Report on Due Diligence on the Greenwood Gold Project, BC.


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Due Diligence Report
Due Diligence Report

REPORT ON DUE DILIGENCE ON THE GREENWOOD GOLD PROJECT, BC.

1. SUMMARY

On behalf of Golden Dawn Minerals Inc., due diligence studies were conducted to support the corporate decision to acquire the Greenwood Gold Project. Due Diligence verified the technical and economic aspects of the project, as well as the status of titles, royalties, permits and First Nations involvement in the project.

Golden Dawn’s due diligence effort went as far as commissioning two new National Instrument 43-101 Technical Reports, including a report on updated mineral resource estimates and a Preliminary Economic Assessment (PEA) report, by independent mining consultants P&E Mining Consultants Inc. In addition, site visits were conducted by contractors accompanied by company personnel to examine in detail the major mill and mining equipment included in the sale. As such, the Company expended considerable effort and expense to critically examine all the available information on this project.

Mineral Claims, Royalties and First Nations

Mineral claims, crown grants and mining leases comprising the Lexington and Golden Crown properties all appear to be currently active as presented by the vendor. Most of the royalty agreements on these claims may have been extinguished by the previous bankruptcy process that former owner Merit Mining Corp. went through. A First Nations Impacts Benefit Agreement is likely also extinguished. The royalty and other agreement issues require legal verification.

Permits

The permits for the Lexington-Grenoble Mine and the Greenwood mill are active but on hold pending transfer of ownership and approval of new operating plans by the British Columbia Ministry of Energy and Mines. An application for a water discharge permit was submitted to the British Columbia Ministry of Environment and is currently being revised by Kala Goesciences Ltd. for re-submission by the end of May, 2016. This permit is required for the Lexington mine to be dewatered for access.

There is a trigger level of production at 75,000 tonnes per annum, which represents 200 to 225 tonne per day throughput, below which permits are handled by the Chief Inspector of Mines in the MEM branch. Above this, permitting is done out of the Major Mines Permitting Office (MMPO), is much broader in scope, and is done at a Provincial level under the Minster and Deputy Minister for Mines. Large mining projects also require an “Environmental Assessment”, which involves review by many provincial, federal and national level bodies.

Mineral Resources

As described in the 2016 Mineral Resource Technical Report, the geological databases for the Lexington-Grenoble and Golden Crown deposits were updated, the deposits were re-modeled and the mineral resource
Due Diligence Report

estimates were updated. This resulted in increased tonnage and decreased gold equivalent ounces in the Measured and Indicated Resource categories for Lexington-Grenoble compared to a 2006 resource estimate. For the Golden Crown deposit, the new estimate also resulted in increased tonnage and decreased gold equivalent ounces, and also an increase in the amount of inferred tonnage compared to the 2006 estimates.

Opportunities have been identified for up-side exploration potential at the Lexington-Grenoble and Golden Crown deposits that could add significantly to the resource. Other deposits in the region, including the May Mac mine owned by Golden Dawn and the Lone Star deposit in the USA could potentially be exploited in the future.

**Mill Process**

The mill process results and metallurgical testwork completed to date on the two deposits were reviewed. Recoveries for gold and copper appear to be as expected for the Lexington-Grenoble deposit. Although the design throughput was eventually achieved during previous operations, lower than expected recoveries as a result of lower than anticipated feed grades were experienced. From the records and reports of previous operations, this is now understood to have been due to mining dilution. The Golden Crown deposit has different mineralogy to that of the Lexington-Grenoble deposit. Preliminary indications are that approximately a third of the gold reports to the gravity concentrate, 30-40% of the gold is recovered with the copper concentrate, and up to 25-30% goes with a pyrite concentrate. Laboratory results to date suggest a significant quantity of gold will report with the iron sulfides depressed during flotation. Treatment methods such as cyanide leaching of the pyrite concentrate can be evaluated further. Further testwork is required on the Golden Crown deposit.

**Mill Equipment**

The Greenwood plant consists of an outdoor semi-portable crushing plant and a ball mill with gravity and froth flotation housed in a steel clad insulated building. The tailing storage facility (TSF) consists of a membrane lined pond at a nearby location situated at a lower elevation than the plant. Grid power supply to the mill site has been maintained and is currently in a ready to go mode. The mill equipment is in relatively good condition.

**Mining Equipment**

The mining equipment fleet includes scooptrams (3 Wagner 3.5 yard and 2 2.5 yard JCI), rock trucks (2), air jumbos (2) air compressor (1), rock bolter (1) and tractors for personnel transport (3). The larger units are in fair condition and will require replacement of uncertified engines, re-installation of fire suppression equipment and in some cases replacement of the braking systems.

**Project Economics**

The Preliminary Economic Assessment Technical Report envisages a new mining plan that was formulated on the basis of the revised geological interpretation and updated mineral resource estimates. The cash flow model generated for the base case indicates the Greenwood Gold Project has economic potential for producing gold doré bars and a gold-rich copper concentrate. P&E recommends that Golden Dawn advance the project with extended and advanced technical studies, particularly in alternative mine planning, metallurgical, geotechnical and environmental matters with the intention to advance the Greenwood Project to a production decision.
Critical Overview

Fred Sveinson, P.Eng., formerly with Merit Mining Corp., conducted a high level review of the project and made several suggestions. Closer spaced drilling may be required for the remaining resource blocks. The mining method previously used was drift and slash but long hole bulk mining method is recommended. The mill achieved about 275tpd throughput when resources from both Lexington and Golden Crown were supplied. A test trench mined at the Golden Crown in 2008 showed the grades were in line with what was expected. The mill was laid out to install a second ball mill and add flotation cells to easily increase throughput. The mechanized underground equipment can likely be overhauled for a lot less than buying new or good used equipment. The mine has to be as mechanized as possible, using long hole mining where possible to get the productivities up and costs down. In summary, if the tonnes can be mined at the predicted grades, then this becomes a good project.

2. INTRODUCTION

Golden Dawn Minerals Inc. entered into a binding Letter of Intent to acquire the Greenwood Gold project from Huakan International Mining Inc., as announced February 24, 2016. Wolf Wiese, CEO of Golden Dawn, then requested that due diligence studies be carried out. A multi-disciplinary due diligence team was assembled to carry out a technical audit of the project. This report compiles the individual studies into one document. Further details can be found in the reports, which are listed in the Bibliography.

2.1. Objective

The purpose of these due diligence studies is a technical audit into the status of resources, mining, processing, infrastructure, and project economics. Also investigated were the mineral titles, royalties, reclamation liabilities; and First Nations agreement.

A formal analysis of the project economics was carried out and documented in a National Instrument 43-101 Preliminary Economic Assessment Technical Report (filed on Sedar.com on May 20, 2016). This report is based upon the existing mineral resources, which were updated and documented in a separate NI 43-101 Mineral Resource Technical Report for the Lexington-Grenoble and Golden Crown deposits (filed on Sedar.com on April 8, 2016). The PEA report documents the existing infrastructure, proposed mining and mineral processing, environmental considerations. Reviews of the mineral titles, permits, First Nation agreement, up-side mineral potential, infrastructure and equipment on site, and a high-level review of the project were also completed separately for Golden Dawn as part of its due diligence.
## 2.2. Due Diligence Team

The following table lists the parties and area of expertise for the due diligence team members.

**Table 1. Due Diligence Team**

<table>
<thead>
<tr>
<th>Company</th>
<th>Name</th>
<th>Due Diligence Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Golden Dawn Minerals Inc.</td>
<td>Dr. Mathew Ball, P.Geo., COO &amp; Chief Geologist</td>
<td>Team Leader: Coordinate Site Visits and Final Report</td>
</tr>
<tr>
<td>International Mine Builders Inc.</td>
<td>Fred Sveinson, P.Eng., President</td>
<td>Mining Engineering Consultant: High-level review of project and proposed mining plan.</td>
</tr>
<tr>
<td>Genex Mining Co. Ltd</td>
<td>Brian Mills, President</td>
<td>Mining Contractor: Status of mining equipment at site</td>
</tr>
</tbody>
</table>
3. TITLES AND AGREEMENTS

Apex Geosciences investigated the status of Mineral Claims, Mineral Leases and Crown Grants associated with the Greenwood Gold Project. Apex Geosciences also investigated the status of royalty agreements associated with the project. The following is summarized from their report.

3.1. Mineral Titles

The active status of the mineral claims and leases was confirmed. The active status of Crown Grant mineral claims was also confirmed via MTO, but the actual ownership, legal status and any other information such as liens was not confirmed. This information can be obtained from the Land Titles.

3.2. Royalty Agreements

The Greenwood Property progressed in ownership from Huakan to AMT Industries Canada Inc., into court appointed receivership by Grant Thornton Limited (“Grant Thornton”), then official bankruptcy and eventual sale of assets. Huakan re-obtained the Property through bid process in early 2014. The authors requested but have yet to confirmation from Grant Thornton; however, it appears that all agreements were extinguished through the receivership and bankruptcy process with the exception of those net smelter return royalty agreements encumbering the Century Gold mineral claims and the “Rippon Crown” mineral tenure numbers 357698 and 517646 in favour of Donald Rippon and Karl Schindler. These royalties survive because they were a result of negotiations with the Receiver.

3.2.1. Golden Crown Property

The majority of the existing Golden Crown Resource is contained within the Golden Crown and Winnipeg Crown Grants (refer to maps in the Apex report), which were subject to the Dynasty Motorcar Royalty. Apex’s research suggests that this royalty and the Kemp royalties for the Zip and JD mineral claims have been extinguished.

There is a small portion of the 2006 Golden Crown Resource on one of the Century Gold Mineral Claims (mineral claim 357031) as part of the “Portal Zone”.

The Schindler and Rippon Century Gold Claim Royalty and the “Rippon Crown” Royalty on Claims 357698 and 517646 (highlighted in light yellow) are the only royalties that likely survive and encumber the project as this was a negotiated settlement between the Receiver and Mr. Rippon.

There are some significant drill hole intercepts and therefore potential for future resources to be developed on a couple of the other Century Gold and Rippon Crown mineral claims.

3.2.2. Lexington-Grenoble

According to Apex, it is highly likely that any past and future royalty payments associated with the Grenoble Energy and Successors Net Profit Interest are likely extinguished as part of the Bankruptcy, receivership and sale.
4. PERMITS

Apex Geosciences also investigated the status of permits associated with the Greenwood Gold Project. There are currently three relatively recent and active land use (mining related) permits associated with the Lexington Mine and the Zip Mill. The permits are considered active but they are officially on care and maintenance and no work is allowed under these permits without the approval of new work programs.

4.1. Mines Act Permit M-233

Mines Act Permit M-233 approved the processing of 200 tonnes per day (72,000 tonnes/year) at the Zip (Greenwood) Mill. This permit would have expired on March 31, 2013. A request has been submitted to the MEM to get confirmation of the expiry of the Permit and for instruction on what is required to reactivate and/or transfer the permit.

Apex did not find any documents regarding a security deposit for this permit, but the recent technical report produced by P & E Mining Consultants Inc. states there is a $235,000 bond with the Government of British Columbia, which correlates with a Huakan Press Release dated January 9, 2013, which states the current reclamation bond on the Greenwood Gold Project is approximately $450,000. (Note: all dollar figures in this report are Canadian Dollars unless specified otherwise.) A request has been submitted to the Ministry to confirm the actual security posted by Huakan for each of the permit.

4.2. Mines Act Permit M-234

Mines Act Permit M-234 approved the surface and underground mining and exploration activities associated with the Lexington Mine. This permit had an expiry of March 31st, 2013. A request has been submitted to the Ministry of Energy and Mines (MEM) for instruction on what is required to reactivate and transfer the permit. A $215,000 reclamation security deposit has been supplied by Huakan in relation to Permit M-234.

4.3. Mineral Exploration Permit (MX-GEN-12)

A general Mineral Exploration Permit (MX-GEN-12) is held by Huakan (formerly Merit) that covers a large area from Greenwood to Mount McKinney including the Lexington and Golden Crown Properties. Huakan has an $80,000 bond associated with this permit, however, only a portion of that is attributed to the disturbances at the Lexington and Golden Crown associated with drill pads, drill roads and trenches.

It is the recommendation of APEX that once Golden Dawn completes the acquisition a new general exploration permit be applied for these areas in the name of Golden Dawn in order to allow for any surface exploration activities that may be required. Letters of authorization will be required to be drafted and signed by both parties to ensure that Huakan is relieved of, and Golden Dawn assumes all, responsibility for these areas. A new reclamation deposit in Golden Dawn’s name will likely be required.

4.4. MOE Discharge Permit for Lexington Mine

A Ministry of Environment (MOE) approval to discharge effluent to the ground from underground mine workings at the Lexington Mine (100171) was approved May 21, 2008 but expired June 30, 2009.
A new water discharge permit for the Lexington Mine was applied for by Kala Geoscience on behalf of Huakan on April 10, 2015. The application requested authorization for the removal of stored water (due to inactivity) with a discharge rate of 5,440 m3/day for approximately 30 days (163,200 m3 in total) and a maximum operational dewatering discharge rate of 50 m3/day for approximately 3 years. P&E Mining Consultants Inc. has estimated the size of the total Lexington workings to be about 50,000 m3, so the permit application appears appropriate. The application was deemed incomplete on February 23, 2016, and the MOE recommended a pre-application meeting with the ministry prior to re-submission with additional technical requirements. The 2015 application documents and letter from the MOE are provided in Appendix 8 of the Apex report.

As of May 6, 2016, Paul Cowley, P.Geo., reported on behalf of Huakan that “Kala is in progress of the steps they had defined to secure the permit…..they said there were still on their schedule of submitting the deficiencies before the end of May. Kala was planning on meeting the senior reviewer to ensure their prescribed submission was going to meet all of their expectations”.

4.5. Golden Crown Mine

The Golden Crown Mine is considered a historic mine and has had no recent permitting (as per communication with Paul Cowley).

The permitting process should start with a Notice of Work that includes surface and underground exploration. This should allow for the rehabilitation of the underground and access portals along with any desired drilling. The mine itself will require de-watering, slashing out the tunnel and a full rehab with bolting as needed and/or starting a new decline from the other end as there are places along the tunnel that are unstable because of serpentinite in the roof that “chimneys,” and has inadequate screening. Due to the small scale of Golden Crown a Notice of Work Permit for small scale mining i.e. a 10,000 tonne bulk sample should be applied for as well followed by a continuous mining permit once the planned mining at Golden Crown has been sufficiently validated and is considered warranted.

A water discharge permit will need to be applied for as soon as possible (Appendix 9). Mr. Cowley has indicated that Skeff Creek and water coming out of the historic Golden Crown portal require monthly sampling. A water discharge permit application is a multi-step process it requires submission of a preliminary application, meetings with Ministry staff, First Nation and public consultations, and the submission of a final application with the application fee and Payment Form ($200 for a Permit; $100 plus variable fee for an Approval).

APEX: Based upon our conversations with various government organizations it is fairly clear that the quickest and most cost effective method to re-open the Lexington mine and the zip mill will be to transfer wherever possible the existing permits to Golden Dawn and then apply to extend and/or re-instate those permits. This will be much faster than trying to start with new permits. On initial review it sounds as if it is possible to extend and transfer the critical permits but further due diligence is required and it would be prudent to set up a meeting with the Ministry of Energy and Mines (MEM) and the Chief Inspector as well as the Ministry of Environment (MOE).
4.6. Small Mine vs 400 TPD Permit

The distinction between a small mine (<75,000 tonnes of production per annum), which represents a 200 to 225 tonne per day operation, and a 400 to 500 tonne per day operation is real and there are consequences to going to the larger mines permit. The 200 to 225 tonne per day operation can and is permitted by the Chief Inspector of Mines in the local MEM branch i.e. Cranbrook, whereas the larger permit is done out of a different office, is coordinated by the Major Mines Permitting Office (MMPO), is much broader in scope, and is done at a Provincial level under the Minister and Deputy Minister for Mines. However, there is a much greater impact to permitting a large project in that mining projects that are deemed large enough require an “Environmental Assessment”. This results in bringing many provincial, federal and national level bodies to review the project.

In some of the conversations and emails it was suggested that going to a larger mining permit is best done once the applicant obtains a successful small mines permit and commences production. Going to a larger mines permit then would be viewed as an expansion of current activities, and if the expansion is not deemed of sufficient size or impact as to require an “Environmental Assessment” then it can be granted at the Provincial – MEM level shortening the cost and timeline. The MMPO does deal with projects that are not deemed to be reviewable and perhaps can speed up the process once it is deemed not reviewable.

APEX: It is strongly recommended to meet with the Chief Inspector of Mines to determine what size and /or impact levels are required to become “reviewable” and trigger a full “Environmental Assessment” and then make sure that the current planned activities and any future planned expansion stay well under those guidelines and criteria.

5. FIRST NATIONS

Apex Geosciences investigated the status of First Nations associated with the Greenwood Gold Project (Appendix 1). There was an Agreement between the Osoyoos Indian Band (OIB) and Merit Mining Corp. (provided in Appendix 10.) It is the opinion of APEX that the OIB Agreement was also extinguished following the bankruptcy of AMT Industries Canada Inc. and subsequent receivership of the Property. However, it is clear and should be noted that consultation will be required for any new permits, such as the de-watering Permit Approval, and potentially for any ground disturbance Permits in the area.

The OIB was the only official group identified by the Government when permit applications were submitted in 2007, although in discussion with Paul Cowley of Huakan it was noted that near the end of the application period, the Splatsin First Nations identified themselves as having rights in the area. After discussions with the OIB, the Splatsin removed their claim.

APEX: It is the recommendation of the authors prior to submission of any permit applications or First Nations consultations, an investigation into First Nations land claims be initiated. APEX has tried to ascertain from a couple of government agencies whether Golden Dawn would or should deal with the OIB only or whether the Splatsin need to be consulted. We have not received any feedback yet. Consultations and new agreements might have to address both groups.

The current OIB representative is J.R. (Banjo) Linkevic, of their Lands Department. Mr. Linkevic who was instrumental in designing the original Impacts and Benefits Agreement with Merit Mining in 2007. Mr. Linkevic
stated that the OIB would be amenable to a new Property owner utilizing the existing agreement or to working with the OIB to construct a new Agreement. Mr. Linkevic also stressed the importance of starting consultations as early as possible in the permitting and planning stage.

A brief summary of the financial considerations in The Impact and Benefits Agreement established between Merit (Huakan) and the Osoyoos Indian Band (OIB) in 2007 is listed in the Apex report.

APEX: A meeting with the OIB should be initiated prior to additional permitting to delineate what parts of this agreement, if any, will be transferred to the new Property owner or if it is in the best interest of both parties to produce a new agreement.

6. ENVIRONMENT AND COMMUNITY

The following summary is taken from the recent PEA Technical Report by P&E Mining Consultants Inc.

Various baseline studies completed and available to support past and future permitting include those for managing waste rock and tailings material at the mine and mill site, extensive surface water quality sampling at both Lexington-Grenoble Mine and mill site but little at Golden Crown, meteorological data collection, biodiversity assessments of Lexington-Grenoble and Golden Crown Mine sites and mill site, assessment of water quality and quantity, surface drainage, climate, hydrology, hydrogeology, wildlife, vegetation, fisheries and biodiversity values, ARD/ML, terrain ecosystem mapping, socioeconomics, socio-community, land use planning and culture and heritage.

The present land use is mineral exploration, mining, forestry and seasonal cattle grazing. The Project site is not located within any federal or provincial parks, or provincial special management areas. There are no known environmental or archaeological concerns within the project site.

There are no creeks, lakes or swamps above or in the immediate area of the two Lexington-Grenoble portals, or existing waste dumps. The drainage area above the current development is small and runoff via Goosmus Creek is minimal due to the vegetation and the small catchment area. Water sampling of Goosmus Creek since 1997 demonstrates that any portal discharge (which has been minimal and periodic in volume and frequency), does not affect downstream water quality.

There are no creeks, lakes or swamps in the vicinity of the Golden Crown Mine. The area is generally drained to the north by Snowshoe Creek and to the south by Skeff Creek both of which drain into July Creek. Snowshoe Creek is sampled for water quality but Steff Creek is not. The Golden Crown Adit, driven in 1988, has a natural water drainage rate of approximately 3 gallons per minute.

The Greenwood Process Plant and Tailing Facility site is located between two tributaries of the Snowshoe Creek, which only during refreshet drains to July Creek which flows south into the Kettle River. Water quality sampling since 2003 have demonstrated that the prior, during and post operation, has not had any impact to the water quality downstream of the site. The site has peripheral and internal drainage systems to manage surface run off.

Fisheries studies on Goosmus and Snowshoe Creeks have demonstrated because of small flows and waterfalls that these creeks precluded the presence of fish and aquatic resources in these areas.
The major vegetation in the area consists of hemlock, tamarack, cedar, pine and some deciduous trees. Some of the land has been logged prior to 2007, including the Lexington-Grenoble, Golden Crown Mine sites and the Greenwood tailing site.

The most common wildlife in the area is deer. There are also occasional sightings of black bear, moose, coyotes, cougar and various small mammals such as squirrels. Bird life includes a variety of small birds plus eagles, hawks, owls and ravens. From studies in 2004 and 2006 of the existing or potential biodiversity values within the mineralized area and its multipurpose uses, it was opined that the proposed development was not likely to adversely harm fish or wildlife habitat.

The Lexington-Grenoble Mine site as presently developed is small, 3.5 hectares, and it is expected that the area of disturbance upon reactivation will not increase significantly, <1 hectare by adding to the Eastern portal waste dump area. The site will be used to service mining only, with processing of mineralization to occur at the Greenwood Process Plant.

The Greenwood Process Plant site will not require any new disturbance or work except improvements internal to the building, including the plan to increase the throughput capacity. The Tailings facility will require subsequent lifts. The material for the lifts will be sourced locally. Once the tailings facility reached it full design capacity, dry stack tailings on top of the hydraulic tailings would be employed.

The current portal and adit at Golden Crown would be slashed larger to permit trackless equipment. The waste rock would incrementally be added to the existing portal dump. A second portal with a spiral decline planned over the deposit would have a small footprint (< 1 hectare).

Due to the short storage time of mineralization and waste, the dry climate and stockpile graded base and run-off collection design, metal leaching and acid rock drainage (“ARD”) considerations are mitigated throughout the project life. Run of mine (“ROM”) mined material will be trucked from the underground Lexington-Grenoble and Golden Crown Mines and dumped in a ROM stockpile adjacent to the crushing plant. The total tailings volume will be susceptible to acid generation. The tailings stream will be transported to the tailings impoundment, which is fully lined and has been designed to maintain saturation of the tailings.

The tailings impoundment will be covered with a saturated rock fill cover on closure in order to mitigate the ARD potential. All buildings and operations materials for all three sites will be removed on closure and disturbed areas and inactive roads will be reclaimed under the direction of the BC Ministry of Energy and Mines. The mining and milling sites will be monitored for a two year period post closure.

The reactivation of the project including the construction of the Golden Crown Mine will likely affect the regional and local economy in a positive direction, in employment, relative incomes and real estate. Areas of insignificant impact would be in the areas of infrastructure, demographics, crime, education and local public services. Much of this spending will flow to businesses located within BC and the Kootenay Boundary Regional District, but due to the nature of the goods, many goods will need to be sourced from companies across the country and some goods may be sourced globally. During the operations phase, the project is expected to add significantly to the regional and local economy. Total operations cost for the life of the mine is estimated at $79.6 million. However, the decommissioning phase will begin to see reductions in investments in the regional and local economy.
8. MINERAL RESOURCES

8.1. 2016 Mineral Resource Estimate


The Mineral Resource Estimate for the Greenwood Gold Project in this technical report has been previously reported in the April 8, 2016 news release by Golden Dawn. The Mineral Resource Estimates for the Greenwood Gold Properties are presented in Tables 2 and 3 below.

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<th>Classification</th>
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<th>Classification</th>
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<th>Au g/t</th>
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</tbody>
</table>

(1) Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues. It is noted that no specific issues have been identified as yet.

(2) The quantity and grade of reported Inferred resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred resources as an Indicated or Measured mineral resource
and it is uncertain if further exploration will result in upgrading them to an Indicated or Measured mineral resource category.

(3) The mineral resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.

(4) The 3.5 g/t AuEq resource cut-off grade was derived from the approximate Jan 31/16 two year trailing average Au price of US$1,200/oz and Cu price of US$2.75/lb, US$/C$ exchange rate of 0.83, 90% & 85% respective Au and Cu process recoveries, C$35/t process cost, C$75/t mining cost and C$30/t G&A cost. AuEq g/t = Au g/t + (Cu% x 1.5)

Cautionary Note: Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. The quantity and grade of reported Inferred resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred resources as an Indicated or Measured mineral resource and it is uncertain if further exploration will result in upgrading them to an Indicated or Measured mineral resource category.

The Lexington-Grenoble Deposit is interpreted as a series of twelve closely spaced shallow to moderately dipping en echelon overlapping zones hosted within a dacitic pyroclastic unit. Zones are composed of sheeted and stockworked pyrite-chalcopyrite veins, veinlets and disseminations carrying gold. With present knowledge, the multiple zones are confined to an area 525 m along strike, 20-60 m perpendicular to the strike and 25 m vertical thickness.

The Golden Crown Deposit is composed of a corridor of west northwest trending sub-parallel and closely spaced steeply dipping massive sulphide (pyrrhotite-pyrite+/-chalcopyrite+/-arsenopyrite)and quartz-sulphide veins lying within an area 130 m wide by 800 m long. As many as 18 discrete veins have been identified in the system. Veins typically are 0.3-1 m true width, with local developments to 5 m true width near the serpentinite contact. Veins range in sulphide content from 50 to 90 % sulphides in a quartz gangue and carry high gold tenor. The bulk of the gold is free-milling, associated with pyrite.

Gemcom modeling software was used for both Lexington-Grenoble and Golden Crown Deposits, establishing the 3D block model and subsequent grade estimates. Grade capping was used to restrict the influence of statistical outliers during Inverse Distance Cubed (1/d3) application of block grades for Lexington-Grenoble and Inverse Distance Squared (1/d2) application of block grades for Golden Crown. Interpolated density models for both deposits were generated by P&E from data measurements collected by Huakan. The 2008 production stopes have been eliminated from the updated Lexington-Grenoble model.

8.2. Up-side exploration Potential

Apex Geosciences briefly also investigated the exploration potential of the properties associated with the Greenwood Gold Project. Additional comments are provided herein from the recent Technical Report on Mineral Resources.
8.2.1. Golden Crown Property

The Geology of the area is complicated but mineralization appears to be structure related with veins along a serpentinite shear/structural zone with Jurassic intrusions into a late Paleozoic – Permian/Triassic volcanic-sedimentary rocks. The gold mineralization is hosted in quartz-sulphide to semi-massive sulphide veins that are often associated with serpentinite bodies (in purple) as is illustrated in figure 1 below.

Mineral claim 357026 (shown on figure 2) with an un-named vein described herein as the Golden Crown NW Extension, has several high grade (>10 g/t Au) intercepts in 1981, 1984 and 1990 drill holes and does not appear to have been drilled since 1990. The South Vein in mineral claim 334436 was extensively trenched in 2006 with some excellent sample results, which was conducted in order to follow up on a number of high grade historic drill hole intersections in 1986 and 1998 drilling. There are no current resources attributed to either of these prospects. Both warrant further work and drilling and could yield future resources.

A third significant target exists at the NW end of the claim package and is identified as the JD Zone or Vein as illustrated in figure 2 above. It has yielded a number of high grade (>10 g/t Au) results in trenches, is on strike with the Golden Crown veins demonstrating that the structure likely continues along strike and remains undrilled or poorly drill tested.

During 2011 APEX conducted a number of HLEM surveys to follow ZOff –EM conductors identified by airborne EM surveys (See the figure below with purple highlighting high zones of conductivity). A significant EM anomaly was identified with a wide spaced AeroTEM III survey and was subsequently followed up by Huakan with HLEM surveys. The HLEM surveys identified multiple significant HLEM conductivity anomalies associated with The Portal Vein, the main King and Golden Crown Veins and the Golden Crown NW Extension Vein.
APEX: The entire claim block should be covered with HLEM surveys and some deeper seeing time domain such as MLTEM or HTEM ground surveys should be tested to identify further veins and potential targets for further drilling and resource addition. The prospects are considered good to excellent to discover further high grade resources at the Golden Crown portion of the property.

The following comments are from the NI 43-101 Technical report on Mineral Resources, dated April 8, 2016, by P&E Mining Consultants Ltd.

“Exploration to date on Golden Crown has tested mineralization over more than 500 m of strike length. Many of the veins and wider shoots remain open-ended laterally and at depth. One specific example is the King Vein with a 40° westward rake that remains open-ended along this projection. Drill testing this projection for favourable geology and vein development could have a dramatic impact on resource expansion. Furthermore, the down dip root system to the King Vein could also exist beyond the serpentinite bodies present in the stratigraphy that generally terminate veins. Drill testing the down dip projection of the King Vein could also result in significant addition to the resource base on the property.

Trenching that was done 2.5 km northwest of the main vein system identified high grade gold mineralization that should be further tested by drilling that could potentially add to the resource base. In addition, the entire 2.5 km gap between the principal vein system and the trenched auriferous shears also contains untested gold soil anomalies and therefore has potential for additional discoveries.”

8.2.2. Lexington Deposit Extension

It is clear at the Lexington Mine there is potential to add resources immediately down plunge to the southeast of the main resource as is illustrated in figure 2 below. There may also be some potential around a couple of intersections to the northwest of the planned mining operation.

Figure 2. View of 3d model showing drill holes and locations of targets.
It is still not clear what the deposit model is. The Cu-Au high-sulphide (pyrite – chalcopyrite) mineralization is called vein like and occurs as an echelon series of shallow east dipping sulphide zones within a dacite just above the contact with serpentinite along the structural Goosmus zone. There are a number of Jurassic porphyry intrusions in and around the contact.

APEX: The structural zone warrants a lot more exploration including drilling and obviously provides good potential to make new discoveries and expand the resource base. There is some historic IP that provided a number of targets. Further deep seeing time domain EM and some modern IP combined with exploration drilling are strongly recommended.

The following comments are from the NI 43-101 Technical report on Mineral Resources, dated April 8, 2016, by P&E Mining Consultants Ltd.

“Based on the character of the mineralizing system on the Lexington and the adjacent properties, there is excellent potential to find addition gold-copper resources.

At the deposit scale, the Lexington-Grenoble Deposit remains open and there are a number of targets to test for extensions. Firstly, the deposit is open up and down dip along its strike length. A single hole should not discount or close off lateral continuity opportunities. In addition, drilling has not stepped out to the far side of post-mineral dykes where the deposit is expected to extend down dip. Secondly, the deposit has a defined strike length extent of 520 m by drilling done to date. Drilling for the southern projection of the deposit is limited and inconclusive. However, what appears to be the same mineralized system is present 1.2 km southward at the Richmond and Northwest zones and the Lone Star Pit, indicating excellent potential for extension of the deposit in this direction. Thirdly, the Lexington-Grenoble Deposit is interpreted to occupy a ripple or deflection in the plane of a thrust fault. There is a high probability of other deflections on this thrust plane, due to the laterally extensive nature of a typical thrust plane and their inherent undulations or ripples. Thus, there is high probability of discovering gold-copper deposits lying sub parallel to the Lexington-Grenoble Deposit. It is speculated that the two resource pods known as TG-81 and B93-6 may be the start of two separate down dip sub parallel deposits to the Lexington-Grenoble Deposit. “

8.2.3. Lone Star Resource

The Lone Star Property is not part of the current Greenwood Gold project but is located nearby in Ferry County, Washington, USA, adjacent to the Lexington Property on the British Columbia side of the Canada - United States border. This property previously was part of the project but could be considered for acquisition and for this reason is included in this section on upside potential. As reported in 2007, exploration at the Lone Star property to date includes 252 diamond and percussion drill holes for a total of 23,702 metres of drilling.

The Lone Star deposit is interpreted as a series of eight shallow to moderately dipping en echelon overlapping zones hosted within a dacitic and minor serpentinite unit. Zones are composed of sheeted and stockwork pyrite-chalcopyrite veins, veinlets and disseminations carrying gold. With the current knowledge,
the multiple zones are confined to an area 330 metres from north to south, 260 metres from east to west and 140 metres vertically.

A resource estimate was made by P&E in 2007. At a cut-off grade of 1.5% Cu (CuEq) or 5.0 g Au/t equivalent (AuEq), the currently defined resource for the Lone Star deposit is:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Tonnes</th>
<th>Cu%</th>
<th>Au g/t</th>
<th>Cu Eq%</th>
<th>Au oz</th>
<th>Cu million lb. lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicated</td>
<td>63,000</td>
<td>2.30</td>
<td>1.28</td>
<td>2.69</td>
<td>2,600</td>
<td>3.19</td>
</tr>
<tr>
<td>Inferred</td>
<td>682,000</td>
<td>2.00</td>
<td>1.46</td>
<td>2.44</td>
<td>32,000</td>
<td>30.07</td>
</tr>
</tbody>
</table>

(1) Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.

(2) The quantity and grade of reported inferred resources in this estimation are conceptual in nature.

8.2.4. MAY MAC

The May Mac Mine Property, held by Golden Dawn Minerals Inc., is located 3.1 km south southwest of Greenwood and is accessible by road. The property embraces a multitude of quartz veins carrying gold, silver and base metals, the majority of which lie within a fault-bounded block of argillite, serpentine and greenstone measuring up to 200 m wide and in excess of 1,200 m long. The veins run parallel to (and appear to be associated with) a fault to the north, which separates the favorable belt from an older diorite mass. The property is almost entirely covered by a thin mantle of overburden and although in excess of ten veins have been located to date, almost all development has been restricted to just two principal veins.

Underground mining has been conducted intermittently since 1894 on the two vein systems over a partially-developed length of some 470 m. Total lateral underground development exceeds 1,000 m. Total production to date is reported to be in the range of 3,400 tonnes, averaging 5.16 g/t Au, 236 g/t Ag, 1.5 % Pb, and 1 % Zn. Approximately half of this was direct-shipped without pre-concentration, and the other half processed on-site as a flotation concentrate. All production was shipped to the COMINCO smelter, some 180 km away. The property is presently deemed to embrace no mineral reserve or mineral resource.

Golden Dawn is actively exploring the May Mac mine and has defined new veins with potential for resources that could support a mining operation.

Golden Dawn concludes that considerable potential exists to increase the resource base at the Lexington and Golden Crown deposits, and that additional resources could be acquired nearby, all of which may lead to extending the mine life to ten or more years.
9. MINING

The Greenwood Gold Project mining plan used in the Preliminary Economic Assessment includes the Lexington-Grenoble Mine and the Golden Crown Mine. The mine production rate is 200 tpd (72,000 tpa) in the first year of operation and increases to 400 tonnes per day (144,000 tpa) following expansion and additional permitting of the Greenwood Mill during the second year of operation. Mining commences at the Lexington-Grenoble Mine and the Golden Crown Mine is phased in when required to augment Lexington-Grenoble Mine production. A central mill and tailings facility is constructed on the Golden Crown property located 1.5 road kilometres from the Golden Crown Mine and 17 road kilometres from the Lexington-Grenoble Mine.

9.1. Lexington-Grenoble Mine

Lexington’s potential mill feed estimates were based on a 3.5g/t Au equivalent (“AuEq”) cut-off grade for the 31 Lexington-Grenoble life of mine (“LOM”) stopes considered. Initially 86%, or 377,000 tonnes grading 6.25 g/t Au, 1.03% Cu and 7.95 g/t AuEq of the total Measured, Indicated and Inferred resources were considered for the financial evaluation. This material was diluted by 18% with 1.50 g/t AuEq and extracted 80% based on the Lexington-Grenoble mine plan and mining method. This resulted in 356,000 tonnes grading 5.47 g/t Au, 0.90% Cu and 6.96 g/t AuEq (diluted and extracted).

The Lexington-Grenoble mining operation is envisaged as a mechanized ramp access, pilot and slash, mining operation that would be expanded on the existing development in the mine. The mine currently has access to surface through two declines, one vent raise, two surface portals and related lateral development. In the proposed mine plan, the mine will have access to surface through two declines, several vent raises, three surface portals and related lateral development.

The mining method would employ industry standard jackleg and slusher equipment working in stoping panels oriented along the dip of the mineralized zones.

The mine will be serviced by surface support services located near the portals.

Mill feed from the mining operation would be hauled to surface using 13 tonne trucks. The maximum Lexington-Grenoble forecast mill feed production rate is 212 tonnes per day, which equates to 72,000 tonnes per year at process plant availability of 93%.

A longitudinal projection of the proposed Lexington-Grenoble Mine is presented in Figure 3.
9.2. **Golden Crown Mine**

Golden Crown’s mill feed estimates were based on a 3.5g/t AuEq cut-off grade for 23 Golden Crown LOM stope considered. Initially 90%, or 195,000 tonnes grading 9.76 g/t Au, 0.54% Cu and 10.66 g/t AuEq of the total Measured, Indicated and Inferred resources were considered for the financial evaluation. This material was diluted by 15% with 1.50 g/t AuEq and extracted 85%, based on the Golden Crown mine plan and mining method. This resulted in 191,000 tonnes grading 8.67 g/t Au, 0.48% Cu and 9.46 g/t AuEq (diluted and extracted).

The Golden Crown Mine is envisaged as a narrow vein captive cut and fill mining operation, with ramp accesses to mining stope developed from an existing portal and access drift. The mine currently has some sublevel development completed, several vent raises and related lateral development.

The mining method would employ industry standard captive cut and fill mining practices with hydraulic backfill. The dip of the mineralization is approximately 72 degrees.

The mine will be serviced by surface support services located near the portal.

Mill feed from the mining operation would be hauled to surface using 13 tonne trucks. The maximum Golden Crown forecast mill feed production rate is 212 tonnes per day, which equates to 72,000 tonnes per year based on 93% process plant availability.
10. MINERAL PROCESSING PLAN

Mineral processing of the Lexington-Grenoble and Golden Crown Mine product will be performed at the existing Greenwood Mill and concentrator facility, currently on care and maintenance. The facility is accessed from the mines via all-weather gravel roads, 18 km to the Lexington-Grenoble Mine, and 2 km to the Golden Crown Mine. The existing processing facility consists of a concentrating plant and related equipment, including infrastructure and a tailings storage facility (“TSF”).

The concentrating plant incorporates conventional mineral processing to produce a gold gravity concentrate, and a copper-gold flotation concentrate. Crushing is performed using a jaw crusher, followed by secondary cone crushing operating in closed circuit with a vibrating screen. The fine feed is directed to a grinding and flotation circuit that can process 8.8 tonnes per hour of feed, although the crushing plant is capable of processing double this throughput.

In addition to the outside crushing plant and the mill building, the site has an office/administration trailer, a sample preparation room contained in a metal sea cargo container, and a Sprung (tensioned fabric) cover.
structure for the storage of bagged sulphide float concentrate. There is an assay laboratory in a mobile trailer, which contains an atomic adsorption spectrophotometer and a fire assay furnace. The facility is pictured in Figure 5.

**Figure 5.** Mill building and site area

The average head grade of mill feed from the Lexington-Grenoble Mine is 5.47 g/t gold, and 0.90% copper, with an overall process recovery of 86% for gold and 87.5% for copper. For Golden Crown the average mill feed grade is 8.67 g/t gold, and 0.48% copper, with an overall recovery of 70% for gold and 82% for copper. Metal recoveries for Lexington-Grenoble mill feed are based on laboratory test results and previous operating data.

The facility will initially process at a nominal daily throughput of 212 tonnes/day. Assuming 93% plant availability, this provides for an annual nominal production rate of 72,000 tonnes. Daily throughput will be doubled to 424 tonnes per day after one year, with the addition of a second primary grinding mill and modifications to the existing rougher flotation circuit. Much of the current remaining equipment including the crushing, regrind mill, scavenger/cleaner flotation cells, and dewatering system were previously designed to handle the expansion.

### 10.1. Metallurgical Testwork

Considerable metallurgical test work has been performed by various laboratories on mineral samples obtained from the Lexington–Grenoble Deposit which was subsequently supported by several months of operating data obtained during the 2008 mining campaign of Lexington-Grenoble with processing undertaken at the Greenwood Mill. The Golden Crown mineralization has had limited investigation into metallurgical testing. The two resources show significant differences in process response.

Cyanide leaching studies were performed on various flotation products including the cleaner (pyrite) tailing streams and a separate pyrite concentrate. The results showed gold responded well to standard leaching techniques with gold recoveries in the 80% to 90% range.
Mill feed sorting using X-ray technology was performed on a low grade (1.46 g/t Au) Lexington-Grenoble mineral sample collected by Merit Mining. The test work used close to ½ tonne of material at three pre-screened particle size ranges consisting of ½" (12.7 mm) to 1" (25.4 mm); 1" to 1.5" (38.1 mm), and 1.5" to 2" (50.8 mm). The three pre-screened size fractions mentioned above are fed separately on a continuous dry basis to the DEXRT sorting unit. Each fraction of rejects and concentrate was then separately assayed. The findings indicate that DEXRT sorting on a 1.46 g/t Au feed material could reject 49% of the mass while maintaining reasonable gold recovery and upgrading characteristics. Similarly for mineralogy of this type the material may respond well to dense media separation (DMS) methods and an initial investigation into this procedure is recommended.

Most of the Golden Crown test work information is of limited use, as the results were primarily performed on samples not fully representative of the deposit. In general, the preliminary test work performed on the King Vein work indicated that approximately a third of the gold reports to the gravity concentrate. Of the remainder, 30-40% of the gold is recovered with the copper concentrate, and up to 25-30% goes with a pyrite concentrate. The balance is lost to final bulk float tailing. Treatment methods such as cyanide leaching of the pyrite concentrate can be evaluated further. Further testwork work should include work index testing, flotation optimization, and comparison to pre-concentration methods selected for Lexington-Grenoble.

While the work to date suggests that the Golden Crown material can be processed at the existing Greenwood facility there are a number of potential differences to the process response. These include;

1) A lower copper grade and higher iron sulfide (pyrite and pyrrhotite) content evident in the Golden Crown material as compared to Lexington-Grenoble. This may cause additional challenges to achieving the required minimum copper grade in the concentrate, while maintaining satisfactory metal recovery.

2) The gold grade for Golden Crown, while higher than Lexington-Grenoble is more closely associated with the iron sulfides. This potentially results in less gold reporting to both the cleaned gravity and flotation products. In addition the iron sulfides must be depressed to allow for producing a saleable copper concentrate. Laboratory results to date suggest a significant quantity of gold will report with the iron sulfides depressed during flotation. Two potential options to investigate to improve gold recovery are to generate a separate gold pyrite concentrate for sale, or leach the gold to produce onsite Dore. Cyanide leaching of either a rougher gold pyrite concentrate or subsequently reprocessing the bulk or cleaner float tailing can be evaluated.

There are indications that the arsenic content of the Golden Crown material is higher than that of Lexington-Grenoble. Arsenic content should be established in the resource model.

10.2. Greenwood Mill Operating Response
The Greenwood mill was built to treat mineralized material from the Lexington-Grenoble deposit. Mineral processing consisted of bulk sulfide flotation following gravity pretreatment at a moderate grind of approximately 65% passing 200 mesh (74 microns). The gravity circuit consisted of a Knelson centrifugal concentrator operating from feed split off the mill hydrocyclone underflow. The Knelson concentrate was
cleaned by tabling. The rougher float concentrate was reground and lime was used to depress pyrite during flotation cleaning to produce a final chalcopyrite - gold concentrate for sale. Originally mill head grades were expected to average about 8 g/t Au with a resulting gold recovery of 90%. The actual operating head grade averaged about 3.96 g/t Au, less than half of what had originally projected. Consequently, gold recovery averaged about 80%. Approximately half the gold typically reported to the final gravity concentrate, which is what the historical test work had indicated. Copper mill head grades were originally expected to be in a range of 1.0% to 1.3% Cu, for an expected plant recovery of approximately 95%. Actual plant operating data gave a mill head grade that averaged about 0.83% Cu, resulting in 86% recovery. The plant data gave a copper concentrate grading approximately 23% Cu, 35 g/t Au and 48 g/t Ag. There were no reported penalty charges associated with the Lexington-Grenoble float concentrate for deleterious elements such as arsenic or mercury.

Crushing is performed using jaw crushing, followed by secondary cone crushing operating in closed circuit with a vibrating screen. The crushing equipment was purchased new, from China, as a mobile system (knock-off North American equipment design including Symons cone crusher). This equipment is fixed to metal framework that is anchored to a concrete pad. The crushing circuit is located outside, and is not under cover. The crushing circuit provides over capacity and was originally sized for over double the throughput to allow for the future mill expansion.

11. INFRASTRUCTURE

The Greenwood plant consists of an outdoor semi-portable crushing plant and a ball mill with gravity and froth flotation housed in a steel clad insulated building. The tailing storage facility (TSF) consists of a membrane lined pond at a nearby location situated at a lower elevation than the plant.

Grid power supply to the mill site has been maintained and is currently in a ready to go mode. The Lexington-Grenoble and Golden Crown Mines would operate on diesel generated power. There is a mobile trailer used for administration and offices. Utilities including, electric power, propane heating, potable and process water supply are in place and mostly functioning. Communication is currently by satellite phone, with no Wi-Fi or cell phone service available. The motor control center (MCC) and transformer appear to be in good condition, but will require electrical inspection along with the rest of the plant. In general, the plant was cleaned out and appears to have been shut down in an organized manner in late 2008.

An assay laboratory is situated nearby in a trailer. The lab is equipped with a single fire assay furnace, atomic adsorption analyzer (AA), two weigh scales and associated tools, reagents and glassware. The equipment appears in reasonable condition, but requires full recertification and calibration of the instrumentation and scales prior to use.

Equipment at site around the mill includes three pickup trucks and an ambulance in the yard and which are stated to be in need of same minimal repairs. There are corporate ATV’s, RV’s and mobile mining equipment present.

11.1. MILL INFRASTRUCTURE

A visual site inspection on April 1, 2016 showed the Mill to be in an overall good condition. This inspection was done without operating or taking anything apart.
11.1.1. **Crushing Plant:**
The equipment is believed to be a Chinese knockoff and mounted on a trailer to make a portable unit by Westpro out of Vernon. The crushing system is not covered, which creates wet ore. Cone crushers are not designed to run wet ore. Wet ore may plug the screen deck but one can change out to screens that are a better designed for a wetter product. The coarse ore pad is not covered, which may be causing problems in the discharge cutes. The area where the ore is dumped on the grizzly needs modifications - it is very dangerous and there needs to be sides and guards made so the ore only goes in the hopper and not around it. This is a plate steel and beams project. A guard on ladder stairs should be installed too. There is no way of picking up any equipment /changing liners, screen, etc. There are no walkways around a lot of the equipment for maintenance and repairs.

**Grizzly:**

- Bent bars.
- Need to be able to take the big rock off.
- Bars are around 19inch apart, might want to bring that in a bit.
- If the mine is bringing down a lot of oversize one will have to consider a rock breaker. Could be stationary or on an excavator. There usually are a few good used stationary ones around.

**Jaw Crusher:** - 24 x 36 inch

![Figure 6 Grizzly](image_url)

Figure 6 Grizzly

![Figure 7. Ore dump and grizzly](image_url)

Figure 7. Ore dump and grizzly

![Figure 8. Walkway over Jaw Crusher](image_url)

Figure 8. Walkway over Jaw Crusher
Due Diligence Report

**Screen deck:** CC1300-616P

**Figure 9. Cone feed chute**

-There are a few wear points to be addressed but generally in good shape.

**Cone Crusher:** -Model; CC1300-616

**Figure 10 Cone crusher**

-Probably a Symons knock off but need to find out for sure.

-The Mantel and bowl were possibly not backed off on shut down. The liners could be rusted together and will need effort to loosen up. The liners might be the wrong configuration for this application. One could run the crusher and on the next set of liners make sure they are the correct ones.

-The lube systems overflow tank needs a drain and overflow. There has been a bit of oil coming out of it. Could just be from starting up with a cold cone and cold oil.

-Need to check out the oil heating system.

-Recommend installing a separate oil filter system.

-Need to check out the wiring to make sure the lube system can continually run in the cold months.

-The liners may not be the correct configuration required for this system.
Conveyors:

-The stacking conveyer will not move. It is missing parts and the oil tank is open. Also it has a flat tire. May not be needed for operations but probably want this for maintenance purposes.

-There could be the need for more scrapers as the ore may be wetter than desired.

-Need to look into the scraper points for cleanup.

11.1.2. The Mill

Main mill: 8x6 Harding Conical, discharge screen ball mill, 200HP, with Babbitt bearings, Falk, direct drive.

-Inside of shell is in very good condition. No Wash

-There is a bit of an oil leak on the inside of the feed bearing. This is probably just a wiper seal and would need the mill lifted to change out.

-The rubber liners have been removed. The operator stated that they were just changed out before shut down.

-This mill has not been lifted or turned since the shutdown. This is normally not good practice but the balls and liners were removed so there would be a lighter load on the bearings.

-There are no cradles & jack stands to lift the mill. (4 jacks go under the cradles in order to do a smooth straight lift, so as to not damage the bearings or alignment).

-There is no spare bearing(s). Should have one.

-Spray gear tack.

-Bull and pinion gear in good shape. There is a spare bull gear outside that looks like it is for this mill.

-Discharge screen is in good shape.
Regrind Mill: 50 HP, 4x4ft mill with shell extension 4x8, with Babbitt bearings.

- Mill appears to be in good shape
- Rubber liners removed
- Liners used but good
- No spare bearing(s). Should have one.
- There are no cradles and jack stands to lift the mill.
- No discharge screen required.
- Uses block grease for bearings.

Knelson Gravity Separator: Model: KC-CD20MS

These machines are great for gold recovery but they use a lot of water and this is a problem with low tonnage mills. The problem is that it makes it hard to keep the mill density steady and on a mill of this tonnage it does not take much to throw off the desired density.

- Need to be taken apart for detailed inspection
Denver flotation cells:

Figure 14. Flotation cells

- The agitators and backing plates are in good condition.
- No signs of steel wear.
- Bottom rubber plate good.
- Discharge paddles good.
- Cleaner cells have front of cell bars for adjustment. Did not see any bars there.

Filter:

- Larox Vertical Tower filter press, Model: PF3 2B1

Figure 15. Filter press

- This kind of filter is complicated which makes it harder to operate and repair. This is not the machine that the operator can repair in the middle of the night.
-Former operator stated that they normally had 10% moisture in the concentrate. This is not good as it makes harder to ship, more costly to ship and there could be a penalty at the smelter.

**Thickeners:** 2 of 15ft
- Hydraulic lift
- No reason to believe there are any issues with these units.

**Lime system:**
- Seems to be fine, need to check the flow.

**Jig room:**
- All seems OK in there but would need further inspection.

**Pumps:**
- All pumps were opened which is a good thing.
- Liners / impellors that were visible, in good condition.
- No spare liners/impellors or spare parts to be found.
- Need to further look into the pumps under the thickeners. These pumps should be positive displacement and look like they are 2x2x10 SRL. The 2x2 will pump up to 55% solids as long as the inflow is direct and is well piped. (Assuming it is not direct or well piped) There could be an issue pumping the proper density using these pumps in their locations.

**Reagent pumps and feeders:**
- Need to be torn down and inspected. -There is no Flock feeder.

**Sample cutters:** -Told by the operator that one never worked.

**Cyclones:** - Krebs Brand
- Need tear down to inspect internal parts.
- Need to find out if they are the proper size and what is the proper sizing for the internal parts.

**Product out feed / bagging, etc.:**
- Belt conveyor to bags.
- Need to install a floor mount scale. Need to have all bags the same weight for shipping.
- Need rollers to roll the bags out for pick up and storage until moved out. Need to further investigate were the rollers should go to. Maybe out the side wall and the forklift can pick without going into building!
**Piping:**

- There are a lot of wear points in this system and it would be a short time before holes appear. Probably close to the point of replacing some pipe and fittings. May warrant modifications.

  Wear Points: chutes, pump boxes, transition points etc.

- Not properly done. Needs modifications.

**Fine ore bin discharge feed chutes:**

- Need to be replaced with operator friendly units that will withstand wear.

**Conveyor belts:**

- Looks in good shape with lots of wear left. (could be some damage that I did not see but not likely)

**First Aid:**

- There is no First Aid room and one must be build, somewhere.

**Maintenance Equipment:**

- There is no overhead crane in the mill.

- Need some kind of overhead lifting. They used a mobile crane.

**Spares:**

- Almost none. There are two of 1.5 hp motors, a few V belts, spare ball mill bull gear, a few mill liners, some screens (for the crusher) and some chute liner.

**Mill Building:**

- Recommend installation of ceiling fans, to cut down on propane costs.

- Snow coming of roof on walkway to electrical room. Very dangerous.
- On the same side the propane from the tanks come up on the side of the building, there is also snow run off. Also very dangerous.

**Mill Electrical:**

- All looks to be installed properly and in great condition.

- Power from power company about 2.5km to mill, which is cared for by Marteck Electrical out of Castlegar. (information from mill operator giving the tour). This means the mine owns the sub-station at the mill and it is their responsibility if there are any issues.

The concrete block wall to the right of the crusher is leaning in. This is the wall the holds up the road to the grizzly.

**Laboratory:**

- All equipment seems to be in good condition.

- Leak in the roof at the furnace end.

**Figure 17. Assay laboratory furnace**

**Mill water:**

- The mill uses water reclaimed from the tailing pond, which sometimes might become an issue from the buildup of chemicals.

**Overall Mill Infrastructure General:**

The overall condition of the plant is in good condition but it does need some changes and modifications. When they were running this plant they had a lot of small issues that when compounded created an operating problem. Some of the main things to are;

- Pull the cone and jaw liners and bring in the company to measure up for lead time and cost of new liners. Would need to figure out the best configuration for this application.

- Locate the mill liner drawing, if they do not show up, bring the guy in to measure up and give lead time and costing. One needs spare liners pieces and needs to know when to order a set(s). It is a good practice to have a spare set in stock but can wait to do the first order.

- List of critical spares needed, source out parts / lead time, for none critical spares

- Source out Ball Mill bearing housing, for spares.

- Put together a proper file on all equipment.
11.2. Mining Equipment

A large majority of the diesel engines are no longer on the Canmet list of approved diesel engines for use in underground mines and would have to be replaced before these machines can be used underground.

Also, prior to putting the mobile equipment into service:

- All fuel and oil tanks should be drained, cleaned and refilled.
- All filters changed.
- All flat tires removed from rims - clean out tires.
- Replace all hoses that have damage.

11.2.1. Scooptrams

METHOD OF ESTABLISHING VALUE:

The Mackwood Group has a very similar scoop for sale at the price of $49,000. A refurbished price for a Wagner 3.5 yard Scooptram is $198,900 USD. These scoops come with Cummins QSB 6.7, Detroit DDEC Series 40, or Deutz TCD 914L06 Engines.

Driftech Inc. (Mining Division of the McDowell Group) suggests an engine replacement for the Wagner 3.5 yards would be a Mercedes 906 approx. cost with radiator $20,000. For the JCI 250 scoops they recommend tier 3 914 Duetz approx. cost $15,000. You could put the same engine as the Wagner 3.5 yard scoops in the 413 Rock Trucks.

Amalgamated Mining Equipment - Recommends the following replacement engines. These engines will bolt up to the existing torque converters and are an engine and cooling package module (No extra mounting etc. of after cooler & radiator)

- 1995 Wagner ST 3.5 yard Scooptram - Iveco N67MNTX20.00A800, 173 Hp@2200 RPM NRCAN (CANMET) Certificate#1213 - complete engine, radiator & after cooler package (drop-in) cost $35,900
- Wagner ST 3.5 yard Scooptram s/n SA04P0254 - same engine cost - $35,900.
- JCI 250 Scooptram - Iveco N45MSTX20.50A800, 125HP @2200 RPM (CANMET) certificate #1234 - complete engine, radiator & aftercooler package (drop in) cost - $29,800.
- JCI 250 scooptram s/n# 58388-3129. Engine as above and cost $29,800,
- Tamrock MJM 2OB s/n3102 - D914L04, 70HP @2300 RPM (CANMET) certificate #1221 - $14,000.
Wagner ST 3.5 yard Scooptram - Quick attach bucket. (116 hrs)

- Condition: FAIR
- Engine - Deutz F8L413 - NOT on the CANMET list
- No engine oil on dipstick
- Tires are in poor condition
- Canopy is in good condition.
- Body and pins seem to be in good condition.
- Fire suppression needs to be re-installed.
- Maintenance records were not made available.

FAIR MARKET VALUE: $49,000.00

---

Wagner ST 3.5 yard Scooptram

- Condition: FAIR
- Engine - Caterpillar 3306 P.C. - NOT on the CANMET list
• 1 flat tire
• Crank seal leak
• Canopy is in good condition.
• Body and pins seem to be in good condition.
• Fire suppression needs to be re-installed.
• Maintenance records were not made available.

1995 Wagner ST 3.5 yard Scooptram with quick attach bucket (1658 hrs)

• Condition: FAIR
• Engine caterpillar 3306 P.C. - Nor on the CANMET list
• Canopy is in good condition.
• Body and pins seem to be in good condition.
• Fire suppression needs to be re-installed.
• Maintenance records were not made available.
JCI 250M 2.5 yard Scooptram (4492 hrs)

- Condition: FAIR
- Engine Deutz FSLFRW 413 - NOT on the CANMET list
- Lots of oil leaks
- Canopy is in good condition.
- Body and pins seem to be in good condition.
- Fire suppression needs to be re-installed.
- Maintenance records were not made available.

JCI 250M 2.5 yard Scooptram (2279 hrs)

- Condition: FAIR
- Engine Deutz F51413 FRW - NOT on the CANMET list of approved diesel engines for underground use.
- Front Tires estimated at 30%
- Canopy is in good condition.
- Body and pins seem to be in good condition.
• Fire suppression needs to be re-installed.
• Maintenance records were not made available.

11.2.2. Jumbos

RDH 08-812 TAMROCK MJM 20B- 2 BOOM JUMBO.

Figure 23. RDH 08-812 Tamrock MJM 20B- 2 boom jumbo.

• Condition: FAIR
• Engine is a Deutz 4 cylinder 9L2 - Engine is on the CANMET list of approved diesel engines for underground use.
• Engine would not turn over (seized) - water may have gotten in the engine.
• Engine rebuild may be $7000.00
• Wheel seal leak and leak on boom.
• Canopy extension may not be certified.
• Body and pins seem to be in good condition.
• Fire suppression needs to be re-installed.
• Maintenance records were not made available.
MCDOWELL 820-502 TAMROCK MJM 20B 2 BOOM JUMBO (333 HRS)

Figure 24. McDowell 820-502 Tamrock MJM 20B 2 boom jumbo (333 hrs)

- Condition: FAIR
- Engine Deutz 4 cylinder 9L2- Engine is on the CANMET list - Did not start, may have a starter issue.
- Need to replace air hoses, drain all oil and fuel, new filters and may need new feed chain.
- Canopy is in good condition.
- Body and pins seem to be in good condition.
- Fire suppression needs to be re-installed.
- Maintenance records were not made available.

11.2.3. **Rock Trucks**

JDT 413 13 Tonne Rock truck (89hrs)

Figure 25. JDT 413 13 Tonne Rock Truck (89hrs)
• Condition: FAIR
• Engine is a Deutz F8t 413 FW - Engine is on the CANMET list of approved diesel engines for underground use.
• Leaky Planetary
• 1 tire is spilt and needs to be replaced.
• Has the old Dry disc brakes.
• Air/hydraulic can convert to hydraulic.
• Canopy is in good condition.
• Body and pins seem to be in good condition.
• Fire suppression needs to be re-installed.
• Maintenance records were not made available.

JDT 413 13 tonne (834 hrs)

Figure 26. JDT 413 13 tonne (834 hrs)

• Condition: FAIR
• Engine is a Deutz F8L 413 - Engine is on the CANMET list of approved diesel engines for underground use.
• Dry disc brakes. Air/hydraulic, can convert to hydraulic.
• Tires 50% or less
• Right Rear wheel seal leak.
• Canopy is in good condition.
• Body and pins seem to be in good condition.
• Fire suppression needs to be re-installed.
• Maintenance records were not made available.
11.2.4.   Ventilation Fans

SN#200713752 - 42 1/4 " 100hp  - cannot turn fan

SN#200814368 - 42 1/4 " 75hp  - cannot turn fan

- Note: Motors may need to be rebuilt. Water found in bottom bearing

Fans located near Assay lab:

SN#200713751 - 421/4 " 100hp - seized - needs rebuild

SN#2008L4364 - 78" 30hp  - Seems good.

SN#200916374 - Seems good

11.2.5. Air Operated Slushers

- Broken handles but both slushers seem good.

11.2.6. Rock Bolter

Figure 27. Rock Bolter

Genex did not examine the bolter as it is located at the Lexington Eastern portal, so no estimate was made for this unit. The engine is reported to be F61912W. This engine is on the Canmet list of approved diesel engines.
11.2.7. Sullair 1600 cfm compressor:

The CAT rental store puts the estimated value at $65,000-$70,000.

11.2.8. Tractors

(3) Kubota t3400 ST Tractors   Condition: Good

- All Tractors seem to be in good condition. 1-2 front tires did not have much wear left.
- Fire suppression needs to be re-installed.
- Maintenance records were not made available.

12. PROJECT ECONOMICS

A formal analysis of the project economics was documented in a National Instrument 43-101 Preliminary Economic Assessment Technical Report completed by P&E Mining Consultants Inc. (PEA filed on Sedar.com on May 20, 2016). This report is based upon the existing mineral resources, which were updated and documented in a separate NI 43-101 Mineral Resource Technical Report for the Lexington-Grenoble and Golden Crown deposits (filed on Sedar.com on April 8, 2016).
The Base Case of this PEA shows that the Greenwood Project has economic potential for producing gold doré bars and a gold-rich copper concentrate. P&E recommends that Golden Dawn advance the project with extended and advanced technical studies, particularly in alternative mine planning, metallurgical, geotechnical and environmental matters with the intention to advance the Greenwood Project to a production decision.

**PEA Highlights**

- Base case pre-tax IRR of 72.6% and NPV (6% discount rate) of C$32.5M (after-tax IRR of 61.5% and NPV of C$23.2M)
- Pre-production capital requirements of C$9.7M
- Pre-production period of 6 months as a result of existing infrastructure and permits from the acquisition of the Mill and Lexington-Grenoble and Golden Crown Mines
- Life of mine ("LOM") cash cost of US$631 per ounce gold and all-in sustaining costs of US$820 per ounce gold
- Preliminary Economic Assessment (the "PEA") uses the updated mineral resource estimates as announced April 6, 2016.
- Potential of increasing resource on both Lexington and Golden Crown Mines
- Potential of further mill feed from the company’s 100% owned May Mac Mine 15 km by road access from Greenwood Mill.
- Several proximal satellite deposits too small to warrant stand-alone processing facilities may further increase mill feed.
- Life of Mine: 5 Years

A projected after-tax cash flow model has been developed for the conceptualized Greenwood Gold Mining and Processing Operation. All costs are in second quarter 2016 Canadian dollars with no allowance for inflation or escalation. The summary of the results of the cash flow analysis is presented in Table 5.

<table>
<thead>
<tr>
<th>Description</th>
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<tr>
<td>Internal Rate of Return</td>
<td>61.5%</td>
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<tr>
<td>NPV at 0%</td>
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<td>NPV at 6%</td>
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<td>NPV at 10%</td>
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<td>Project Payback Period in Years</td>
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An estimated total of 104,000 equivalent ounces of gold is expected to be recovered over the life of mine. Total mill feed production during the first 18 months of the life of mine will be 200 tonnes per day. For the remainder of the life of mine, the mill feed production rate will be at 400 tonnes per day.

A CDN$1.00 = US$0.82 exchange rate has been assumed in this assessment.

Cumulative pre-tax and post-tax cash flows are estimated to be $44.7 and $32.2, respectively. Post-tax IRR, and NPV at a 6% discount rate, are estimated to be 61.5% and $23.2 million, respectively.

The economic analysis is most sensitive to changes in the US$/CDN$ currency exchange rates and to gold prices and less sensitive to changes in capital and operating costs.

The cash flow summary is presented in Table 6. All costs are in 2nd quarter 2016 Canadian dollars with no allowance for inflation.
## Table 22.5
**GREENWOOD GOLD PROJECT CASH FLOW SUMMARY**

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<th>Description</th>
<th>Discount/Tax Rate</th>
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Table 6. Cash flow Summary
13. HIGH-LEVEL OVERVIEW

Mr. Fred Sveinson, P.Eng. was engaged by Golden Dawn to review the Greenwood Gold project because he is a senior mining engineer with considerable experience in underground mining operations, and because he was previously involved with this project as President and CEO of Merit Mining Corp. Sveinson conducted a high-level review of all the key information of the Greenwood Project and provided the following comments.

13.1. Lexington

13.1.1. Mine Grade

The mined grade was lower by about half than estimated in the PEA (original mine plan) implying a dilution of 100% more than plan. The flat lying veins were not as continuous as expected, with stringers of good grade taking off into the hanging wall and footwall. As these stringers were slashed as ore there was an inclusion of waste at the same time causing some of the additional dilution. Face and back sampling by the geologists indicated a grade closer to what was projected in the PEA, but this was not supported by the actual production from the mill. Gold and copper was very erratic, whereby a high sample could be followed by a low grade sample close by. High grade samples were likely skewing the grades upward. Mill recoveries were not quite as high as projected, but that was somewhat due to the lower grade ore processed. As the mill is the ultimate test then one has to believe that the mined grade is correct, re-adjust the grade accordingly and live with it, or determine a better means of calculating the mineable grade which could include closer spaced drilling for the remaining blocks.

13.1.2. Mining

Drift and slash was used as the mining method due to the narrow flat lying nature of the veins. This is a labour intensive costly mining method. Also, due to the stacked nature of the veins it was difficult to maintain the waste pillars between the individual veins. By shutdown of the mine in November 2008 production had increased to about 150tpd and we were projecting to go to 170tpd using drift and slash mining.

In August / September of 2009 Ben Mossman, P. Eng. was engaged to review the mine plan and mining method. Ben reviewed the geological model, the development and the mine plan and recommended that a large portion of the remaining resource be converted to a lower cost long hole bulk mining method with the remainder continuing to use drift and slash. The thicker areas of stacked veins would be amenable to long hole mining which has higher productivity and lower operating costs. By mining all of the stacked sequence, then all stringers carrying gold and copper should be recovered, thus increasing the total recovery of metal. However, the overall grade would be lower, as the waste between the veins would also be mined. Ben focussed on the larger unmined block to the south east in the mine, which surprisingly indicated a grade of close to what was currently being mined. Ben laid out the development and mining for his plan. Ben did not look at the areas that were already mined, which could be re-evaluated later to determine if more ore could be recovered using long holes. By using long hole mining production could be doubled fairly easily and could go higher. Thus 170tpd could go to 340tpd and beyond. As the mill’s name plate capacity was 200tpd (70,000tpyr for small mine plan permitting) Ben planned to mine half the time. By December of 2008 the mill had been operated at up to 275tpd.

Ben’s plan should be reviewed closely as I believe it is a good path forward. Lexington alone should be able to support a mill start-up.
13.1.4. Processing
The mill ran at rated capacity (200tpd) within one month of start-up in March of 2008. There were very few issues with the mill from a maintenance perspective. The mine was not able to meet its target until combined Lexington and Golden Crown ore was delivered to the mill and the mill achieved about 275tpd. Lexington recoveries for gold and copper were lower, however, that was partly a function of the lower grades processed.

13.2. Golden Crown

13.2.1. Mining
Narrow vein long hole mining was planned for Golden Crown. A test trench was mined with a jumbo on surface in the summer of 2008. The grades were in line with what was expected.

13.2.2. Processing
Golden Crown recoveries were lower than expected, however the met testing indicated that a pyrite circuit would be required to optimize recovery, which was not in place.

13.3. Ore Sorting
With the issue with lower grades and higher dilution at Lexington plus Golden Crown being very narrow, ore sorting was tested. A sample from Lexington was bench tested followed by a larger pilot test in Germany, which proved successful rejecting about 40% of the waste and retaining most of the metal. Sorting was not tested on Golden Crown, but should work well due to the amount of sulphides. There are also other deposits within trucking distance of Greenwood that sorting will likely work on. The sorter would be installed after the crushing system, then feed to the mill. Rejects from the sorter could be used as backfill underground or left on surface, if Non Acid Generating. Ore sorting has been around for a long time, but not used a lot for precious and base metals as it adds a degree of complication to the circuit.

13.4. Mill in General
The mill was laid out to install a second ball mill and add flotation cells to easily increase throughput. Another gravity concentrator may be required and possibly larger pumps and piping. An estimate was carried out for repairs to start-up.

13.5. Mining Equipment
The mechanized underground equipment is quite old. However, most of it can likely be overhauled for a lot less than buying new or good used equipment. However, operating costs will be higher for older equipment. The big components that usually have to be changed are tyres, hoses, engines and brakes. Once it is determined what the equipment fleet should be, then a used equipment dealer can provide an estimate to overhaul equipment versus providing good used equipment that is ready to go, with possible credit for the current equipment. As some of the equipment came from the J&L project there is more than required to start-up Lexington.

13.6. Operating Costs
The mine has to be as mechanized as possible, using long hole mining where possible to get the productivities up and costs down. This will also allow the mill to run at capacity either full time or part time.
13.7. Tailings Storage Facility (TSF)

The TSF is lined and constructed so that additional lifts could be constructed. With new rules since the Mt Polley issue there may have to be some geo-tech work done to check the dam integrity. Paul Cowley can likely answer this.

13.8. Permitting

The processing of different ores will require additional permitting. Prior to re-opening a closure plan may be required. There also may be other permits or studies required. The government seems to take advantage of mines when they shut down, to ask for other info prior to start-up that was not required before. The small mine aspect is likely gone now. I believe that the criteria is more to do with the size of footprint. In other words, if the mine operating rate is increased, but the footprint (area of disturbance) stays the same, then additional permitting may not be required, which is a positive.

13.9. Cash Flow Model

Review of the summary cash flow and the tables that feed it indicates it looks like a good model. In summary, if the tonnes can be mined at the predicted grades, then this becomes a good project.
14. BIBLIOGRAPHY


