The Jay Pipe underground mining concepts described in this report will be unique among Ekati operations, in the requirement for backfill to provide partial support to the crown pillar. The longhole mining method will require the majority of the backfill to be cemented.

During the brainstorming meetings a number of potential backfill systems were discussed, including the following.

- Hydraulic (sand) fill
- Paste fill
- Rockfill

Historical testing of kimberlite tailings at Diavik Mine has determined this material to be unsuitable for use in paste fill. Local sources of natural sand in adequate quantities are not known. It is assumed that hydraulic fill or paste fill could only be produced by grinding waste rock, at high cost.

At this level of study, cemented rock fill has been selected as the preferred backfill. Adequate quantities of waste rock are available at the Misery operation. These stockpiles include both potentially acid generating (PAG) and non-acid generating (NAG) rock. Placing the PAG waste underground as backfill may mitigate potential environmental concerns. This potential benefit has not been assessed.

The waste rock will be dumped into a backfill raise from surface, leading down to the active mining levels. The surface backfill truck dump will be located on an island southeast of the pipe and accessed via a causeway from shore. An underground backfill truck loading chute will be provided on each level, with a short “finger raise” connecting the chute to the main backfill raise.

A slurry of normal Portland cement and water will be prepared in the surface batch plant and delivered (in measured batches) to an agitated tank located near the loading chute. As the truck is loaded, a quantity of slurry will be sprayed on the load. Subsequently the truck will deliver the mixture to the stope being filled.

9.0 MINE SERVICES

9.1 Compressed Air and Service Water

Compressed air will be provided by new compressors installed near the portal location, and distributed via pipeline underground.

Service water will be provided by re-cycling a portion of the mine discharge water. Service water will not be potable.

Potable water will be provided as bottled water delivered to underground refuge stations and lunchrooms via service truck.

9.2 Dewatering

The dewatering system will be similar in configuration to the Panda – Koala complex, involving drainage downward from level to level via “borehole sumps” and boreholes to a main pumping facility. Submersible pumps will be provided in lower level “collection sumps” pumping up to the main pumping facility. Relay stations will pump the water to surface where it will be discharged into the Misery settling ponds. An allowance has been included in the estimates for upgrade of these ponds. The system capacity has been estimated to be 0.6 m^3 per second or 36,000 litres per minute (9,500 USGPM) based on Diavik Mine experience.

9.3 Electrical

Primary power will be provided to Jay site from the Ekati generating plant via a new transmission line running parallel to the Misery Haul Road and Jay Access Road. Underground distribution will be similar to Koala, involving common components where feasible. Conceptual electrical system drawings are provided in Appendix A.

10.0 PERSONNEL

At this level of study, forecasts of direct and indirect personnel have not been prepared. The steady state production rate is approximately double that of Koala and direct personnel requirements may vary in proportion.

Indirect personnel requirements will depend on the project and production period timing relative to other mining operations on the Ekati property.

The 100 person camp to be constructed for Jay Pipe is assumed to be of adequate capacity. If overflow is experienced during the project/construction period, some personnel may be accommodated at the main Ekati camp.

11.0 SCHEDULE

The combined pre-production and stope production schedule was prepared in EPS and transferred to Microsoft Project and is included in Appendix C.

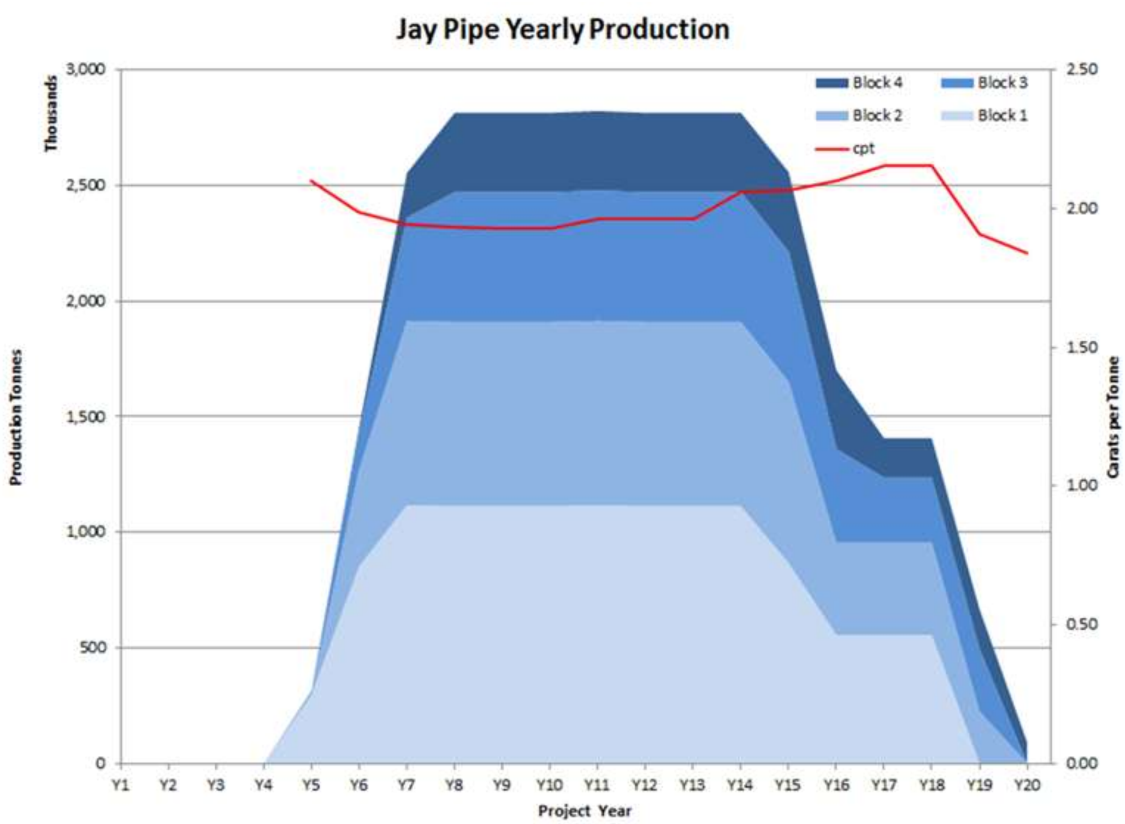
11.1 Pre-Production Period Critical Path

The earliest production will be from 2070 Level at the middle of Project Year Five (Y5). The main pre-production activities include; installation of surface infrastructure, driving the service and conveyor ramps, installation of the conveyor and sizer, pumping facilities on 2050 Level, establishing main fresh and return air systems and establishing the backfill system. Silling development on 2070 and 2090 Levels will also be required.

11.2 Production Profile

The production profile was determined from the EPS schedule and is summarized in Figure 11-1. Block production capacity was derived from detailed scheduling of a 2.5 million tonne level between 2100 Level and 2120 Level.

Figure 11-1: Production Profile



11.2.1 Stope Cycle and Productivity

The duration to mine a stope was estimated based on the key mining activities and is summarized in Table 11-1. The calculations consider a typical stope of 20 metres high x 12 metres wide x 50 metres long and ore density of 2.34.

Table 11-1: Stope Production Cycle

Mining Activity	Duration	Rate
Drilling	29 Days	259 m per day
Blasting1	3 Days	1,872 tonnes per blast
Mucking	13 Days	1,730 tonnes per day
Sub-Total	45 Days	500 tonnes per day
Backfilling	18 Days	800 tonnes backfill per day
Total	63 Days	360 tonnes per day

1 - Days added for blasting. Actual number of productions blasts is 12

Backfill curing time of 7 days was added to the filling duration. Availabilities used for the production schedule generation are:

- Workplace availability: 90%
- Equipment availability: 75%
- Backfill plant availability: 60%

For production scheduling purposes, individual stope sequencing was not prepared. The amalgamated schedule used a consolidated mining rate in tonnes per day for sill development and production. This rate was determined by sequencing a sample level (2000 Level to 2120 Level) of stopes at varying tonnes per day, with associated development, utilizing rates as per Table 11-1 (ramps, level, cross cuts and sills). Table 11-2 lists the consolidated rates for standard stopes. For stopes within mining Block 1 the rate of 1,525 tonnes per day was applied. For all other mining blocks, a consolidated mining rate was developed by factoring the Block 1 rate by the number of calculated full size stopes as per Table 11-3.

Table 11-2: Variance of Consolidated Mining Rates

Density (t per m³)	Duration (days)	Stope Size (tonnes)	Mining Rate (tonnes per day)	Consolidated Mining Rate (tonnes per day)
2.20	63	21,120	340	1495
2.25	63	21,600	340	1515
2.27	63	21,792	350	1525
2.30	63	22,080	350	1535
2.35	63	22,560	360	1560

Table 11-3: Consolidated Mining Rates Used

Mining Block	Stopes per Level	Change from Block 1	Consolidated Mining Rate (tonnes per day)
1	103	0%	1525
2	73	29%	1080
3	52	49%	770
4	32	69%	470

For scheduling purposes the quantities used for development drifting reflect an additional 10% excavation allowance for miscellaneous slashes/cut-outs that are anticipated, but not designed at this time. In the kimberlite drawpoints, there is no development allowance.

Table 11-4: Development Advance Rates

Drift Size (height x width)	No. of Headings	Advance (m/day)
5.5 m x 5.5 m (Granite) Ramp Access	Single Multiple	5.0 5.6
5.0 m x 5.5 m (Granite) Level Access/ Extraction Drift	Single Multiple	5.0 5.6
5.0 m x 5.0 m (Granite) Level Development	Single Multiple	5.0 5.6
4.6 m x 4.5 m (Granite) Crosscut	Single Multiple	5.0 5.6
4.6 m x 4.5 m (Poor Kimberlite) 4.6 m x 4.5 m (Very Poor Kimberlite)	Multiple Multiple	5.0 4.0

12.0 COST ESTIMATES AND FINANCIAL ANALYSIS

The cost estimates are based on the following.

- Prior studies prepared by Stantec for the Ekati Mine.
- Actual Ekati site cost data where available.
- First principals “built-up” estimates.

Historical estimates were escalated to Year 2013 at 5% per annum. Inflation from Year 2013 forward was not applied.

The cost estimates were prepared in constant dollars (2013 Canadian currency) to an overall “bottom line” accuracy level of ±30 to 35%. It is assumed that contractor crews will complete all pre-production/ongoing development and steady-state operations.

The cost estimates are summarized in Table 12-1 and presented in more detail in Appendix D.

Table 12-1: Cost Estimate Summary

WBS Level 1	Description	Quantity	Unit	Unit Cost	Budgeted Cost
1	**Surface Infrastructures**	1	ls		$82,716,267
2	**Underground Mobile Equipment Purchase**	54	each		$59,101,384
3	**Mine Development**	15,995	metres		$162,102,014
4	**Mine Operations**	31,866,051	Tonnes	$60.2	$1,917,816,111
5	**Mine Ventilation System**	1	ls		$34,443,008
6	**Material Handling System**	1	ls		$79,747,000
7	**Underground Infrastructures**	1	ls		$49,866,737
8	**Owner's Indirects**	31,866,051	Tonnes	$32.7	$1,041,508,164
	Total Jay Pipe Concept Study				$3,427,300,685

The estimated costs have been categorized as pre-production capital costs, sustaining capital costs and operating costs

12.1 Capital Costs

The pre-production (project period) capital costs generally include all surface and permanent underground development/infrastructure in waste necessary to support the initial stoping operations. The project period ends when the primary ventilation raises, initial dewatering facilities, and the ore handling system are commissioned. Operating costs incurred prior to the end of the project period are included in the pre-production capital costs.

A contingency of 20% is applied to the pre-production capital costs in the cash flow model.

The sustaining capital costs reflect the post-project period life-of-mine requirements for ramp and primary level access, and for extension of infrastructure systems such as ventilation and dewatering.

Waste development directly associated with the stoping approach (i.e. cross-cuts, drawpoint access, etc.) is included with the operating costs.

12.2 Operating Costs

The operating costs reflect all labour, material, equipment, and consumables required on a daily basis to produce the ore tonnages involved. The costs include surface transportation from Jay Pipe to a stockpile at the processing plant at Ekati. Downstream costs for processing, refining, and marketing are not included in the cost estimates, however, a processing cost of $11.00 per tonne is applied in the cash flow model.

12.3 Cash Flow

Based on the resource grades and diamond value provided by DDEC and the production forecast prepared by Stantec, a forecast of annual revenues was prepared. A process plant recovery factor of 85% was applied.

Based on the life-of-mine schedule and cost estimates, an annual expenditure forecast was prepared. These components were combined to assemble the cash flow model.

The estimated costs have been categorized as pre-production capital costs, sustaining capital costs and operating costs. A contingency of 20% is applied to the pre-production capital costs in the cash flow model.

Inflation from Year 2013 forward has not been applied.

NPV was calculated using 7% discount rate.

Downstream costs for refining and marketing are not included. A processing cost of $11.00 per tonne is applied in the cash flow model.

The estimated cash flow is presented in Appendix D.

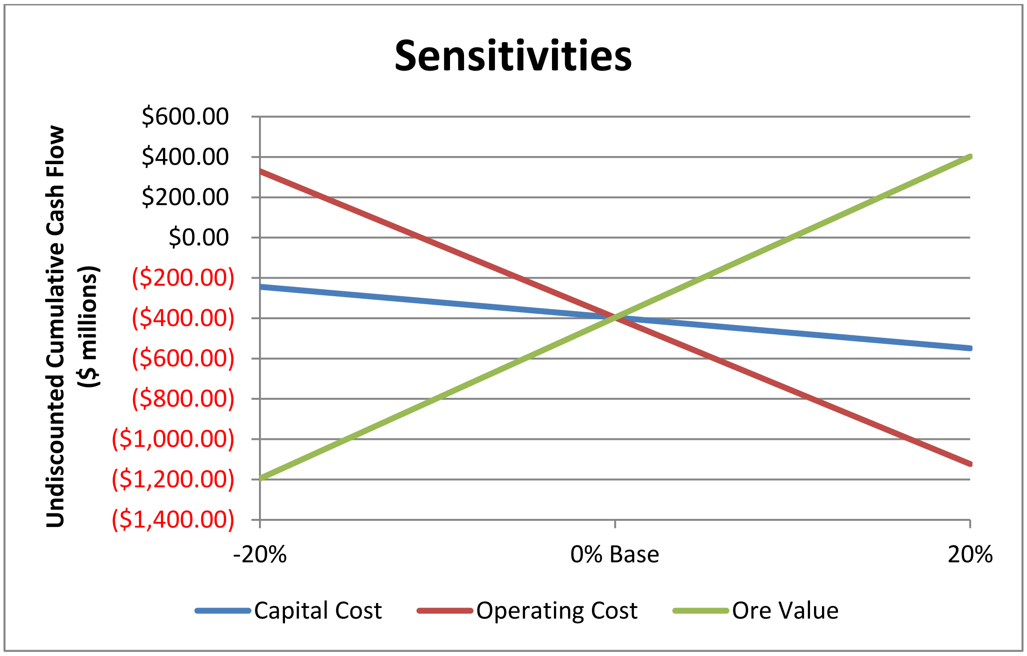
12.4 Sensitivities

Sensitivities (+20% and -20%) to Ore Values, Capital Costs, and Operating Costs have been prepared against undiscounted cash flow and are summarized in Table 12-3 and presented graphically in Figure 12-1. The undiscounted cumulative cash flow is most sensitive to the ore value and least sensitive to capital costs.

Table 12-2 – Sensitivities

Sensitivity Item	Undiscounted Cumulative Cash Flow ($ millions)		
	-20%	0% Base	20%
Capital Cost	($244.23)	($396.50)	($548.78)
Operating Cost	$330.10	($396.50)	($1,123.11)
Ore Value	($1,196.08)	($396.50)	$403.08

Figure 12-1: Sensitivities

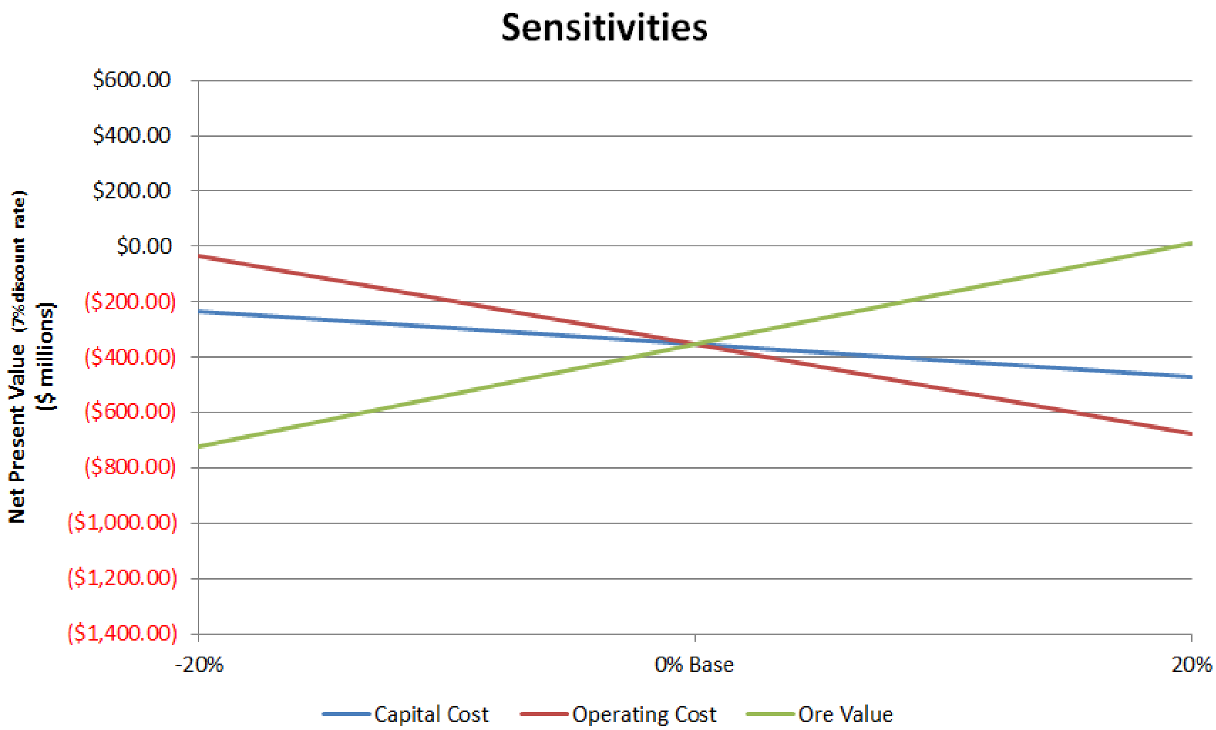


Sensitivities against NPV are summarized in Table 12-3 and presented graphically in Figure 12-2.

Table 12-3 – Sensitivities using Net Present Value

Sensitivity Item	Net Present Value (7% dicount rate) ($ millions)		
	-20%	0% Base	20%
Capital Cost	($236.92)	($355.13)	($473.34)
Operating Cost	($32.82)	($355.13)	($677.44)
Ore Value	($724.62)	($355.13)	$14.37

Figure 12-2 – Sensitivities using Net Present Value



13.0 RISKS AND OPPORTUNITIES

Risks

A fundamental risk with the Base Case underground mining approach described in this report relates to the integrity of the crown pillar and the potential for water and/or mud ingress into the mine workings. At this conceptual stage of study it has been assumed that the selected crown pillar size will be adequate. Thorough geomechanical analysis will be required to test this assumption before subsequent mine studies/designs are prepared.

Exploration holes have been drilled, downward through the resource, including the crown pillar. These holes are reported to have been grouted, however records are incomplete. Confirmation and verification of the condition and location of these holes will be required to mitigate the risk of development or production mining encountering a hydraulic connection to the lake (with subsequent risk of flooding).

Dewatering facilities have been sized in this analysis based on system capacities at the other Ekati and Diavik underground operations. Risk assessment and analysis related to the crown pillar, potential water inflows and dewatering system capacity is recommended at a later stage of study.

Other risks associated with this mining concept include the following.

- Geomechanical conditions at the surface collar locations of the ventilation and backfill raises and the ramp portals may be poor, leading to higher costs and longer construction periods than anticipated.
- Ground conditions in the host rock and in the kimberlite have been assumed to be similar to those at Koala and Panda so that ground support requirements and advance rates will be similar. Poorer conditions would result in slower advance and higher costs.
- The current resource has been estimated to ±400 metres depth. For purposes of this study the resource has been extrapolated to 600 metres depth, assuming a continuous trend of grade and tonnage per level. Further exploration might prove these assumptions to be either optimistic or pessimistic.

Opportunities

The following opportunities are suggested.

- The depth of Lac du Sauvage above Jay Pipe represents a fundamental risk to the underground mining approach described in this report. In the open pit approach (described elsewhere by others), a major cost and similar risk are associated with the perimeter dyke required to surround the pit and control the lake waters from entering the pit. If the level of Lac du Sauvage can be corrected to a lower elevation, then both of these risk areas will be mitigated accordingly.

- Use of a perimeter dyke (with or without lake level correction) in combination with an underground mining approach may provide lower risk and improved economics. The perimeter dyke might be of lesser circumference than in the open pit model. The underground mine could be allowed to cave through to surface (inside the perimeter dyke). The entire pipe would thus be available (no crown pillar). Backfill would not be required, so that operating costs would be reduced accordingly.
- The current resource is defined to ±400 metres depth below lake level. An exploration ramp might be driven from the shore of Lac du Sauvage to encounter the pipe at approximately 350 metres depth and a drift might be driven from this point horizontally through the kimberlite. The kimberlite drift would provide:
  - A bulk sample to test the geological resource estimates.
  - An opportunity to assess geomechanical conditions and ground support requirements.
  - A platform for exploration drilling to greater depth.
  - The exploration ramp might serve as the service ramp in the final mine design.

14.0 CONCLUSIONS

The following advantages and disadvantages are associated with the underground mining approach described in this report.

Advantages

- The approach involves a crown pillar extending some 200 metres from the bottom of Lac du Sauvage to the top mining level. The crown pillar is envisioned to remain in place with partial support provided by backfill. The lake bottom will not be disturbed except for the construction of causeways to provide access to two islands.
- The underground working environment may be more consistent and less susceptible to weather interruptions, compared to open pit alternatives.
- The mine openings provide a platform for further exploration drilling to depth.

Disadvantages

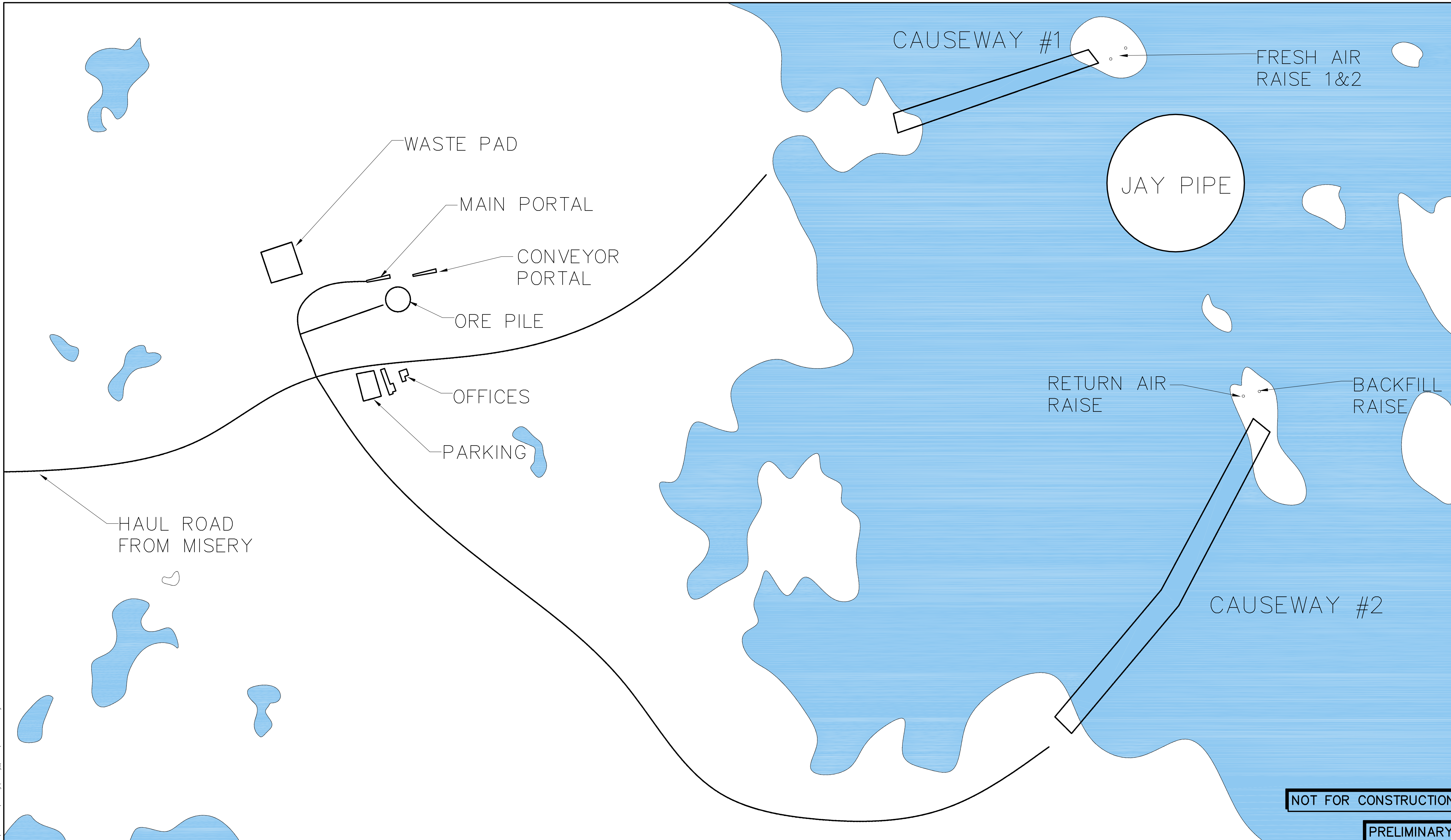
- The approach requires that the upper portion of the resource remain in place as a crown pillar and not be mined.
- The operating costs are comparatively high. The requirement for backfill contributes to these costs.
- To ensure the adequacy of the crown pillar, thorough geomechanical analysis is required. Following this analysis, estimates should be updated regarding:
  - The portion of the resource required to remain in place as the crown pillar.
  - The costs associated with potential crown pillar support.
  - The risk of water inflow in excess of dewatering equipment capacity.
  - The potential for sudden inrush of water or mud.

APPENDIX A

DRAWINGS

JAY PIPE

Drawing No.	SURFACE INFASTRUCTURE	
100-A0001	Site Plan	1
151-A0001	Primary Intake Fans & Heater House - General Arrangement - Plan	1
151-A0002	Primary Intake Fans & Heater House - General Arrangement - Section	1
	UNDERGROUND INFASTRUCTURE	
400-U0001A	Mine Dewatering General Arrangement - Borehole sump - Plan and Sections	1
400-U0002A	Mine Dewatering General Arrangement - Main Sump & Pump station - Plan and Sections	1
400-U0003A	Mine Dewatering General Arrangement - Collection Sump - Plan and Sections	1
400-U0004A	Back Fill Station & Sump - General Arrangement	1
400-U0005A	Sizer Room & Picking belt Arrangement Plan	1
400-U0006A	Sizer Room & Picking belt Arrangement Section	1
420-A0001	Service Area General Arrangement	1
470-A0001	Detonator Magazine General Arrangement - Plan	1
470-A0002	Explosive Magazine General Arrangement - Plan	1
470-A0003	Permanent Refuge Station General Arrangement - Plan and Sections	1
500-U0001A	Typical Ramp Profile 5.5m x 5.5m - Ramp	1
500-U0002A	Typical Drift Profile 5.0m x 5.0m - Drift	1
500-U0003A	Typical Ramp Profile 5.5m x 5.5m - Conveyor	1
510-U0001A	Mine Long Section	1
520-U0001A	Level Plan - 2070L	1
520-U0002A	Level Plan - 2050L	1
520-U0003A	Level Plan - Sub Level	1
520-U0004A	Ramp Plan - Conveyor & Main Ramp Profile	1
530-U001A	Mining Methods	1
	ELECTRICAL	
13545-ESK001A-RA	Riser Diagram - Mine Services	1
13545-ESK002A-RA	Riser Diagram - Block 1	1
13545-ESK003A-RA	Riser Diagram - Block 2	1
13545-ESK004A-RA	Riser Diagram - Block 3	1
13545-ESK005A-RA	Riser Diagram - Block 4	1
13545-ESK006A-RA	Riser Diagram - Mobile Rack	1
	TOTAL DRAWINGS	28



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REV.	DESCRIPTION	DATE	BY
A	PRELIMINARY –		

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NOT FOR CONSTRUCTION

PROGRESS PRINT
DWG UPDATED:
BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.07.23

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: CONCEPT STUDY
MINE SITE PLAN
GENERAL ARRANGEMENT

SCALE:	PROJ. NO.	DWG. NO.	REV. NO.
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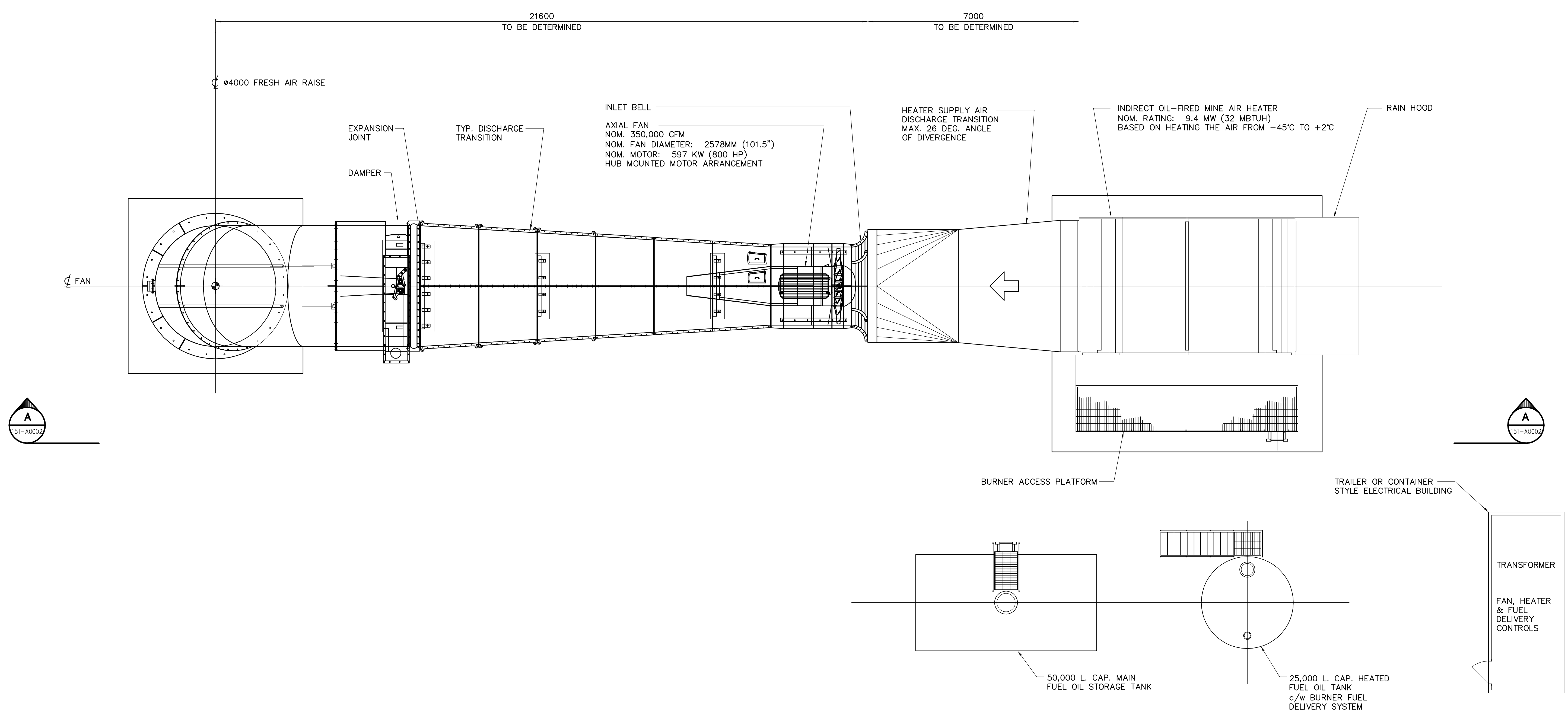

VENTILATION RAISE FAN – PLAN
(2 REQUIRED PER FRESH AIR RAISE)

NOT FOR CONSTRUCTION

PRELIMINARY

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BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: SURFACE VENTILATION
TYPICAL FRESH AIR FAN/HEATER
GENERAL ARRANGEMENT – PLAN

SCALE: NTS
PROJ. NO. 169513545
DWG. NO. 151-A0001
REV. NO. A

PROJ. NO. 169513545
DWG. NO. 151-A0001
REV. NO. A

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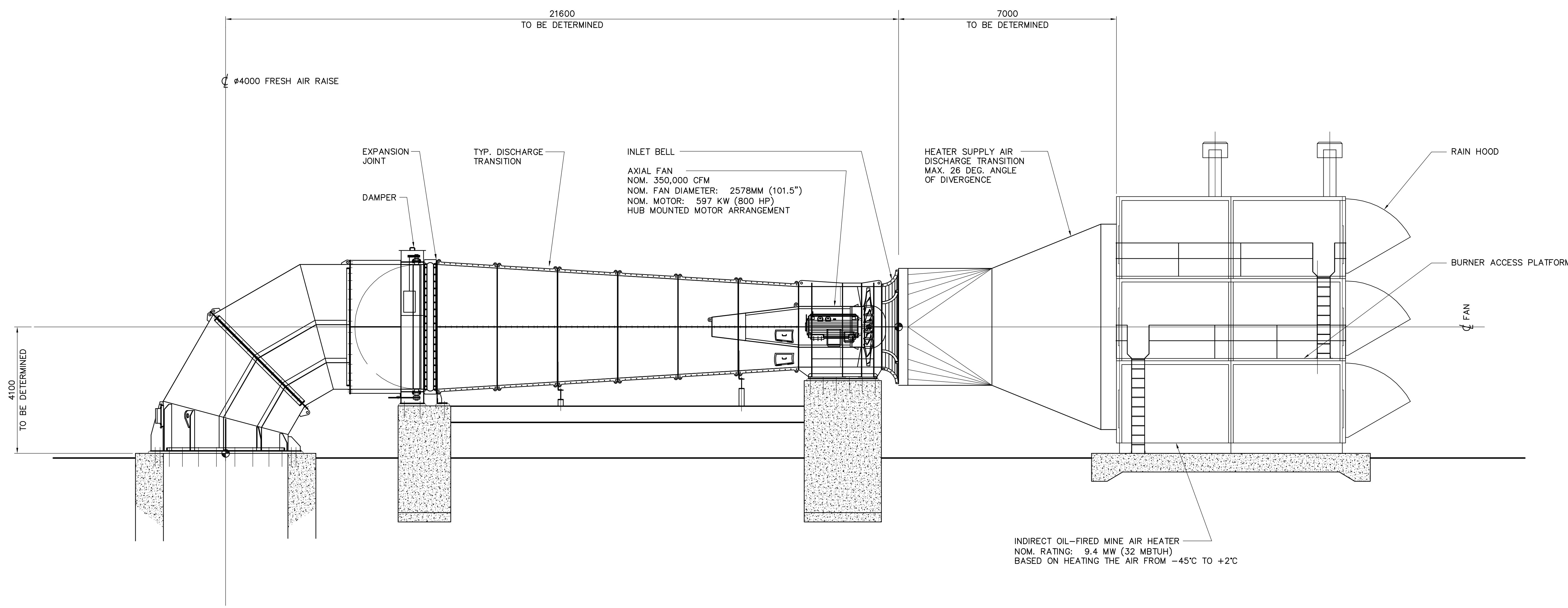

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BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

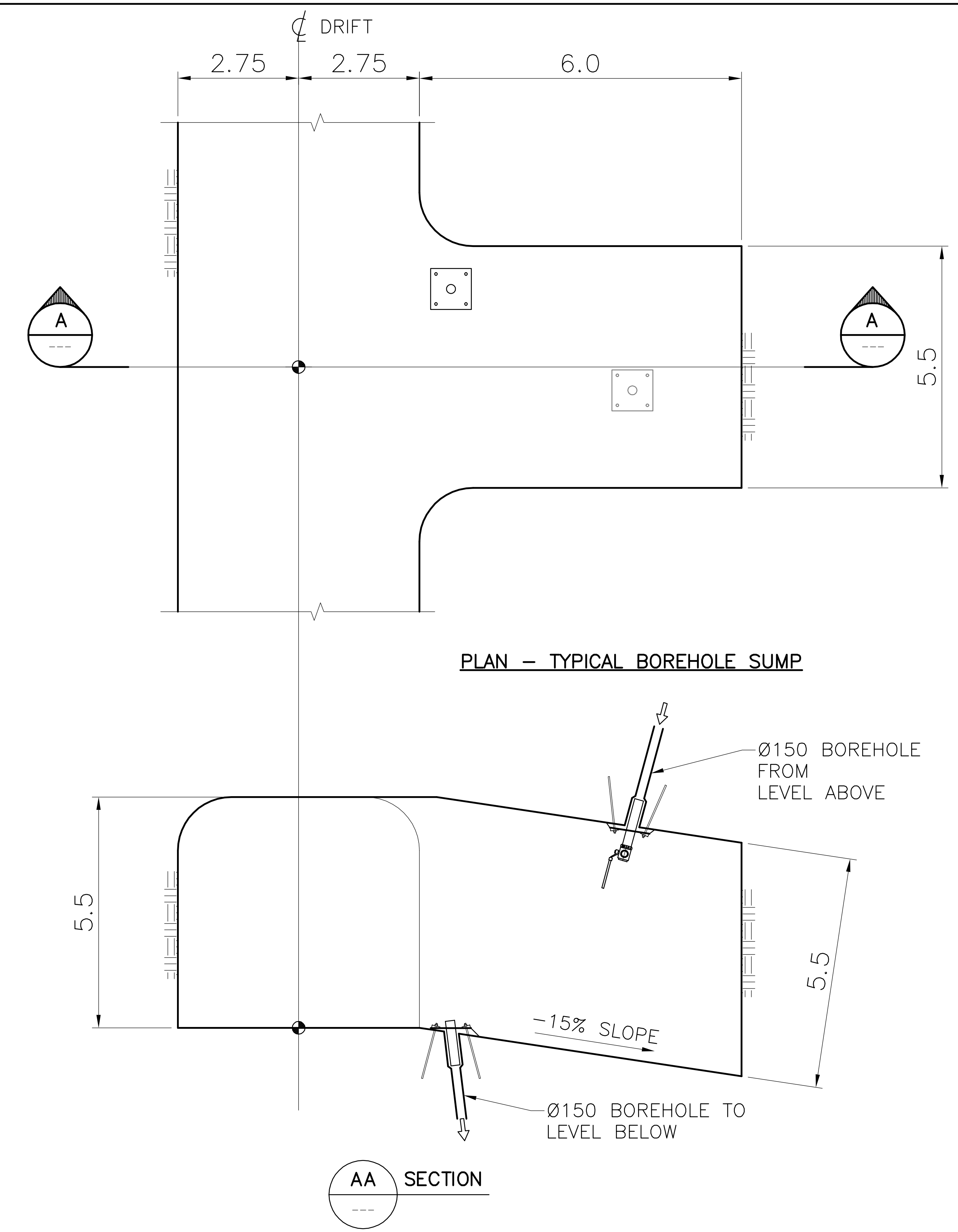
Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: SURFACE VENTILATION
TYPICAL FRESH AIR FAN/HEATER
GENERAL ARRANGEMENT - SECTION

SCALE: NTS
PROJ. NO. 169513545
DWG. NO. 151-A0002
REV. NO. A

PROJ. NO. 169513545
DWG. NO. 151-A0002
REV. NO. A

Aug 09, 2013 - 2:57pm \\CD1212-N01U\169513545\drawing\mining_prelim\151-A0002.dwg



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PROGRESS PRINT
DWG UPDATED:
BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: MINE DEWATERING
TYPICAL BOREHOLE SUMP
GENERAL ARRANGEMENT PLAN & SECTION

SCALE:	PROJ. NO.	DWG. NO.	REV. NO.
NTS	169513545	400–U0001A	A

PROJ. NO. 169513545 DWG. NO. 400–U0001A REV. NO. A

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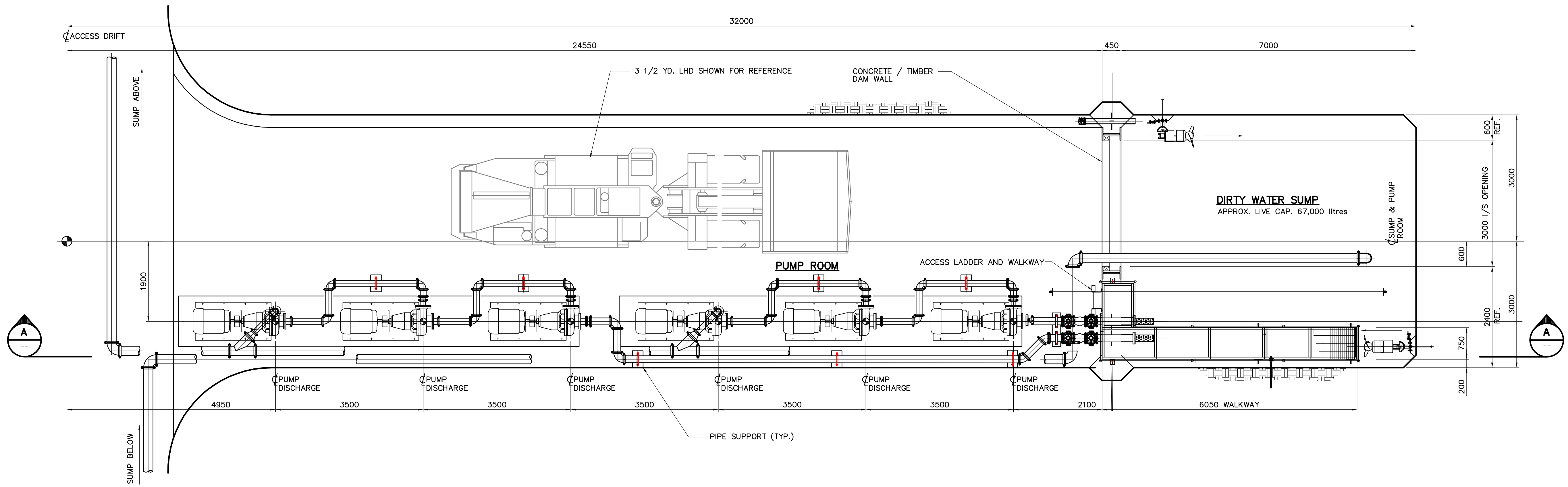
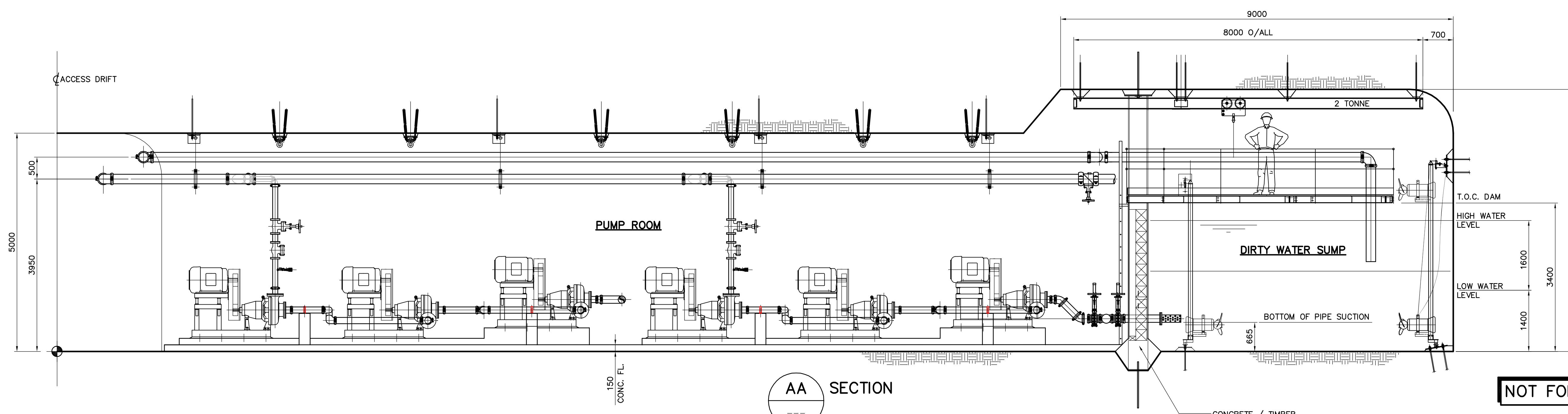


PLAN – MAIN SUMP & PUMP STATION



AA SECTION

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DWG UPDATED:
BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: MINE DEWATERING GENERAL ARRANGEMENT MAIN SUMP & PUMP STATION PLAN & SECTION
SCALE: NTS
PROJ. NO. 169513545
DWG. NO. 400–U0002A
REV. NO. A

PROJ. NO. 169513545 DWG. NO. 400–U0002A REV. NO. A

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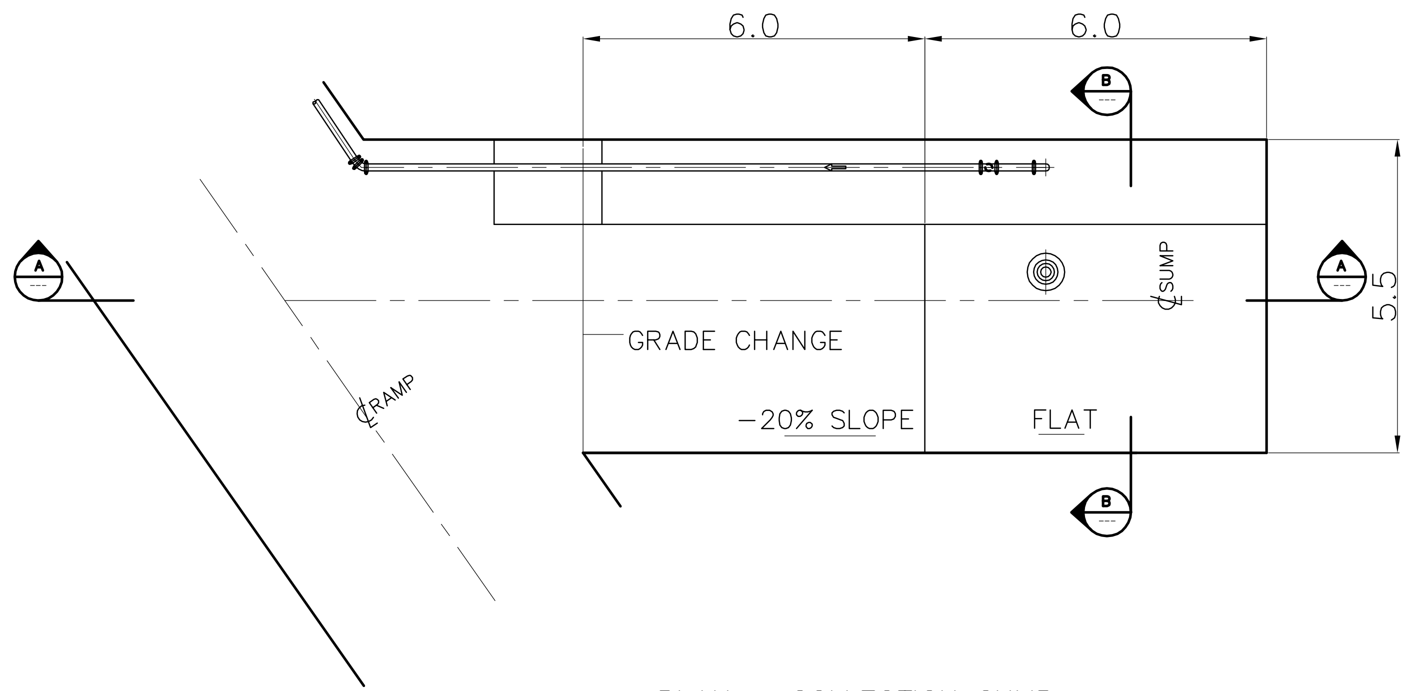
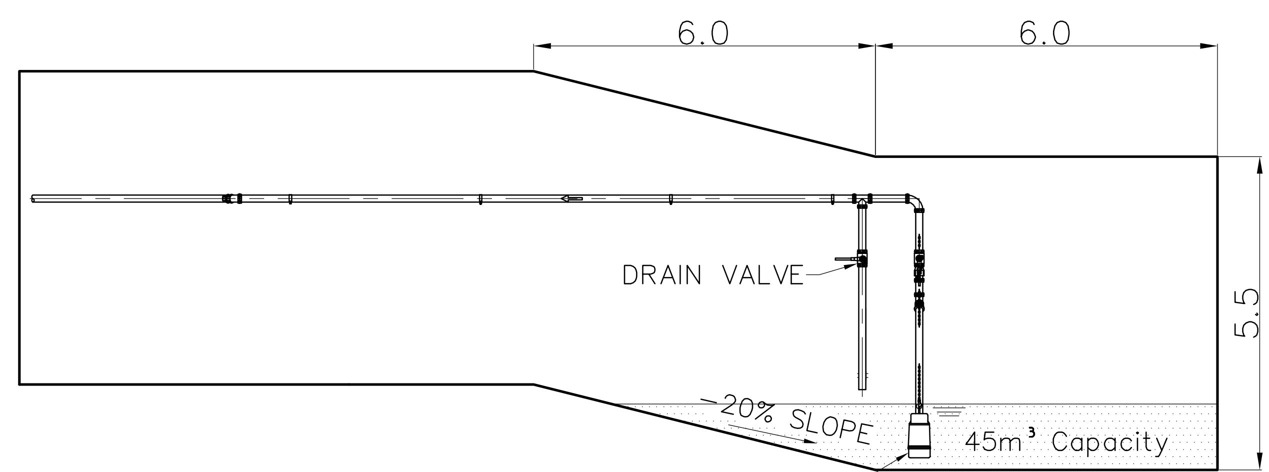


PLAN – COLLECTION SUMP



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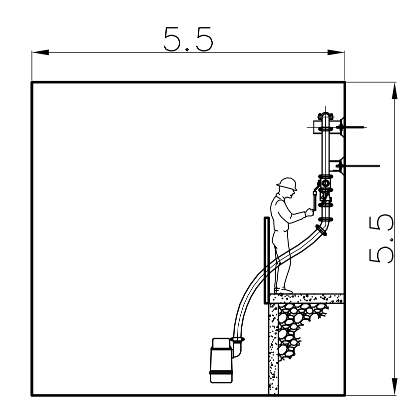

BB SECTION

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PRELIMINARY

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DWG UPDATED:
BY:

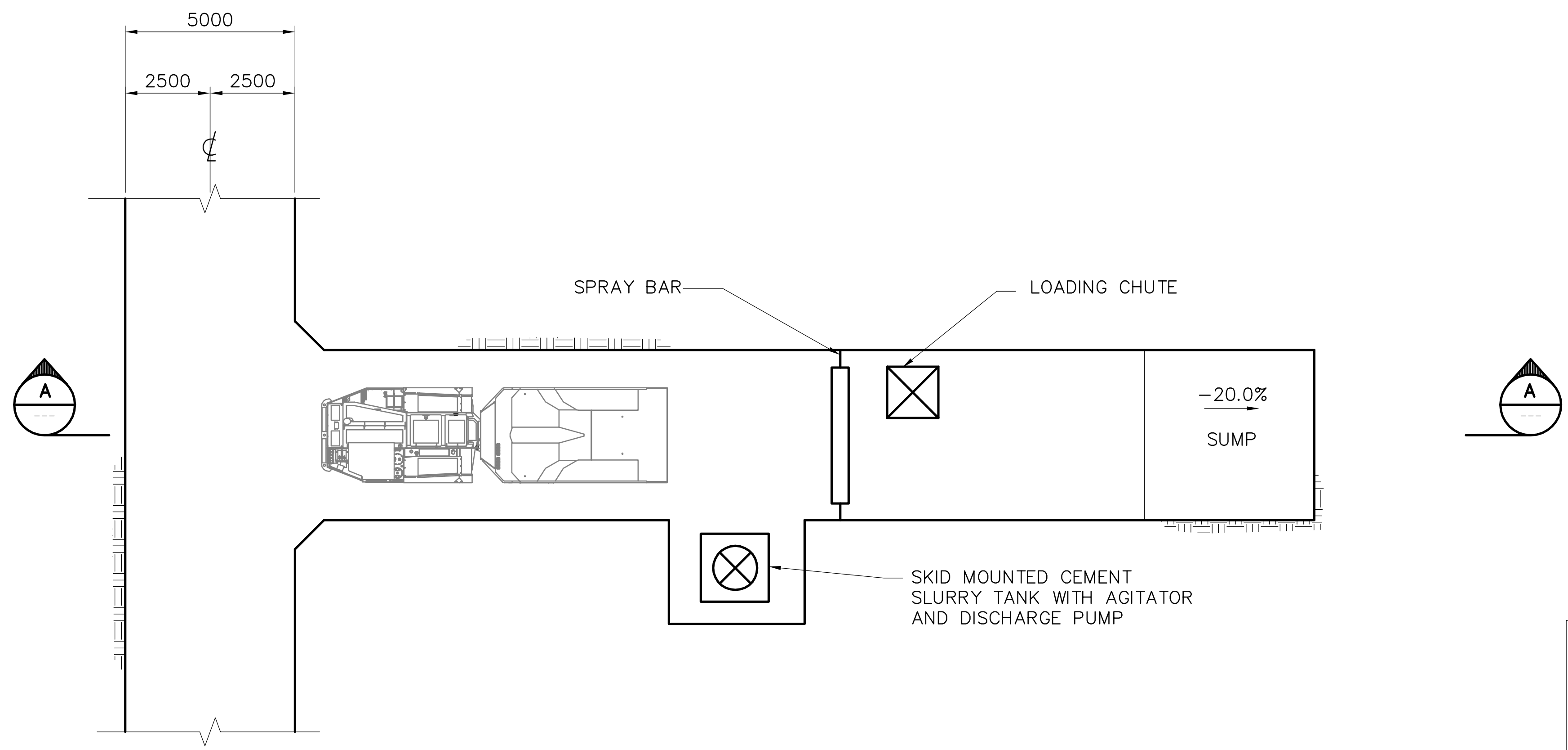
ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

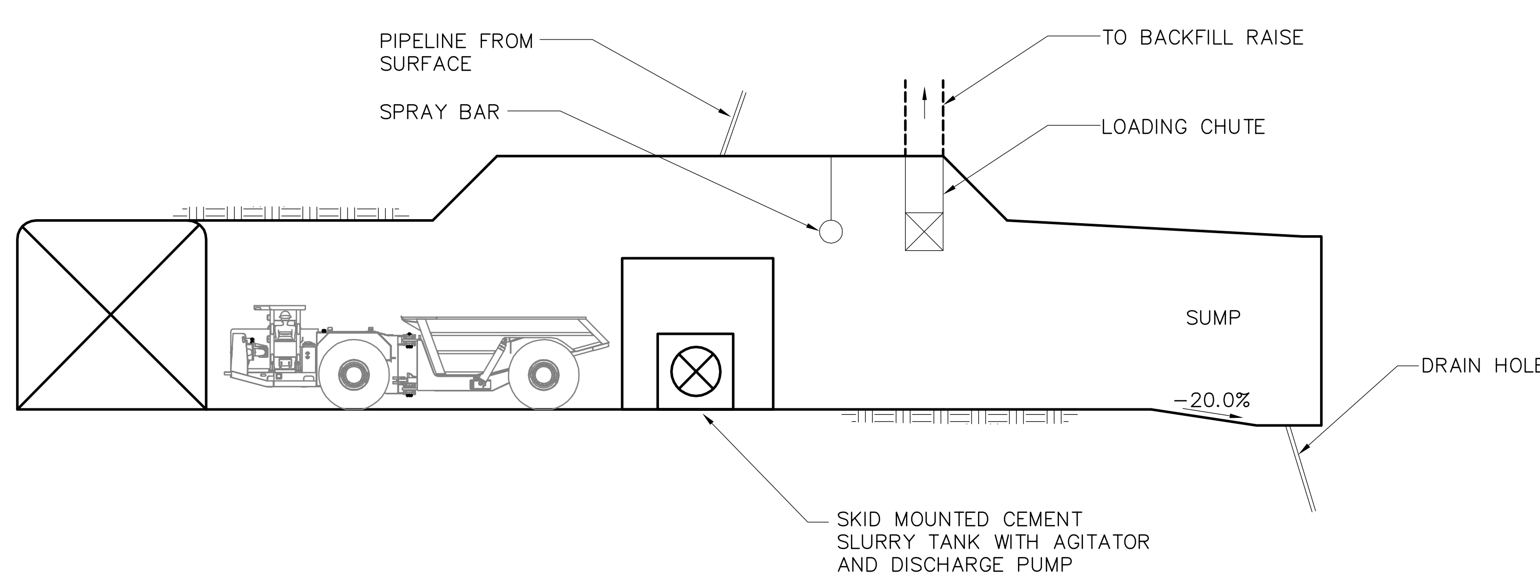
CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: MINE DEWATERING
GENERAL ARRANGEMENT
COLLECTION SUMP
PLAN & SECTION

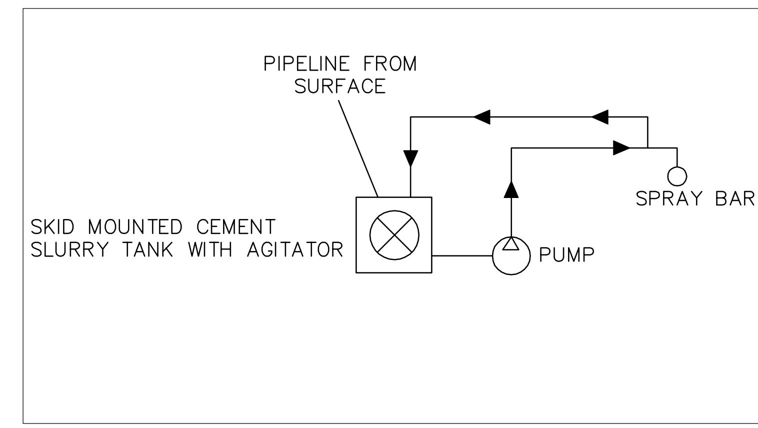
SCALE:	PROJ. NO.	DWG. NO.	REV. NO.
NTS	169513545	400–U0003A	A

Aug 09, 2013 – 2:57pm \\CD1212–N01U\169513545\drawing\mining_prelim\400–U0003A.dwg



PLAN – BACKFILL STATION





FLOW SHEET

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DWG UPDATED:
BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: BACKFILL STATION & SUMP GENERAL ARRANGEMENT PLAN & SECTION

SCALE:	PROJ. NO.	DWG. NO.	REV. NO.
NTS	169513545	400–U0004A	A

PROJ. NO. 169513545 DWG. NO. 400–U0004A REV. NO. A

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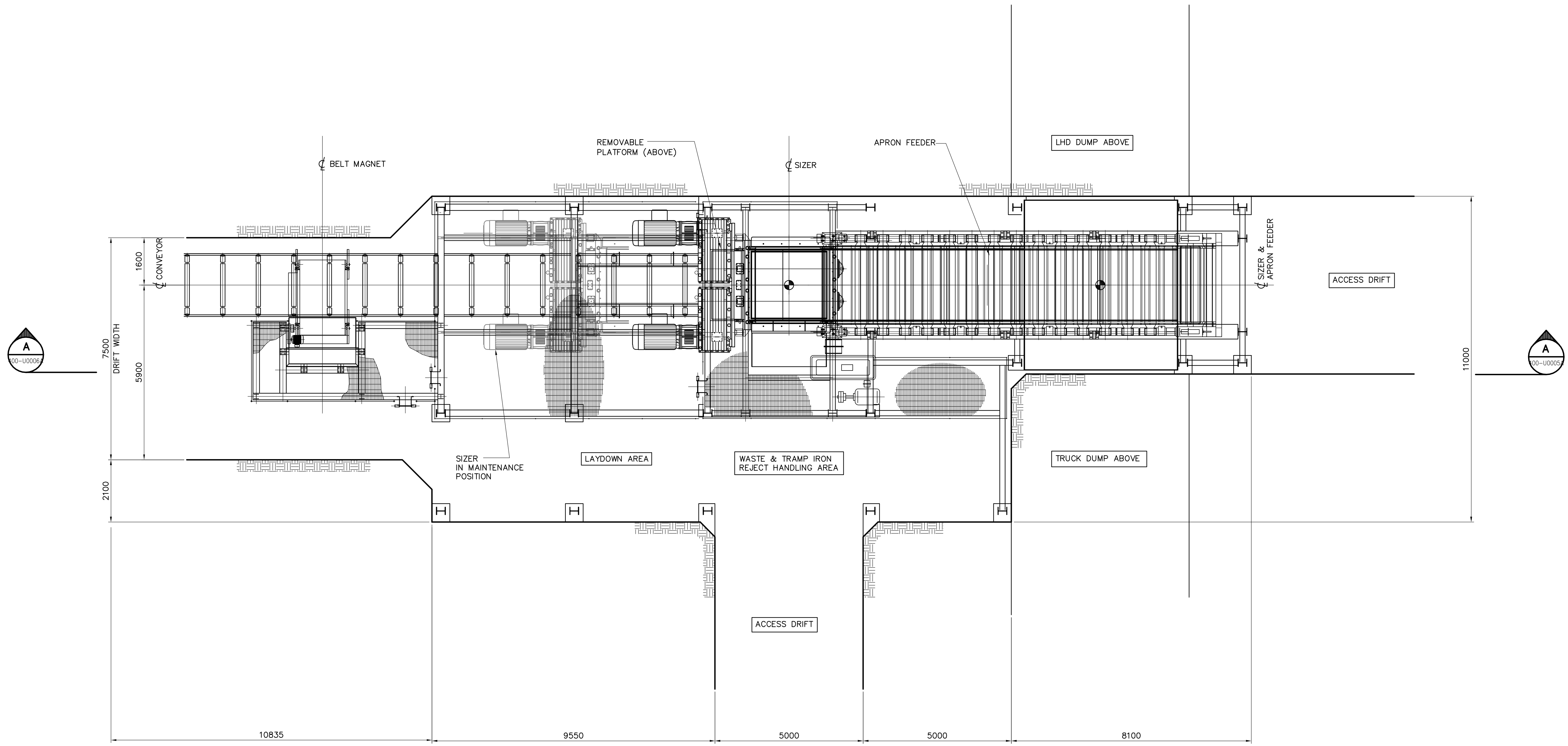

PLAN – 2050L – SIZER ROOM

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DWG UPDATED:
BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: SIZER ROOM & PICKING BELT GENERAL ARRANGEMENT 2050L SECTION
SCALE: NTS
PROJ. NO. 169513545
DWG. NO. 400–U0005A
REV. NO. A

PROJ. NO. 169513545 DWG. NO. 400–U0005A REV. NO. A

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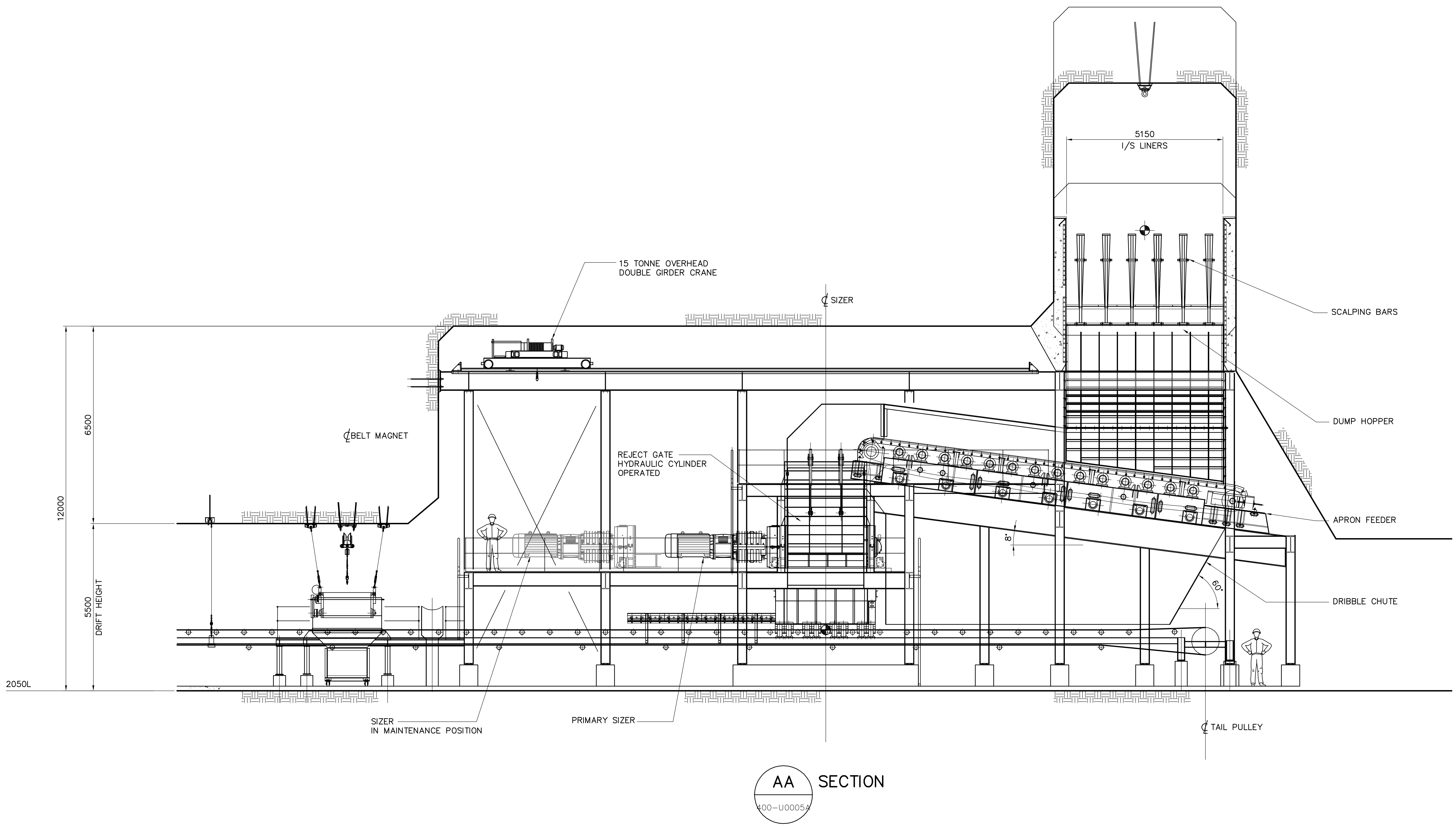

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PROJ. NO. 169513545 DWG. NO. 400-U0006A REV. NO. A

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DWG UPDATED:
BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: SIZER ROOM & PICKING BELT
GENERAL ARRANGEMENT
2050L
SECTION

SCALE: NTS
PROJ. NO. 169513545
DWG. NO. 400-U0006A
REV. NO. A

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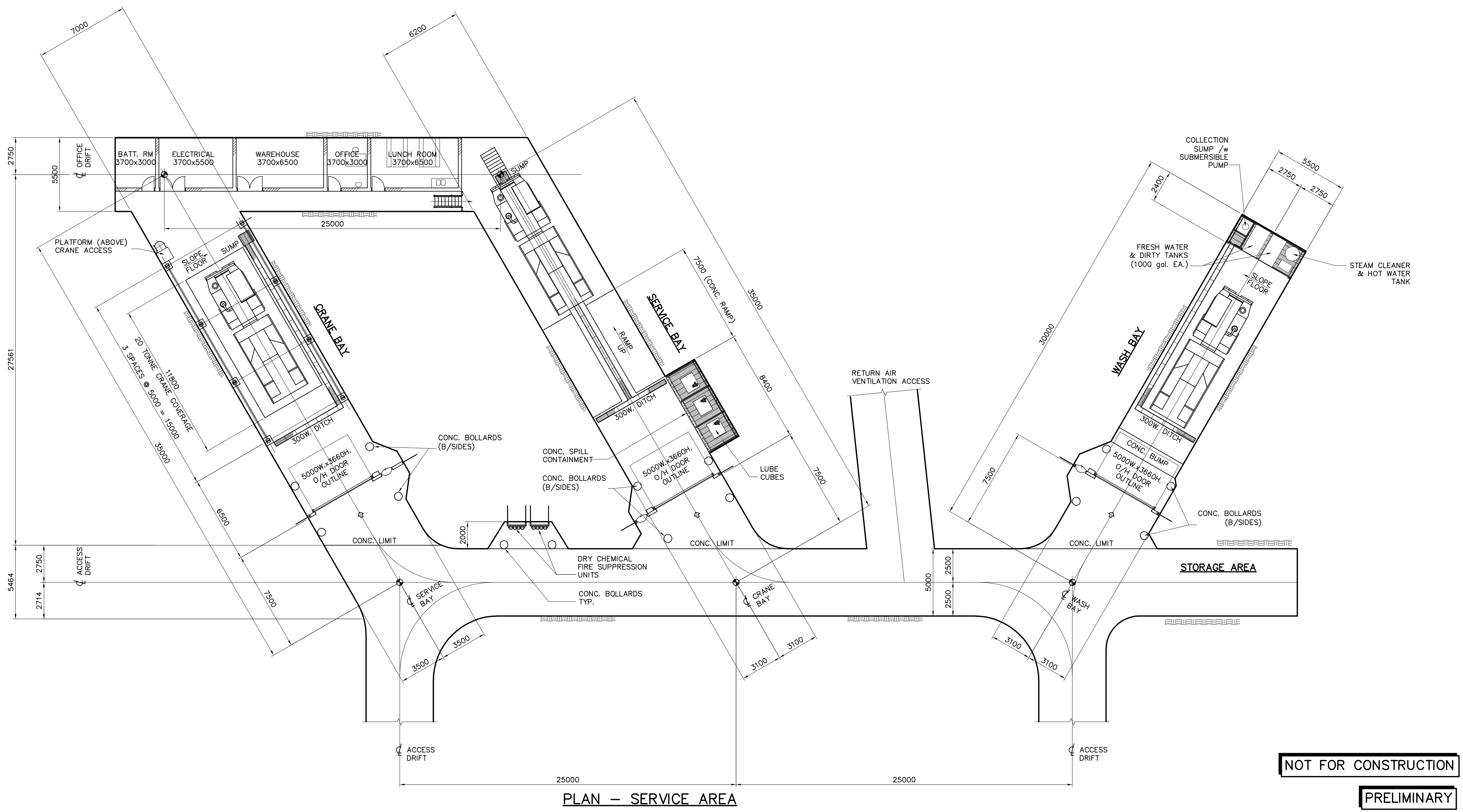

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PROJ. NO.	DWG. NO.	REV. NO.
169513545	470-A0001	A

REF. DWG. NO.	REFERENCE DRAWING TITLE
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REV.	DESCRIPTION	DATE	BY
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DWG UPDATED:
BY:

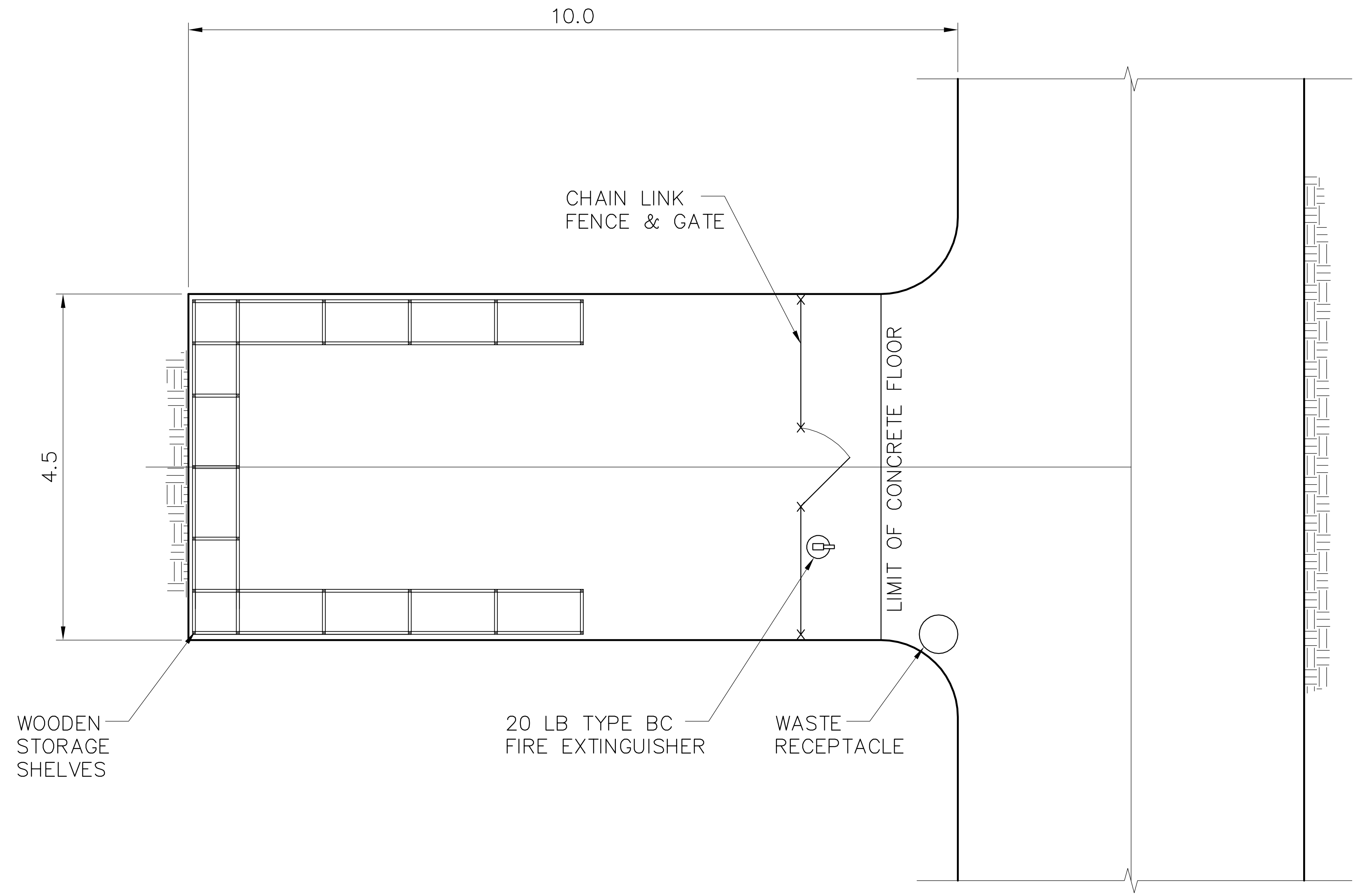
ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: U/G INFRASTRUCTURE SERVICE AREA G.A PLAN

SCALE	PROJ. NO.	DWG. NO.	REV. NO.
NTS	169513545	420-A0001	A

Aug 09, 2013 – 2:58pm \\CD1212-N01U\169513545\drawing\mining_prelim\420-A0001.dwg



PLAN – DETONATOR MAGAZINE

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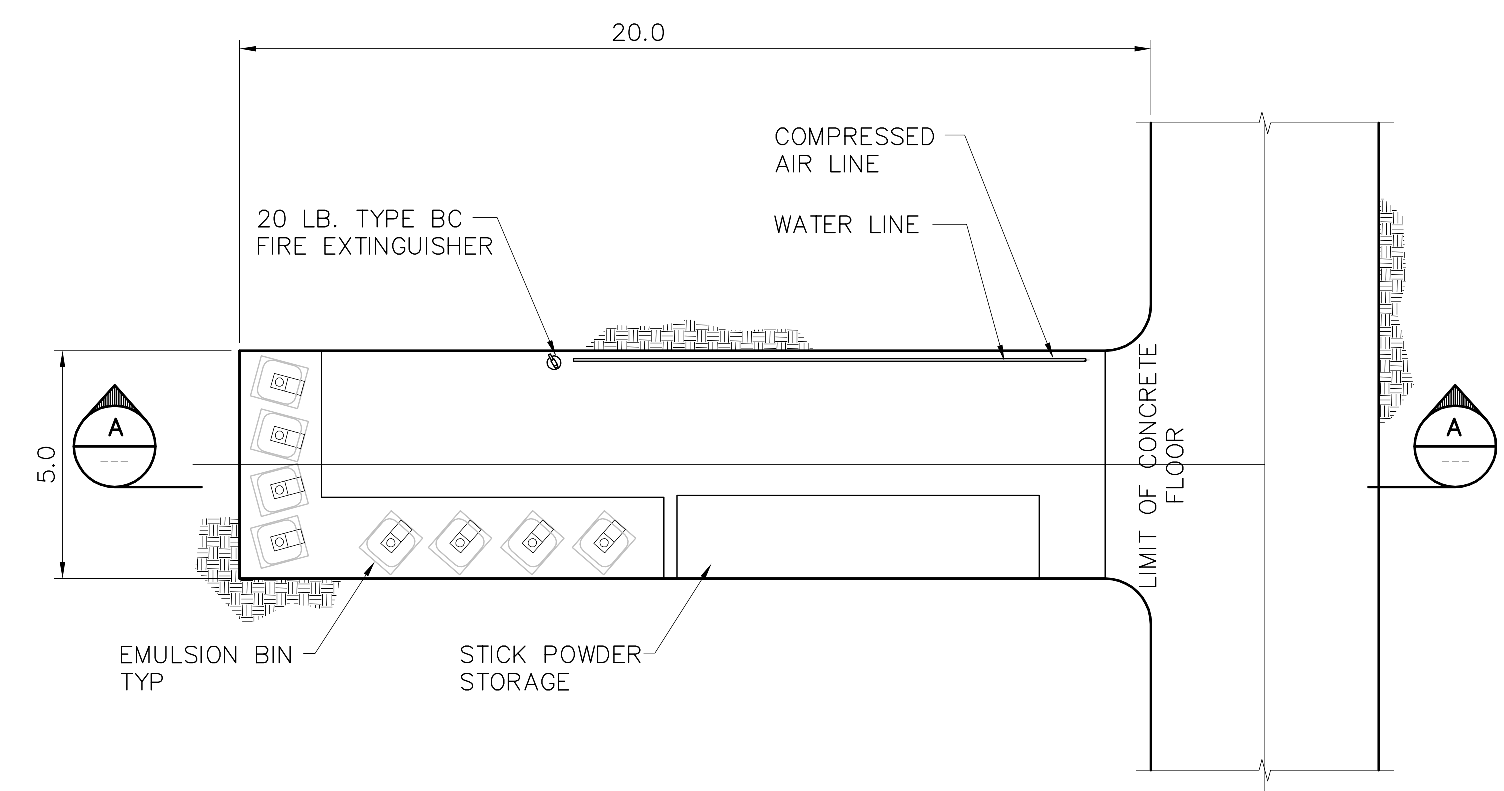
ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

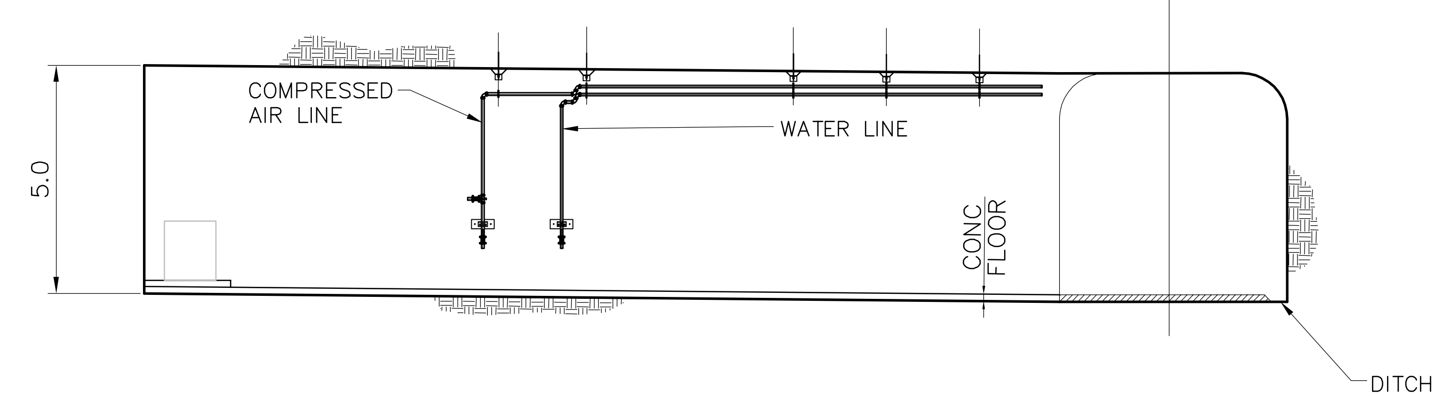
CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: DETONATOR MAGAZINE
GENERAL ARRANGEMENT
PLAN

SCALE: NTS
PROJ. NO. 169513545
DWG. NO. 470–A0001
REV. NO. A

PROJ. NO. 169513545 DWG. NO. 470–A0001 REV. NO. A



PLAN – EXPLOSIVE MAGAZINE



AA SECTION

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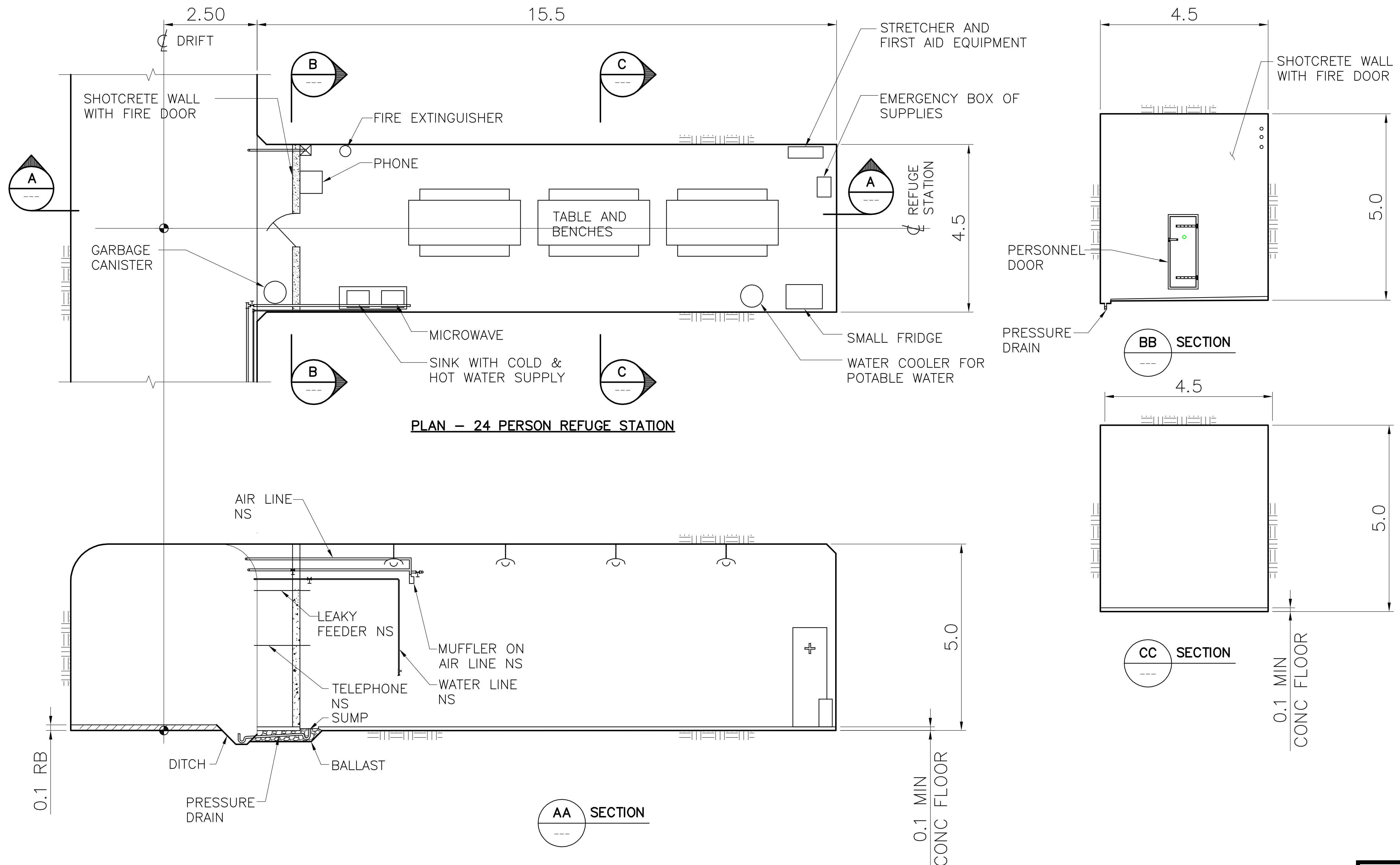
ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: EXPLOSIVE MAGAZINE GENERAL ARRANGEMENT PLAN
SCALE: NTS
PROJ. NO. 169513545
DWG. NO. 470–A0002
REV. NO. A

PROJ. NO. 169513545
DWG. NO. 470–A0002
REV. NO. A



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DWG UPDATED:
BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: REFUGE STATION GENERAL ARRANGEMENT PLAN
SCALE: NTS
PROJ. NO. 169513545
DWG. NO. 470–A0003
REV. NO. A

PROJ. NO. 169513545 DWG. NO. 470–A0003 REV. NO. A

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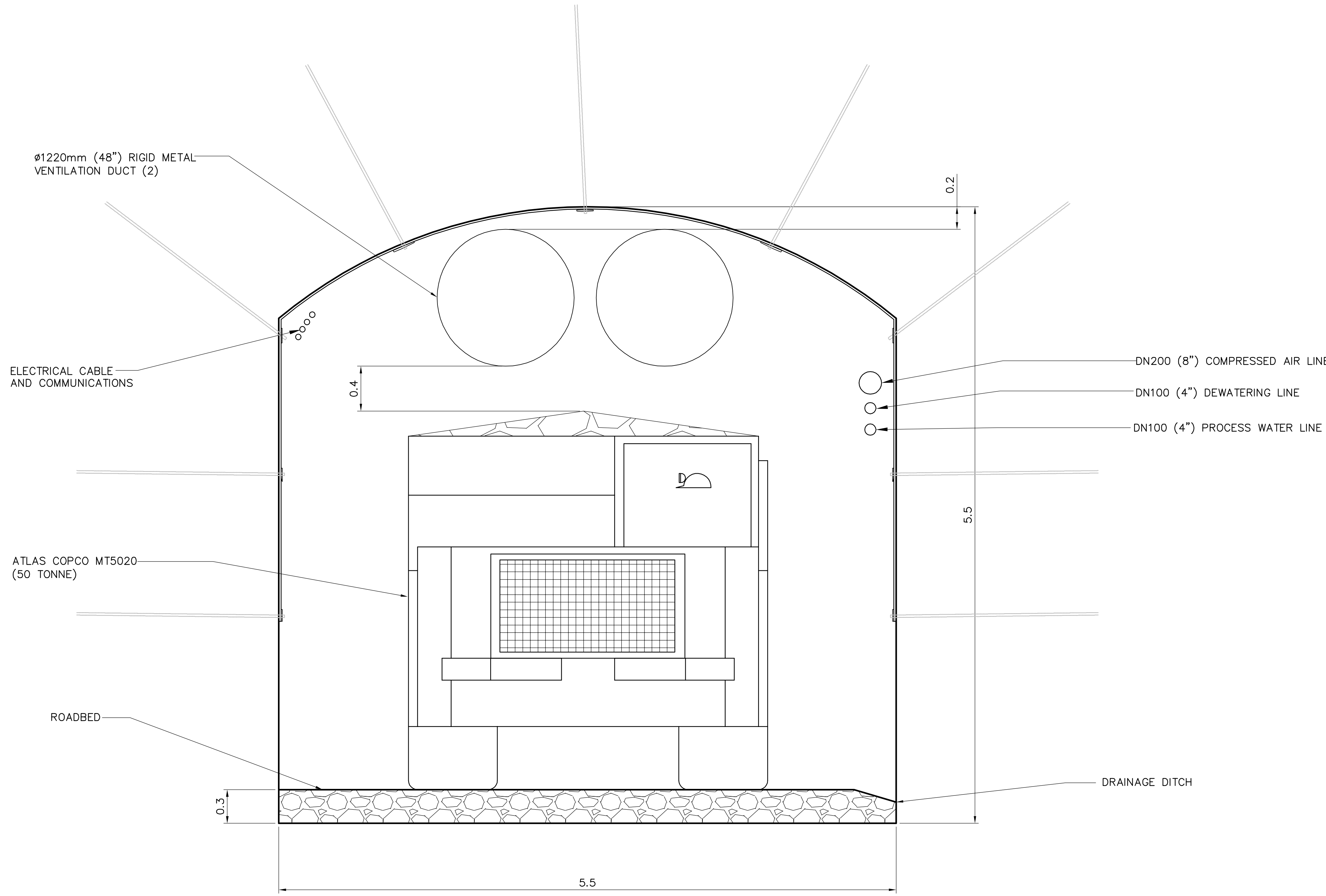

RAMP PROFILE WITH VENTILATION DUCTING & 50 TONNE TRUCK

5.5m WIDE x 5.5m HIGH ARCH BACK DRIFT

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PRELIMINARY

REF. DWG. NO.	REFERENCE DRAWING TITLE	REV.	DESCRIPTION	DATE	BY
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DWG UPDATED:
BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: RAMP PROFILE
5.5m x 5.5m
50 TONNE TRUCK

SCALE: NTS
PROJ. NO. 169513545
DWG. NO. 500–U0001A
REV. NO. A

PROJ. NO. 169513545
DWG. NO. 500–U0001A
REV. NO. A

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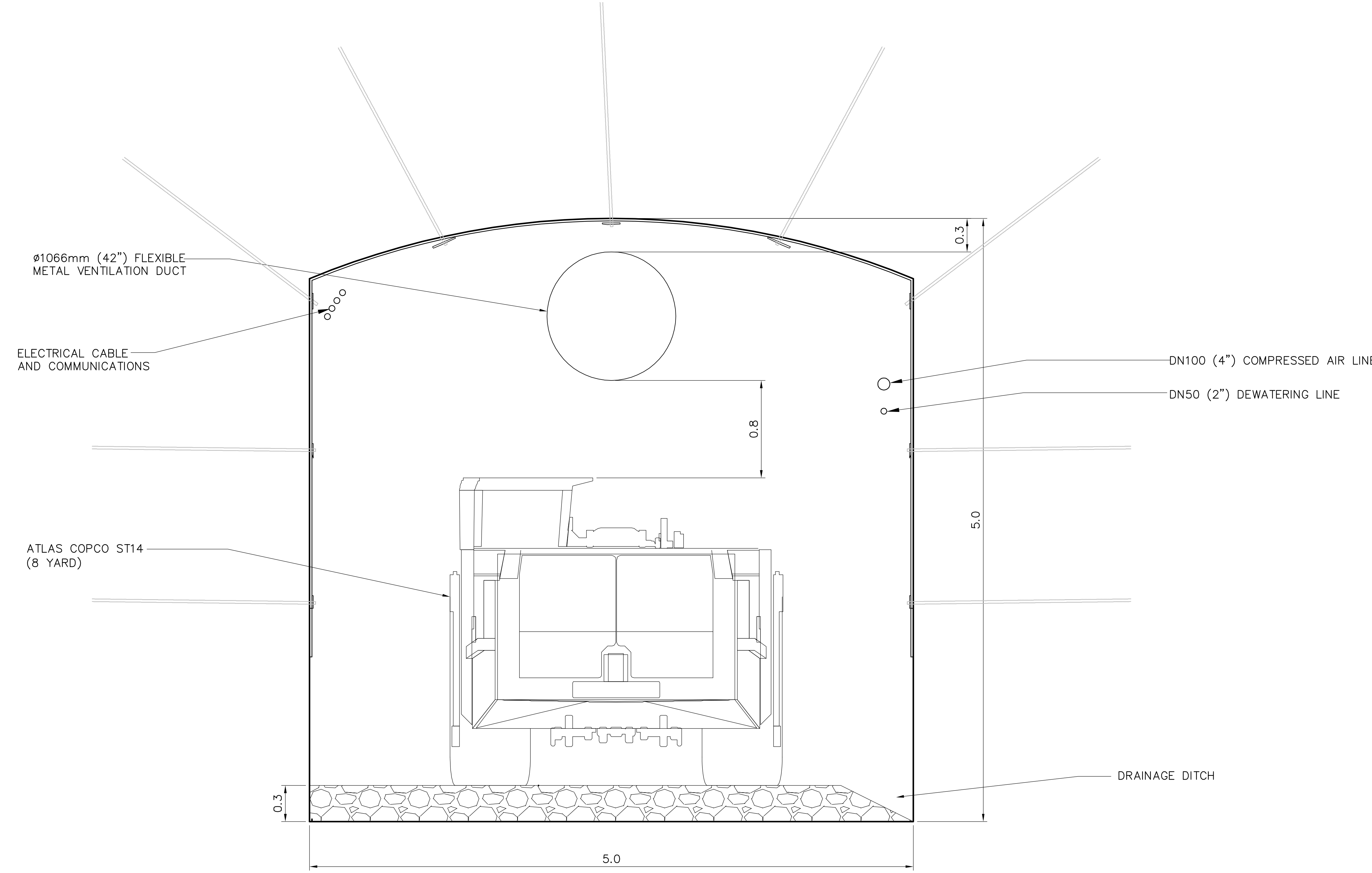

DRIFT PROFILE WITH VENTILATION DUCTING & 8 YARD LHD

5.0m WIDE x 5.0m HIGH ARCH BACK DRIFT (TYPICAL LEVEL)

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BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: DRIFT PROFILE 5.0m x 5.0m DRIFT 8 YARD LHD
SCALE: NTS
PROJ. NO. 169513545
DWG. NO. 500–U0002A
REV. NO. A

PROJ. NO. 169513545 DWG. NO. 500–U0001 REV. NO. A

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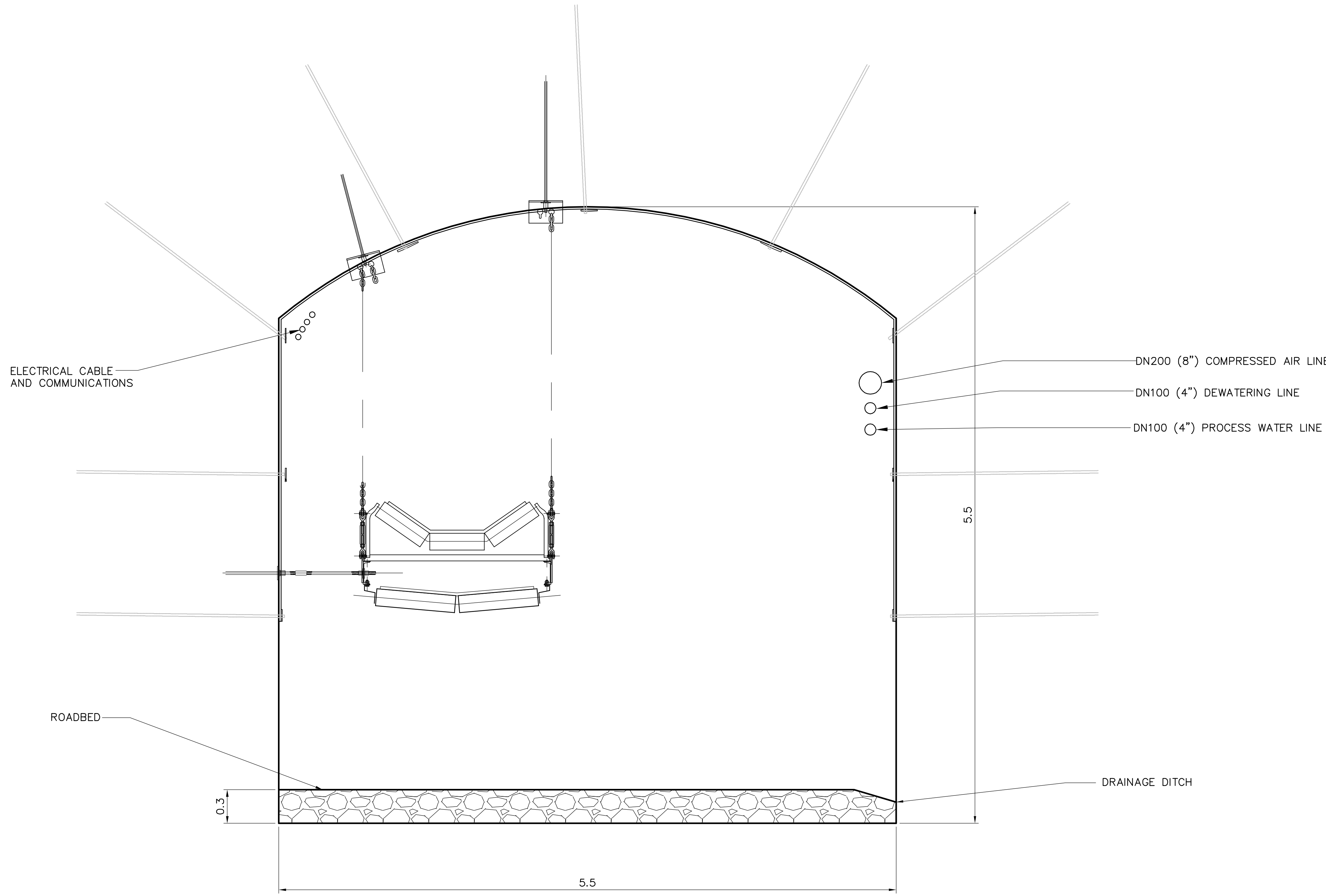

RAMP PROFILE WITH CONVEYOR

5.5m WIDE x 5.5m HIGH ARCH BACK DRIFT

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DWG UPDATED:
BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

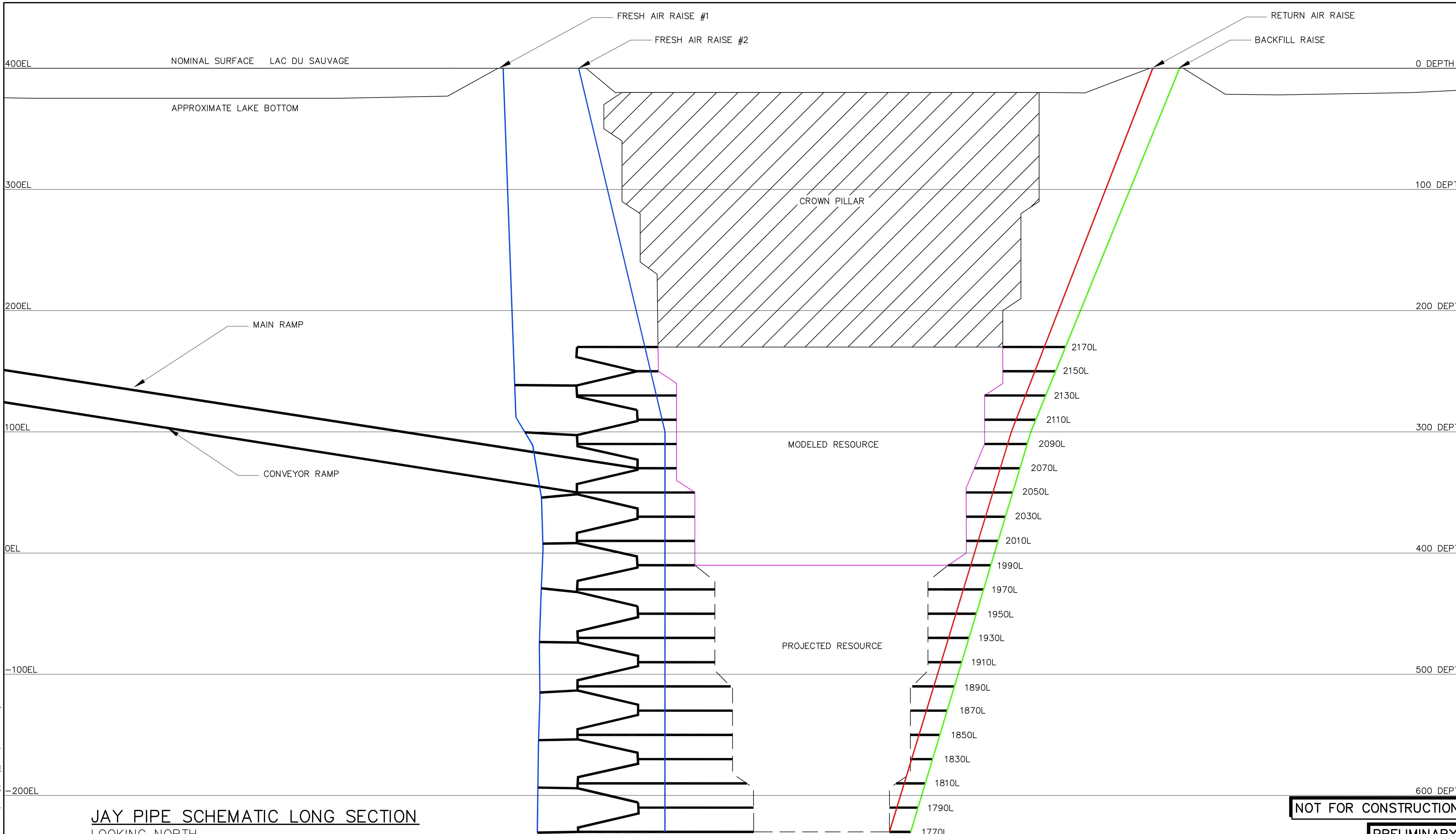
Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: CONVEYOR RAMP PROFILE 5.5m x 5.5m

SCALE: NTS
PROJ. NO. 169513545
DWG. NO. 500–U0003A
REV. NO. A

PROJ. NO. 169513545 DWG. NO. 500–U0003A REV. NO. A

Aug 09, 2013 – 3:00pm \\CD1212–N01U:\169513545\drawing\mining_prelim\500–U0003A.dwg



JAY PIPE SCHEMATIC LONG SECTION

LOOKING NORTH

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BY:

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ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT:
DOMINION DIAMOND

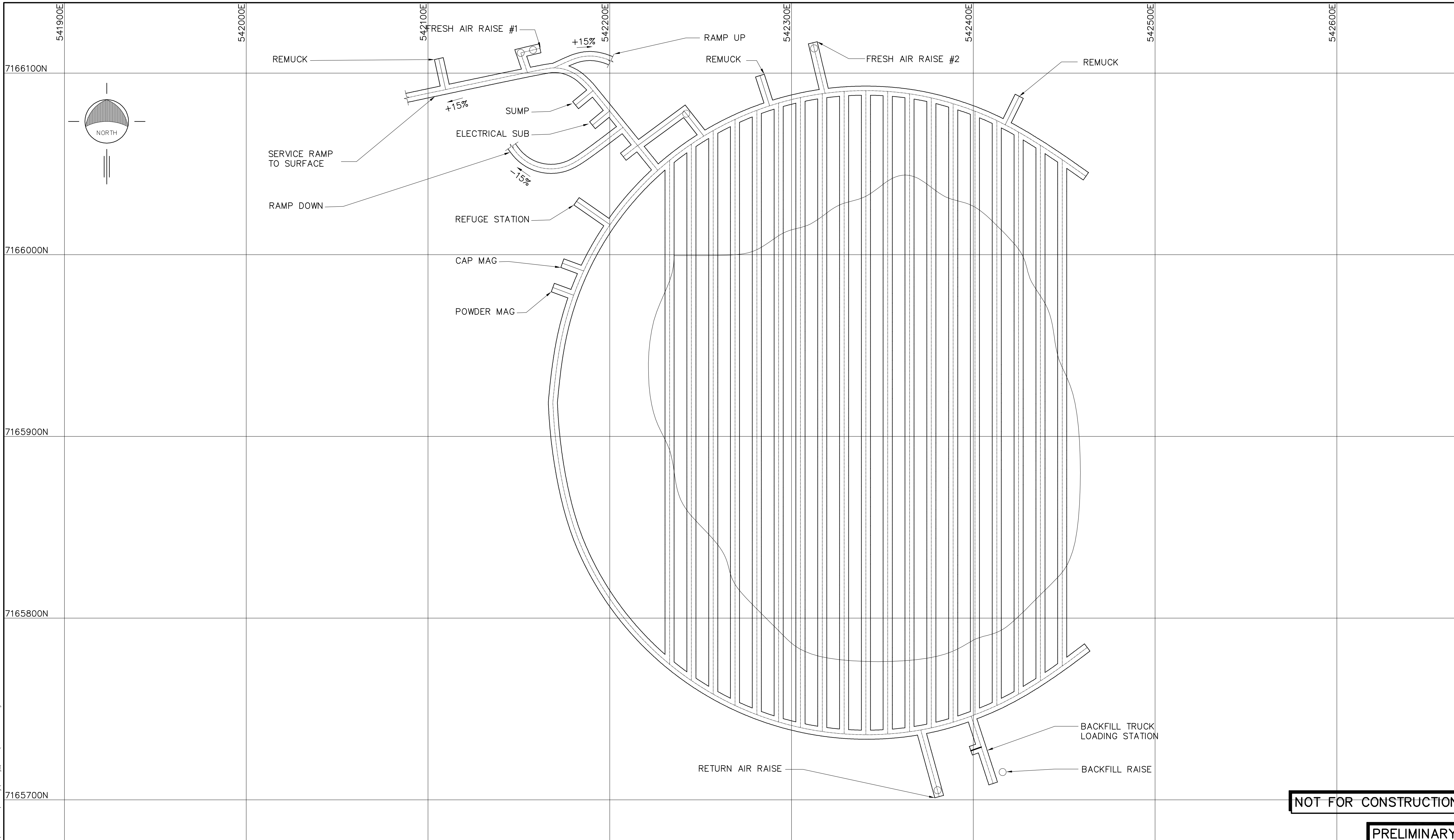
PROPERTY:
JAY PIPE

PROJECT:
CONCEPT STUDY
LONG SECTION

SCALE:	PROJ. NO.	DWG. NO.	REV. NO.
NTS	169513545	510–U0001A	A

PROJ. NO. 169513545 DWG. NO. 510–U0001A REV. NO. A

Aug 09, 2013 – 3:00pm \\CD1212-N01U\169513545\drawing\mining_prelim\510-U0001A.dwg



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PROJ. NO. 169513845 DWG. NO. 000–U0000 REV. NO. A

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DWG UPDATED:
BY:

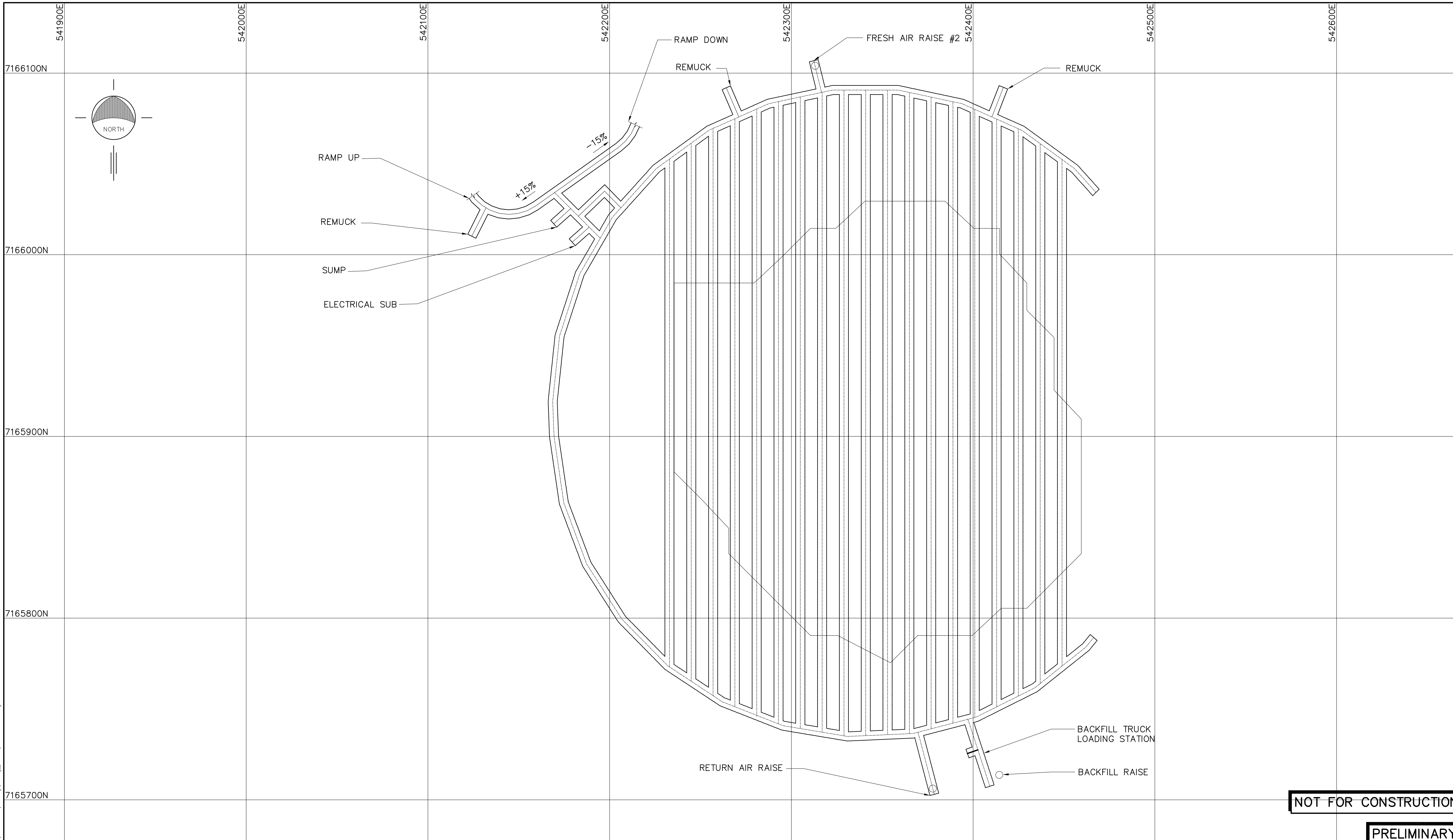
ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: CONCEPT STUDY
2070 L
PLAN

SCALE: 1:1000
PROJ. NO. 169513545
DWG. NO. 520–U0001A
REV. NO. A

Aug 09, 2013 – 3:00pm \\CD1212–N01U\169513545\drawing\mining_prelim\520–U0001A.dwg



REF. DWG. NO.	REFERENCE DRAWING TITLE	REV.	DESCRIPTION	DATE	BY
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DWG UPDATED:
BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: CONCEPT STUDY TYPICAL SUBLEVEL PLAN

SCALE: 1:1000 | PROJ. NO. 169513545 | DWG. NO. 520–U0003A | REV. NO. A

PROJ. NO. 169513845 | DWG. NO. 520–U0003A | REV. NO. A

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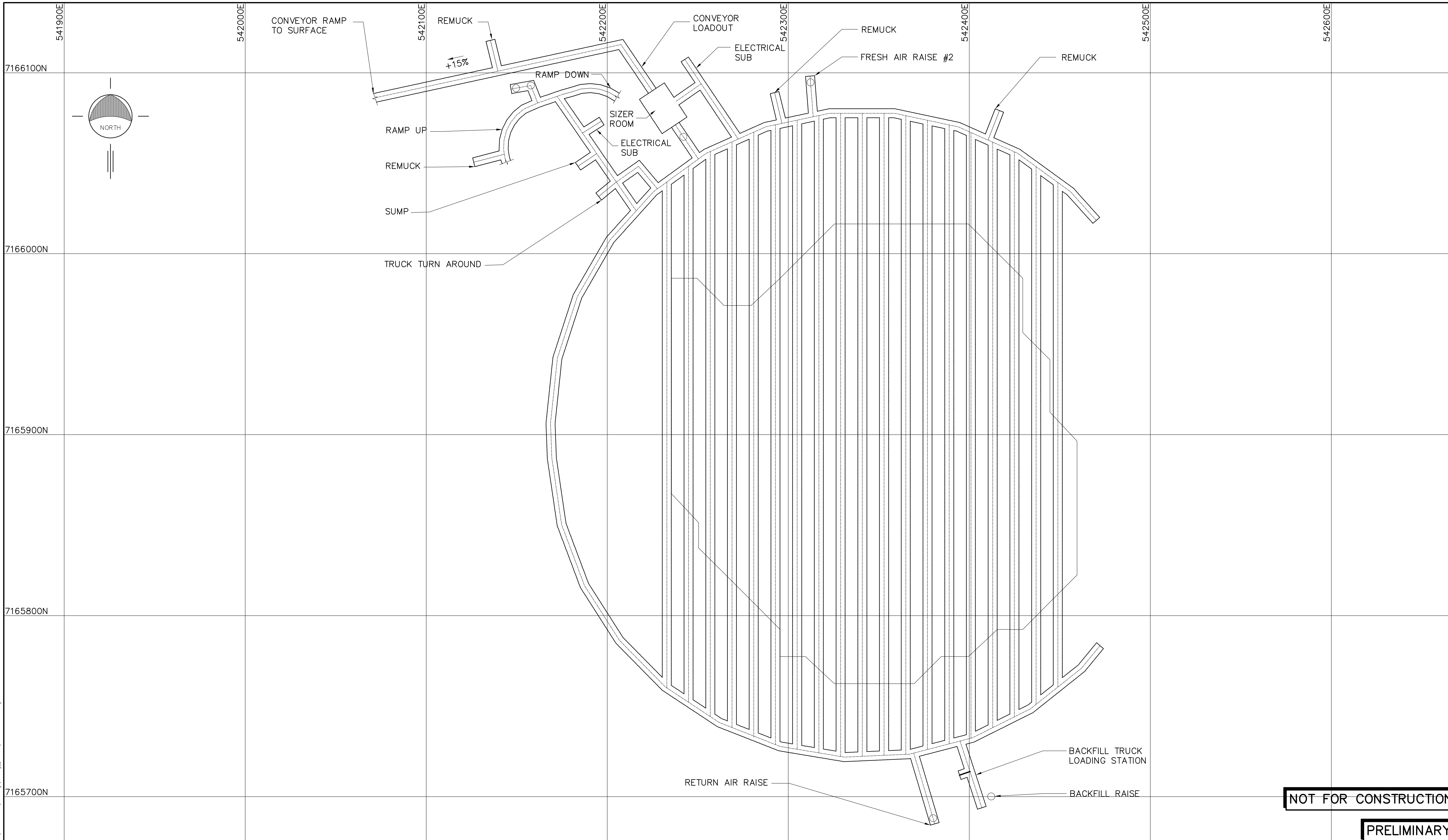

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PRELIMINARY

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DWG UPDATED:
BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: CONCEPT STUDY 2050 L PLAN

SCALE: 1:1000
PROJ. NO. 169513545
DWG. NO. 520–U0002A
REV. NO. A

PROJ. NO. 169513845
DWG. NO. 520–U0002A
REV. NO. A

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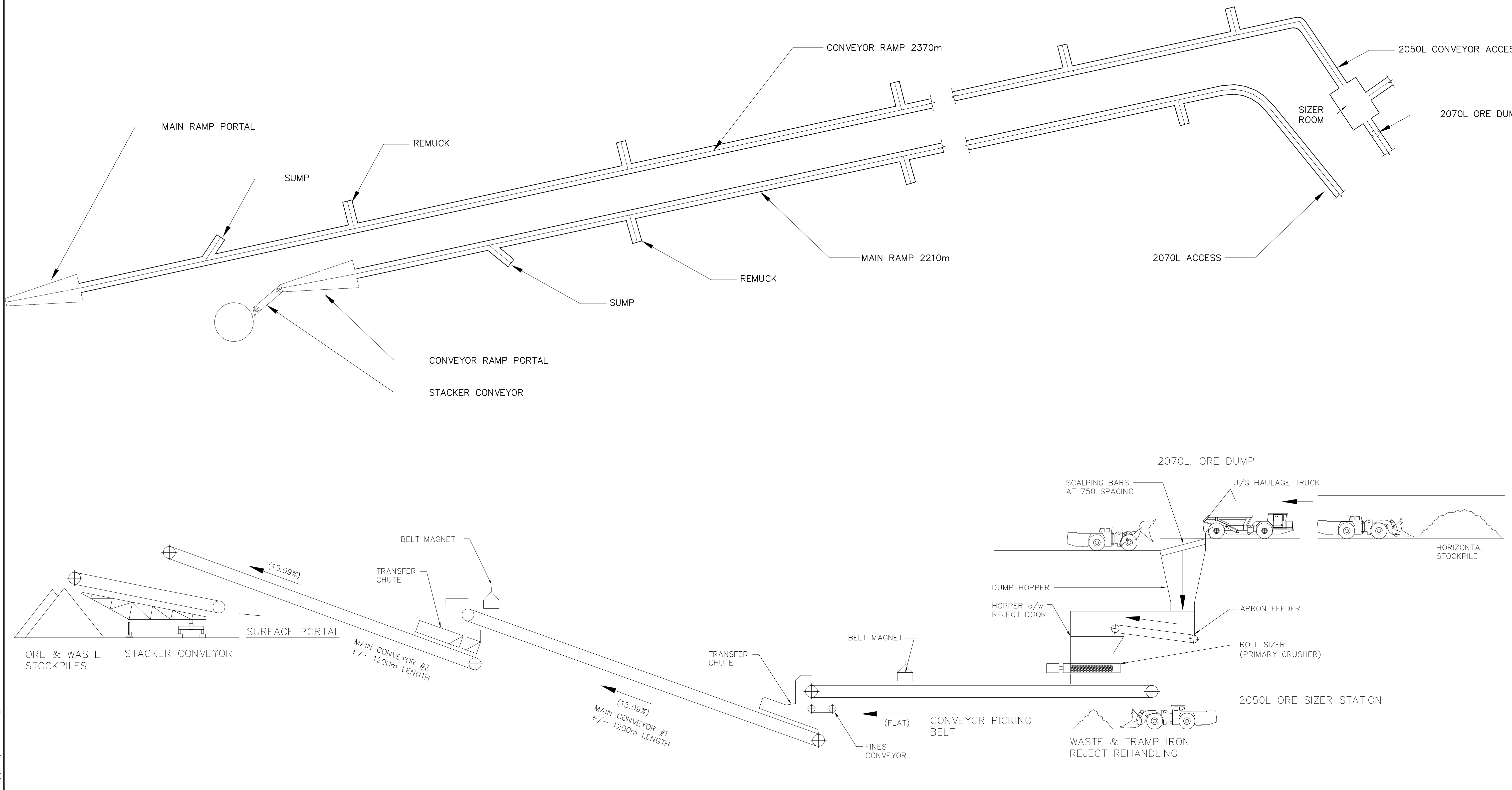

FLOW DIAGRAM

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DWG UPDATED:
BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

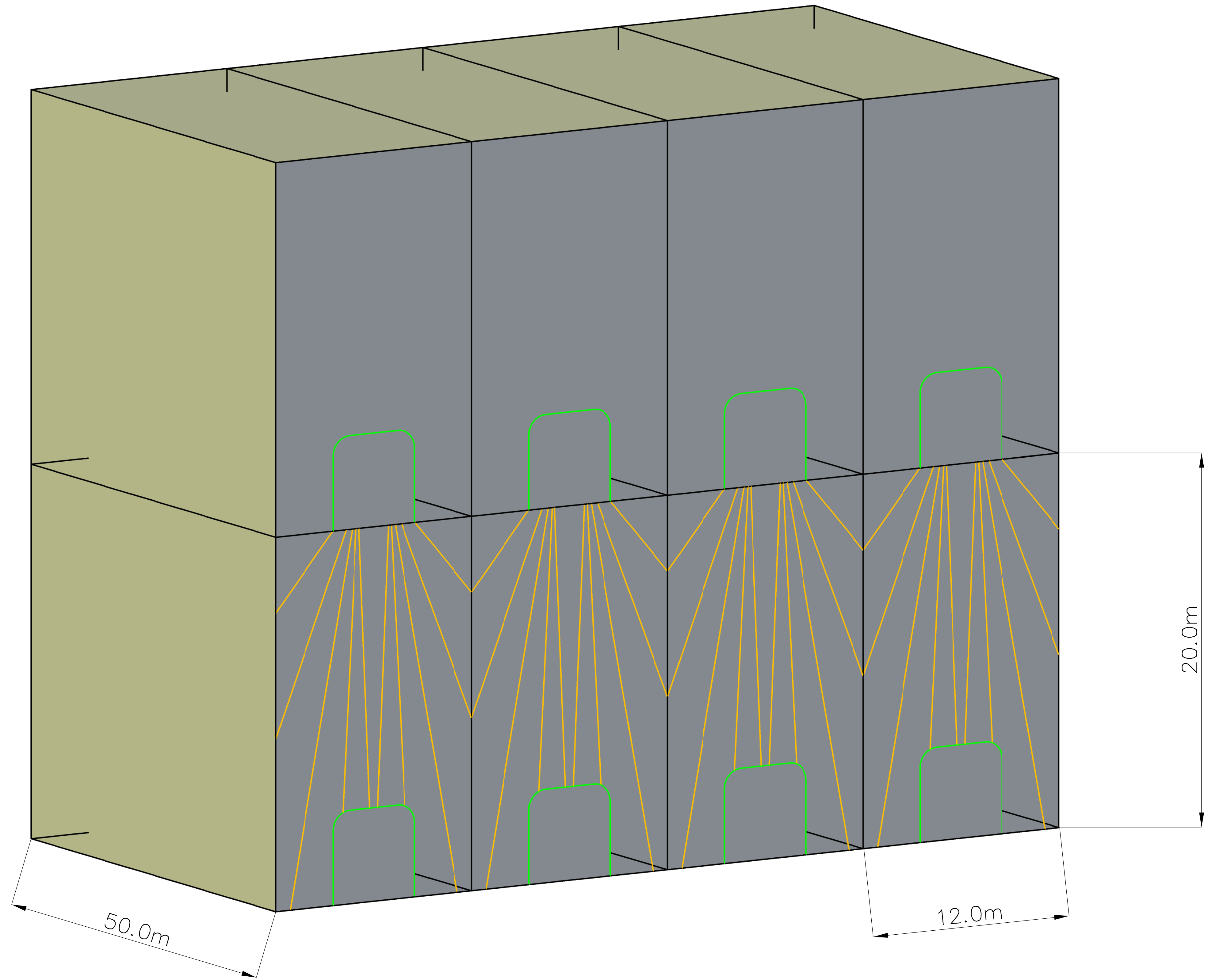
Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: CONCEPT STUDY
FLOW DIAGRAM
ORE HANDLING SYSTEM

SCALE: NTS
PROJ. NO. 169513845
DWG. NO. 520–U0004A
REV. NO. A

PROJ. NO. 169513845
DWG. NO. 520–U0004A
REV. NO. A

Aug 09, 2013 – 3:01pm \\CD1212–N01U:\169513845\drawing\mining_prelim\520–U0004A.dwg



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REF. DWG. NO.	REFERENCE DRAWING TITLE	REV.	DESCRIPTION	DATE	BY
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PROGRESS PRINT
DWG UPDATED:
BY:

ORIGINAL DRAWN BY: MDL
DATE: 2013.08.01

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: MINING METHOD STOPE PROFILE 12m x 20m STOPE

SCALE:	PROJ. NO.	DWG. NO.	REV. NO.
NTS	169513545	530–U0001A	A

PROJ. NO. 169513545
DWG. NO. 530–U0001A
REV. NO. A

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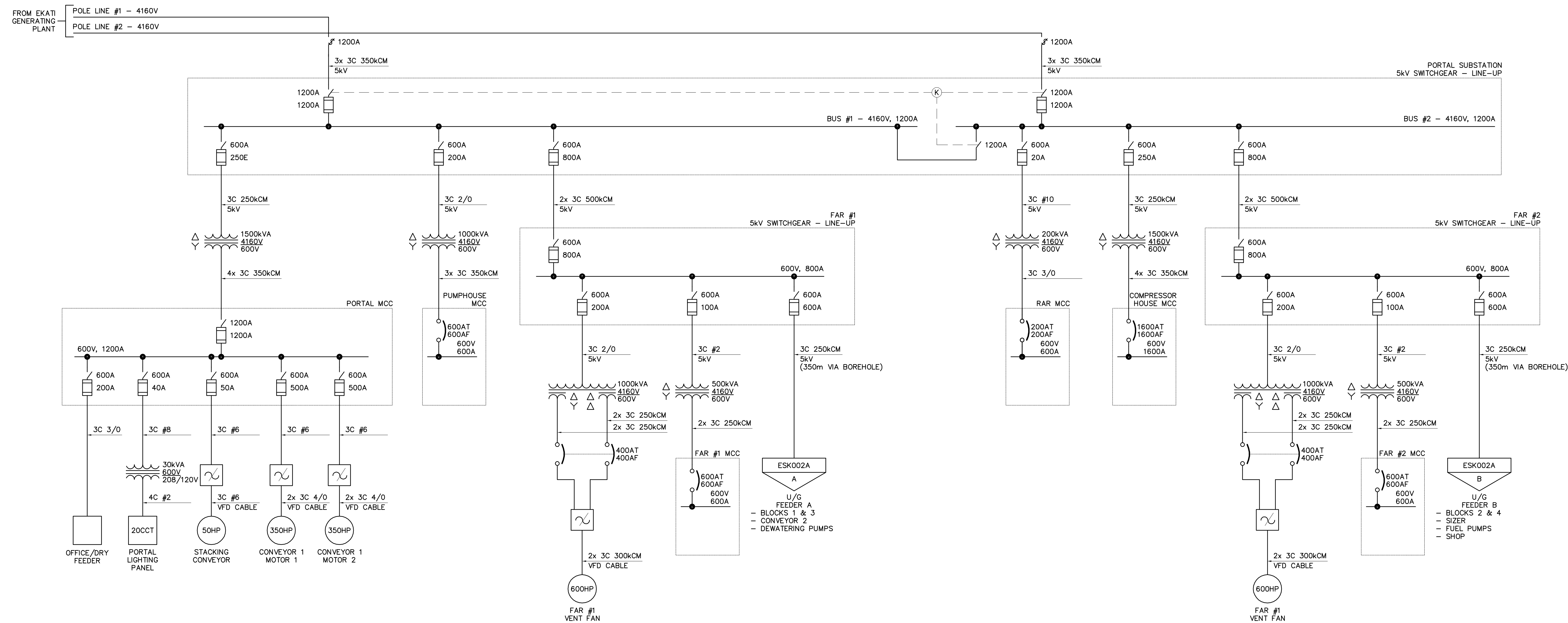

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PROGRESS PRINT
DWG UPDATED: 31.07.13
BY: ADP

ORIGINAL DRAWN BY: ADP
DATE: 2013.07.31

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: CONCEPT STUDY MINE SERVICES ELECTRICAL RISER DIAGRAM

SCALE: NTS | PROJ. NO. 169513545 | DWG. NO. ESK001A | REV. NO. A

PROJ. NO. 169513545 DWG. NO. ESK001A REV. NO. A

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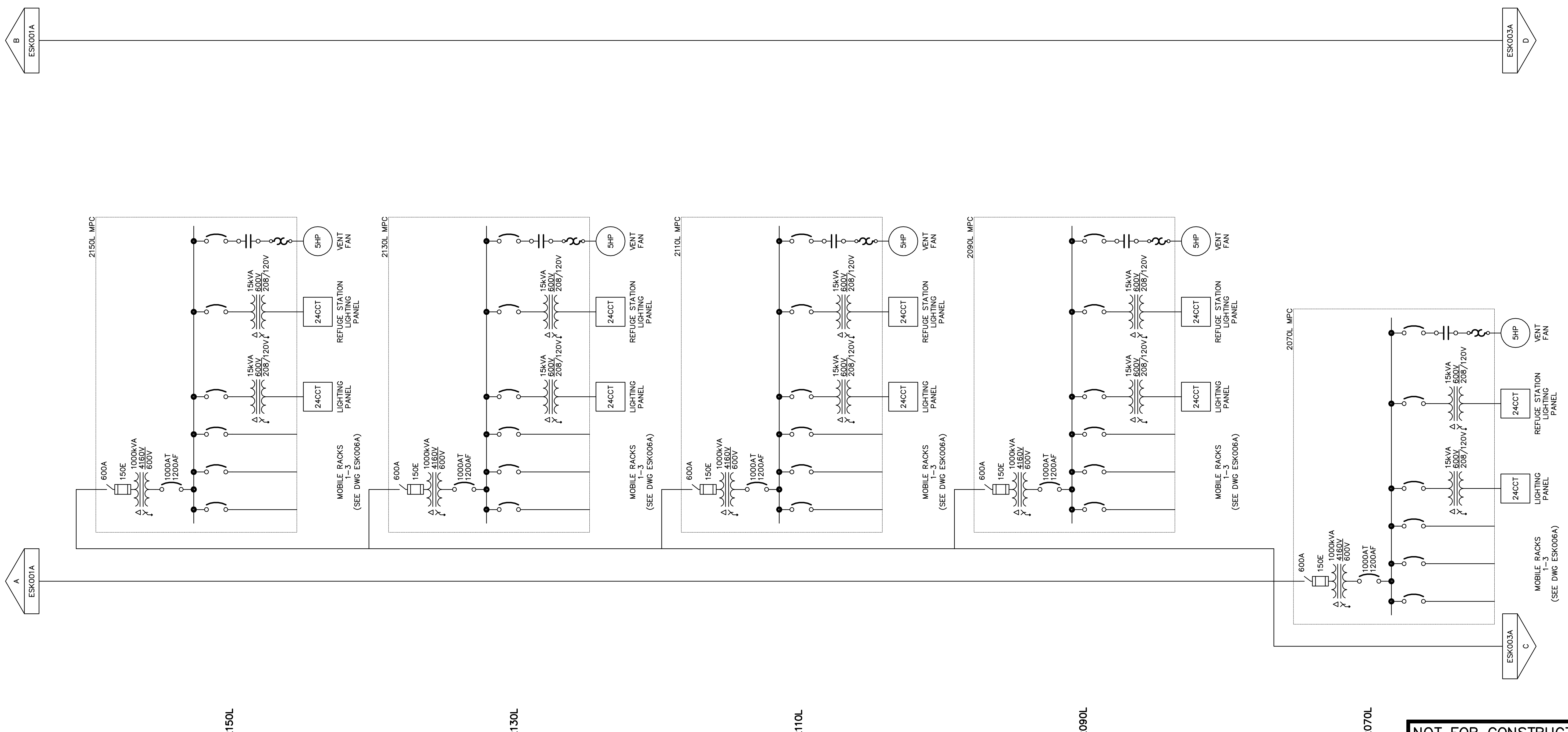

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PROJ. NO. 169513545 DWG. NO. ESK002A REV. NO. A

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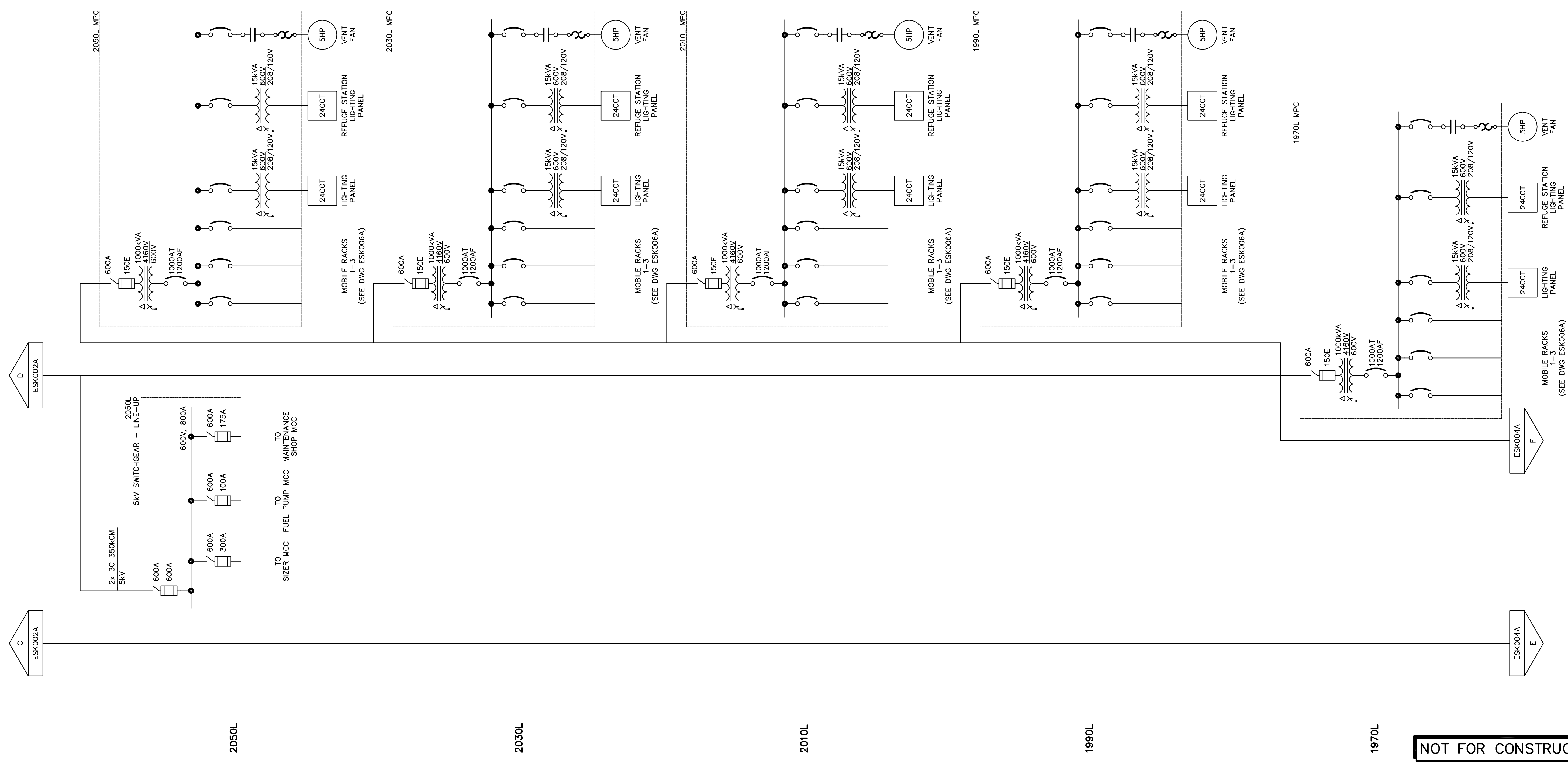
PROGRESS PRINT
DWG UPDATED: 13.08.02
BY: ADP

ORIGINAL DRAWN BY: ADP
DATE: 2013.08.02

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: CONCEPT STUDY
MINE SERVICES
BLOCK 1 (2070L, 2090L, 2110L, 2130L & 2150L)
RISER DIAGRAM

SCALE:	PROJ. NO.	DWG. NO.	REV. NO.
NTS	169513545	ESK002A	A



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DWG UPDATED: 13.08.02
BY: ADP

ORIGINAL DRAWN BY: ADP
DATE: 2013.08.02

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: CONCEPT STUDY
MINE SERVICES
BLOCK 2 (1970L, 1990L, 2010L, 2030L & 2050L)
RISER DIAGRAM

SCALE:	PROJ. NO.	DWG. NO.	REV. NO.
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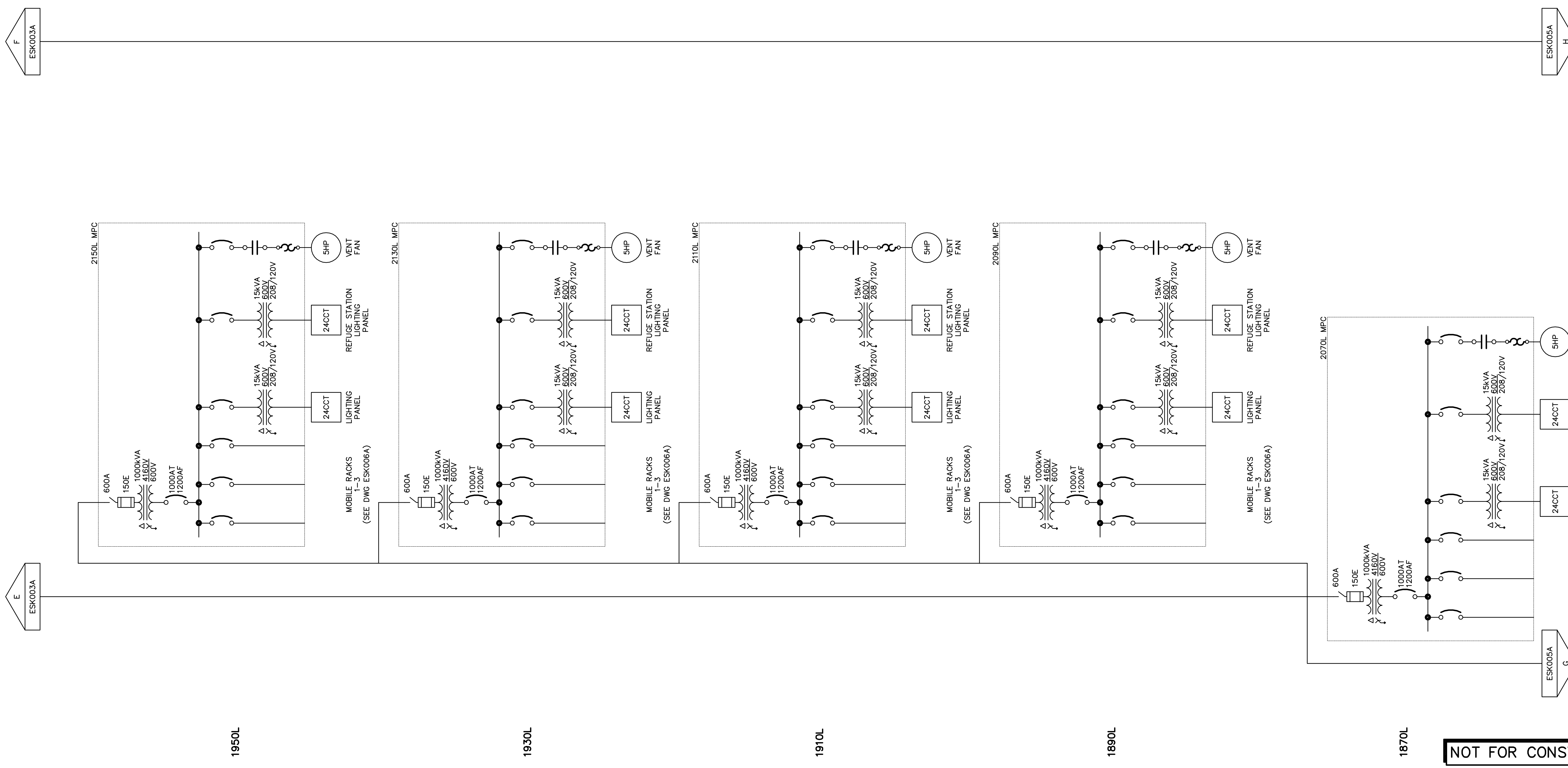
PROJ. NO. 169513545
DWG. NO. ESK003A
REV. NO. A



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PRELIMINARY

REF. DWG. NO.	REFERENCE DRAWING TITLE
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REV.	DESCRIPTION	DATE	BY	CHIEF DSGR. / CHECK	DSGN. ENG. / PR.MGR
A	PRELIMINARY –				

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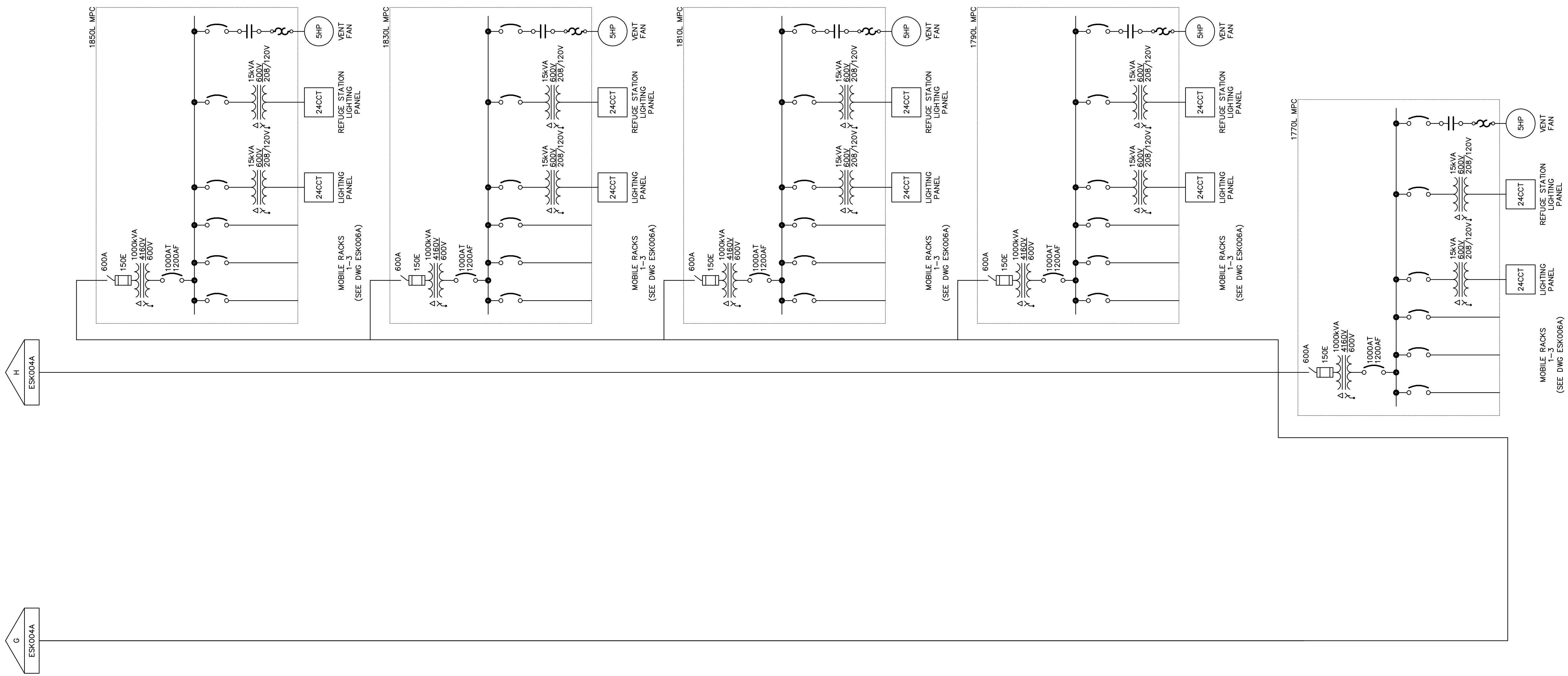
DWG UPDATED: 13.08.02
BY: ADP

ORIGINAL DRAWN BY: ADP
DATE: 2013.08.02

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: CONCEPT STUDY
MINE SERVICES
BLOCK 3 (1870L, 1890L, 1910L, 1930L & 1950L)
RISER DIAGRAM

SCALE:	PROJ. NO.	DWG. NO.	REV. NO.
NTS	169513545	ESK004A	A

PROJ. NO. 169513545
DWG. NO. ESK004A
REV. NO. A



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DWG UPDATED: 13.08.02
BY: ADP

ORIGINAL DRAWN BY: ADP
DATE: 2013.08.02

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: CONCEPT STUDY
MINE SERVICES
BLOCK 4 (1770L, 1790L, 1810L, 1830L & 1850L)
RISER DIAGRAM

SCALE: NTS
PROJ. NO. 169513545
DWG. NO. ESK005A
REV. NO. A

PROJ. NO. 169513545
DWG. NO. ESK005A
REV. NO. A

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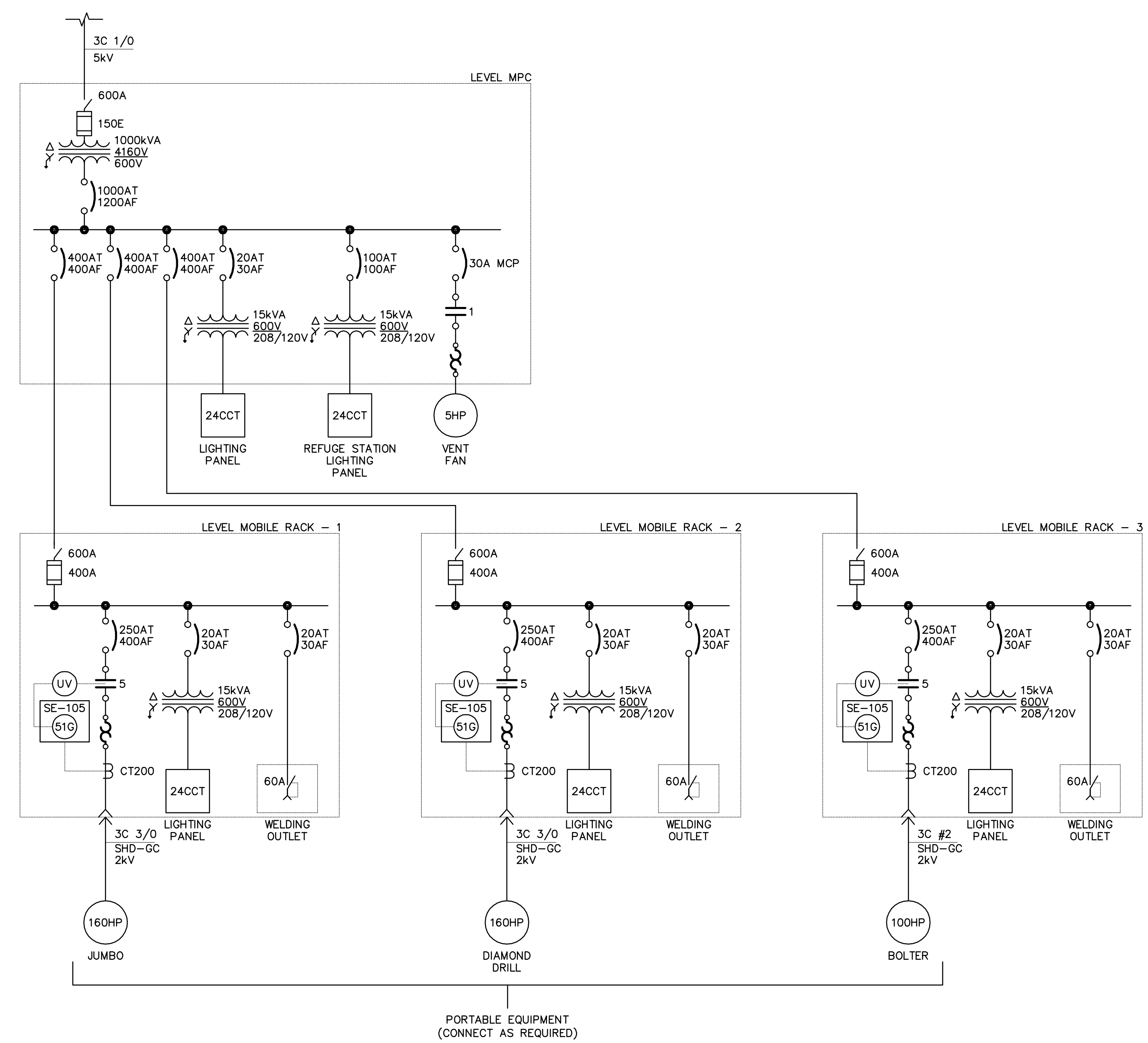

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PRELIMINARY

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PROGRESS PRINT
DWG UPDATED: 13.08.02
BY: ADP

ORIGINAL DRAWN BY: ADP
DATE: 2013.08.02

Stantec

CLIENT: DOMINION DIAMOND
PROPERTY: JAY PIPE
PROJECT: CONCEPT STUDY
MINE SERVICES
ELECTRICAL – LEVEL MOBILE RACK
RISER DIAGRAM (TYPICAL)

SCALE: NTS | PROJ. NO. 169513545 | DWG. NO. ESK006A | REV. NO. A

PROJ. NO. 169513545
DWG. NO. ESK006A
REV. NO. A

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APPENDIX B

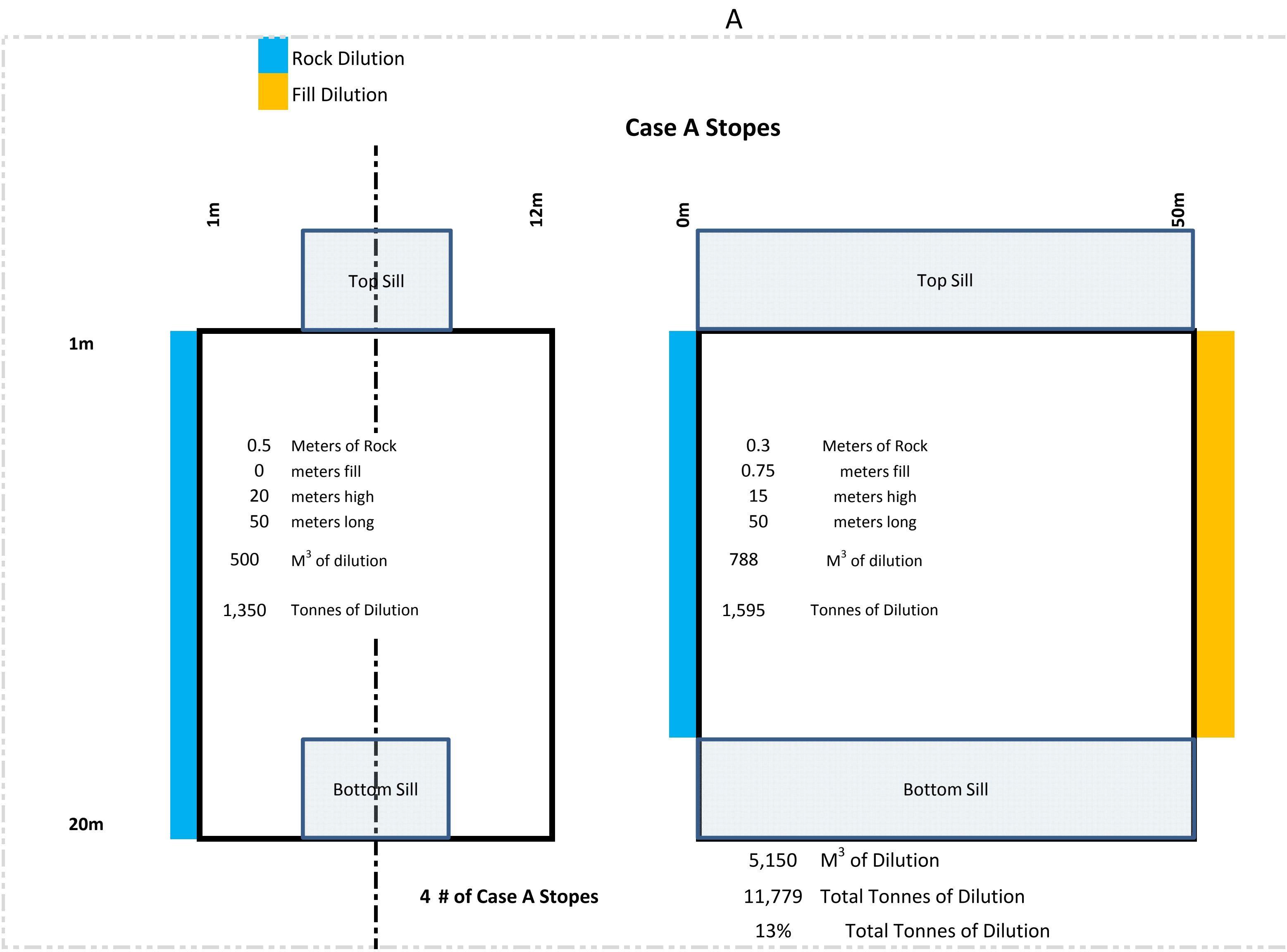
STOPE DILUTION CALCULATIONS

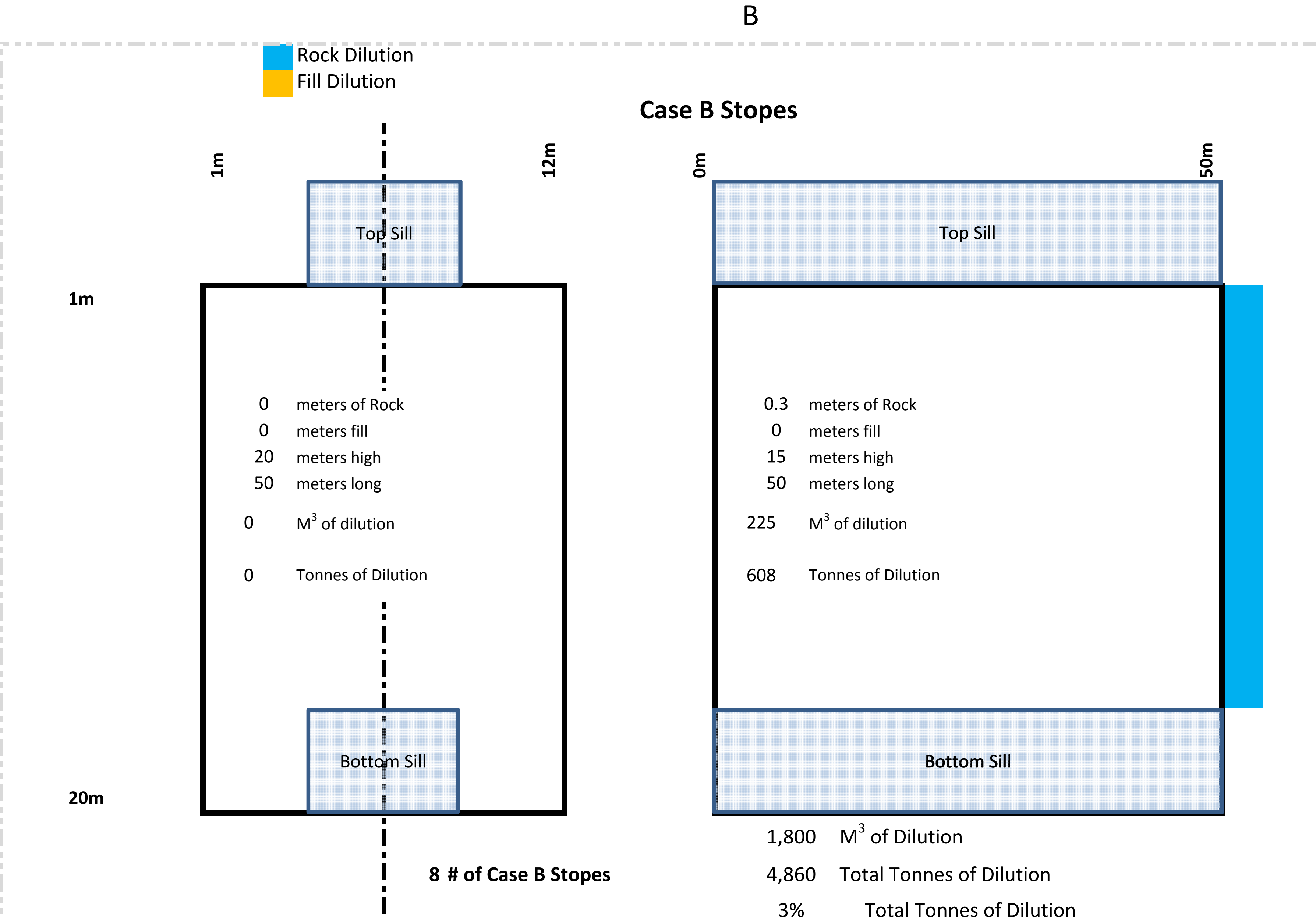
External Dilution Table

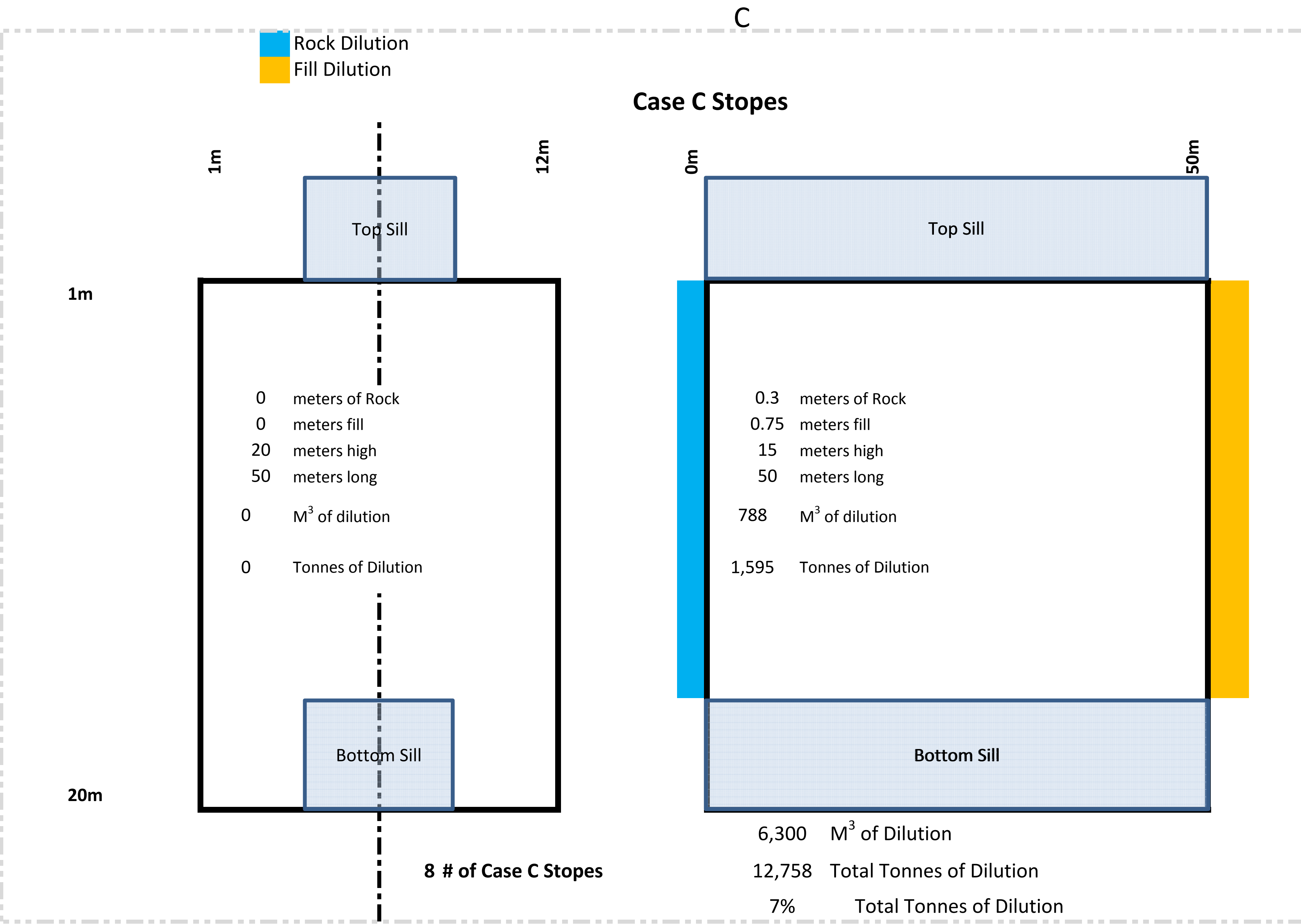
Dilution Type	Description	Number of Stopes	Location of Dilution	Rock	Fill	Dilution Tonnes	Stope Tonnes	Percent Dilution	Volume
A	Primary/Secondary Corner Stopes	4	Stope Wall	1		11,779	101,408	12%	5,150
			Stope Face	1	1				
B	Primary/Secondary Starter Stopes	8	Stope Wall			4,860	184,118	3%	1,800
			Stope Face	1					
C	Primary/Secondary Finisher Stopes	8	Stope Wall			12,758	192,016	7%	6,300
			Stope Face	1	1				
D	Primary/Secondary Outsiders Stopes	6	Stope Wall	1		14,023	148,467	9%	6,375
			Stope Face		1				
E	Primary/Secondary Inside Stopes	24	Stope Wall			31,590	569,364	6%	18,000
			Stope Face		1				
F	Tertiary Starter Stopes	9	Stope Wall		2	29,160	230,825	13%	15,525
			Stope Face	1					
G	Tertiary Finsher Stopes	9	Stope Wall		2	41,690	243,355	17%	21,938
			Stope Face	1	1				
H	Tertiary Inside Stopes	27	Stope Wall		2	97,732	702,727	14%	55,688
			Stope Face		1				
	Total	95				**243,591**	**2,372,279**	**11%**	130,775

Density

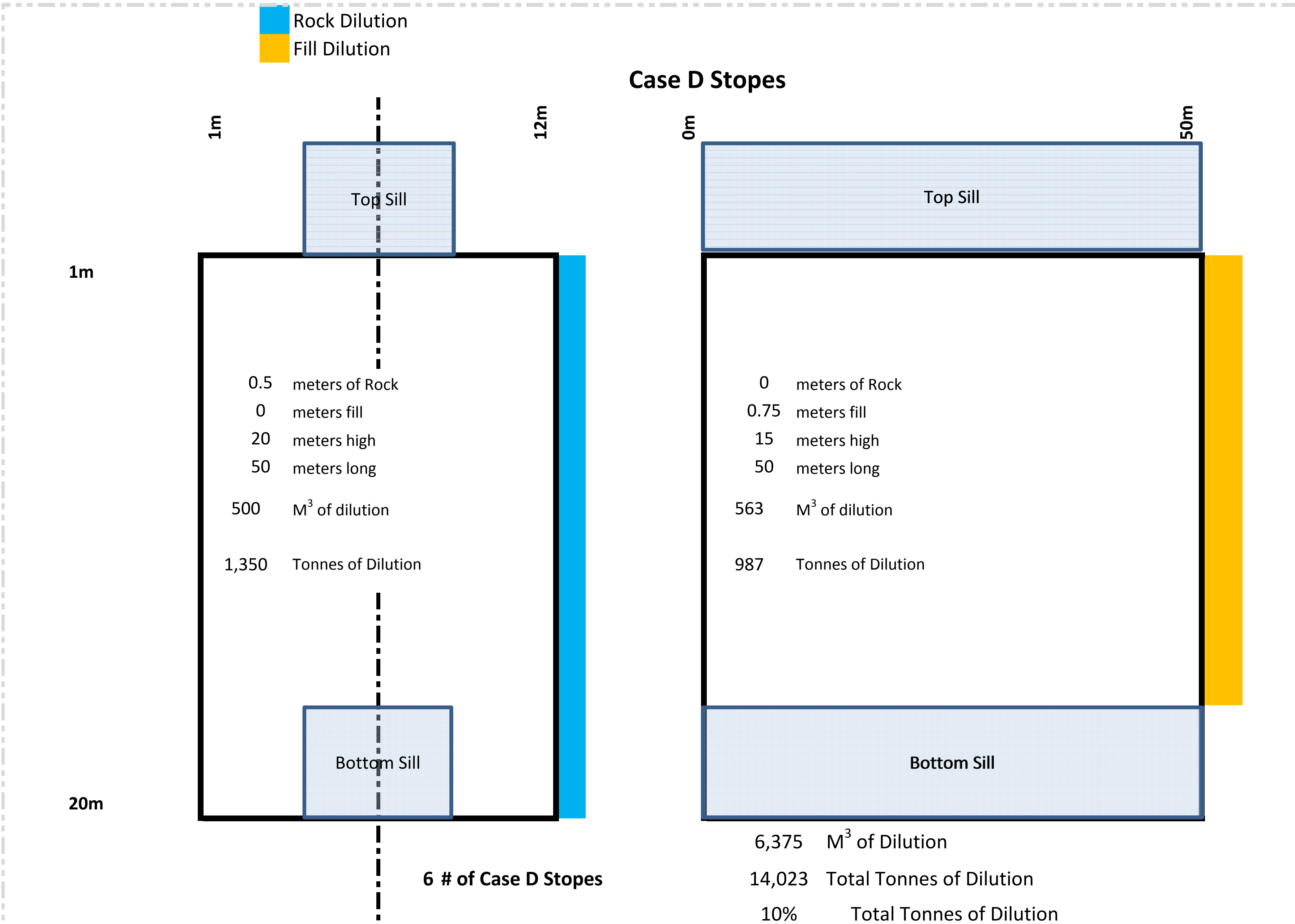
Filling Ratio	65%
Fill	1.76
Rock	2.70
Overall % Dil	**11%**



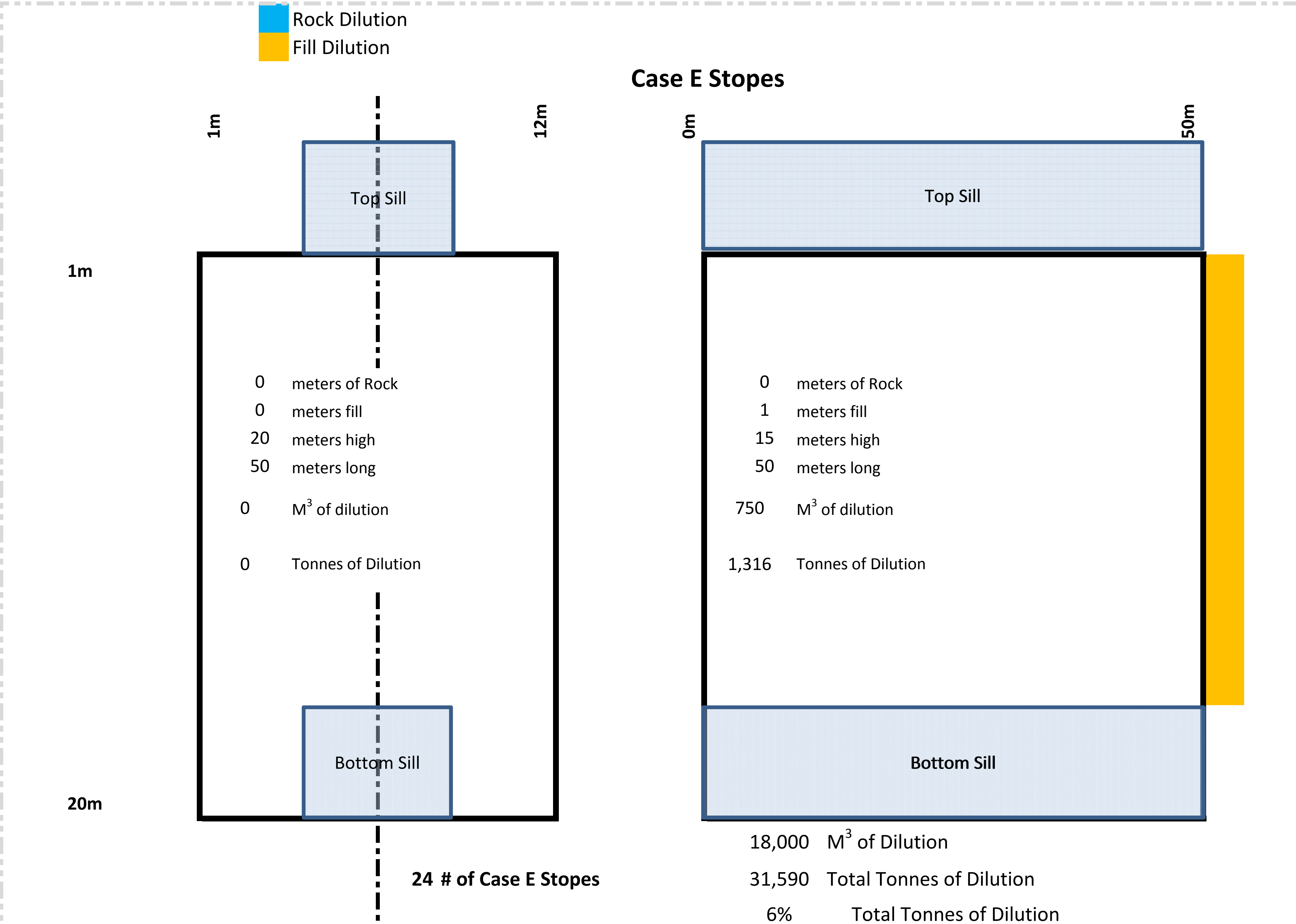

B
Rock Dilution
Fill Dilution
Case B Stopes
1m
12m
0m
50m
Top Sill
Top Sill
1m
0 meters of Rock
0 meters fill
20 meters high
50 meters long
0 M3 of dilution
0 Tonnes of Dilution
0.3 meters of Rock
0 meters fill
15 meters high
50 meters long
225 M3 of dilution
608 Tonnes of Dilution
Bottom Sill
Bottom Sill
20m
1,800 M3 of Dilution
8 # of Case B Stopes
4,860 Total Tonnes of Dilution
3% Total Tonnes of Dilution

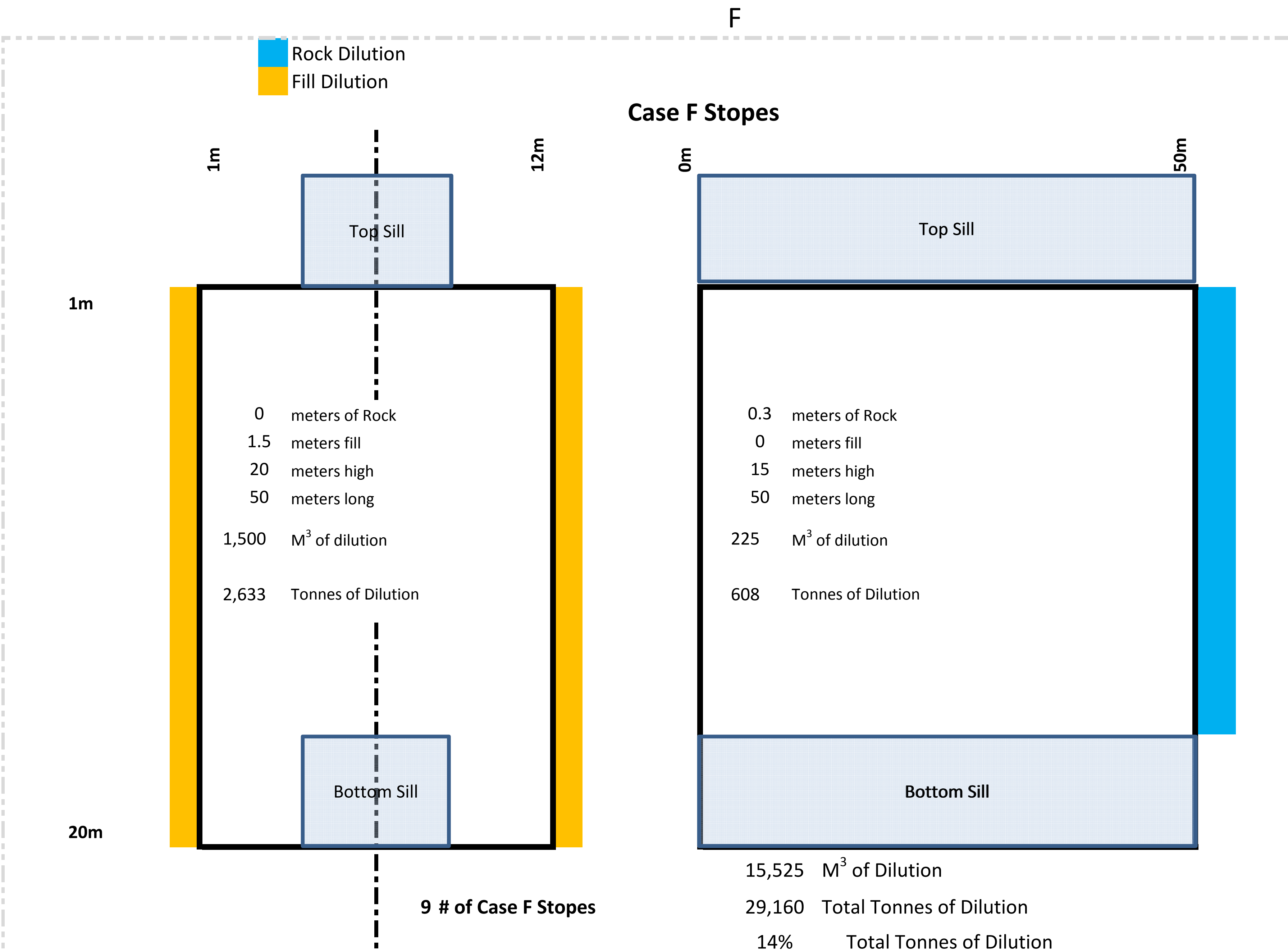

C
Rock Dilution
Fill Dilution
Case C Stopes
1m
12m
0m
50m
Top Sill
Top Sill
1m
0 meters of Rock
0 meters fill
20 meters high
50 meters long
0 M3 of dilution
0 Tonnes of Dilution
0.3 meters of Rock
0.75 meters fill
15 meters high
50 meters long
788 M3 of dilution
1,595 Tonnes of Dilution
Bottom Sill
Bottom Sill
20m
6,300 M3 of Dilution
8 # of Case C Stopes
12,758 Total Tonnes of Dilution
7% Total Tonnes of Dilution

D

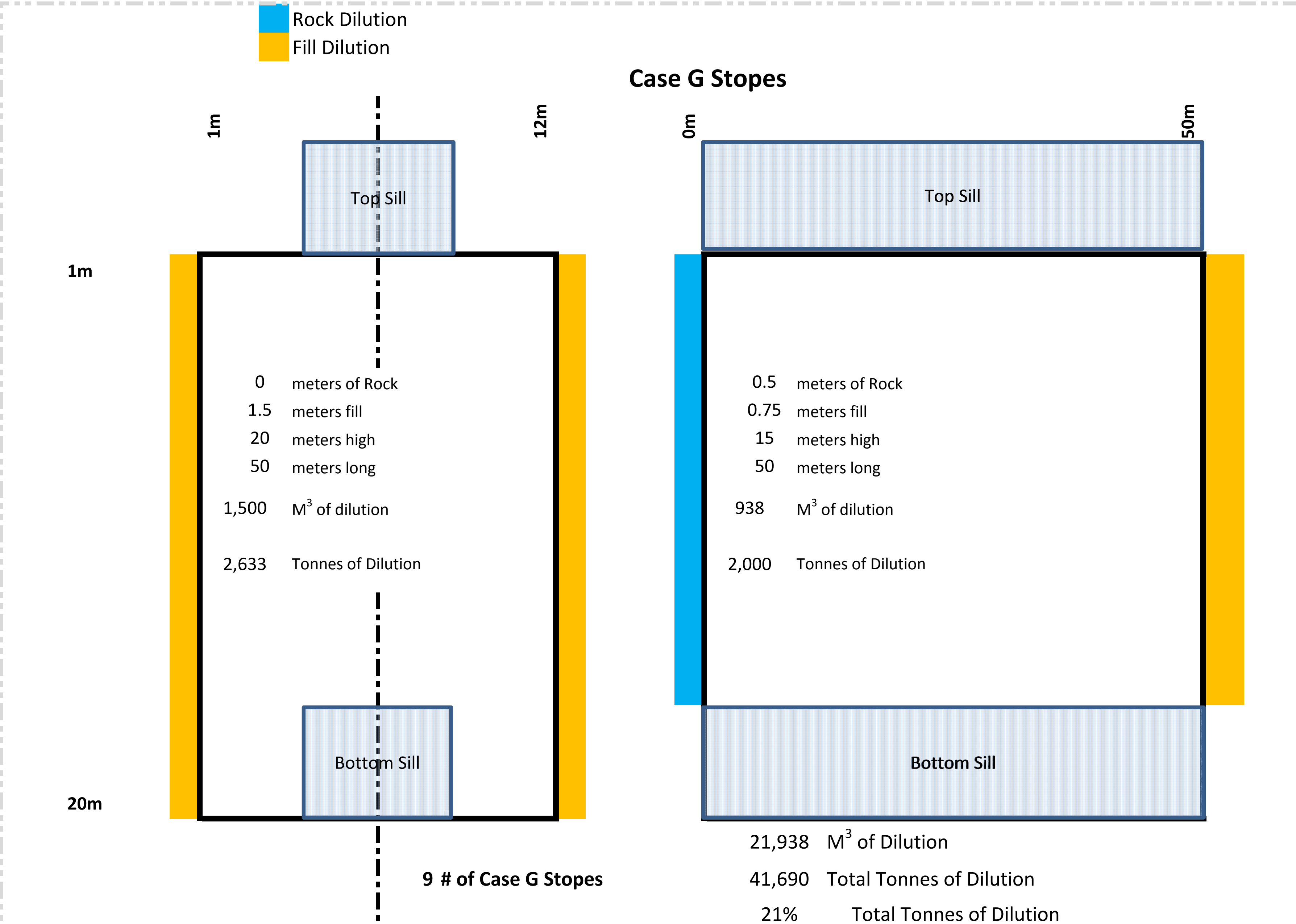

Rock Dilution
Fill Dilution
Case D Stopes
1m
12m
0m
50m
Top Sill
Top Sill
1m
20m
0.5 meters of Rock
0 meters fill
20 meters high
50 meters long
500 M3 of dilution
1,350 Tonnes of Dilution
0 meters of Rock
0.75 meters fill
15 meters high
50 meters long
563 M3 of dilution
987 Tonnes of Dilution
Bottom Sill
Bottom Sill
6,375 M3 of Dilution
6 # of Case D Stopes
14,023 Total Tonnes of Dilution
10% Total Tonnes of Dilution

E


Rock Dilution
Fill Dilution
Case E Stopes
1m
12m
0m
50m
Top Sill
Top Sill
1m
0 meters of Rock
0 meters fill
20 meters high
50 meters long
0 M3 of dilution
0 Tonnes of Dilution
0 meters of Rock
1 meters fill
15 meters high
50 meters long
750 M3 of dilution
1,316 Tonnes of Dilution
Bottom Sill
Bottom Sill
20m
18,000 M3 of Dilution
24 # of Case E Stopes
31,590 Total Tonnes of Dilution
6% Total Tonnes of Dilution

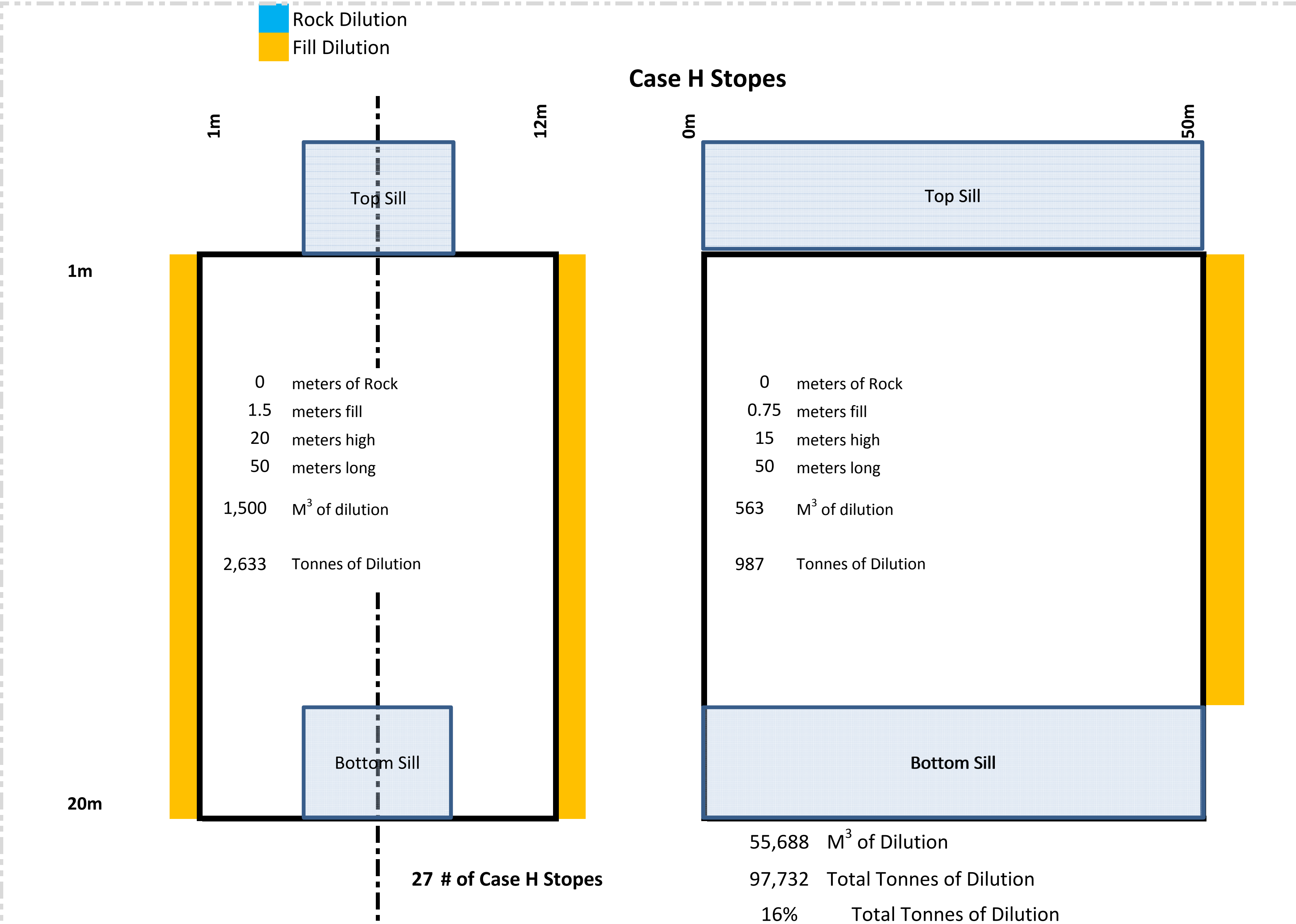

F
Rock Dilution
Fill Dilution
Case F Stopes
1m
12m
0m
50m
Top Sill
Top Sill
1m
0 meters of Rock
1.5 meters fill
20 meters high
50 meters long
1,500 M3 of dilution
2,633 Tonnes of Dilution
0.3 meters of Rock
0 meters fill
15 meters high
50 meters long
225 M3 of dilution
608 Tonnes of Dilution
Bottom Sill
Bottom Sill
20m
15,525 M3 of Dilution
9 # of Case F Stopes
29,160 Total Tonnes of Dilution
14% Total Tonnes of Dilution

G



Rock Dilution
Fill Dilution
Case G Stopes
1m
12m
0m
50m
Top Sill
Top Sill
1m
20m
0 meters of Rock
1.5 meters fill
20 meters high
50 meters long
1,500 M3 of dilution
2,633 Tonnes of Dilution
0.5 meters of Rock
0.75 meters fill
15 meters high
50 meters long
938 M3 of dilution
2,000 Tonnes of Dilution
Bottom Sill
Bottom Sill
21,938 M3 of Dilution
9 # of Case G Stopes
41,690 Total Tonnes of Dilution
21% Total Tonnes of Dilution

H


Rock Dilution
Fill Dilution
Case H Stopes
1m
12m
0m
50m
Top Sill
Top Sill
1m
20m
0 meters of Rock
1.5 meters fill
20 meters high
50 meters long
1,500 M3 of dilution
2,633 Tonnes of Dilution
0 meters of Rock
0.75 meters fill
15 meters high
50 meters long
563 M3 of dilution
987 Tonnes of Dilution
Bottom Sill
Bottom Sill
55,688 M3 of Dilution
27 # of Case H Stopes
97,732 Total Tonnes of Dilution
16% Total Tonnes of Dilution

APPENDIX C

SCHEDULE

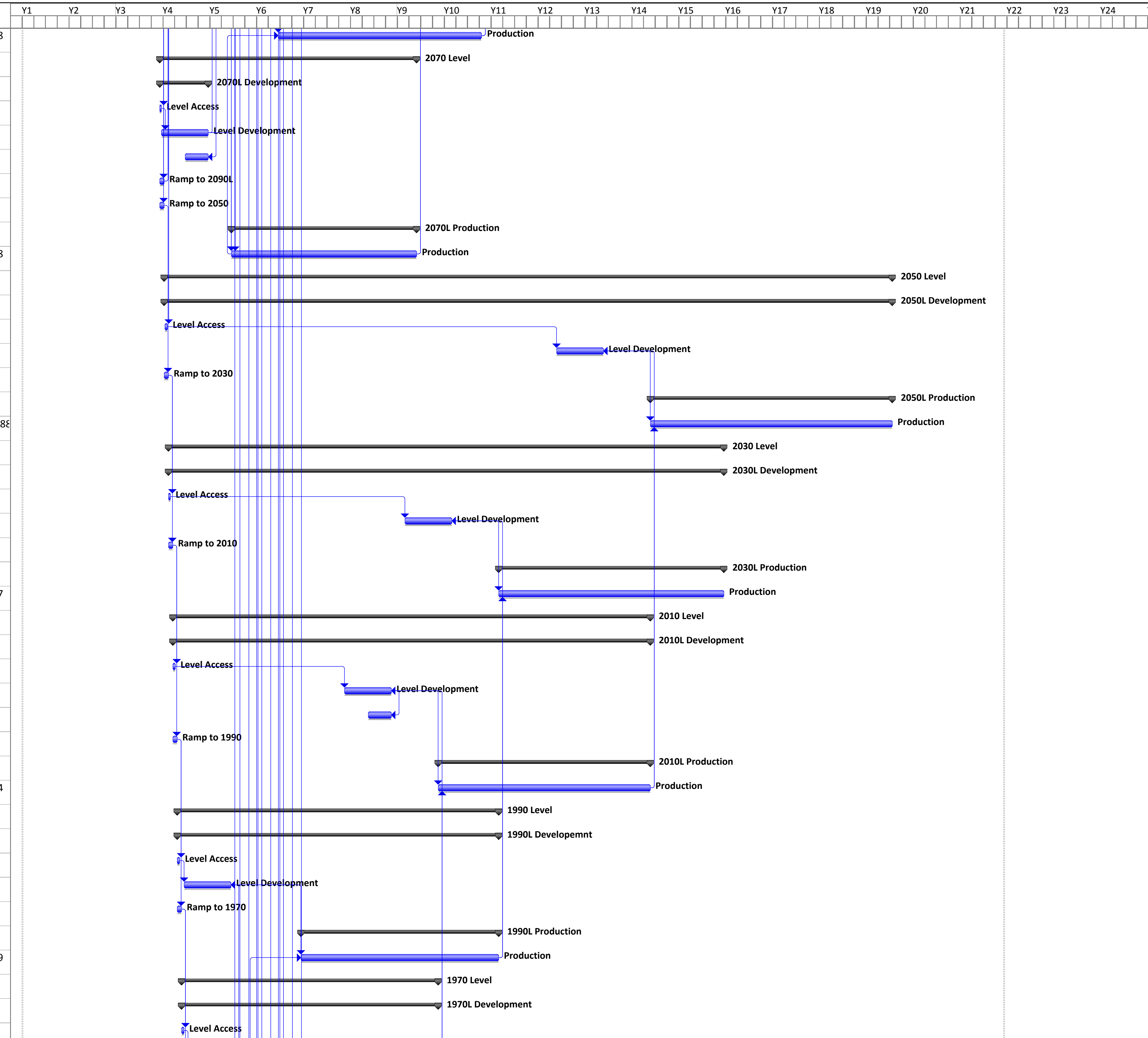
ID		Code	Task Name	Level	Duration	Start	Finish	Mined Tonnes
1			**Surface Infrastructure**		**1138 days**	**Fri 01/01/16**	**ue 02/12/19**	**0**
2		CAPEX-Const	Ventilation System FAR #1 Collar Constructioi		156 days	Fri 01/01/16	un 06/05/16	0
3		CAPEX-Const	FAR#1 Fans & Fan House Foundations Construction		60 days	Fri 12/22/17	Tue 02/20/18	0
4		CAPEX-Const	Ventilation System FAR #2 Collar Constructioi		156 days	Fri 01/01/16	un 06/05/16	0
5		CAPEX-Const	FAR#2 Fans & Fan House Foundations Construction		60 days	Thu 03/22/18	Mon 05/21/18	0
6		CAPEX-Const	Ventilation System RAR#1 Collar Constructior		156 days	Fri 01/01/16	un 06/05/16	0
7		CAPEX-Const	RAR#2 Fans & Fan House Foundations Construction		60 days	Fri 12/14/18	Tue 02/12/19	0
8		CAPEX-Const	Fill Raise Collar Construction		60 days	Fri 01/01/16	ue 03/01/16	0
9			**Access Roads**		**730 days**	**Wed 01/01/**	**Fri 01/01/16**	**0**
10		CAPEX-Const	Road from Misery Haul Road to Jay Pipe Site		365 days	Wed 01/01/:	hu 01/01/15	0
11		CAPEX-Const	Causeway to Fresh Air Ventilation		365 days	Thu 01/01/1	Fri 01/01/16	0
12		CAPEX-Const	Causeway to Return Air Ventilation		365 days	Thu 01/01/1	Fri 01/01/16	0
13			**Ramp Portal Excavation and Construction**		**141 days**	**Thu 01/01/1**	**Fri 05/22/15**	**0**
14		CAPEX-Const	Main Ramp Portal Excavation and Constructi		141 days	Thu 01/01/1	Fri 05/22/15	0
15		CAPEX-Const	Conveyor Ramp Portal Excavation and Construction		141 days	Thu 01/01/15	Fri 05/22/15	0
16		CAPEX-Const	100 Man Camp Installation		134 days	Wed 01/01/:	hu 05/15/14	0
17		CAPEX-Const	Maintenance Shop		30 days	Thu 01/01/1	Sat 01/31/15	0
18		CAPEX-Const	U/G Ore Handling System Construction		365 days	Sun 03/19/1	on 03/19/18	0
19		CAPEX-Const	Surface Pipelines Purchase & Installation		90 days	Thu 01/01/1	ed 04/01/15	0
20		CAPEX-Const	Surface Power Distribution		180 days	Sat 07/05/14	hu 01/01/15	0
21		CAPEX-Const	Underground Concrete Fill Hole Distribution		60 days	Thu 03/22/1	on 05/21/18	0
22		CAPEX-Const	Underground Power Distribution		6570 days	Fri 12/09/16	ue 12/05/34	0
23		CAPEX-Const	Electrical Substation Crushed Rock Pad		60 days	Thu 01/01/1	on 03/02/15	0
24		CAPEX-Const	Compressed Air System Installation		125 days	Thu 01/01/1	ed 05/06/15	0
25			**Mine Development**		**6630 days**	**Fri 05/22/15**	**Sat 07/16/33**	**0**
26		CAPEX-LatDev	Service Ramp Surface to 2070L	2400	567 days	Fri 05/22/15	Fri 12/09/16	0
27		CAPEX-LatDev	Converyor Ramp Surface to 2070L	2400	607 days	Fri 05/22/15	ed 01/18/17	0
28		CAPEX-LatDev	Sizer Room Excavation	2050	180 days	Wed 01/18/:	on 07/17/17	0
29		CAPEX-Rse	Fresh Air Raise #1 Bored from 2070L to Surfa	2400	90 days	Sat 09/23/17	Fri 12/22/17	0
30		CAPEX-Rse	Fresh Air Raise #2 Bored from 2070L to Surfa	2400	90 days	Fri 12/22/17	hu 03/22/18	0
31		CAPEX-Rse	Return Air Raise #1 Bored from 2070L to Surf	2400	90 days	Thu 03/22/1	ed 06/20/18	0
32		CAPEX-Rse	Fill Raise #1 Bored from 2070L to Surface	2400	90 days	Fri 12/22/17	hu 03/22/18	0
33		CAPEX-Const	U/G Maintenance Facility	2070	180 days	Wed 01/18/:	on 07/17/17	0
34		CAPEX-Const	Main Pumping System	2050	90 days	Wed 01/18/:	ue 04/18/17	0
35			**U/G FAR Raises**		**519 days**	**Sun 06/17/1**	**on 11/18/19**	**0**
36		CAPEX-Rse	Fresh Air Raise #1 Bored from 1970L to 2(	2070	40 days	Sun 06/17/1	Fri 07/27/18	0
37		CAPEX-Rse	Fresh Air Raise #2 Bored from 1970L to 2(	2070	40 days	Sun 08/26/1	Fri 10/05/18	0

Project: Jap Pipe Project Schedule
Date: Fri 08/09/13

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline | Progress

ID		Code	Task Name	Level	Duration	Start	Finish	Mined Tonnes
38		CAPEX-Rse	Return Air Raise #1 Bored from 1970L to 2070L	2070	40 days	Sun 11/04/18	Fri 12/14/18	0
39		CAPEX-Rse	Fresh Air Raise #1 Bored from 1870L to 1	1970	40 days	Tue 12/04/1	un 01/13/19	0
40		CAPEX-Rse	Fresh Air Raise #2 Bored from 1870L to 1	1970	40 days	Tue 02/12/1	un 03/24/19	0
41		CAPEX-Rse	Return Air Raise #1 Bored from 1870L to 1970L	1970	40 days	Tue 04/23/19	Sun 06/02/19	0
42		CAPEX-Rse	Fresh Air Raise #1 Bored from 1770L to 1	1870	40 days	Wed 05/22/	on 07/01/19	0
43		CAPEX-Rse	Fresh Air Raise #2 Bored from 1770L to 1	1870	40 days	Wed 07/31/	on 09/09/19	0
44		CAPEX-Rse	Return Air Raise #1 Bored from 1770L to 1870L	1870	40 days	Wed 10/09/19	Mon 11/18/19	0
45			**2170 Level**		**3142 days**	**Thu 05/25/1**	**ed 12/31/25**	**0**
46			**2170L Development**	**2170**	**3142 days**	**Thu 05/25/1**	**ed 12/31/25**	**0**
47		CAPEX-LatDev	Level Access	2170	20 days	Thu 05/25/1	ed 06/14/17	0
48		CAPEX-LatDev	Level Development	2170	365 days	Tue 12/31/2	ed 12/31/25	0
49			**2150 Level**		**5370 days**	**Fri 04/21/17**	**at 01/03/32**	**0**
50			**2150L Development**	**2150**	**5370 days**	**Fri 04/21/17**	**at 01/03/32**	**0**
51		CAPEX-LatDev	Level Access	2150	20 days	Fri 04/21/17	hu 05/11/17	0
52		CAPEX-LatDev	Level Development	2150	365 days	Tue 12/31/2	ed 12/31/25	0
53		CAPEX-LatDev	Ramp to 2170	2150	34 days	Fri 04/21/17	hu 05/25/17	0
54			**2150L Production**	**2150**	**1829 days**	**Thu 12/31/2**	**at 01/03/32**	**0**
55		OPEX-Prod	Production	2150	1829 days	Thu 12/31/2	at 01/03/32	2788448
56			**2130 Level**		**4143 days**	**Sat 03/18/1**	**Fri 07/21/28**	**0**
57			**2130L Development**	**2130**	**4143 days**	**Sat 03/18/1**	**Fri 07/21/28**	**0**
58		CAPEX-LatDev	Level Access	2130	20 days	Sat 03/18/17	Fri 04/07/17	0
59		CAPEX-LatDev	Level Development	2130	365 days	Wed 10/20/	hu 10/20/22	0
60		CAPEX-LatDev	Ramp to 2150	2130	34 days	Sat 03/18/17	Fri 04/21/17	0
61			**2130L Production**	**2130**	**1736 days**	**Fri 10/20/23**	**Fri 07/21/28**	**0**
62		OPEX-Prod	Production	2130	1736 days	Fri 10/20/23	Fri 07/21/28	2647020
63			**2110 Level**		**3609 days**	**Sun 02/12/1**	**hu 12/31/26**	**0**
64			**2110L Development**	**2110**	**3609 days**	**Sun 02/12/1**	**hu 12/31/26**	**0**
65		CAPEX-LatDev	Level Access	2110	20 days	Sun 02/12/1	at 03/04/17	0
66		CAPEX-LatDev	Level Development	2110	365 days	Tue 06/02/2	ed 06/02/21	0
67		OPEX-DD	Definition Drilling	2110	180 days	Fri 12/04/20	ed 06/02/21	0
68		CAPEX-LatDev	Ramp to 2130	2110	34 days	Sun 02/12/1	at 03/18/17	0
69			**2110L Production**	**2110**	**1673 days**	**Thu 06/02/2**	**hu 12/31/26**	**0**
70		OPEX-Prod	Production	2110	1673 days	Thu 06/02/2	hu 12/31/26	2551426
71			**2090 Level**		**2472 days**	**Thu 01/12/1**	**Fri 10/20/23**	**0**
72			**2090L Development**	**2090**	**2472 days**	**Thu 01/12/1**	**Fri 10/20/23**	**0**
73		CAPEX-LatDev	Level Access	2090	20 days	Thu 01/12/1	ed 02/01/17	0
74		CAPEX-LatDev	Level Development	2090	365 days	Wed 02/01/	hu 02/01/18	0
75		CAPEX-LatDev	Ramp to 2110L	2090	31 days	Thu 01/12/1	un 02/12/17	0
76			**2090L Production**	**2090**	**1583 days**	**Thu 06/20/1**	**Fri 10/20/23**	**0**

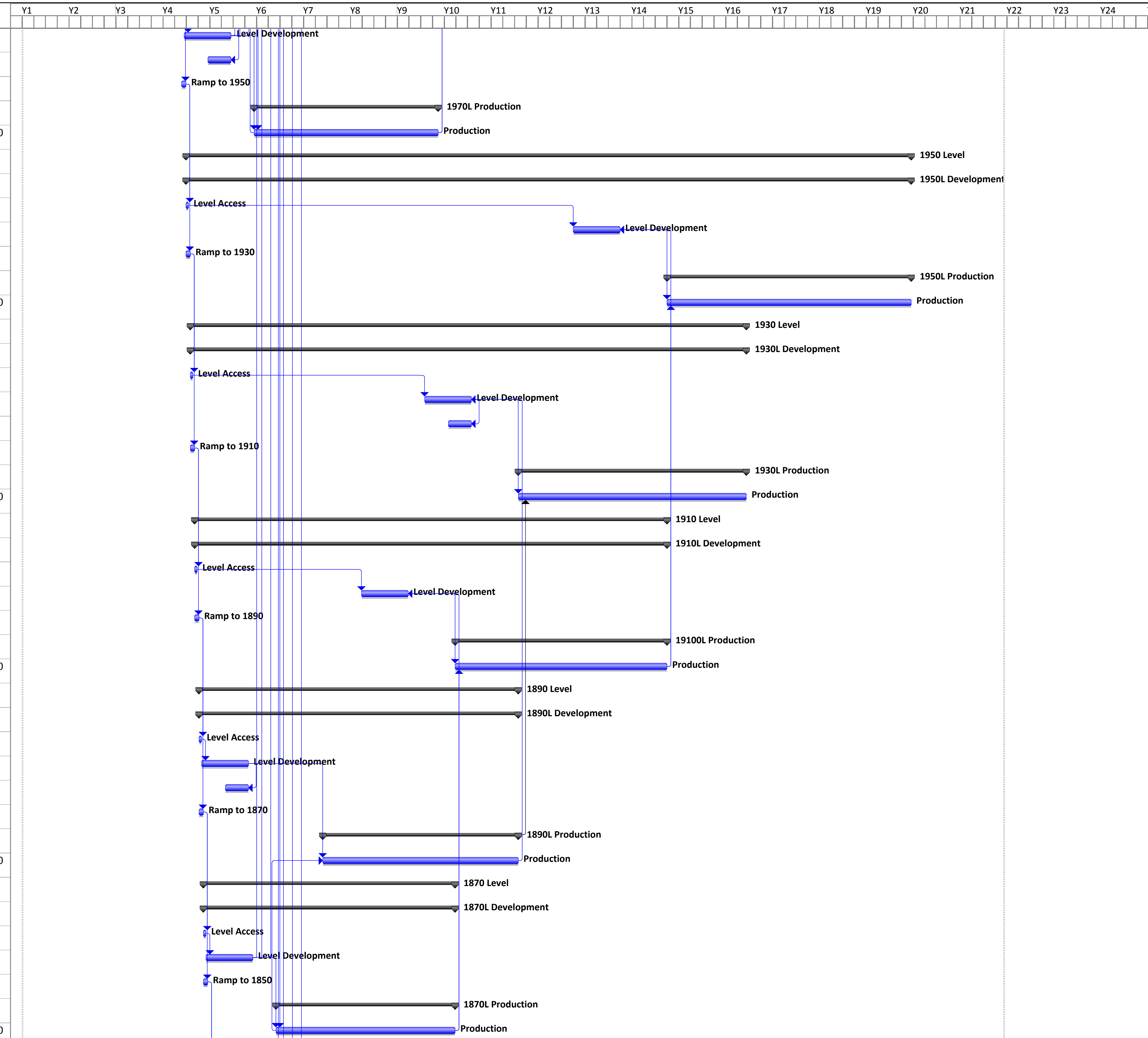
ID		Code	Task Name	Level	Duration	Start	Finish	Mined Tonnes
77		OPEX-Prod	Production	2090	1583 days	Thu 06/20/1	Fri 10/20/23	2414558
78			**2070 Level**		**2001 days**	**Fri 12/09/16**	**hu 06/02/22**	**0**
79			**2070L Development**		**378 days**	**Fri 12/09/16**	**Fri 12/22/17**	**0**
80		CAPEX-LatDev	Level Access	2070	13 days	Fri 12/09/16	hu 12/22/16	0
81		CAPEX-LatDev	Level Development	2070	365 days	Thu 12/22/1	Fri 12/22/17	0
82		OPEX-DD	Definition Drilling	2070	180 days	Sun 06/25/1	Fri 12/22/17	0
83		CAPEX-LatDev	Ramp to 2090L	2070	34 days	Fri 12/09/16	hu 01/12/17	0
84		CAPEX-LatDev	Ramp to 2050	2070	34 days	Fri 12/09/16	hu 01/12/17	0
85			**2070L Production**	**2070**	**1443 days**	**Wed 06/20/**	**hu 06/02/22**	**0**
86		OPEX-Prod	Production	2070	1443 days	Wed 06/20/	hu 06/02/22	2200218
87			**2050 Level**		**5672 days**	**Thu 01/12/1**	**at 07/24/32**	**0**
88			**2050L Development**	**2050**	**5672 days**	**Thu 01/12/1**	**at 07/24/32**	**0**
89		CAPEX-LatDev	Level Access	2050	20 days	Wed 01/18/	ue 02/07/17	0
90		CAPEX-LatDev	Level Development	2050	365 days	Tue 05/27/2	ed 05/27/26	0
91		CAPEX-LatDev	Ramp to 2030	2050	34 days	Thu 01/12/1	ed 02/15/17	0
92			**2050L Production**	**2050**	**1885 days**	**Thu 05/27/2**	**at 07/24/32**	**0**
93		OPEX-Prod	Production	2050	1885 days	Thu 05/27/2	Sat 07/24/32	2055601.88
94			**2030 Level**		**4326 days**	**Wed 02/15/**	**ed 12/20/28**	**0**
95			**2030L Development**	**2030**	**4326 days**	**Wed 02/15/**	**ed 12/20/28**	**0**
96		CAPEX-LatDev	Level Access	2030	15 days	Wed 02/15/	hu 03/02/17	0
97		CAPEX-LatDev	Level Development	2030	365 days	Thu 03/03/2	Fri 03/03/23	0
98		CAPEX-LatDev	Ramp to 2010	2030	34 days	Wed 02/15/	ue 03/21/17	0
99			**2030L Production**	**2030**	**1754 days**	**Sat 03/02/2**	**ed 12/20/28**	**0**
100		OPEX-Prod	Production	2030	1754 days	Sat 03/02/2	ed 12/20/28	1910987
101			**2010 Level**		**3719 days**	**Tue 03/21/1**	**hu 05/27/27**	**0**
102			**2010L Development**	**2010**	**3719 days**	**Tue 03/21/1**	**hu 05/27/27**	**0**
103		CAPEX-LatDev	Level Access	2010	20 days	Tue 03/21/1	on 04/10/17	0
104		CAPEX-LatDev	Level Development	2010	365 days	Tue 11/17/2	ed 11/17/21	0
105		OPEX-DD	Definition Drilling	2010	180 days	Fri 05/21/21	ed 11/17/21	0
106		CAPEX-LatDev	Ramp to 1990	2010	34 days	Tue 03/21/1	on 04/24/17	0
107			**2010L Production**	**2010**	**1652 days**	**Thu 11/17/2**	**hu 05/27/27**	**0**
108		OPEX-Prod	Production	2010	1652 days	Thu 11/17/2	hu 05/27/27	1799944
109			**1990 Level**		**2504 days**	**Mon 04/24/**	**at 03/02/24**	**0**
110			**1990L Developemnt**	**1990**	**2504 days**	**Mon 04/24/**	**at 03/02/24**	**0**
111		CAPEX-LatDev	Level Access	1990	20 days	Mon 04/24/	un 05/14/17	0
112		CAPEX-LatDev	Level Development	1990	365 days	Sat 06/17/17	un 06/17/18	0
113		CAPEX-LatDev	Ramp to 1970	1990	34 days	Mon 04/24/	un 05/28/17	0
114			**1990L Production**	**1990**	**1540 days**	**Sat 12/14/1**	**at 03/02/24**	**0**
115		OPEX-Prod	Production	1990	1540 days	Sat 12/14/1	Sat 03/02/24	1678569
116			**1970 Level**		**1999 days**	**Sun 05/28/1**	**hu 11/17/22**	**0**
117			**1970L Development**	**1970**	**1999 days**	**Sun 05/28/1**	**hu 11/17/22**	**0**
118		CAPEX-LatDev	Level Access	1970	20 days	Sun 05/28/1	Sat 06/17/17	0



Project: Jap Pipe Project Schedule
Date: Fri 08/09/13

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline | Progress

ID		Code	Task Name	Level	Duration	Start	Finish	Mined Tonnes
119		CAPEX-LatDev	Level Development	1970	365 days	Sat 06/17/17	un 06/17/18	0
120		OPEX-DD	Definition Drilling	1970	180 days	Tue 12/19/1	un 06/17/18	0
121		CAPEX-LatDev	Ramp to 1950	1970	34 days	Sun 05/28/1	Sat 07/01/17	0
122			**1970L Production**	**1970**	**1434 days**	**Fri 12/14/18**	**hu 11/17/22**	**0**
123		OPEX-Prod	Production	1970	1434 days	Fri 12/14/18	hu 11/17/22	1562880
124			**1950 Level**		**5649 days**	**Sat 07/01/1**	**at 12/18/32**	**0**
125			**1950L Development**	**1950**	**5649 days**	**Sat 07/01/1**	**at 12/18/32**	**0**
126		CAPEX-LatDev	Level Access	1950	20 days	Sat 07/01/17	Fri 07/21/17	0
127		CAPEX-LatDev	Level Development	1950	365 days	Sat 10/04/25	un 10/04/26	0
128		CAPEX-LatDev	Ramp to 1930	1950	34 days	Sat 07/01/17	Fri 08/04/17	0
129			**1950L Production**	**1950**	**1902 days**	**Mon 10/04/**	**at 12/18/32**	**0**
130		OPEX-Prod	Production	1950	1902 days	Mon 10/04/	Sat 12/18/32	1465200
131			**1930 Level**		**4331 days**	**Fri 08/04/17**	**ed 06/13/29**	**0**
132			**1930L Development**	**1930**	**4331 days**	**Fri 08/04/17**	**ed 06/13/29**	**0**
133		CAPEX-LatDev	Level Access	1930	20 days	Fri 08/04/17	hu 08/24/17	0
134		CAPEX-LatDev	Level Development	1930	365 days	Wed 08/03/	hu 08/03/23	0
135		OPEX-DD	Definition Drilling	1930	180 days	Sat 02/04/2	hu 08/03/23	0
136		CAPEX-LatDev	Ramp to 1910	1930	34 days	Fri 08/04/17	hu 09/07/17	0
137			**1930L Production**	**1930**	**1776 days**	**Fri 08/02/24**	**ed 06/13/29**	**0**
138		OPEX-Prod	Production	1930	1776 days	Fri 08/02/24	ed 06/13/29	1367520
139			**1910 Level**		**3679 days**	**Thu 09/07/1**	**on 10/04/27**	**0**
140			**1910L Development**	**1910**	**3679 days**	**Thu 09/07/1**	**on 10/04/27**	**0**
141		CAPEX-LatDev	Level Access	1910	20 days	Thu 09/07/1	ed 09/27/17	0
142		CAPEX-LatDev	Level Development	1910	365 days	Mon 03/29/	ue 03/29/22	0
143		CAPEX-LatDev	Ramp to 1890	1910	34 days	Thu 09/07/1	ed 10/11/17	0
144			**19100L Production**	**1910**	**1650 days**	**Wed 03/29/**	**on 10/04/27**	**0**
145		OPEX-Prod	Production	1910	1650 days	Wed 03/29/	on 10/04/27	1269840
146			**1890 Level**		**2487 days**	**Wed 10/11/**	**Fri 08/02/24**	**0**
147			**1890L Development**	**1890**	**2487 days**	**Wed 10/11/**	**Fri 08/02/24**	**0**
148		CAPEX-LatDev	Level Access	1890	20 days	Wed 10/11/	ue 10/31/17	0
149		CAPEX-LatDev	Level Development	1890	365 days	Tue 10/31/1	ed 10/31/18	0
150		OPEX-DD	Definition Drilling	1890	180 days	Fri 05/04/18	ed 10/31/18	0
151		CAPEX-LatDev	Ramp to 1870	1890	34 days	Wed 10/11/	ue 11/14/17	0
152			**1890L Production**	**1890**	**1523 days**	**Mon 06/01/**	**Fri 08/02/24**	**0**
153		OPEX-Prod	Production	1890	1523 days	Mon 06/01/	Fri 08/02/24	1172160
154			**1870 Level**		**1961 days**	**Tue 11/14/1**	**ed 03/29/23**	**0**
155			**1870L Development**	**1870**	**1961 days**	**Tue 11/14/1**	**ed 03/29/23**	**0**
156		CAPEX-LatDev	Level Access	1870	20 days	Tue 11/14/1	on 12/04/17	0
157		CAPEX-LatDev	Level Development	1870	365 days	Mon 12/04/	ue 12/04/18	0
158		CAPEX-LatDev	Ramp to 1850	1870	34 days	Tue 11/14/1	on 12/18/17	0
159			**1870L Production**	**1870**	**1396 days**	**Sun 06/02/1**	**ed 03/29/23**	**0**
160		OPEX-Prod	Production	1870	1396 days	Sun 06/02/1	ed 03/29/23	1074480



Project: Jap Pipe Project Schedule
Date: Fri 08/09/13

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline | Progress

ID		Code	Task Name	Level	Duration	Start	Finish	Mined Tonnes
161			**1850 Level**		**5689 days**	**Mon 12/18/**	**at 07/16/33**	**0**
162			**1850L Development**	**1850**	**5689 days**	**Mon 12/18/**	**at 07/16/33**	**0**
163		CAPEX-LatDev	Level Access	1850	20 days	Mon 12/18/	un 01/07/18	0
164		CAPEX-LatDev	Level Development	1850	365 days	Thu 11/06/2	Fri 11/06/26	0
165		OPEX-DD	Definition Drilling	1850	180 days	Sun 05/10/2	Fri 11/06/26	0
166		CAPEX-LatDev	Ramp to 1830	1850	34 days	Mon 12/18/	un 01/21/18	0
167			**1850L Production**	**1850**	**2079 days**	**Sat 11/06/2**	**at 07/16/33**	**0**
168		OPEX-Prod	Production	1850	2079 days	Sat 11/06/2	at 07/16/33	976800
169			**1830 Level**		**4357 days**	**Sun 01/21/1**	**ed 12/26/29**	**0**
170			**1830L Development**	**1830**	**4357 days**	**Sun 01/21/1**	**ed 12/26/29**	**0**
171		CAPEX-LatDev	Level Access	1830	20 days	Sun 01/21/1	at 02/10/18	0
172		CAPEX-LatDev	Level Development	1830	365 days	Sat 11/12/2	un 11/12/23	0
173		CAPEX-LatDev	Ramp to 1810	1830	34 days	Sun 01/21/1	at 02/24/18	0
174			**1830L Production**	**1830**	**1871 days**	**Mon 11/11/**	**ed 12/26/29**	**0**
175		OPEX-Prod	Production	1830	1871 days	Mon 11/11/	ed 12/26/29	879120
176			**1810 Level**		**3542 days**	**Sat 02/24/1**	**at 11/06/27**	**0**
177			**1810L Development**	**1810**	**3542 days**	**Sat 02/24/1**	**at 11/06/27**	**0**
178		CAPEX-LatDev	Level Access	1810	20 days	Sat 02/24/1	Fri 03/16/18	0
179		CAPEX-LatDev	Level Development	1810	365 days	Sun 04/18/2	on 04/18/22	0
180		OPEX-DD	Definition Drilling	1810	120 days	Sun 12/19/2	on 04/18/22	0
181		CAPEX-LatDev	Ramp to 1790	1810	34 days	Sat 02/24/1	Fri 03/30/18	0
182			**1810L Production**	**1810**	**1663 days**	**Tue 04/18/2**	**at 11/06/27**	**0**
183		OPEX-Prod	Production	1810	1663 days	Tue 04/18/2	Sat 11/06/27	781440
184			**1790 Level**		**2418 days**	**Fri 03/30/18**	**on 11/11/24**	**0**
185			**1790L Development**	**1790**	**2418 days**	**Fri 03/30/18**	**on 11/11/24**	**0**
186		CAPEX-LatDev	Level Access	1790	20 days	Fri 03/30/18	hu 04/19/18	0
187		CAPEX-LatDev	Level Development	1790	365 days	Thu 04/19/1	Fri 04/19/19	0
188		CAPEX-LatDev	Ramp to 1770	1790	34 days	Fri 03/30/18	hu 05/03/18	0
189			**1790L Production**	**1790**	**1455 days**	**Tue 11/17/2**	**on 11/11/24**	**0**
190		OPEX-Prod	Production	1790	1455 days	Tue 11/17/2	on 11/11/24	683760
191			**1770 Level**		**1811 days**	**Thu 05/03/1**	**ue 04/18/23**	**0**
192			**1770L Development**	**1770**	**1811 days**	**Thu 05/03/1**	**ue 04/18/23**	**0**
193		CAPEX-LatDev	Level Access	1770	20 days	Thu 05/03/1	ed 05/23/18	0
194		CAPEX-LatDev	Level Development	1770	364 days	Wed 05/23/	ed 05/22/19	0
195		OPEX-LatDev	**1770L Production**	**1770**	**1247 days**	**Mon 11/18/**	**ue 04/18/23**	**0**
196		OPEX-Prod	Production	1770	1247 days	Mon 11/18/	ue 04/18/23	586080

Project: Jap Pipe Project Schedule
Date: Fri 08/09/13

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline | Progress

APPENDIX D

COST ESTIMATE AND CASH FLOW

Dominion Diamonds

Jay Pipe Concept Study

Budgeted Cost

WBS			Description	Quantity	Unit	Unit Cost	Budgeted Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
Level 1	Level 2	Level 3																										
1			Surface Infrastructures																									
1	100		Acces Roads																									
1	100	001	Road from Misery Site to Jay Pipe Site	7.5	km	$1,000,000	$7,500,000	$7,500,000																				$7,500,000
1	100	002	Road from Jay Site to Fresh Air ventilation Plant	1.5	km	$1,000,000	$1,500,000		$1,500,000																			$1,500,000
1	100	003	Road from Jay Site to Return Air ventilation Plant	1.5	km	$1,000,000	$1,500,000		$1,500,000																			$1,500,000
1	100		Subtotal Access Roads				$10,500,000	$7,500,000	$3,000,000																			$10,500,000
			Ramp Portal Excavation and Construction																									
1	110	001	Main Ramp Portal Excavation and Construction	1	ls	$3,833,153	$3,833,153		$3,833,153																			$3,833,153
1	120	001	Conveyor Ramp Portal Excavation and Construction	1	ls	$3,833,153	$3,833,153		$3,833,153																			$3,833,153
			Subtotal Ramp Portal and Conctruction				$7,666,306		$7,666,306																			$7,666,306
			Raises Collar Construction and Fan House Foundations																									
1	130	001	Ventilation System FAR#1 Collar Construction	1	ls	$3,931,765	$3,931,765		$3,931,765																			$3,931,765
1	140	002	FAR#1 Fans & Fan House Foundations Construction	1	ls	$2,662,764	$2,662,764		$2,662,764																			$2,662,764
1	150	001	Ventilation System FAR#2 Collar Construction	1	ls	$3,931,765	$3,931,765			$3,931,765																		$3,931,765
1	160	002	FAR#2 Fans & Fan House Foundations Construction	1	ls	$2,662,764	$2,662,764			$2,662,764																		$2,662,764
1	170	001	Ventilation System RAR#1 Collar Construction	1	ls	$3,931,765	$3,931,765		$3,931,765																			$3,931,765
1	180	001	Waste Backfill Raise Collar Construction	1	ls	$3,931,765	$3,931,765			$3,931,765																		$3,931,765
1	190	002	Waste Backfill Building Foundations	1	ls	$450,000	$450,000			$450,000																		$450,000
			Subtotal Raises Collar Construction and Fan House Foundations				$21,502,589		10,526,294	10,976,294																		$21,502,589
			Surface Equipment Purchase																									
1	200	001	Underground Power Distribution Purchase	1	ls	$489,600	$489,600		$489,600																			$489,600
1	200	002	Purchase Surface Electrical/Controls	1	ls	$2,187,600	$2,187,600		$2,187,600																			$2,187,600
1	200	003	Purchase & Installation 13.8 KV Ekati Powerline	37	km	$256,800	$9,501,600	$4,750,800	$4,750,800																			$9,501,600
1	200	004	PLC, Communication Interface Ekati	1	ls	$963,000	$963,000		$963,000																			$963,000
1	200	005	Surface Communications Purchase	1	ls	$1,109,700	$1,109,700		$1,109,700																			$1,109,700
1	200	006	Purchase Compressor 1 (1000cfm) & Pipe Fittings	1	ls	$346,300	$346,300		$346,300																			$346,300
1	200	007	Purchase Compressor 2 (1000cfm) & Pipe Fittings	1	ls	$346,300	$346,300		$346,300																			$346,300
1	200	008	Purchase Mine Water Discharge HPDE Pipe 250mm(10")	7,500	m	$360	$2,700,000		$2,700,000																			$2,700,000
1	200	009	Purchase Compressed Air Line 250mm(10")	200	m	$180	$36,000		$36,000																			$36,000
1	200	010	Mine Rescue Team Equipment Purchase	1	ls	$590,945	$590,945		$590,945																			$590,945
1	200	011	Surface ERT Equipment Purchase	1	ls	$549,784	$549,784		$549,784																			$549,784
1	200	012	Purchase Waste Backfill Plant Building	1	ls	$350,000	$350,000				$350,000																	$350,000
1	200	013	Purchase Main Ramp Portal Steel Plates	130	m	$13,964	$1,815,310	$1,815,310																				$1,815,310
1	200	014	Purchase Conveyor Ramp Portal Steel Plates	130	m	$13,964	$1,815,310	$1,815,310																				$1,815,310
1	200	015	Purchase and Install Concrete Backfill Plant	1	ls	$1,500,000	$1,500,000			$750,000	$750,000																	$1,500,000
1	200	016	Purchase and Install Concrete/Shotcrete Plant	1	ls	$1,500,000	$1,500,000		$1,500,000																			$1,500,000
1	200	017	Purchase Connate Water Truck 1	1	ls	$241,392	$241,392		$241,392																			$241,392
1	200	018	Purchase Connate Water Truck 2	1	ls	$241,392	$241,392		$241,392																			$241,392
1	200		Subtotal Surface Equipment Purchase				$26,284,232	$8,381,419	$16,052,812	$750,000	$1,100,000																	$26,284,232
																										$0
			Surface Infrastructures Installation																									$0
1	210	001	100 Man Camp Installation	1	ls	$920,405	$920,405	$920,405																				$920,405
																										$0
1	220	001	Maintenance Shop Purchase & Installation	1	ls	$3,280,008	$3,280,008		$3,280,008																			$3,280,008
																										$0
1	230	001	Quality Assurance/Quality Controls	1	ls	$750,000	$750,000		$250,000	$250,000	$250,000																	$750,000
																										$0
1	240	001	Surface Water Pipeline Purchase & Installation	7,500	m	$960	$7,200,000		$7,200,000																			$7,200,000
																										$0
1	250	001	Surface Power Distribution Installation	1	ls	$1,680,000	$1,680,000		$1,680,000																			$1,680,000
																										$0
1	260	001	Surface Communications Installation	1	ls	$332,100	$332,100		$332,100																			$332,100
																										$0
1	270	001	Underground Concrete Backfill Hole Distribution to 2170 Lev	330	m	$1,803	$594,906				$594,906																	$594,906
1	280	001	Underground Electrical Hole Distribution to 2170 Level	330	m	$1,803	$594,906		$594,906																			
																										$0
1	290	001	Underground Power Distribution Installation	1	ls	$962,316	$962,316		$962,316																			$962,316
																										$0
1	300	001	Surface Electrical Substation Crushed Rock Pad	1	ls	$160,500	$160,500		$160,500																			$160,500
																										$0
1	310	001	Compressed Air System Installation	1	ls	$288,000	$288,000		$288,000																			$288,000
																										$0
			SubtotalSurface Infrastructures Installation				$16,763,141	$920,405	$14,747,830	$250,000	$844,906																	$16,763,141
																										$0
1			Total Surface Infrastructures	1	ls	$82,716,267	$82,716,267	$16,801,824	$51,993,243	$11,976,294	$1,944,906																	$82,716,267
2			U/G Mobile Equipment Purchase																									
			Haulage Truck Purchase																									
2	100	001	AD45 Elphinstone Truck Purchase	4	each	$1,717,600	$6,870,398				$6,870,398																	$6,870,398
2	100	001	AD45 Elphinstone Truck Purchase	4	each	$1,717,600	$6,870,398					$3,435,199	$3,435,199															$6,870,398
2	100		Haulage Truck Purchase	8	each		$13,740,797																					
			LHDs Purchase																									
2	110	001	R1700G Elphinstone LHD Purchase	4	each	$1,544,419	$6,177,677				$6,177,677																	$6,177,677
2	110	001	R1700G Elphinstone LHD & Remote Purchase	4	each	$1,744,419	$6,977,677						$6,977,677															$6,977,677
			LHDs Purchase	8	each		$13,155,354																					
			Drilling Equipment Purchase																									
2	120	001	Jumbo Drilling Equipment Purchase	4	each	$1,725,600	$6,902,400				$6,902,400																	$6,902,400

Dominion Diamonds

Jay Pipe Concept Study

Budgeted Cost

WBS			Description	Quantity	Unit	Unit Cost	Budgeted Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
Level 1	Level 2	Level 3																										
2	120	001	Longhole Drilling Equipment Purchase	4	each	$1,365,600	$5,462,400						$5,462,400															$5,462,400
			Drilling Equipment Purchase	8	each		$12,364,800																					
2	130	001	Ground Support Equipment Purchase	13	each	$897,579	$11,668,526				$5,834,263	$5,834,263																$11,668,526
2	140	001	Underground Service Vehicles Purchase	17	each	$480,700	$8,171,907				$2,723,969	$2,723,969	$2,723,969															$8,171,907
2			Total U/G Mobile Equipment Purchase	54	each		$59,101,384				$28,508,707	$11,993,431	$18,599,245															$59,101,384
3			Mine Development																									
			Lateral Development																									
3	400	001	Main Access Ramp from Surface to 2070 Level	2,853	metres	$5,837	$16,652,961		$8,326,481	$8,326,481																		$16,652,961
3	410	001	Conveyor Access Ramp from Surface to 2050 Level	3,055	metres	$5,837	$17,832,035		$8,916,018	$8,916,018																		$17,832,035
3	410	002	2050 Level Sizer Area Excavation	150	metres	$5,837	$875,550		$437,775	$437,775																		$875,550
3	410	003	2050 Level Sizer Area Cable bolting	1	ls	$750,000	$750,000		$375,000	$375,000																		$750,000
3	420	001	Level Access Ramps	3,460	metres	$5,837	$20,196,020				$6,732,007	$6,732,007	$6,732,007															$20,196,020
			Subtotal Access Ramp 5.5m X5.5m	9,368	metres	$6,011	$56,306,566																					
			Level Development																									
			Level Access 5.0m x 5.0m and Infrastructures Drift 5.0 x 5.5m																									
3	430	001	Subtotal Level Access and Infrastructures Drift	6,627	metres	$5,286	$35,030,322				$8,757,581	$8,757,581	$8,757,581	$8,757,581														$35,030,322
			Subtotal Lateral Development	15,995	metres	$5,710	$91,336,888																					
			Ventilation Raises																									
			Surface Bored Ventilation Raises																									
3	500	001	Mobilize Raisebore Contractor	1	ls	$126,000	$126,000				$126,000																	$126,000
3	500	001	Fresh Air Raise #1 Bored from 2070L to Surface	370	metres	$5,500	$2,035,000				$1,017,500	$1,017,500																$2,035,000
3	500	002	Fresh Air Raise #2 Bored from 2070L to Surface	390	metres	$5,500	$2,145,000				$1,072,500	$1,072,500																$2,145,000
3	500	003	Return Air Raise #1 Bored from 2070L to Surface	390	metres	$5,500	$2,145,000				$1,072,500	$1,072,500																$2,145,000
3	500	004	Fill Raise #1 Bored from 2070L to Surface	390	metres	$5,500	$2,145,000				$1,072,500	$1,072,500																$2,145,000
3	500	005	Raisebore Standby	60	days	$2,460	$147,600				$73,800	$73,800																$147,600
			Subtotal Surface Bored Ventilation and Fill Raises	1,600	metres	$5,465	$8,743,600																					
3	500	006	Underground FAR Bored Raises 4 metres	630	metres	$7,750	$4,882,500					$2,441,250	$2,441,250															$4,882,500
3	500	007	Underground RAR Bored Raises 4 metres	315	metres	$7,750	$2,441,250					$1,220,625	$1,220,625															$2,441,250
3	500	008	Underground Bored Egress/Manway Raises 3 meters	315	metres	$5,500	$1,732,500					$866,250	$866,250															$1,732,500
3	500	009	Underground Ore Pass Bored Raises 3 metres	315	metres	$5,500	$1,732,500					$866,250	$866,250															$1,732,500
3	500	010	Underground Fill Bored Raises 3 metres	315	metres	$5,500	$1,732,500					$866,250	$866,250															$1,732,500
							$0																					
3	500	011	Demobilize Raisebore Contractor	1	ls	$93,000	$93,000						$93,000															$93,000
			Subtotal Underground Bored Ventilation and Ore Pass Raises	945	metres	$13,348	$12,614,250																					
			Total Bored Ventilation Fill and Ore Pass Raises	2,545	metres	$8,392	$21,357,850																					
3	600	001	Contractor's Indirects Labour- Capital Period	1,460	days	$30,523	$44,562,996		$11,140,749	$11,140,749	$11,140,749	$11,140,749																$44,562,996
3	600	001	Contractor's Indirect Operating & G & A -Capital Period	1,460	days	$3,318	$4,844,280		$1,211,070	$1,211,070	$1,211,070	$1,211,070																$4,844,280
			Subtotal Contractors Indirects				$49,407,276																					$0
3			Total Mine Development	15,995	metres		$162,102,014		$30,407,092	$30,407,092	$32,276,206	$38,410,831	$21,843,212	$8,757,581														$162,102,014
4			Mine Operations																									
4	100	001	Geotechnical, Definition Drilling	14,358	metres	$720	$10,337,760						$689,184	$689,184	$689,184	$689,184	$689,184	$689,184	$689,184	$689,184	$689,184	$689,184	$689,184	$689,184	$689,184	$689,184	$689,184	$10,337,760
4	120	001	Waste Cross Cut 4.5m x 4.6m	47,056	metres	$4,860	$228,668,632				$13,451,096	$13,451,096	$13,451,096	$13,451,096	$13,451,096	$13,451,096	$13,451,096	$13,451,096	$13,451,096	$13,451,096	$13,451,096	$13,451,096	$13,451,096	$13,451,096	$13,451,096	$13,451,096	$13,451,096	$228,668,632
4	130	001	Draw Point Development Kimberlite 4.5m x4.6m	63,567	metres	$8,639	$549,155,313				$32,303,254	$32,303,254	$32,303,254	$32,303,254	$32,303,254	$32,303,254	$32,303,254	$32,303,254	$32,303,254	$32,303,254	$32,303,254	$32,303,254	$32,303,254	$32,303,254	$32,303,254	$32,303,254	$32,303,254	$549,155,313
4	140	001	Slot Raise Preparation (1.1m Bored Raise)	28,064	metres	$600	$16,838,390						$1,122,559	$1,122,559	$1,122,559	$1,122,559	$1,122,559	$1,122,559	$1,122,559	$1,122,559	$1,122,559	$1,122,559	$1,122,559	$1,122,559	$1,122,559	$1,122,559	$1,122,559	$16,838,390
4	150	001	Production Drilling	4,360,483	metres	$21.25	$92,668,986						$6,177,932	$6,177,932	$6,177,932	$6,177,932	$6,177,932	$6,177,932	$6,177,932	$6,177,932	$6,177,932	$6,177,932	$6,177,932	$6,177,932	$6,177,932	$6,177,932	$6,177,932	$92,668,986
4	160	001	Production Blasting	28,343,140	Tonnes	$5.03	$142,509,308						$9,500,621	$9,500,621	$9,500,621	$9,500,621	$9,500,621	$9,500,621	$9,500,621	$9,500,621	$9,500,621	$9,500,621	$9,500,621	$9,500,621	$9,500,621	$9,500,621	$9,500,621	$142,509,308
4	170	001	Production Mucking (R1700G) to Ore Pass	28,343,140	Tonnes	$8.70	$246,585,318						$16,439,021	$16,439,021	$16,439,021	$16,439,021	$16,439,021	$16,439,021	$16,439,021	$16,439,021	$16,439,021	$16,439,021	$16,439,021	$16,439,021	$16,439,021	$16,439,021	$16,439,021	$246,585,318
4	180	001	Production Backfilling	17,005,884	Tonnes	$11.40	$193,867,078						$12,924,472	$12,924,472	$12,924,472	$12,924,472	$12,924,472	$12,924,472	$12,924,472	$12,924,472	$12,924,472	$12,924,472	$12,924,472	$12,924,472	$12,924,472	$12,924,472	$12,924,472	$193,867,078
4	190	001	Production Mucking to Material Handling System	19,244,421	Tonnes	$4.0	$76,977,684						$5,131,846	$5,131,846	$5,131,846	$5,131,846	$5,131,846	$5,131,846	$5,131,846	$5,131,846	$5,131,846	$5,131,846	$5,131,846	$5,131,846	$5,131,846	$5,131,846	$5,131,846	$76,977,684
4	200	001	Production Material Handling System to Surface	30,448,894	Tonnes	$4.00	$121,673,780						$8,111,585	$8,111,585	$8,111,585	$8,111,585	$8,111,585	$8,111,585	$8,111,585	$8,111,585	$8,111,585	$8,111,585	$8,111,585	$8,111,585	$8,111,585	$8,111,585	$8,111,585	$121,673,780
4	210	001	Rocky Ore Haulage to Surface	1,417,157	Tonnes	$21.65	$30,681,449						$2,045,430	$2,045,430	$2,045,430	$2,045,430	$2,045,430	$2,045,430	$2,045,430	$2,045,430	$2,045,430	$2,045,430	$2,045,430	$2,045,430	$2,045,430	$2,045,430	$2,045,430	$30,681,449
4	250	001	Draw Point Rehabilitation	54,361	metres	$500	$27,180,500						$1,812,033	$1,812,033	$1,812,033	$1,812,033	$1,812,033	$1,812,033	$1,812,033	$1,812,033	$1,812,033	$1,812,033	$1,812,033	$1,812,033	$1,812,033	$1,812,033	$1,812,033	$27,180,500
4	300	001	Contractor's Indirects Labour- Operating Period	5,475	days	$29,681	$162,505,862						$10,833,724	$10,833,724	$10,833,724	$10,833,724	$10,833,724	$10,833,724	$10,833,724	$10,833,724	$10,833,724	$10,833,724	$10,833,724	$10,833,724	$10,833,724	$10,833,724	$10,833,724	$162,505,862
4	300	001	Contractor's Indirect Operating & G & A -Operating Period	5,475	days	$3,318	$18,166,050						$1,211,070	$1,211,070	$1,211,070	$1,211,070	$1,211,070	$1,211,070	$1,211,070	$1,211,070	$1,211,070	$1,211,070	$1,211,070	$1,211,070	$1,211,070	$1,211,070	$1,211,070	$18,166,050
4			Total Mine Operations	31,866,051	Tonnes	$60.2	$1,917,816,111				$45,754,350	$45,754,350	$121,753,827	$121,753,827	$121,753,827	$121,753,827	$121,753,827	$121,753,827	$121,753,827	$121,753,827	$121,753,827	$121,753,827	$121,753,827	$121,753,827	$121,753,827	$121,753,827	$121,753,827	$1,917,816,111
5			Mine Ventilation System																									
5	100	001	Ventilation System FAR#1 Equipment Purchase	1	ls	$6,119,730	$6,119,730					$3,059,865	$3,059,865															$6,119,730
5	110	001	Ventilation System FAR#2 Equipment Purchase	1	ls	$6,119,730	$6,119,730					$3,059,865	$3,059,865															$6,119,730

Dominion Diamonds

Jay Pipe Concept Study

Budgeted Cost

WBS Level 1	WBS Level 2	WBS Level 3	Description	Quantity	Unit	Unit Cost	Budgeted Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
5	120	001	Ventilation System FAR#1 Construction & Installation	1	ls	$5,310,721	$5,310,721					$2,655,361	$2,655,361															$5,310,721
5	130	001	Ventilation System FAR#2 Construction & Installation	1	ls	$5,310,721	$5,310,721					$2,655,361	$2,655,361															$5,310,721
5	140	001	Ventilation System RAR#1 Equipment Purchase	1	ls	$100,000	$100,000					$50,000	$50,000															$100,000
5	150	001	Ventilation System RAR#1 Construction & Installation	1	ls	$250,000	$250,000					$125,000	$125,000															$250,000
5	160	001	Ventilation System Main Ramp Equipment Purchase	1	ls	$1,362,797	$1,362,797		$1,362,797																			$1,362,797
5	170	001	Ventilation System Conveyor Ramp Equipment Purchase	1	ls	$1,362,797	$1,362,797		$1,362,797																			$1,362,797
5	180	001	Ancillary Ventilation Fans	1	ls	$4,330,320	$4,330,320				$1,443,440	$1,443,440	$1,443,440															$4,330,320
5	190	001	Typical level Ventilation Doors/Bulkheads	80	ea	$52,202	$4,176,191				$1,392,064	$1,392,064	$1,392,064															$4,176,191
5			Total Mine Ventilation System				$34,443,008		$2,725,595	$0	$2,835,504	$14,440,955	$14,440,955															$34,443,008
6			Material Handling System																									
6	100	001	JV1 Conveyor Equipment and Material Purchase	100	m	$19,700	$1,970,000				$1,970,000																	$1,970,000
6	110	001	JV3 Conveyor Equipment and Material Purchase	1,400	m	$5,090	$7,126,000				$7,126,000																	$7,126,000
6	120	001	JV4 Conveyor Equipment and Material Purchase	1,400	m	$5,090	$7,126,000				$7,126,000																	$7,126,000
6	130	001	JV5 Stacker Conveyor Equipment and Material Purchase	200	m	$12,500	$2,500,000				$2,500,000																	$2,500,000
6	140	001	Sizer Equipment and Material Purchase	1	ls	$7,775,000	$7,775,000				$3,887,500	$3,887,500																$7,775,000
6	150	001	Ore Pass System Equipment and Material Purchase	1	ls	$7,630,000	$7,630,000				$3,815,000	$3,815,000																$7,630,000
6	160	001	JV1 Conveyor Construction and Installation	80	m	$52,750	$4,220,000				$2,110,000	$2,110,000																$4,220,000
6	200	001	JV3 Conveyor Construction and Installation	1,400	m	$6,800	$9,520,000				$4,760,000	$4,760,000																$9,520,000
6	210	001	JV4 Conveyor Construction and Installation	1,400	m	$6,800	$9,520,000				$4,760,000	$4,760,000																$9,520,000
6	220	001	JV5 Stacker Conveyor Construction and Installation	200	m	$19,700	$3,940,000				$1,970,000	$1,970,000																$3,940,000
6	230	001	Sizer Construction and Installation	1	ls	$5,160,000	$5,160,000				$2,580,000	$2,580,000																$5,160,000
6	240	001	Ore Pass System Construction and Installation	1	ls	$13,260,000	$13,260,000				$4,420,000	$4,420,000	$4,420,000															$13,260,000
6			Total Material Handling System	1	ls		$79,747,000				$47,024,500	$28,302,500	$4,420,000															$79,747,000
7			Underground Infrastructure																									
7	100	001	FAR Steel Manway 2070L to Surface	390	metres	$3,639	$1,419,327				$709,664	$709,664																$1,419,327
7	110	001	Underground FAR Steel Manway from 1770L to 2070L	310	metres	$4,305	$1,334,583					$1,334,583																$1,334,583
7	120	001	2070L Refuge Station	1	ls	$291,206	$291,206			$291,206																		$291,206
7	130	001	2050L Refuge Station	1	ls	$291,206	$291,206			$291,206																		$291,206
7	140	001	Typical Level Refuge Station (6)	1	ls	$1,747,238	$1,747,238				$582,413	$582,413	$582,413															$1,747,238
7	150	001	Portable Refuge Stations (2)	2	ea	$186,000	$372,000		$186,000	$186,000																		$372,000
7	160	001	Typical Level Electrical Substation (19)	19	ea	$588,316	$11,178,000			$2,794,500	$2,794,500	$2,794,500	$2,794,500															$11,178,000
7	170	001	2070 Level Electrical Substation (Material Handling System)	1	ea	$558,000	$558,000				$558,000																	$558,000
7	180	001	Electrical/Controls Mining Equipment	1	ls	$224,064	$224,064		$224,064																			$224,064
7	190	001	U/G Communication & IT Equipment	1	ls	$2,243,700	$2,243,700			$747,900	$747,900	$747,900																$2,243,700
7	200	001	2070L Fuel and Lube Station	1	ls	$621,114	$621,114			$621,114																		$621,114
7	210	001	Explosives Magazines 2070 Level	1	ls	$180,300	$180,300			$180,300																		$180,300
7	220	001	2150 Level Main Dewatering Sump 1	1	ls	$3,594,278	$3,594,278				$3,594,278																	$3,594,278
7	230	001	2150 Level Main Dewatering Sump 2	1	ls	$3,594,278	$3,594,278				$3,594,278																	$3,594,278
7	240	001	2050 Level Main Dewatering Sump 1	1	ls	$3,594,278	$3,594,278			$3,594,278																		$3,594,278
7	250	001	2050 Level Main Dewatering Sump 2	1	ls	$3,594,278	$3,594,278			$3,594,278																		$3,594,278
7	260	001	1930 Level Main Dewatering Sump 1	1	ls	$1,674,250	$1,674,250				$1,674,250																	$1,674,250
7	270	001	1770 Level Main Dewatering Sump 1	1	ls	$1,674,250	$1,674,250				$1,674,250																	$1,674,250
7	280	001	Main Dewatering Pipeline 2070 Level to Surface	3,000	m	$1,008	$3,025,284			$3,025,284																		$3,025,284
7	290	001	Main Dewatering Pipeline 1770 Level to 2070 Level	2,500	m	$1,015	$2,537,220				$2,537,220																	$2,537,220
7	300	001	Underground Concrete Fill Mixing Plant	2	ea	$250,000	$500,000					$250,000	$250,000															$500,000
7	310	001	Underground Boreholes for Concrete Fill	350	m	$1,500	$525,000				$175,000	$175,000	$175,000															$525,000
7	320	001	Main Compressed Air Pipeline	2,500	m	$470	$1,174,560				$391,520	$391,520	$391,520															$1,174,560
7	330	001	Level Dewatering Sumps (19)	19	ea	$86,149	$1,636,826		$327,365	$327,365	$327,365	$327,365	$327,365															$1,636,826
7	340	001	Main Ramp Saline Service Water System Sump	1	ls	$305,618	$305,618		$305,618																			$305,618
7	350	001	Conveyor Ramp Saline Service Water System Sump	1	ls	$305,618	$305,618		$305,618																			$305,618

Dominion Diamonds

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Budgeted Cost

WBS Level 1	WBS Level 2	WBS Level 3	Description	Quantity	Unit	Unit Cost	Budgeted Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
7	360	001	Levels Dust Collectors	19	ea	$87,908	$1,670,260		$334,052	$334,052	$334,052	$334,052	$334,052															$1,670,260
7			Total Underground Infrastructure	1	ls		$49,866,737	$0	$1,682,716	$15,987,485	$19,694,689	$7,646,996	$4,854,850															$49,866,737
8			Owner's Indirects																									
8	100	001	Owner's Manpower - Capital Period	1,460	days	$11,354	$16,576,898	$3,315,380	$3,315,380	$3,315,380	$3,315,380	$3,315,380																$16,576,898
8	100	001	Owner's Manpower - Operating Period	5,840	days	$11,354	$66,307,594						$4,420,506	$4,420,506	$4,420,506	$4,420,506	$4,420,506	$4,420,506	$4,420,506	$4,420,506	$4,420,506	$4,420,506	$4,420,506	$4,420,506	$4,420,506	$4,420,506	$4,420,506	$66,307,594
			Owner's Manpower	7,300	days		$82,884,492																					
8	110	001	Surface Haulage Sorted Ore/Waste	1,417,157	Tonnes	$6.42	$9,098,148					$568,634	$568,634	$568,634	$568,634	$568,634	$568,634	$568,634	$568,634	$568,634	$568,634	$568,634	$568,634	$568,634	$568,634	$568,634	$568,634	$9,098,148
8	120	001	Surface Ore Haulage from Misery to Ekati	32,183,408	Tonnes	$11.24	$361,722,305					$22,607,644	$22,607,644	$22,607,644	$22,607,644	$22,607,644	$22,607,644	$22,607,644	$22,607,644	$22,607,644	$22,607,644	$22,607,644	$22,607,644	$22,607,644	$22,607,644	$22,607,644	$22,607,644	$361,722,305
8	130	001	Road Maintenance from Misery to Ekati	7,300	days	$7,036	$51,359,981	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$2,567,999	$51,359,981
8	140	001	Surface Connate Water Treatment	7,300	days	$578	$4,217,940	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$210,897	$4,217,940
8	150	001	Ekati Logistics Crush and Rehandle	7,300	days	$963	$7,029,900	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$351,495	$7,029,900
8	160	001	Consulting Services	1	ls	$12,680,000	$12,680,000	$5,000,000	$7,680,000																			$12,680,000
			Supply & Services																									
			Accomodations & Flights																									
8	170	001	Accomodations	1,095,000	Man days	$75	$82,125,000	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$4,106,250	$82,125,000
8	180	001	Owner's Flights	15,643	Man Fligl	$240	$3,754,320	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$187,716	$3,754,320
8	190	001	Contractor's Flights	78,214	Man Fligl	$540	$42,235,560	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$2,111,778	$42,235,560
			Total Accomodations & Flights	7,300	days	$17,550	$128,114,880	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$6,405,744	$128,114,880
			Fuel Heating Fresh Air Raises and Electricity																									
			Fuel Heating Portal & FAR																									
8	200	001	Fuel Heating Fresh Air Raises	146,306,250	litres	$1.20	$175,567,500		$904,500	$1,809,000	$3,618,000	$7,236,000	$10,800,000	$10,800,000	$10,800,000	$10,800,000	$10,800,000	$10,800,000	$10,800,000	$10,800,000	$10,800,000	$10,800,000	$10,800,000	$10,800,000	$10,800,000	$10,800,000	$10,800,000	$175,567,500
8	210	001	Fuel Electricity	155,247,188	litres	$1.20	$186,296,625		$959,775	$1,919,550	$3,839,100	$7,678,200	$11,460,000	$11,460,000	$11,460,000	$11,460,000	$11,460,000	$11,460,000	$11,460,000	$11,460,000	$11,460,000	$11,460,000	$11,460,000	$11,460,000	$11,460,000	$11,460,000	$11,460,000	$186,296,625
			Total Fuel Heating Fresh Air Raises and Electricity	301,553,438	litres	$1.20	$361,864,125		$1,864,275	$3,728,550	$7,457,100	$14,914,200	$22,260,000	$22,260,000	$22,260,000	$22,260,000	$22,260,000	$22,260,000	$22,260,000	$22,260,000	$22,260,000	$22,260,000	$22,260,000	$22,260,000	$22,260,000	$22,260,000	$22,260,000	$361,864,125
8	220	001	Freight Material and Equipment	12,750,000	kg	$0.60	$7,650,000		$1,500,000	$1,500,000	$1,500,000	$900,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$7,650,000
8	230	001	U/G Light Vehicle Operation and Maintenance	7,300	days	$2,039	$14,886,394		$125,000	$250,000	$853,611	$853,611	$853,611	$853,611	$853,611	$853,611	$853,611	$853,611	$853,611	$853,611	$853,611	$853,611	$853,611	$853,611	$853,611	$853,611	$853,611	$14,886,394
			Supply & Services	7,300	days	$70,208	$512,515,399	$6,405,744	$9,895,019	$11,884,294	$16,216,455	$23,073,555	$29,669,355	$29,669,355	$29,669,355	$29,669,355	$29,669,355	$29,669,355	$29,669,355	$29,669,355	$29,669,355	$29,669,355	$29,669,355	$29,669,355	$29,669,355	$29,669,355	$29,669,355	$512,515,399
8			Total Owner's Indirects	31,866,051	Tonnes	$32.7	$1,041,508,164	$17,851,515	$24,020,790	$18,330,065	$22,662,226	$52,695,604	$60,396,531	$60,396,531	$60,396,531	$60,396,531	$60,396,531	$60,396,531	$60,396,531	$60,396,531	$60,396,531	$60,396,531	$60,396,531	$60,396,531	$60,396,531	$60,396,531	$60,396,531	$1,041,508,164
			Grand Total Jay Pipe Project Concept Study	31,866,051	Tonnes	$107.6	$3,427,300,685	$34,653,339	$110,829,436	$76,700,936	$200,701,088	$199,244,668	$246,308,620	$190,907,939	$182,150,358	$182,150,358	$182,150,358	$182,150,358	$182,150,358	$182,150,358	$182,150,358	$182,150,358	$182,150,358	$182,150,358	$182,150,358	$182,150,358	$182,150,358	$3,427,300,685

Jay Pipe Project Concept Study
Cash Flow and Economic Results

Production

	UoM	Totals	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Total/Average
Mined Tonnes to Mill	tonnes	31,866,051	-	-	-	-	316,995	1,456,160	2,553,950	2,814,150	2,814,150	2,814,150	2,821,860	2,814,150	2,814,150	2,814,150	2,557,879	1,700,425	1,407,075	1,407,075	668,122	91,610	**31,866,051**
Diluted Grade	Carats/tonne	1.99	-	-	-	-	2.1	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	1.9	1.8	**2.0**
Production Rate	tonnes/day	5,453	-	-	-	-	868	3,989	6,978	7,710	7,710	7,710	7,710	7,710	7,710	7,710	6,989	4,659	3,855	3,855	1,825	251	**5,453**
Production Operating Days	days/year	5,844	-	-	-	-	365	365	366	365	365	365	366	365	365	365	366	365	365	365	366	365	**5844**
Project Days	days/year	7,305	365	365	366	365	365	365	366	365	365	365	366	365	365	365	366	365	365	365	366	365	

Revenue

	UoM	Totals	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Total/Average
Mined Tonnes to Mill	tonnes	31,866,051	-	-	-	-	316,995	1,456,160	2,553,950	2,814,150	2,814,150	2,814,150	2,821,860	2,814,150	2,814,150	2,814,150	2,557,879	1,700,425	1,407,075	1,407,075	668,122	91,610	**31,866,051**
Diluted Grade	Carats/tonne	1.99	-	-	-	-	2.10	1.99	1.94	1.93	1.93	1.93	1.96	1.96	1.96	2.06	2.07	2.10	2.15	2.15	1.91	1.84	**2.0**
Diamonds in Mill Feed	Carats	63,559,583	-	-	-	-	665,636	2,890,756	4,963,844	5,441,312	5,426,664	5,431,217	5,533,461	5,523,716	5,524,454	5,804,042	5,283,071	3,568,596	3,029,467	3,029,467	1,275,516	168,364	**63,559,583**
Metallurgical Recovery	%	85%	0%	0%	0%	0%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	**85.0%**
Diamonds Recoverd	Carats	54,025,645	-	-	-	-	565,791	2,457,142	4,219,267	4,625,115	4,612,664	4,616,535	4,703,442	4,695,159	4,695,786	4,933,435	4,490,611	3,033,307	2,575,047	2,575,047	1,084,188	143,109	**54,025,645**
Diamonds Percent Paid	100%	100%	0%	0%	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	**100.0%**
Diamonds Paid	Carats	54,025,645	-	-	-	-	565,791	2,457,142	4,219,267	4,625,115	4,612,664	4,616,535	4,703,442	4,695,159	4,695,786	4,933,435	4,490,611	3,033,307	2,575,047	2,575,047	1,084,188	143,109	**54,025,645**
Diamond Value Per Carat	$ per Carat	$74.00	$0.00	$0.00	$0.00	$0.00	$74.00	$74.00	$74.00	$74.00	$74.00	$74.00	$74.00	$74.00	$74.00	$74.00	$74.00	$74.00	$74.00	$74.00	$74.00	$74.00	**$74**
Diamond Revenue	$ x 1,000	$ 3,997,898	$ -	$ -	$ -	$ -	$ 41,868.50	$ 181,828.52	$ 312,225.79	$ 342,258.50	$ 341,337.17	$ 341,623.57	$ 348,054.70	$ 347,441.74	$ 347,488.17	$ 365,074.21	$ 332,305.19	$ 224,464.70	$ 190,553.48	$ 190,553.48	$ 80,229.93	$ 10,590.10	**$3,997,898**
Royalty	$ x 1,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Total Revenue	$ x 1,000	$ 3,997,898	**$ -**	**$ -**	**$ -**	**$ -**	**$ 41,868.50**	**$ 181,828.52**	**$ 312,225.79**	**$ 342,258.50**	**$ 341,337.17**	**$ 341,623.57**	**$ 348,054.70**	**$ 347,441.74**	**$ 347,488.17**	**$ 365,074.21**	**$ 332,305.19**	**$ 224,464.70**	**$ 190,553.48**	**$ 190,553.48**	**$ 80,229.93**	**$ 10,590.10**	**$3,997,898**

Capital Cost

	UoM	Totals	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Total/Average
Mine																							
Underground Excavations	$ x 1,000	$ 112,695	$ -	$ 18,055	$ 18,055	$ 19,924	$ 26,059	$ 21,843	$ 8,758	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$112,695**
Underground Construction	$ x 1,000	$ 138,120	$ -	$ 1,683	$ 15,987	$ 69,555	$ 38,785	$ 12,110	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$138,120**
Mobile Equipment and Compressors	$ x 1,000	$ 59,101	$ -	$ -	$ -	$ 28,509	$ 11,993	$ 18,599	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$59,101**
Indirects during Construction Period	$ x 1,000	$ 45,754	$ -	$ -	$ -	$ 45,754	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$45,754**
Mill Refurbishment	$ x 1,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$0**
Tailings Facility	$ x 1,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$0**
Surface Facilities and Services	$ x 1,000	$ 108,653	$ 16,802	$ 54,719	$ 11,976	$ 1,945	$ 11,605	$ 11,605	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$108,653**
Site Indirects Capital Period	$ x 1,000	$ 132,909	$ 17,852	$ 23,896	$ 18,080	$ 21,809	$ 51,273	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$132,909**
EPCM	$ x 1,000	$ 49,407	$ -	$ 12,352	$ 12,352	$ 12,352	$ 12,352	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$49,407**
Subtotal	$ x 1,000	$ 646,640	**$ 34,653**	**$ 110,704**	**$ 76,451**	**$ 199,847**	**$ 152,068**	**$ 64,158**	**$ 8,758**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$646,640**
Contingency	20%	$ 114,745	$ 6,931	$ 22,141	$ 15,290	$ 39,969	$ 30,414	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$129,328**
Total Capital Cost	$ x 1,000	$ 761,385	**$ 41,584**	**$ 132,845**	**$ 91,741**	**$ 239,817**	**$ 182,482**	**$ 64,158**	**$ 8,758**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$775,968**
Cost per Tonne	$/tonne	$23.89	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$575.66**	**$44.06**	**$3.43**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$24.35**
Cost per Carat (Paid)	$/Carat	$14.09	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$322.53**	**$26.11**	**$2.08**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$14.36**

Operating Cost

	UoM	Totals	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Total/Average
Mining	$ x 1,000	$ 1,872,062	$ -	$ -	$ -	$ -	$ 45,754	$ 121,754	$ 121,754	$ 121,754	$ 121,754	$ 121,754	$ 121,754	$ 121,754	$ 121,754	$ 121,754	$ 121,754	$ 121,754	$ 121,754	$ 121,754	$ 121,754	$ 121,754	**$1,872,062**
Milling	$ x 1,000	$ 347,255	$ -	$ -	$ -	$ -	$ 216	$ 16,018	$ 28,093	$ 30,956	$ 30,956	$ 30,956	$ 31,040	$ 30,956	$ 30,956	$ 30,956	$ 28,137	$ 18,705	$ 15,478	$ 15,478	$ 7,349	$ 1,008	**$347,255**
Site Indirects	$ x 1,000	$ 908,599	$ -	$ 125	$ 250	$ 854	$ 1,422	$ 60,397	$ 60,397	$ 60,397	$ 60,397	$ 60,397	$ 60,397	$ 60,397	$ 60,397	$ 60,397	$ 60,397	$ 60,397	$ 60,397	$ 60,397	$ 60,397	$ 60,397	**$908,599**
Corporate Overhead	$ x 1,000	$ 505,099	$ -	$ -	$ -	$ -	$ 314	$ 23,299	$ 40,863	$ 45,026	$ 45,026	$ 45,026	$ 45,150	$ 45,026	$ 45,026	$ 45,026	$ 40,926	$ 27,207	$ 22,513	$ 22,513	$ 10,690	$ 1,466	**$505,099**
Total Operating Cost	$ x 1,000	$ 3,633,015	**$ -**	**$ 125**	**$ 250**	**$ 854**	**$ 47,706**	**$ 221,467**	**$ 251,107**	**$ 258,132**	**$ 258,132**	**$ 258,132**	**$ 258,341**	**$ 258,132**	**$ 258,132**	**$ 258,132**	**$ 251,213**	**$ 228,062**	**$ 220,141**	**$ 220,141**	**$ 200,190**	**$ 184,624**	**$2,070,511**
Cost per Tonne	$/tonne	$114.01	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$150.50**	**$152.09**	**$98.32**	**$91.73**	**$91.73**	**$91.73**	**$91.55**	**$91.73**	**$91.73**	**$91.73**	**$98.21**	**$134.12**	**$156.45**	**$156.45**	**$299.63**	**$2,015.33**	**$64.98**
Cost per Carat (Paid)	$/Carat	$67.25	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$84.32**	**$90.13**	**$59.51**	**$55.81**	**$55.96**	**$55.91**	**$54.93**	**$54.98**	**$54.97**	**$52.32**	**$55.94**	**$75.19**	**$85.49**	**$85.49**	**$184.64**	**$1,290.09**	**$38.32**

Economic Results

	UoM	Totals	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Total/Average
Revenue	$ x 1,000	$ 3,997,898	$ -	$ -	$ -	$ -	$ 41,869	$ 181,829	$ 312,226	$ 342,258	$ 341,337	$ 341,624	$ 348,055	$ 347,442	$ 347,488	$ 365,074	$ 332,305	$ 224,465	$ 190,553	$ 190,553	$ 80,230	$ 10,590	**$3,997,898**
Capital Cost	$ x 1,000	$ 761,385	$ 41,584	$ 132,845	$ 91,741	$ 239,817	$ 182,482	$ 64,158	$ 8,758	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$761,385**
Operating Cost	$ x 1,000	$ 3,633,015	$ -	$ 125	$ 250	$ 854	$ 47,706	$ 221,467	$ 251,107	$ 258,132	$ 258,132	$ 258,132	$ 258,341	$ 258,132	$ 258,132	$ 258,132	$ 251,213	$ 228,062	$ 220,141	$ 220,141	$ 200,190	$ 184,624	**$3,633,015**
Subtotal	$ x 1,000	$ (396,502)	**$ (41,584)**	**$ (132,970)**	**$ (91,991)**	**$ (240,671)**	**$ (188,320)**	**$ (103,796)**	**$ 52,361**	**$ 84,126**	**$ 83,205**	**$ 83,491**	**$ 89,714**	**$ 89,309**	**$ 89,356**	**$ 106,942**	**$ 81,092**	**$ (3,597)**	**$ (29,588)**	**$ (29,588)**	**$ (119,960)**	**$ (174,034)**	**($396,502)**
Taxes	$ x 1,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$0
Funding	$ x 1,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$0
Cash Flow	$ x 1,000	$ (396,502)	**$ (41,584)**	**$ (132,970)**	**$ (91,991)**	**$ (240,671)**	**$ (188,320)**	**$ (103,796)**	**$ 52,361**	**$ 84,126**	**$ 83,205**	**$ 83,491**	**$ 89,714**	**$ 89,309**	**$ 89,356**	**$ 106,942**	**$ 81,092**	**$ (3,597)**	**$ (29,588)**	**$ (29,588)**	**$ (119,960)**	**$ (174,034)**	**-$396,502**
Cummulative Cash Flow	$ x 1,000		$ (41,584)	$ (174,554)	$ (266,545)	$ (507,216)	$ (695,536)	$ (799,332)	$ (746,971)	$ (662,845)	$ (579,640)	$ (496,149)	$ (406,435)	$ (317,125)	$ (227,770)	$ (120,828)	$ (39,736)	$ (43,333)	$ (72,921)	$ (102,509)	$ (222,468)	$ (396,502)	
Discounted Cash Flow	7%	$ (355,127)	$ (38,864)	$ (116,141)	$ (75,092)	$ (183,606)	$ (134,269)	$ (69,164)	$ 32,608	$ 48,962	$ 45,258	$ 42,443	$ 42,623	$ 39,654	$ 37,079	$ 41,474	$ 29,392	$ (1,218)	$ (9,367)	$ (8,754)	$ (33,170)	$ (44,974)	**-$355,127**
Cummulative Discounted Cash Flow	$ x 1,000		$ (38,864)	$ (155,005)	$ (230,097)	$ (413,704)	$ (547,973)	$ (617,137)	$ (584,529)	$ (535,567)	$ (490,309)	$ (447,866)	$ (405,244)	$ (365,589)	$ (328,510)	$ (287,036)	$ (257,644)	$ (258,863)	$ (268,230)	$ (276,984)	$ (310,153)	$ (355,127)	
NPV at 7%	$ x 1,000	$ (355,127)																					
IRR	%	0%																					
Payback Period (first year of positive cummulative cashflow)		Cannot Calculate																					