CENTERRA GOLD INC.

TECHNICAL REPORT ON THE KUMTOR MINE, KYRGYZ REPUBLIC

NI 43-101 Report

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1 SUMMARY

KUMTOR MINE

The Kumtor Mine is located in the Kyrgyz Republic, approximately 350 kilometres to the southeast of the Kyrgyz capital of Bishkek and about 60 kilometres to the north of the international boundary with the People's Republic of China. The Kumtor Mine is comprised of the Central Deposit (often historically referenced as the Central Pit or Kumtor Pit) and two smaller satellite deposits, the Sarytor Deposit and the Southwest Deposit. In 1978, debris from the Sarytor Deposit was discovered by a geophysical expedition of the state Kyrgyz Geology department and received extensive exploration work from the USSR Ministry of Geology. In 1992 Cameco Corporation (Cameco) was invited by the Government to participate in the development of the Kumtor deposit. Centerra Gold Inc. (Centerra or the Company), which became a public company in 2004, currently holds a 100% interest in the Kumtor Mine through its wholly-owned subsidiary, Kumtor Gold Company CJSC (KGC).

Open pit mining since 1996 has concentrated on the Central Deposit, with a smaller amount of tonnage mined from the Southwest Deposit. Mineral Reserves to be extracted by open pit mining have been estimated for the Central, Southwest, and Sarytor Deposits as presented in this report, and additional Mineral Resources that may be mined by open pit have been estimated for the Central, Southwest, and Sarytor Deposits. Within the Central Deposit, parts of the high grade Stockwork and SB Zones are located directly beneath the Life of Mine (LOM) pit design of the Central Pit and are considered potential underground mining targets by Centerra. Since start-up in late 1996, the Kumtor Mill (the Mill) has produced approximately 9.9 million ounces of gold from 98.5 million tonnes of ore with an average gold head grade of 4.0 grams per tonne (g/t).

As at December 31, 2014, the estimated Kumtor Mine Proven and Probable Mineral Reserves from the Central, Southwest, and Sarytor Deposits, including surface stockpiles were 68.5 million tonnes containing 6.1 million ounces of gold at an average gold grade of 2.8 g/t. Based on these Mineral Reserves, the open pit LOM plan has been updated with open pit mining to continue to 2023 with milling operations concluding in 2026.

As at December 31, 2014, the estimated Kumtor Mine open pit Measured and Indicated Mineral Resources (which are additional to the Proven and Probable Mineral Reserves) for the Central, Southwest and Sarytor Deposits are 29.5 million tonnes containing 2.8 million ounces of gold at an average gold grade of 3.0 g/t; the estimated open pit Inferred Resources for the Central, Southwest, and Sarytor Deposits are 2.7 million tonnes containing 126,000 ounces at an average gold grade of 1.5 g/t.

The Stockwork Zone accounts for an estimated additional Indicated Mineral Resource potentially mineable by underground mining methods of 156,000 tonnes containing 54,000 ounces of gold at an average gold grade of 10.8 g/t and the Stockwork and SB Zones together account for an estimated Inferred Mineral Resource of 4.6 million tonnes containing 1.6 million ounces of gold at an average gold grade of 10.9 g/t.

As of December 31, 2014, Kumtor's Proven and Probable gold reserves decreased by 1.6 million ounces from year-end 2013, after accounting for processing of 731,000 contained ounces in 2014. The reserve decrease is a result of:

- Negative production reconciliation in 2014,
- Introduction of a new resource model used for reserve estimation, and
- Design changes to the Central Pit to reflect the impact of an in-pit waste rock buttress and the flattening of certain pit slopes.

TABLE 1-1 RECONCILIATION OF GOLD RESERVES AND RESOURCES

(in thousands of ounces of contained gold)

Headings	Dec. 31, 2013	2014 Throughput	2014 Addition (Deletion)	Dec. 31, 2014
Gold Proven and Probable Mineral Reserves				
Open Pit	8,516	731	(1,649)	6,136
Gold Measured and Indicated Mineral Resources				
Open Pit	2,520	-	284	2,804
Stockwork U/G	121	-	(67)	54
Gold Inferred Mineral Resources				
Open Pit	712	-	(586)	126
Stockwork Underground	705	-	(411)	294
SB Underground	1,229	-	86	1,315

Historically, the Kumtor Mine resource block model has performed very well, however, as the Company reported in February 2014, the Kumtor Mine operation experienced negative production reconciliation during 2013, resulting in a negative reserve adjustment of 184,000 contained ounces of gold. As a result, during 2014, the Company retained an independent consultant to conduct an audit of the resource model. The work determined that the then current resource model was potentially biased and that Centerra should investigate different methodologies for better estimating the higher grade section of the SB Zone. The consultant also recommended that the Kumtor Mine undertake additional infill drilling in the deeper parts of the ore body. Both recommendations were implemented. The additional infill drilling is scheduled for completion in the first half of 2015.

In September 2014, mining again reached the SB Zone. The negative reconciliation experienced in the fourth quarter of 2013 re-occurred in the fourth quarter of 2014. The Company retained an independent consultant to assist in the development of a new resource model for the Central Deposit. This new resource model was used for the Mineral Reserve and Mineral Resource estimate discussed in this Technical Report. The estimate also incorporates the impact of the buttress on the pit design and updated geotechnical information that requires lower pit slope angles in some sectors of the pit. The Company is planning on carrying out further geotechnical drilling in 2015. The results of this work will be incorporated into an updated geotechnical model to determine what, if any, further revisions are required to the pit slope angles.

Using the new Mineral Reserve estimates, the Kumtor Mine's LOM plan has been optimized and will also reflect the cancellation of certain capital related to additional mine haulage equipment and the cancellation of the mill expansion, both of which were planned and described in the December 2012 technical report (2012 Technical Report).

ARRANGEMENTS WITH THE GOVERNMENT OF THE KYRGYZ REPUBLIC

Kumtor Gold Company (KGC) holds Centerra's 100% interest in the Kumtor Mine. KGC is incorporated in the Kyrgyz Republic and is a wholly-owned subsidiary of Centerra.

Centerra became a publicly-listed company on the Toronto Stock Exchange in June 2004 following the transfer to Centerra of certain gold assets, including the Kumtor Mine, previously held by Kyrgyzaltyn OSJC (Kyrgyzaltyn), a state owned entity of the Government of the Kyrgyz Republic (the Government) and Cameco Gold Inc. (Cameco Gold), a wholly-owned subsidiary of Cameco.

KUMTOR MINE AGREEMENTS

In April 2009, the Government, Cameco and Centerra, entered into an Agreement on New Terms (ANT) for the Kumtor Mine. As a result, the parties entered into restated project agreements (including the Restated Concession Agreement, the Restated Investment Agreement, the Restated Gold and Silver Sales Agreement and the Restated Shareholders Agreement) to govern the Kumtor Mine, which agreements incorporated the provisions of the ANT and settled certain outstanding disputes related to the Kumtor Mine. Pursuant to the terms of the ANT, Centerra issued 18,232,615 shares from its treasury to Kyrgyzaltyn.

The Restated Concession Agreement gives KGC the exclusive rights to all minerals within an area of approximately 26,000 hectares centered on the Central Deposit and with an expiry date of December 4, 2042 (Concession Area). All of the deposits and prospects outlined in this report, the current and future waste dumps and the processing plant and current tailing management facility are located within the Concession Area.

The Restated Investment Agreement provides that the Government will support further and additional exploration activity by Centerra in the Kyrgyz Republic by inviting it to consider opportunities to acquire additional exploration and mining licences. As of June 6, 2009, when the Restated Concession Agreement came into effect, the mining and exploration licences and associated agreements then in existence terminated and were superseded by the Restated Concession Agreement.

On December 30, 2009, Cameco disposed of 88,618,472 common shares of Centerra by means of a public offering through a syndicate of underwriters. On the same date, Cameco also transferred an additional 25,300,000 shares of Centerra to Kyrgyzaltyn pursuant to the terms of the Restated Shareholders Agreement. With the completion of these transactions, Kyrgyzaltyn now owns approximately 32.7% of Centerra with the balance being held by public shareholders.

ATTEMPTS TO RE-NEGOTIATE PROJECT AGREEMENTS GOVERNING THE KUMTOR MINE

Starting from 2012, the Kumtor Mine has been the subject of significant discussion in the Kyrgyz Republic Parliament, Government, and regulatory agencies. A Kyrgyz Parliamentary Commission Report was issued on June 18, 2012 and made a number of unfavourable assertions regarding the Kumtor Mine as reported in a Centerra press release dated June 22, 2012. A subsequently formed State Commission was formed in July 2012 with a mandate to "assess the environmental, industrial and social damage" caused by the Kumtor Mine and to provide a "legal examination of agreements made on the Kumtor Mine in terms of protecting of state interests". The State Commission issued its final report in December 2012. The report included many allegations regarding prior transactions relating to the Kumtor Mine, the Kumtor Mine operations, and management. The State Commission recommended (among other things) that the Government open negotiations of the Kumtor Mine agreements.

The Kyrgyz Republic Parliament received the State Commission report in January 2013 and recommended (among other things) that the Government conduct negotiations with Centerra with a view of revising the project agreements governing the Kumtor Mine.

On December 23, 2013, Centerra, the Government, and Kyrgyzaltyn signed a non-binding heads of agreement which envisioned that Kyrgyzaltyn would exchange its 32.7% interest in Centerra for a 50% interest in a joint venture company formed to hold the Kumtor Mine. The board of the joint venture company would be comprised of an equal number of Centerra and Kyrgyzaltyn representatives. Centerra would remain the operator/manager of the Kumtor Mine pursuant to an operating agreement which would contain typical terms and provisions. The heads of agreement was non-binding and the parties continued to discuss the proposal through 2014 to date. Pursuant to a Parliamentary decree dated February 26, 2015, the Kyrgyz Parliament acknowledged the duration of negotiation and requested resolution within a one-month period, and requested the Government to submit a draft law on nationalization of the Kumtor Mine and to start considering the implementation of such law. To date, no definitive agreements have been signed and the parties continue to negotiate.

ENVIRONMENTAL CLAIMS

Since 2012, KGC has been the subject of various court claims commenced by Kyrgyz regulatory authorities for approximately $467 million (at the applicable exchange rates when the claims were commenced) relating to alleged environmental damages at the Kumtor Mine, mainly with respect to the existing waste dumps, use of water, and damages to land. Additional claims have been commenced by the regulatory authorities which are not currently subject to court claims, a step which is required in order for the authorities to enforce the claim. KGC refutes all allegations.

LAND USE RIGHTS OVER THE KUMTOR CONCESSION AREA

In November 2013, KGC received a claim from the Kyrgyz Republic General Prosecutor's Office requesting the Inter-District Court of the Issyk-Kul Province invalidate its land use certificate and seize certain lands within Kumtor's concession area. This court claim remains before the Kyrgyz court, where Centerra and KGC are refuting the request. Centerra and KGC believe that the request to invalidate Kumtor's land use rights violates the Restated Investment Agreement.

DELAYS IN ANNUAL MINE PERMITS AND APPROVALS

The Restated Investment Agreement provides that KGC is entitled to all licences, consents, permits and approvals of the Government necessary for the operation of the Kumtor Mine. Despite the guarantees, KGC has experienced from, time to time, delays in receiving the required approvals and permits from Kyrgyz Republic authorities. This occurred in mid-2014 when despite the efforts of KGC to obtain approval from the Kyrgyz Republic authorities for the 2014 Kumtor Mine plan and the related permits, such approvals and permits were not issued. Centerra announced that in the absence of the issuance of such approval and permits by June 13, 2014, KGC would begin an orderly shutdown of operations at the Kumtor Mine. Fortunately, the necessary approvals and permits were received from the relevant Kyrgyz Republic agencies before such date, and the Kumtor operations continued uninterrupted.

Starting in the fourth quarter of 2014, Kumtor submitted to various Kyrgyz Republic authorities for approval its 2015 annual mine plan and its ecological passport, which provides for, among other things, allowable levels of environmental emissions and discharges. The ecological passport requires renewal every five years. Similar to KGC's experience in 2014, KGC received correspondence from such agencies declining to review such documents and expressing concerns regarding the mining of ice at Kumtor. In particular, regulatory authorities referenced the Kyrgyz Republic Water Code and its prohibition regarding the mining of ice (glaciers). Centerra and KGC have disputed the interpretation of the Water Code by the regulatory agencies, and have noted (as discussed above) that the current project agreements governing the Kumtor Mine require relevant Government authorities to be reasonable in relation to their approval of any mining plans submitted for approval, and with respect to permits and approvals, Kumtor is entitled to maintain, have renewed and receive such licences, consents, permissions and approvals as are from time to time necessary or convenient for the operation of the Kumtor Mine. In addition, Centerra and KGC have noted that the mining of ice at the Kumtor Mine has consistently been a feature of the Kumtor Mine since its commencement and has been discussed in all earlier annual mine plans which were approved. Should Kumtor be prevented from continuing its practice of mining ice, the entire December 31, 2014 Mineral Reserves, and LOM plan would be at risk, leading to an early closure of the operation.

Furthermore, certain other permits will expire on March 31, 2015 and KGC is in discussions to renew these permits, some of which are dependent upon the approval of the 2015 annual mine plan.

Centerra and KGC have been informed that the Government has passed a Government decree authorizing the issuance of the annual mine plan approval. Two of the three approvals (expertises) for the 2015 annual mine plan have been received from the Kyrgyz regulatory authorities but one approval remains outstanding, and no further information is available regarding the ecological passport and the other required permits.

This report assumes 100% ownership of the Kumtor Mine by Centerra. The economic assumptions and projections in this report are based on the existing agreements concluded in 2009 and assumes that the environmental claims are resolved without material impact on the Kumtor Mine and that the required approvals, permits, and land use matters are resolved to the satisfaction of Centerra and KGC. Any changes regarding the ownership of the project or the terms and conditions pursuant to which it operates would alter the economic outcomes of the new LOM plan as presented in this report.

PROPERTY LOCATION AND DESCRIPTION

The Kumtor Mine is located in the Kyrgyz Republic, one of the independent successor states of the former Soviet Union, some 350 kilometres to the southeast of the Kyrgyz capital of Bishkek and about 60 kilometres to the north of the international boundary with the People's Republic of China, in the Tien Shan Mountains, at 41º 52' N and 78º 11' E.

Access to the Kumtor Mine site is by the main road from Bishkek to Balykchy, a distance of 180 kilometres. Balykchy is located on the western shore of Lake Issyk-Kul at an elevation of 1,600 metres and hosts the marshalling yard for the project. The next leg follows a secondary road along the south shore of the lake to the settlement of Barskaun, a distance of 150 kilometres. The final 100 kilometres into the Tien Shan Mountains to reach the Kumtor Mine site is on a narrow winding road that climbs to an elevation of 3,700 metres through 32 switchbacks of the Sary-Moynuk Pass before proceeding eastward on a plateau through which the Kumtor River and other seasonal rivers flow. The entire road trip takes approximately five hours to complete.

The Mill facility is situated in alpine terrain at an elevation of 4,016 metres, while the highest mining activity occurs above 4,400 metres. The main camp, administration, and maintenance facilities are at approximately 3,600 metres elevation. Local valleys are occupied by active glaciers that extend down to elevations of 3,800 to 3,900 metres, and undisturbed permafrost in the area can reach a depth of 250 metres. The region is seismically active as a result of the continuing convergence between the Indian and Eurasian plates, but the Concession Area has a relatively sparse history of seismic activity. All facilities, including the process plant and tailings storage dam, have been designed in accordance with recommended seismic standards for the area.

KUMTOR MINE GEOLOGY AND MINERALIZATION

The Kumtor Mine deposits occur in the middle Tien Shan metallogenic belt, a Hercynian fault and thrust belt in Central Asia that extends from Uzbekistan in the west through Tajikistan and the Kyrgyz Republic into northwestern China and hosts a number of important gold deposits, among them Muruntau, Zarmitan, Jilau, and Kumtor.

The mine geology is dominated by several major thrust sheets and fault zones which strike northeasterly and dip to the southeast at varying but moderate angles. Each thrust sheet (Zone) contains older rocks than the sheet it structurally overlies. The Zone hosting the gold mineralization is composed of meta-sediments of Vendian age (youngest Proterozoic or oldest Palaeozoic) that are strongly folded and schistose. In most areas, the Kumtor Fault Zone (KFZ), a dark grey to black, graphitic gouge and schist zone forms the footwall of this structural segment. The KFZ has a width of up to several hundred metres. The adjacent rocks in its hanging wall are strongly affected by folding, shearing and faulting for a distance of up to several hundred metres. The rocks in the structural footwall of the KFZ are Cambro-Ordovician limestone and phyllite, thrust over Tertiary sediments of possible continental derivation which in turn rests, with apparent unconformity, on Carboniferous clastic sediments.

The structural geology has evolved through four main deformation events pre-Carboniferous to Tertiary in age. Recent advances in understanding of the structural geology have improved the understanding of some of the geotechnical issues affecting the Central Pit.

Gold mineralization occurs where the Vendian sediments have been hydrothermally altered and mineralized, an event that has been dated as late Carboniferous to early Permian. Gold mineralization is developed at varying intensities over a distance of more than twelve kilometres, with the Central Deposit being the most important. Other known occurrences along the mineralized trend are the Southwest Deposit, which was first mined in 2006 to 2008, and the Sarytor Deposit, for which a Mineral Reserve was estimated for the first time at the end of 2006. Additional centers of mineralization are known from the Northeast, Akbel, Muzdusuu, and Bordoo prospects, however, no Mineral Resources have yet been estimated in these areas.

Mineralization took place in four main pulses with the mineralization being most intense, and the gold grade the highest, where the metasomatic activity was continuous through phases two and three. Substantial volumes affected by such activity are represented by the Stockwork and SB Zones of the Central Deposit, which contain the most significant accumulations of high grade mineralization. Native gold and gold-bearing minerals such as tellurides occur as very fine inclusions in pyrite, with an average size of only 10 microns, which accounts for the partly refractory nature of the ore. However, the fine grain size of the gold also renders assay results for this mineralization relatively reliable, with only a small nugget effect. Post-ore faults, in addition to being of geotechnical significance, often carry significant quantities of graphite, and other carbonaceous components which constitute the source for the preg-robbing character of some of the mineralization.

GEOTECHNICAL ISSUES

PIT WALL STABILITY

The final pit walls will have a vertical extent of up to 620 metres in the SB Zone part of the Central Pit (up to 960 metres if the natural slope above is considered) and up to 750 metres in the Stockwork Zone area. In general, there is a higher risk associated with higher rock walls.

The pit wall slopes for the LOM pit design follow the recommendations by Golder Associates Ltd., who have been providing long-term geotechnical advice to KGC. Following two failures of the northeast highwall in 2002 and 2006, a comprehensive program of structural mapping, geotechnical drilling and modelling has resulted in a reduction of the design pit walls to generally between 26 degrees and 34 degrees. The slope angles recommended by Golder will be validated by additional geotechnical drilling, particularly in the southeast and east parts of the Central Pit. The geotechnical drilling is scheduled to begin in the second half of 2015. The design slope angles assume that the pit walls are depressurized, and drilling to accomplish depressurization is part of the mine plan.

Operations at the Central Pit have been negatively affected as a result of two substantial failures of the bedrock highwall that forms the northeastern limit of the Central Pit as well as less severe deformations that occurred in other parts of the pit.

The first northeast highwall failure in the Stockwork Zone on July 8, 2002 resulted in the temporary suspension of operations, and led to a shortfall in 2002 production because the Stockwork Zone was rendered temporarily inaccessible. A second failure of similar magnitude occurred on July 13, 2006, in an area above the Stockwork Zone that was planned to be mined in 2006 and 2007. Mining from the area has since been deferred and has concentrated on the southern part of the Central Pit to exploit the SB Zone discovered in 2005.

Following the second ground wall movement, KGC, Golder Associates Ltd. (Golder) and Centerra continued to assess the causes of the pit wall failure and have developed remedial measures and long-term pit slope design criteria that would reduce the possibility of a recurrence. This work has provided insight into the mechanisms of the highwall failures.

In the 2009 year-end Mineral Reserve estimate and LOM plan, the northeastern highwall design was revised from a slope angle of 36 degrees to a slope angle in the order of 30 degrees. This design increases the probability that the known wedges that gave rise to the two failures will not cause another wall failure. Since 2006, the inactive highwall has been stable based on the monitoring data collected from approximately 100 survey prisms. The safety of the highwall design depends on the state of its depressurization. If the highwall is not or cannot be sufficiently depressurized and proves to be unstable at the current slope angles, the Mineral Reserves and LOM plan for this part of the Central Pit would be adversely affected. However, that part of the Lysii Glacier providing meltwater to the northeast highwall will be mined out in 2019 according to the new LOM mine plan, mitigating against most surface water entering the northeastern highwall and KGC plans to maintain an active drilling depressurization program in the area.

The southern part of the Central Pit which exploits the SB Zone has undergone several revisions to its design bedrock slope angles. The slope angles of 36˚ originally specified in 2006 were revised to approximately 30 to 34 degrees for most sectors, with only a few retaining an angle of 36 degrees. The revisions were required as a result of ravelling and deformation of the rock slopes during previous mining activities and were determined using a substantial amount of geotechnical drilling completed after 2006. This has shown that the structural features causing slope instability dip into the pit at relatively shallow angles (more or less parallel to the pit slopes) in two major sectors (northwestern and eastern walls). The pit walls are now designed to avoid undercutting of these structures. The safety of the walls depends on the accuracy of the structural geological model, which is being continuously refined and updated, as well as the ability to depressurize water-bearing faults and structures. Additional geotechnical drilling will cover portions of the southeastern and eastern walls into which the pit will expand, and more slope-angle revisions may be required. It is important to note that a downward change in the overall slope angle will impact the Mineral Reserve estimates and/or the projected economics of the project.

The location of the LOM pit crest on the northwest wall reaches 90 metres from the Mill, representing a Factor of Safety of 1.34. This assumption is based on the current understanding of pore water pressure in the northwest wall sector. The final LOM pit crest will not reach 90 metres from the Mill until the final cutback allowing sufficient time to validate the current model.

GLACIAL ICE

In order to access the Mineral Reserve, KGC is required to mine glacial ice. From the information presented in Section 16, there is uncertainty in predicting the rate at which Davidov Glacier ice mining has to be accomplished to develop the southern part of Central Pit. The volume of ice mining and the additional mining equipment required to accomplish this are therefore subject to upward revision, possibly in a substantial way. In 2014, high deformation rates of the South Arm of Davidov Glacier required the construction of a 90 metre high toe buttress constructed of rock mined from Central Pit to provide for safe mining below. Should ice mining not keep up with the forward ice movement, or a similar toe buttress be ineffective for managing glacier ice movements from future cutbacks, interruptions to the LOM plan with respect to mining of the SB Zone would occur, with negative implications for the mine plan and the Project cash flow.

WASTE DUMPS

The LOM plan requires waste rock to be deposited in waste rock dumps located in the Davidov, Sarytor, and Lysii Valleys. The waste dumps are on top of permafrost, fine-grained moraine soils, with high ground ice content within the Davidov and Sarytor Valleys and to a lesser extent, the Lysii Valley. Based on performance monitoring to date of the three waste dumps, continued deformation of the waste dumps has been incorporated into the waste-dump design. However, should the dumps become sufficiently unstable, their use will have to be reduced or stopped entirely. Such circumstance would adversely impact the LOM plan and economic performance of the Kumtor Mine operation.

TAILINGS MANAGEMENT FACILITY

The remaining approved capacity of the tailings management facility is insufficient to store all of the 45 million cubic metres of tailings (68.6 million tonnes of ore) to be processed in the current LOM plan. To accommodate the shortfall, storage options are being considered, including raising of the existing tailings dam and or constructing new tailings management facilities both within and outside the Concession Area. The LOM plan assumes raising of the existing tailings dam. If permitting of this option cannot be obtained, additional capital expenditures beyond those in the current capital budget for the new LOM plan would have to be incurred.

PETROV LAKE

Petrov Lake is a glacier lake that has formed with the retreat of Petrov Glacier and is located approximately 5 kilometres upstream of the tailings dam. The lake has formed due to glacier meltwaters being dammed by a natural terminal moraine which is mostly frozen and likely contains buried glacier ice. Thawing of the moraine dam, to an extent that it allows for piping or overtopping of the dam, may lead to a dam breach and the uncontrolled release of lake water that can potentially erode a section of the tailings dam and damage other downstream facilities. KGC considers any damage to the tailings dam a serious threat. Climate change is considered the most likely mechanism for initiating thawing. While the risk of this outflow occurring in the next ten years is considered low, this is a future event that needs to be considered for mine closure. An early warning system is currently being installed to safeguard people working in the path of a potential outflow. Mitigation options are being evaluated.

MINING AND MILLING OPERATIONS

Mining operations at the Kumtor Mine use conventional open pit mining methods. Mining in the Central Pit is done on 10 metre benches to allow more efficient use of the larger mining equipment purchased in recent years. Ore at the smaller Southwest and Sarytor pits will be mined on nominal 4m benches for better mining selectivity of the smaller ore zones.

Blast holes are drilled using six diesel-powered Sandvik DR-460 rig and two Drilltech D55SP rotary-percussion drill rigs, with a hole diameter of 300 millimetres (mm). Charging the holes is undertaken by special bulk explosives trucks delivering either ammonium nitrate with fuel oil, or emulsion explosives for wet holes. The explosives consumption is about 0.26 kg per tonne of ore or waste.

The main loading fleet operating at the end of 2014 consisted of five Hitachi 3600 shovels, nine Liebherr 9350 hydraulic shovels, and one CAT 5130 B hydraulic shovel. The main haulage fleet operating at the end of 2014 was 71 CAT 789 haul trucks and 32 CAT 785 haul trucks.

The current plant flowsheet reflects the fine-grained nature of the gold and its intimate association with pyrite, and consists of crushing, grinding, pyrite flotation, and two-stage re-grinding of the flotation concentrate. Two separate carbon-in-leach (CIL) circuits extract the gold from the re-ground concentrate and from the flotation tails, with final gold recovery accomplished by electro-winning and refining. The Mill was originally designed with a capacity to process 4.8 million tonnes of ore per year. The Mill throughput is currently 5.9 million tonnes per year or a nominal capacity of 15,900 tonnes per day.

The ore to be milled is managed through a number of stockpiles that receive ore of different metallurgical character and of different grade ranges as determined by grade-control data and thus allow blending of the mill feed for optimum gold recovery.

The ore is crushed in a gyratory crusher followed by primary grinding in a semi-autogenous (SAG) mill. Secondary grinding is completed in closed circuit with hydrocyclones with overflow gravitating to the flotation circuit producing a bulk sulphide flotation concentrate with a grade of 30 to 50 g/t Au, and a flotation gold recovery of 87 to 92%.

Ultra-fine grinding of flotation concentrate is completed in a ball mill in closed circuit with hydrocyclones followed by further grinding to 95% to 98% passing 20 microns in an IsaMill which provides additional liberation of the fine gold (2-5 microns) enclosed in pyrite.

The flotation concentrate is leached in a CIL circuit. The flotation tailings are leached in the tailings CIL circuit. The loaded carbon from both CIL circuits is stripped in two parallel carbon stripping circuits. Gold is subsequently recovered by electro-winning. Gold flake is washed from the cathodes, dried and smelted in an induction furnace and cast into doré bars. Carbon is reactivated in a 2,400 kW electrically heated horizontal kiln for reuse in the CIL circuits.

Tailings from both CIL circuits are combined in the 30.5 metre diameter tailings thickener and discharged by gravity to the tailings disposal area through a slurry pipeline The tailings management facility is described Section 18 of this report.

Historically, the overall metallurgical recovery of gold in the Kumtor processing plant has averaged 79.4%. With KGC's current knowledge, the LOM plan annual recoveries are expected to range from 54% to 83%, averaging 78% depending on the head grade and metallurgical characteristics of the ore. Work continues at the Kumtor Mine on implementing strategies to improve gold recoveries.

Subsequent to the 2012 Technical Report, mill expansion studies were completed in 2013 and 2014. The decision was made not to proceed with the mill expansion.

MINERAL RESOURCES AND MINERAL RESERVES

All Mineral Resource and Mineral Reserve estimates were prepared in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum Standards for Mineral Resource and Mineral Reserves (2014) as incorporated into National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* (NI 43-101) and were prepared, reviewed, verified and compiled by Centerra's geological and mining staff with assistance from RPA Inc. (RPA) under the supervision of Gordon Reid, Professional Engineer and Centerra's Vice-President and Chief Operating Officer, who is the qualified person for the purpose of NI 43-101.

Table 1-2 summarizes open pit and underground Mineral Resources exclusive of Mineral Reserves as of December 31, 2014, based on a $1,450/oz gold price. The 2014 year-end open pit Measured and Indicated Mineral Resources total 29.5 million tonnes averaging 3.0 g/t Au and contain 2.8 million ounces of gold. In addition, the 2014 year-end open pit Inferred Mineral Resources total 2.7 million tonnes averaging 1.5 g/t Au and contain 126,000 ounces of gold. The 2014 year-end underground Measured and Indicated Mineral Resources total 156,000 tonnes averaging 10.8 g/t Au and contain 54,000 ounces of gold. As well, the 2014 year-end underground Inferred Mineral Resources total 4.6 million tonnes averaging 10.9 g/t Au and contain 1.6 million ounces of gold.

The resource model update for the SB Zone of the Central Deposit was prepared in December 2014, using all of the drillholes available as of that date, by RPA. ARANZ Leapfrog software was used to update the principal mineralized domains within the SB Zone and values for gold were interpolated into blocks using inverse distance cubed (ID3) in GEMS. After the estimation of gold grades within the SB Zone, blocks southwest of Section Line 86 were imported into the pre-existing KS13 model framework to create the KS-2014YE model.

The resource model for the Sarytor and Southwest Deposits was prepared in June 2014, using all of the drillholes available as of that date, by Centerra. Geovia Surpac (Surpac) was used to model the mineralized domains within the Sarytor and Southwest Deposits and values for gold were interpolated into blocks using ordinary kriging (OK) in GEMS. The resource estimation work is documented in Smith (2014).

The underground resource model for the SB and Stockwork Zones of the Central Deposit was prepared in December 2013, using all of the drillholes available as of that date.

RPA reviewed the resource assumptions, input parameters, geological interpretation, and block modelling procedures and is of the opinion that the Mineral Resource estimates are appropriate for the style of mineralization and that the resource models are reasonable and acceptable to support the 2014 Mineral Resource and Mineral Reserve estimates. The Qualified Person for the resource estimate is RPA Senior Resource Geologist, Pierre Landry, P.Geo.

Centerra and RPA are not aware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, or other relevant factors that could materially affect the resource estimate at the time of this report, other than as discussed in this report.

For the Kumtor Mine, updated pit designs were created in 2014 and were selected from a number of alternatives investigated, with particular emphasis on geotechnical considerations The economic studies undertaken by KGC and the LOM plan subsequently adopted by Centerra demonstrate that the Kumtor Mine Mineral Reserves are the “economically mineable part of a Measured and/or Indicated Mineral Resource” as defined by the CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM, 2104) as incorporated into NI 43-101

In the Central Pit KS-2014YE block model, the grades have been diluted out from the mineralized domains to the full size of the blocks. The model has been calibrated to the blasthole model, so it is assumed that this process has adequately accounted for external mining dilution. In the Southwest and Sarytor Deposits SRSW-2014YE block model, external dilution has been estimated based on the percentage of the block inside the mineralized domain. Blocks that were diluted below the cut-off grade are not included in the Mineral

Reserves. The net result of this process is a reduction in contained gold of approximately 4%, as compared to the undiluted model.

Mineral Resources as of December 31, 2014 are summarized in Table 1-2.

TABLE 1-2 MINERAL RESOURCE ESTIMATE SUMMARY – DECEMBER 31, 2014

Property	Classification	Tonnes (kt)	Grade Au (g/t)	Gold (koz)
Kumtor Open Pit	Measured	14,317	3.2	1,473
	Indicated	15,144	2.7	1,330
	Measured and Indicated	**29,462**	**3.0**	**2,804**
	Inferred	2,655	1.5	126
Kumtor Stockwork Underground	Measured	-	-	-
	Indicated	156	10.8	54
	Measured and Indicated	**156**	**10.8**	**54**
	Inferred	775	11.8	294
Kumtor SB Zone Underground	Inferred	3,806	10.7	1,315
Total Underground Inferred	Inferred	4,581	10.9	1,609

Notes:
1. CIM definitions were followed for classification of Mineral Resources.
2. Mineral Resources are in addition to Mineral Reserves.
3. Open Pit Mineral Resources are estimated at a cut-off grade of 0.85 g/t Au for the Central Pit and 1.0 g/t Au for the Sarytor and Southwest Deposits.
4. Underground Mineral Resources are estimated at a cut-off grade of 6.0 g/t Au.
5. Mineral Resources are estimated using a long-term gold price of US$1,450 per ounce.
6. High assays or composites are capped between 30 g/t Au and 70 g/t depending on the deposit.
7. Bulk densities are 0.92 t/m^3 for glacial ice, 2.30 t/m^3 for weathered rock and 2.85 t/m^3 fresh rock.
8. Numbers may not add due to rounding.

Mineral Reserves as of December 31, 2014 are summarized in Table 1-3.

TABLE 1-3 MINERAL RESERVE SUMMARY – DECEMBER 31, 2014

Proven Mineral Reserves			Probable Mineral Reserves			Total Proven and Probable Mineral Reserves		
Tonnes (kt)	Grade Au (g/t)	Contained Gold (oz)	Tonnes (kt)	Grade Au(g/t)	Contained Gold (oz)	Tonnes (kt)	Grade Au (g/t)	Contained Gold (oz)
7,778	2.1	526	60,729	2.9	5,610	68,507	2.8	6,136

Notes:

1. CIM definitions were followed for classification of Mineral Reserves.
2. Open Pit Mineral Reserves are estimated at a cut-off grade of 0.85 g/t Au for the Central Pit and 1.0. g/t Au for the Southwest and Sarytor Deposits.
3. Mineral Reserves are estimated using a long-term gold price of US$1,300 per ounce
4. High assays or composites are capped between 30 g/t Au and 70 g/t depending on the deposit.
5. Bulk densities are 0.92 t/m^3 for glacial ice, 2.30 t/m^3 for weathered rock and 2.85 t/m^3 fresh rock.
6. Price assumptions reflect long-term price forecasts.
7. Numbers may not add due to rounding.

Mineral Reserves could be materially affected by the risk factors described under the heading Risk Factors.

KUMTOR MINE LIFE OF MINE PLAN AND PROJECTED CASH FLOW

Based on the estimate of Mineral Reserves as of December 31, 2014, KGC has developed an updated LOM plan for the Central, Southwest, and Sarytor Deposits

The new LOM plan extends the open pit mining to 2023 and milling operations of the Kumtor Mine to the end of 2026. The LOM plan is based only on open pit Mineral Reserves and has no provision for production from any underground mining activities.

TABLE 1-4 KUMTOR MINE LOM, PROJECTED OPERATING AND CAPITAL COST

	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
PRODUCTION														
Mining (Operating)	(T x 1000)	25,456	79,529	37,470	114,155	89,992	-	91,221	36,803	29,212	-	-	-	503,838
Mining (Capital Stripping)	(T x 1000)	145,264	77,975	135,529	58,844	74,359	157,010	76,795	95,849	56,340	-	-	-	877,965
Mining Total	(T x 1000)	170,720	157,504	172,999	172,999	164,351	157,010	168,016	132,653	85,552	-	-	-	1,381,803
Milling	(T x 1000)	5,942	5,907	5,891	5,891	5,891	5,907	5,891	5,891	5,891	5,907	5,891	3,669	68,569
Gold Production	**(oz x 1000)**	**519**	**527**	**472**	**458**	**475**	**523**	**517**	**605**	**376**	**198**	**104**	**83**	**4,857**
Gold Sales	**(oz x 1000)**	**520**	**530**	**475**	**455**	**475**	**525**	**515**	**605**	**375**	**200**	**105**	**85**	**4,865**
DIRECT OPERATING COSTS														
Mining (Operating)	($ x 1000)	42,896	125,462	57,490	160,477	132,062	6,622	122,998	48,844	40,802	5,120	4,889	2,651	750,312
Milling	($ x 1000)	67,530	67,293	68,778	68,741	68,634	68,115	67,047	67,027	66,213	65,091	63,956	35,319	773,744
Administration	($ x 1000)	72,298	68,096	67,207	66,220	65,290	64,123	53,411	47,541	38,273	25,936	17,646	10,157	596,199
Refining and Other Management Fees	($ x 1000)	3,413	3,459	3,199	3,021	3,115	3,440	3,292	3,867	2,610	1,527	965	738	32,644
Other Costs	($ x 1000)	103	103	103	103	103	103	103	103	103	103	103	103	1,236
Total Direct Operating Costs	($ x 1000)	186,240	264,412	196,776	298,563	269,204	142,402	246,851	167,381	148,002	97,775	87,560	48,968	2,154,134
Direct Cash Cost - per ounce poured	**($/oz poured)**	**359**	**501**	**417**	**652**	**566**	**272**	**478**	**277**	**394**	**494**	**844**	**588**	**444**
Change in Inventories	($ x 1000)	(10,519)	(44,401)	25,540	(32,430)	(61,509)	101,119	(6,757)	15,141	(4,659)	24,109	18,113	22,629	46,376
By-Product Credit Revenue	($ x 1000)	(2,566)	(2,598)	(2,416)	(2,277)	(2,342)	(2,586)	(2,463)	(2,894)	(1,983)	(1,177)	(763)	(579)	(24,644)
OTHER PRODUCTION COSTS														
Mining (Capital Stripping)	($/t mined)	206,699	116,522	183,941	79,306	103,647	225,416	98,011	110,088	66,810	-	-	-	1,190,439
Revenue Based Taxes	($/t milled)	94,640	96,460	86,450	82,810	86,450	95,550	93,730	110,110	68,250	36,400	19,110	15,465	885,425
Total Other Production Costs	($/t milled)	301,339	212,982	270,391	162,116	190,097	320,966	191,741	220,198	135,060	36,400	19,110	15,465	2,075,865
Total Direct and Other Costs - per ounce poured	**($/oz poured)**	**939**	**905**	**991**	**1,006**	**966**	**886**	**848**	**641**	**754**	**678**	**1,028**	**773**	**871**
CAPITAL COSTS														
Open Pit Sustaining Capital	($ x 1000)	46,969	94,554	54,870	68,631	63,118	43,383	30,400	11,700	7,400	1,300	800	400	423,526
Open Pit Growth Capital	($ x 1000)	24,980	26,040	29,115	11,950	7,361	5,978	5,978	4,457	-	-	-	-	115,858
Total Capital	**($ x 1000)**	**71,949**	**120,594**	**83,985**	**80,581**	**70,480**	**49,360**	**36,378**	**16,157**	**7,400**	**1,300**	**800**	**400**	**539,384**
UNIT COSTS														
Mining (Operating)	($/t mined)	1.69	1.58	1.53	1.41	1.47	-	1.35	1.33	1.40	-	-	-	1.49
Mining (Capital Stripping)	($/t mined)	1.42	1.49	1.36	1.35	1.39	1.44	1.28	1.15	1.19	-	-	-	1.36
Milling	($/t milled)	11.36	11.39	11.68	11.67	11.65	11.53	11.38	11.38	11.24	11.02	10.86	9.63	11.28
Administration	($/t milled)	12.17	11.53	11.41	11.24	11.08	10.86	9.07	8.07	6.50	4.39	3.00	2.77	8.69
All-in Sustaining costs - per ounce sold	**($/oz sold)**	**821**	**808**	**966**	**905**	**783**	**971**	**711**	**498**	**575**	**610**	**1,007**	**840**	**779**
All-in costs - per ounce sold	**($/oz sold)**	**869**	**858**	**1,027**	**931**	**799**	**982**	**722**	**506**	**575**	**610**	**1,007**	**840**	**803**
All-in costs - per ounce sold (including taxes)	**($/oz sold)**	**1,051**	**1,040**	**1,209**	**1,113**	**981**	**1,164**	**904**	**688**	**757**	**792**	**1,189**	**1,022**	**985**

Note: The LOM gold production shown in Table 1-4 includes carbon fines.

ECONOMIC ANALYSIS

Using a price of gold of $1,300 per ounce, as assumed for the Mineral Reserve estimation process, the open pit LOM plan and the operating and capital cost forecasts have been used to project the net cash flow for the Kumtor Mine from December 31, 2014 to the end of 2026. The total net cash flow discounted at 8% amounts to $944 million dollars after accounting for all operating costs, capital expenditures related to the open pit operation and taxes under the Restated Investment Agreement. The gold price of $1,300 per ounce is being assumed to reflect long-term price forecasts.

The total LOM capital expenditures required to exploit the Mineral Reserves in the LOM plan is estimated at $540 million, which includes total sustaining capital amounts of nearly $424 million and growth capital of $116. The growth capital mainly consists of costs for the tailings dam construction, installation of dewatering systems, and the relocation of certain infrastructure.

The all-in sustaining cost per ounce sold, which includes capital stripping but does not include growth capital, or the revenue based tax, averages $779 per ounce for 2015 to the end of the LOM.

All-in cost per ounce sold including revenue based tax averages $985 per ounce for the period 2015 to the end of the LOM.

All-in sustaining cost, all-in cost, and all-in cost including revenue based tax per ounce sold are non GAAP measures. For a complete description refer to Centerra's Management's Discussion and Analysis for the year ended December 31, 2014.

Mill operating costs average $11.48/t from 2015 to 2023. Mill operating costs decrease to $10.63/t from 2024 to 2026 due to reductions in Mill personnel. The reductions are mainly in the areas of expatriate senior supervisory and technical personnel.

Mill capital costs are $34.5 million. This includes both sustaining and growth capital costs. The sustaining capital costs reflect the age of the Mill and equipment replacement required to maintain the planned operating availability of 93%.

Table 1-5 shows the sensitivity of the Kumtor Mine net present value (NPV) to gold prices from $1,100 to $1,500, discount rates of 0%, 5%, 8%, and 10%, and sensitivities to three other variables at the base-case gold price and an 8% discount rate.

TABLE 1-5 SENSITIVITIES OF MINE NET CASH FLOW
Millions of dollars

	Sensitivity to Gold Price at 0%, 5%, 8% and 10% Discount Rates			
Discount Rate	**0%**	**5%**	**8%**	**10%**
Gold Price ($/ounce)				
$1,100	709	475	378	327
$1,200	1,127	799	661	586
$1,300	**1,546**	**1,124**	**944**	**845**
$1,400	1,964	1,448	1,226	1,105
$1,500	2,382	1,773	1,509	1,364
	Sensitivities to other Variables at $1,300 per ounce and 8% Discount Rate			
Variable	**Operating Costs**	**Capital Costs**		**Gold Grade**
+10%	798	817		1,311
Base Case	**944**	**944**		**944**
-10%	1,090	1,071		576

The LOM $NPV_{8\%}$ is most sensitive to a change in the gold price followed by a change in gold head grade. A 10% gold grade reduction diminishes $NPV_{8\%}$ over the period of the LOM plan by about $368 million at a constant gold price of $1,300 per ounce.

ENVIRONMENTAL, PERMITTING AND SOCIAL CONSIDERATIONS

The KGC Health, Safety, and Environment (HSE) Policy and Compliance Departments spend considerable time and resources ensuring that all permits and licenses are received and remain current.

The Restated Investment Agreement provides that KGC is entitled to all licences, consents, permits and approvals of the Government necessary for the operation of the Kumtor Mine. Despite the guarantees, and as described earlier, KGC has experienced from, time to time, delays in receiving the required approvals and permits from Kyrgyz Republic authorities.

As per KGC's annual environmental reports KGC is in material compliance with Kyrgyz legislation and good international industry practice.

As part of its obligations to the original lending institutions in connection with the Kumtor Mine financing, KGC implemented an Environmental Management Action Plan (EMAP) in 1995. The EMAP outlines KGC's environmental and safety commitments, including the regulations applicable to the Kumtor Mine. The EMAP has been updated over the years, most recently in in 2010 to reflect the maturing operations.

The Restated Investment Agreement provides that KGC will continue to be obligated to operate in accordance with mine and operating plans that seek to limit the environmental impact of the project and protect human health and safety in accordance with good international mining practices. Specifically, KGC continues to be obligated to operate in material compliance with the standards applicable under the EMAP.

Under the EMAP, KGC is required to update its Conceptual Closure Plan (CCP) every three years. This approach allows for the development and adaptation of the CCP, provides a period for testing and monitoring of several years to evaluate the various options contemplated by the CCP, and is followed by the development of a Final Closure Plan (FCP) two years prior to the end of mine life. The FCP will consider the results of the testing and monitoring as well as any changes to the environmental, regulatory, and social environment that may have occurred over the LOM.

The KGC CCP was reviewed and updated during 2013, and the associated report was issued in early 2014. The most recent LOM plan is for open pit mining to end in 2023 and milling operations to conclude in 2026.

As a result of the latest CCP review, the LOM closure cost based on estimated current and LOM plan impacts as at December 31, 2014 is $50 million after allowing for additional mining and 2014 inflation, of which $16 million has been funded. KGC is required to re-calculate closure liability on an annual basis, in accordance with International Financial Reporting Standards (IFRS), to take into account future discount and inflation rates.

In 1995, KGC established a Reclamation Trust Fund to accrue cash funds for mine closure liabilities. This is funded by sales revenue, annually in arrears. On December 31, 2014 the balance in the fund was $16 million, with the remaining $34 million to be funded over the LOM as per the ANT.

KGC operations are subject to regular environmental audits by Kyrgyz and international companies and experts, as well as audits commissioned by Centerra and the European Bank for Reconstruction and Development (EBRD).

KGC has developed and implemented a Health and Safety Management System (HSMS) that is aligned with the International Council on Mining and Metals (ICMM). KGC recently conducted a risk based audit (ERM, September 2014) of its HSMS. There were no major audit findings. Centerra, in conjunction with KGC, will continue to regularly audit the health and safety management systems. In addition, KGC recently underwent an on-site roads and vehicular audit (WESA September 2104) with no major audit findings.

EXPLORATION

The most significant remaining exploration target is the investigation of Mineral Resources potentially mineable by underground methods in the Central Deposit area.

Fourteen holes for 1,850 metres are planned for 2015 in the SB Zone. These holes will increase the confidence level for the resources with the decrease in drill spacing. Access and timing is limited by active mining in this part of the Central Pit.

RISK FACTORS

There are several risk factors that could have a material effect on the Kumtor Mine. Some of these risks have already been discussed in previous sections. The risks are both of a technical and non-technical nature.

The KS-2014YE Mineral Resource model was developed in December 2014 and was used as the basis for the December 31, 2014 Mineral Reserve estimate. Although the model has been calibrated to the previous five years production, there is no guarantee that the model will accurately predict future gold production.

The occurrence and distribution of natural graphitic carbon in the ore body is not presently defined and not included in the KS-2014YE Mineral Resource model. High levels of graphitic carbon pose risk to Mill recovery as was experienced in September to November 2014.

The final pit walls will have a vertical extent of up to 620 metres in the SB Zone part of the Central Pit (up to 960 metres if the natural slope above is considered) and up to 750 metres in the Stockwork Zone area. In general, there is a higher risk associated with higher rock walls.

Following two failures of the northeast highwall in 2002 and 2006, a comprehensive program of structural mapping, geotechnical drilling and modelling has resulted in a reduction of the design pit walls to generally between 26 degrees and 34 degrees. The slope angles recommended by Golder will be validated by additional geotechnical drilling, particularly in the southeast and east parts of the Central Pit. The geotechnical drilling is scheduled to begin in the second half of 2015. The design slope angles assume that the pit walls are depressurized, and drilling to accomplish depressurization is part of the mine plan.

If the slope angles used for the design of the LOM pit need significant flattening or if the pit walls prove to be unstable at the slope angles assumed by the LOM pit design, there would be a negative impact on the LOM plan and on the current open pit Mineral Reserves.

The location of the LOM pit crest on the northwest wall reaches 90 metres from the Mill, representing a Factor of Safety of 1.34. This assumption is based on the current understanding of pore water pressure in the northwest wall sector. The final LOM pit crest will not reach 90 metres from the Mill until the final cutback allowing sufficient time to validate the current model.

In order to access the Mineral Reserve, KGC is required to mine glacial ice. There is uncertainty in predicting the rate at which Davidov Glacier ice mining has to be accomplished to develop the southern part of Central Pit. The volume of ice mining and the additional mining equipment required to accomplish this are therefore subject to upward revision, possibly in a substantial way. In 2014, high deformation rates of the South Arm of Davidov Glacier required the construction of a 90 metre high toe buttress constructed of rock mined from Central Pit to provide for safe mining below. Should ice mining not keep up with the forward ice movement, or a similar toe buttress be ineffective for managing glacier ice movements from future cutbacks, interruptions to the LOM plan with respect to mining of the SB Zone would occur, with negative implications for the mine plan and the Project cash flow.

The LOM plan requires waste rock to be deposited in waste rock dumps located in the Davidov, Sarytor, and Lysii Valleys. The waste dumps are on top of permafrost, fine-grained moraine soils, with high ground ice content within the Davidov and Sarytor Valleys and to a lesser extent, the Lysii Valley. Based on performance monitoring to date of the three waste dumps, continued deformation of the waste dumps has been incorporated into the waste-dump design. However, should the dumps become sufficiently unstable, their use will have to be reduced or stopped entirely. Such circumstance would adversely impact the LOM plan and economic performance of the Kumtor Mine operation.

The remaining approved capacity of the tailings management facility is insufficient to store all of the 45 million cubic metres of tailings (68.6 million tonnes of ore) to be processed in the current LOM plan. To accommodate the shortfall, storage options are being considered, including raising of the existing tailings dam and or constructing new tailings management facilities both within and outside the Concession Area. The LOM plan assumes raising of the existing tailings dam. If permitting of this option cannot be obtained, additional capital expenditures beyond those in the current capital budget for the new LOM plan would have to be incurred.

Petrov Lake is a glacier lake that has formed with the retreat of Petrov Glacier and is located approximately 5 kilometres upstream of the tailings dam. The lake has formed due to glacier meltwaters being dammed by a natural terminal moraine which is mostly frozen and likely contains buried glacier ice. Thawing of the moraine dam, to an extent that it allows for piping or overtopping of the dam, may lead to a dam breach and the uncontrolled release of lake water that can potentially erode a section of the tailings dam and damage other downstream facilities. KGC considers any damage to the tailings dam a serious threat. Climate change is considered the most likely mechanism for initiating thawing. While the risk of this outflow occurring in the next ten years is considered low, this is a future event that needs to be considered for mine closure. An early warning system is currently being installed to safeguard people working in the path of a potential outflow. Mitigation options are being evaluated.

The Kumtor Mine operation is exposed to a number of non-technical risks which are related to the country of operation or derive from other external factors largely or entirely beyond the control of Centerra or KGC. The segment below covers certain key risks.

The Kyrgyz Republic has experienced political difficulties in recent years including two revolutions (2005 and 2010) that have resulted in the ouster of the then incumbent president; the reconstitution of parliament; and the imprisonment of various political party members. The Kyrgyz economy continues to be impacted by a volatile political environment and lack of economic development.

The Kumtor Mine operation plays an important part in the Kyrgyz economy. In addition, the Kyrgyz state, through Kyrgyzaltyn, holds nearly one-third of the issued shares of Centerra. Political risk has affected the Kumtor Mine in various ways during the last several years, including through requests to renegotiate the agreement governing the Kumtor Mine (the "Kumtor Mine Agreement"), calls for nationalization of the Kumtor Mine, regulatory agencies making claims for alleged environmental damages, and court actions commenced by the Kyrgyz Republic General Prosecutor to rescind previously granted land use rights to Kumtor, and delays in obtaining necessary permits and approvals.

The Kumtor Mine is located in a remote location and long lead times are required for equipment and supplies which partly originate in other countries. Supply-chain risks are associated with the flow of materials, supplies, and services to the mine site, as well as timely delivery of equipment. Any significant delay in the delivery of equipment and/or materials due to border or customs clearance issues, road blockades or the failure of a key supplier to meet a delivery schedule for critical equipment may negatively affect the timely execution of the LOM plan.

CONCLUSIONS

The authors of this Technical Report make the following conclusions:

GEOLOGY AND MINERAL RESOURCES

- The Kumtor Central deposit is hosted by Vendian meta-sediments; primarily, grey carbonaceous quartz-sericite-chlorite schists or phyllites that are strongly folded and schistose, with a large proportion of faulted and sheared rocks.

- The geology of the deposits and controls to mineralization are reasonably well understood.

- The sample data is collected using protocols that are consistent with industry best practice. The sampling is appropriate for the mineralization type and the samples are representative of the deposit.

- The samples are kept and transported in a secure manner.

- Assays are carried out in a well-managed facility using conventional methods commonly used in the industry. During previous drilling campaigns, suitable levels of independent QA/QC samples are submitted to the laboratory to ensure reasonable results are being returned.

- The assay database is securely maintained, has been subjected to a reasonable and appropriate level of validation and verification, and is suitable for use in estimation of Mineral Resources.

- The assumptions, parameters, and methodology are generally appropriate for Mineral Resource estimation and consistent with the style of mineralization and mining methods.

- The grade interpolations were carried out using conventional methods, commonly used in the industry, and applied with reasonable geological inference and controls.

- Mineral Resources are reported exclusive of Mineral Reserves and are estimated effective December 31, 2014 as follows:
    - Open pit Measured and Indicated Mineral Resources total 29.5 million tonnes averaging 3.0 g/t Au and contain 2.8 million ounces of gold.
    - Open pit Inferred Mineral Resources total 2.7 million tonnes averaging 1.5 g/t Au and contain 126,000 ounces of gold.
    - Underground Measured and Indicated Mineral Resources total 156,000 tonnes averaging 10.8 g/t Au and contain 54,000 ounces of gold.
    - Underground Inferred Mineral Resources total 4.6 million tonnes averaging 10.9 g/t Au and contain 1.6 million ounces of gold.

MINING AND MINERAL RESERVES

- The Total Mineral Reserves as of December 31, 2014 have decreased by approximately 20% in tonnes and 28% in contained ounces compared to the estimate at the end of 2013, with the average gold grade dropping from 3.1 g/t to 2.8 g/t. Milling operations are expected to continue until 2026.

- Opportunities for further Mineral Reserve expansions are constrained by the topography in the southern part of the LOM Central Pit.

- The Kumtor Mine operation will continue to produce ore at a high strip ratio for most of its projected mine life, with the total annual tonnage mined in the range of 85 to 173 million tonnes for the period of 2015 to 2023 with an average waste-to-ore ratio of 21.7 to 1.

- Re-location of surface installations due to the encroachment of the Central Pit and because of the movement of the Davidov Valley waste dump requires additional capital expenditures until 2017. Other capital projects include the continuing expansion of the tailing facility.

- Gold production from the Central Pit has been negatively impacted on several occasions from 2002 to 2014 by geotechnical issues related to the poor quality of the host rocks resulting from the intensive and complex structural deformation in the area, and from the gradual movement into the pit of glacier ice and of waste dumps previously placed on top of the adjacent Davidov Glacier. While the understanding and resulting remedial plans for these issues have progressed significantly, pit wall stability issues remain a significant technical risk to achieving the gold production and associated cash flow as outlined in the LOM plan.

- This report discusses the potential of mining high grade resources utilizing underground mining. No underground test mining has yet been completed in what are very difficult ground conditions. Without additional drilling and a comprehensive test mining program, followed by a prefeasibility study, conversion of these resources into reserves will not be possible. These resources have not been included in the LOM plan.

PROCESS

- Historically, the overall metallurgical recovery of gold in the Kumtor processing plant has averaged 79.4%. With our current knowledge, the LOM plan annual recoveries are expected to range from 54% to 83%, averaging 78% depending on the head grade and metallurgical characteristics of the ore. Work continues at the Kumtor Mine on implementing strategies to improve gold recoveries.

- Subsequent to the 2012 Technical Report, Mill expansion studies were completed in 2013 and 2014. The decision was made not to proceed with the Mill expansion.

- The occurrence and distribution of natural graphitic carbon in the ore body is not presently defined and not included in the KS-2014YE Mineral Resource model. High levels of graphitic carbon pose risk to Mill recovery as was experienced in September to November 2014. Additional drilling and metallurgical testing is planned in 2015 to provide additional information.

GEOTECHNICAL

- There are no indications of geotechnical issues for the smaller Southwest and Sarytor Deposits that will be mined in the years 2015, 2017, and, 2021 to 2023;

- The LOM plan requires waste rock to be deposited in waste rock dumps located in the Davidov, Sarytor, and Lysii Valleys. The waste dumps are on top of permafrost, fine-grained moraine soils, with high ground ice content within the Davidov and Sarytor Valleys and to a lesser extent, the Lysii Valley. Based on performance monitoring to date of the three waste dumps, continued deformation of the waste dumps has been incorporated into the waste-dump design. However, should the dumps become sufficiently unstable, their use will have to be reduced or stopped entirely. Such circumstance would adversely impact the LOM plan and economic performance of the Kumtor Mine operation;

- Pit wall stability is strongly influenced by the level of water saturation of the rock, with dry conditions being more stable than saturated conditions. Piezometer installations, horizontal drainage wells, and pressure testing should be continued as required to assess water pressures.

- Structural mapping and additional geotechnical drilling should be continued over the LOM as necessary

- Relevant geotechnical information gathered for the northwest wall sector should be used to validate the current stability model.

POLITICAL

- The Kumtor Mine is subject to political risk. In the last several years, there have been requests to renegotiate the agreements governing the Kumtor Mine, calls for nationalization of the Kumtor Mine, regulatory agencies making claims for alleged environmental damages, and court actions commenced by the Kyrgyz Republic General Prosecutor to rescind previously granted land use rights to Kumtor, and delays in obtaining necessary permits and approvals.

- This report assumes 100% ownership of the Kumtor Mine by Centerra. The economic assumptions and projections in this report are based on the existing agreements concluded in 2009 that the environmental claims are resolved without material impact on the Kumtor Mine and that the required approvals, permits, and land use matters are resolved to the satisfaction of Centerra and KGC. Any changes regarding the ownership of the project or the terms and conditions pursuant to which it operates would alter the economic outcomes of the new LOM plan as presented in this report.

ENVIRONMENTAL

- KGC Health, Safety, and Environment (HSE) Policy and Compliance Departments proactively work to receive permits and licenses are received on a timely basis and remain current. However, delays have been experienced. Some permits remain outstanding as of the date of this report and discussions are ongoing.

- KGC operations are subject to regular environmental audits by Kyrgyz and international companies and experts, as well as audits commissioned by Centerra and the European Bank for Reconstruction and Development (EBRD).

- As per KGC's annual environmental reports KGC is in material compliance with Kyrgyz legislation and good international industry practice and specifically, continues to be obligated to operate in material compliance with the standards applicable under the Environmental Management Action Plan (EMAP).

- The KGC CCP was reviewed and updated during 2013 by international experts, and the associated report was issued in early 2014.

RECOMMENDATIONS

The authors of this Technical Report make the following recommendations:

GEOLOGY AND MINERAL RESOURCES

- Update mineralization wireframes for the Stockwork Zone as well as the Sarytor and Southwest Deposits.

- Create an underground resource block model for the Central Deposit using smaller blocks and new wireframes after the 2015 drilling campaign is completed.

- Continue to review and update high grade capping levels as new data becomes available.

- Perform additional density measurements using core from the 2015 drilling campaign to investigate densities at depth.

- Review blasthole sample splitting and preparation protocols.

- Update current resource classification criteria to define more continuous areas of each category.

- Produce a detailed report that summarizes all resource estimation work.

- Archive all Mineral Resource and Mineral Reserve files together at the site and corporate.

MINING AND MINERAL RESERVES

- Complete additional drill programs and an underground test mining program to determine the technical and economic parameters of underground mining for a prefeasibility study.

PROCESS

- Complete additional drilling and metallurgical testing to define the occurrences and distribution of natural graphitic carbon in the ore body.

- Continues to implement strategies to improve gold recoveries.
- Further define the capital expenditure program to address aging Mill equipment.

GEOTECHNICAL

- Implement additional geotechnical drilling and related studies to validate the pit slope design assumptions used for the LOM plan.
- Continue the program of monitoring and geotechnical analysis of the flow of glacier ice and of historical waste dumps deposited on glacier ice towards the Central Pit and of the deformations of the historical waste dumps.
- Continue monitoring the groundwater pressure of all of the Central Pit walls and particularly of the highwalls.
- Continue drilling depressurization wells, where necessary.
- Carry out a program of geotechnical investigations, instrumentation and monitoring, and analysis to assess the potential impacts of continued waste dump deformations on closure plans.
- Evaluate and select an option for lake level control of Lake Petrov.

POLITICAL

- Continue to discuss and negotiate with Kyrgyz authorities and Government outstanding matters, including a proposed restructuring, outstanding environmental claims, delays in permitting and land use matters.

ENVIRONMENTAL

- Seek approval of the annual mine plan and obtain a valid Ecological Passport.
- If deemed appropriate update the Environmental Management Action Plan (EMAP) to reflect the maturing operations.
- Continue the iterative updates of the Conceptual Closure Plan (CCP) with the next version due in 2016.
- Continue to regularly audit the environmental and health & safety management systems.

2 INTRODUCTION

BACKGROUND

Centerra Gold Inc. (Centerra) has prepared a Technical Report (the Technical Report) for the Kumtor Mine, Kyrgyz Republic. The current Technical Report provides an update of the 2012 Technical Report dated December 20, 2012 (Thalenhorst et al., 2012) and also supports the disclosure of the December 2014 Kumtor Mine Mineral Resources and Mineral Reserves estimate.

Kumtor Gold Company CJSC (KGC), a wholly-owned subsidiary of Centerra, holds Centerra's interest in the Kumtor Mine. Centerra became a publicly-listed company on the Toronto Stock Exchange in June, 2004 following the transfer to Centerra of certain gold assets, including the Kumtor Mine, previously held by the Government and Cameco Gold Inc. (Cameco Gold), a wholly-owned subsidiary of Cameco Corporation (Cameco).

The Kumtor Mine is comprised of the Central Deposit (often historically referenced as the Central Pit or Kumtor Pit) and two smaller satellite deposits, the Sarytor Deposit and the Southwest Deposit. Open pit mining since 1996 has concentrated on the Central Deposit, with a smaller amount of tonnage mined from the Southwest Deposit. Mineral Reserves to be extracted by open pit mining have been estimated for the Central, Southwest, and Sarytor Deposits as presented in this report, and additional Mineral Resources that may be mined by open pit have been estimated for the Central, Southwest, and Sarytor Deposits. Within the Central Deposit, parts of the high grade Stockwork and SB Zones are located directly beneath the Life of Mine (LOM) pit design of the Central Pit and are considered potential underground mining targets by Centerra. Since start-up in late 1996, the Kumtor Mill has produced approximately 9.9 million ounces of gold from 98.5 million tonnes of ore with an average gold head grade of 4.0 grams per tonne (g/t).

TERMS OF REFERENCE

This Technical Report on the Mineral Resources and Mineral Reserves of the Kumtor Mine as of December 31, 2014 complies with the standards of disclosure as set forth in NI 43-101. The report was prepared by the technical staff of Centerra being Judy Wong, P.Geo., Computer Applications Geologist and Database Manager, Tommaso Roberto Raponi, P.Eng., Director, Metallurgy, and Kevin D'Souza, Chartered Engineer., Vice President of Sustainability & Environment, under the supervision of Gordon Reid, P. Eng. and Centerra's Vice-President and Chief Operating Officer. In addition, the Mineral Resources were estimated by Pierre Landry, P. Geo, Senior Geologist, RPA Inc., who is responsible for Section 14 of the report. Jack Seto, P.Eng., Senior Geotechnical Engineer, BGC Engineering Inc., reviewed the glacier-related issues, waste dumps design and capacity, and project infrastructure, while Al Chance, P.Eng., Principal Mining Geotechnical Engineer, Golder Associates Ltd., is responsible for pit design parameters and geotechnical aspects.

The metric system of units is used throughout this Technical Report, deviating only to report ounces of gold. The currency used is the United States dollar, unless otherwise indicated.

SOURCES OF INFORMATION

Pierre Landry visited the site from February 26 to March 2, 2015. All of the Centerra personnel responsible for this report have visited the site numerous times as indicated in their certificates of Qualified Person in Section 29 of this Technical Report. Jack Seto, P.Eng., BGC Engineering Inc., and Al Chance, P. Eng., Golder Associates Ltd., visited the site on February 27 to March 2, 2015, and February 26 to March 1, 2015 respectively.

Following the initial discovery of gold at Kumtor in 1978, the Central Deposit was delineated by a Soviet-Kyrgyz geological expedition. Extensive drilling programs, surface and underground sampling programs and studies related to the Central Deposit and its exploitation were completed by various Soviet agencies. The data from those studies were evaluated and verified by the Kumtor Feasibility Study (as defined in Section 9).

Since commencement of production in late 1996, additional technical studies have been carried out by KGC, Cameco, Centerra, and consultants retained by them with expertise in the fields of geology, geotechnical issues, Mineral Resource estimation, engineering, mining, metallurgy, and environment as part of the ongoing mining operations. Such studies have included the preparation of periodic Mineral Resource models and annual Mineral Reserve estimates and the reconciliation of the Mineral Reserve estimates to mine production, all of which have been made available to the authors of this report. Other sources of technical information have included geological and engineering studies, sampling and assaying results, internal notes and memoranda, computer models, and monthly KGC operating reports from December 1996 through December 2014.

Information with respect to actual historical and future estimated operating and capital costs and to taxation issues pertaining to the Kumtor Mine has been developed by Centerra and KGC for inclusion in the economic evaluation of the Mineral Reserves presented in Section 22.

The documents reviewed, and other sources of information, are listed at the end of this report in Section 27 References.

Table 2-1 sets out the contributions by the co-authors to this report.

TABLE 2-1 REPORT CONTRIBUTIONS BY THE CO-AUTHORS

	Company	Primary Areas of Responsibility	Report Sections Authored
Gordon Reid	Centerra Gold Inc.	Overall responsibility for the report and its conclusions	All sections other than 9, 10, 11, 12, 13, 14, 17, 18, 20 and parts of Sections 15 (Pit Design Parameters) and 16 (Geotechnical Summary, Glacier-Related Issues, Waste Dumps Design and Capacity)
Judy Wong	Centerra Gold Inc.	Exploration, drilling, sample preparation and analysis	Sections 9, 10, and 11
Tommaso Roberto Raponi	Centerra Gold Inc.	Mineral processing and metallurgical testing, recovery methods	Sections 13 and 17
Kevin D'Souza	Centerra Gold Inc.	Environmental Studies, permitting and social or community impact	Section 20
Pierre Landry	RPA Inc.	Data verification, Mineral Resource estimate	Sections 12 and 14
Jack Seto	BGC Engineering Inc.	Glacier-related issues, waste dumps design and capacity, project infrastructure	Section 18 and parts of Section 16
Al Chance	Golder Associates Ltd.	Pit design parameters, geotechnical aspects	Parts of Sections 15 and 16

3 RELIANCE ON OTHER EXPERTS

The authors have relied, and believe they have a reasonable basis to rely upon the following individuals who have contributed to the environmental, legal, marketing and taxation information stated in this report, as noted below:

- Frank Herbert, General Counsel and Corporate Secretary, Centerra, with respect to legal matters addressed in Sections 1, 4, and 6.

The date of these contributions is March 20, 2015.

The authors of this report have reviewed the information provided by the other experts as listed above and, based on the authors' review of this information, believe it to be reasonable and reliable.

Except for the purposes legislated under provincial securities laws, any use of this report by any third party is at that party's sole risk.

4 PROPERTY DESCRIPTION AND LOCATION

The Kumtor Mine is located in the Kyrgyz Republic, one of the independent successor states of the former Soviet Union, approximately 350 kilometres to the southeast of the Kyrgyz capital of Bishkek (Figure 4-1) and about 60 kilometres to the north of the international boundary with the People's Republic of China, in the Tien Shan Mountains, at 41º 52' N and 78º 11' E (Figure 4-2).

The Kumtor Mine is comprised of the Central Deposit including the Stockwork and SB Zones, and two satellite deposits known as the Southwest and Sarytor Deposits.

The Kumtor Mine is governed by a series of agreements which were amended and restated in 2009. The principal agreements are:

1. A Restated Investment Agreement entered into as of June 6, 2009, among the Government, on behalf of the Kyrgyz Republic, Centerra and KGC (Restated Investment Agreement) setting out the terms and conditions applicable to the operation and development of the Kumtor Mine including those relating to taxation which are summarized in Section 22 of this report;

2. A Restated Concession Agreement entered into on June 6, 2009 among the Government, on behalf of the Kyrgyz Republic and KGC (Restated Concession Agreement), which provides for the expansion of KGC's then-existing concession to include the full area of its previous exploration and development licences into the Concession Area as described in Section 4 of this report;

3. A Restated Shareholders Agreement entered into on June 6, 2009 among Kyrgyzaltyn, Cameco, and Centerra (Restated Shareholders Agreement) which sets out the rights and obligations of Cameco and Kyrgyzaltyn with respect to their respective ownership of shares of Centerra. As a result of its disposition of Centerra shares in December 2009, Cameco is no longer a party to this agreement; and

4. The Restated Gold and Silver Sale Agreement dated June 6, 2009 among KGC, Kyrgyzaltyn and the Government (Restated Gold and Silver Sale Agreement) under which Kyrgyzaltyn has agreed to purchase all of the gold produced by the Kumtor Mine at market prices for reprocessing at its refinery in the Kyrgyz Republic as described in Section 19 of this report.

In addition to the Restated Investment Agreement, the Restated Concession Agreement, the Restated Shareholders Agreement and the Restated Gold and Silver Sale Agreement, there are a number of other important legal documents with respect to the Kumtor Mine, which are briefly noted below:

1. The Insurance Risk Rights Plan Agreement, dated June 21, 2004, between Centerra and CIBC Mellon Trust Company;

2. The Priority Power Supply Agreement dated May 22, 1995, between the State Joint Stock Energy Holding Company of the Kyrgyz Republic and KGC, under which the Kumtor Mine is guaranteed an uninterrupted source of electricity;

3. The Reclamation Trust Deed dated January 25, 1996, among the Government, KGC and Rothschild Trust Corporation Limited establishing the reclamation trust described in Section 20 of this report; and

4. A three-year $150 million revolving credit facility dated November 16, 2010, between Centerra and the European Bank for Reconstruction and Development (EBRD) as sole lender. This facility was for an original three-year period but has since been renewed and will expire on February 17, 2016. This facility is for general corporate purposes, permitted acquisitions, working capital, capital expenditures, and intercompany loans and/or capital contributions to finance the development of Centerra's existing properties in the Kyrgyz Republic and Mongolia, and for future investments in other EBRD countries of operation. The terms of the facility require KGC to pledge certain mobile equipment as security and Centerra to maintain compliance with specified covenants including financial covenants.

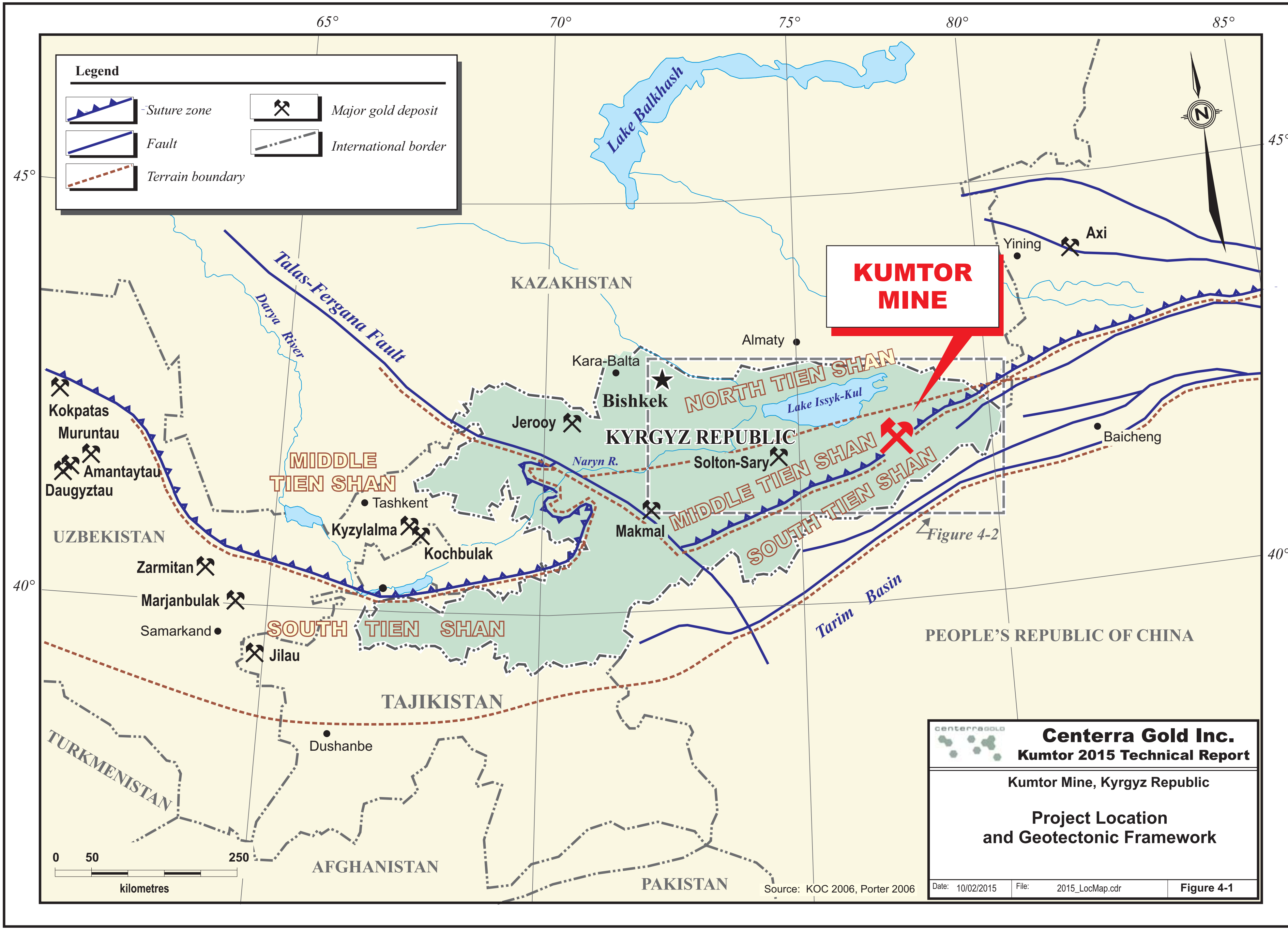
Under the Restated Concession Agreement, KGC has the exclusive rights to all minerals within an area of approximately 26,000 hectares centered on the Central Deposit and with an expiry date of December 4, 2042 (the Concession Area). The open pits, deposits, and prospects outlined in this report, existing and future waste dumps, the processing plant, and the tailing management facility are located within the Concession Area. The Restated Concession Agreement also provides that the Government will support further and additional exploration activity by Centerra in the Kyrgyz Republic by inviting it to consider opportunities to acquire additional exploration and mining licences. As of June 6, 2009, when the Restated Concession Agreement came into effect, the then existing mining and exploration licences and associated agreements terminated and were superseded by the Restated Concession Agreement.

The outline of the Concession Area (corners 1 to 5) are shown in Figure 4-3 and the coordinates are set out in Table 4-1.

TABLE 4-1 COORDINATES OF THE CONCESSION AREA

	Gauss Kruger Coordinates	
	North	East
Corner 1	4,648,000	14,260,000
Corner 2	4,648,000	14,276,000
Corner 3	4,631,000	14,276,000
Corner 4	4,631,000	14,264,000
Corner 5	4,635,000	14,260,000

The coordinate system is Gauss Krueger (Pulkovo 1942) Zone 14


Legend
Suture zone
Fault
Terrain boundary
Major gold deposit
International border
65°
70°
75°
80°
85°
45°
40°
Lake Balkhash
KAZAKHSTAN
Talas-Fergana Fault
Darya River
KUMTOR MINE
Yining
Axi
Almaty
Kara-Balta
Bishkek
NORTH TIEN SHAN
Lake Issyk-Kul
Jerooy
KYRGYZ REPUBLIC
Solton-Sary
Naryn R.
MIDDLE TIEN SHAN
SOUTH TIEN SHAN
Makmal
Baicheng
Figure 4-2
Kokpatas
Muruntau
Amantaytau
Daugyztau
UZBEKISTAN
Tashkent
Kyzylalma
Kochbulak
Zarmitan
Marjanbulak
Samarkand
Jilau
Tarim Basin
PEOPLE'S REPUBLIC OF CHINA
TAJIKISTAN
TURKMENISTAN
Dushanbe
AFGHANISTAN
PAKISTAN
0 50 250
kilometres
Source: KOC 2006, Porter 2006
Centerra Gold Inc.
Kumtor 2015 Technical Report
Kumtor Mine, Kyrgyz Republic
Project Location and Geotectonic Framework
Date: 10/02/2015
File: 2015_LocMap.cdr
Figure 4-1

Legend

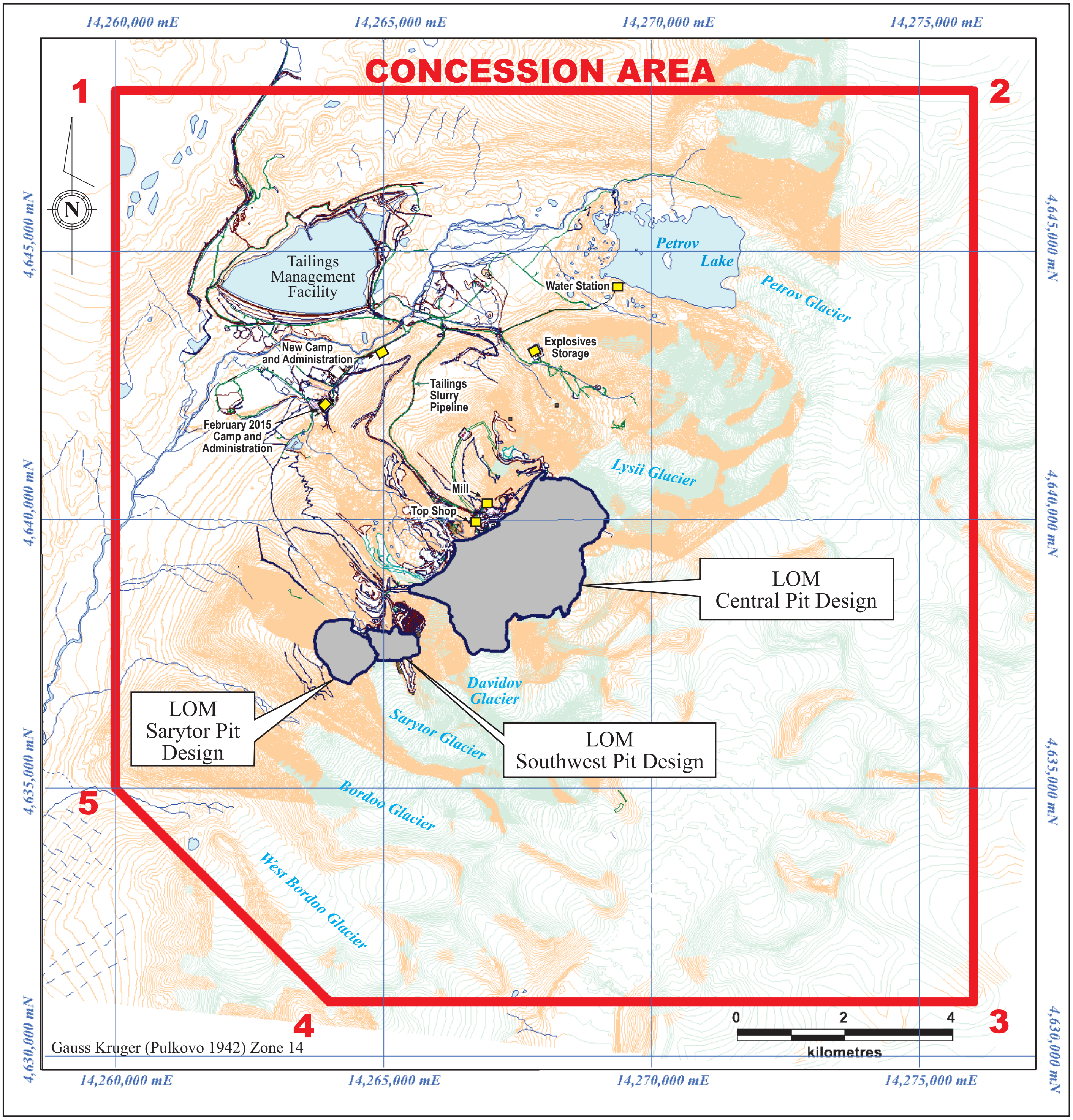
- Power Line
- Water Course
- Road
- Railroad

Centerra Gold Inc.
Kumtor 2015 Technical Report

Kumtor Mine, Kyrgyz Republic

Project Location
and Access

Date: 10/02/2015	File: 2015_LocAccess.cdr	Figure 4-2



centerraGOLD

Centerra Gold Inc.

Kumtor 2015 Technical Report

Kumtor Mine, Kyrgyz Republic

Concession Area and Site Map

Date: 10/02/2015 File: 2015_Concession.cdr **Figure 4-3**

The Restated Investment Agreement specifies that KGC will be guaranteed such access to the Kumtor Mine site, including all necessary surface lands, together with access to water, power and other infrastructure, as is necessary or convenient for the operation of the Kumtor Mine.

However, following a Parliamentary report issued in 2012 and a subsequent State Commission formed in 2013, the Government on July 5, 2012 cancelled a previously issued Government Decree that provided KGC with land use (surface) rights over the Concession Area for the duration of the Restated Concession Agreement. As a result, the related land use certificate issued by the local land office was also cancelled. In 2013, the Kyrgyz Republic General Prosecutor's Office commenced a claim in the Kyrgyz Court requesting that the court enforce the previously issued Government Decree. The merits of the case have not been argued yet.

The revocation and the subsequent court case has not impacted Kumtor Mine operations as the Company is relying upon assertions by the Prime Minister that the revocation would have no impact on or limit Kumtor Mine's activities or operations, its rights under the Restated Investment Agreement and the history of constructive dialogue between Centerra, KGC and the Government. Pursuant to the Restated Investment Agreement, KGC is guaranteed all necessary access to the Concession Area, including all necessary surface lands as is necessary or desirable for the operation of the Kumtor Mine.

Legal surveys are not required to establish the boundaries of the registered area, and accordingly, no surveys of such boundaries have been undertaken.

The Restated Investment Agreement provides that KGC is entitled to all licences, consents, permits and approvals of the Government necessary for the operation of the Kumtor Mine. Despite the guarantees, KGC has experienced from, time to time, delays in receiving the required approvals and permits from Kyrgyz Republic authorities. This occurred in mid-2014 when despite the efforts of KGC to obtain approval from the Kyrgyz Republic authorities for the 2014 Kumtor mine plan and the related permits, such approvals and permits had not been issued. Centerra announced that in the absence of the issuance of such approval and permits by June 13, 2014, KGC would begin an orderly shutdown of operations at the Kumtor Mine. Fortunately, the necessary approvals and permits were received from the relevant Kyrgyz Republic agencies before such date, and the Kumtor operations continued uninterrupted.

Starting in the fourth quarter of 2014, Kumtor submitted to various Government agencies for approval its 2015 annual mine plan and its ecological passport, which provides for, among other things, allowable levels of environmental emissions and discharges. The ecological passport requires renewal every five years. Similar to KGC's experience in 2014, KGC received correspondence from such agencies declining to review such documents and expressing concerns regarding the mining of ice at Kumtor. In particular, regulatory authorities referenced the Kyrgyz Republic Water Code and its prohibition regarding the mining of ice (glaciers). Centerra and KGC have disputed the interpretation of the Water Code by the regulatory agencies, and have noted (as discussed above) that the current project agreements governing the Kumtor Mine require relevant Government authorities to be reasonable in relation to their approval of any mining plans submitted for approval, and with respect to permits and approvals, KGC is entitled to maintain, have renewed and receive such licences, consents, permissions and approvals as are from time to time necessary or convenient for the operation of the Kumtor Mine. In addition, Centerra and KGC have noted that the mining of ice at the Kumtor Mine has consistently been a feature of the Kumtor Mine since its commencement and has been discussed in all earlier annual mine plans which were approved. Should Kumtor be prevented from continuing its practice of mining ice, the entire December 31, 2014 Mineral Reserves, and LOM plan would be at risk, leading to an early closure of the operation.

Furthermore, certain other permits will expire on March 31, 2015 and KGC is in discussions to renew these permits, some of which are dependent upon the approval of the 2015 annual mine plan.

Centerra and KGC have been informed that the Government has passed a Government decree authorizing the issuance of the annual mine plan approval. Two of the three approvals (expertises) for the 2015 annual mine plan have been received from the Kyrgyz regulatory authorities but one approval remains outstanding, and no further information is available regarding the ecological passport and the other required permits.

The authors have been advised by KGC that other than as expressly noted above regarding the land use certificate, the annual mine plan approvals and the ecological passport, all permits and licences required for the conduct of mining operations at the Kumtor Mine are currently in good standing. The principal permits and environmental aspects and liabilities are described in Section 20. There are no royalties, back-in rights, payments or other agreements or encumbrances related to the Kumtor Mine other than the agreements noted above and various forms of royalties and local taxation as set forth in Section 22 of this report. For a discussion of the potential risks associated with the Kumtor Mine, see Section 24 of this report.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Access to the Kumtor Mine (see Figure 4-2) is by a main road that runs between Bishkek and Balykchy, located on the western shore of Lake Issyk-Kul at an elevation of 1,600 metres, a distance of 180 kilometres. This road is currently being upgraded to four lanes in many places. A secondary road for 150 kilometres along the south shore of the lake leads to the town of Barskaun. The final 100 kilometres into the Tien Shan Mountains to reach the mine site is on a winding road that climbs to an elevation of 3,700 metres through 32 switchbacks of the Sary-Moynuk Pass before proceeding eastward on a plateau through which the Kumtor River and other seasonal rivers flow. KGC has done considerable work to improve and maintain this vital access road and despite occasional avalanches and movements of gravel and till down steep slopes during heavy rains, there has not been any lengthy period during which the road has been out of service.

The processing plant is situated in alpine terrain at an elevation of 4,016 metres, while the highest waste and glacier mining occurs above 4,400 metres. The main camp, administration, and maintenance facilities are at about 3,600 metres. Local valleys are occupied by active glaciers that extend down to elevations of 3,800 to 3,900 metres, and undisturbed permafrost in the area can reach a depth of 250 metres. The region is seismically active as a result of the continuing convergence between India and Eurasia, but the Concession Area has a relatively sparse history of seismic activity. All facilities at the Kumtor Mine, including the processing plant and tailings storage dam, have been designed in accordance with recommended seismic standards for the area.

The climate is continental with a mean annual temperature of minus 8°C. Extreme recorded temperatures vary from plus 23°C to minus 49°C, with short summers that last from June to September. Precipitation is low at around 300 millimetres per annum, with the majority falling in the summer months, and snow accumulations of 600 millimetres. The Kumtor Mine operates 365 days per year and there have been no significant interruptions to operations because of climatic conditions.

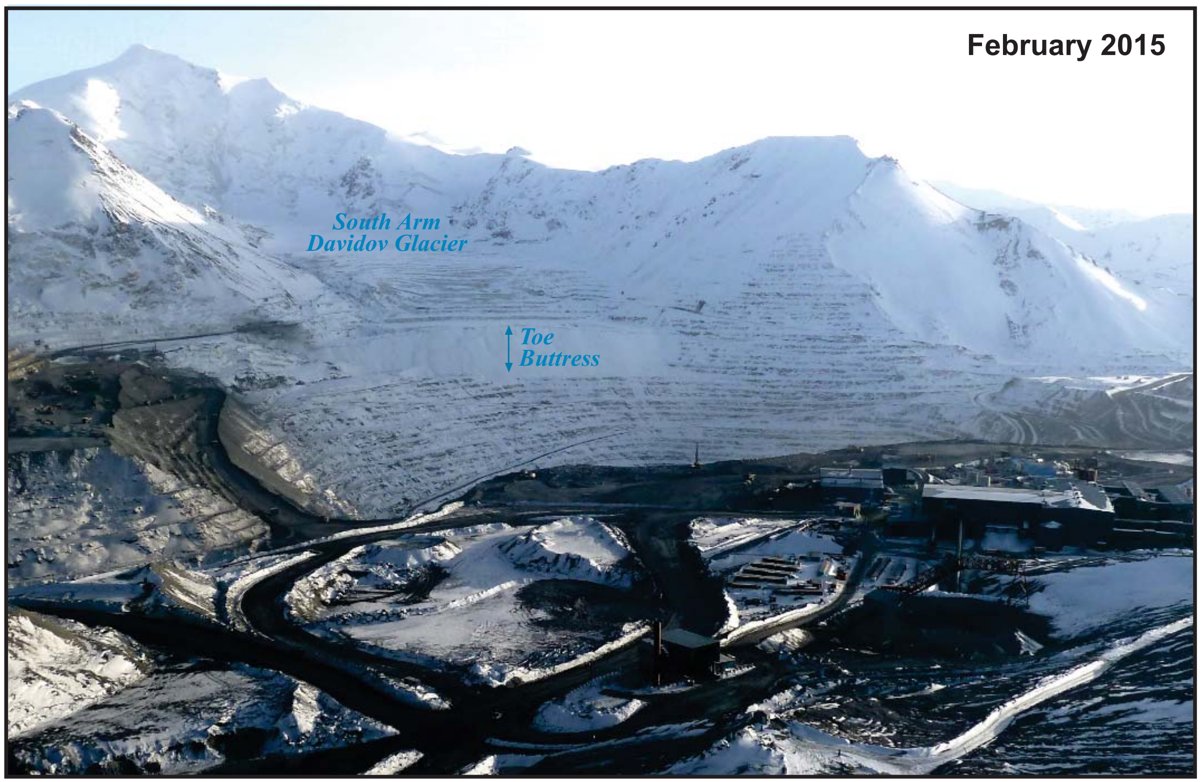
Reflecting the high elevation and the harsh climate, sparse low vegetation is restricted to the valley floors and lower mountain slopes, with a total absence of trees or shrubs (Figure 5-1).

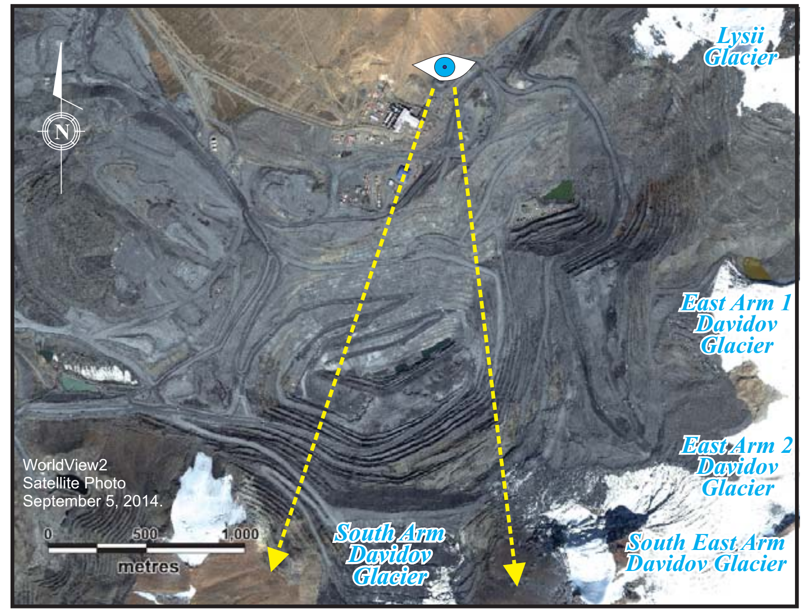
Most employees of KGC are citizens of the Kyrgyz Republic. The remainder are skilled expatriates. Most employees work a two-week rotation, and are transported between the mine site from Bishkek and the Issyk-Kul region using a company-owned commuter bus service.

Supplies are transported by rail to the Kumtor Mine marshalling yard in Balykchy at the west-end of Lake Issyk-Kul and then trucked 250 kilometres to the mine site. There are usually several daily truck convoys, and cyanide is transported to the site four times a year under a special set of precautions, with no other traffic allowed at those times. A helicopter pad is available at the mine site for emergency use.

The mine site is connected to the Kyrgyz Republic national power grid with a 110 kilovolt overhead power line that was constructed for the project and that runs parallel to the access road. The mine maintains two standby generator stations in case of power outages. Fresh water for human and industrial use is taken from Petrov Lake, situated five kilometres northeast of the Mill site (see Figure 4-3). The minimum water inflow into this glacial lake is estimated to be in excess of 1,000 cubic metres per hour or approximately twice the average project demand.

For a description of the waste rock disposal areas, processing plant site, and tailings storage, please see Sections 16, 17 and 18.





Centerra Gold Inc.
Kumtor 2015 Technical Report

Kumtor Mine, Kyrgyz Republic

Central Pit and Processing Plant
2000 and 2015

Date: 10/03/2015	File: 2015_PitPlant.cdr	Figure 5-1

6 HISTORY

Intermittent exploration in the general Kumtor Mine area dates back to the late 1920s.

1978	Debris from the Sarytor Deposit is discovered by a geophysical expedition of the state Kyrgyz Geology department sampling float from the frontal moraine of the Sarytor Glacier. The sole outcrop of what is now called the Central Deposit is found during follow-up prospecting.
1979 to 1989	A systematic evaluation of the Central Deposit, and to a lesser extent of the Southwest Deposit, is carried out consisting of several phases of surface trenching and geological mapping, diamond drilling and underground development on three levels culminating in a detailed sampling program of the central upper part of the Central Deposit.
1990	An initial mineral reserve statement, issued by the USSR State Committee on Reserves.
1991	Soviet Union breaks up and Kyrgyz Republic emerges as an independent country. Centerra's former parent company becomes aware of the project.
1992	Centerra's former parent company concludes an agreement with the Kyrgyz Republic regarding the project, and retains a third party consultant to undertake a feasibility study of the project (the Kumtor Feasibility Study).
1992-1993	The Kumtor Feasibility Study is completed. The feasibility work program included data verification (by re-sampling parts of the underground openings and re-assaying of original sample rejects), additional and definitive metallurgical test work, and a re-estimation of mineral resources and mineral reserves using geostatistical methods, a block model and pit optimization software.
1994	An update to the Kumtor Feasibility Study is completed. A project development agreement is finalized with the Government. Pursuant to this agreement, Cameco Gold, through its wholly-owned subsidiary Kumtor Mountain Corporation (KMC), held a one-third interest in KGC, a Kyrgyz joint stock company that owned the concession giving it exclusive rights to develop the Kumtor Mine. Kyrgyzaltyn JSC (Kyrgyzaltyn), a state-owned entity of the Kyrgyz Republic, held the remaining two-thirds interest in KGC
1995	A further update to the Kumtor Feasibility Study is completed
1995	Financing arrangements for the Kumtor Mine are concluded.

1996	Project construction is completed.
1997	After capital expenditures of approximately $452 million, mining of the Central Pit commences and commercial production is achieved.
2004	Kyrgyzaltyn and Cameco Gold sell to Centerra all of their shares in KGC effective June 22, 2004 in exchange for, among other consideration, common shares in Centerra. Accordingly, Centerra now holds a 100% interest in the Kumtor Mine.
2006	Ore deliveries from the Southwest Deposit commence.
2009	Project agreements from 2004 are amended and restated.

In December 2003, the Government, Cameco, and Centerra, among others, entered into various project agreements setting out the terms and conditions applicable to the operation and development of the Kumtor Mine. These agreements replaced the original agreements concluded in 1995 as part of the original feasibility activities. In August 2007, the Government, Cameco, and Centerra entered into framework agreements to provide for the amendment and restatement of such project agreements, but the framework agreements were not ratified by the Parliament of the Kyrgyz Republic within the time frame agreed to by the parties, and therefore expired.

In April 2009, the Government, Cameco, and Centerra, among others, entered into an Agreement on New Terms for the Kumtor Mine (ANT) as a result of which the parties entered into restated project agreements to govern the Kumtor Mine, which agreements incorporated the provisions of the ANT and settled certain outstanding disputes related to the Kumtor Mine. Pursuant to the terms of the ANT, Centerra issued 18,232,615 shares from its treasury to Kyrgyzaltyn.

On December 30, 2009, Cameco disposed of its remaining 88,618,472 common shares of Centerra by means of a public offering. On the same date, Cameco also transferred an additional 25,300,000 shares of Centerra to Kyrgyzaltyn. With the completion of these transactions, Kyrgyzaltyn now owns 32.7% of Centerra with the balance held by public shareholders.

Starting from 2012, the Kumtor Mine has been the subject of significant discussion in the Kyrgyz Republic Parliament, Government, and regulatory agencies. On February 15, 2012, the Kyrgyz Republic Parliament established an interim Parliamentary Commission to inspect and review KGC's compliance with relevant Kyrgyz operational and environmental laws and regulations and community standards, and the State's regulation over KGC's activities. The Parliamentary Commission report was issued on June 18, 2012 and made a number of unfavourable assertions regarding the Kumtor Mine as reported in a Centerra press release dated June 22, 2012.

Following the Parliamentary Commission Report, the Kyrgyz Parliament passed a resolution obliging the Government to form a state commission (the State Commission) to "assess the environmental, industrial, and social damage" caused by the Kumtor Mine, and to provide a "legal examination of agreements made on the Kumtor Mine in terms of protection of the state interests."

The State Commission was formed in July 2012 and was comprised of three working groups with responsibility for environmental and mining matters, legal matters (including a review of all prior and current agreements relating to the Kumtor Mine), and socio-economic matters (including a review of financial, taxation, procurement and employment related matters). Following extensive discussions and reviews by the State Commission at the Kumtor Mine, the final report was released in December 2012. The report included many allegations regarding prior transactions relating to the Kumtor Mine, the Kumtor Mine operations and management. The State Commission recommended (among other things) that the Government open negotiations on the Kumtor Mine agreements.

The Kyrgyz Republic Parliament received the State Commission report in January 2013, and recommended that the Government ensure the continuous operation of the Kumtor Mine, and within three months of the date of the decree, conduct negotiations with Centerra with a view to revising the Kumtor Mine Agreements to return to conditions that existed prior to the restructuring of the project in 2003, but subject to the application of current Kyrgyz legislation, and to enter into new agreements on these terms. The Parliament provided that if the parties did not come to terms regarding the agreements by the deadline, the Government was instructed to take certain actions with respect to the Kumtor Mine, including invalidating legislation approving the Kumtor Mine agreements and unilaterally terminating them. The original deadline was extended several times, the last being until December 23, 2013.

On December 23, 2013, Centerra, the Government, and Kyrgyzaltyn signed a non-binding heads of agreement which envisioned that the Kyrgyzaltyn would exchange its 32.7% interest in Centerra for a 50% interest in a joint venture company formed to hold the Kumtor Mine. The board of the joint venture company would be comprised of an equal number of Centerra and Kyrgyzaltyn representatives. Centerra would remain the operator/manager of the Kumtor Mine pursuant to an operating agreement which would contain typical terms and provisions. The heads of agreement was non-binding and the parties continued to discuss the proposal through 2014 to date. Pursuant to a Parliamentary decree dated February 26, 2015, the Kyrgyz Parliament acknowledged the duration of negotiation and requested resolution within a one-month period, and requested the Government to submit a draft law on nationalization of the Kumtor Mine and to start considering the implementation of such law. To date, no definitive agreements have been signed and the parties continue to negotiate.

PRODUCTION HISTORY

The Mill started processing ore in December of 1996 and achieved commercial production in 1997. The ore mined from the Central Deposit was augmented by ore from the Southwest Deposit in the years 2006 to 2008. As of December 31, 2014, a total of 98.5 million tonnes of ore from both deposits has been milled with an average gold content of 4.0 g/t. Since start-up, 9.9 million ounces of gold have been recovered. Some 1.7 billion tonnes of waste have been mined for an overall strip ratio of 15.9 to 1. Annual production data compiled from the monthly operating reports issued by KGC are shown in Table 6-1. The mine data were determined from truck counts (for tonnages) and grade-control data (for the gold grade). The differences with the plant data are small (5%) for each of the tonnage and the gold grade, with the contained ounces practically identical and reflecting the usual accounting differences between mine and mill.

TABLE 6-1 PRODUCTION HISTORY TO DECEMBER 31, 2014

	Ore & Low-Grade Mined		Waste Mined		Ore Milled		Mill Recovery	Gold Produced
	Tonnes ('000)	Grade Gold (g/t)	Tonnes ('000)	Strip Ratio	Tonnes ('000)	Gold Grade (g/t)	%	Ounces ('000)
1996	477	4.1	13,346	28.0	159	3.2	58.2	10
1997	5,017	5.2	17,946	3.6	4,023	5.3	73.3	502
1998	5,349	4.5	26,425	4.9	5,254	4.9	78.5	645
1999	8,054	3.5	33,105	4.1	5,298	4.5	79.4	611
2000	6,518	4.1	36,763	5.6	5,498	4.7	81.5	670
2001	5,606	5.2	46,863	8.4	5,470	5.2	83.1	753
2002	5,141	3.5	49,184	9.6	5,611	3.7	78.1	529
2003	4,828	5.0	72,881	15.1	5,631	4.5	82.6	678
2004	3,428	6.2	81,427	23.8	5,654	4.4	82.1	657
2005	6,135	3.1	74,903	12.2	5,649	3.4	81.2	499
2006	3,887	2.6	81,534	21.0	5,696	2.3	73.0	303
2007	5,132	2.5	109,649	21.4	5,545	2.4	72.7	301
2008	4,967	4.2	115,548	23.3	5,577	3.9	79.7	556
2009	4,464	4.7	111,079	24.9	5,780	3.7	76.7	525
2010	5,765	4.1	110,701	19.2	5,594	4.0	79.5	568
2011	6,020	3.5	144,584	24.0	5,815	3.8	80.8	583
2012	4,955	3.0	142,655	28.8	4,756	2.8	75.6	315
2013	7,289	3.6	169,403	23.2	5,596	4.3	79.3	600
2014	8,640	3.4	183,084	21.2	5,840	3.9	78.0	568
Total	**101,672**	**3.9**	**1,621,080**	**20.2**	**98,446**	**4.0**	**78.7**	**9,873**

Mining tonnages are reported above the cut-off grade used at the time. Because the low-grade material is currently being used as mill feed and will continue to be processed in accordance with the LOM plan, it is treated as ore when calculating the stripping ratio (S/R) in Table 6-1.

7 GEOLOGICAL SETTING AND MINERALIZATION

GEOLOGICAL SETTING

The gold deposit of the Kumtor Mine occur in the Tien Shan Metallogenic Belt, a Hercynian fold and thrust belt that traverses Central Asia, from western Uzbekistan in the west through Tajikistan and the Kyrgyz Republic into northwestern China, a distance of more than 2,500 kilometres (Figure 7-1). It "represents the central part of the Altaid Orogenic Collage of Central Eurasia" (Porter, 2006). Along this belt, described by Cole (1992) as "a major metallogenic province which contains many world-class mesothermal-type gold deposits" occur a number of important gold deposits including Muruntau, Zarmitan, Jilau, and Kumtor. "The Tien Shan itself is an extremely complex fold and fault belt in which various components represent different orogenetic events that span the Phanerozoic and were later overprinted by Alpine-Himalayan deformation". This belt is located at "...the margin of Paleozoic Asia (Baltica and Siberia) [to the north] and the Palaeo-Turkestan Ocean" (Cole, 1992).

The Tien Shan Belt is sub-divided into three main tectonic "elements" (Porter, 2006), the North, Middle and South Tien Shan. These elements, which may be interpreted as accretionary terrains, are up to 250 kilometres wide in Uzbekistan and Tajikistan but converge eastwards so that in the Kumtor Mine area the Middle Tien is only a few tens of kilometres wide. The North and Middle Tien Shan terrains are separated by the Nikolaev Fault, while the Middle and the South Tien Shan are separated by the Atbashi-Inylchek Fault.

In the Kumtor area, the Nikolaev Fault occupies the Kumtor River valley (Figure 7-1), while the pronounced valley in the southern part is thought to be an expression of the Atbashi-Inylchek Fault.

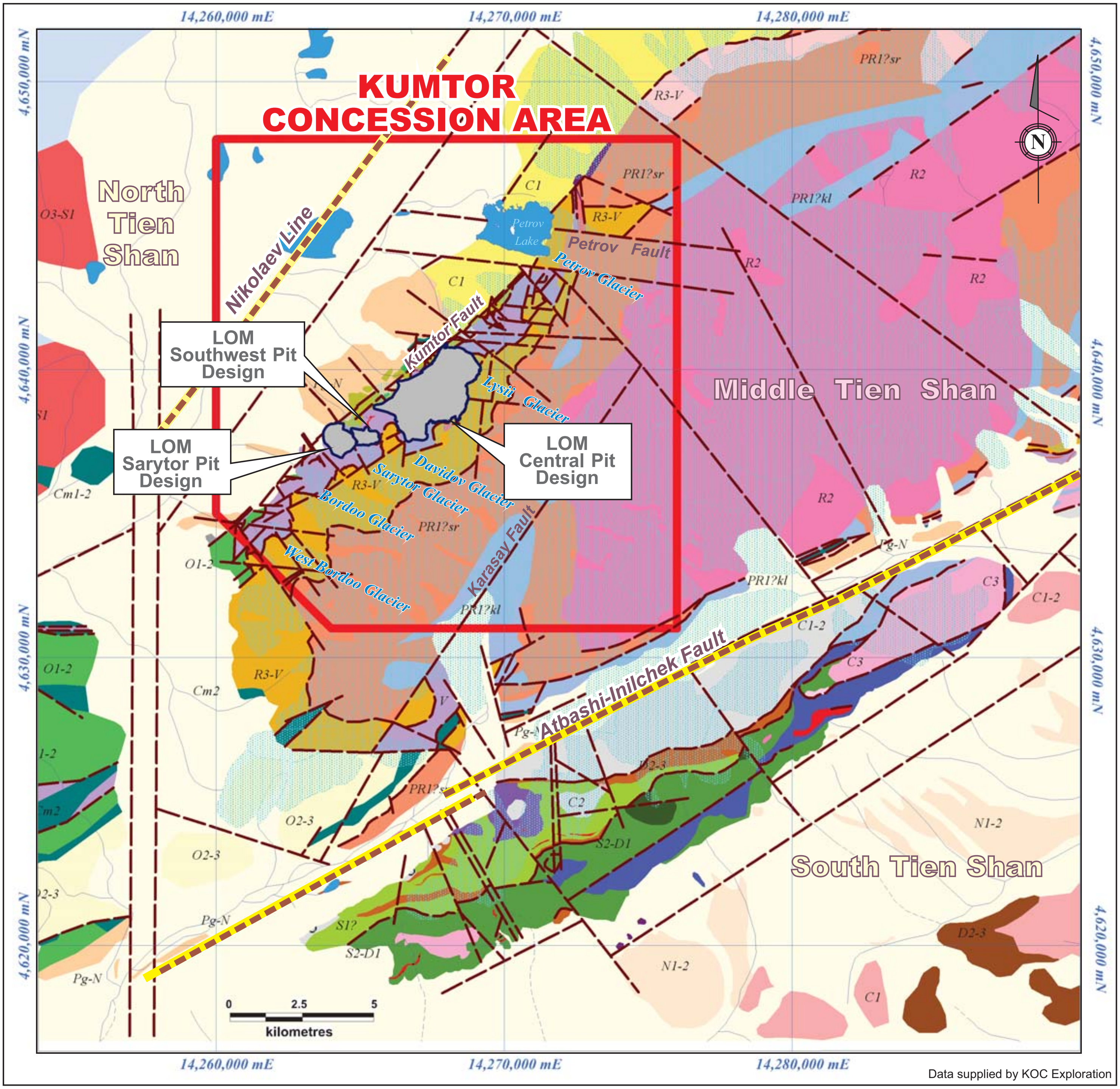
KUMTOR GEOLOGY AND STRUCTURAL EVOLUTION

The known gold deposits of the Kumtor Mine area are located in the northwestern section of the Middle Tien Shan (Figures 7-1 and 7-2). The Middle Tien Shan is intruded by granitic and granodioritic rocks assigned to the Meso- or Neo-Proterozoic era which contain remnants of even older gneisses. The intrusive rocks are thrust northwestwards over Proterozoic sedimentary and volcanic rocks which are assigned a Riphean age (also Meso to Neo-Proterozoic) and are in turn in fault and thrust contact with clastic sedimentary rocks of Vendian age (youngest Proterozoic or oldest Paleozoic). Further to the northwest, additional thrust faults including the Kumtor Fault Zone (KFZ) complete a section of thrusting and faulting several kilometres wide, with the youngest rocks exposed in the footwall of the KFZ.

The South Tien Shan terrain is dominated by Early Paleozoic sediments with subordinate mafic volcanics and some felsic intrusive bodies but contains ophiolites which indicate further plate tectonic movements within this terrain.

As is apparent from the description of the various tectonic zones within the Middle Tien Shan terrain, the geology of the Kumtor Mine area is dominated by structural features due to thrusting and faulting. Significant new knowledge has been gained in the past few years through the work of R. Seago (Seago 2006a-c, 2007a&b) and T. Starling of Telluris Consulting (Telluris 2006, 2007, 2009) whose work has shown that the structural geology of the Kumtor Mine area has evolved through four main deformation events identified as D 1 to D 4 (oldest to youngest). D 1 and D 2 pre-date the Carboniferous. D 2 is of Caledonian age with D 1 being an even earlier burial metamorphism event. D 3 is of Hercynian age (late Carboniferous to early Permian) and extends over the mineralization episode with pre-, syn- and post-mineralization D 3 structures. Mao et al. (2004) report a late Carboniferous to early Permian age for the Kumtor Mine mineralization itself. The observations at Kumtor correlate with the age of D 3 at Jilau (Cole et al. 2000) and Muruntau, where the age of the mineralization, however, is Triassic (Wilde et al 2001). D 4 is of Alpine or Himalayan age, from Tertiary to the present.

The presence of a ubiquitous schistosity (S 1) in the meta-sediments of the area is the result of the D 1 deformation episode which peaked at low to mid-greenschist facies regional metamorphism. During the D 2 episode, the S 1 schistosity was folded into a series of open, asymmetric F 2 folds which trend NE-SW with an associated axial planar crenulation cleavage (S 2). While associated faults dip to the SE, these structures have been subjected to two further phases of deformation and their original orientation is therefore changed. Telluris (2007) reports of an early silicification event during D 2, but does not comment on any gold mineralization that may have been introduced at this time.



Legend

Glacial cover

Recent sediments (QIII-QIV)

Middle Tien-Shan

- Red clay, conglomerate-breccia (Pg-N)
- Limestone (C1-2); sandstone (C1)
- Sandstone (O2-3)
- Aulerolite (O1-2)
- Black cherty, limestone (Cm2-O1)
- Ore-bearing rocks - phyllites (Cm-V)
- Arkoses, tuffs, basalts, rhyolites (R3-V)
- Gneiss, marble, schists (PR1)
- Granite, granodiorite (R2)
- Syenite (P1?)
- Granite, diorite (PR?sr)
- Alpine tectonic melange

South Tien-Shan

- Red-brown conglomerate (C2)
- Marblized limestone with gypsum (D2-3)
- Sericitic shale (S2-D1)
- Basalt (S2-D1)
- Speckled shale (O3-S1?)
- Quartz-biotite schist,metabasalt (O-S1?)
- Granite, granodiorite (C3)
- Ophiolitic melange (O?)

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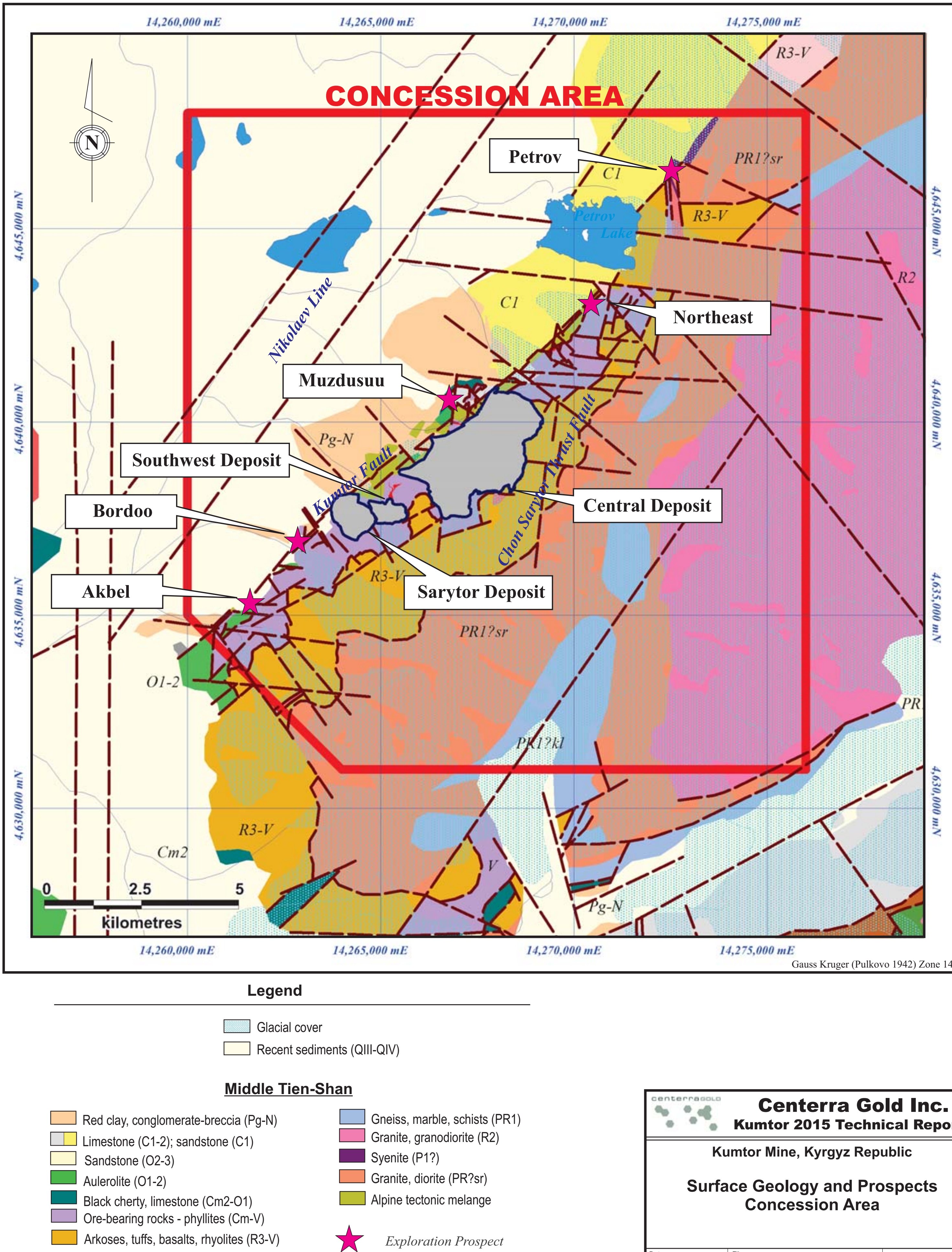
Surface Geology
Kumtor Project Area

Date: 10/03/2015	File: 2015_ConLic.cdr	Figure 7-1



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Surface Geology and Prospects Concession Area

Date: 10/03/2015 | File: 2015_TargetsPortrait.cdr | **Figure 7-2**

The third deformation episode D 3 resulted in both S 1 and S 2 being deformed by an S-N compressional event resulting in the formation of E-W trending D 3 fore-thrusts (with dips to the south) and back-thrusts (with dips to the north), and a series of roughly N-S trending strike-slip faults, lateral ramps and small-scale kink bands (F 3). The most recent D4 event has re-activated many of the pre-existing structures, especially D 2, and has imparted a NE-SW striking structural fabric, with an overall SE dip, on the main faults and S 1 foliation. Many of the D 2 cohesive structures were re-activated during D 4 resulting in unconsolidated fault breccias and gouges. The D4 tectonic axis is SE-NW.

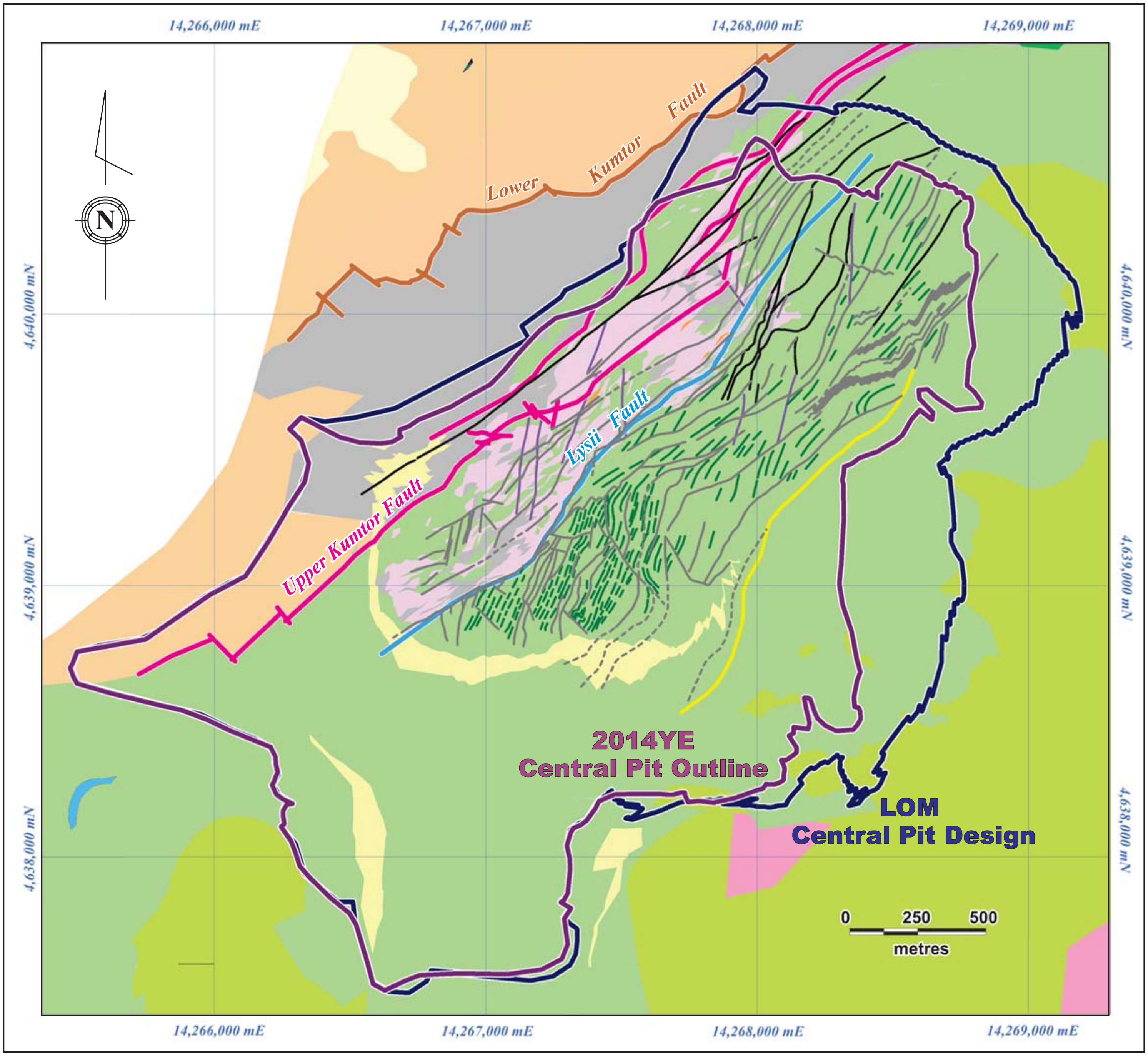
As a result of these multiple deformation events, the structural geology in the Kumtor Mine area is dominated by several major thrust sheets with an inverted age relationship (Figure 7-3). The dominant structural direction is northeast-southwest (D 4), with moderate dips to the southeast. Each thrust sheet contains older rocks than the sheet it structurally overlies. Four major structural sheets (zones), stacked upon one another, and bounded by long-lived faults that were active repeatedly, have been identified, as follows:

- Zone 0 consists of Cambro-Ordovician limestone and phyllite, thrust over Tertiary sediments of possible continental derivation that in turn rest on Carboniferous clastic sediments with apparent profound unconformity;

- Zone 1 constitutes the KFZ, whose upper limit is the Upper Kumtor Fault. The KFZ is generally a dark-grey to black, graphitic gouge zone. The KFZ strikes northeasterly, dips to the southeast at moderate angles and has a width of up to several hundred metres. The adjacent rocks in its hanging wall are strongly affected by shearing and faulting for a distance of up to several hundred metres;

- Zone 2 includes the mineralization which is hosted by Vendian meta-sediments, grey carbonaceous quartz-sericite-chlorite schists or phyllites that are strongly folded and schistose, with a large proportion of faulted and sheared rocks. Zone 2 is delimited in the footwall by the Upper Kumtor Fault and in the hanging wall by the Lysii Fault. It appears that the mineralizing event, itself multi-phase, has healed some of the earlier brittle features within Zone 2; and

- Zone 3 consists of phyllites, also of Vendian age, that show several phases of folding. Zone 3 is sub-divided into three units based on the orientation of the foliation. The dip of the schistosity is shallow to steep to the southeast in the Zone 3A and 3C rocks, and steep to the northwest in the Zone 3B rocks. The subsequent brittle deformation is less strongly developed compared to Zones 1 and 2. Zone 3 is sub-divided into three units based on the orientation of the foliation. Zone 3 is important for the pit slope stability discussed in Section 16 because of the development of the D3 and the D4 back-thrust faults within the zone.



Note: Dumps and ice not shown

- Quaternary Sedimentary Deposits
- Till
- Footwall Rocks
- Lower Carboniferous Sandstones and Limestones
- Riphean Sediments and Volcanics
- Cambrian Ordovician Cherts and Sandstones
- Proterozoic Granite
- Kumtor Fault Zone
- Phyllites with Fore-Thrusts and Back-Thrusts
- Metasomatites

- Lower Kumtor Fault
- Upper Kumtor Fault
- Lysii Fault
- 3A / 3B Boundary Fault
- Upper 3B Boundary Fault
- D3 Fault
- D2 and D4 Faults
- S1 Foliation

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Structural Geological Map Central Deposit

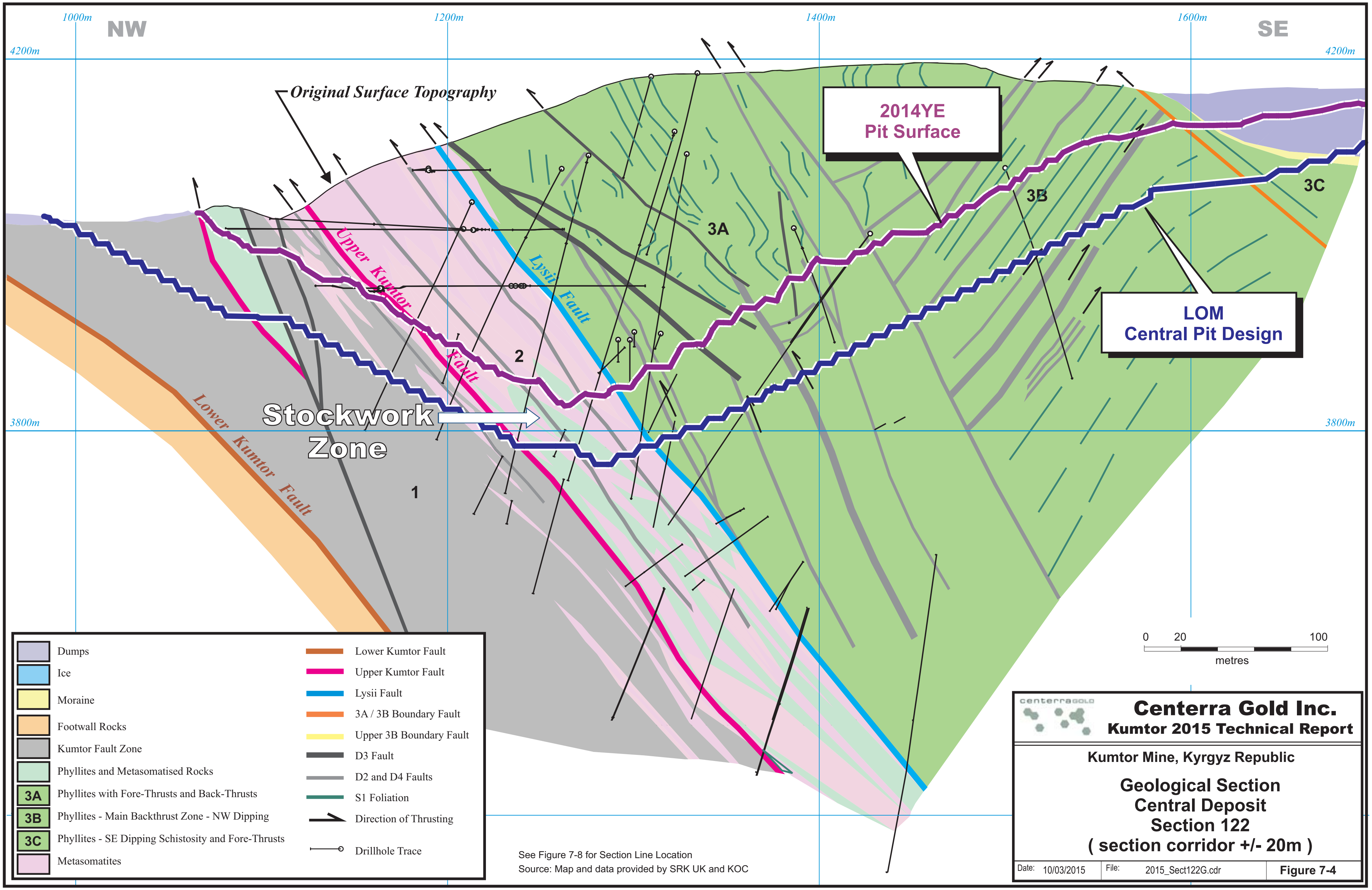
Date: 10/03/2015 File: 2015_StructGeo.cdr **Figure 7-3**

It is important to note that most fault structures in the area are persistent, with thick gouge or tectonic breccia and are therefore potential failure surfaces. This is attributed to D 4 re-activation of pre-existing faults.

Figures 7-4 to 7-7 illustrate the geology in the third dimension for the three deposits, providing an illustration of the structural complexities of the Kumtor Mine area. The location of the four sections is shown on Figure 7-8.

The main structures of the Central Deposit are also present in the Southwest and Sarytor Deposits. The main thrust faults at Sarytor strike E-W, and the faults and S 1 schistosity along with the mineralized zones have a shallow southerly dip. The structures are truncated in the west, with Zone 0 juxtaposed against a steep NNE-SSW trending fault. This fault is strike-slip in nature indicating a D 3 origin, and is likely the over-steepened continuation of the Lower Kumtor Fault, which separates Zones 0 and 1 in the Central Pit area. The E-W orientation of thrust faults with a southerly dip is a function of D 3 deformation, with limited overprinting by the D 4 structural event.

Structures start to swing to a NE-SW trend as they continue eastward into the Southwest Deposit area, where there is a strong D 4 structural overprint. This D 4 overprint can be traced northward into the Central Pit and thus the structural make-up of the Southwest Deposit is more like that of the Central Pit than the Sarytor Deposit. These observations indicate that the D 3 structures were rotated into a NE-SW trend by the D 4 structural event.



See Figure 7-8 for Section Line Location
Source: Map and data provided by SRK UK and KOC

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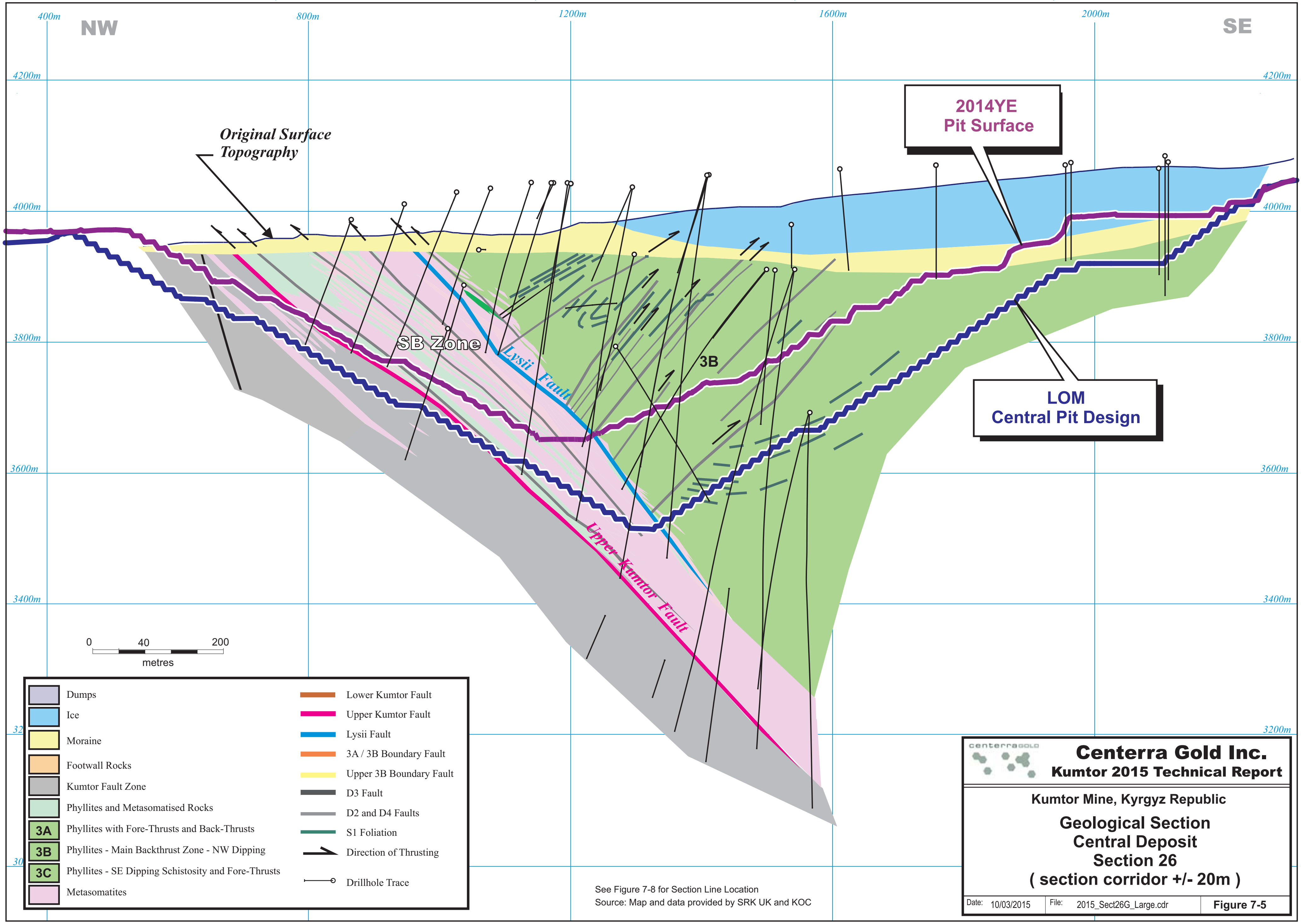
Geological Section
Central Deposit
Section 122
(section corridor +/- 20m)

Date: 10/03/2015 | File: 2015_Sect122G.cdr | **Figure 7-4**



NW
SE
400m
800m
1200m
1600m
2000m
4200m
4000m
3800m
3600m
3400m
3200m
Original Surface Topography
2014YE Pit Surface
LOM Central Pit Design
SB Zone
Lysii Fault
3B
Upper Kumtor Fault
0
40
200
metres
Dumps
Ice
Moraine
Footwall Rocks
Kumtor Fault Zone
Phyllites and Metasomatised Rocks
3A
Phyllites with Fore-Thrusts and Back-Thrusts
3B
Phyllites - Main Backthrust Zone - NW Dipping
3C
Phyllites - SE Dipping Schistosity and Fore-Thrusts
Metasomatites
Lower Kumtor Fault
Upper Kumtor Fault
Lysii Fault
3A / 3B Boundary Fault
Upper 3B Boundary Fault
D3 Fault
D2 and D4 Faults
S1 Foliation
Direction of Thrusting
Drillhole Trace
See Figure 7-8 for Section Line Location
Source: Map and data provided by SRK UK and KOC
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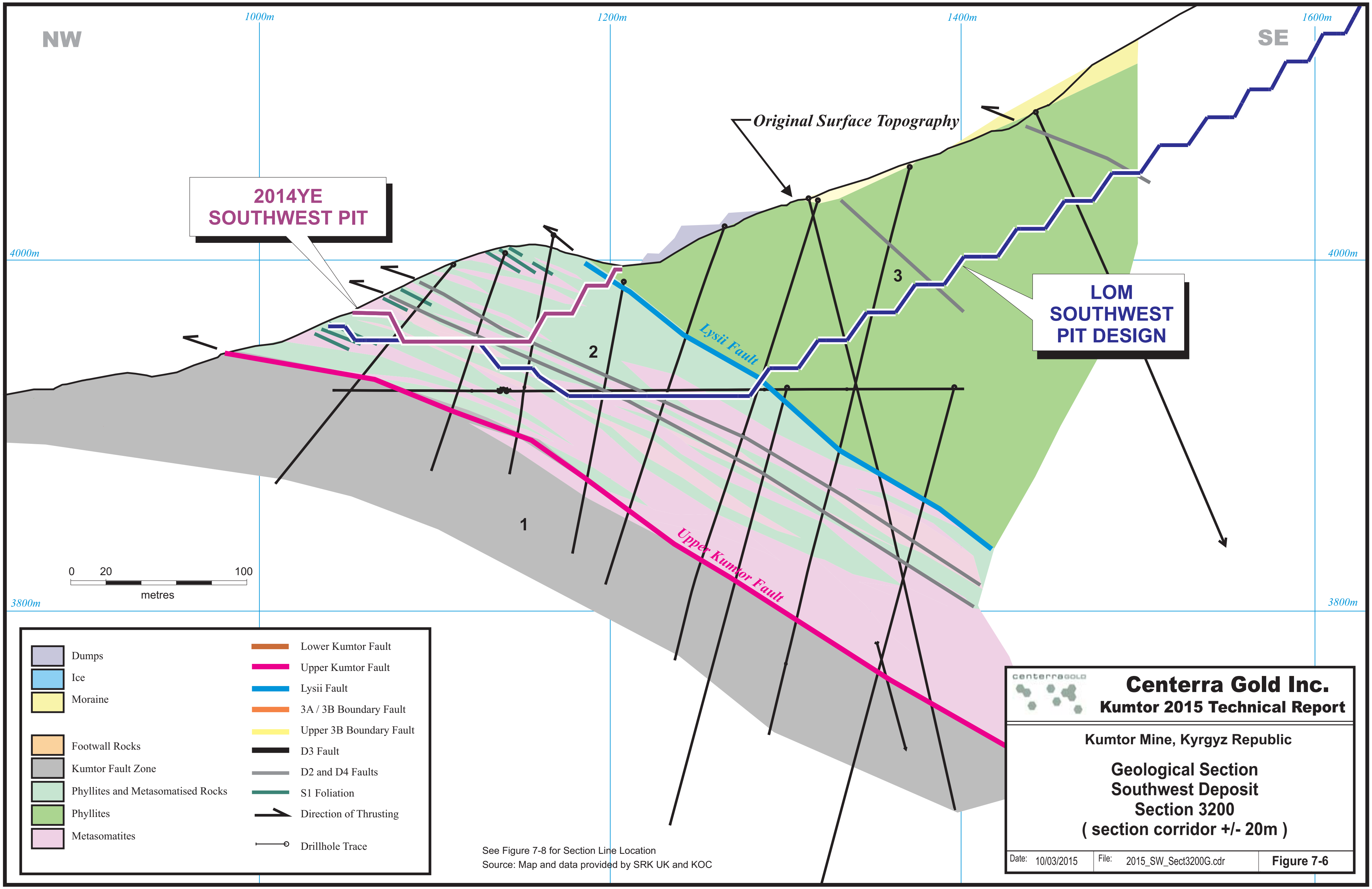
Geological Section
Central Deposit
Section 26
(section corridor +/- 20m)
Date: 10/03/2015
File: 2015_Sect26G_Large.cdr
Figure 7-5


NW
SE
1000m
1200m
1400m
1600m
4000m
3800m
2014YE SOUTHWEST PIT
Original Surface Topography
LOM SOUTHWEST PIT DESIGN
Lysii Fault
Upper Kumtor Fault
1
2
3
0 20 100
metres
Dumps
Ice
Moraine
Footwall Rocks
Kumtor Fault Zone
Phyllites and Metasomatised Rocks
Phyllites
Metasomatites
Lower Kumtor Fault
Upper Kumtor Fault
Lysii Fault
3A / 3B Boundary Fault
Upper 3B Boundary Fault
D3 Fault
D2 and D4 Faults
S1 Foliation
Direction of Thrusting
Drillhole Trace
See Figure 7-8 for Section Line Location
Source: Map and data provided by SRK UK and KOC
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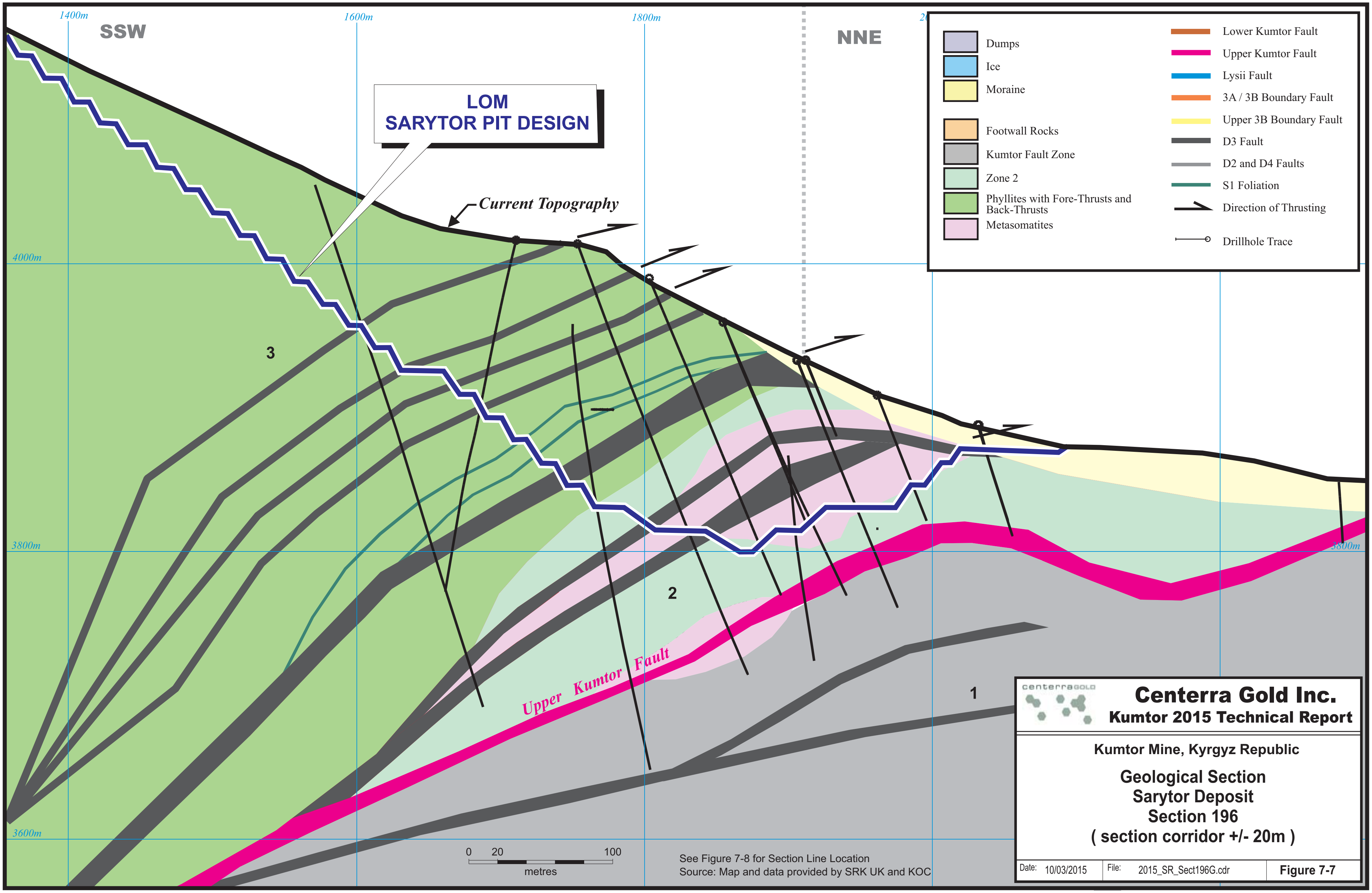
Geological Section
Southwest Deposit
Section 3200
(section corridor +/- 20m)
Date: 10/03/2015
File: 2015_SW_Sect3200G.cdr
Figure 7-6



1400m
1600m
1800m
SSW
NNE
LOM
SARYTOR PIT DESIGN
Current Topography
4000m
3800m
3600m
3
2
1
Upper Kumtor Fault
Dumps
Ice
Moraine
Footwall Rocks
Kumtor Fault Zone
Zone 2
Phyllites with Fore-Thrusts and Back-Thrusts
Metasomatites
Lower Kumtor Fault
Upper Kumtor Fault
Lysii Fault
3A / 3B Boundary Fault
Upper 3B Boundary Fault
D3 Fault
D2 and D4 Faults
S1 Foliation
Direction of Thrusting
Drillhole Trace
0 20 100
metres
See Figure 7-8 for Section Line Location
Source: Map and data provided by SRK UK and KOC
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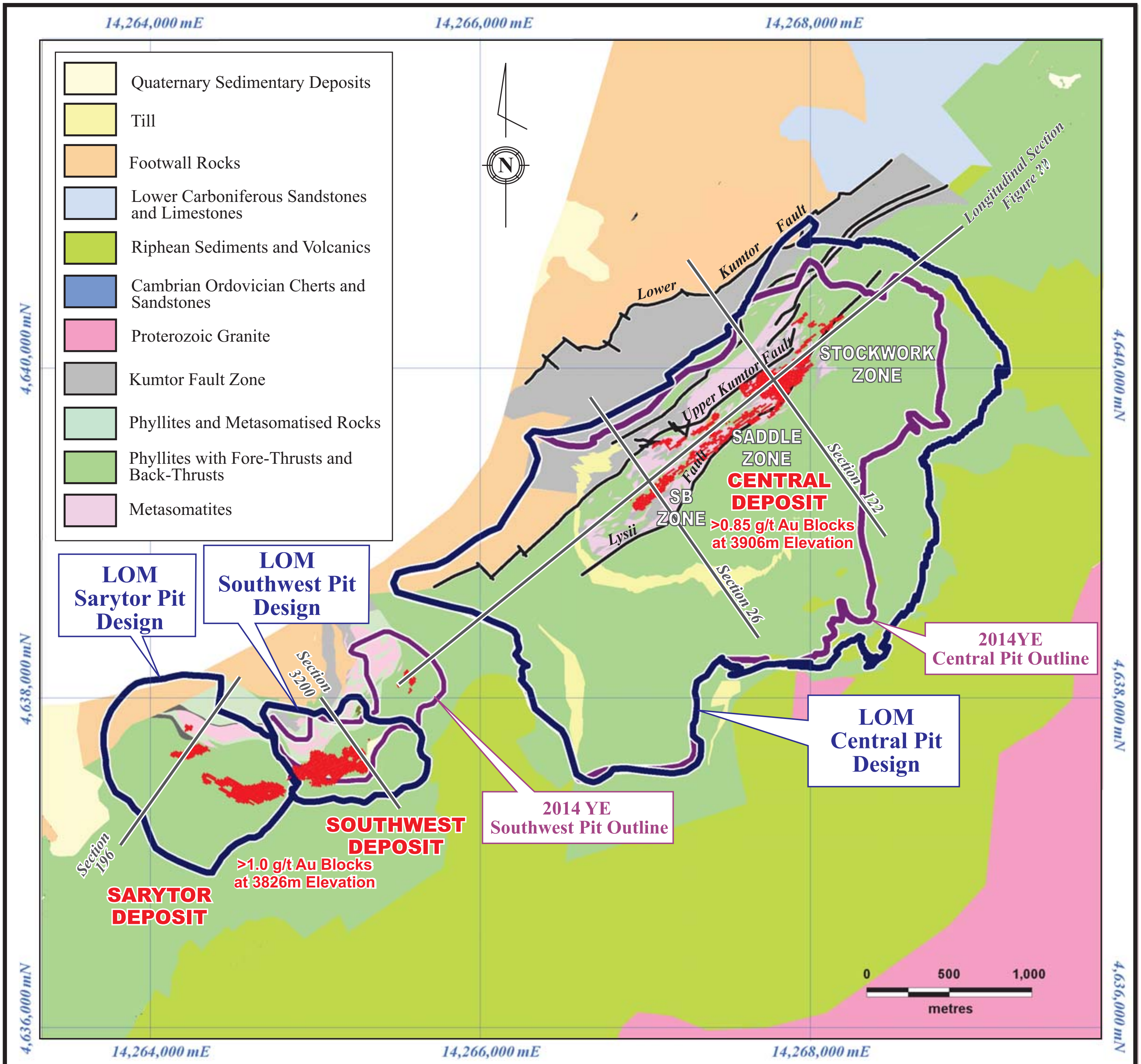
Geological Section
Sarytor Deposit
Section 196
(section corridor +/- 20m)
Date: 10/03/2015
File: 2015_SR_Sect196G.cdr
Figure 7-7

GENERAL DESCRIPTION OF THE KUMTOR MINERALIZATION

Gold mineralization of economic importance occurs where the Vendian sediments have been hydrothermally altered and mineralized, an event that may have taken place in Permian time as discussed above, based on structural considerations (Ivanov et al., 2000) and as reported by Mao et al. (2004). Gold mineralization is developed over a strike distance of more than twelve kilometres. The Central Deposit is the most important accumulation identified to date and has considerable dimensions with a strike length of 2.4 kilometres, a vertical extent of one kilometre, and a width of up to 300 metres. Other known occurrences along the mineralized trend are the Southwest Deposit and Sarytor Deposit as shown on Figure 7-2. Figure 7-8 provides a composite of the main ore accumulations of the Central, Southwest, and Sarytor, Deposits.

According to Ivanov et al., 2000, mineralization in the Kumtor Mine area took place in four main pulses. An initial pulse resulted primarily in pervasive quartz-carbonate-albite-chlorite-sericite-pyrite alteration, with little gold of economic consequence being deposited. However, this early alteration may have "stiffened" the host rocks sufficiently to make them susceptible to the intensive veining, stockwork and hydrothermal breccia development during the next two pulses that deposited all of the economically significant gold. A few typical examples of mineralized drill core are in Figure 7-9.

The temperature of formation of the second stage veins was 310 ± 15°C, according to Ivanov & Ansdell, 2002. The mineralogy during the main phases includes early K-feldspar followed by later albite and variable amounts of carbonate (calcite, dolomite, ankerite and siderite), quartz, pyrite, sericite and chlorite, in addition to small amounts of chalcopyrite, haematite, barite, strontianite and accessory magnetite, scheelite, ferberite, rutile, cassiterite, sphalerite, galena, native gold and tetrahedrite, as well as a number of silver-gold, lead and nickel tellurides. The feldspars combine to comprise nearly 20% of the ore, the carbonates collectively 25 to 30%, pyrite 15 to 20%, quartz 5 to 10%, and the remainder are host rock inclusions.



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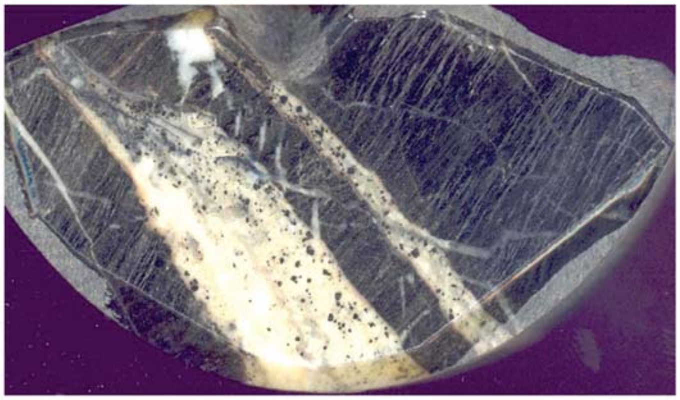
Principal Areas of Mineralization

Date: 10/03/2015	File: 2015_MinAreas.cdr	Figure 7-8



Weakly Metasomatized

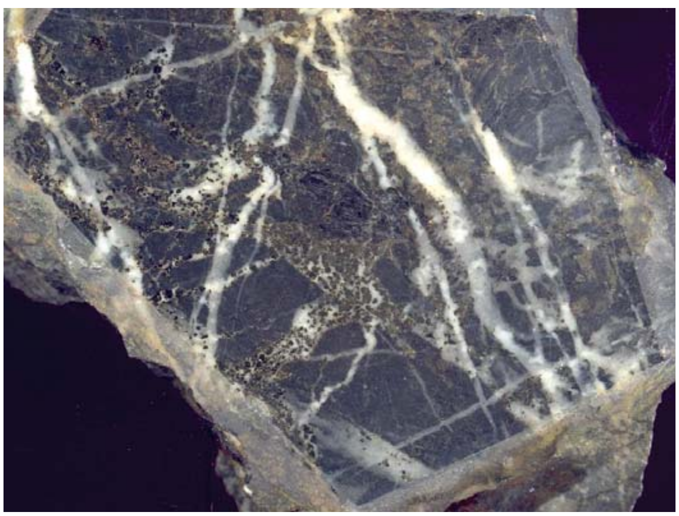
Drill hole: D670 at 82.4m
Au: 1.2 ppm

Banded phyllite with quartz-carbonate veins and pyrite with micro-inclusions of pyrrhotite, chalcopyrite; pyrite+sphalerite clusters

Weakly Metasomatized

Drill hole: D670 at 53.8m
Au: 0.5 ppm

Carbonaceous chlorite-sericite metasomatite with intense albite alteration



Moderately Metasomatized

Drill hole: D670 at 177.6m
Au: 1.4 ppm

Albite carbonate metasomatite with stockwork of pyrite-quartz-feldspar-carbonate veins

Moderately Metasomatized

Drill hole: D670 at: 62.6m
Au: 2.5ppm

Banded metasomatite of pyrite-albite-potassium feldspar-carbonate

Strongly Metasomatized

Drill hole: D919 at 225.4m
Au: 15.9ppm

Pyrite - carbonate (dolomite) - albite metasomatite

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Intensities of Mineralization

Date: 10/03/2015 | File: 2015_Core.cdr | **Figure 7-9**

The mineralization is most intense, and the gold grade is the highest, where the metasomatic activity was continuous through mineralization phases two and three. This is the case for the Stockwork and SB Zones, and explains their higher-than-average gold grades. The last pulse created planar carbonate-pyrite metasomatic rocks that are associated with zones of intense deformation of previously altered phyllites.

Native gold and the gold-silver tellurides are intimately associated with pyrite to the extent that gold grade and pyrite content are "positively correlated" (Ivanov et al., 2000). The gold and the gold-bearing minerals occur as very fine inclusions in the pyrite, with an average size of only 10 microns. This, together with the poor cyanide leach response of the gold tellurides, accounts for the partly refractory nature of the ore. The refractory characteristics are reflected in the relatively low historic and forecast gold recovery of around 80%, despite the very fine grind applied to the pyrite flotation concentrate from which most of the gold is recovered. However, the fine grain size of the gold also renders assaying of this mineralization relatively reliable, with only a small minor nugget effect.

Most of the mineralization takes the form of veins, veinlets, and breccia bodies in which the mineralization forms the matrix. In the more intensely mineralized areas, the surrounding host rock has also been altered. Post-ore faulting is generally parallel to, or at low angles with, the mineralized sequence. These faults often carry significant quantities of graphite, and other carbonaceous components which constitute the sources for the preg-robbing character of some of the mineralization.

THE CENTRAL DEPOSIT

Two parallel zones of alteration and gold mineralization strike northeasterly and dip to the southeast at 45 to 60 degrees, separated by 30 to 50 metres of barren or poorly mineralized rock. The South Zone, with a length of 700 to 1,000 metres and a horizontal width of 40 to 80 metres, is reasonably well mineralized throughout its entire length, with an average gold grade of 3 to 4 g/t. The North Zone, somewhat more extensive along strike but with a similar width, has lesser gold grade continuity and splits into a number of individual lenses that have average gold grades in the range of 2 to 3.5 g/t.

At their northeastern end, the North and South Zones coalesce into the Stockwork Zone, which has been the heart of the deposit during the earlier years of mining, having the highest gold grades and the best grade continuity. Its dimensions in the upper part of the deposit are 400 to 500 metres long by 50 to 200 metres wide, with an average gold grade of 5 to 6 g/t. The Stockwork Zone plunges northeasterly at 40 to 50 degrees, and diminishes in size below elevation 3,700 metres. The Stockwork Zone is located closest to the northeast pit highwall and thus has a large effect on the overall strip ratio of the pit. Drilling in recent years has further extended the Stockwork Zone down dip and outlined a higher grade core beneath the bottom of the planned open pit.

In the southwestern part of the Central Deposit, the SB Zone (structurally a part of the South Zone) tops out at elevation 3,900 metres, below which it widens significantly. It was the discovery of the SB Zone that gave rise to the large increase in the Mineral Reserves in 2005 of the Central Deposit. Drilling since 2008 has extended the SB Zone along strike to the southwest increasing its current known strike extent to 1,000 metres, a vertical extent of 650 metres, and a width that ranges from 6 to 75 metres, with grades in the range of 5 g/t Au.

The Stockwork and SB Zones are separated by the Saddle Zone, a narrow but consistent zone of high grade mineralization generally located along the hangingwall contact of a broader zone of lower grade mineralization up to 200 metres in width.

THE SOUTHWEST DEPOSIT

The Southwest Deposit is located three kilometres to the southwest of the Central Deposit across the Davidov Glacier, along the KFZ (Figure 7-1). Recent underground drilling has defined the southwestern limit of the SB Zone and the northeastern limit of the SW Deposit below the glacier, with a barren gap of approximately 600 metres. To the southwest, the Southwest Deposit is covered by the Sarytor Glacier, beyond which additional mineralization is known as the Sarytor Deposit.

The structural/lithological framework of the Southwest and Sarytor Deposits is identical to those of the Central Deposit, as described above and as shown in Figures 7-6 and 7-7, with the structural dips generally at angles ranging from 20 to 50 degrees, somewhat shallower than at the Central Deposit.

Twelve individual lenses of mineralization have been identified at the Southwest Deposit within an overall mineralized envelope that is approximately 100 metres thick and has been traced along strike for a distance in excess of one kilometre. Individual zones tend to be relatively narrow and of different intensities of mineralization, and their contacts are often marked by tectonic crush zones with black fault gouge. The footwall contacts are generally sharp and clearly defined, while the hanging wall contacts are more gradational. Gold enrichment along both contacts can be observed on many sections. Due to the flat orientation of the mineralized zones, their contacts have a sinuous feature in both plan and section.

THE SARYTOR DEPOSIT

The Sarytor Deposit is located to the southwest of the Southwest Deposit. The two deposits are interpreted as being contiguous below the Sarytor Glacier. The main geological structures are common for the Southwest and Sarytor Deposit. The drill results indicate that the mineralized section in the Sarytor Deposit strikes east-west and dips south at 20 to 30 degrees The thickness of the mineralized envelope is relatively consistent and varies from 80 to 120 metres, with the strike length of the known mineralization being approximately 800 metres.

Host rocks are structurally disturbed slates and phyllites with lenses of till-like conglomerates and dolomitic slates. Development of background alteration is weak and represented mainly by vein-type silicification. Unaltered host rocks do not carry any elevated gold values. The zone has been traced by drilling for 200 to 300 metres down dip.

The mineralized envelope hosts five mineralized lenses separated by zones of strongly faulted, barren host rocks. Alteration intensity and zone thickness increase southward. Metasomatism is represented by banded albite-carbonate-quartz alteration with 3% to 5% pyrite. Barite and siderite are well developed in the southern part of the Sarytor Deposits. As a rule, pyrite content is positively correlated with the gold grade.

OTHER MINERALIZED ZONES

Several other mineralized prospects are known within the Kumtor Concession Area including the Northeast, Petrov, Muzdusuu, Bordoo and Akbel areas, shown on Figure 7-2. These exhibit many structural, alteration and mineralization features similar to the main zones described previously.

8 DEPOSIT TYPES

In his summary paper, Porter (2006) states:

"Gold mineralization occurs in two principal settings within the Tien Shan Mineral Belt, namely as i) porphyry and epithermal systems developed within magmatic arcs, and ii) orogenic-type gold deposits that are structurally controlled, and temporally and spatially associated with late Palaeozoic, syntectonic to early postcollisional, highly evolved, I-type granodioritic to monzonitic intrusives in fore- and back-arc terranes." (Porter 2006, page 1); and

"The orogenic gold deposits of the Tien Shan Mineral Belt include some of the largest economic gold accumulations in the world, and span the time scale from Lower to Late Palaeozoic. The greatest concentration of significant orogenic gold deposits however, is in the southwestern part of the belt, in the South and Middle Tien Shan of Uzbekistan and Kyrgyzstan. These deposits are associated with Permian magmatism emplaced during the final- to early post-collisional stages of orogenesis, within a sutured back-arc setting containing carbon-rich sedimentary sequences…" (Porter 2006, page 4).

The general characterization of the orogenic gold deposits by Porter (2006) above is borne out by the detailed observations described in Section 7 of this report. Given the location astride a major fault of regional importance and owing to the strong association of gold mineralization with a multi-phased metasomatic system at relatively high temperatures, the gold deposits of the Kumtor Mine, are members of the class of structurally controlled meso-thermal gold replacement deposits.

9 EXPLORATION

Intermittent exploration in the Kumtor Mine area dates back to the 1920s. Debris from the Sarytor Deposit was discovered in 1978 by a geophysical expedition of the state Kyrgyz Geology department sampling float from the frontal moraine of the Sarytor Glacier (Figure 4-3). The solitary outcrop of what is now called the Central Deposit was found during follow-up prospecting. From 1979 to 1989, a systematic evaluation of the Central Deposit, and to a lesser extent of the Southwest Deposit, was carried out consisting of several phases of surface trenching and geological mapping, diamond drilling and underground development on three levels culminating in a detailed sampling program of the central upper part of the Central Deposit. A report entitled “Results of Detailed Exploration of the Kumtor Gold Deposit” was issued in 1989, and an initial Mineral Reserve statement was issued by the USSR State Committee on Reserves in March 1990.

After the break-up of the Soviet Union and following the emergence of the Kyrgyz Republic as an independent country in 1991, Cameco became aware of the Kumtor Mine, concluded an agreement with the Kyrgyz Republic in 1992 and retained Kilborn Western Inc. to undertake a feasibility study of the project (the Kumtor Feasibility Study). The feasibility work program included data verification (by re-sampling parts of the underground openings and re-assaying of original sample rejects), additional and definitive metallurgical testwork, and a re-estimation of Mineral Resources and Mineral Reserves using geostatistical methods, a block model and pit optimization software. The Kumtor Feasibility Study was completed in 1993, with updates in April 1994 and in May 1995.

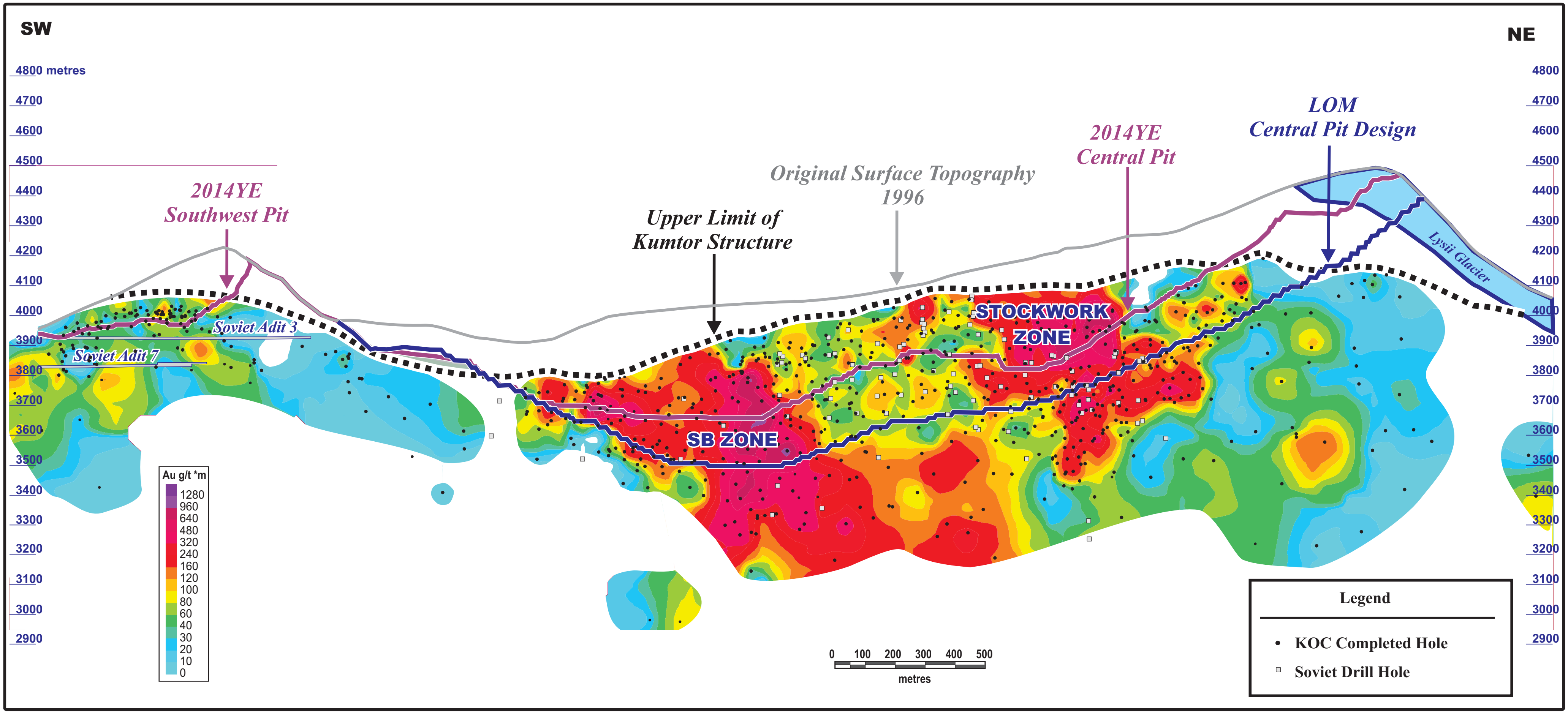
Final agreements were signed in 1992, and the Kumtor Feasibility Study was approved by the Kyrgyz authorities in 1994, financing arrangements were concluded in 1995 and project construction was completed late in 1996. After initial capital expenditures of $452 million, commercial production was achieved in the second quarter of 1997. A historical estimate of quantity and grade of mineral content that was non-compliant with NI 43-101 of 53.5 million tonnes with an average gold grade of 3.9 g/t was used as a basis to forecast treatment of 4.8 million tonnes per year for eleven years, with a total gold production projection of 5.4 million ounces.

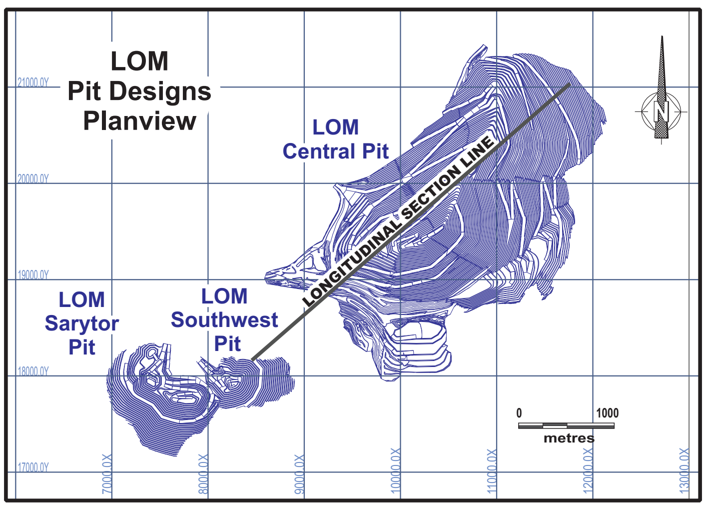
All the data used for the current Mineral Resource estimate, from which the current Mineral Reserve estimate is derived, is contained in the Central Deposit database. The blasthole data from open pit mining are not used for grade estimation but are used qualitatively for variography. They provide the data for the grade control model which is the intermediary for the reconciliation of the Mineral Resource block model with the mill production figures.

For geological work including drilling and block modelling, local grids are used that are aligned with the predominant structural direction in each area of interest. The long axes of the Central, Southwest Deposit grids are oriented northeast-southwest (at 41 degrees) and the Sarytor Deposit grid at 64.6 degrees. Section lines are at nominal 40-metre intervals and are oriented perpendicular to the long grid axes.

EXPLORATION OF SB AND STOCKWORK ZONE EXTENSIONS

Substantial efforts were made from 2006 to 2013 to develop, and ultimately mine by underground methods, those high grade portions of the SB and Stockwork Zones that fell outside of the ultimate pits of earlier Central Pit mine designs (see Figure 9-1 Longitudinal Section). Separate declines had been completed to access the two zones, but progress of the development was slow due to very difficult ground conditions. Total development has amounted to approximately 3,000 metres. The two declines were connected in June 2013. The decline in the SB section of the pit would have allowed for underground drilling in the southern part of the SB Zone. This drilling contributed to the increase in SB Zone Mineral Resources. However, much of the underground infrastructure established will be consumed by the new final pit design.





Centerra Gold Inc.

Kumtor 2015 Technical Report

Kumtor Mine, Kyrgyz Republic

Grade Thickness Longitudinal Section Through Southwest and Central Pits

Date:	10/03/2015	File:	2015_LongSect.cdr	Figure 9-1

PLANNED DRILLING PROGRAMS

From October 2012 to the end of 2013, 29 holes were completed with a total of 13,016 metres. Total drilling in the SB Zone to the end of 2013 totalled 97,780 metres in 258 holes. The KS-2014YE ultimate pit will consume all of existing underground openings. Portal No. 1, in the Davidov Valley, is no longer accessible. Access to the underground workings will be possible until September 2015 from Portal No. 2 located within the central part of the Central Pit.

Fourteen holes for 1,850 metres are planned for 2015 in the SB Zone. These holes will increase the confidence level for the resources with the decrease in drill spacing. Access and timing is limited by active mining in this part of the Central Pit.

There is no additional drilling planned for those parts of the Stockwork Zone that are below the KS-2014YE design pit.

PAST EXPLORATION IN AND AROUND THE CENTRAL PIT

SOUTHWEST AND SARYTOR DEPOSITS

The Southwest and Sarytor Deposits are satellite open pits located to the southwest of the Central Pit and separated from it by the Davidov Glacier and valley. At the Southwest and Sarytor Deposits, the Kumtor Mine mineralization dips gently to the south and becomes quickly concealed beneath steep topography south of the existing open pits. Exploration activities in 2011 and 2012 included drill tests of anomalies north of the Southwest Deposit and drilling down-dip of the Sarytor Deposit has identified local high grade mineralization (e.g. 7.1 g/t Au over 28.3 metres in drillhole SR-12-202). Drilling north of the Southwest Deposit has identified narrow intervals of oxide gold mineralization in rocks in the footwall of the Southwest Deposit. Drilling carried out in 2013 to follow extensions of the narrow intervals of gold mineralization in the Southwest Deposit, was disappointing.

OTHER PROSPECTS ON THE CONCESSION

Several prospects occur along strike in both the northeast and southwest directions from the Central Deposit. The areas to the southwest of the Central Pit (e.g., the Southwest and Sarytor Deposits) have the disadvantage of the controlling structures dipping at shallow to intermediate angles to the southeast, with the surface rising in the same direction. Access to the deeper parts of gold mineralization in this area by open pit mining is therefore limited by the adverse topographical situation.

The Concession Area and the exploration prospects discussed in this section are shown on Figure 7-2.

NORTHEAST PROSPECT

To the northeast of the Central Pit is the Northeast Area where surface trenching, diamond drilling, and underground sampling were undertaken in the 1980s. Exploration targets were generated in this area following the addition of data into the exploration database and the re-interpretation of the geology and the earlier exploration results. Exploration work in this area has since included, surface trenching, soil sampling, induced polarization (IP), and magnetometer surveys and 88 diamond drillholes were completed to the end of 2012. Please refer to Section 10 for drilling data.

An initial Mineral Resource estimate was published by Centerra in early 2012 amounting to 4.1 million tonnes of Inferred Mineral Resources at an average gold grade of 2.1 g/t from this deposit. The 2011 drilling identified an area of higher gold grades (e.g. 23.4 g/t Au over 9 metres in drillhole DN1566) near the eastern limits of the area covered by the historical exploration.

However due to the adoption of a constrained pit shell, the size of the deposit is not sufficient to warrant inclusion in the statement of Mineral Resources at this time. No additional work is currently planned for this prospect.

PETROV, MUZDUSUU, BORDOO AND AKBEL PROSPECTS

Exploration activities at these prospects have previously been described in Thalenhorst (2012) and will not be described again here.

Currently, there is no additional work planned on any of these prospects.

10 DRILLING

As the Central Deposit was being mined, KGC undertook a substantial amount of additional diamond drilling on the deposit and on surrounding exploration targets beginning in 1998, to augment the limited deposit information below elevation 3,950 metres, and to identify additional Mineral Resources and Mineral Reserves that would extend the life of the operation. The pertinent drilling data are summarized in Table 10-1.

TABLE 10-1 SUMMARY OF ADDITIONAL DRILLING COMPLETED, 1998 TO DECEMBER 31, 2014

	Central Deposit		Other Targets	
Year	**Number of Holes**	**Length (m)**	**Number of Holes**	**Length (m)**
1998	16	3,010	0	-
1999	48	12,708	20	3,304
2000	0	-	20	2,977
2001	43	12,735	30	5,352
2002	10	2,119	50	8,646
2003	50	14,349	30	4,543
2004	65	22,263	66	12,684
2005	146	44,863	52	7,969
2006	50	18,280	98	14,620
2007	28	15,362	42	6,693
2008	96	39,472	19	2,820
2009	68	30,088	47	10,010
2010	38	17,020	76	20,379
2011	88	29,301	50	11,782
2012	110	36,656	7	3,372
2013	23	9,956	6	619
2014	-	-	-	-
Total	**879**	**308,183**	**613**	**115,770**

The figures in Table 10-1 include completed drillholes only, and omit drillholes that had been abandoned. Holes drilled for geotechnical and condemnation purposes are also excluded.

The principal exploration data acquisition method at the Kumtor Mine is diamond drilling. There is a large historical drillhole database (augmented by underground exploration results at the Central, Southwest and Sarytor Deposits) dating back to the Soviet era. To a large extent, this historical information is no longer relevant to the current Mineral Reserve estimate, since the upper parts of the Central Deposit, to which the majority of historical information pertained, has now been mined out. Models for the Southwest and Sarytor Deposits use very little historical Soviet era data. There are only small tonnages in the current Mineral Resources that rely on Soviet data, and these old data are progressively being verified by in-fill or replacement drilling.

As a result of the lack of sufficiently detailed information at the Central Deposit below elevation 3,950 metres, about 28% of the 1994 Kumtor Feasibility Study open pit Mineral Reserves, which contained one-quarter of the total gold to be mined, had been substantially less well documented than the upper part of the deposit. To fill this information gap, and to explore for extensions to the known mineralization, KGC has undertaken a large in-fill diamond drill program in the years 1998 to 2013 as compiled in Table 10-1. Drilling during this time was undertaken from various pit benches and setups outside of the pit, including on the waste piles. This drilling has increased the density of the drill pattern in the lower part of the deposit to equal or better than was available at the time of the Kumtor Feasibility Study for above the 3,950 metre elevation.

In the Central, Southwest, and Sarytor Deposits, the drillholes are now generally spaced 30 to 40 metres along strike and 40 to 80 metres down-dip in geologically complex areas, and at 80 metres along strike and 60 to 80 metres down-dip in other areas. The Kumtor Mine database as of December 31, 2014 consisted of more than 360,300 assays, with roughly 20% dating from the Soviet era as shown by deposit in Table 10-2. Of the remaining Mineral Resources and Mineral Reserves outlined in this report, only a small fraction, estimated less 10%, are reliant on Soviet era data and in almost all cases some KGC data is used to confirm these results.

TABLE 10-2 ASSAY DATA BY SOURCE, KUMTOR MINE

	KGC			Soviet			Total		
Area	**Number of Holes**	**Number of Assays**	**Total Metres**	**Number of Holes**	**Number of Assays**	**Total Metres**	**Number of Holes**	**Number of Assays**	**Total Metres**
Central	879	188,309	308,183	158	20,706	62,126	1,037	209,015	370,309
Sarytor	225	35,284	39,576	31	1,444	5,012	256	36,728	44,589
Southwest	262	41,427	46,774	22	2,975	4,856	284	44,402	51,630
Northeast	88	13,283	17,582	33	4,465	7,560	121	17,748	25,143
Bordoo	8	1,679	2,267	26	7	4,005	34	1,686	6,272
Akbel	6	789	1,613	-	-	-	6	789	1,613
Muzdusuu	13	1,953	3,771	17	1,368	4,013	30	3,321	7,784
Condemnation	4	803	1,692	-	-	-	4	803	1,692
Petrov	7	1,748	2,494	-	-	-	7	1,748	2,494
Total	1,492	285,275	423,953	287	30,965	87,573	1,779	316,240	511,525

From 1998 to 2013, KGC drilling was done with its own fleet of diamond drill rigs both for surface and underground drilling. Active exploration drilling finished in October 2013.

The majority of the KGC diamond drillholes are steeply inclined and recover HQ-size core, except when ground conditions necessitate a reduction in core size to NQ. For all of the holes, drill collars are surveyed and down-hole deviations are measured at intervals of 20 to 30 metres using a Reflex single shot camera. Limitations on set-ups dictate that a certain number of off-section holes are drilled. Drill cores are logged for geological and geotechnical information, and are photographed prior to sampling. Drillhole collar coordinates, down-hole deviation surveys, assay results, and information on lithology, alteration and mineralization are recorded in the mine and exploration drilling databases. The drilling database and the assay database derived from it are used for Mineral Resource estimation as described in Section 14.

Drill core recovery typically varies from 80% to 100%, averaging greater than 95%. In certain cases where the core recovery from mineralized intervals is low, the hole is stopped and re-drilled to achieve better core recovery. There is no evidence that core recovery issues impact the reliability of the gold assay data used for Mineral Resource and Mineral Reserve estimation.

The angle of intersections between the drillholes and the mineralization is generally such that the true width of the mineralization is equivalent to 70% to 95% of the length of mineralized drillhole intervals.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

Lynda Bloom of Analytical Solutions Limited visited the site in August 2012 and has made a number of recommendations (Bloom, 2012), which are addressed in the following sections, as appropriate. A recurring and general observation is that all procedures of logging, sampling, and assaying would benefit from the introduction of software programs that streamline the processes and reduce the incidence of transcription errors.

CORE SAMPLING METHOD AND APPROACH

For the drilling completed by KGC, the drill core length is measured and checked against the depth blocks inserted by the drillers in the core boxes. The core is logged and photographed. Sample intervals are chosen to be representative of geological features such as veining, alteration, and mineralization. Individual samples are normally one metre long, but the interval may be increased to 2.0 metres in unaltered rocks. With the exception of geotechnical holes, drillholes are sampled over their entire length.

Competent drill core selected for sampling is cut by a diamond saw into two halves. One half is placed into a numbered bag and sent to the KGC laboratory for assaying. The other half is placed back in the core box and retained in permanent storage on site. Incompetent core intervals are sampled with a scoop that fits snugly into the individual core box rows, removing one-half of the material at the discretion of the sampling technician.

Blasthole cuttings are sampled with a pie-shaped wedge that is placed radially away from the collar of the hole. Approximately ten kilograms of sample are collected per bench. Duplicate samples are taken at a rate of 4%. The duplicate results were reviewed by Bloom (2012) who observed that for assays ≥ 1 g/t, most of the duplicate results fell within an error of ±50%, with no bias. The relative error below 1 g/t is larger. Given the style of the mineralization with respect to sampling these results are considered to be satisfactory. Centerra will continue to review blasthole sample splitting and preparation protocols.

SAMPLE PREPARATION

Sample preparation from 1998 to 2012 has been previously described in Thalenhorst et al (2012) and will not be repeated here. All sample collection, preparation and assaying from the 1998-2013 drilling programs were performed by KGC personnel at the KGC-owned site laboratory, which is not certified but is subjected to periodic calibration and operations checks by the Kyrgyz National Accreditations agency. Sample collection protocols are monitored by the Quality Assurance/Quality Control (QA/QC) geologist. Preparation and assay protocols are supervised by KGC's chief assayer at the Kumtor Mine. Samples are delivered to and from the laboratory at the mine site by KGC personnel. Additional security of samples is not required in this mining environment.

From 1998 to 2012, drill core, as well as blasthole, mill, and tailings samples, including solutions, have been prepared at the KGC laboratory using the following core preparation and assaying procedures.

1. Samples are received by the sample preparation section with a corresponding manifest indicating the number of samples and the numerical sample identification.

2. Dry the samples at a temperature of 105°C.

3. Crush the entire sample in three sequential jaw crushers to 95% passing 1.7 millimetres (10 mesh).

4. The last of the three jaw crushers directly feeds a rotary splitter that is set to obtain a 150-gram sub-sample. The remaining reject material is returned to the original bag and, in the case of core samples, is delivered to the exploration department for storage.

5. Pulverize the sub-sample to 100% passing 106 microns (150 mesh) using a ring-and-puck pulverizer.

In 2013, exploration drillholes were prepared and assayed at the Alex Stewart Group (ALS) laboratory, located in Kara-Balta, approximately 480 kilometres from the Kumtor Mine site. Samples were picked up from site via a transportation contractor vehicle twice a week and delivered to the ALS laboratory. As the drillholes are located within the Central, Southwest and Sarytor pits and transported directly to the ALS laboratory, the validity and integrity of the samples along the chain of custody is assumed and additional security of samples is not required in this mining environment. Assay results were then returned within two days of sample receipt by the ALS laboratory. The decision to send drill samples to the ALS laboratory was made as the KGC laboratory was deemed to be overloaded with production samples and the KGC laboratory's poor performance on analyses below 1.0 g/t Au.

Sample preparation was as follows;

1. The entire drill core was crushed to approximately 90% passing 2 millimetres (10 mesh);
2. The coarse sample is riffle split and 500 grams is pulverized; and
3. The sub-sample was then pulverized to 90% passing 75 microns (200 mesh) using a ring-and-puck pulverizer.

The author is of the opinion that the sample collection and sample preparation protocols in place at the Kumtor Mine are in accordance with normal industry operating practices.

ANALYTICAL METHODS

From 1998 to 2012, drill core, as well as blasthole, mill, and tailings samples have been assayed at the KGC laboratory. A 30-gram aliquot of the pulp is fire assayed with a suitable flux and a gravimetric finish. The sample weight is decreased to 20 grams for samples with high sulphide content. The KGC laboratory has have three atomic absorption (AA) spectrometers, however, an AA finish of low grade samples has not been implemented since no analytical-grade acetylene gas was available in Kyrgyzstan. As a result, the KGC laboratory has a relatively high detection limit for gold.

Assaying at ALS used a 60-gram aliquot of the pulp for fire assay (FA) with an Atomic Absorption Spectroscopy (AAS) finish. The lower detection limit of this analysis is 0.05 ppm and the upper level being 100 ppm. Assays above 100ppm are re-analyzed using FA + Inductively Coupled Plasma Mass Spectrometry (ICP MS).

The author is of the opinion that the assaying protocol in place for the Kumtor Mine is in accordance with normal industry operating practices.

QUALITY CONTROL PROCEDURES

Quality control procedures have evolved over time. Those in effect before 2008 have been described in Redmond et al. (2011) and from 2008 to 2012 are described in Thalenhorst et al. (2012) and are not repeated here.

Bloom (2012) made the following recommendations to simplify the quality control protocol of the KGC laboratory:

a. *There are currently up to 44 Geostats reference materials (RMs) being used. Only 5 to 6 RMs should be in use in a 6-month period with these RMs selected to cover the expected range of gold concentrations;*

b. *All drill core samples submitted to the KGC laboratory will have either one blank or one RM submitted with each batch of 20 samples. RMs should be alternated with blanks. This is consistent with the KGC laboratory batch size of 22 samples plus its internal control samples;*

c. *Results for blank samples will be acceptable up to 0.2 g/t gold. Any results over 0.2 g/t will result in repeat assays for ten samples assayed before and after the QC failure. Note that if the KGC laboratory successfully achieves a lower detection limit for exploration drill core in the future, then a value of 0.1 g/t gold could be used as the designation of QC failures;*

d. *Results for RMs will be verified upon receipt and any values outside acceptable limits (± 2 standard deviations or a minimum of ± 10%) will result in repeats for ten samples assayed before and after the QC failure being requested;*

e. *Requests for repeats do not require renumbering and re-submission of the samples;*

f. *It is not necessary to resubmit samples greater than 0.1 g/t gold for re-assay at the KGC laboratory;*

g. *The practice of sending samples quarterly to ALS Kara Balta should continue. Based on 2011 activity, the current rate of 350 samples quarterly represents 7% of all samples and this could be modified to include only 5% of samples with greater than 0.1 g/t gold. It is not necessary to re-number the sample bags. The same pulp should be submitted that was assayed at the KGC laboratory and RMs should be inserted as previously. Two of the 30 gm bags of Geostats standards should be submitted to Kara Balta for each RM insertion; and*

h. *It is not necessary to resolve differences of greater than 20% between Kara Balta and the KGC laboratory but further investigation should be done to define acceptable precision limits at different grade range.*

All of the above quality control procedures recommended by Bloom 2012 have been implemented by KGC.

There are now only 10 Geostats RMs used to cover the expected range of gold grades. Either one blank or one RM is submitted with each batch of 20 samples. RMs are alternated with blanks. Results for RMs are verified upon receipt and any values outside acceptable limits (± 2 standard deviations or a minimum of ± 10%) will result in repeats for ten samples assayed before and after the QC failure. Repeats are no longer re-numbered on re-submission of the samples.

Since 2008, the KGC laboratory has participated twice yearly in the Geostats international round-robin, and the lab has performed well on samples with gold grades higher than 0.5 g/t but poorly on samples with less than 0.10 g/t Au.

Duplicate samples are taken at a rate of 4%. The duplicate results were reviewed by Bloom (2012) who observed that for assays ≥ 1 g/t Au, most of the duplicate results fell within an error of ±50%, with no bias. The relative error below 1 g/t Au is greater.

QUALITY CONTROL RESULTS

The results of the coarse reject and pulp check assay program undertaken by KGC from 2002 to 2013 are the most pertinent for the Kumtor Mine Mineral Resource estimate, along with the results of the check assays performed at the ALS laboratory. This information is compiled in Table 11-1 for assay pairs averaging greater than 0.1 g/t gold.

Detailed analysis of the comparison between the KGC laboratory and the Central Scientific Research Laboratory (CSRL) assays for samples from before 2007 shows that the detection limits of the two laboratories were different, with CSRL reporting higher values than KGC for values <0.1 g/t. In the range from 0.1 to 1.0 g/t, KGC was systematically higher, typically by a factor of 10% to 20%. Above 1 g/t, the two laboratories produced identical average results in most cases.

The comparison of the assays from KGC laboratory and from ALS laboratory shows good performance by the KGC laboratory for samples with gold grades higher than 0.5 g/t, excellent performance for samples with higher than 1.0 g/t Au, but poor performance for samples with less than 0.25 g/t Au. This is largely a reflection on the continued use of gravimetric finishes for all samples, including those with values less than 1.0 g/t Au.

TABLE 11-1 CHECK ASSAY RESULTS (>0.1 G/T GOLD)

Reject Check Assays at Central Scientific Research Laboratory					
Period	**Number of Pairs**	**Pairs Removed**	**Original KGC (g/t)**	**KGC Re-split (g/t)**	**Check Results (g/t)**
2003 and earlier	1,279	8	2.6	2.6	2.6
2004	3,424	42	2.8	2.8	2.7
2005	4,990	89	4.5	4.5	4.4
2006	4,578	74	4.4	4.4	4.4
2007	768	18	2.5	2.5	2.4
Total	**15,039**	**221**	**3.8 wgt. average**	**3.8 wgt. average**	**3.7 wgt. average**
Check Assays at Alex Stewart Assayers and Environmental Laboratory (ALS)					
Period	**Number of Pairs**	**Pairs Removed**	**Sample Type**	**Original KGC (g/t)**	**Check Results (g/t)**
2002	489	4	Reject	2.3	2.4
2002	44	0	Pulp	2.9	2.7
2005	38	0	Pulp	1.4	1.4
2007	197	0	Pulp	0.9	0.8
2008	400	5	Pulp	12.6	11.8
2008	38	1	CRM	6.5	6.7
2009	29	0	Reject	81.9	82.7
2009	597	8	Pulp	13.1	13.3
2009	57	5	CRM	9.5	10.4
2010	0	0	Reject	-	-
2010	442	5	Pulp	10.6	10.3
2010	35	1	CRM	7.4	8.1
2011	973	30	Pulp	10.50	10.29
2011	78	0	CRM	7.17	7.35
2012	470	13	Pulp	11.11	11.22
2012	45	0	CRM	5.92	5.80
Total	3,932	72		9.85 **wgt. average**	9.76 **wgt. average**

Assays at ALS with Check Assays at Central Scientific Research Laboratory					
Period	**Number of Pairs**	**Pairs Removed**	**Sample Type**	**Original ALS (g/t)**	**Check Results (g/t)**
2013	224	0	Pulp	8.40	8.83
2013	15	4	CRM	3.58	3.32
2014	0	0	Pulp	0	0
2014	0	0	CRM	0	0
Total	239	4		8.15	8.48
	518	4	Rejects	6.8	6.9
All	3,385	61	Pulps	10.41	10.28
	268	11	CRM	7.19	7.52
Total	**4,171**	**76**		**9.75 wgt. average**	**9.68 wgt. average**

The "pairs removed" constitute a small proportion of the overall check assay population. They were excluded from the comparison in Table 11-1 because the pairs are so dissimilar as to most likely be caused by something other than an assay accuracy problem or the natural variability (sample error) of the material being assayed.

Bloom (2012) has commented on the recent performance of the KGC laboratory with respect to the reliability of the assay data produced as follows:

"The various data sets that test the accuracy of the Kumtor laboratory generally confirm that the laboratory's performance is acceptable. Some of the contradictory data, such as the Geostats RMs assayed at Kumtor being biased high for grades greater than 5 g/t, may be related to the quality of the RMs and not necessarily the laboratory's abilities.

There is however consistent evidence that the assays less than 1 g/t are not reliable. It is most likely that this is because the Kumtor laboratory currently uses a gravimetric finish for all assays (with the exception of tailings). Gravimetric assays are not used at commercial laboratories for samples with less than 3 g/t Au. This is because the method requires the physical manipulation and weighing of the fire assay bead and for low grade samples the bead is near non-existent ….

In general, the Kumtor laboratory operates at industry standards but it is challenged by old equipment, especially in sample preparation, and is operating in a space that was designed for about 30 percent of the work load.

Access to analytical grade acetylene will allow the laboratory to provide fire assays with an AAS-finish. The method needs to be implemented after thorough method development and testing. The fire assay AAS-finish assays will improve the quality and reliability of assays, in particular in the range of less than 1 g/t gold."

The aforementioned recommendations by Bloom (2012) have been addressed by sending drill samples to the ALS laboratory in Kara Balta where the laboratory is a modern certified laboratory.

CONCLUSIONS

The author responsible for this section of the report is satisfied that the Kumtor assay data base is without a bias that would make the Kumtor Mine Mineral Resource estimate unreliable. This is based on the following observations:

- The sample preparation and assaying methods used by KGC meet industry standards. The results of the check assay program indicate that there are no major apparent issues with respect to assay accuracy as shown in Table 11-1. However, the QA/QC protocol used prior to 2008 was both incomplete (the lack of true blanks and standards that were blind to the KGC laboratory and to CSRL) and cumbersome, since much duplicate assaying was performed on low grade to very low grade samples; and

- The revised QA/QC protocol introduced in 2008 and revised in 2012 has resulted in improvement of the reliability of the assays within mineralized zones while allowing a significant reduction in duplicate assaying of waste material; and

- While the audit by Bloom (2012) has confirmed the high bias of the KGC laboratory for gold grads <1.0 g/t, the effect on the Mineral Resource and Mineral Reserve estimate is negligible.

The author is of the opinion that special sample security measures at KGC laboratory are unnecessary in the remote operational environment and are therefore not being taken.

12 DATA VERIFICATION

While data verification is the principal method of determining the reliability of the data used for Mineral Resource or Mineral Reserve estimation in projects in the pre-production stage, the main verification in the case of a mine with an operating history of many years is the ability of the Mineral Reserve estimate to reconcile production tonnages and metal grades for the ore mined. This not only verifies the data underlying the Mineral Resource and Mineral Reserve estimates, but also the various parameters and procedures applied to the data during the estimation process.

A program of Mineral Reserve-production reconciliation has been routinely undertaken. Results were not as expected in 2013 and 2014. Additional drilling in the deeper parts, and high grade portions of the SB Zone are expected to mitigate these issues. This is described in more detail in Section 14. Comments on the historical database and current data verification procedures are as follows.

HISTORICAL DATABASE

The historical database created during the Soviet era has not changed since the Kumtor Feasibility Study, by which it was verified. Details have been reported in previous technical reports, most recently in Redmond et al (2011), who confirmed the Soviet data by mine production and KGC drilling. Problematic areas of the deposit have been mined out in the meantime. The substantial additional drilling undertaken by KGC since 1998 (Table 10-1) has generally confirmed the Soviet data.

KGC DATABASE

Standard database checks are being performed regularly by the exploration database manager, who is responsible for its upkeep and reliability. Assay results, lithology, drillhole locations, and down-hole surveys are verified back to the Laboratory Data Sheets and original data by the mine QA/QC geologist for every drillhole.

The in-fill drilling program to cover the area below 3,950 metre elevation was largely complete by the end of 2013, and the database for the deposit is now considered mostly reliable down to below the 3,500 metre elevation, well below the bottom of the original Soviet pit design at 3,700 metres.

Verification of both the exploration and production data has been completed, which included the validation of the assay database and the bench scale reconciliation between the exploration drilling data with those obtained from mine production. This provides confidence in the reliability of both the exploration and production data used in this report.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

HISTORICAL SOVIET ERA METALLURGICAL TESTING

Extensive metallurgical testing was completed by Kyrgyz Geology from 1981 until 1989 at several Kyrgyz and Soviet Institutes. In total 68 different samples were tested including three bulk samples obtained from the underground exploration workings. The bulk samples were 9.5, 20, and 464 tonnes in size. The "semi-industrial" 464 tonne sample was the source of the 1.5 tonne sample sent to Lakefield Research for flowsheet definition and testing described below.

Kyrgyz Geology assays for the semi-industrial sample are shown in Table 13-1.

TABLE 13-1 SEMI-INDUSTRIAL SAMPLE KYRGYZ ASSAYS

Au (g/t)	$S^{=}$ (%)	$C_{graphite}$ (%)	Te (g/t)
4.80	4.65	0.34	10

Bulk tests using a flowsheet consisting of grinding, flotation, and flotation concentrate regrind and cyanide leaching produced the following general results:

- Flotation recovery of approximately 92% Au in 13% of the mass. Some work was also completed at combining flotation with gravity concentration. Overall results though about the same as flotation only.
- Flotation concentrate leach recovery from 80% to 86% Au after regrind. Fineness of regrind was not determined. Leaching was completed with resin adsorption of dissolved gold.
- Flotation tailings leach recovery from 60% to 80% Au. Leaching was completed with resin adsorption of dissolved gold.

As a comparison, whole ore leach with resin testing was also completed to provide a baseline. The best result for the semi-industrial sample was 77.6%.

METALLURGICAL TESTING IN SUPPORT OF THE 1993 FEASIBILITY STUDY

The Kumtor Mine LOM recovery was established in the Kumtor Feasibility Study (FS). The metallurgical testwork completed for the Kumtor Feasibility Study was a combination of programs by KGC and by Kilborn Western Inc. (Kilborn), who was responsible for the Kumtor Feasibility Study under the direction of KGC. The metallurgical testing was completed between 1992 and 1993 at North American laboratories, primarily Lakefield Research as it was known then.

Initial tests were conducted on small samples collected by KGC in 1992. Kilborn arranged for a 1.5 tonne sub-sample of the large 464 tonne "semi-industrial" previously collected by Kyrgyz Geology, a state agency to be shipped to Lakefield Research in 1993. A wide range of bench scale testing was completed on this sample to establish the Kumtor Mine flowsheet and the recoveries to be incorporated in the Kumtor Feasibility Study. Later in 1993, Kilborn arranged for three additional samples (known as M1, M2 and M3) for verification testing.

The semi-industrial sample and additional verification samples were obtained from underground drifts completed by Kyrgyz Geology to access the Stockwork, North, and South Zones. The semi-industrial sample is composed primarily of Stockwork Zone material with some North Zone material. Samples M1 and M3 are from the Stockwork Zone and M2 is from South Zone.

TABLE 13-2 OPTIMIZED UNIT AND OVERALL RECOVERIES FROM SEMI-INDUSTRIAL SAMPLE FROM TESTING AT LAKEFIELD RESEARCH

Unit Operation	Recovery (% Au)
Flotation	88.0
Flotation Concentration CIL	82.5
Flotation Tailings CIL	67.1
Overall Recovery	80.7

Flowsheet verification tests on samples M1, M2, and M3 returned in lower recoveries (completed in duplicate) than the profile above although a control tests on a sample of the semi-industrial sample returned higher recovery than previous as seen in Table 13-3.

TABLE 13-3 OVERALL RECOVERIES FROM FLOWSHEET VERIFICATION TESTS

Sample	$Recovery_1$ (% Au)	$Recovery_2$ (% Au)
M1	78.2	77.0
M2	71.0	72.1
M3	79.4	76.3
Semi-Industrial	85.1	86.4

Limited sampling and testing was completed on the South Zone and as a result a conservative approach was taken in assigning a recovery. For the purposes of establishing the overall recovery for the Mineral Reserve in the Kumtor Feasibility Study, the following recoveries were used:

- Stockwork and North Zones = 80.7%
- South Zone = 76.0%

The 1993 LOM recovery adjusted for industrial scale up factors was 80.1%. Production to the end of 2006 when mining in the Stockwork Zone was stopped due the highwall failure approximates the ore defined in the 1993 Kumtor Feasibility Study. Reconciling the production data to the original Mineral Reserve provides a look at how the predicted recovery held up. The cumulative recovery for this period is about 0.5% below the predicted recovery at 79.6%.

ONGOING METALLURGICAL TESTING

Since the start of operations, a fully equipped metallurgical laboratory has been developed at site within the Mill. The KGC metallurgical laboratory provides support for all unit operations in the Mill. Assaying of metallurgical samples is performed by the KGC Laboratory.

During the initial years of operation, a proxy test was developed to provide recovery estimates for budgeting and production forecasting. Rather than testing samples using the entire mill flowsheet, the samples were ultra-finely ground and leached with carbon. The recovery from this procedure closely matched mill recovery for the Stockwork Zone ore.

Southwest Deposit diamond drill core samples were tested using the same proxy tests. The procedure was subsequently modified as actual mill flotation recoveries were lower than anticipated due to the complex mineralization of Southwest Deposit ore. The modified procedure replicated the Mill flowsheet with all unit operations.

Metallurgical development for the SB Zone was completed on site. Exploration diamond drill core samples were composited to approximate bench samples for testing. The samples were tested using the modified procedure that replicated the Mill flowsheet. Recovery algorithms were developed based on head grades.

Initial recovery testing was completed for the Sarytor Deposit using exploration diamond drill core samples. The geology and mineralization of the Sarytor Deposit is complex, requiring additional drilling and metallurgical testwork which will be completed in 2015.

MILL RECOVERIES

Figure 13-1 shows mill recoveries from 1998 to 2006. During this period, ore from the Stockwork Zone was mined and processed. Results from 1997 are not included as the Mill was being optimized in that year.

Figure 13-2 shows mill recoveries from 2008 to 2014. During this period SB Zone was mined and processed. Compared to the Stockwork Zone results, recoveries show more scatter. The highest recoveries (85%) occurred with the highest head grades (>8 g/t).

FIGURE 13-1 STOCKWORK ZONE GOLD RECOVERY AS A FUNCTION OF HEAD GRADE: 1998 TO 2006

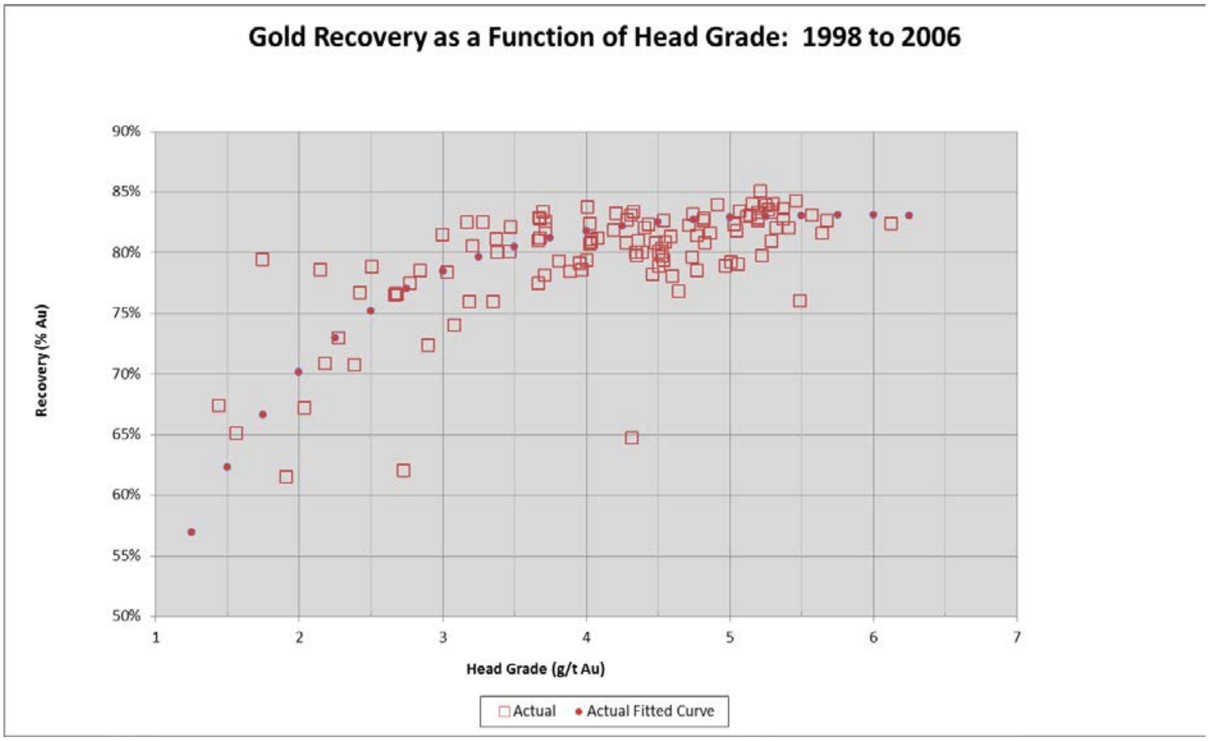
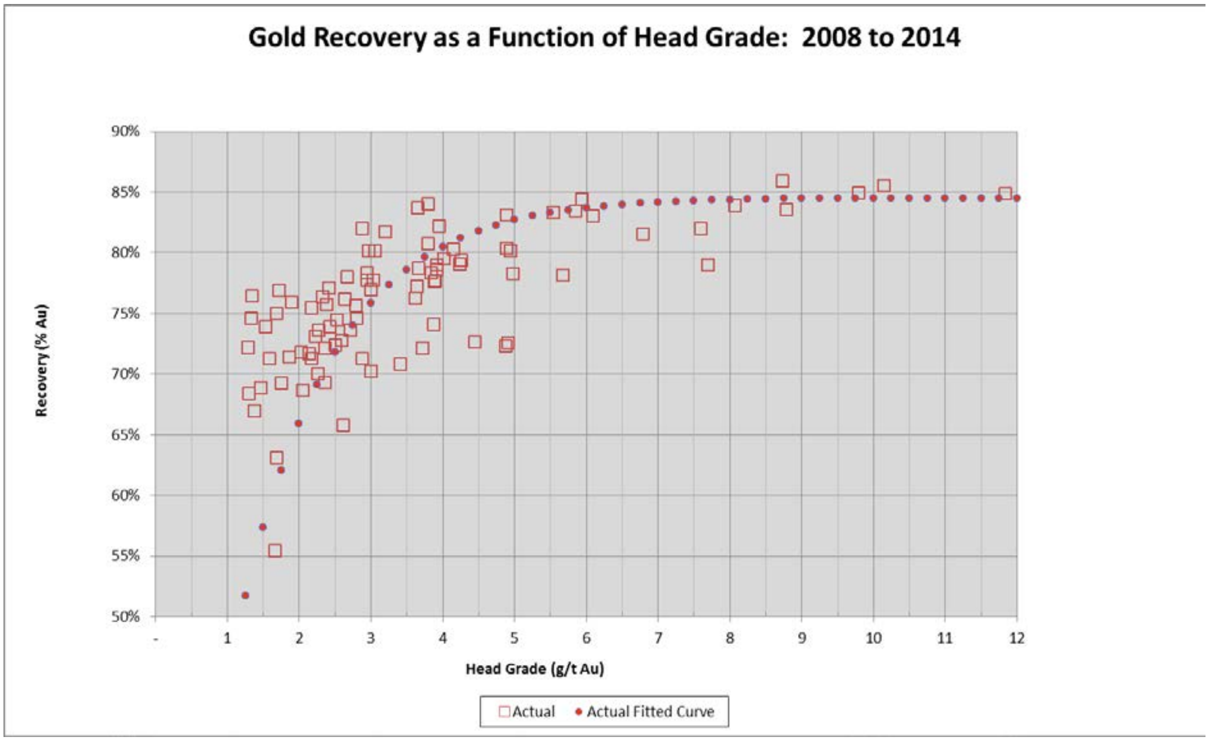


FIGURE 13-2 SB ZONE GOLD RECOVERY AS A FUNCTION OF HEAD GRADE: 2008 TO 2014



MINERALOGY AND FLOWSHEET SELECTION

Kumtor ore is considered as double refractory. Native gold and gold-silver tellurides are intimately associated with pyrite to the extent that gold grade and pyrite content are "positively correlated" (Ivanov et al., 2000). The gold and the gold-bearing minerals occur as very fine inclusions in the pyrite, with an average size of only 10 microns. This permits the gold to be collected in a sulphide concentrate which can be subjected to intensive ultrafine grinding to enhance gold recovery.

In addition naturally occurring carbonaceous matter interferes with gold recovery by adsorbing leached gold. This is known as the "preg robbing" effect. The distribution of the carbonaceous matter is erratic and not easily predicted. Gold leaching is conducted in carbon-in-leach circuits (CIL) where activated carbon is added at the start of leaching to counteract the "preg robbing" effect of the naturally occurring carbonaceous matter.

Typically gold tellurides have slow leach characteristics. The occurrence of gold tellurides in the SB Zone is greater than was observed in the Stockwork Zone. The gold tellurides in the SB Zone are very fine, typically around 5 microns or less. The very fine grain size appears to mitigate the slow leaching that would be expected from gold tellurides.

These ore characteristics have been recognized since the Kumtor Mine started production and have been managed effectively since that time.

14 MINERAL RESOURCE ESTIMATE

The Kumtor Mine has two Mineral Resource models; the model for the Central Deposit is comprised of the SB and Stockwork Zones while the second model is comprised of the Southwest and Sarytor Deposits.

Additionally, the Kumtor Mine has an underground Mineral Resource model that is comprised of the SB and Stockwork Zone mineralization that extends below the 2014YE Resource pit shell.

Table 14-1 summarizes open pit and underground Mineral Resources exclusive of Mineral Reserves as of December 31, 2014, based on a $1,450/oz gold price. The 2014 year-end open pit Measured and Indicated Mineral Resources total 29.5 million tonnes averaging 3.0 g/t Au and contain 2.8 million ounces of gold. In addition, the 2014 year-end open pit Inferred Mineral Resources total 2.7 million tonnes averaging 1.5 g/t Au and contain 126,000 ounces of gold.

The 2014 year-end underground Measured and Indicated Mineral Resources total 156,000 t averaging 10.8 g/t Au and contain 54,000 ounces of gold. As well, the 2014 year-end underground Inferred Mineral Resources total 4.6 million tonnes averaging 10.9 g/t Au and contain 1.6 million ounces of gold.

TABLE 14-1 MINERAL RESOURCE ESTIMATE SUMMARY – DECEMBER 31, 2014

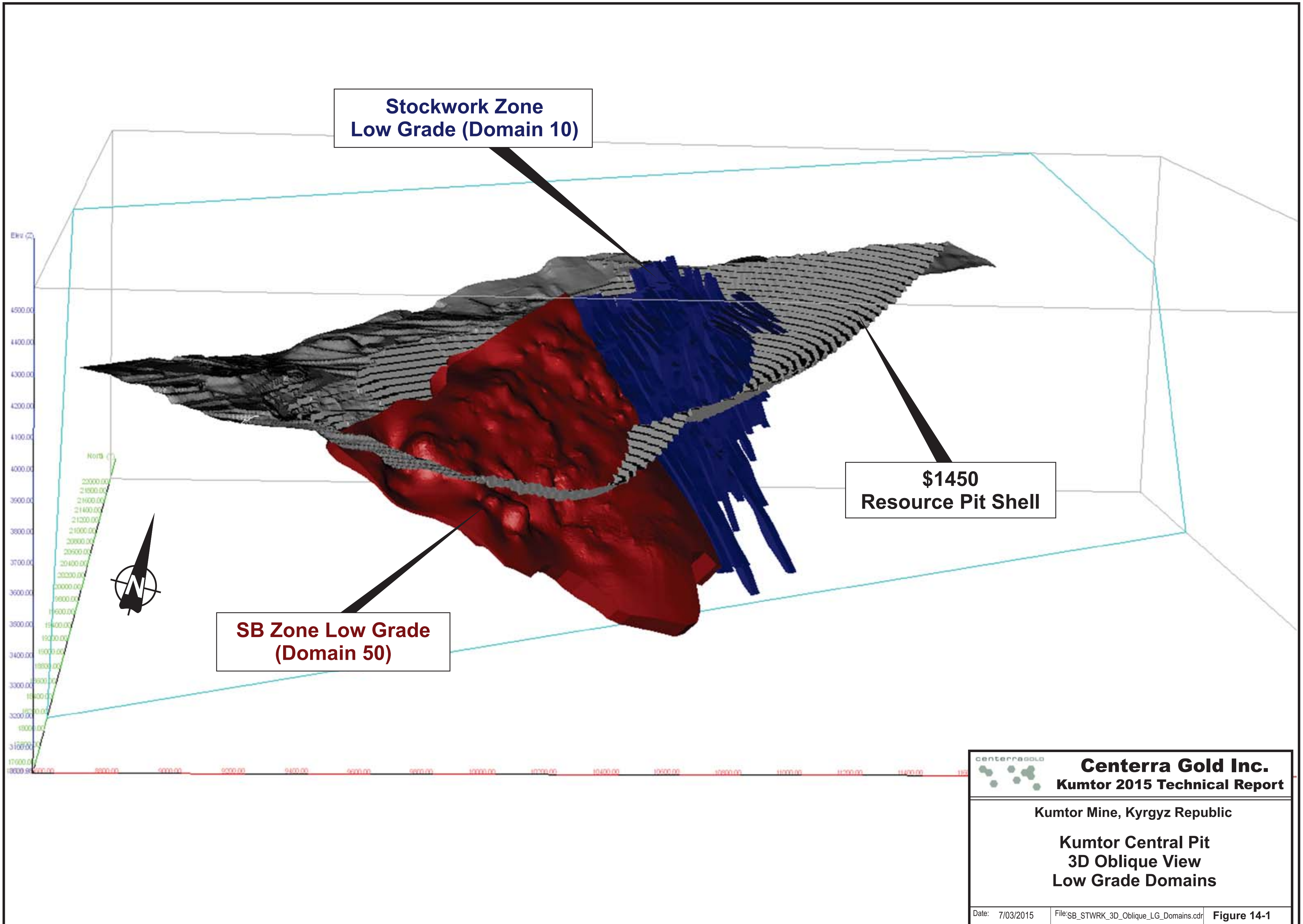
Property	Classification	Tonnes (kt)	Grade Au (g/t)	Gold (koz)
Kumtor Open Pit	Measured	14,317	3.2	1,473
	Indicated	15,144	2.7	1,330
	Measured and Indicated	**29,462**	**3.0**	**2,804**
	Inferred	2,655	1.5	126
Kumtor Stockwork Underground	Measured	-	-	-
	Indicated	156	10.8	54
	Measured and Indicated	**156**	**10.8**	**54**
	Inferred	775	11.8	294

Property	Classification	Tonnes (kt)	Grade Au (g/t)	Gold (koz)
Kumtor SB Zone Underground	Inferred	3,806	10.7	1,315
Total Underground Inferred	Inferred	4,581	10.9	1,609

Notes:
1. CIM definitions were followed for classification of Mineral Resources.
2. Mineral Resources are in addition to Mineral Reserves.
3. Open Pit Mineral Resources are estimated at a cut-off grade of 0.85 g/t Au for the Central Pit and 1.0 g/t Au for the Sarytor and Southwest Deposits.
4. Underground Mineral Resources are estimated at a cut-off grade of 6.0 g/t Au.
5. Mineral Resources are estimated using a long-term gold price of US$1,450 per ounce.
6. High assays or composites are capped between 30 g/t Au and 70 g/t depending on the deposit.
7. Bulk densities are 0.92 t/m^3 for glacial ice, 2.30 t/m^3 for weathered rock and 2.85 t/m^3 fresh rock.
8. Numbers may not add due to rounding.

The resource model for the Stockwork Zone of the Central Deposit was prepared in December 2013, using all of the drillholes available as of that date, by Centerra. Geovia GEMS (GEMS) was used to model the mineralized domains within the Stockwork Zone and values for gold were interpolated into blocks using ordinary kriging (OK) in GEMS.

The resource model update for the SB Zone of the Central Deposit was prepared in December 2014, using all of the drillholes available as of that date, by RPA. ARANZ Leapfrog software was used to update the principal mineralized domains within the SB Zone and values for gold were interpolated into blocks using inverse distance cubed (ID3) in GEMS. After the estimation of gold grades within the SB Zone, blocks southwest of Section Line 86 were imported into the pre-existing KS13 model framework to create the KS-2014YE model. Figures 14-1 and 14-2 show where the SB Zone update (red wireframes) ends and where the Stockwork Zone (blue wireframes) begin.



Stockwork Zone
Low Grade (Domain 10)
$1450
Resource Pit Shell
SB Zone Low Grade
(Domain 50)
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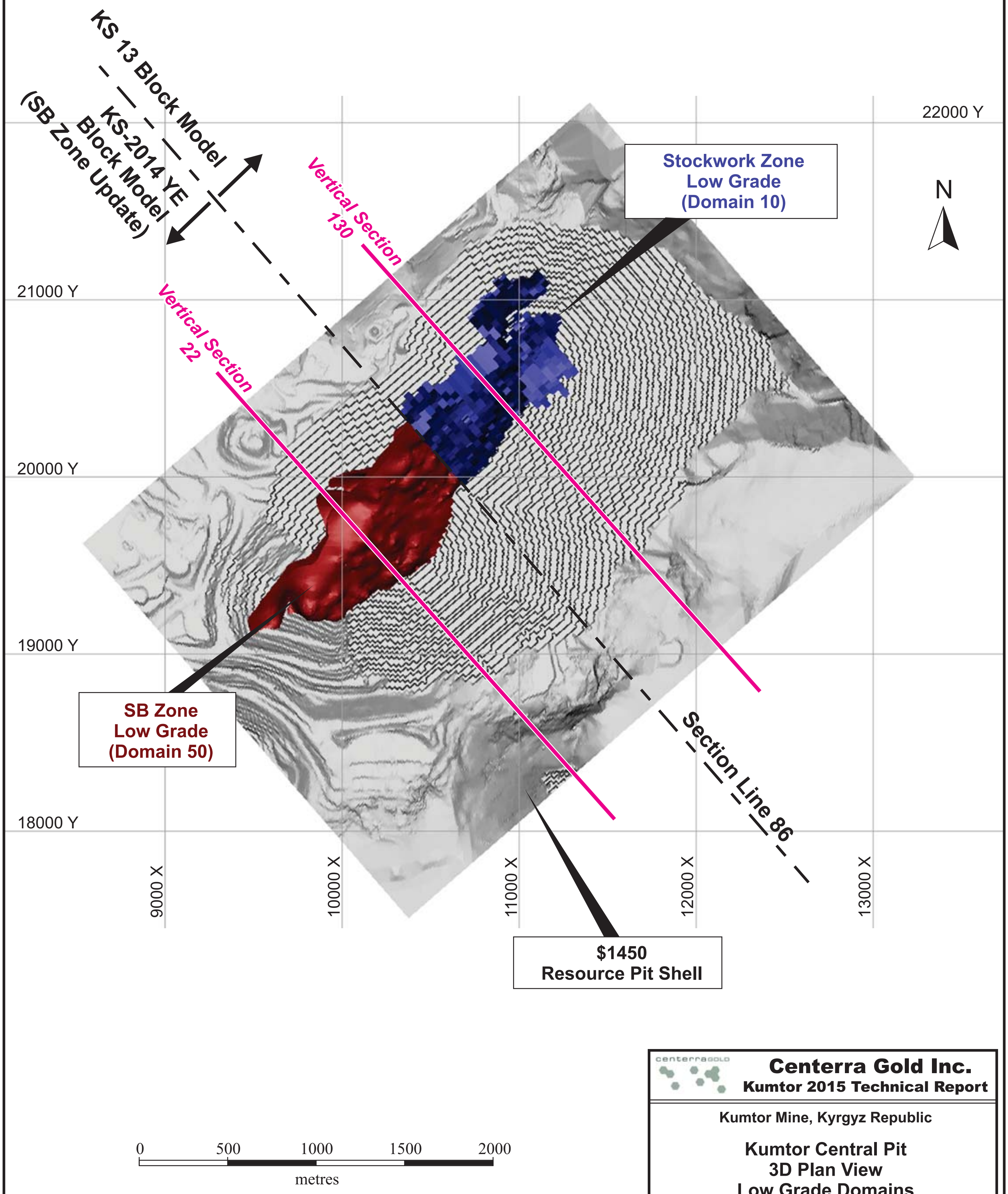
Kumtor Mine, Kyrgyz Republic
Kumtor Central Pit
3D Oblique View
Low Grade Domains
Date: 7/03/2015
File: SB_STWRK_3D_Oblique_LG_Domains.cdr
Figure 14-1



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Kumtor Central Pit
3D Plan View
Low Grade Domains

Date: 7/03/2015	File: SB_STWRK_3D_Plan_LG_Domains.cdr	Figure 14-2

The resource model for the Sarytor and Southwest Deposits was prepared in June 2014, using all of the drillholes available as of that date, by Centerra. Geovia Surpac (Surpac) was used to model the mineralized domains within the Sarytor and Southwest Deposits and values for gold were interpolated into blocks using ordinary kriging (OK) in GEMS. The resource estimation work is documented in Smith (2014).

The underground resource model for the SB and Stockwork Zones of the Central Deposit was prepared in December 2013, using all of the drillholes available as of that date.

RPA reviewed the resource assumptions, input parameters, geological interpretation, and block modelling procedures and is of the opinion that the Mineral Resource estimates are appropriate for the style of mineralization and that the resource models are reasonable and acceptable to support the 2014 Mineral Resource and Mineral Reserve estimates. The Qualified Person for the resource estimate is RPA Senior Resource Geologist, Pierre Landry, P.Geo.

Centerra and RPA are not aware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, or other relevant factors that could materially affect the resource estimate at the time of this report, other than as discussed in this report.

GEOLOGICAL AND STRUCTURAL MODELS

A detailed geological data compilation was carried out by Centerra geologists to identify major geological contacts, mineralization, and structural features. These data were used to interpret the primary mineralized domains for all deposits at the Kumtor Mine. Geological and geotechnical pit mapping is conducted every two benches (20 m) within the Central Deposit and the resulting data has been used to create a detailed litho-structural model. The mineralization of the Central Deposit is limited to geotechnical Zone 2, which is bounded to the north by the Upper Kumtor Fault (UKF) and to the south by the Lysii Fault (LYSI). This model is discussed in greater detail in Section 16.

BULK DENSITY

The density of mineralized zones of the Kumtor deposit have been extensively tested and determined using several methods including densitometer, mineral composition, and gamma. In addition, the density was further investigated by bulk methods during underground development.

The Central Laboratory of Kyrgyz Geology (CLKG) analyzed 200 samples collected from different mineralized zones. Densities range from 2.51 to 3.23 tonnes per cubic metre (t/m³) and average 2.85 tonnes per cubic metre.

The average densities from the different methods of determination as summarized by CLKG are:

- Volume mass determination 2.86 t/m³
- Densitometer measurements 2.88 t/m³
- Blast holes using gamma 2.84 t/m³
- Mineral composition 2.93 t/m³

The determination of the density by mineral composition is a theoretical calculation based on the weight and percentage of the mineral within the sample. The results of this method were not used to determine the overall density of the material.

In the spring of 1993, Kumtor shipped 1.5 tonnes of mineralized material to Lakefield Research Inc. (Lakefield) in Canada for metallurgical testing. The specific gravity of the bulk sample was determined at 2.85 tonnes per cubic metre, which agrees with the results of the estimates determined by CLKG. The bulk density values used by Centerra to assign tonnage are listed in Table 14-2 by rock code.

TABLE 14-2 RESOURCE MODEL BULK DENSITIES

Description	Density (g/cm³)
Glacial Ice	0.92
Glacial Till/Moraine	2.30
Waste Dump	2.30
Rock	2.85

RPA recommends that Centerra perform additional density measurements using core from 2015 drilling campaign to investigate densities at depth.

OPEN PIT MINERALIZATION MODEL AND WIREFRAMES

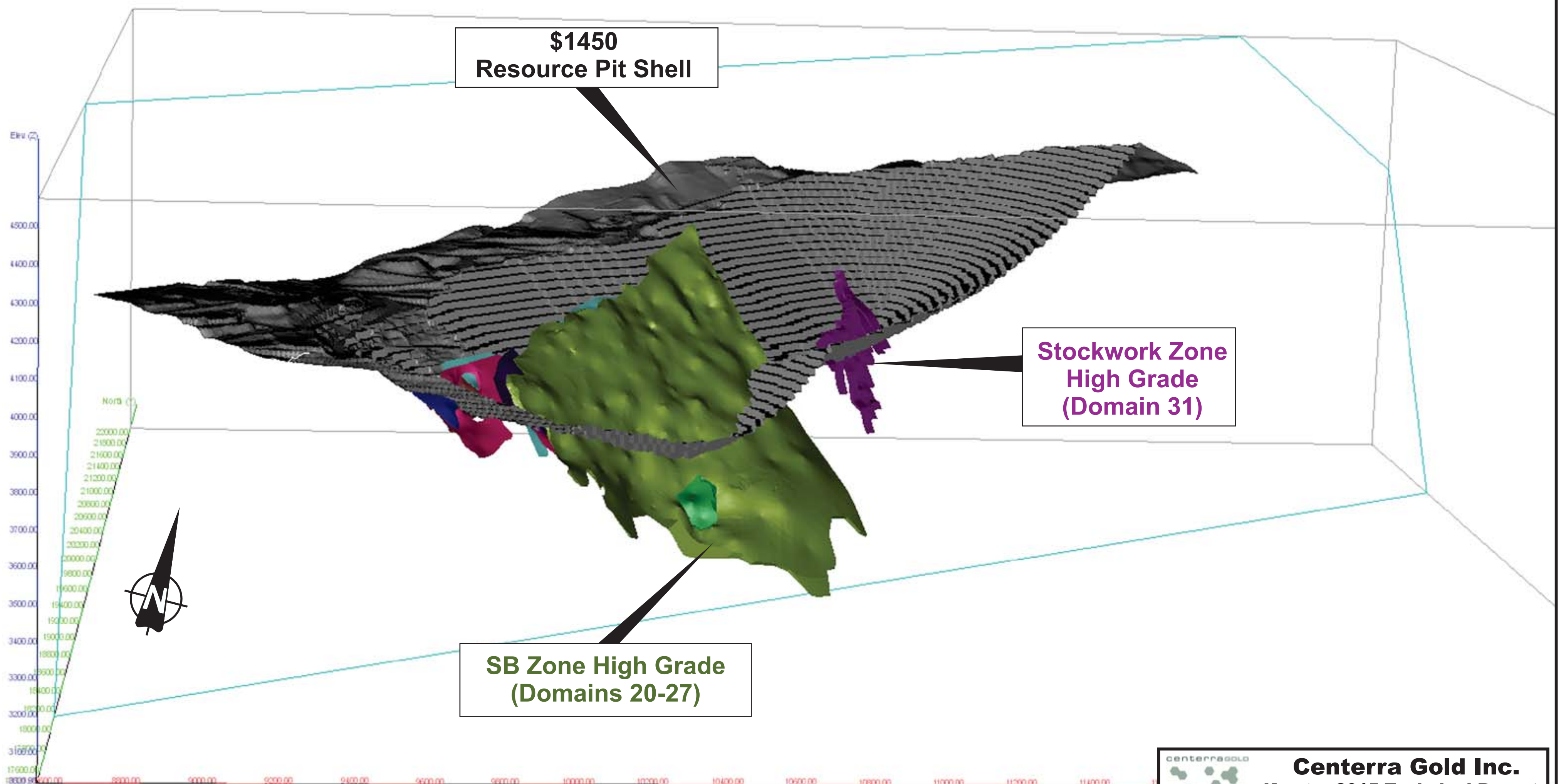
Mineralization is continuous throughout the SB and Stockwork Zones that comprise the Central Deposit. The drilling at the Central Deposit has outlined gold mineralization along a northeast trending and southeast dipping corridor. This mineralized corridor is bound to the north by the

Upper Kumtor Fault (UKF) and to the south by the Lysii Fault (LYSI). The mineralization extends approximately 2.5 kilometres from the beginning of the SB Zone in the southwest to the end of the Stockwork Zone in the northeast. The mineralization has a general strike direction of 040 degrees and dips at approximately -50 degrees towards the southeast. The width of the mineralized corridor gently tapers with depth. Figures 14-1 and 14-2 show oblique and plan views of the 3D wireframes that were created to represent the broad envelope of lower grade mineralization (~ 0.50 g/t Au) observed at the Central Deposit. Figures 14-3 and 14-4 show oblique and plan view of the 3D wireframes that were created to represent the narrower high grade mineralization (> 3.00 g/t Au) found within the lower grade envelope at the Central Deposit.

SB ZONE

Mineralization within the SB Zone consists of a broad low grade (~0.50 g/t Au) corridor consisting of shear veins and veinlets whose intensity increases towards the central high grade (>3 g/t Au) corridor. The mineralization is associated with metasomatic alteration of varying intensities, styles, and mineral assemblages. Gold mineralization within the SB Zone is typically hosted by intensely deformed phyllites and associated with quartz, carbonate, feldspar, and pyrite. Already mined out, the low grade domain measured approximately 120 metres wide at the elevation of 4,000 metres, while at the current mining level of 3,630 metres it measures approximately 90 metres wide. Similarly, the main high grade domain measured approximately 45 metres wide at the 3,850 metre elevation, while at the current mining level of 3,630 metres it measures approximately 30 metres wide.

Wireframes representing these mineralized domains were constructed based on structural contacts, and gold assay grades. Mineralized domains were generated using Leapfrog Geo geological modelling software from drillhole intersections, with an approximate minimum width of one metre. A consolidated block model was created in order to address the issue of minimum wireframe thickness, thereby capturing the relative contribution of the low grade and high grade domains within a given block. Lower grade intercepts were included at the edges of the wireframe or within larger intercepts in order to maintain continuity between sections. On each section, the interpreted upper and lower boundaries of the mineralized domains were snapped to drillholes.



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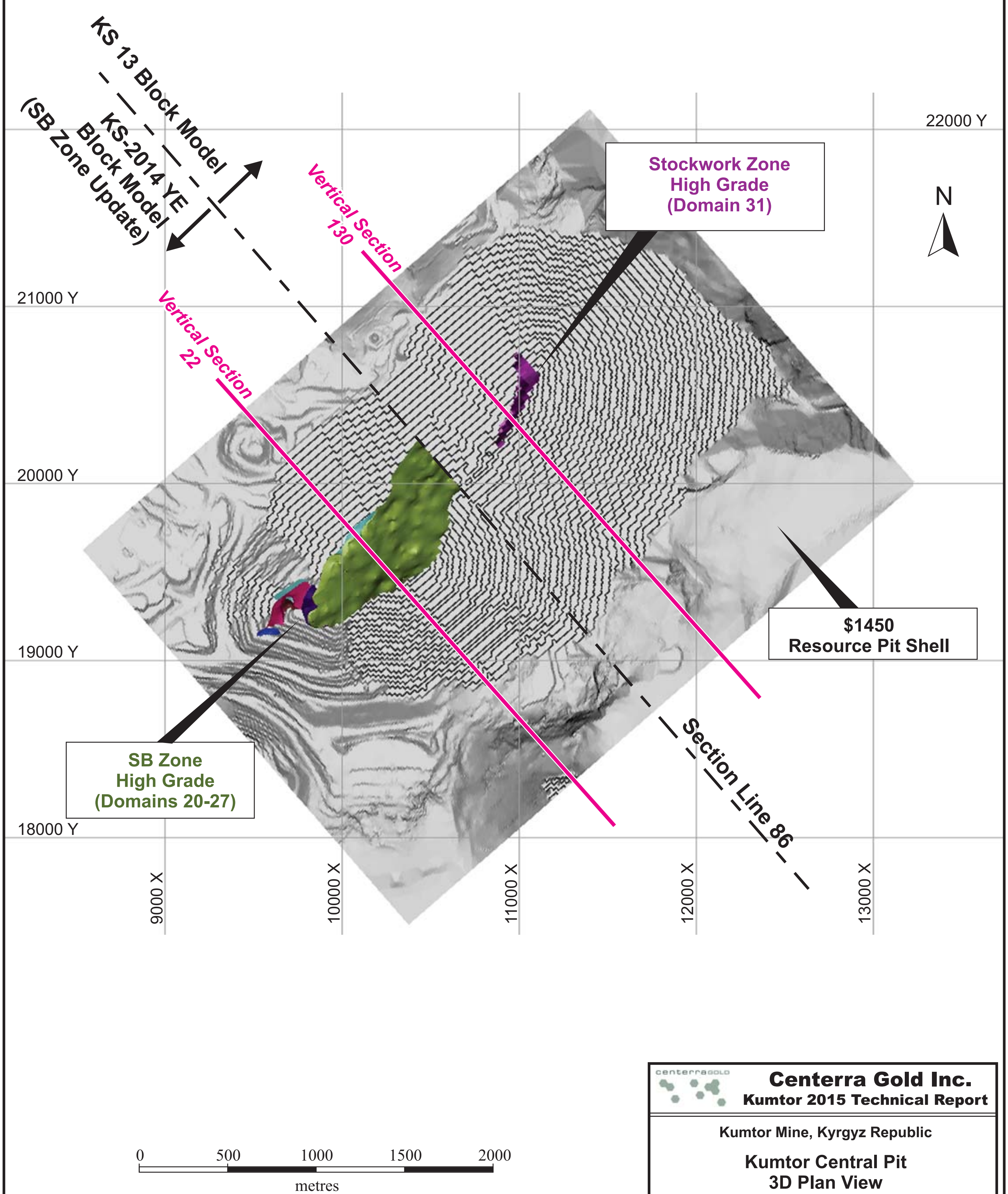
Kumtor Central Pit
3D Oblique View
High Grade Domains

Date: 7/03/2015 | File: SB_STWRK_3D_Oblique_HG_Domains.cdr | **Figure 14-3**



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Kumtor Central Pit
3D Plan View
High Grade Domains

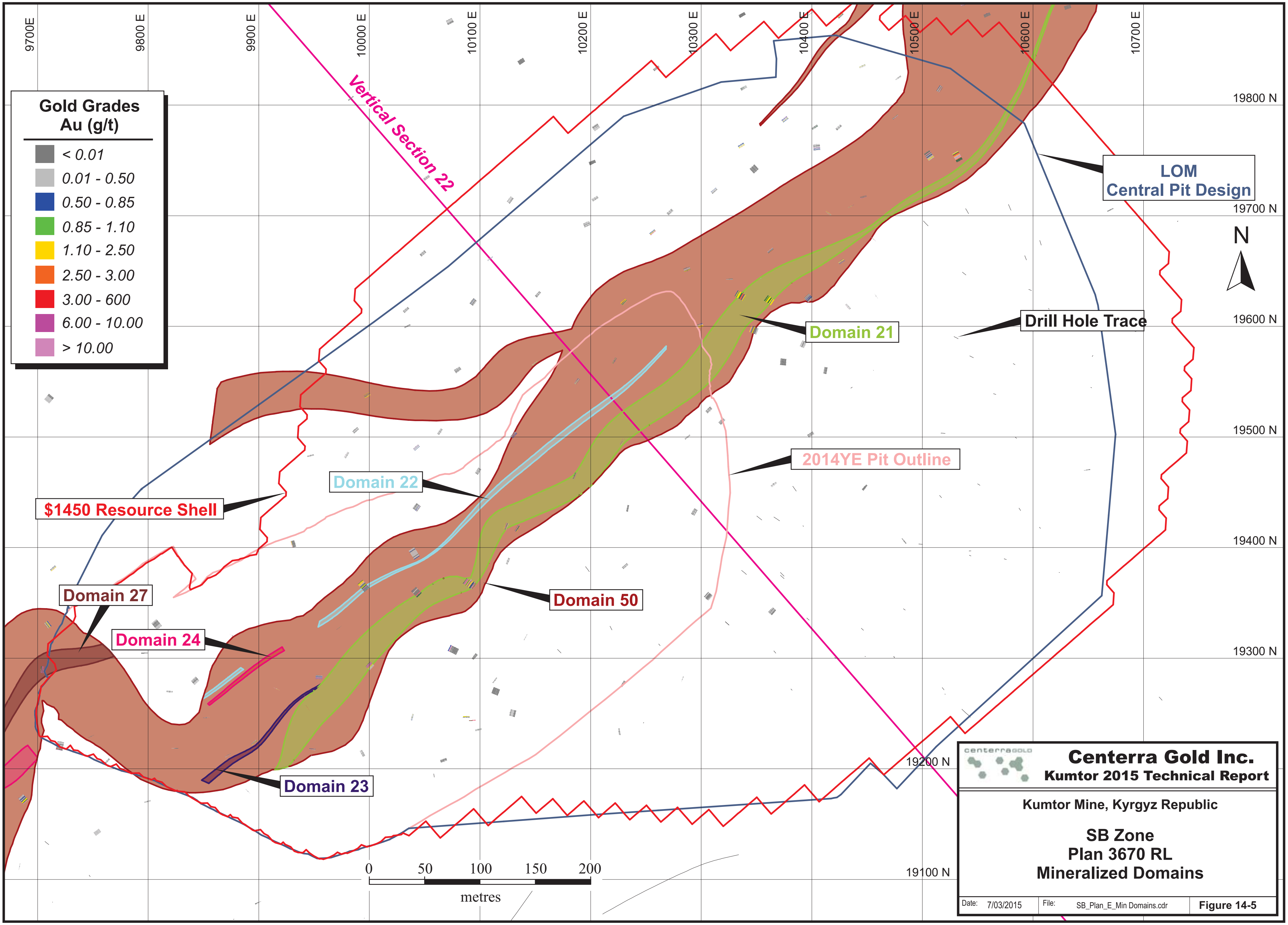
Date: 7/03/2015 | File: SB_STWRK_3D_Plan_HG_Domains.cdr | Figure 14-4

There are eight mineralized wireframes in total that represent the mineralized corridor. Seven wireframes represent the high grade domain and they are all contained within a single low grade domain wireframe. The high grade domain is comprised of a single wireframe that defines the main mineralized trend and six other wireframes, which define hanging-wall and footwall mineralization that branch off from the main trend. The hanging-wall and footwall wireframes were treated as soft boundaries with the main trend wireframe during grade interpolation. A hard boundary was used between the Low Grade and High Grade domains. Table 14-3 provides a description of the wireframes and their respective resource model rock codes. The High Grade 1 (Main Trend) and High Grade 2 wireframes were later sub-divided into two rock codes in order to accommodate varying wireframe orientations during interpolation. The high grade and low grade domains have a general strike direction of 042 degrees and dip at approximately -50 degrees towards the southeast.

TABLE 14-3 SB ZONE RESOURCE MODEL WIREFRAMES

Description	Rock Code(s)
High Grade 1 (Main Trend)	20, 21
High Grade 2	22, 28
High Grade 3	23
High Grade 4	24
High Grade 5	25
High Grade 6	26
High Grade 7	27
Low Grade	50
Waste Model	60

The mineralization wireframes for the SB Zone are shown in Figures 14-5 and 14-6.



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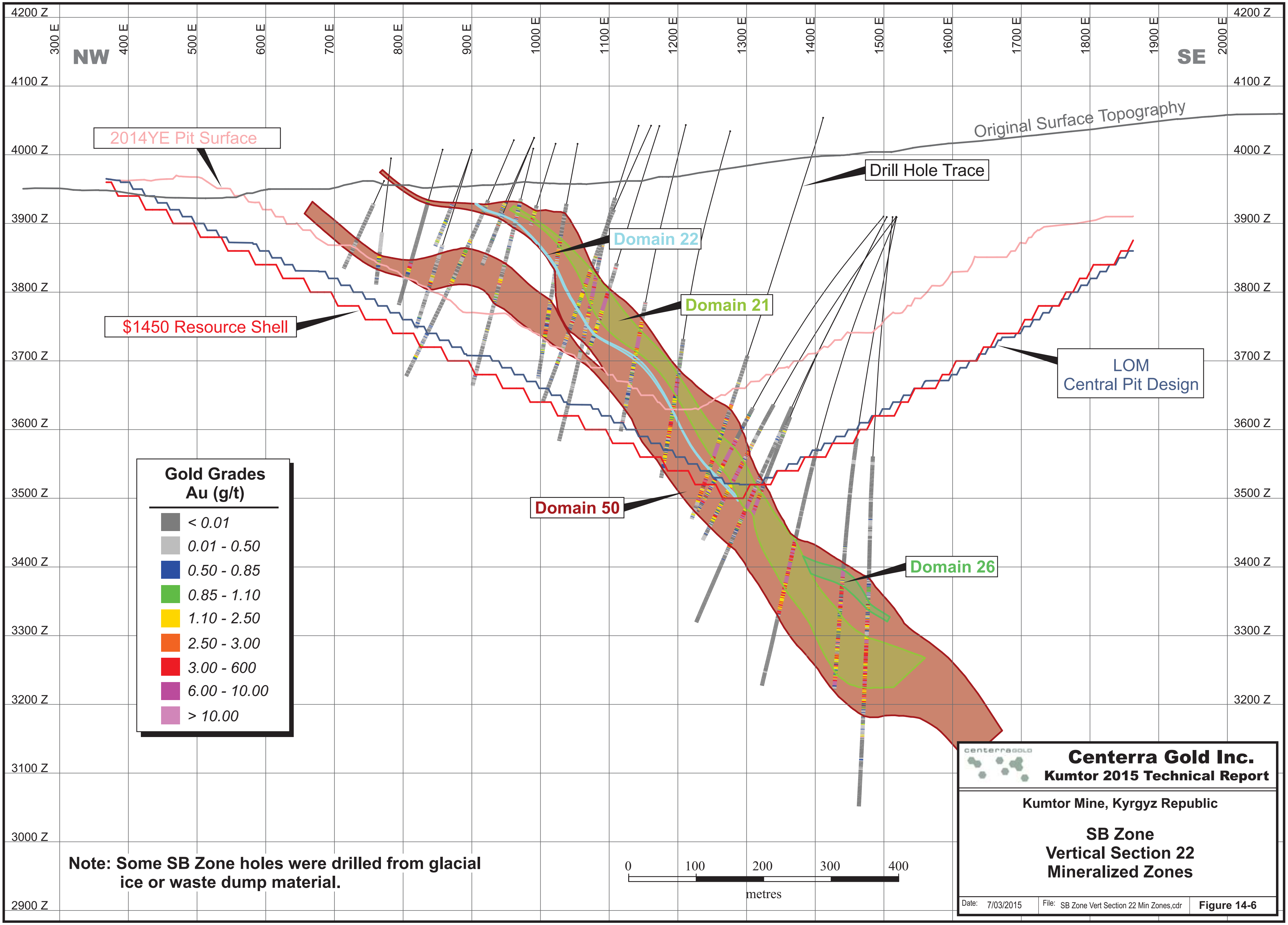
SB Zone
Plan 3670 RL
Mineralized Domains

Date: 7/03/2015 | File: SB_Plan_E_Min Domains.cdr | **Figure 14-5**



Note: Some SB Zone holes were drilled from glacial ice or waste dump material.

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SB Zone
Vertical Section 22
Mineralized Zones

Date: 7/03/2015 | File: SB Zone Vert Section 22 Min Zones.cdr | **Figure 14-6**

STOCKWORK ZONE

The Stockwork Zone occupies the same mineralized corridor as the SB Zone, however, the style and shape of mineralization is different. Mineralization within the Stockwork zone consists of a broad low grade (~0.50 g/t Au) corridor consisting of shear veins and veinlets whose intensity increases towards a central stockwork (>4-5 g/t Au) corridor. The central stockwork tapers to a narrower feeder zone that is approximately 5 to 50 metres wide below an elevation of 3,700 metres. Already mined out, the low grade corridor measured approximately 290 metres wide at the 4,000 metre elevation, while at the current Stockwork pit mining level of 3,820 metres it measures approximately 120 metres wide. The higher grade mineralization of the central stockwork and the feeder zone are associated with metasomatic alteration of varying intensities, styles, and mineral assemblages. The feeder zone was modelled as a high grade domain that exhibits distinct spatial and grade continuity at a cut-off of 6.00 g/t Au. The same feeder zone wireframe was also used for the underground resource model.

Wireframes representing the low grade and high grade mineralized domains were constructed based on structural contacts and gold composite grades. Mineralized domains were generated using GEMS geological modelling software from drillhole intersections, with an approximate minimum width of approximately two metres. Drillholes were composited from collar to toe using a length of two metres. Polylines were digitized on section and used to define the limits of the low grade and high grade domains. These polylines were then extruded into solids, with each section being extruded half the distance to the next section. On each section, the interpreted upper and lower boundaries of the mineralized domains were snapped to the section plane. Composites were then flagged with the code of their respective zone. RPA recommends updating mineralization wireframes for the Stockwork Zone using 3D wireframes that are triangulated between snapped assay intervals rather than extruded from section planes.

The higher gold grades observed within the stockwork-style mineralization appear to be gradational and generally show a smooth transition into the lower grade domain. Based on this observation, what is referred to as the “low grade domain” actually includes the higher grade stockwork-style mineralization above the elevation (~3,700 m) where the stockwork-style mineralization transitions into a high grade feeder. Similar to the high grades observed within the SB Zone, the feeder zone exhibits a more discrete contact with surrounding lower grade mineralization at depth and has been modelled as a separate domain. Table 14-4 provides a description of the wireframes and their respective resource model rock codes.

TABLE 14-4 STOCKWORK RESOURCE MODEL WIREFRAMES

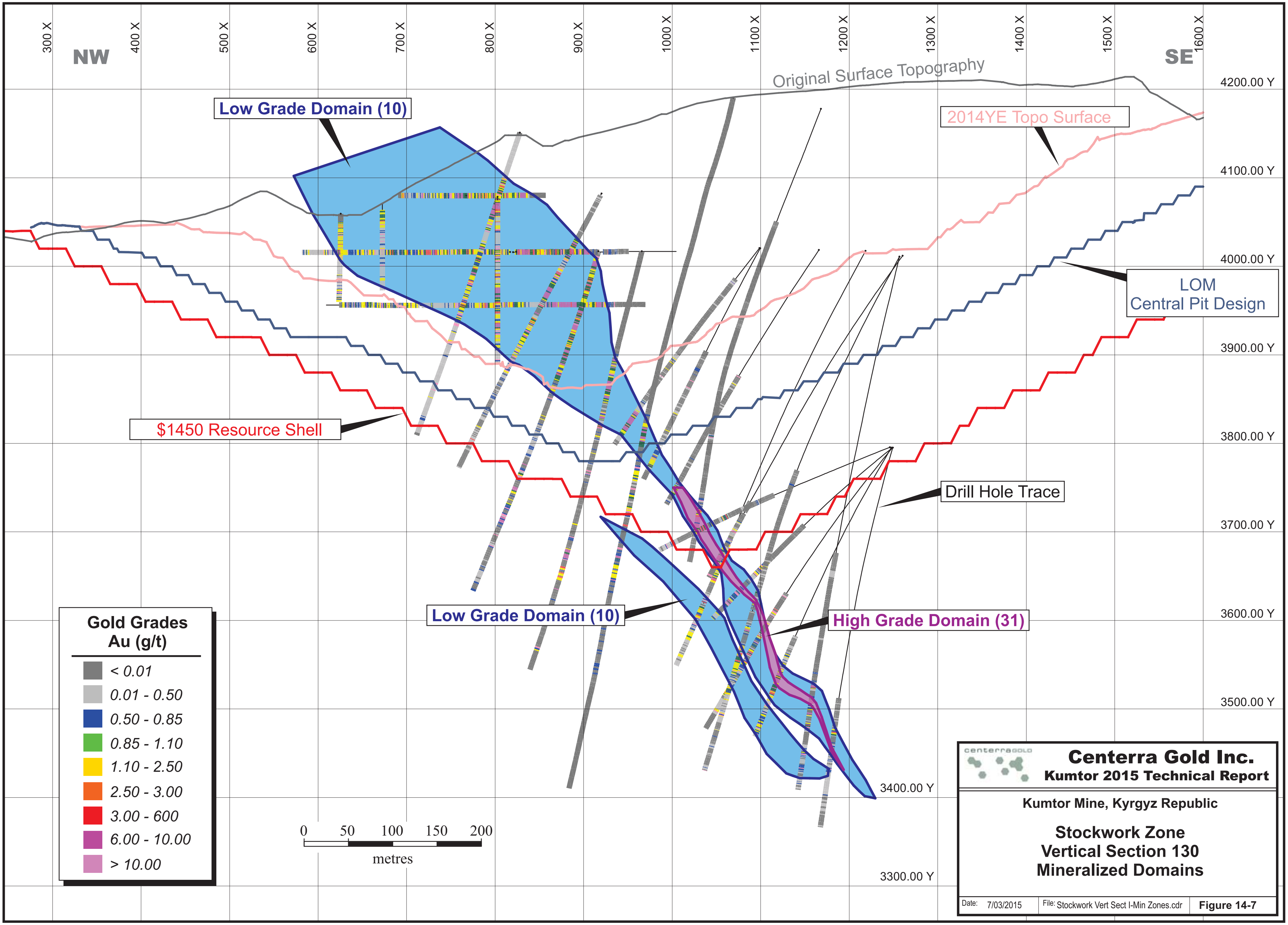
Description	Rock Code(s)
High Grade Feeder	31
Low Grade and Stockwork	10

The mineralization wireframes for the Stockwork Zone is shown in Figure 14-7.

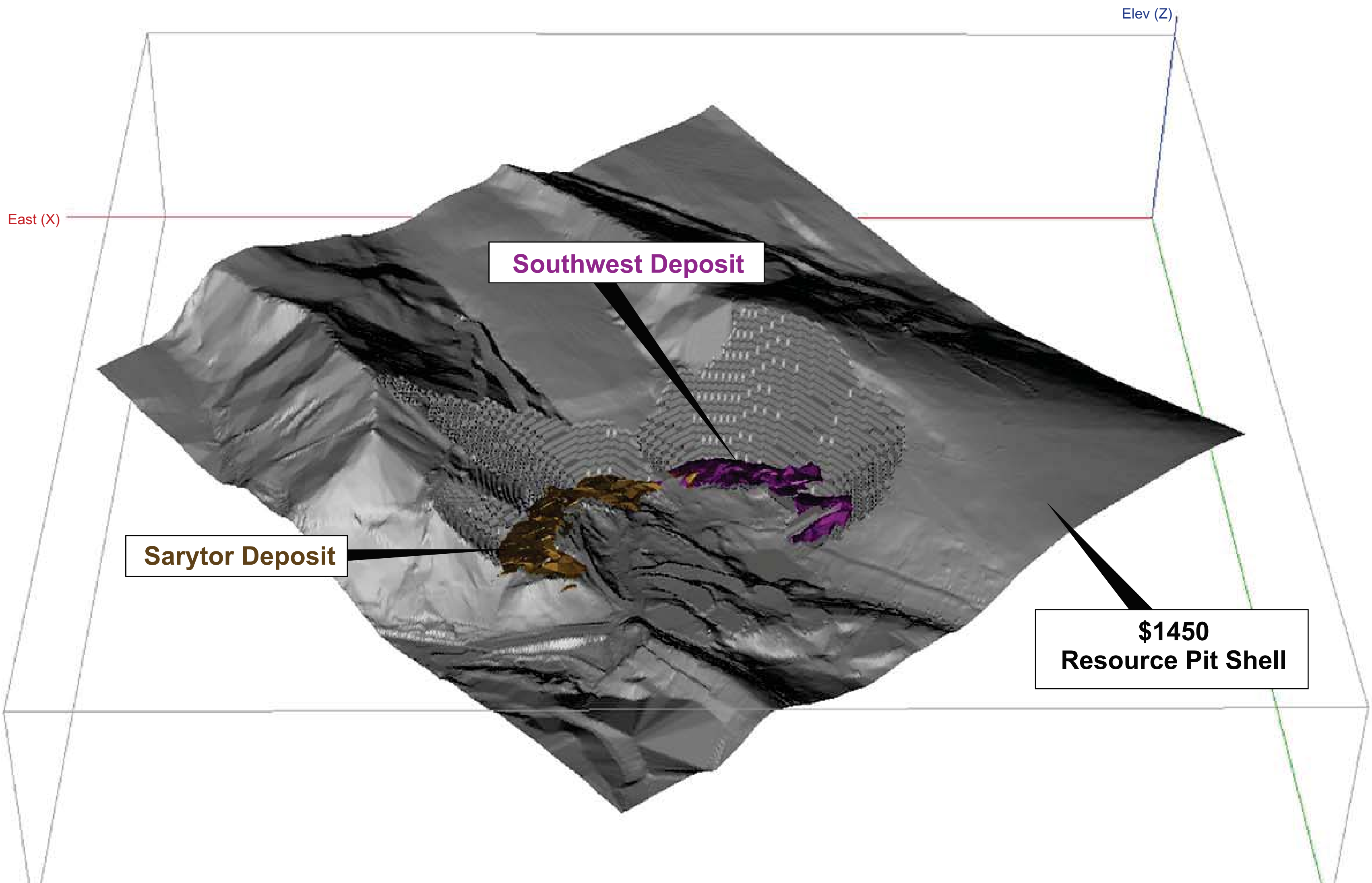
SARYTOR AND SOUTHWEST DEPOSITS

The Southwest and Sarytor Deposits share the same general litho-structural framework as the Central Deposit, however, the mineralized structures dip at much shallower angles, which range from 20 to 50 degrees. The Southwest and Sarytor Deposits are believed to share the same geological structures and have been interpreted as being contiguous below the Sarytor Glacier. RPA recommends updating mineralization wireframes for the Sarytor and Southwest Deposits to reflect more realistic mineralization geometries and to eliminate overlapping wireframes where the respective deposit wireframe interpretations meet beneath the Sarytor Glacier. RPA reviewed the overlapping wireframes and found no evidence of double counting.

Figures 14-8 and 14-9 show oblique and plan view of the 3D wireframes that were created to represent the mineralization at the Sarytor and Southwest Deposits.



NW
SE
300 X
400 X
500 X
600 X
700 X
800 X
900 X
1000 X
1100 X
1200 X
1300 X
1400 X
1500 X
1600 X
4200.00 Y
4100.00 Y
4000.00 Y
3900.00 Y
3800.00 Y
3700.00 Y
3600.00 Y
3500.00 Y
3400.00 Y
3300.00 Y
Original Surface Topography
2014YE Topo Surface
Low Grade Domain (10)
LOM
Central Pit Design
$1450 Resource Shell
Drill Hole Trace
Low Grade Domain (10)
High Grade Domain (31)
Gold Grades
Au (g/t)
< 0.01
0.01 - 0.50
0.50 - 0.85
0.85 - 1.10
1.10 - 2.50
2.50 - 3.00
3.00 - 600
6.00 - 10.00
> 10.00
0
50
100
150
200
metres
Centerra Gold Inc.
Kumtor 2015 Technical Report
Kumtor Mine, Kyrgyz Republic
Stockwork Zone
Vertical Section 130
Mineralized Domains
Date: 7/03/2015
File: Stockwork Vert Sect I-Min Zones.cdr
Figure 14-7

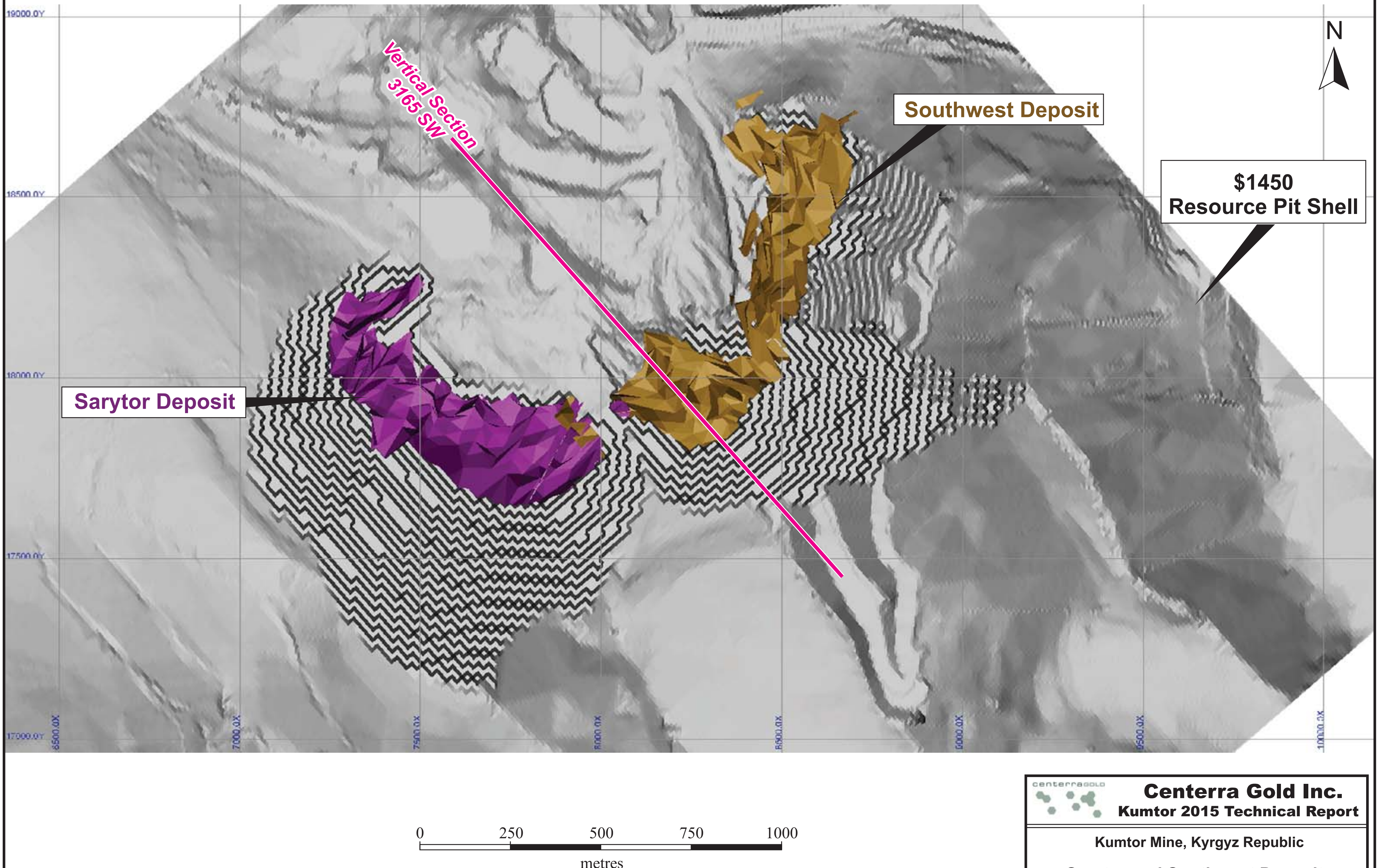


Centerra Gold Inc.
Kumtor 2015 Technical Report

Kumtor Mine, Kyrgyz Republic

Sarytor and Southwest Deposits
3D Oblique View
Mineralized Domains

Date: 7/03/2015	File: SarytorSW_3D_Oblique_Min_Domains.cdr	Figure 14-8



centerra GOLD

Centerra Gold Inc.
Kumtor 2015 Technical Report

Kumtor Mine, Kyrgyz Republic

Sarytor and Southwest Deposits
3D Plan View
Mineralized Domains

Date: 7/03/2015	File: SarytorSW_3D_Plan_Min_Domains.cdr	Figure 14-9

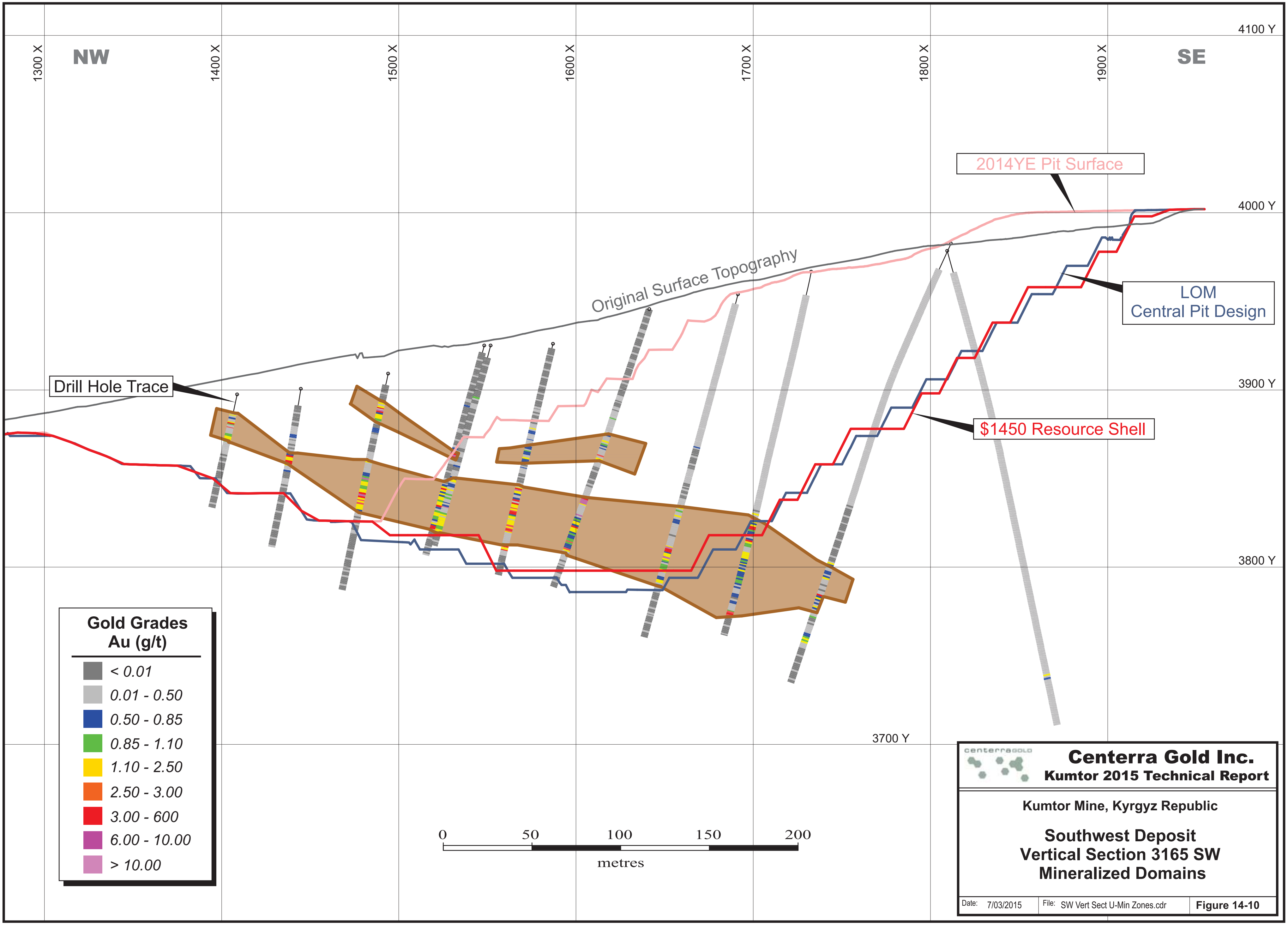
The Southwest Deposit mineralization extends approximately 1.2 kilometres in the southwest direction to where it meets the Sarytor Deposit beneath the Sarytor Glacier. The Sarytor Deposit mineralization extends an additional 0.9 kilometres in the east-northeasterly direction from where it meets the Southwest Deposit. The mineralized domains are composed of stacked lenses varying in thickness from 2 to 60 metres, with an average thickness of approximately 25 metres. The mineralized lenses are typically separated by approximately 10 to 15 metres of poorly mineralized rock. The lenses vary in gold tenor and tend to be marked by tectonic crush zones with black fault gouge.

Wireframes representing these mineralized domains were constructed based on structural contacts, and two metre composited gold assay grades. Mineralized domains were generated along 40 metre spaced vertical sections using GEMS from drillhole intersections, with an approximate minimum width of two metres. Lower grade intercepts were included at the edges of the wireframe or within larger intercepts in order to maintain continuity between sections. On each section, the interpreted upper and lower boundaries of the mineralized domains were snapped to drillholes.

The Southwest Deposit consists of twelve mineralized lenses: 12, 13, 14, 15, 16, 17, 18, 19 and 20, however there are nine domains where three of the zones contain two lenses. The lenses are tabular in shape. The general strike direction of the Southwest lenses is approximately 55 degrees azimuth and dip at approximately -20 to -25 degrees towards the southwest.

The Sarytor Deposit consists of five mineralized lenses: 1, 2, 3, 4, and 5. The lenses are tabular in shape. The general strike direction of the Sarytor lenses is approximately 115° azimuth and dip at approximately -25º to -30º towards the southeast.

The mineralization wireframes for the Southwest Deposit are shown in Figure 14-10.



NW
SE
1300 X
1400 X
1500 X
1600 X
1700 X
1800 X
1900 X
4100 Y
4000 Y
3900 Y
3800 Y
3700 Y
2014YE Pit Surface
Original Surface Topography
LOM
Central Pit Design
Drill Hole Trace
$1450 Resource Shell
Gold Grades
Au (g/t)
< 0.01
0.01 - 0.50
0.50 - 0.85
0.85 - 1.10
1.10 - 2.50
2.50 - 3.00
3.00 - 600
6.00 - 10.00
> 10.00
0
50
100
150
200
metres
Centerra Gold Inc.
Kumtor 2015 Technical Report
Kumtor Mine, Kyrgyz Republic
Southwest Deposit
Vertical Section 3165 SW
Mineralized Domains
Date: 7/03/2015
File: SW Vert Sect U-Min Zones.cdr
Figure 14-10

UNDERGROUND MINERALIZATION MODEL AND WIREFRAMES

SB AND STOCKWORK ZONES

Wireframes representing high grade mineralized domains were created based on structural contacts, and gold composite grades. The mineralized domains for the SB and Stockwork Zones were modelled in areas that possess distinct spatial and grade continuity at a cut-off of 6.00 g/t Au. The mineralized domains were created using GEMS software from drillhole intersections, with an approximate minimum width of approximately two metres. Drillholes were composited from collar to toe using a length of two metres. Polylines were digitized on section and used to define the limits of the low grade and high grade domains. These polylines were then extruded into solids, with each section being extruded half the distance to the next section. On each section, the interpreted upper and lower boundaries of the mineralized domains were snapped to the section plane. Composites were then flagged with the code of their respective zone

Similar to the high grades observed within the SB Zone, the feeder zone exhibits a more discrete contact with surrounding lower grade mineralization at depth and has been modelled as a separate domain. Table 14-5 provides a description of the wireframes and their respective resource model rock codes.

TABLE 14-5 UNDERGROUND RESOURCE MODEL WIREFRAMES

Description	Rock Code(s)
High Grade Stockwork Feeder	31
High Grade SB	30

DATABASE

GENERAL DESCRIPTION

The Mineral Resource estimates for the SB Zone, Stockwork Zone, Southwest Deposit, and Sarytor Deposit are based primarily on information from surface and underground exploration diamond drillholes and supplemented by historical adits, trenches, dewatering holes, geotechnical holes, and production drilling. The Kumtor Mine master database contains a total of 3,646 collar records totaling 720,366 metres. The database is further subdivided based on general deposit area and then subsets of these deposit areas were used to estimate Mineral Resources within the SB Zone and Stockwork Zone, as well as Southwest and Sarytor Zones.

The subset used to update the SB Zone includes 824 collar records of the 1,795 collar records found within the Central Deposit set. Most of the holes are drilled at a steeply inclined orientation between -65˚ and -90˚ (vertical). Drilling within the SB Zone covers an approximate area of 1.5 kilometres (northeast-southwest) by 2.8 kilometres (southeast-northwest), with the majority of the drilling focused on the high grade trend within the mineralized corridor. Hole lengths vary widely, but they are typically in the range of 150 to 425 metres. Drillhole spacing on the deposit is variable both along and across strike but is generally 45 metres along strike by 45 metres across strike from surface to the 3,850 metre bench elevation. Below the 3,850 metre bench elevation, the drillhole spacing is generally 60 metres along strike by 60 metres across strike.

The subset used to update the Stockwork Zone includes 497 unique collar records of the 1,795 collar records found within the Central Deposit dataset as well as a portion of the 824 holes used to update the SB Zone. Since the mineralization between the SB and Stockwork Zone is continuous, drillhole data was shared between the SB Zone and the Stockwork Zone. This process permitted the use of assay data on either side of the SB/Stockwork boundary up to a distance of approximately 90 metres. Most of the holes within the Stockwork Zone are drilled at a steeply inclined orientation between -65˚ and -90˚ (vertical). Drilling within the Stockwork covers an approximate area of 1.8 kilometres (northeast-southwest) by 2.8 kilometres (southeast-northwest), with the majority of the drilling focused on the high grade stockwork mineralization and the feeder zone that lies immediately below it. Hole lengths vary widely, but they are typically in the range of 150 to 425 metres. Drillhole spacing on the deposit is variable both along and across strike but is generally 30 metres along strike by 30 metres across strike from surface to the 3,750 metre bench elevation. Below the 3,750 metre bench elevation, the drillhole spacing is generally 50 metres along strike by 50 metres across strike.

There are 282 collar records for the Southwest Deposit and 249 collar records for the Sarytor Deposit. Drill hole spacing at the Southwest and Sarytor Deposits is relatively constant both along and across strike and is generally 40 metres along strike by 40 metres across strike from surface to the base of mineralization.

Further detail on drilling can be found in Section 10 Drilling.

DRILLHOLE DATABASE VALIDATION

The following is a list of the data validation checks performed on the drillhole database by both RPA and Centerra:

- Checked for duplicate drillhole collar locations and hole numbers.
- Checked collar locations for zero/extreme values.
- Checked assays for missing intervals, long intervals, extreme high values, blank/zero values, reasonable minimum/maximum values, etc.
- Ran validity checks for out-of-range values, missing intervals, overlapping intervals, out-of-sequence intervals, etc.
- Carried out visual inspection of drillholes for unusual azimuths, dips, and deviations.

The Central Deposit database included a total of 1,795 collar records for diamond drillholes and trenches, dewatering holes, geotechnical holes as well as historical Russian drillholes and adits, covering an area of 5.5 kilometres northeast-southwest by 3.0 kilometres southeast-northwest.

For the SB Zone update, RPA used a subset of the regional database consisting of 824 surface and underground exploration diamond drillholes, trenches, dewatering holes, geotechnical holes to guide interpretation and carry out the resource estimate. This subset is located within the immediate SB Zone area and excludes the historical adits which, show location discrepancies when compared with the mineralized intersections of nearby holes. These adits have been superseded by sufficient drilling and are located in areas that have already been mined out. A small number of holes were also omitted as they were abandoned early as a result of technical difficulties and the holes were immediately re-drilled adjacent to the initial hole.

The resource estimate for the Stockwork Zone used 497 collar records of the 1,795 collar records found within the Central Deposit dataset as well as a portion of the 824 holes used to update the

SB Zone. These collar records consisted of surface and underground exploration diamond drillholes, trenches, dewatering holes, and geotechnical holes to guide interpretation and carry out the resource estimate. This subset is located within the Stockwork Zone and includes the historical adits. Although these adits showed location discrepancies within the more discrete mineralization observed in SB Zone, the adits in the Stockwork Zone lie within the broader stockwork style of mineralization. Due to the broader nature of the mineralization found within the Stockwork Zone, the adits do not show any material location discrepancies relative to local drillholes. Furthermore, the adits have already been mined out and are located above the current mining level.

The resource estimate for the Sarytor and Southwest Deposits used 282 collar records for the Southwest Deposit and 249 drillholes collar records for the Sarytor Deposit. These collar records consisted of surface exploration diamond drillholes, trenches, geotechnical holes and historical adits to guide interpretation and carry out the resource estimate.

Since the underground resource estimate covers both the SB and Stockwork Zones, the resource estimate for these zones used the 1,795 collar records found within the Central Deposit set.

The Kumtor exploration and mining databases are actively maintained under the supervision of Kumtor site personnel. The data provided for the resource estimate was exported directly from these databases. Assay results, lithology, drillhole locations, and down-hole surveys are verified back to the Laboratory Data Sheets and original data by the mine QA/QC geologist for every drillhole. RPA is of the opinion that the database is acceptable for the purposes of resource estimation. The collar, survey, and assay data was imported into GEMS software for the purposes of resource estimation and no substantive errors were found during the import process. RPA recommends that Centerra continue to validate historical drillhole, trench and adit data for the purposes of resource estimation.

OPEN PIT ASSAY STATISTICS

SB ZONE

Of the 824 drillholes within the SB Zone, 552 drillholes intersect the mineralization wireframes. The mineralization wireframes were used to flag drillhole intervals in the database that lie inside the wireframes. The assays from the remaining 272 holes that did not intersect the wireframes were also identified in order to characterize the material outside the wireframes. The assay statistics for each mineralized domain are presented in Table 14-6.

TABLE 14-6 SB ZONE ASSAY STATISTICS BY DOMAIN

Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
High Grade (21 to 27)	6,593	0.00	1,331.70	9.09	26.92	2.96
Low Grade (50)	34,700	0.00	238.08	1.35	4.01	2.97
Waste Model (60)	65,910	0.00	125.50	0.29	1.57	5.33

STOCKWORK ZONE

The resource estimate for the Stockwork Zone used 497 collar records of the 1,795 collar records found within the Central Deposit dataset as well as a portion of the 824 holes used to update the SB Zone. The assay statistics for each mineralized domain are presented in Table 14-7.

TABLE 14-7 STOCKWORK ZONE ASSAY STATISTICS BY DOMAIN

Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
High Grade (31)	723	0.00	133.69	11.10	15.91	1.43
Low Grade (10)	40,870	0.00	531.52	3.15	7.86	2.49

SARYTOR AND SOUTHWEST DEPOSITS

The mineralization wireframes were used to flag 7,777 assay samples from the 282 Southwest Deposit drillholes. The same process was also used to flag 6,554 assay samples from the 249 holes drilled in the Sarytor Deposit. The assay statistics for each respective domain are presented in Table 14-8.

TABLE 14-8 SOUTHWEST AND SARYTOR ZONE ASSAY STATISTICS BY DOMAIN

Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
SW12	3,556	0.00	80.58	1.70	3.47	2.04
SW13	290	0.00	16.10	1.13	1.39	1.23
SW14	244	0.00	27.66	1.51	2.31	1.53
SW15	1,888	0.00	133.07	2.55	6.43	2.52
SW16	785	0.00	38.75	1.40	2.74	1.96
SW17	322	0.00	81.33	1.83	5.20	2.84
SW18	361	0.00	58.12	2.06	4.24	2.06
SW19	194	0.00	160.27	5.65	14.63	2.59
SW20	31	0.00	38.83	4.04	8.89	2.20
Southwest Global	**7,777**	**0.00**	**160.27**	**1.98**	**4.99**	**2.52**
SR01	491	0.00	22.23	1.40	2.39	1.71
SR02	3,311	0.00	104.63	1.73	3.30	1.91
SR03	357	0.00	14.87	1.06	1.56	1.47
SR04	1,088	0.00	114.08	4.40	8.93	2.03
SR05	1,301	0.00	37.03	1.70	2.91	1.71
Sarytor Global	**6,554**	**0.00**	**114.08**	**2.10**	**4.68**	**2.23**

UNDERGROUND ASSAY STATISTICS

SB AND STOCKWORK ZONES

The underground resource estimate for the SB and Stockwork Zones used the 1,795 collar records found within the Central Deposit. The assay statistics for each mineralized domain are presented in Table 14-9.

TABLE 14-9 SB AND STOCKWORK ZONE ASSAY STATISTICS BY DOMAIN

Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
Stockwork High Grade (31)	723	0.00	133.69	11.10	15.91	1.43
SB High Grade (30)	564	0.00	468.94	11.27	23.72	2.10

OPEN PIT ASSAY CAPPING STATISTICS

In positively skewed statistical distributions, high outlier assay values can have a disproportionate effect on average values, which can result in a positive bias to the grade estimate. One way to minimize the potential for bias is to cap or cut high outlier assays to a predetermined value. The Kumtor Mine assays for gold are positively skewed and RPA and Centerra have capped high outlier assay values. RPA recommends that Centerra continue to review and update high grade capping levels as new data become available.

SB ZONE

Gold assay capping levels were determined using production data as a benchmark to determine the appropriate capping level of the high grade domain. A combination of histograms, decile analysis, probability plots, and the visual inspection of higher grade assays spatially were used to determine the capping levels for the low grade domain and waste model. Assays within the high grade domain were capped at 30 g/t Au, assays within the low grade domain were capped at 20 g/t Au, and the remaining waste model assays were capped at 12 g/t Au. All assays were capped prior to compositing.

Table 14-10 summarizes statistics on the raw data after capping was applied.

TABLE 14-10 CAPPED SB ZONE ASSAY STATISTICS BY DOMAIN

Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation	Contained Metal Lost (%)	No. Assays Capped
High Grade (21 to 27)	6,593	0.00	30.00	6.94	7.23	1.04	22	287
Low Grade (50)	34,700	0.00	20.00	1.25	2.29	1.83	7	149
Waste Model (60)	65,910	0.00	12.00	0.27	0.95	3.53	8	130

In general, it can be seen that the application of capping has decreased the coefficient of variation significantly across all domains. The proportion of metal lost from capping at the SB Zone is a function of the strong positive skew of their respective distributions. The strong positive skew is caused by a small number of very high grades (+200 g/t Au) that carry a substantial portion of the contained metal in the uncapped data set.

STOCKWORK ZONE

Gold assay capping levels were determined using a combination of histograms, box-plots, and probability plots, to determine the capping levels for the Stockwork Zone. The current model uses a 50 g/t Au capping level for the low grade and 70 g/t Au for the high grade zones. Assays were capped prior to compositing to 2 m.

Table 14-11 summarizes statistics on the raw data after capping was applied.

TABLE 14-11 CAPPED STOCKWORK ZONE ASSAY STATISTICS BY DOMAIN

Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
High Grade (31)	723	0.00	70.00	10.66	13.54	1.27
Low Grade (10)	40,870	0.00	50.00	3.02	5.83	1.93

SARYTOR AND SOUTHWEST DEPOSITS

Gold assay capping levels were determined using a combination of histograms, box-plots and probability plots, to determine the capping levels for the Sarytor and Southwest Deposits. The flagged assays for each zone were evaluated on both a global and lens by lens basis. Capping levels for the Southwest and Sarytor Deposits were determined to be 33 g/t Au and 30 g/t Au respectively. The current model uses a 30 g/t Au capping level for both zones in order to preserve the same parameters used in previous Sarytor and Southwest resource models. Centerra performed a statistical comparison between assays capped to 30 g/t Au and 2 metre composites capped to 30 g/t Au. This comparison noted that both capped assays and capped 2 metre composites of each lens have very similar means and coefficients of variation. The similarity of the capped assays and capped 2 metre composites indicates that both deposits possess a low degree of downhole variation. Assays were capped prior to compositing to 2 metres.

Table 14-12 summarizes statistics on the raw data after capping was applied.

TABLE 14-12 CAPPED SOUTHWEST AND SARYTOR ZONE ASSAY STATISTICS BY DOMAIN

Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
SW12	3,556	0.00	30.00	1.65	2.74	1.66
SW13	290	0.00	16.10	1.13	1.39	1.23
SW14	244	0.00	27.66	1.51	2.31	1.53
SW15	1,888	0.00	30.00	2.37	4.72	1.99
SW16	785	0.00	30.00	1.39	2.56	1.84
SW17	322	0.00	30.00	1.66	3.00	1.81
SW18	361	0.00	30.00	1.97	3.31	1.68
SW19	194	0.00	30.00	4.52	6.60	1.46
SW20	31	0.00	30.00	3.75	7.84	2.09
Southwest Global	**7,777**	**0.00**	**30.00**	**1.92**	**3.56**	**1.85**
SR01	491	0.00	22.23	1.40	2.39	1.71
SR02	3,311	0.00	30.00	1.68	2.25	1.34
SR03	357	0.00	14.87	1.06	1.56	1.47
SR04	1,088	0.00	30.00	3.97	6.31	1.59
SR05	1,301	0.00	30.00	1.70	2.86	1.68
Sarytor Global	**6,554**	**0.00**	**30.00**	**2.03**	**3.51**	**1.73**

UNDERGROUND ASSAY CAPPING STATISTICS

SB AND STOCKWORK ZONES

Gold assay capping levels were determined using a combination of histograms, box-plots and probability plots, to determine the capping levels for the SB and Stockwork Zones. The current model uses a 70 g/t Au capping level for both high grade zones. Assays were capped prior to compositing to 2 metres.

Table 14-13 summarizes statistics on the raw data after capping was applied.

TABLE 14-13 SB AND STOCKWORK ZONE ASSAY STATISTICS BY DOMAIN

Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
Stockwork High Grade (31)	723	0	70.00	10.66	13.54	1.27
SB High Grade (30)	564	0	70.00	10.19	11.20	1.10

OPEN PIT COMPOSITE STATISTICS

SB ZONE

Sample intervals varied from 0.10 to 11 metres, with 84% of the samples measuring 1.00 metre in length and 11% of the samples measuring from 1.00 to 2.00 metres in length. Only 1% of samples measured more than 2.00 metres in length. Centerra elected to composite assays to 2.00 metres lengths. After capping was applied to the raw assay data, assays were composited to 2.00 metres within each mineralized wireframe domain. Samples were composited in downhole intervals of two metres, starting at the wireframe pierce-point for each domain, continuing to the point at which the hole exited the domain. A small number of unsampled intervals that fell within the low grade domain were ignored during the compositing process because they were generally situated in mineralized areas. A large number of unsampled intervals located within the waste model domain were assigned a value of zero. There were no unsampled intervals within the high grade domain.

Compositing to 2.00 metre intervals occasionally resulted in the last composite in the mineralized domain being less than 2.00 metres. For the composites less than 2.00 metres, RPA examined the grade distributions, including mean grades, of composites greater than and less than 1.00 metre and concluded that no material bias is introduced by including composites less than 2.00 metres.

Table 14-14 summarizes statistics of the composite grades.

TABLE 14-14 SB ZONE COMPOSITE STATISTICS BY DOMAIN

Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
High Grade (20 to 28)	3,287	0.00	30.00	6.68	5.94	0.89
Low Grade (50)	17,981	0.00	20.00	1.21	1.84	1.52
Waste Model (60)	99,012	0.00	12.00	0.09	0.49	5.44

Of note is the significant increase in the number of waste model domain composites over the number of assays. This is due to the creation of samples with zero grades for unsampled intervals.

STOCKWORK ZONE

Sample intervals varied from 0.05 to 8.80 metres, with 66% of the samples measuring 1.00 metre in length and 12% of the samples measuring from 1.00 to 2.00 metres in length. Only 2% of samples measured more than 2.00 metres in length. Centerra elected to composite assays to 2.00 metre lengths. After capping was applied to the raw assay data, assays were composited to 2.00 metres within each mineralized wireframe domain. Samples were composited in downhole intervals of two metres, starting at the collar and ending at the toe. Unsampled intervals with that fell within the high and low grade domains were ignored during the compositing process. Composites with mid-points located within the extruded wireframes were flagged with the code of their respective zone.

Table 14-15 summarizes statistics of the composite grades.

TABLE 14-15 STOCKWORK ZONE COMPOSITE STATISTICS BY DOMAIN

Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
High Grade (31)	323	0.20	68.30	10.49	9.80	0.93
Low Grade (10)	20,938	0.00	50.00	2.88	4.86	1.69

SARYTOR AND SOUTHWEST DEPOSITS

A composite length of two metres was chosen for the Southwest and Sarytor Deposits. This length was based on the most common assay length of 1.00 metre and the relatively thin lens style of mineralization. Each composite was assigned a rock code for assisting in the grade interpolation, codes 1 through 5 for Sarytor and 12 through 20 for Southwest. Prior to building mineralized wireframes using a 0.50 g/t Au cut-off grade, all drillholes were composited and the polylines were snapped to the appropriate composite intervals, which results in no residual composites less than 2.00 metres.

Table 14-16 summarizes statistics of the composite grades.

TABLE 14-16 CAPPED SOUTHWEST AND SARYTOR ZONE 2M COMPOSITE STATISTICS BY DOMAIN

Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
SW12	1,687	0.01	30.00	1.67	2.27	1.36
SW13	129	0.01	5.22	1.14	0.90	0.79
SW14	153	0.05	16.98	1.55	1.91	1.23
SW15	870	0.01	30.00	2.60	4.19	1.61
SW16	356	0.02	15.55	1.52	1.93	1.27
SW17	135	0.03	18.22	1.94	2.59	1.33
SW18	164	0.03	16.00	2.03	2.52	1.24
SW19	87	0.03	30.00	4.68	6.23	1.33
SW20	16	0.25	29.86	3.68	7.47	2.03
Southwest Global	**3,597**	**0.01**	**30.00**	**1.97**	**3.05**	**1.55**
SR01	210	0.01	12.18	1.41	1.82	1.29
SR02	1,471	0.01	20.07	1.68	1.74	1.03
SR03	154	0.01	7.97	1.10	1.06	0.96
SR04	473	0.02	30.00	4.02	5.42	1.35
SR05	561	0.01	15.60	1.82	2.34	1.29
Sarytor Global	**2,869**	**0.01**	**30.00**	**2.04**	**2.93**	**1.43**

UNDERGROUND COMPOSITE STATISTICS

SB AND STOCKWORK ZONES

Similar to the open pit zones, underground assay intervals within each mineralized wireframe domain were composited to 2.00 metre lengths after capping was applied to the raw assay data. Samples were composited in downhole intervals of two metres, starting at the collar and ending at the toe. Unsampled intervals with that fell within the high and low grade domains were ignored during the compositing process. Composites with mid-point located within the extruded wireframes were flagged with the code of their respective zone.

Table 14-17 summarizes statistics of the composite grades.

TABLE 14-17 SB AND STOCKWORK ZONE COMPOSITE STATISTICS BY DOMAIN

Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
Stockwork High Grade (31)	323	0.20	68.30	10.49	9.80	0.93
SB High Grade (30)	251	0.00	42.51	9.98	7.54	0.76

SB ZONE OPEN PIT BLOCK MODEL

DIMENSIONS AND CODING – SB ZONE

A block model framework was created for the SB Zone update in order to cover the entire Central Deposit area using a block size of 10 metres by 10 metres by 10 metres. The block model dimensions were adjusted from the KS13 model in order to accommodate the extents of the mineralized domain wireframes. This block model framework encompasses the extents of the SB and Stockwork Zones. The block model was rotated to align with the southwest-northeast trend of the mineralized domains. The block model extents for the KS-2014YE model are given in Table 14-18. After the estimation of gold grades within the larger block model extents, the SB Zone blocks southwest of Section 86 were imported into the pre-existing KS13 model framework to create the KS-2014YE model.

TABLE 14-18 KS-2014YE BLOCK MODEL EXTENTS

Number of Blocks	
Columns:	380
Rows:	281
Levels:	112
Origin and rotation	
X:	10,375.1321
Y:	17,503.2314
Z:	4,540
Rotation:	41°
Block Size	
Column size:	10
Row size:	10
Level size:	10

Before grade estimation, all model blocks were assigned mineralization and density codes. Each block was assigned a percentage of the volume that was within each mineralized wireframe domain. The volumes of the mineralized domains in the block model were compared to the volumes from the mineralization wireframes and were within ±0.5%. The relevant attributes used in the block model are given in Table 14-19 with a list of the codes used for each attribute is given in Table 14-20.

The KS-2014YE block model project was set up as a multi-folder percent model, with individual folders corresponding to the high grade, low grade and waste model wireframes. After interpolating gold grades within the percent model, a block consolidation script was used to combine the three folders into a single folder. Consolidating the block model generates an average grade for each block based on the proportional grade contribution from each folder.

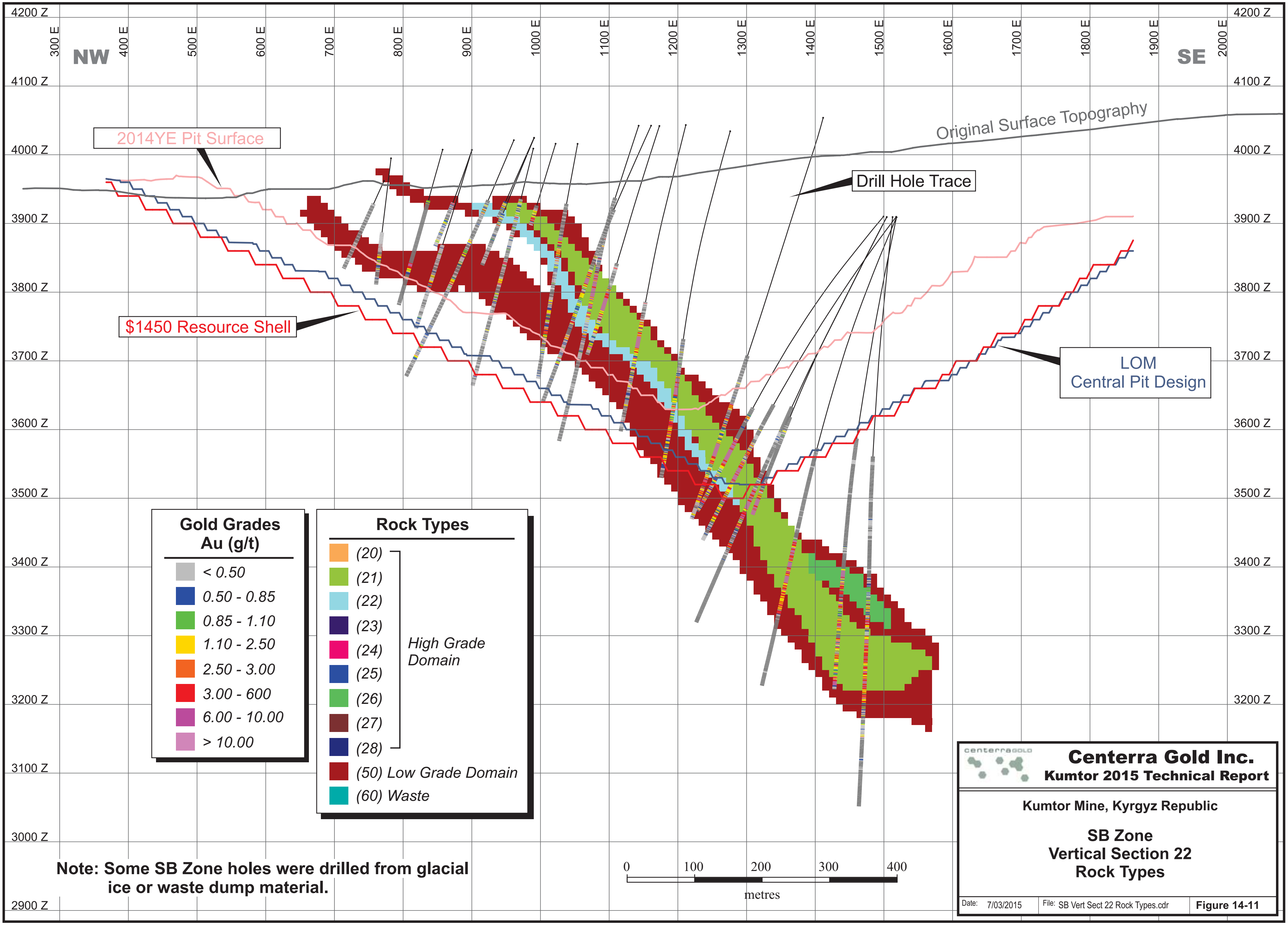
TABLE 14-19 CONSOLIDATED BLOCK MODEL ATTRIBUTES

Attribute Name	Description
Rock Type	Coded Mineralized Domains (majority rules)
Density	Assigned Density
Percent	% of Block within Mineralized Domains
AU30	Capped ID3 Gold Attribute Populated During Estimation
Class	Block Classification
SB_Zone	Model coded to separate the SB Zone from the Stockwork Zone

TABLE 14-20 BLOCK CODING FOR ATTRIBUTES

Domain Name	Description	Rock Type (Code)
High Grade 1 (Main Trend)	Sub-divided for interpolation	20, 21
High Grade 2	Sub-divided for interpolation	22, 28
High Grade 3		23
High Grade 4		24
High Grade 5		25
High Grade 6		26
High Grade 7		27
Low Grade		50
Waste Model		60

Figure 14-11 shows the block model Rock Type coding for the SB Zone.


NW
SE
2014YE Pit Surface
Original Surface Topography
Drill Hole Trace
$1450 Resource Shell
LOM
Central Pit Design
Gold Grades
Au (g/t)
< 0.50
0.50 - 0.85
0.85 - 1.10
1.10 - 2.50
2.50 - 3.00
3.00 - 600
6.00 - 10.00
> 10.00
Rock Types
(20)
(21)
(22)
(23)
(24)
(25)
(26)
(27)
(28)
High Grade Domain
(50) Low Grade Domain
(60) Waste
Note: Some SB Zone holes were drilled from glacial ice or waste dump material.
0 100 200 300 400
metres
Centerra Gold Inc.
Kumtor 2015 Technical Report
Kumtor Mine, Kyrgyz Republic
SB Zone
Vertical Section 22
Rock Types
Date: 7/03/2015
File: SB Vert Sect 22 Rock Types.cdr
Figure 14-11

VARIOGRAPHY AND TREND ANALYSIS – SB ZONE

Variograms for gold were developed in Snowden Supervisor geostatistical software using a subset of blasthole data from the SB Zone. This area measures approximately 175 metres in length along strike and 250 metres down-dip and represents one of two "shoots" of high grade mineralization within the SB Zone that exhibits good geological and grade continuity. Figure 14-12 shows the two high grade shoots along the 3,810 RL mining level as defined by blasthole drilling. The shoot labelled with the number one was used for the variography and trend analysis.

Within the SB Zone, the major axis orientation of 227 degrees dipping -50 degrees SE showed the best relationship between variogram ranges and the mineralized structure. This corresponds well with the High Grade 1 wireframe which has a strike orientation of approximately 042 degrees and dips at approximately -50 degrees to the southeast. There is a minimal (4 degrees) plunge component to the southwest.

The major axis (along strike) and semi-major axis (down dip) are within the plane of the high grade domain and have ranges between 55 metres and 80 metres along strike and between 50 metres and 75 metres down dip. The minor axis orientation (across strike) at 320 degrees shows a variogram range of approximately 15 metres. Figures 14-13 to 14-15 show the major and semi-major and minor axis variograms.

RPA is of the opinion that multiple search orientations are warranted to adequately fit the shape of the mineralization locally and that the search ranges obtained from the variogram analysis provide sufficient support for the search ellipse dimensions used for the estimation.

FIGURE 14-12 HIGH GRADE SHOOTS WITHIN SB ZONE

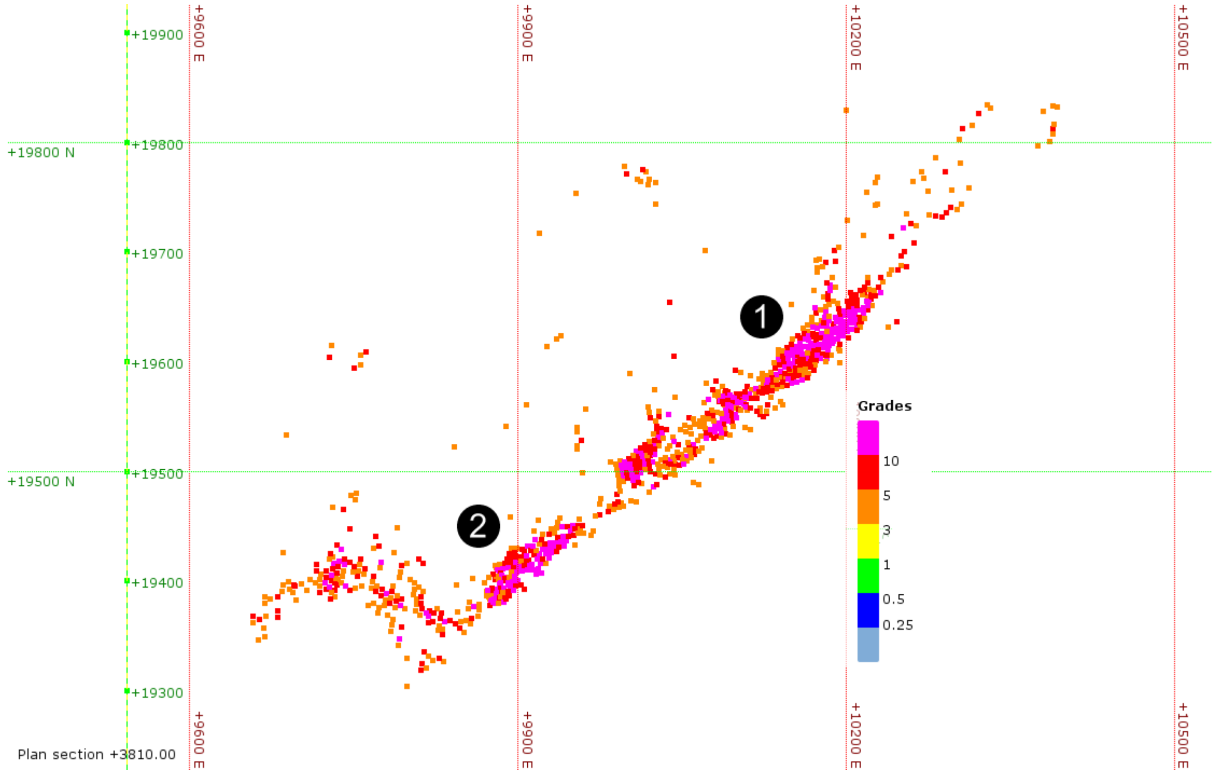


FIGURE 14-13 MAJOR VARIOGRAM (AU) SB ZONE

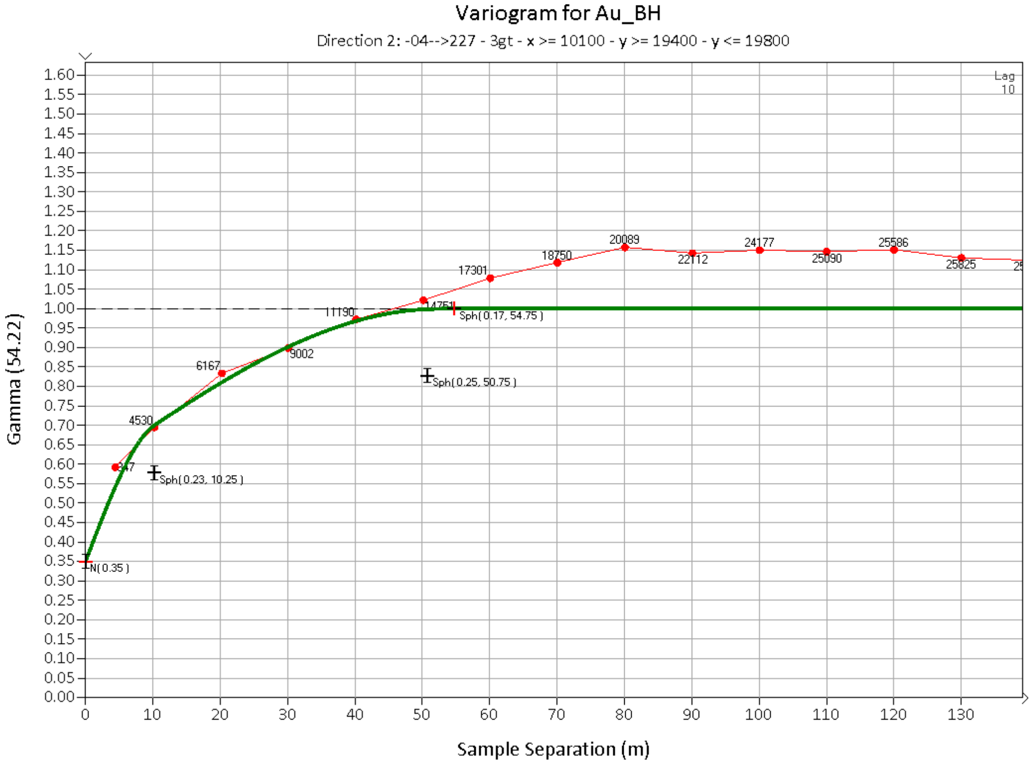


FIGURE 14-14 SEMI-MAJOR VARIOGRAM (AU) SB ZONE

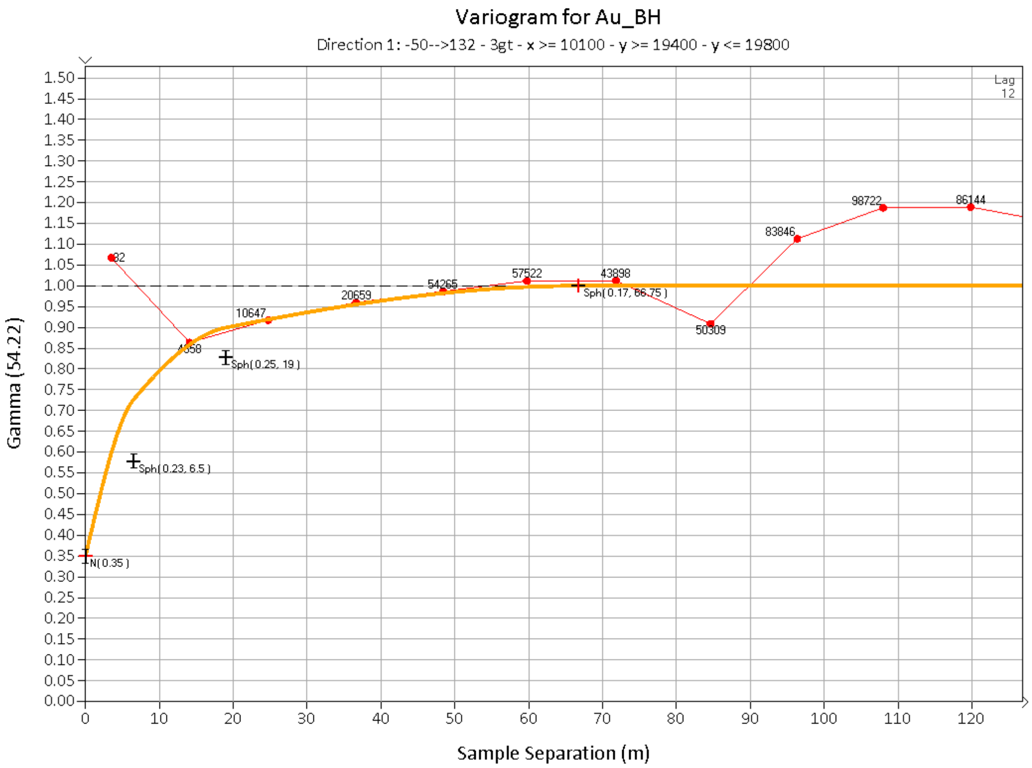
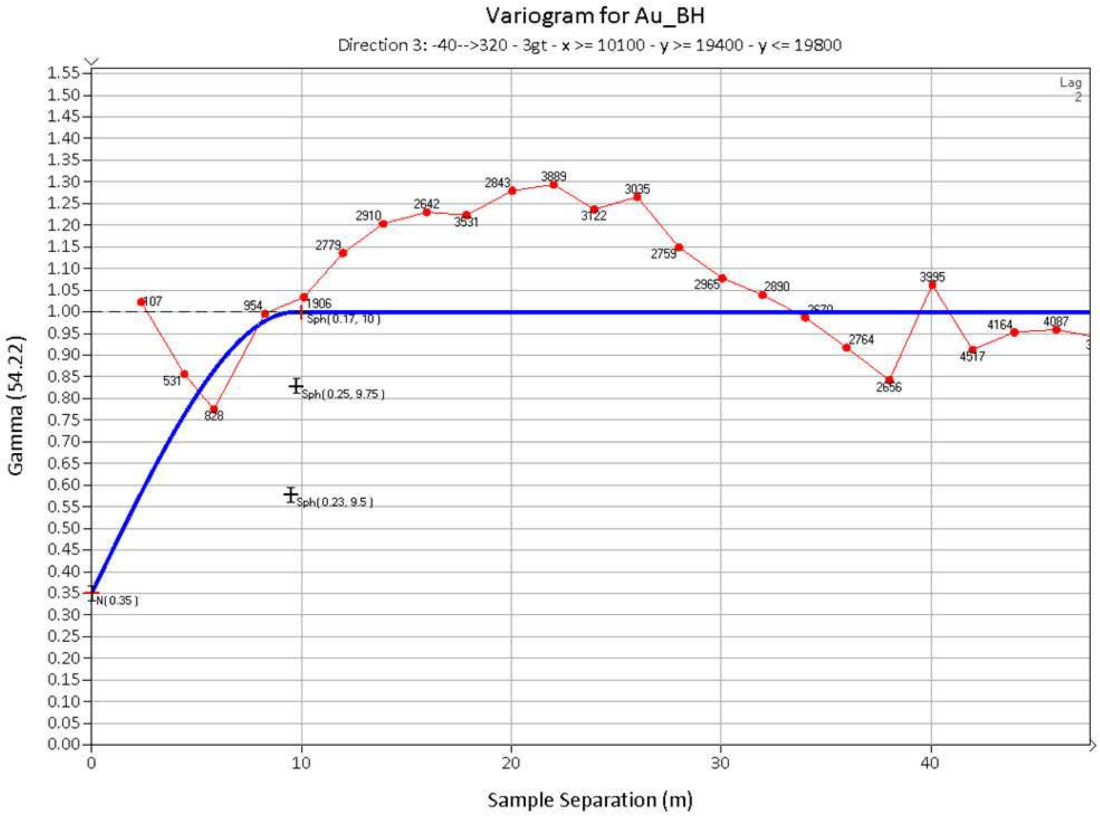


FIGURE 14-15 MINOR VARIOGRAM (AU) SB ZONE



GRADE INTERPOLATION – SB ZONE

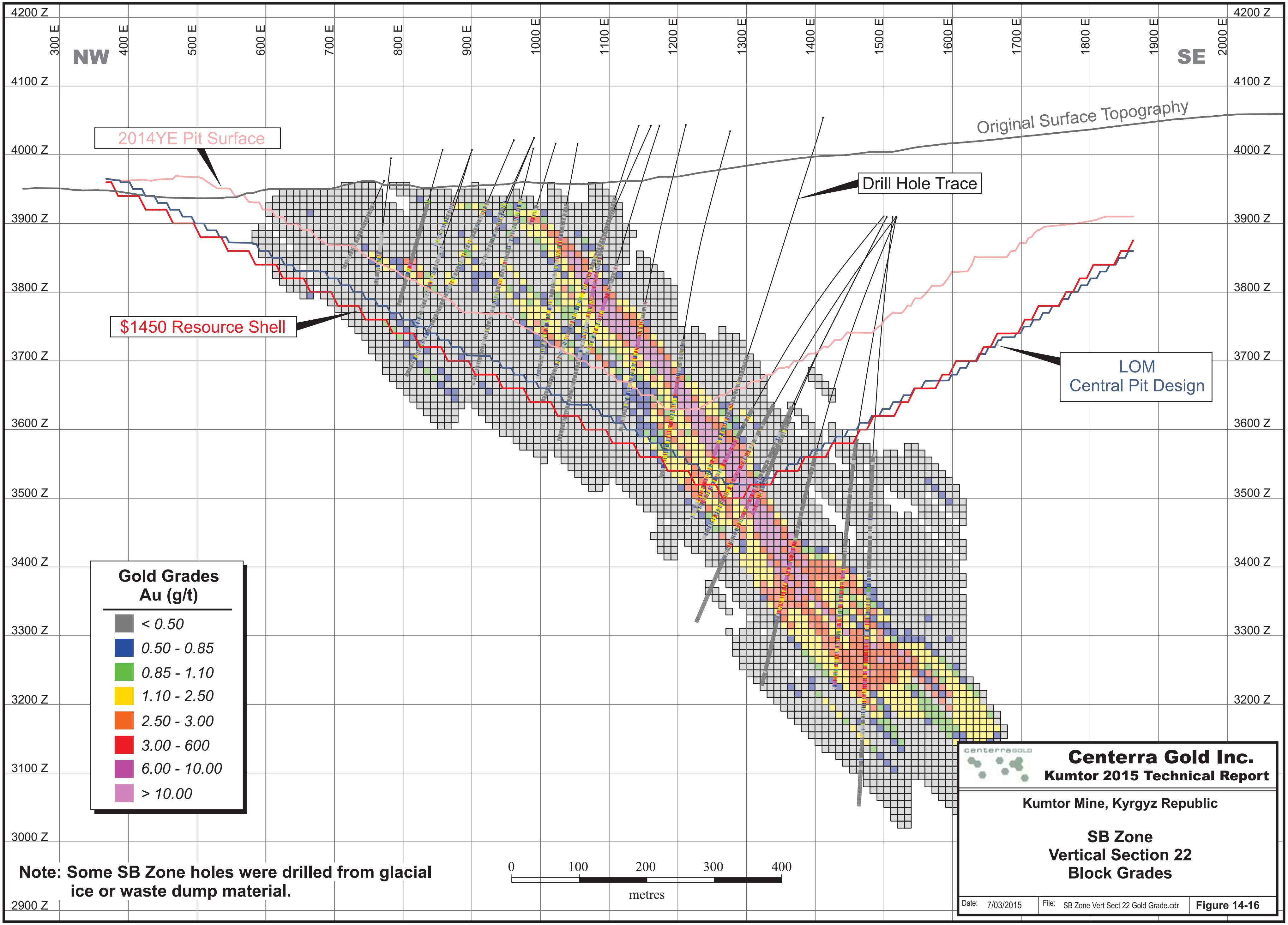
Estimation of gold grades was carried out using inverse distance cubed (ID3) constrained within the mineralized domain wireframes. Three passes with increasingly longer search axes were carried out to ensure that most blocks within the mineralized domain wireframes were assigned a grade and to assist with resource classification. An additional fourth pass was performed to assign grades to the remaining unpopulated blocks in order to allow for volumetric comparisons between block and wireframe volumes. The estimation parameters and ellipse orientations used are summarized in Table 14-21. The subdivided areas of the high grade wireframes were treated as soft boundaries during the interpolation.

The ellipsoid orientations for all mineralized domains were fixed to reflect the variography as well as the dominant azimuth and dip for each domain or sector. Figures 14-16 and 14-17 show the interpolated gold block grades relative to the composites.

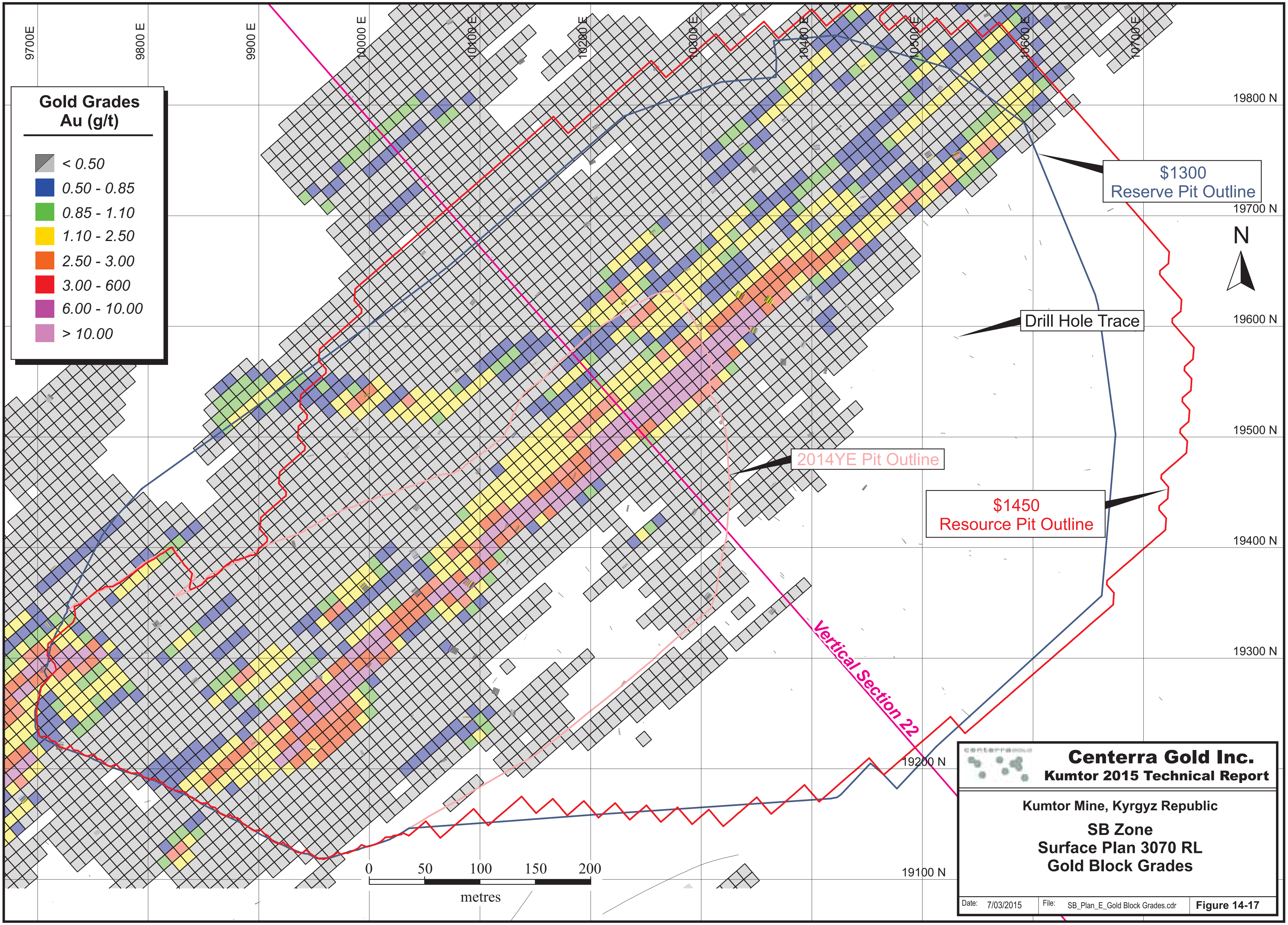
TABLE 14-21 SB ZONE INTERPOLATION PARAMETERS AND ELLIPSE ORIENTATIONS

Estimation Pass	**HG (21-25,27)**	**HG (20)**	**HG (26)**	**HG (28)**	**LG (50)**	**Waste (60)**
Estimation Pass 1:						
Samples						
Min. samples used	6	6	6	6	6	6
Max. samples used	15	15	15	15	15	15
Max. samples per hole	5	5	5	5	5	5
Distances						
Range Major (m)	50	50	50	50	50	50
Range Semi-Major (m)	50	50	50	50	50	50
Range Minor (m)	10	10	10	10	10	10
Ellipsoid Orientation (GEMS ZXZ)						
Rotation about 'Z' (degrees)	*-1.0*	*20*	*-40*	*-14.0*	*-1.0*	*-1.0*
Rotation about 'X' (degrees)	*50.0*	*50.0*	*35.0*	*40.0*	*50.0*	*50.0*
Rotation about 'Z' (degrees)	*-85.0*	*-85.0*	*-85.0*	*-85.0*	*-85.0*	*-85.0*
Estimation Pass 2:						
Samples						
Min. samples used	5	5	5	5	5	5
Max. samples used	15	15	15	15	15	15

Estimation Pass	HG (21-25,27)	HG (20)	HG (26)	HG (28)	LG (50)	Waste (60)
Max. samples per hole	5	5	5	5	5	5
Distances						
Range Major (m)	75	75	75	75	75	75
Range Semi-Major (m)	75	75	75	75	75	75
Range Minor (m)	15	15	15	15	15	15
Ellipsoid Orientation (GEMS ZXZ)						
Rotation about 'Z' (degrees)	*-1.0*	*20*	*-40*	*-14.0*	*-1.0*	*-1.0*
Rotation about 'X' (degrees)	*50.0*	*50.0*	*35.0*	*40.0*	*50.0*	*50.0*
Rotation about 'Z' (degrees)	*-85.0*	*-85.0*	*-85.0*	*-85.0*	*-85.0*	*-85.0*
Estimation Pass 3:						
Samples						
Min. samples used	*1*	*1*	*1*	*1*	*1*	*1*
Max. samples used	*15*	*15*	*15*	*15*	*15*	*15*
Max. samples per hole	-	-	-	-	-	-
Distances						
Range Major (m)	100	100	100	100	100	100
Range Semi-Major (m)	100	100	100	100	100	100
Range Minor (m)	20	20	20	20	20	20
Ellipsoid Orientation (GEMS ZXZ)						
Rotation about 'Z' (degrees)	*-1.0*	*20*	*-40*	*-14.0*	*-1.0*	*-1.0*
Rotation about 'X' (degrees)	*50.0*	*50.0*	*35.0*	*40.0*	*50.0*	*50.0*
Rotation about 'Z' (degrees)	*-85.0*	*-85.0*	*-85.0*	*-85.0*	*-85.0*	*-85.0*



4200 Z
4100 Z
4000 Z
3900 Z
3800 Z
3700 Z
3600 Z
3500 Z
3400 Z
3300 Z
3200 Z
3100 Z
3000 Z
2900 Z
300 E
400 E
500 E
600 E
700 E
800 E
900 E
1000 E
1100 E
1200 E
1300 E
1400 E
1500 E
1600 E
1700 E
1800 E
1900 E
2000 E
NW
SE
Original Surface Topography
2014YE Pit Surface
Drill Hole Trace
$1450 Resource Shell
LOM
Central Pit Design
Gold Grades
Au (g/t)
< 0.50
0.50 - 0.85
0.85 - 1.10
1.10 - 2.50
2.50 - 3.00
3.00 - 600
6.00 - 10.00
> 10.00
0
100
200
300
400
metres
Note: Some SB Zone holes were drilled from glacial ice or waste dump material.
Centerra Gold Inc.
Kumtor 2015 Technical Report
Kumtor Mine, Kyrgyz Republic
SB Zone
Vertical Section 22
Block Grades
Date: 7/03/2015
File: SB Zone Vert Sect 22 Gold Grade.cdr
Figure 14-16



Gold Grades
Au (g/t)
< 0.50
0.50 - 0.85
0.85 - 1.10
1.10 - 2.50
2.50 - 3.00
3.00 - 600
6.00 - 10.00
> 10.00
9700E
9800 E
9900 E
10000 E
10100 E
10200 E
10300 E
10400 E
10500 E
10600 E
10700 E
19800 N
19700 N
19600 N
19500 N
19400 N
19300 N
19200 N
19100 N
N
$1300
Reserve Pit Outline
Drill Hole Trace
2014YE Pit Outline
$1450
Resource Pit Outline
Vertical Section 22
0
50
100
150
200
metres
Centerra Gold Inc.
Kumtor 2015 Technical Report
Kumtor Mine, Kyrgyz Republic
SB Zone
Surface Plan 3070 RL
Gold Block Grades
Date: 7/03/2015
File: SB_Plan_E_Gold Block Grades.cdr
Figure 14-17

STOCKWORK ZONE OPEN PIT BLOCK MODEL

DIMENSIONS AND CODING –STOCKWORK ZONE

The KS13 block model framework was created to cover the entire Central Deposit area using a block size of 10 metres by 10 metres by 10 metres. This block model framework encompasses the extents of the SB and Stockwork Zones. The block model was rotated to align with the southwest-northeast trend of the mineralized domains. As mentioned previously, the SB Zone blocks southwest of Section 86 were imported into the pre-existing KS13 model framework to create the KS-2014YE model. The block model extents for the KS-2014YE model are given in Table 14-22.

TABLE 14-22 KS-2014YE BLOCK MODEL EXTENTS

Number of Blocks	
Columns:	380
Rows:	281
Levels:	112
Origin and rotation	
X:	10,375.1321
Y:	17,503.2314
Z:	4,540
Rotation:	41°
Block Size (m)	
Column size:	10
Row size:	10
Level size:	10

Before grade estimation, all model blocks were assigned mineralization and density codes. Each block was assigned a percentage of the volume that was within each mineralized wireframe domain. The relevant attributes used in the block model are given in Table 14-23 with a list of the codes used for each attribute given in Table 14-24.

The KS13 project is set up as a percent model, with individual folders corresponding to the high grade, and low grade wireframes in order to more accurately estimate the tonnage of the narrower mining zones. After interpolating gold grades within the percent model, external dilution at zero grade was added to mineralized blocks that straddle waste to create a diluted block model that was used for open pit optimization.

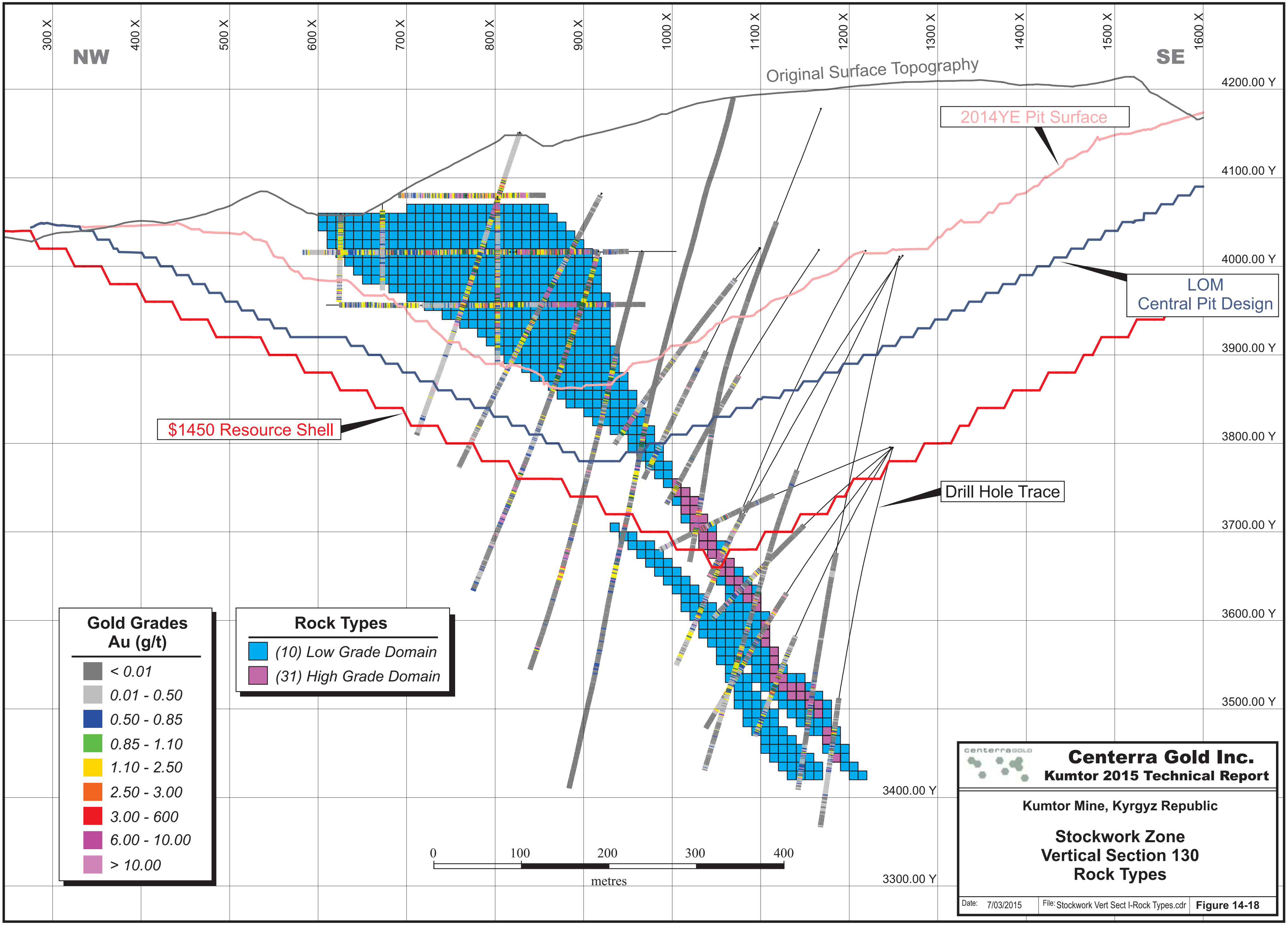
TABLE 14-23 DILUTED KS13 BLOCK MODEL ATTRIBUTES

Attribute Name	Description
Rock Type	Mineralized Domains
Density	Assigned Density
AU-RESERVE	Diluted Capped OK Gold Attribute
Class	Block Classification

TABLE 14-24 BLOCK CODING FOR ATTRIBUTES

Domain Name	Rock Type (Code)
High Grade	31
Low Grade	10

Figure 14-18 shows the block model Rock Type coding for the Stockwork Zone.


NW
SE
300 X
400 X
500 X
600 X
700 X
800 X
900 X
1000 X
1100 X
1200 X
1300 X
1400 X
1500 X
1600 X
4200.00 Y
4100.00 Y
4000.00 Y
3900.00 Y
3800.00 Y
3700.00 Y
3600.00 Y
3500.00 Y
3400.00 Y
3300.00 Y
Original Surface Topography
2014YE Pit Surface
LOM
Central Pit Design
$1450 Resource Shell
Drill Hole Trace
Gold Grades
Au (g/t)
< 0.01
0.01 - 0.50
0.50 - 0.85
0.85 - 1.10
1.10 - 2.50
2.50 - 3.00
3.00 - 600
6.00 - 10.00
> 10.00
Rock Types
(10) Low Grade Domain
(31) High Grade Domain
0
100
200
300
400
metres
Centerra Gold Inc.
Kumtor 2015 Technical Report
Kumtor Mine, Kyrgyz Republic
Stockwork Zone
Vertical Section 130
Rock Types
Date: 7/03/2015
File: Stockwork Vert Sect I-Rock Types.cdr
Figure 14-18

VARIOGRAPHY AND TREND ANALYSIS –STOCKWORK ZONE

Blasthole data from open pit mining were not used for grade estimation but were used qualitatively for variography.

Centerra found that a major axis orientation of 042.5˚ dipping -47.5˚ to the southeast showed the best relationship between variogram ranges and the mineralized structure. This corresponds well with the general orientation of the Central Deposit mineralized corridor and is consistent with the grade continuity orientations observed at the SB Zone. A range of 90 metres was observed in the major-axis orientation.

The variograms in the downhole direction show a relative nugget effect of 43% in the low grade domain and a relative nugget effect of 30% in the high grade domain. Spherical structures have been used to model the variogram directions for the high and low grade domains. Table 14-25 presents the variograms parameters for the high and low grade domains of the Stockwork Zone.

TABLE 14-25 VARIOGRAM PARAMETERS FOR STOCKWORK ZONE

Deposit	Structure Type	Variogram Parameter	Parameter Used
Stockwork	1st: Nugget Effect	C0	0.43
LG (Domain 10)	2nd: Spherical	Sill	0.43
		Range - Primary	24 m
		Range – Semi-Major	8 m
		Range - Minor	25 m
		Rotation Angle - X	135°
		Rotation Angle - X	-48°
		Rotation Angle - Y	45°
	3nd: Spherical	Sill	0.15
		Range - Primary	344 m
		Range – Semi-Major	356 m
		Range - Minor	58 m
		Rotation Angle - X	135°
		Rotation Angle - X	-48°
		Rotation Angle - Y	45°
Stockwork	1st: Nugget Effect	C0	0.3
HG (Domain 31)	2nd: Spherical	Sill	0.43

Deposit	Structure Type	Variogram Parameter	Parameter Used
		Range - Primary	25.3 m
		Range – Semi-Major	25.3 m
		Range - Minor	7.5 m
		Rotation Angle - X	135°
		Rotation Angle - X	-48°
		Rotation Angle - Y	45°
	3nd: Spherical	Sill	0.27
		Range - Primary	193 m
		Range – Semi-Major	99 m
		Range - Minor	49.5 m
		Rotation Angle - Z	135°
		Rotation Angle - X	-48°
		Rotation Angle - Y	45°

GRADE INTERPOLATION –STOCKWORK ZONE

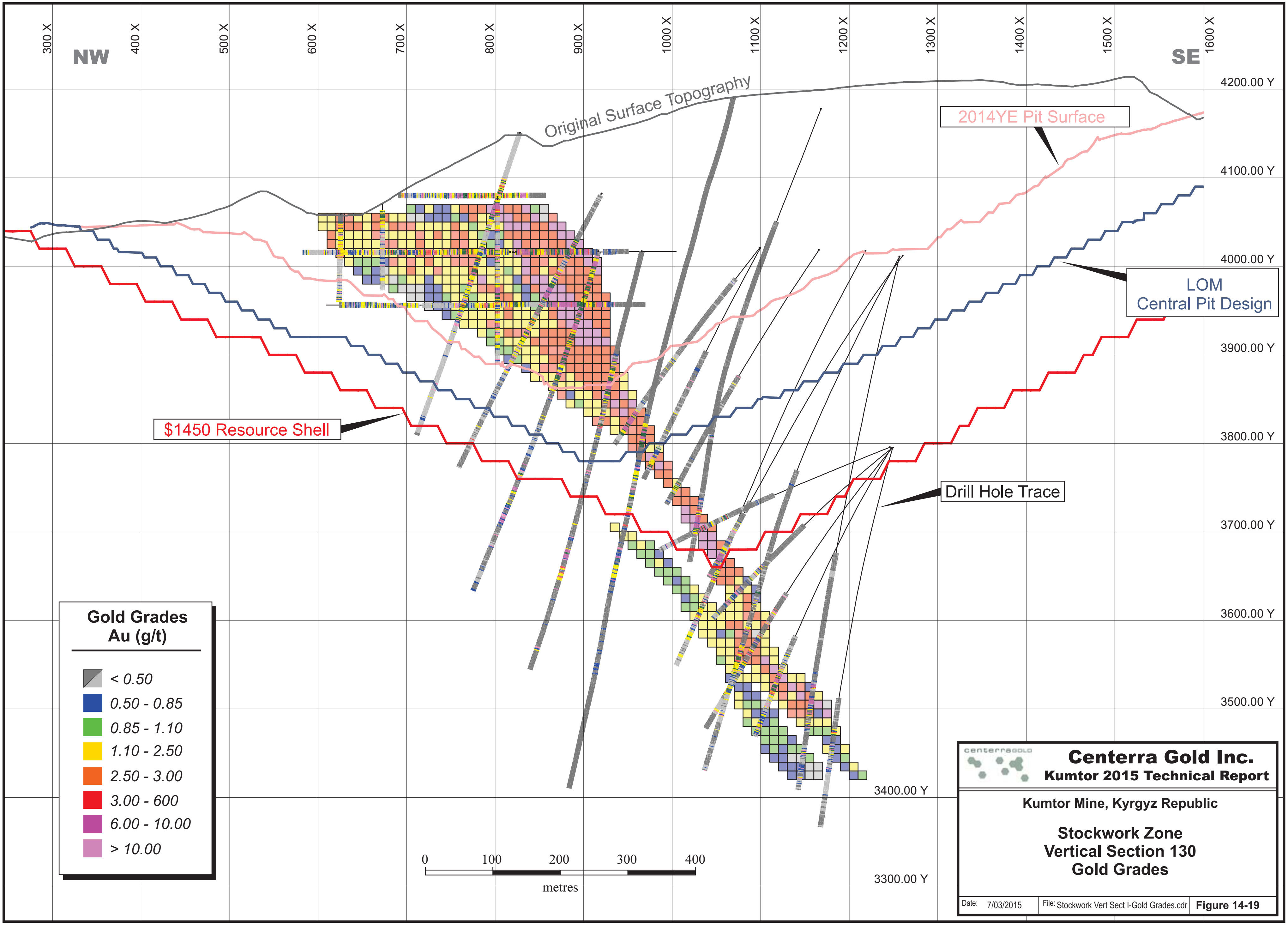
Estimation of gold grades was carried out using Ordinary Kriging (OK) constrained within the mineralized domain wireframes. Three passes with increasingly longer search radii were carried out to ensure that most blocks within the mineralized domain wireframes were assigned a grade and to assist with resource classification. The estimation parameters and ellipse orientations used are summarized in Table 14-26. Gold grades were interpolated with a "soft boundary" such that both high and low grade composites could be used to interpolate both high and low grade mineralized blocks. The goal was to create a smoother gold grade distribution within the entire mineralized envelope, which lowers overall gold grade of the mineralized zone similar to what was observed from open pit production results within the Stockwork Zone.

The ellipsoid orientations for all mineralized domains were fixed to reflect the variography as well as the dominant azimuth and dip for each domain or sector. Figures 14-19 and 14-20 show the interpolated gold block grades relative to the composites.

TABLE 14-26 STOCKWORK ZONE INTERPOLATION PARAMETERS AND ELLIPSE ORIENTATIONS

	HG (31)	LG (10)
Estimation Pass 1:		
Samples		
Min. samples used	7	4
Max. samples used	16	12
Max. samples per hole	3	3
Distances		
Range Major (m)	30	30
Range Semi-Major (m)	30	30
Range Minor (m)	15	20
Ellipsoid Orientation (GEMS ZXZ)		
Rotation about ‘Z’ (degrees)	*5*	*5*
Rotation about ‘X’ (degrees)	*48*	*48*
Rotation about ‘Z’ (degrees)	*9*	*9*
Estimation Pass 2:		
Samples		
Min. samples used	4	4
Max. samples used	12	12
Max. samples per hole	3	3
Distances		
Range Major (m)	60	70
Range Semi-Major (m)	60	70
Range Minor (m)	20	30
Ellipsoid Orientation (GEMS ZXZ)		
Rotation about ‘Z’ (degrees)	*5*	*5*
Rotation about ‘X’ (degrees)	*48*	*48*
Rotation about ‘Z’ (degrees)	*9*	*9*
Estimation Pass 3:		
Samples		
Min. samples used	4	4
Max. samples used	12	12
Max. samples per hole	3	3

	HG (31)	LG (10)
Distances		
Range Major (m)	120	90
Range Semi-Major (m)	120	90
Range Minor (m)	40	30
Ellipsoid Orientation (GEMS ZXZ)		
Rotation about ‘Z’ (degrees)	*5*	*5*
Rotation about ‘X’ (degrees)	*48*	*48*
Rotation about ‘Z’ (degrees)	*9*	*9*



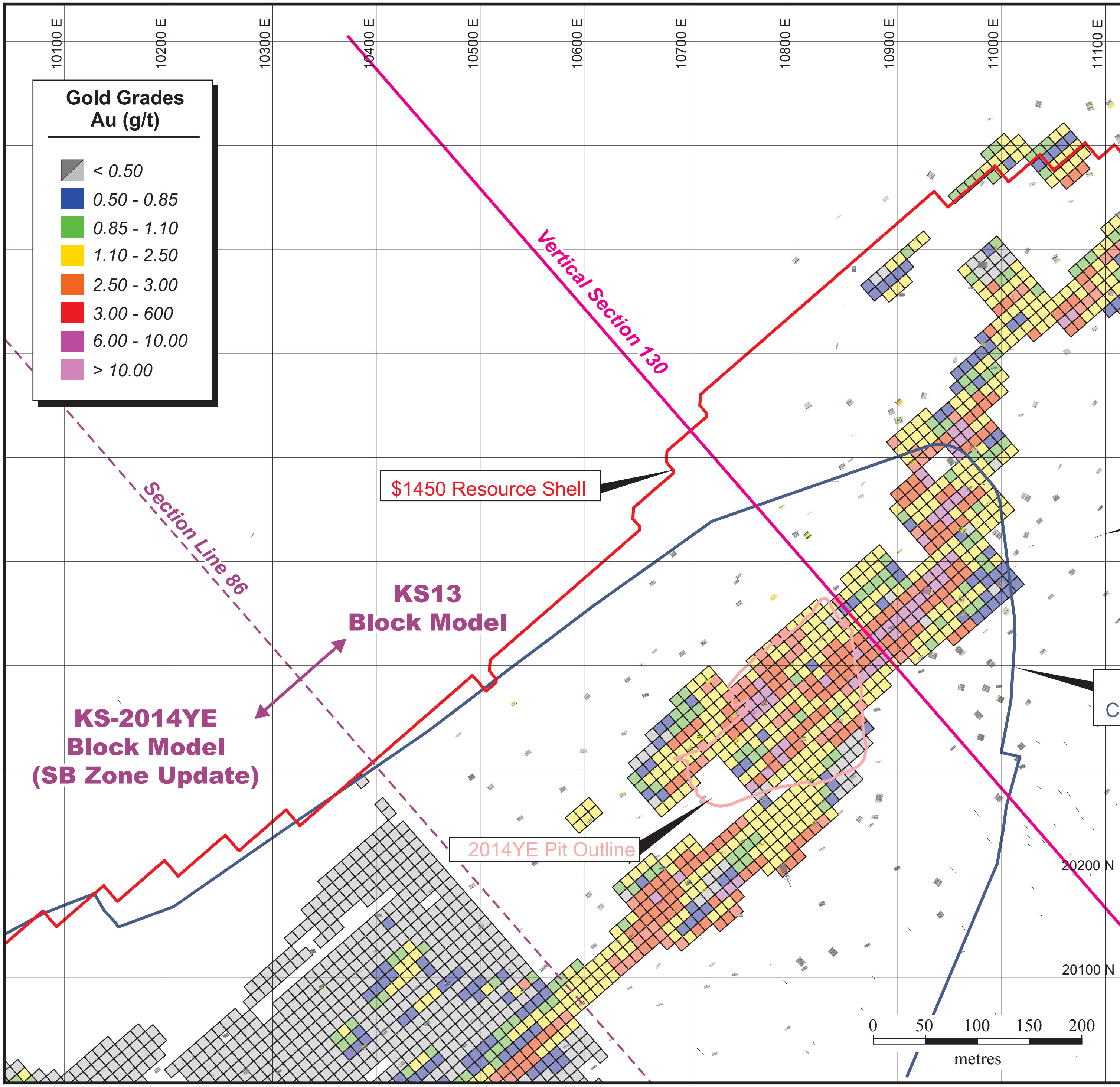
centerra GOLD

Centerra Gold Inc.
Kumtor 2015 Technical Report

Kumtor Mine, Kyrgyz Republic

Stockwork Zone
Vertical Section 130
Gold Grades

Date: 7/03/2015 | File: Stockwork Vert Sect I-Gold Grades.cdr | **Figure 14-19**



centerraGOLD

Centerra Gold Inc.
Kumtor 2015 Technical Report

Kumtor Mine, Kyrgyz Republic

Stockwork Zone
Plan 3850 RL
Gold Grades

Date: 7/03/2015	File: Stockwork Plans Gold Grades.cdr	Figure 14-20

SOUTHWEST AND SARYTOR OPEN PIT BLOCK MODELS

DIMENSIONS AND CODING – SARYTOR AND SOUTHWEST DEPOSITS

A block model framework was created to cover the Sarytor and Southwest Deposit area using a block size of 10 metres by 10 metres by 4 metres. The block model was rotated to align with the southwest-northeast trend of the mineralized domains. The block model extents for the SRSW-2014YE model are given in Table 14-27.

TABLE 14-27 SRSW-2014YE BLOCK MODEL EXTENTS

Number of Blocks	
Columns:	350
Rows:	330
Levels:	250
Origin and rotation	
X:	7,733.649
Y:	15,207.025
Z:	4,538
Rotation:	41°
Block Size (m)	
Column size:	10
Row size:	10
Level size:	4

Before grade estimation, all model blocks were assigned mineralization and density codes. Each block was assigned a percentage of the volume that was within each mineralized wireframe domain. The volumes of the mineralized domains in the block model were compared to the volumes from the mineralization wireframes and were within ±0.5%. The relevant attributes used in the block model are given in Table 14-28 with a list of the codes used for each attribute given in Table 14-29.

The Sarytor and Southwest block model project is set up as a two-folder percent model, with individual folders corresponding to the mineralized wireframes and the material outside of the wireframes (waste). After the interpolation of block grades, dilution was applied to the grade model and the pit optimization was performed using both the block grades and percentages.

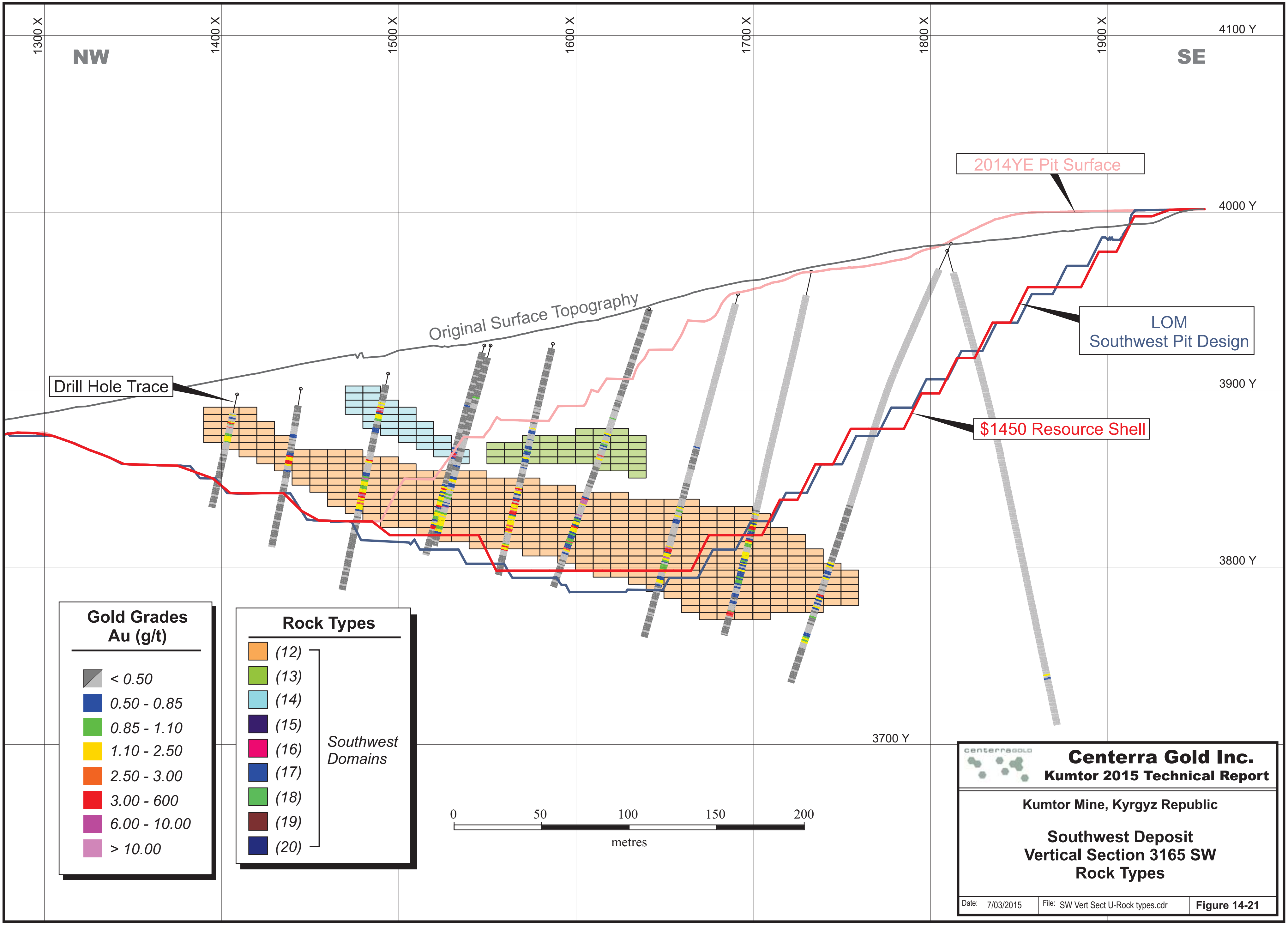
TABLE 14-28 SARYTOR AND SOUTHWEST BLOCK MODEL ATTRIBUTES

Attribute Name	Description
Rock Type	Coded Mineralized Domains (majority rules)
Density	Assigned Density
Percent	% of Block within Mineralized Domains
AU	Capped Ordinary Kriging Gold Grade
Class	Block Classification

TABLE 14-29 SARYTOR AND SOUTHWEST ROCK TYPE CODES

Deposit	Domain Name	Rock Type (Code)	Density (t/m³)
Southwest	SW12	12	2.85
	SW13	13	2.85
	SW14	14	2.85
	SW15	15	2.85
	SW16	16	2.85
	SW17	17	2.85
	SW18	18	2.85
	SW19	19	2.85
	SW20	20	2.85
Sarytor	SR01	1	2.85
	SR02	2	2.85
	SR03	3	2.85
	SR04	4	2.85
	SR05	5	2.85

Figure 14-21 shows the block model Rock Type coding for the Southwest Deposit.


1300 X
1400 X
1500 X
1600 X
1700 X
1800 X
1900 X
4100 Y
4000 Y
3900 Y
3800 Y
3700 Y
NW
SE
2014YE Pit Surface
Original Surface Topography
Drill Hole Trace
LOM
Southwest Pit Design
$1450 Resource Shell
Gold Grades
Au (g/t)
< 0.50
0.50 - 0.85
0.85 - 1.10
1.10 - 2.50
2.50 - 3.00
3.00 - 600
6.00 - 10.00
> 10.00
Rock Types
(12)
(13)
(14)
(15)
(16)
(17)
(18)
(19)
(20)
Southwest
Domains
0
50
100
150
200
metres
Centerra Gold Inc.
Kumtor 2015 Technical Report
Kumtor Mine, Kyrgyz Republic
Southwest Deposit
Vertical Section 3165 SW
Rock Types
Date: 7/03/2015
File: SW Vert Sect U-Rock types.cdr
Figure 14-21

VARIOGRAPHY AND TREND ANALYSIS – SARYTOR AND SOUTHWEST DEPOSITS

Variograms for gold were developed in GEMS using 2 metre composites for each of the two deposits. Since the collective lenses in each deposit have similar attitudes and have been interpreted as being contiguous below the Sarytor Glacier, the composites for each of the two deposits were considered both separately and as a whole. Variograms were calculated to assess the continuity in the three major directions.

The variogram model of the primary (major) and secondary (semi-major) axes of the Sarytor Deposit are shown in Figures 14-22 and 14-23.

The variogram model of the primary (major) and secondary (semi-major) axes of the Southwest Deposit are shown in Figures 14-24 and 14-25.

FIGURE 14-22 MAJOR AXIS VARIOGRAM FOR THE SARYTOR DEPOSIT

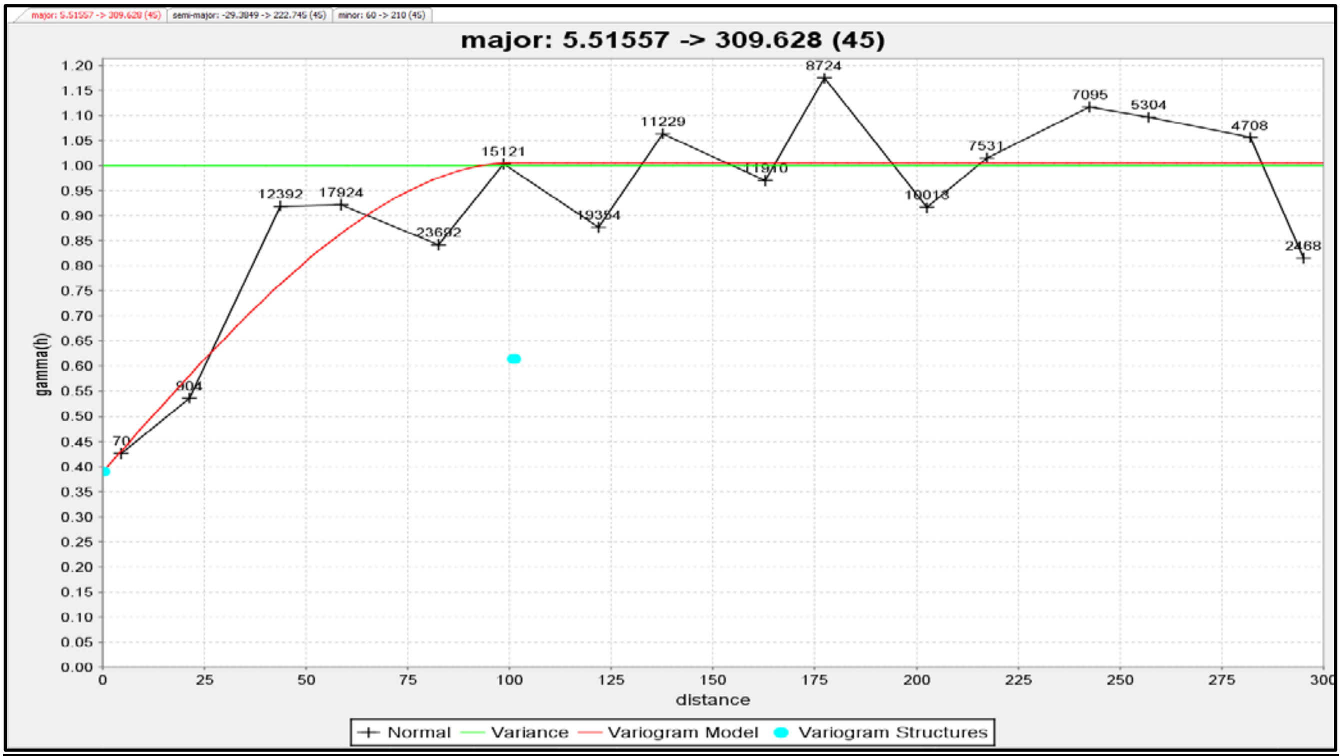


FIGURE 14-23 SEMI-MAJOR AXIS VARIOGRAM FOR THE SARYTOR DEPOSIT

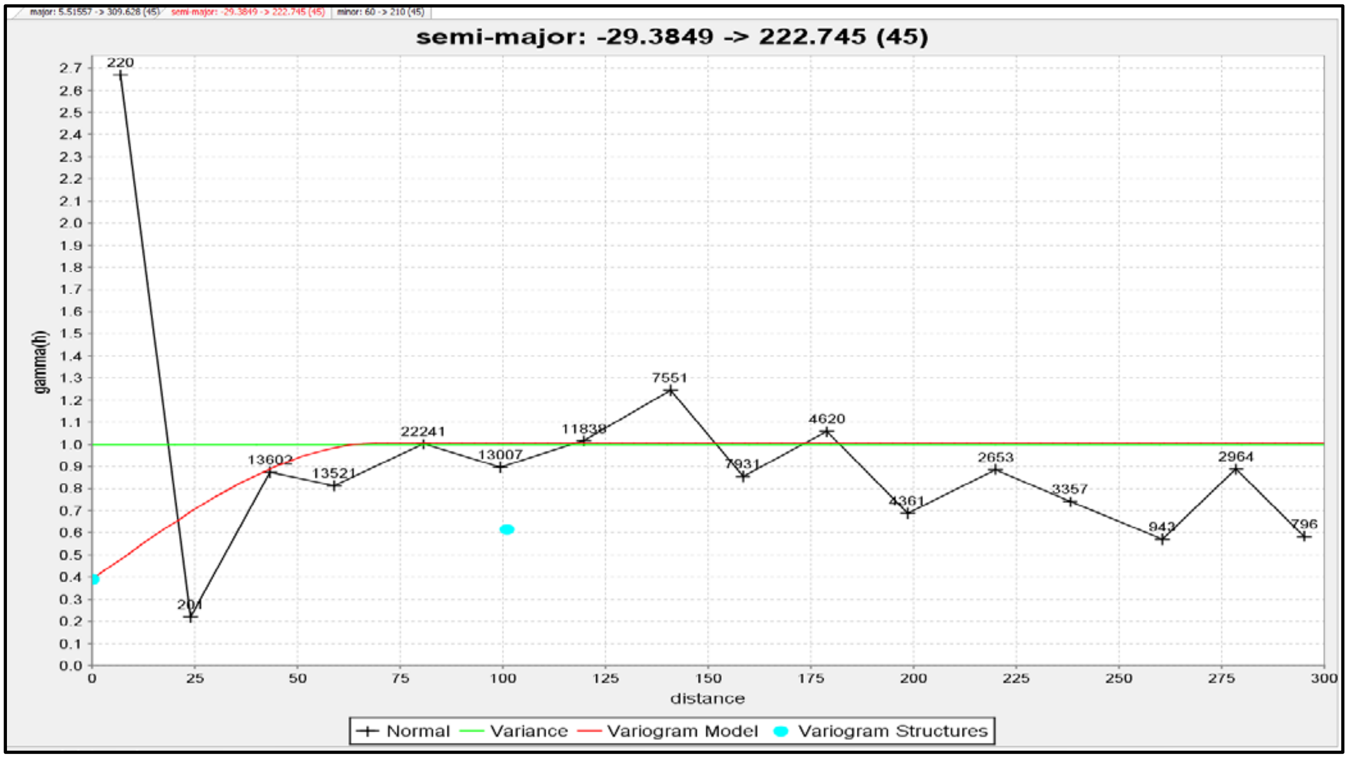


FIGURE 14-24 MAJOR AXIS VARIOGRAM FOR THE SOUTHWEST DEPOSIT

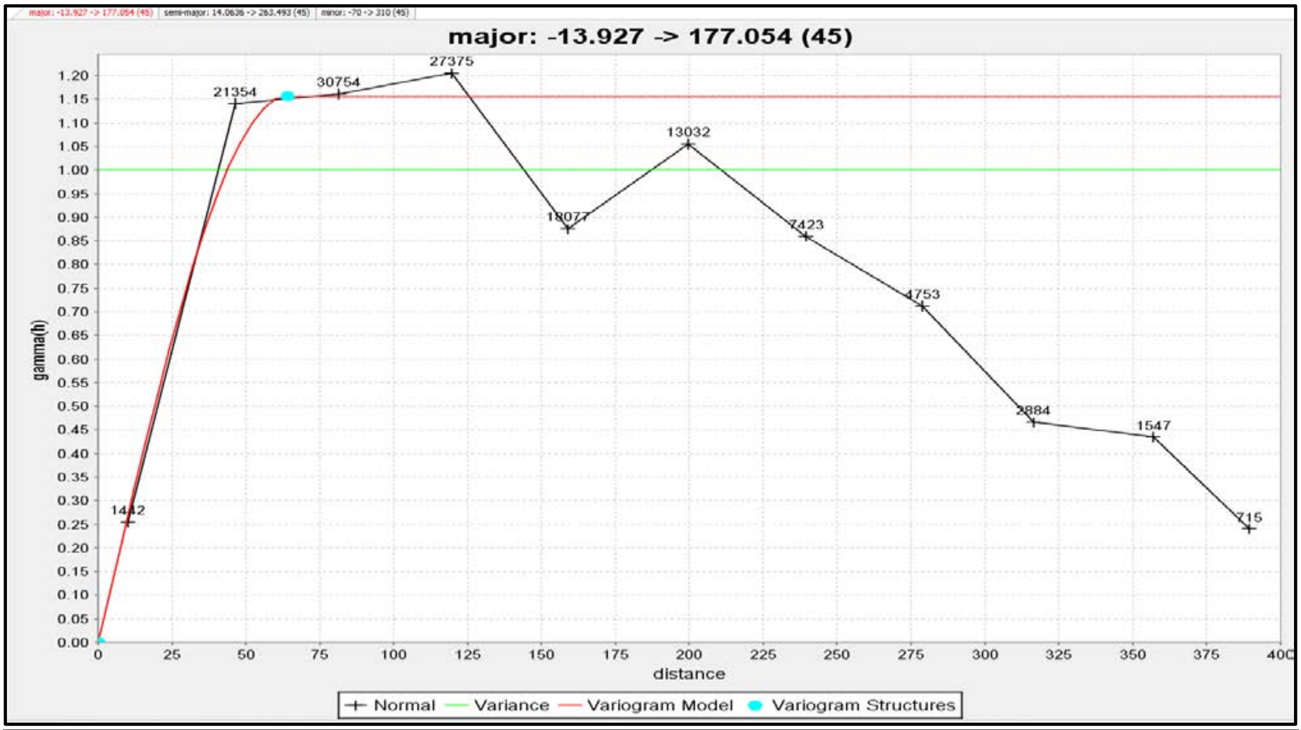
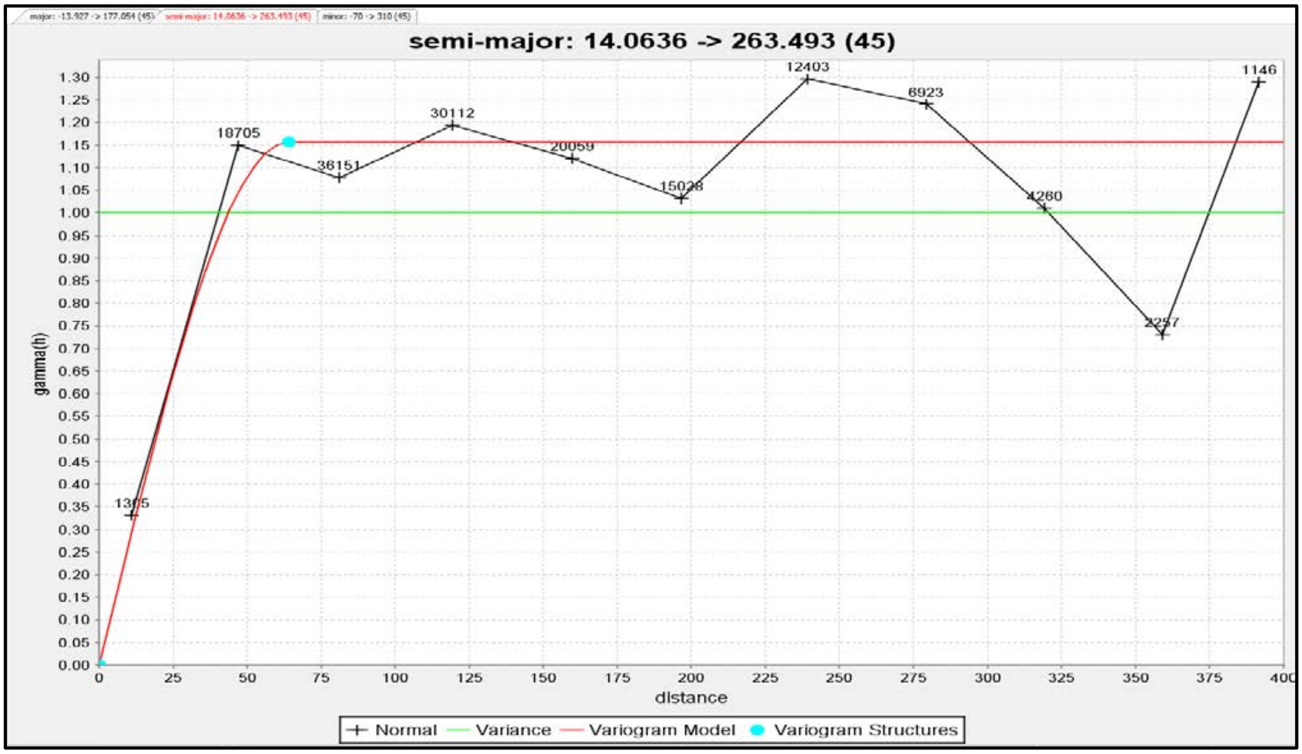


FIGURE 14-25 SEMI-MAJOR AXIS VARIOGRAM FOR THE SOUTHWEST DEPOSIT



As can be seen in Figures 14-22 to 14-25, the experimental variograms show acceptable continuity in the principal and secondary directions. The variograms in the downhole direction show a relative nugget effect of 27% in the Southwest Deposit and no nugget effect in the Sarytor Deposit. Spherical structures have been used to model the variogram directions for the Sarytor and Southwest Deposits. Table 14-30 presents the variogram parameters for Sarytor and Southwest.

TABLE 14-30 VARIOGRAM PARAMETERS FOR SARYTOR AND SOUTHWEST

Deposit	Structure Type	Variogram Parameter	Parameter Used
Southwest	1st: Nugget Effect	C0	1.69
	2nd: Spherical	Sill	6.30
		Range - Primary	70 m
		Range – Semi-Major	70 m
		Range - Minor	30 m
		Rotation Angle - Z	310°
		Rotation Angle - X	20°
		Rotation Angle - Y	220°
Sarytor	1st: Nugget Effect	C0	0.00
	2nd: Spherical	Sill	5.85
		Range - Primary	58 m
		Range – Semi-Major	58 m
		Range - Minor	25 m
		Rotation Angle - Z	176°
		Rotation Angle - X	-14°
		Rotation Angle - Y	263°

GRADE INTERPOLATION – SARYTOR AND SOUTHWEST DEPOSITS

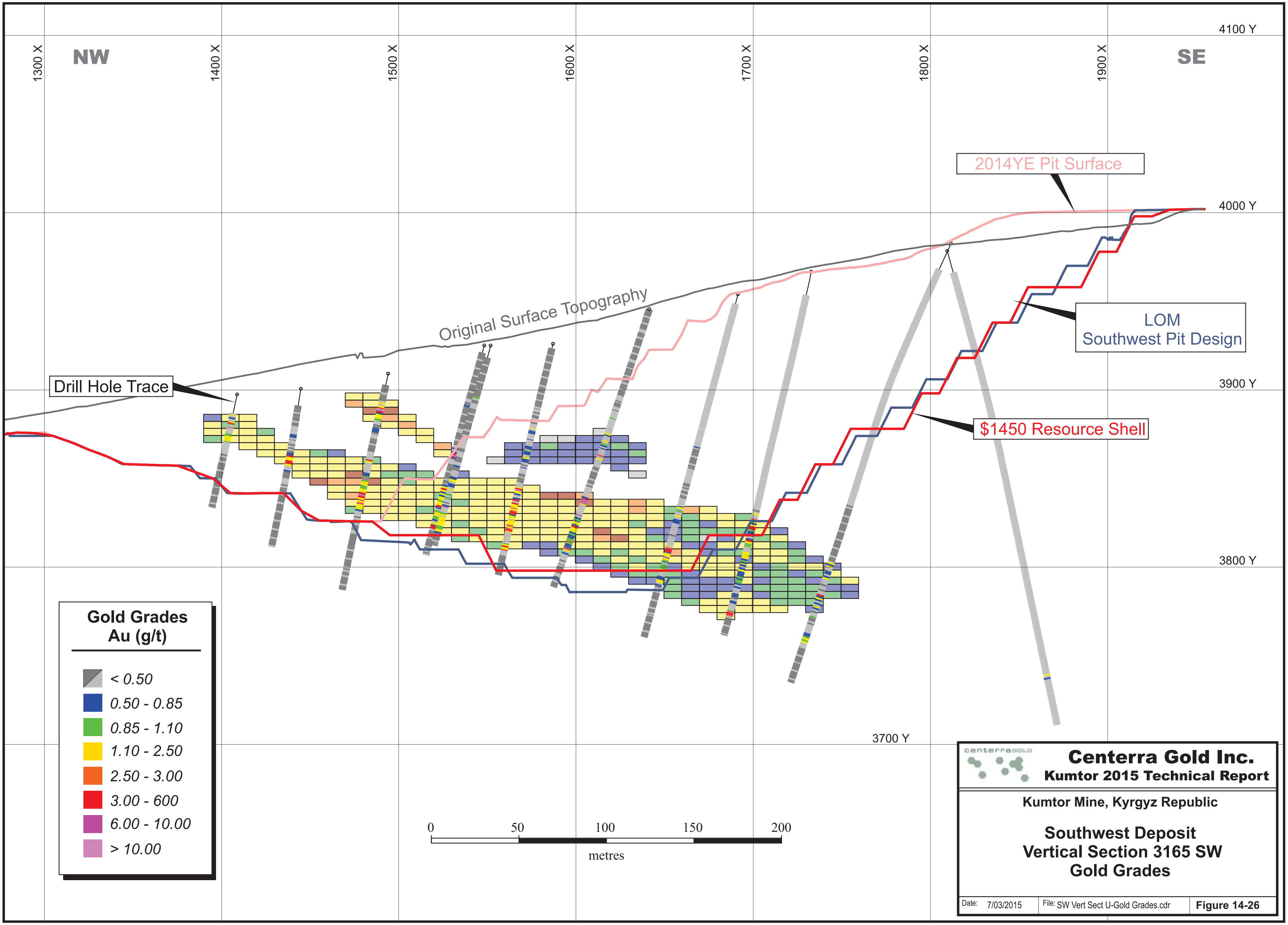
Estimation of gold grades was carried out using ordinary kriging within the mineralized domain wireframes. All individually coded domains were estimated separately in order to prevent blocks from accessing composites from adjacent lenses. Three passes with increasingly longer search radii were carried out to ensure that most blocks within the mineralized domain wireframes were assigned a grade and to assist with resource classification. The search ellipse ranges and anisotropy are based on the ranges obtained from variogram modelling. The estimation parameters and ellipse orientations used are summarized in Table 14-31.

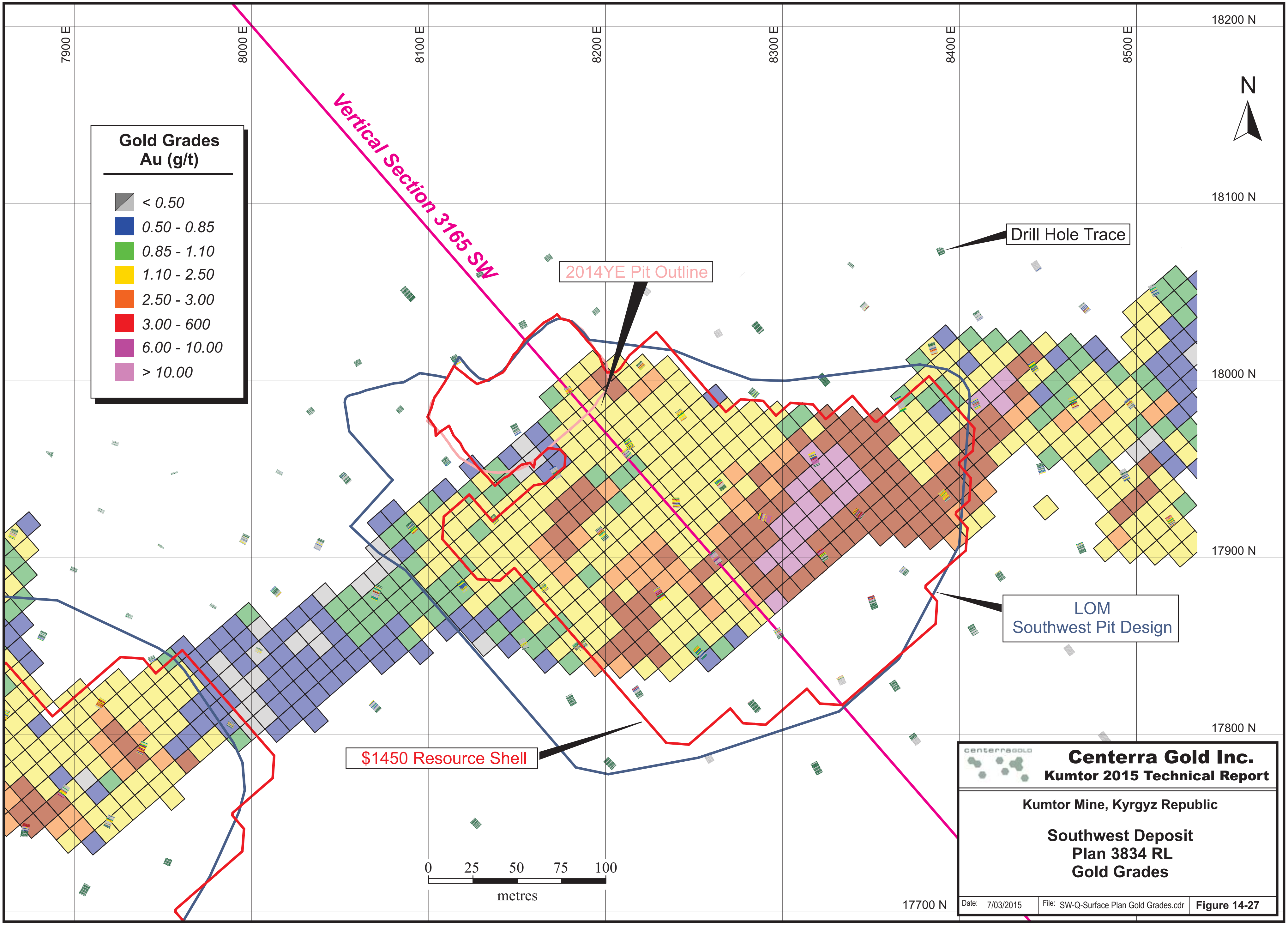
The ellipsoid orientations for all mineralized domains were fixed to reflect the variography as well as the dominant azimuth and dip for each domain or sector. Figures 14-26 and 14-27 show the interpolated gold block grades relative to the composites.

TABLE 14-31 SARYTOR AND SOUTHWEST DEPOSIT INTERPOLATION PARAMETERS AND ELLIPSE ORIENTATIONS

	Southwest	**Sarytor**
Estimation Pass 1:		
Samples		
Min. samples used	4	4
Max. samples used	12	12
Max. samples per hole	3	3
Distances		
Range Major (m)	30	35
Range Semi-Major (m)	30	35
Range Minor (m)	20	20
Ellipsoid Orientation (GEMS ZXZ)		
Rotation about 'Z' (degrees)	*220*	*300*
Rotation about 'X' (degrees)	*-20*	*30*
Rotation about 'Z' (degrees)	*320*	*175*
Estimation Pass 2:		
Samples		
Min. samples used	4	4
Max. samples used	12	12
Max. samples per hole	3	3
Distances		
Range Major (m)	60	70
Range Semi-Major (m)	60	70
Range Minor (m)	30	30
Ellipsoid Orientation (GEMS ZXZ)		
Rotation about 'Z' (degrees)	*220*	*300*
Rotation about 'X' (degrees)	*-20*	*30*
Rotation about 'Z' (degrees)	*320*	*175*
Estimation Pass 3:		

	Southwest	Sarytor
Samples		
Min. samples used	*3*	3
Max. samples used	12	12
Max. samples per hole	3	3
Distances		
Range Major (m)	120	120
Range Semi-Major (m)	120	120
Range Minor (m)	80	40
Ellipsoid Orientation (GEMS ZXZ)		
Rotation about ‘Z’ (degrees)	*220*	*300*
Rotation about ‘X’ (degrees)	*-20*	*30*
Rotation about ‘Z’ (degrees)	*320*	*175*
Discretization	*3x3x3*	*3x3x3*


4100 Y
1300 X
NW
1400 X
1500 X
1600 X
1700 X
1800 X
1900 X
SE
2014YE Pit Surface
4000 Y
Original Surface Topography
LOM
Southwest Pit Design
Drill Hole Trace
3900 Y
$1450 Resource Shell
3800 Y
Gold Grades
Au (g/t)
< 0.50
0.50 - 0.85
0.85 - 1.10
1.10 - 2.50
2.50 - 3.00
3.00 - 600
6.00 - 10.00
> 10.00
3700 Y
0
50
100
150
200
metres
Centerra Gold Inc.
Kumtor 2015 Technical Report
Kumtor Mine, Kyrgyz Republic
Southwest Deposit
Vertical Section 3165 SW
Gold Grades
Date: 7/03/2015
File: SW Vert Sect U-Gold Grades.cdr
Figure 14-26



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Kumtor Mine, Kyrgyz Republic

Southwest Deposit
Plan 3834 RL
Gold Grades

Date: 7/03/2015 | File: SW-Q-Surface Plan Gold Grades.cdr | **Figure 14-27**

UNDERGROUND BLOCK MODEL

SB AND STOCKWORK UNDERGROUND BLOCK MODEL

The underground KS13 block model framework was created to cover the entire Central Deposit area using a block size of 10 metres by 10 metres by 8 metres. This block model framework encompasses the extents of the SB and Stockwork Zones. The block model was rotated to align with the southwest-northeast trend of the mineralized domains. The block model extents for the KS-2014YE model are given in Table 14-32.

TABLE 14-32 KS-2014YE BLOCK MODEL EXTENTS

Number of Blocks	
Columns:	510
Rows:	330
Levels:	167
Origin and rotation	
X:	10,375.1321
Y:	17,503.2314
Z:	4,538
Rotation:	41°
Block Size (m)	
Column size:	10
Row size:	10
Level size:	8

Before grade estimation, all model blocks were assigned mineralization and density codes. Each block was assigned a percentage of the volume that was within each mineralized wireframe domain. The relevant attributes used in the block model are given in Table 14-33 with a list of the codes used for each attribute given in Table 14-34.

The KS13 project is set up as a percent model for the high grade domain. No dilution was applied to the underground block grades.

TABLE 14-33 UNDERGROUND KS13 BLOCK MODEL ATTRIBUTES

Attribute Name	High Grade Folder Description
Rock Type	Mineralized Domains (30 or 31)
Density	Assigned Density (2.85)
AU-Resource	Capped OK Gold Attribute (undiluted)
Percent	% of Block within Mineralized Domains
Class	Block Classification

TABLE 14-34 BLOCK CODING FOR ATTRIBUTES

Domain Name	Rock Type (Code)
Stockwork High Grade	31
SB High Grade	30

VARIOGRAPHY AND TREND ANALYSIS – SB AND STOCKWORK ZONES

Blasthole data from open pit mining were not used for grade estimation but were used qualitatively for variography.

Centerra found that a major axis orientation of 42.5˚ dipping -47.5˚SE showed the best relationship between variogram ranges and the mineralized structure. This corresponds well with the general orientation of the Central Deposit mineralized corridor and is consistent with the grade continuity orientations observed at the SB Zone. A range of 90 metres was observed in the major-axis orientation.

The variograms in the downhole direction show a relative nugget effect of 30% in the high grade domains. Spherical structures have been used to model the variogram directions for the high grade domains. Table 14-35 presents the variograms parameters for high grade domains of the SB and Stockwork Zones.

TABLE 14-35 VARIOGRAM PARAMETERS FOR SB AND STOCKWORK HIGH GRADE DOMAINS

Deposit	Structure Type	Variogram Parameter	Parameter Used
Stockwork	1st: Nugget Effect	C0	0.3
HG (Domains 30, 31)	2nd: Spherical	Sill	0.43
		Range - Primary	25.3 m
		Range – Semi-Major	25.3 m
		Range - Minor	7.5 m
		Rotation Angle - X	135°
		Rotation Angle - X	-48°
		Rotation Angle - Y	45°
	3nd: Spherical	Sill	0.27
		Range - Primary	193 m
		Range – Semi-Major	99 m
		Range - Minor	49.5 m
		Rotation Angle - Z	135°
		Rotation Angle - X	-48°
		Rotation Angle - Y	45°

GRADE INTERPOLATION –SB AND STOCKWORK ZONES

Estimation of gold grades was carried out using OK constrained within the mineralized domain wireframes. Three passes with increasingly longer search radii were carried out to ensure that most blocks within the mineralized domain wireframes were assigned a grade and to assist with resource classification. The estimation parameters and ellipse orientations used are summarized in Table 14-36. Gold grades were interpolated with a hard boundary such that only high grade composites could be used to interpolate block grades within the respective zones with no influence from the surrounding low grade composites used for the open pit model.

The ellipsoid orientations for all mineralized domains were fixed to reflect the variography as well as the dominant azimuth and dip for each domain or sector.

TABLE 14-36 SB AND STOCKWORK ZONE INTERPOLATION PARAMETERS AND ELLIPSE ORIENTATIONS

Estimation Pass	High Grade Zones (30, 31)
Estimation Pass 1:	
Samples	
Min samples used	7
Max samples used	16
Max samples per hole	3
Distances	
Range Major (m)	30
Range Semi-Major (m)	30
Range Minor (m)	15
Ellipsoid Orientation (GEMS ZXZ)	
Rotation about ‘Z’ (degrees)	*5*
Rotation about ‘X’ (degrees)	*48*
Rotation about ‘Z’ (degrees)	*9*
Estimation Pass 2:	
Samples	
Min samples used	4
Max samples used	12
Max samples per hole	3
Distances	
Range Major (m)	60
Range Semi-Major (m)	60
Range Minor (m)	20
Ellipsoid Orientation (GEMS ZXZ)	
Rotation about ‘Z’ (degrees)	*5*
Rotation about ‘X’ (degrees)	*48*
Rotation about ‘Z’ (degrees)	*9*
Estimation Pass 3:	
Samples	
Min samples used	4
Max samples used	12
Max samples per hole	3

Estimation Pass	High Grade Zones (30, 31)
Distances	
Range Major (m)	120
Range Semi-Major (m)	120
Range Minor (m)	40
Ellipsoid Orientation (GEMS ZXZ)	
Rotation about 'Z' (degrees)	*5*
Rotation about 'X' (degrees)	*48*
Rotation about 'Z' (degrees)	*9*

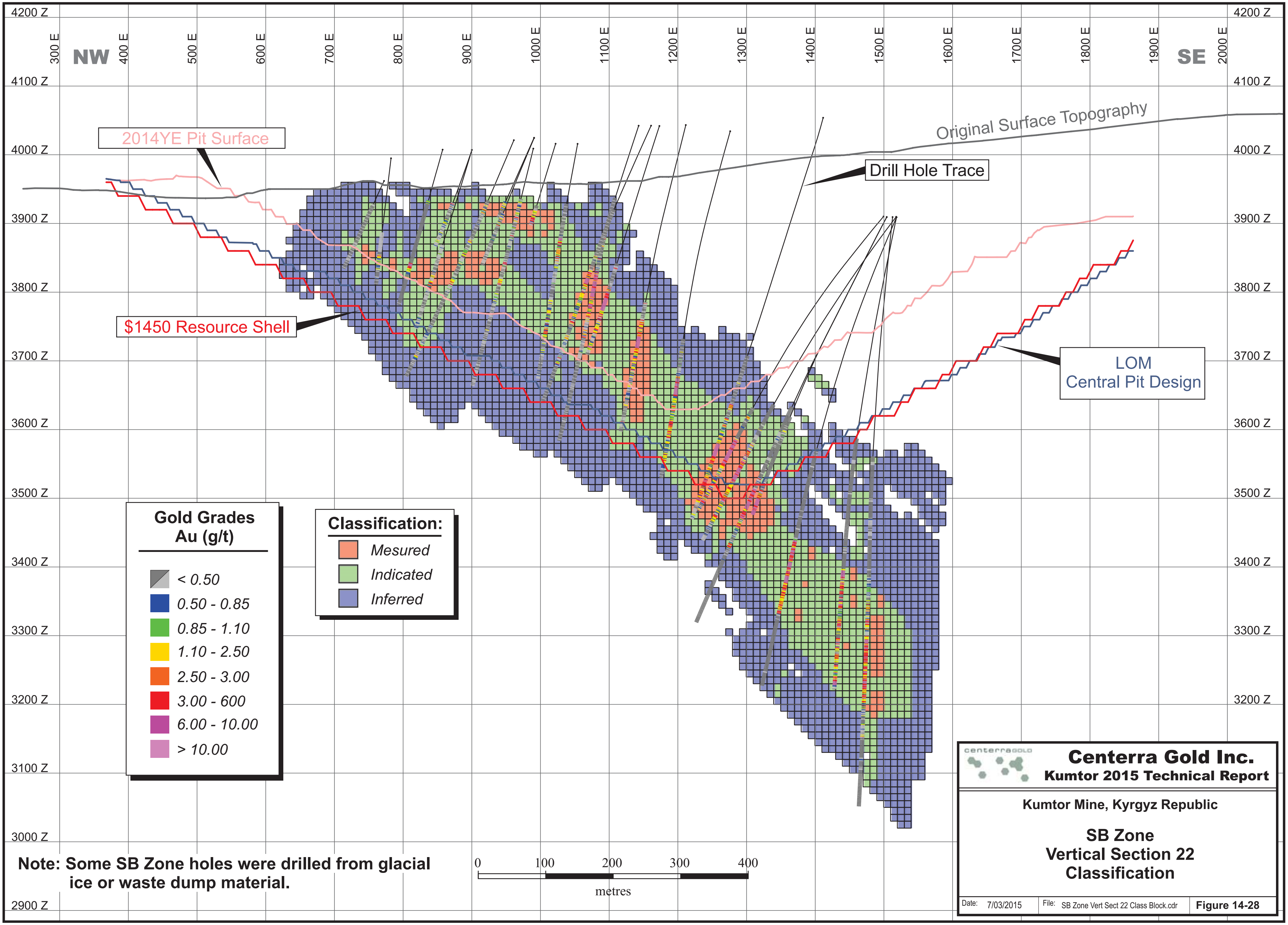
CUT-OFF GRADE

Centerra has reported its Mineral Resources using the same cut-off grade as its Mineral Reserves, 0.85 g/t Au for the SB and Stockwork Zones and 1.00 g/t for the Sarytor and Southwest Deposits. The underground resources was reported using a 6.00 g/t cut-off grade to reflect the poor ground conditions experienced during the excavation of the decline in 2008.

OPEN PIT CLASSIFICATION

Centerra developed resource classification criteria based on the distance of a block to the nearest composite as well as a minimum number of informing drillholes. The classification of open pit resources used search distances of 30, 60, and 90 metres in combination with a two holes minimum to assign the respective Measured, Indicated and Inferred classifications.

Figures 14-28 to 14-30 provided examples of vertical cross sections showing the open pit classification block models.



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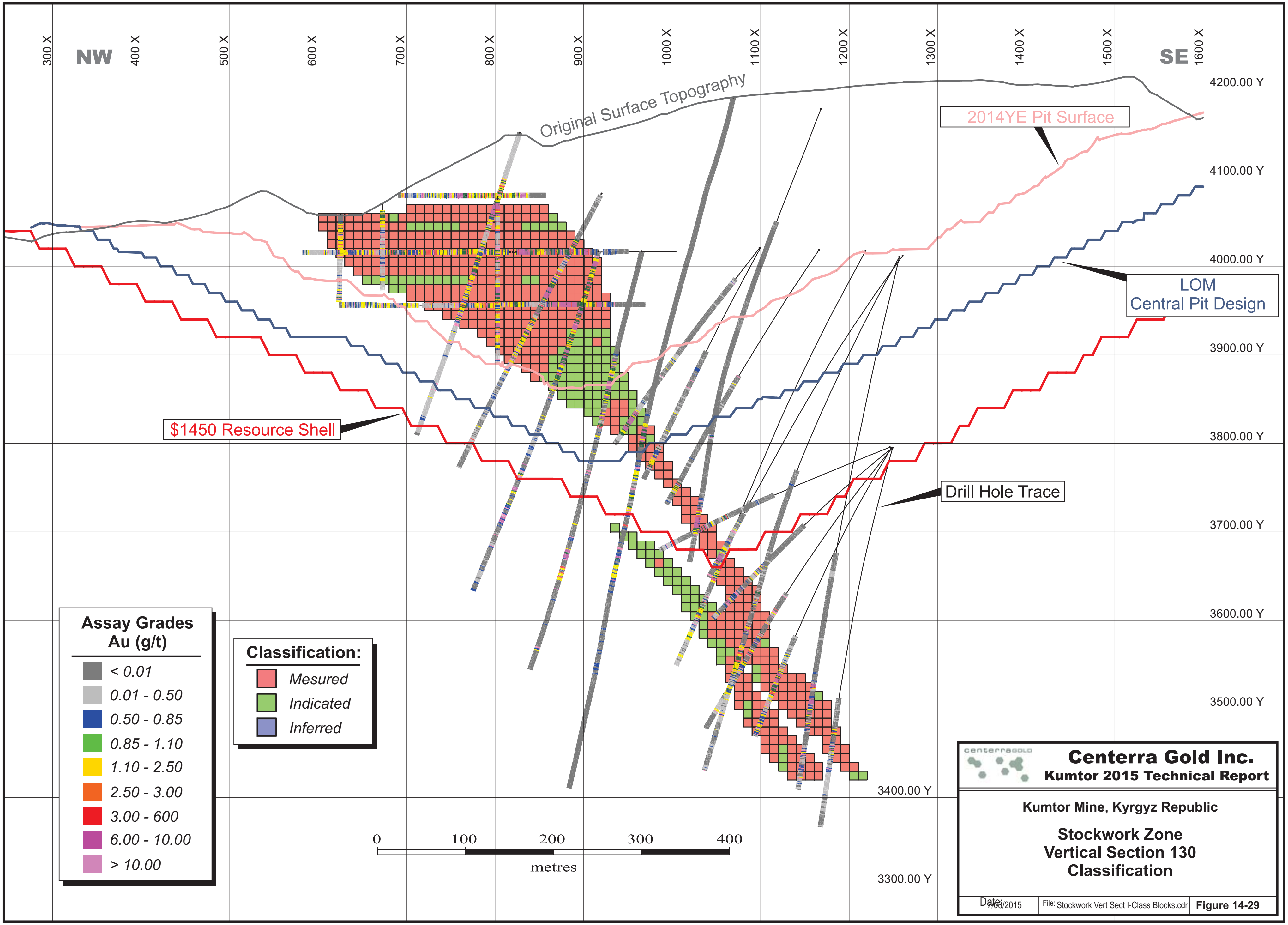
Kumtor Mine, Kyrgyz Republic

SB Zone
Vertical Section 22
Classification

Date: 7/03/2015 | File: SB Zone Vert Sect 22 Class Block.cdr | Figure 14-28


NW
SE
300 X
400 X
500 X
600 X
700 X
800 X
900 X
1000 X
1100 X
1200 X
1300 X
1400 X
1500 X
1600 X
4200.00 Y
4100.00 Y
4000.00 Y
3900.00 Y
3800.00 Y
3700.00 Y
3600.00 Y
3500.00 Y
3400.00 Y
3300.00 Y
Original Surface Topography
2014YE Pit Surface
LOM
Central Pit Design
$1450 Resource Shell
Drill Hole Trace
Assay Grades
Au (g/t)
< 0.01
0.01 - 0.50
0.50 - 0.85
0.85 - 1.10
1.10 - 2.50
2.50 - 3.00
3.00 - 600
6.00 - 10.00
> 10.00
Classification:
Mesured
Indicated
Inferred
0
100
200
300
400
metres
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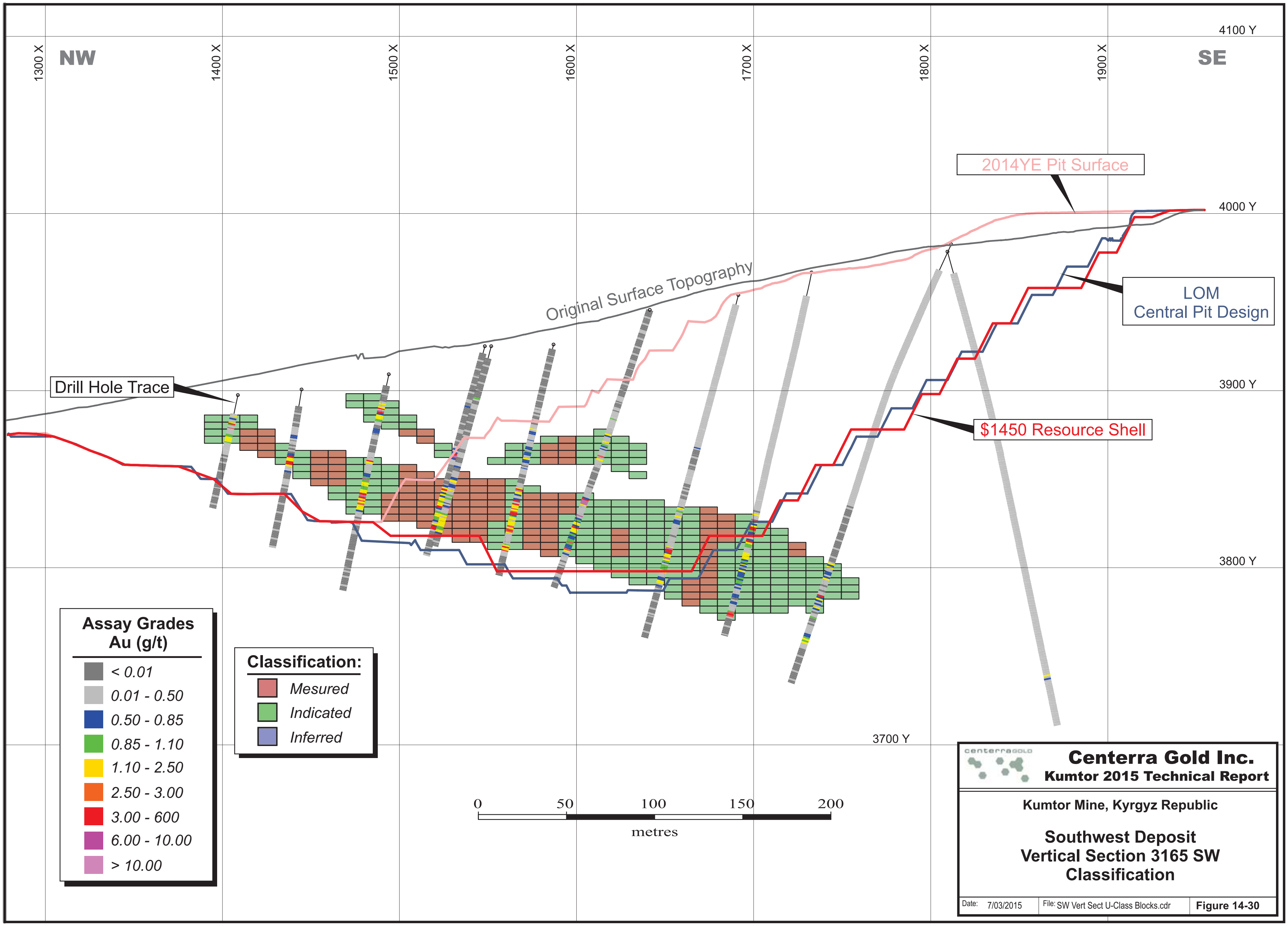
Stockwork Zone
Vertical Section 130
Classification
Date: 7/03/2015
File: Stockwork Vert Sect I-Class Blocks.cdr
Figure 14-29



NW
SE
1300 X
1400 X
1500 X
1600 X
1700 X
1800 X
1900 X
4100 Y
4000 Y
3900 Y
3800 Y
3700 Y
2014YE Pit Surface
Original Surface Topography
LOM
Central Pit Design
Drill Hole Trace
$1450 Resource Shell
Assay Grades
Au (g/t)
< 0.01
0.01 - 0.50
0.50 - 0.85
0.85 - 1.10
1.10 - 2.50
2.50 - 3.00
3.00 - 600
6.00 - 10.00
> 10.00
Classification:
Mesured
Indicated
Inferred
0
50
100
150
200
metres
Centerra Gold Inc.
Kumtor 2015 Technical Report
Kumtor Mine, Kyrgyz Republic
Southwest Deposit
Vertical Section 3165 SW
Classification
Date: 7/03/2015
File: SW Vert Sect U-Class Blocks.cdr
Figure 14-30

UNDERGROUND CLASSIFICATION

Centerra developed resource classification criteria based on the distance of a block to the nearest composite as well as a minimum number of informing drillholes. The classification of Indicated underground resources used anisotropic search distance of 30 metres in combination with a three holes minimum. The classification of Inferred underground resources used anisotropic search distance of 30 to 120 metres in combination with a two holes minimum.

BLOCK MODEL VALIDATION

Each of the Kumtor Mine block models were validated using a variety of quantitative and qualitative measures. Visual reviews of the block models indicate that the estimate methodologies used are appropriate for the styles of mineralization present. The only exception to this may be the block size being used to estimate underground Mineral Resources. RPA recommends that future underground resource estimates use a block size that is smaller than the 10 metre x 10 metre x 8 metre blocks that are currently being used. The use of smaller blocks would allow for greater selectivity and would facilitate the delineation of more contiguous groups of blocks above the underground cut-off grade. RPA also recommends that Centerra update current classification criteria to define more continuous areas of each classification category.

SB ZONE

The mineralization wireframes were checked for overlaps and blocks were checked to ensure consistent rock type coding between the wireframes, composites, and blocks. The mineralized domains were reviewed to confirm that extensions beyond last holes were reasonable and consistent.

Global statistics were tabulated for the assays, composites, and blocks for each domain within the SB Zone and are summarized in Table 14-37. The assay, composite and block statistics compare fairly well for the low grade and waste models but the high grade model shows a marked discrepancy between the composite and block grades. This discrepancy is largely due to two factors. First, the incorporation of lower grade (1 g/t Au to 3 g/t Au) drillhole intercepts within the wireframe to maintain the shape of the mineralized structure; and second, the incorporation of the aforementioned lower grade intercepts in areas with more widely spaced drilling. These two factors allow for a larger proportion of blocks to be populated with grades between 1 g/t Au and 3 g/t Au than are represented by the composites and assays.

TABLE 14-37 ASSAY COMPOSITE AND BLOCK STATISTICS BY DOMAIN

	Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
Assays	High Grade (20 to 28)	6,593	0.00	30.00	6.94	7.23	1.04
	Low Grade (50)	34,700	0.00	20.00	1.25	2.29	1.83
	Waste Model (60)	65,910	0.00	12.00	0.27	0.95	3.53
Composites	High Grade (20 to 28)	3,287	0.00	30.00	6.68	5.94	0.89
	Low Grade (50)	17,981	0.00	20.00	1.21	1.84	1.52
	Waste Model (60)	99,012	0.00	12.00	0.09	0.49	5.44
Blocks	High Grade (20 to 28)	43,611	0.00	29.16	4.78	3.79	0.79
	Low Grade (50)	166,372	0.00	19.24	1.11	1.01	0.91
	Waste Model (60)	912,003	0.00	11.97	0.07	0.27	3.62

The block model grades at the SB Zone were visually compared with composite grades on plan and section views. The model was also visually checked for grade banding, smearing of high grades, plumes of high grades, on sections and plans. This evaluation indicated an acceptable spatial correlation of block grades with composite grades. Based on a visual review of previously mined areas, RPA found that the updated SB Zone estimate using ID3 preserved the local Au grades observed in the drillholes as well as the short term blasthole model.

As part of the reconciliation process outlined below a number of grade and tonnage curves were prepared to help compare the performance of the updated block model relative to the short term blasthole model across a range of grades.

STOCKWORK ZONE

The Stockwork block model was validated using a variety of quantitative and qualitative measures. The mineralization wireframes were checked for overlaps and blocks were checked to ensure consistent rock type coding between the wireframes, composites, and blocks. The mineralized domains were reviewed to confirm that extensions beyond last holes were reasonable and consistent. The block grades were visually compared to the composite grades on sections to check for grade banding, smearing of high grades, plumes of high grades. The composite and block grades were compared statistically on a zone by zone basis as well as a global basis.

The composite data, block model and geological overlays were reviewed on section and using 3D projection views. The visual inspection showed good agreement between composite and block value grades and identified no obvious estimation artifacts or coding errors.

The mineral resource model was further validated by comparing the mean grades of the capped composites used in the estimation to the OK estimate. Table 14-38 presents the comparison between key estimation statistics for both the individual and combined zones.

TABLE 14-38 ASSAY COMPOSITE AND BLOCK STATISTICS BY DOMAIN

	Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
Assays	High Grade (31)	723	0.00	70.00	10.66	13.54	1.27
	Low Grade (10)	40,870	0.00	50.00	3.02	5.83	1.93
Composites	High Grade (31)	323	0.20	68.30	10.49	9.80	0.93
	Low Grade (10)	20,938	0.00	50.00	2.88	4.86	1.69
Blocks	High Grade (31) (Diluted)	636	0.11	14.99	5.75	2.85	0.50
	High Grade (31) Undiluted	3,191	2.95	29.18	10.40	4.09	0.39
	Low Grade (10)	49,381	0.00	32.19	2.61	2.62	1.01

Comparisons between the OK estimate and both the assays and composites are within reasonable limits. The Stockwork feeder zone is relatively narrow (3 to 10 metres) in some areas and blocks in those areas are occasionally less than 50% of an open pit block. After the high grade blocks are diluted with the surrounding lower grade blocks for the purposes of open pit optimization, the block grades within the feeder zone show an expected decrease in grade. The undiluted block grade statistics are also included above for comparison purposes.

SARYTOR AND SOUTHWEST DEPOSITS

The Sarytor and Southwest block model was validated using a variety of quantitative and qualitative measures. The mineralization wireframes were checked for overlaps and blocks were checked to ensure consistent rock type coding between the wireframes, composites, and blocks. Additional attention was given to where the Southwest and Sarytor wireframes meet beneath the Sarytor Glacier. The mineralized domains were reviewed to confirm that extensions beyond last holes were reasonable and consistent. The block grades were visually compared to the composite grades on sections to check for grade banding, smearing of high grades, plumes of high grades. The composite and block grades were compared statistically on a zone by zone basis as well as a global basis.

The composite data, block model and geological overlays were reviewed on section and using 3D projection views. The visual inspection showed good agreement between composite and block value grades and identified no obvious estimation artifacts or coding errors.

The mineral resource model was further validated by comparing the mean grades of the capped composites used in the estimation to the OK estimate. Table 14-39 presents the comparison between key estimation statistics for both the individual and combined zones.

TABLE 14-39 ASSAY COMPOSITE AND BLOCK STATISTICS BY DOMAIN

	Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
Assays	Sarytor	6,554	0.00	30.00	2.03	3.51	1.73
	Southwest	7,777	0.00	30.00	1.92	3.56	1.85
Composites	Sarytor	2,869	0.01	30.00	2.04	2.93	1.43
	Southwest	3,597	0.01	30.00	1.97	3.05	1.55
Blocks	Sarytor	36,123	0.00	16.50	1.92	1.30	0.68
	Southwest	35,827	0.00	14.75	1.69	1.31	0.77

Comparisons between the OK estimate and both the assays and composites are within reasonable limits.

UNDERGROUND SB AND STOCKWORK ZONES

The SB and Stockwork block model was validated using a variety of quantitative and qualitative measures. The mineralization wireframes were checked for overlaps and blocks were checked to ensure consistent rock type coding between the wireframes, composites, and blocks. The mineralized domains were reviewed to confirm that extensions beyond last holes were reasonable and consistent. The block grades were visually compared to the composite grades on sections to check for grade banding, smearing of high grades, plumes of high grades. The composite and block grades were compared statistically on a zone by zone basis as well as a global basis.

The composite data, block model and geological overlays were reviewed on section and using 3D projection views. The visual inspection showed good agreement between composite and block value grades and identified no obvious estimation artifacts or coding errors.

The mineral resource model was further validated by comparing the mean grades of the capped composites used in the estimation to the OK estimate. Table 14-40 presents the comparison between key estimation statistics for both the individual and combined zones.

TABLE 14-40 ASSAY COMPOSITE AND BLOCK STATISTICS BY DOMAIN

	Domain	Number	Min (g/t Au)	Max (g/t Au)	Average (g/t Au)	Std Dev (g/t Au)	Coefficient of Variation
Assays	High Grade (30)	564	0	70.00	10.19	11.20	1.10
	High Grade (31)	723	0	70.00	10.66	13.54	1.27
Composites	High Grade (30)	251	0.00	42.51	9.98	7.54	0.76
	High Grade (31)	323	0.20	68.30	10.49	9.80	0.93
Blocks	High Grade (30)	4,485	1.10	26.24	10.07	4.03	0.40
	High Grade (31)	3,191	2.95	29.18	10.40	4.09	0.39

Comparisons between the OK estimate and both the assays and composites are within reasonable limits. RPA recommends creating new underground block models for the Central Deposit using smaller blocks and new wireframes after 2015 drilling campaign is completed.

SB ZONE BLOCK MODEL RECONCILIATION

Historically, the Kumtor resource block model has reconciled well against production, but as the Company reported in February 2014, the Kumtor Mine experienced negative production reconciliation during 2013, totaling 184,000 contained ounces of gold. As a result, during 2014, the Company retained an independent consultant to conduct an audit of the resource model. The work determined that the KS13 resource model was potentially biased and that Centerra should investigate different methodologies for estimating the higher grade section of the SB Zone. They also recommended that KCG undertake additional infill drilling in the deeper parts of the ore body which is scheduled to be completed in the first half of 2015. In late 2014, RPA was engaged to update the resource estimate of the SB Zone.

RPA performed a series of reconciliation comparisons using the year end pit surfaces from 2009 to 2014 to evaluate the performance of the updated SB Zone block model (KS-2014YE) compared to the previous SB Zone block model (KS13) and the blasthole model. This review compared mined tonnes, grade, and contained ounces on an annual basis as well as over the entire five year period. As the blasthole model reconciles well with the mill production, the updated SB block model grade estimation parameters (grade capping in particular) were calibrated to fit closely with the historical production of tonnes, grade, and contained ounces from the blasthole model. The results of this reconciliation are summarized in Table 14-41.

TABLE 14-41 SB ZONE BLOCK MODEL RECONCILIATION SUMMARY

	Blasthole Model			KS13			KS-2014YE		
Year	Tonnage (kt)	Au (g/t)	Au (koz)	Tonnage (kt)	Au (g/t)	Au (koz)	Tonnage (kt)	Au (g/t)	Au (koz)
2013	6,602	3.46	735	7,062	4.25	964	6,363	3.87	792
2014	3,546	2.94	335	3,295	3.72	394	3,525	2.75	312
Total	**10,148**	**3.28**	**1,070**	**10,357**	**4.08**	**1,358**	**9,888**	**3.47**	**1,104**
Variance From Blasthole Model									
2013	-	-	-	7%	23%	31%	-4%	12%	8%
2014	-	-	-	-7%	27%	18%	-1%	-6%	-7%
Total	**-**	**-**	**-**	**2%**	**24%**	**27%**	**-3%**	**6%**	**3%**

15 MINERAL RESERVE ESTIMATE

GENERAL

Mineral Reserves are that part of the Mineral Resource that can be legally, safely, and profitably mined given a specific set of technical and economic parameters. These include the gold price, mine, mill, and administrative operating costs, metallurgical recovery, geotechnical behaviour of the rocks in the future pit walls, and equipment size parameters. Computer software “optimizes” the pit shape by interrogating each block of the block model as to its ability to pay for its removal plus the incremental tonnage of waste that must be removed to mine the block. Detailed mine planning using commercial software then creates a number of intermittent pit designs that test the ability to access sufficient ore to provide adequate mill feed while postponing waste mining as long as possible. This process results in the creation of one or more “pit shells” which recover the economic part of the Mineral Resources and which are then engineered in detail by adding ramps for mining access and by smoothing of the pit walls.

For the Kumtor Mine, updated pit designs were created in 2014 and were selected from a number of alternatives investigated, with particular emphasis on geotechnical considerations as described in Section 16. The economic studies undertaken by KGC (summarized in Section 22), and the LOM plan subsequently adopted by Centerra (described in Section 16) demonstrate that the Kumtor Mine Mineral Reserves are the “economically mineable part of a Measured and/or Indicated Mineral Resource” as defined by the CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM, 2104) as incorporated into NI 43-101, that read in part as follows:

A Mineral Reserve is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

A Proven Mineral Reserve is the economically mineable part of a Measured Mineral Resource. A Proven Mineral Reserve implies a high degree of confidence in the Modifying Factors.

A Probable Mineral Reserve is the economically mineable part of an Indicated Mineral Resource, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Mineral Reserve is lower than that applying to a Proven Mineral Resource.

Factors affecting the Kumtor Mine's Mineral Resources and Mineral Reserves relating to geotechnical issues are discussed later in Section 16.

DILUTION PROVISIONS

In the Central Pit KS-2014YE block model, the grades have been diluted out from the mineralized domains to the full size of the blocks. The model has been calibrated to the blasthole model, so it is assumed that this process has adequately accounted for external mining dilution. In the Southwest and Sarytor Deposits SRSW-2014YE block model, external dilution has been estimated based on the percentage of the block inside the mineralized domain. Blocks that were diluted below the cut-off grade are not included in the Mineral Reserves. The net result of this process is a reduction in contained gold of approximately 4%, as compared to the undiluted model.

PIT OPTIMIZATION AND PIT DESIGN

To define the Mineral Reserves for the Kumtor Mine KGC undergoes a three step process as follows;

1. The Central, Southwest, and Sarytor Deposits underwent a process of "pit optimization" where Whittle software optimizes the potential future financial return for a number of intermittent pit shells and defines the ultimate pit size and shape for each of the three deposits. To complete this optimization, geotechnical limitations that define the maximum slope angles that can be achieved in each pit, and economic parameters including a range of gold prices, applicable royalty/revenue based taxes, mine, mill, administrative operating costs and metallurgical recoveries are included with the Measured and Indicated resource blocks of the models. The software then interrogates each block of the block model as to its ability to pay for its removal and required processing/administrative costs and net revenue taking into account the incremental tonnage and associated costs of waste that must be removed to mine this block. The pit shell offering the best economic results was chosen and defines, in a general way, the size and shape of the ultimate pit which achieves the maximum financial return based on the defined parameters while observing

the geotechnical limitations. For the purposes of pit optimization no mining was allowed to progress beyond the toe of the buttress on the southeast wall;

2. With the ultimate pit limits defined, practical design parameters such as haulage ramps, safety berms, and practical interim cutback limits based on the overall size of the pit and the equipment to be used are completed within the GEMS software package. This process results in a series of minable cutbacks that together form the ultimate pit design for each of the deposits; and

3. With each cutback designed, a series of potential production schedules are produced based on the practical sequencing of each cutback, the mining equipment available or available with additional capital expenditures, the practical limitations of the amount of mining equipment that can be operated on each cutback, the production rates of equipment in different material types (ice, waste dump and bedrock), the haulage distance to waste dumps, ore stockpiles or to the mill crusher and the limitations of the throughput capacity of the mill itself.

From this process, which in most cases is iterative, a practical LOM production schedule is developed that attempts to maximize gold production and minimize costs and defines the annual mining, milling, and gold production schedules.

PIT DESIGN PARAMETERS

The design of the Central Pit is subject to geotechnical considerations that have received a great deal of attention following the two highwall failures in 2002 and 2006 and the more recent geotechnical issues related to the mining of the historical waste dump and glacial ice above the SB Zone that resulted in the construction of a buttress at the base of the south arm of the Davidov Glacier. As a result of extensive geotechnical studies by KGC and its consultants, the Central Pit has been sub divided into five major design sectors.

These design sectors, as shown in Figure 16-3, include: the footwall zone rocks (Zone 0), the Kumtor Fault Zone (Zone 1), the ore zone (Zone 2) and Zone 3 that has been subdivided into three subsets denoted Zone 3A, Zone 3B, and Zone 3C. The Zone 3 subsets are based on the orientations of the major structures in each zone and are characterized as follows: Zone 3A (Phyllites with fore-thrusts and back-thrusts, Zone 3B (Phyllites – Main Backthrust Zone, NW dipping, and Zone 3C, SE dipping schistosity and fore-thrusts. The final design sector is for glacial till. The slope design parameters for the individual sectors are summarized in Tables 15-1, 15-2 and 15-3

TABLE 15-1 CENTRAL PIT ROCK SLOPE DESIGN PARAMETERS

Pit Sector	Wall Design Azimuth (Degrees From North)	Maximum Inter-Ramp Angle	Maximum Overall Slope Angle	Maximum Berm Width (m)	Bench Height (m)	Batter Angle (Degrees) Angle
Zone-1	00 to 280	36	36	8.8	10	63
Footwall	280 to 360*	29	26	13.0	10	63
Zone 2	00 to 020	Not Applicable				
Ore Zone	020 to 110	30	30	12.3	10	63
	110 to 180	30	30	12.3	10	63
	180 to 280	34	34	9.8	10	63
	280 to 360*	29	29	13.0	10	63
Zones 3A	00 to 020	Not Applicable				
Hanging Wall	020 to 110	30	29	12.3	10	63
	110 to 180	30	30	12.3	10	63
	180 to 280	Not Applicable				
Zone 3B1	00 to 020	Not Applicable				
Hanging Wall	020 to 110	30	29	12.3	10	63
	110 to 120	30	30	12.3	10	63
	120 to 180	Not Applicable				
	180 to 280	Not Applicable				
Zone 3B2	00 to 80	32	31	11	10	63
Hanging Wall	80 to 130	32	31	11	10	63
	130 to 190	34 (30 for the 8 bottom benches)	31	9.8-12.3	10	63
	190 to 360	36	29	8.8	10	63
Zone 3C	00 to 060	32	32	11	10	63
Hanging Wall	60 to 120	34	34	9.8	10	63
	120 to 170	36	34	8.8	10	63
	170 to 360	38	34	7.8	10	63
Glacial Till	00 to 360	38	38	7.8	10	63

Notes: HMA = high movement area. Berm-width is indicated for double-benching design.
* Single-benching used for the slope sectors as proposed by Golder Associates, 2015b

TABLE 15-2 SARYTOR PIT ROCK SLOPE DESIGN PARAMETERS

Wall Design Azimuth (Degrees From North)	Maximum Inter-Ramp Angle	Maximum Overall Slope Angle	Maximum Berm Width (m)	Bench Height (m)	Batter Angle (Degrees)
00 to 020	42	42	10.00	16	63
20 to 165	42	38	10.00	16	63
165 to 210	40	39	11.10	16	63
210 to 255	40	39	11.10	16	63
255 to 295	42	41	10.00	16	63
295 to 360	34	34	15.7	16	63
Till	36	36	14.00	16	63

TABLE 15-3 SOUTHWEST PIT ROCK SLOPE DESIGN PARAMETERS

Wall Design Azimuth (Degrees From North)	Maximum Inter-Ramp Angle	Maximum Slope Angle	Maximum Berm Width (m)	Bench Height (m)	Batter Angle (Degrees)
0-10, 10-330	38	38	12.5	16.0	63.0
330-360	39	39	11.8	16.0	63.0

ECONOMIC PIT PARAMETERS

The Kumtor Mine Mineral Reserves available for mining at December 31, 2014 were estimated on the basis of the KS-2014YE block model for the Central Deposit and the SRSW-2014YE block model for the Southwest and Sarytor Deposits. The pit design parameters described earlier in this section were used, and the main economic parameters are summarized in Table 15-4.

TABLE 15-4 ECONOMIC DESIGN PARAMETERS, CENTRAL, SOUTHWEST, AND SARYTOR AND PITS

	2014 Actual	Central Pit	Sarytor and Southwest Pits
Gold Price $/ounce	1,238	1,300	1,300
Mining			
Average cost per tonne of ore mined ($)	1.34	1.40	2.65
Average cost per tonne of waste mined ($)	1.34	1.40	1.40
Milling			
Average cost per tonne milled ($)	12.04	11.28	11.28
Administration			
Average cost per tonne milled ($)	13.54	8.69	8.69
Metallurgical Recoveries	78%	50% to 88%	48% to 81%

MINERAL RESERVE CLASSIFICATION

The Mineral Reserve classification will normally reflect the original Mineral Resource classification, with Measured Mineral Resources becoming Proven Mineral Reserves and Indicated Mineral Resources becoming Probable Mineral Reserves. However, as discussed earlier in Section 15, both the highwall and the creep movement of a section of the historical waste dump adjacent to the Central Pit have remaining geotechnical uncertainties that constitute a certain risk for the eventual recovery of part of the Mineral Reserves. For this reason Centerra has chosen a more conservative approach to Mineral Reserve classification whereby only Mineral Reserves currently in a stockpile are classified as Proven and the remaining Mineral Reserves that are in-situ are classified as Probable. Given the history of geotechnical issues negatively impacting gold production from 2002 to 2014, the responsible author of this section believes this reclassification to be prudent and reasonable.

CUT-OFF GRADES

The Mineral Reserves and Mineral Resources of the Kumtor Mine are reported at cut-off grades of 0.85 g/t Au for the Central Deposit and for the current ore stockpiles. Given the extended ore haulage distances and lower expected mill recoveries, a cut-off grade of 1.0 g/t Au is reported for the Southwest and Sarytor Deposits. The cut-off grades are calculated assuming the economic parameters outlined in Table 15-4, with the exception of the milling and administration costs. It is expected that by the end of the mine life these will be reduced significantly as only processing operations will be occurring, allowing lower grade material that was stockpiled to be processed profitably. The cut-off grades also include a provision for the payment of the Gross Proceeds Tax to the Government described in Section 22.

DECEMBER 31, 2014 MINERAL RESERVE ESTIMATE

The current estimate for the Central, Southwest, and Sarytor Deposits at a gold price of $1,300 per ounce is summarized in Table 15-5. The in-pit Mineral Reserves are those quoted by the LOM plan developed in December 2014, and reflect the Mineral Reserve status as of December 31, 2014.

TABLE 15-5 KUMTOR MINE MINERAL RESERVES AS OF DECEMBER 31, 2014

	Tonnes (kt)	Gold Grade (g/t)	Contained Gold (Koz)
By Category			
Proven			
Stockpiles (> 0.85 g/t)	7,778	2.1	526
Total Proven Mineral Reserves	**7,778**	**2.1**	**526**
Probable			
SB Pit in-situ (> 0.85 g/t)	26,051	3.1	2,574
Stockwork Pit in-situ (> 0.85 g/t)	18,570	3.1	1,849
Total Central Pit in-situ (> 0.85 g/t)	44,621	3.1	4,423
Sarytor Pit in-situ (> 1.0 g/t)	12,078	2.3	889
Southwest Pit in-situ (> 1.0 g/t)	4,030	2.3	298
Total Probable Mineral Reserves	**60,729**	**2.9**	**5,610**
Total Mineral Reserves	**68,507**	**2.8**	**6,136**

Notes:

1. CIM definitions were followed for classification of Mineral Reserves.
2. Open Pit Mineral Reserves are estimated at a cut-off grade of 0.85 g/t Au for the Central Pit and 1.0. g/t Au for the Southwest and Sarytor Deposits.
3. Mineral Reserves are estimated using a long-term gold price of US$1,300 per ounce
4. High assays or composites are capped between 30 g/t Au and 70 g/t depending on the deposit.
5. Bulk densities are 0.92 t/m^3 for glacial ice, 2.30 t/m^3 for weathered rock and 2.85 t/m^3 fresh rock.
6. Price assumptions reflect long-term price forecasts.
7. Numbers may not add due to rounding.

Mineral Reserves could be materially affected by the risk factors described in Section 24.

16 MINING METHODS

The Central Pit is a large excavation elongated in a southwest to northeast direction, and both the present and the final pit design have a shape resembling an hourglass, with the two wider areas reflecting the locations of the Stockwork and SB Zones, respectively, as described in Section 7. The Southwest and Sarytor Deposits are located to the immediate southwest of the Central Pit. A mining phase has been completed in the Southwest pit and a new phase will commence within the next year at the Sarytor pit

This section summarizes the geotechnical and glacier related impacts on the open pits, the waste dump capacities, the mining operation, and the current LOM plan.

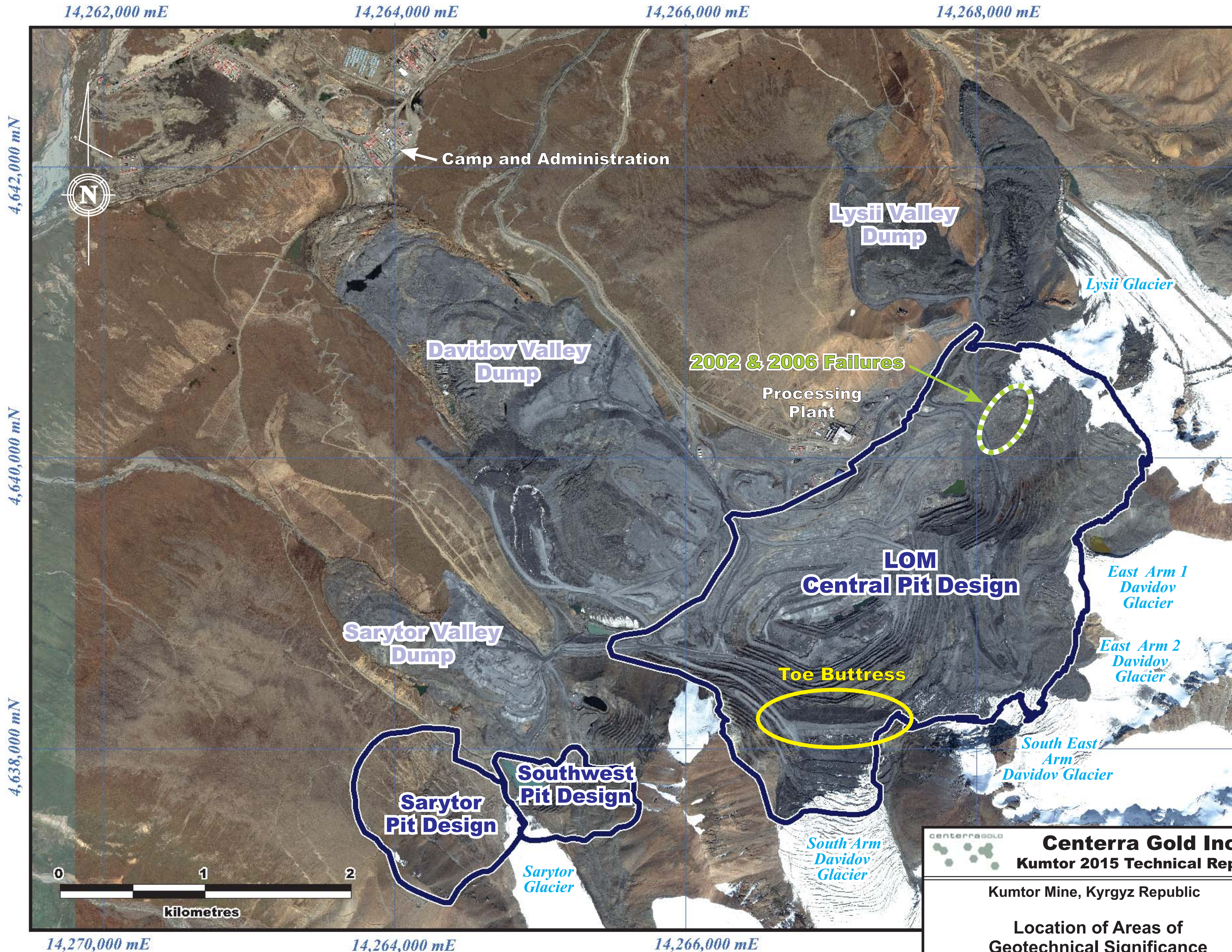
GEOTECHNICAL SUMMARY

Golder Associates Ltd. have been the long-term geotechnical and pit-slope design consultants for KGC and Centerra and have produced a number of reports listed in Section 27. The latest relevant report (Golder Associates, 2015b) addresses the slope stability of the Central Pit. Also, since 2006, SRK Consulting (UK) Ltd. has provided assistance with the structural and geotechnical mapping of the Kumtor Mine open pits, and the reports are also listed in Section 27. Much of the work by Golder and SRK has been incorporated into the current understanding of the slope stability at the Kumtor Mine and has been taken into account for the current design of the Central Pit (Golder 2015b). See Section 15 for the slope design parameters.

The host rocks in which the Kumtor Mine gold mineralization occurs are generally of poor to very poor competency due to the multiple phases of mostly brittle deformation described in Section 7. Additionally, faults, joints, and foliation planes are often at poor intersection angles with the pit walls that have resulted in overall pit slopes being designed at angles that have decreased from the range of 38 to 40 degrees in earlier years to the general 26 to 34 degrees range currently.

The Central Pit is an excavation in a structurally, hydrologically and glaciologically complex setting. Operations at the Central Pit have been negatively affected by two substantial failures of the northeast highwall in 2002 and 2006. In addition, high deformation rates have been experienced along the south and southeast walls of the pit, due to the influx towards the pit of the Davidov Glacier and of previously-placed waste dumps on the ice. In early 2014, operations were impacted by the acceleration of the south arm of the Davidov Glacier following the extraction of a cutback in this area. The accelerations have since been controlled by the addition of a toe buttress that was constructed in March and April of 2014. The toe buttress is discussed in further detail later in this section. The Davidov Valley, Lysii Valley, and the Sarytor Valley dumps have experienced large deformations over recent years and these deformations are also discussed later in this section. These areas have been identified by KGC as geotechnical areas of significance as they have had unforeseen and negative impacts on mine production from the Stockwork and SB Zones. Figure 16-1 shows the locations of these geotechnical areas.

The Golder 2015b report has divided the Central Pit into four wall sectors as described below and shown in Figure 16-2.



Worldview2 Satellite Image:
September 5, 2014

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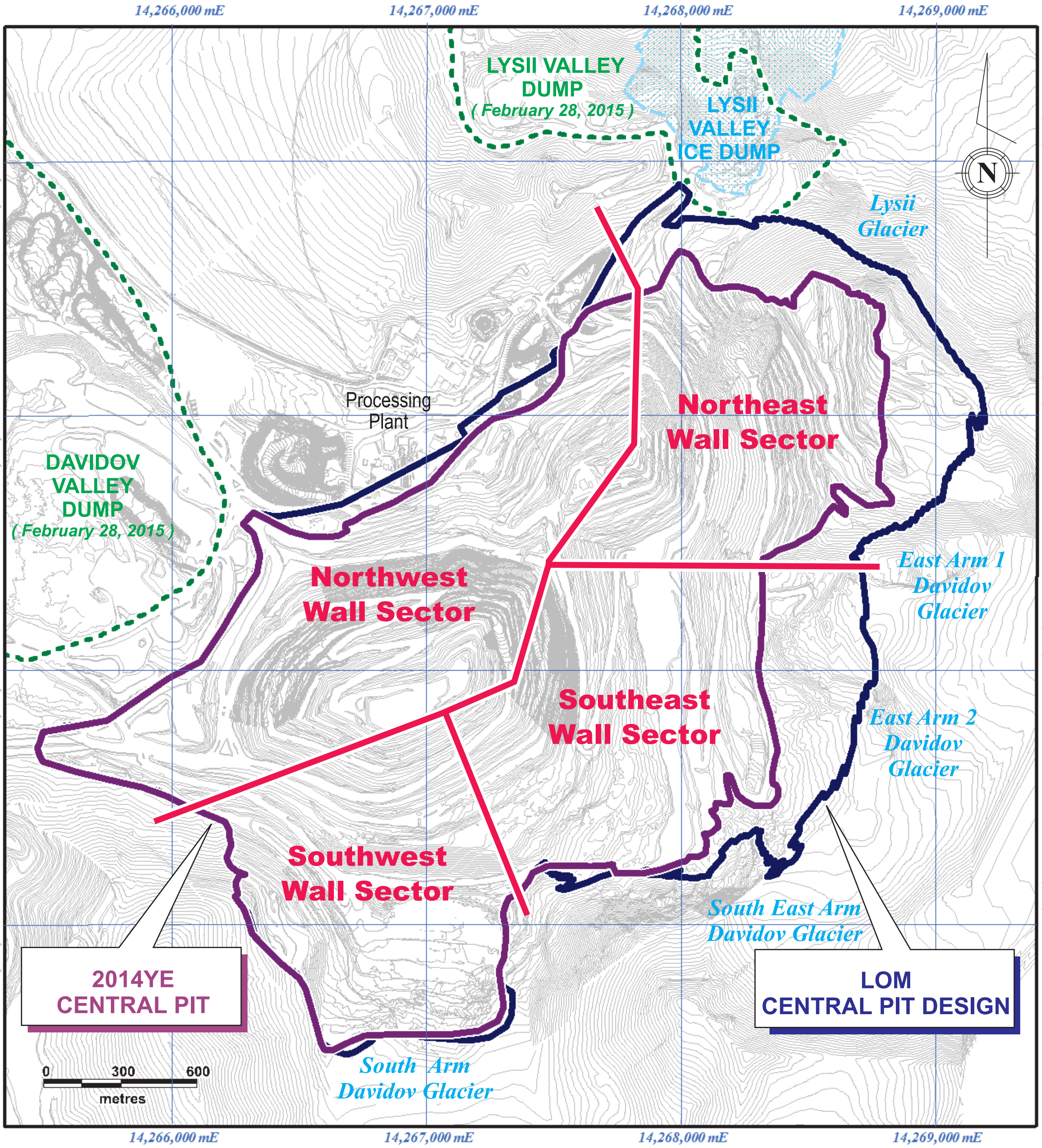
Kumtor 2015 Technical Report

Kumtor Mine, Kyrgyz Republic

Location of Areas of Geotechnical Significance

Date: 10/02/2015 | File: 2015_GeoTech.cdr | **Figure 16-1**



Notes:
- Modified from Golder 2015b
- Geology zone boundaries provided by KGC during Golder May 2013 site visit
- Updated 3c boundary based on location of the fault
- Proposed 3b Transition Zone bsed on updated Southeast wall Geology by Seago 2014

centerragold	**Centerra Gold Inc.** Kumtor 2015 Technical Report
Kumtor Mine, Kyrgyz Republic	
Central Deposit Wall Sector Extents	
Date: 17/03/2015 File: 2015_GeoTechWalls.cdr	Figure 16-2

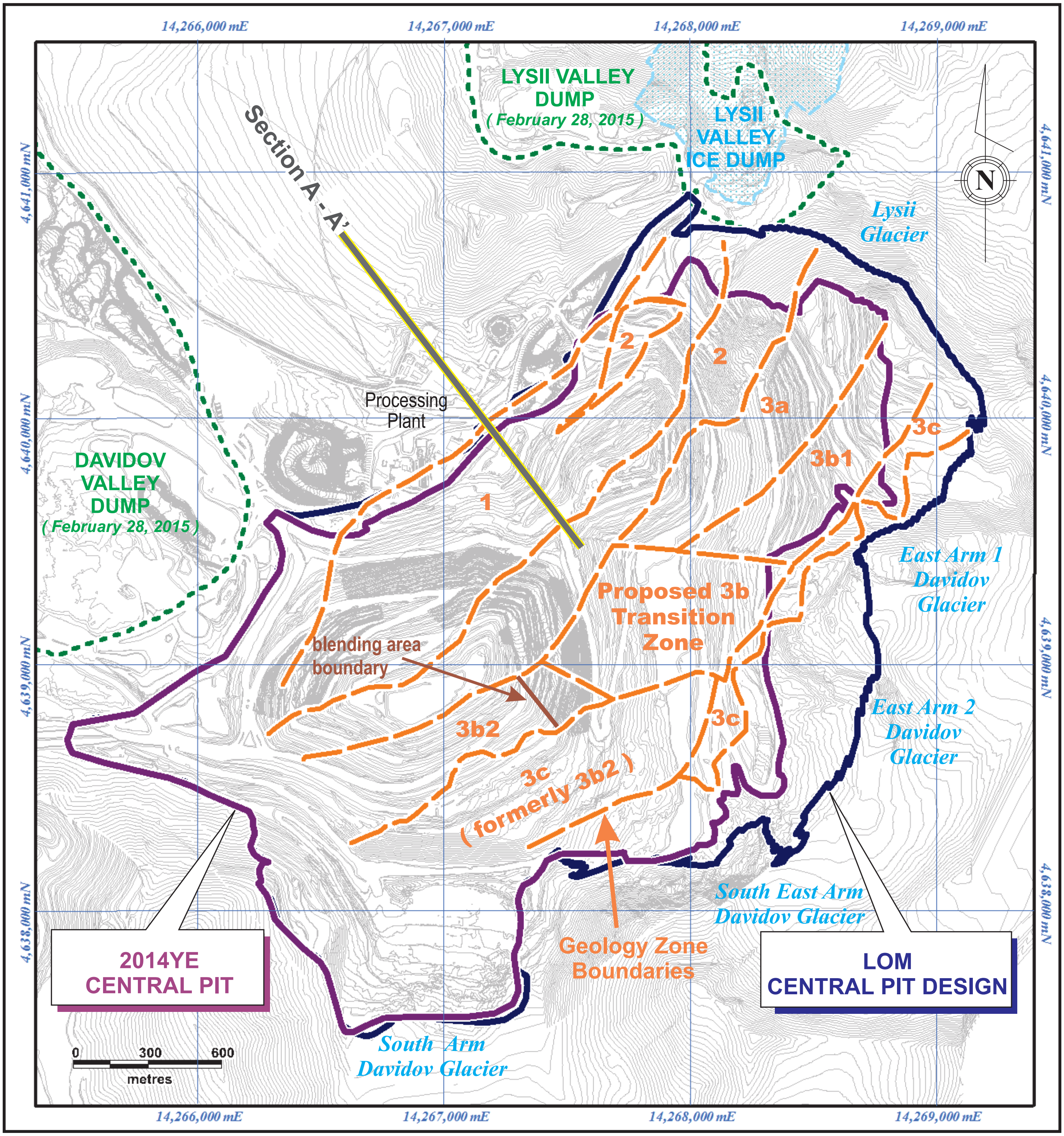
NORTHEAST WALL SECTOR

The northeast wall sector of the pit will range in height from 450 metres to approximately 750 metres in height. The structural geology of the wall has been mapped and interpreted by SRK UK. The structural failure mode of the two previous wall failures appears to be understood, with water seepage into the slope from the Lysii Glacier above considered a contributing factor (Thalenhorst et al., 2012). To create a stable final pit wall, flattening of the highwall to an overall slope angle of 30° is planned with the intent to mine out all of the known wedges, or at least to prevent them from daylighting, as recommended by Golder Associates Ltd. (Golder, 2015b).

Pit wall stability is strongly influenced by the level of water saturation of the rock, with dry conditions being more stable than wet, saturated conditions. To mitigate against glacier water entering the pit wall, the cap of the Lysii Glacier will be mined in 2019 to minimize the amount of melt water seeping into the pit walls. In addition, horizontal drainage wells will continue to be installed to depressurize the slope. Piezometer installations and pressure testing will be carried out to confirm that these mitigation measures are effective and adequate and that KGC will be able to depressurize the highwall, as necessary.

NORTHWEST WALL SECTOR

The northwest side of the pit is approximately 280 metres high and the wall slopes to the southeast away from the processing plant site, which is set back 350 metres from the pit crest. The ore body dips to the southeast, also away from the processing plant site. The slope design for this sector targeted a Factor of Safety (FOS) of 1.2 that, in consideration of the geomechanical rock properties, structural rock fabric, and ground water assumptions resulted in a recommended overall slope angle of 26° (Golder 2015b). Using this recommendation as a guide, the ultimate LOM open pit battery limits or crest will be located some 90 metres away from the plant. On this basis and using the model developed to determine the overall slope angle of 26 degrees, the failure surface that intersects the edge of the Mill has an indicated FOS of 1.34. Figure 16-3 shows the section line (A-A') used for this analysis. In any event, the final pit crest will not reach 90 metres from the Mill until the final cutback of the LOM. As such, continued work will be completed and the current model validated.



Notes:
- Modified from Golder 2015b
- Geology zone boundaries provided by KGC during Golder May 2013 site visit
- Updated 3c boundary based on location of the fault
- Proposed 3b Transition Zone bsed on updated Southeast wall Geology by Seago 2014

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Central Deposit
Geology Zone Boundaries and North Wall Stability Analysis Section Lines

Date: 17/03/2015 | File: 2015_GeoTechSect.cdr | **Figure 16-3**

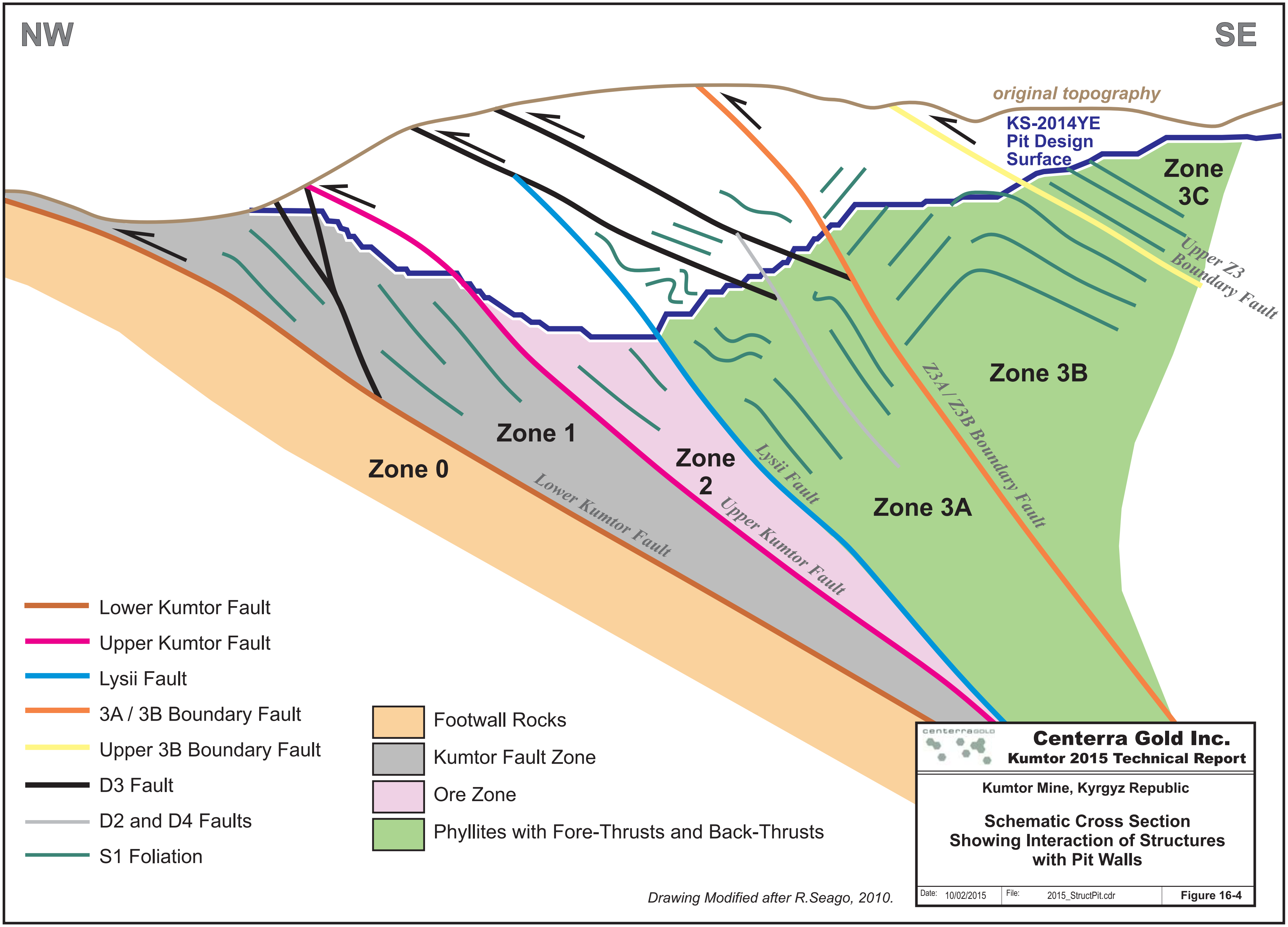
SOUTHEAST WALL SECTOR

The southeast wall sector over the LOM will vary in height from approximately 740 metres on the northeast side of the wall sector to 400 metres on the southwest side of the wall sector. The proposed inter-ramp slope angles will range from 33 to 34 degrees in the lower portion of the wall and around 36 degrees in the upper portion of the wall. The planned overall slope angle ranges between 30 and 34 degrees.

On the southeastern wall sector, the planar structural features are variably more or less parallel to, or dip into the pit wall, depending on the location of the pit walls with respect to folds and faults in structural zones 3A and 3C. However, within Zone 3B, back-thrust faults and related parallel foliation can be expected to dip out of the wall at a variety of inclinations. Figure 16-4 shows a generalized structural interpretation.

To achieve the planned wall angle Golder (2015b) has recommended that the installation of piezometers and horizontal drainage wells continue for slope depressurization. In addition, KGC has a plan in place to continue this work including additional geotechnical drilling in 2015 to better define the orientations of the foliation in Zone 3B.

The design of the LOM plan will necessitate the prior and continuing removal of the advancing arms of the Davidov Glacier, and of previously-placed waste rock on top of the glacier, until 2019. The LOM plan is based on KGC's current understanding with respect to ice advance rates with the risk that larger efforts than currently planned may be required to keep the glacier ice from moving towards the active Central Pit and from disrupting the exploitation of the SB Zone.



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Schematic Cross Section Showing Interaction of Structures with Pit Walls

Date: 10/02/2015 | File: 2015_StructPit.cdr | **Figure 16-4**

SOUTHWEST WALL SECTOR

The height of the ultimate Southwest wall sector will vary from approximately 300 metres on the west side of the sector to 625 metres on the east side of the sector, The wall will use an inter-ramp slope angle which varies between 29 and 32 degrees on the west side of the sector, and 34 degrees on the east side of the sector. Overall slope angles will vary from 26 to 33 degrees respectively.

The interpretation of the geological structures in the southwest part (SB Zone) of the Central Pit (Seago, 2010) has shown that the fabric of the various structural features discussed in Section 7 tend to have an orientation that is parallel or sub-parallel to the pit walls for structural Zones 0, 1, 2, and 3B. The impact is such that ravelling has occurred but has been contained by catch berms.

The results of the analyses completed as part of the Golder (2015b) report indicate that this sector is expected to exhibit adequate overall stability when the expected groundwater conditions are applied to the slope. As such, groundwater pressure should be continued to be monitored through the use of piezometers.

SOUTHWEST AND SARYTOR PITS

The Southwest and Sarytor ultimate pit designs are significantly smaller and have far less vertical extent (up to 950 metres diameter and 365 metres depth in comparison to the Central Pit.

During mining of the Southwest Pit from 2006 to 2008, no serious geotechnical issues were encountered in the mining of a 65 metre thick section of the Sarytor Glacier or of the bedrock highwall. Monitoring of the Southwest Pit slopes continues and no material slope movements have been observed since the suspension of mining in 2008. The wall stability to date supports the choice of wall angles shown in Tables 15-2 and 15-3 of Section 15.

As Figure 16-1 shows, the Southwest and Sarytor Pits will coalesce after mining has been completed. The highwalls of the two pits will cut across the ice of the Sarytor Glacier, which is retreating according to observations over the last several years. The seasonal melt waters from the glacier will be managed by diverting the flow initially into the existing Southwest Pit until mining of the Sarytor Deposit is complete. KGC has a water management system in place that diverts water around the Sarytor Valley waste dumps.

As part of undertaking the assignment of producing this report, the responsible author has reviewed the final pit designs for the Central, Southwest, and Sarytor pits produced by KGC that contain the December 31, 2014 Mineral Reserves of the Kumtor Mine. The author concludes, and considering the technical recommendations provided by others (and referenced herein), that the designs are reasonable and achievable, based on the current knowledge and understanding of all features and parameters affecting their future stability.

GLACIER-RELATED ISSUES

The LOM pit intersects two glaciers, the Lysii Glacier at its northeastern end and Davidov Glacier at its eastern and southern ends. The Sarytor Pit intersects the terminal part of Sarytor Glacier. The interaction between the current and future open pits and the glaciers, and the challenges arising from this interaction, primarily in mining the glacier ice, are described below.

Unique considerations for mining glacier ice include finding and dealing with voids in the ice, filling ice crevasses with ice or waste rock, and managing glacier meltwater flows, especially during the summer months. Mitigating measures to address these issues include the use of ultrasound radar for cavity detection, the allocation of adequate capacity for haulage, and the adequate management of meltwater through a combination of collection, diversion, and pumping.

The mining of ice has also resulted in potential legal issues, including the delay in obtaining necessary approvals and permits for the Kumtor Mine's annual mine plan. See Section 4 for a further discussion.

THE DAVIDOV GLACIER

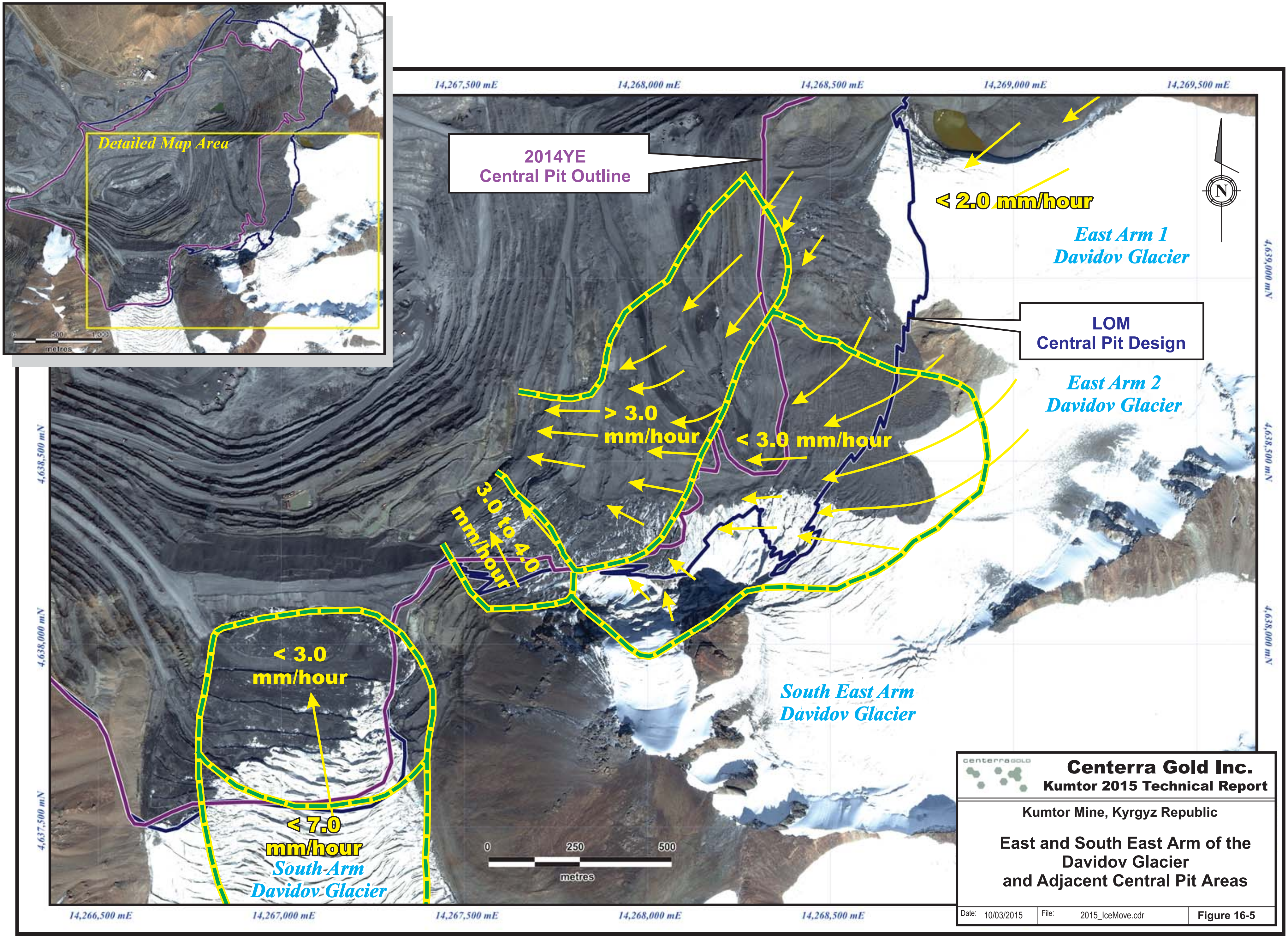
Davidov Glacier consists of four arms identified as "East Arm 1", "East Arm 2", "SE Arm", and "South Arm", from north to south (Figure 16-5). Mining of the Central Pit began in 1995 and from that time until the discovery of the SB Zone in 2005, the majority of the waste rock and sections of the Davidov Glacier were mined and deposited on and along the lateral margins of the Davidov Glacier in an effort to push the flow of the remaining ice away from the crest of what was then the ultimate pit design. The intent was to displace the ice and form a rock-fill buffer between the flowing ice and the active mining area. As a result, a substantial amount of waste rock had been dumped directly onto Davidov Glacier adjacent to the pit (Figures 16-5), with the desired effect of diverting glacier ice flow away from the pit. Subsequently, the performance of the open pit operation has been negatively affected by the creep movement of a section of these historical waste dumps and the Davidov Glacier ice below.

In 2012 and 2013, maximum movement rates (at a given time) of between 20 millimetres/hour (15 metres/month) and 80 millimetres/hour (60 metres/month) were frequently observed. The main effects have been the repeated delay of mining of some of parts of the SB Zone and an increased overall stripping ratio of the pit.

KGC has made significant efforts to manage the influx of waste rock and glacier ice material creeping towards the open pit, including the continued removal of previously-placed waste dump material and an intensive dewatering program intended to intercept and divert the water that was flowing along the ice-till contact. KGC has allocated mining equipment specifically for mining glacier ice and previously-placed waste dumps.

Between January and March of 2014, movement rates at the face of the excavated South Arm of Davidov Glacier surged from approximately 30 millimetres/hour (22 metres/month) to as much as 180 millimetres/hour. The surge was due to the excavation of a section of glacier ice that was resting on a relatively level basal till bed and which, until excavated, had been buttressing the glacier ice further up the valley. Its removal encouraged the accelerated flow of glacier ice towards the pit.

In response, a 90 metre high buttress was constructed in March and April of 2014 at the toe of the excavated South Arm of Davidov Glacier. The buttress was constructed of waste rock hauled directly from mining of the pit. In addition, the slope of the face of the glacier ice was flattened. The combined effect of these two measures resulted in the movement rates in the glacier ice decreasing from as high as 20 millimetres/hour (15 metres/month) in the month following construction of the toe buttress, to as low as 10 millimetres/hour (7 metres/month) by the end of 2014. Currently these rates are less than 7 millimetres/hour.



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East and South East Arm of the Davidov Glacier and Adjacent Central Pit Areas

Date: 10/03/2015	File: 2015_IceMove.cdr	Figure 16-5

The surge highlighted the need to better understand the glacier ice geometry, including ice thickness and the slope angle of the glacier bottom interface with till or bedrock.

While the buttress has been functioning as intended to date, monitoring and assessment of the buttress and deformations of the glacier ice being held back will continue in order to confirm the effectiveness of these remedial measures and its applicability to managing glacier flows from future cutbacks into the Davidov Glacier.

KGC has adopted the following measures as a management strategy for keeping the flow of glacier ice and melt water from negatively impacting the safe mining of Central Pit:

- The ice adjacent to the pit wall will be mined back to a distance of 150 to 200 metres above every active cutback (CB), as indicated in Figure 16-6.
- Engineered sumps have and will continue to be constructed in front of the excavated glacier ice above the pit to collect melt water. The sumps are and will be connected to dewatering pipes that will divert the collected melt water around and away from Central Pit.
- A waste rock buttress, if necessary, may be constructed at the excavated face of glacier ice in the South East Arm of the Davidov Glacier, similar to that which was constructed in 2014 for management of movements towards the pit from the South Arm of Davidov Glacier.
- In sensitive or problematic areas, specialized monitoring instruments including a slope stability radar system are being used.

While the volume of the glacier ice near the Central Pit is reasonably well-known, the rate at which the ice will be advancing toward the pit remains difficult to estimate. Historically, ice movement rates of between 15 and 30 millimetres/hour have been most frequently observed, but the 2014 experience from mining the South Arm of Davidov Glacier has shown that movement rates in excess of 150 millimetres/hour may be possible. Given this uncertainty, the volumes incorporated into the LOM plan, and the additional mining equipment required to accomplish this, are subject to upward revision, possibly in a substantial way. Should ice mining not keep up with the forward ice movement, or a buttress cannot be safely constructed to manage the rate of glacier ice flow towards the pit, interruptions to the LOM plan with respect to mining of the SB Zone would occur.

THE LYSII GLACIER

The Lysii Glacier, which initially flowed directly over the open pit northeastern highwall, was mined beyond the open pit footprint in the early years of the operation. The ice benches stood up well with no creep deformations. Safe mining was achieved by conducting radar surveys for detecting potential cavities and placing a 0.5-metre thick layer of waste material on top of each working area for the safe movement of the mining equipment.

The LOM plan includes the complete removal of the cap of the Lysii Glacier in 2019 to prevent melt water from seeping into the rock behind the pit walls below. This action is consistent with a recommendation provided by Golder Associates Ltd. (Golder, 2015b). Excavation of glacier ice will be carried out following KGC's current standard operating procedures for mining ice. The potential impacts for mining the Lysii Glacier to develop the Central Pit are considered lower than those for the mining of the Davidov Glacier because the predominant direction of flow is away from the pit in this area.

THE SARYTOR GLACIER

Sarytor Glacier was initially mined in 2007 during Cutback 1 of Southwest Pit and will be further mined in the current LOM plan. Operational issues at the time included the inflow of melt waters into the pit during the summer months that required management and low productivity while mining. As previously indicated, no stability issues were reported during the initial mining of Sarytor Glacier, and deformation monitoring indicates that the glacier has only deformed a minor amount since.

MINING OPERATIONS

Mining operations at the Kumtor Mine use conventional open pit mining methods. Mining in the Central Pit is done on 10 metre benches to allow more efficient use of the larger mining equipment purchased in recent years. Ore at the smaller Southwest and Sarytor pits will be mined on nominal 4 metre benches for better mining selectivity of the smaller ore zones.

Blast holes are drilled using six diesel-powered Sandvik DR-460 rig and two Drilltech D55SP rotary-percussion drill rigs, with a hole diameter of 300 millimetres (mm). Charging the holes is undertaken by special bulk explosives trucks delivering either ammonium nitrate with fuel oil, or emulsion explosives for wet holes. The explosives consumption is about 0.26 kg per tonne of ore or waste.

The main loading fleet operating at the end of 2014 consisted of five Hitachi 3600 shovels, nine Liebherr 9350 hydraulic shovels, and one CAT 5130 B hydraulic shovel. The main haulage fleet operating at the end of 2014 was 71 CAT 789 haul trucks and 32 CAT 785 haul trucks. The scheduled major equipment increases and later retirements of the mining fleet over the new mine life is summarized in Table 16-1.

TABLE 16-1 ADDITIONS AND RETIREMENT OF MAJOR MINING EQUIPMENT, 2015 TO 2026

Equipment Model	Actual Units DEC. 31, 2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Hitachi 3600 Shovels	5									(5)			
Liebherr 9350 Shovels	9					(2)		(2)	(5)				
CAT 5130 Shovels	1		(1)										
CAT 789 Trucks	71		2						(31)	(42)			
CAT 785 Trucks	32		(2)	(3)				(5)	(9)	(7)			(6)

The Central Pit has had the benefit of a favourable topographical situation. The top mining elevation in the current ultimate pit design is at 4,470 metres, and the very deepest part of the final pit excavation will be at 3,520 metres in the southwest part of the deposit. The crushing plant to which ore is delivered is at about 4,050 metres and ore transport was thus downhill for the upper portion of the ore body, and will have a maximum uphill vertical haul of 530 metres for the lower portion of the ore body. The haulage distance from the Southwest and Sarytor Deposits, scheduled to be mined starting in 2015, will be approximately 4.5 kilometres.

The initial stripping of the Central Pit in 1995 had the unusual challenge of mining a portion of the Lysii Glacier that covered the northeastern area of the planned open pit, and lesser quantities of ice have been removed from this area in subsequent years as the northeast highwall of the open pit was pushed back. Additional mining of the Lysii Glacier is planned as part of the next highwall push-back. Mining of ice and previously-placed waste dumps on top of glacier ice (particularly Davidov Glacier) on the southeast and south walls of Central Pit have continued since 2007.

Hydrological conditions in the open pits are controlled by the presence of originally up to 250 metres of permafrost that has become more discontinuous in the areas exposed by mining and the seepage of seasonal surface waters and ground waters into the open pit and its walls.

Groundwater volumes are relatively minor while the inflow of seasonal melt waters can be as high as 2,000 L/sec. The Davidov Glacier is the dominant source of melt water entering the Central Pit in the summer months.

Where possible, surface waters are diverted away from the pit using diversion ditches, sumps and gravity pipelines, while water within the pit is channelled to sumps along dewatering ditches and is then pumped outside of the pit limits using electrical pumps purchased in 2011 and 2012. Recent experience indicates that up to two cubic metres of water per second can enter the bottom of the open pit in the summer. KGC maintains a significant inventory of spare pumps, parts, and piping in the event of a pump failure or required expansion of the system during peak flow periods.

GRADE CONTROL PROCEDURES

Ahead of the actual mining activities, bench composites of existing diamond drill core are tested in the KGC laboratory for their metallurgical character, and refractory and carbonaceous ore types are delineated on this basis. This data are also included in the block model used for Mineral Resource and Mineral Reserve estimation and determines in part the value of a block. In general, the northern part of the Central Deposit has the poorest recoveries, but higher grades are matched by higher recoveries. The Southwest and Sarytor Deposits show recoveries that are lower than those experienced in the Central Deposit. The metallurgical information is included in the data used for pit optimization.

Grade control in the pit is based on the sampling of blasthole cuttings whose grade and metallurgical character are determined at the KGC laboratory. This information is entered into the grade control module of the GEMS mining software. Based on the GEMS output, the various ore blocks are staked in the field for digging, taking into account experience with ground movement during blasting. The ore is then delivered to the crusher or the appropriate stockpile depending on the daily blending requirements. KGC has an active and dynamic blending program in close contact with the Mill that adjusts the ore blend as required to maximize the gold recovery. The grade control personnel work seven days per week.

The blasthole assay information, combined into the ore control model, is also used to estimate the monthly pit production and for short and medium-term planning, as monthly forecasts of tonnes and grade by the Mineral Resource block model have a variance that is too high for short-term planning. In addition, logging of the blasthole chips allows the intensity of the alteration to be mapped, an important input parameter into the definition of the structural ore zones that in turn play an important role in the Mineral Resource estimation process.

MINING EQUIPMENT MAINTENANCE AND SERVICES

The maintenance department is currently responsible the maintenance of mine equipment, the process plant, the effluent treatment plant and the electrical distribution system. The department is also responsible for other transportation and mechanical equipment such as the fleet for hauling supplies to and from the mine site from the marshalling yard in Balykchy.

KGC has utilized a computerized maintenance system since start-up for mobile and plant maintenance requirements. Initially schedules were set in accordance with the manufacturers' specifications but as the component history developed, the preventative maintenance schedules were adjusted where required. Work orders are used to control and track all maintenance employee and materials costs. The achieved mechanical availability of major mining equipment is summarized in Table 16-2.

TABLE 16-2 MECHANICAL AVAILABILITY OF MAJOR MINING EQUIPMENT, 2014

Major Mining Equipment Type	Mechanical Availability (%)
Liebherr 9350 Shovels	88.1%
CAT 5130 Excavators	83.7%
CAT 789 Trucks	76.9%
CAT 785 Trucks	81.4%
Production Drills	81.6%

WASTE DUMPS DESIGN AND CAPACITY

To the end of year 2007, the majority of the Central Pit waste had been deposited on Davidov Glacier, with a smaller dump on the Lysii Valley, located northeast of the processing facility, also being used. The expanding pit (due to the incorporation of the SB Zone) resulted in a curtailment of this practice, with waste being deposited in the Davidov Valley immediately west of the pit rim commencing in 2009. Since then, waste deposition has been distributed between the three waste dumps: Davidov Valley (currently the largest of the three dumps), Lysii Valley, and Sarytor Valley. With open pit mining now scheduled to continue until 2023, a significant volume of additional waste rock material will be generated (1.1 billion tonnes from the Central Pit and 234 million tonnes from the Southwest and Sarytor Pits) and deposited in these three waste dumps.

Approximately 28 percent of the future waste is planned to be stored in the Davidov Valley dump. It is planned to be up to 350 metres high, 3.8 kilometres long, and 1.8 kilometres wide at its planned crest. Significant quantities of waste rock were dumped into the Davidov Valley dump between 2011 and 2013, using both bottom-up and top-down construction methods. Glacier ice excavated from the unloading of the Central Pit has been stored in designated areas along the southern edge of the dump. Currently, Central Pit separates the Davidov Glacier from the head of the Davidov Valley waste dump located adjacent to the pit, such that practically no meltwater from the Davidov Glacier flows through the Davidov Valley dump. The predominant sources of water that may infiltrate the dump are precipitation, surface, and ground water flows from the valley catchment area, and meltwater from the ice dump located along the southern edge of the Davidov Valley dump.

About 38 percent of future waste is planned to be placed in the Sarytor Valley dump. The dump is planned to be up to 338 metres high, 3.0 kilometres long, and up to 2.1 kilometres wide at its planned crest. The remaining 34 percent of future waste is planned to be placed on the Lysii Valley dump. The Lysii Valley dump is planned to be up to 430 metres high, 2.2 kilometres long, and up to 1.6 kilometres wide at its planned crest.

The slopes and valley floor of the Sarytor and Davidov Valleys are underlain by ice-rich, fine-grained permafrost soils, as confirmed by geotechnical drilling to a maximum borehole depth of 25 metres (KyrgyzGIIZ OJSC, 2013). Such conditions provide poor foundations for large waste dumps, particularly for sidehill dumps on sloping ground. The Lysii Valley is also underlain by permafrost soils, but the limited geotechnical drilling indicates that the ground ice content is lower and less susceptible to load-induced creep deformations of the foundation.

Performance monitoring to date of the three waste dumps shows that all the waste dumps will deform to varying degrees during dump construction. Since 2011, the toe of Davidov Valley dump has moved down the valley at annual rates of between 100 and 300 metres per year. The surface of the waste dump has exhibited signs of severe deformations and surface cracking. A number of inclinometers located downstream of the waste dump toe have consistently indicated shearing at depths of between approximately 30 and 45 metres below the original surface, suggesting shearing of the foundation soils. Continued dump construction is expected to accelerate the rate and extend the duration of dump movements. KGC has recognized this, and since 2013, has re-located mine infrastructure that would have been damaged by the moving waste dump. The ability to assess the mechanism(s) of this shearing has been challenging due to the high deformation rates that prevent the installation of instrumentation and the sensitivity of the frozen soils to thermal disturbance (ice lenses melt when in contact with drilling fluid).

In 2013, KGC resumed dumping waste rock into Sarytor Valley, and again the dump materials slid down the slope and then down along the length of the Sarytor Valley floor. At its planned ultimate configuration, the waste dump is expected to deform at rates similar to that observed at the Davidov Valley dump because of the similar, ice-rich permafrost foundation conditions. However, there is no infrastructure located downslope of the waste dump for which damage from the deforming dump would interrupt mine operations. KGC has a water management plan in place to prevent water from being impounded against the waste dump as it fills the valley.

To date, the Lysii Valley dump has experienced lower rates of deformation compared to the other two dumps. The lesser deformation is attributed to different foundation conditions; namely, that permafrost is present but contains less ground ice than in the other two valleys, based on borehole logs prepared by KyrgyzGIIZ OJSC (2013).

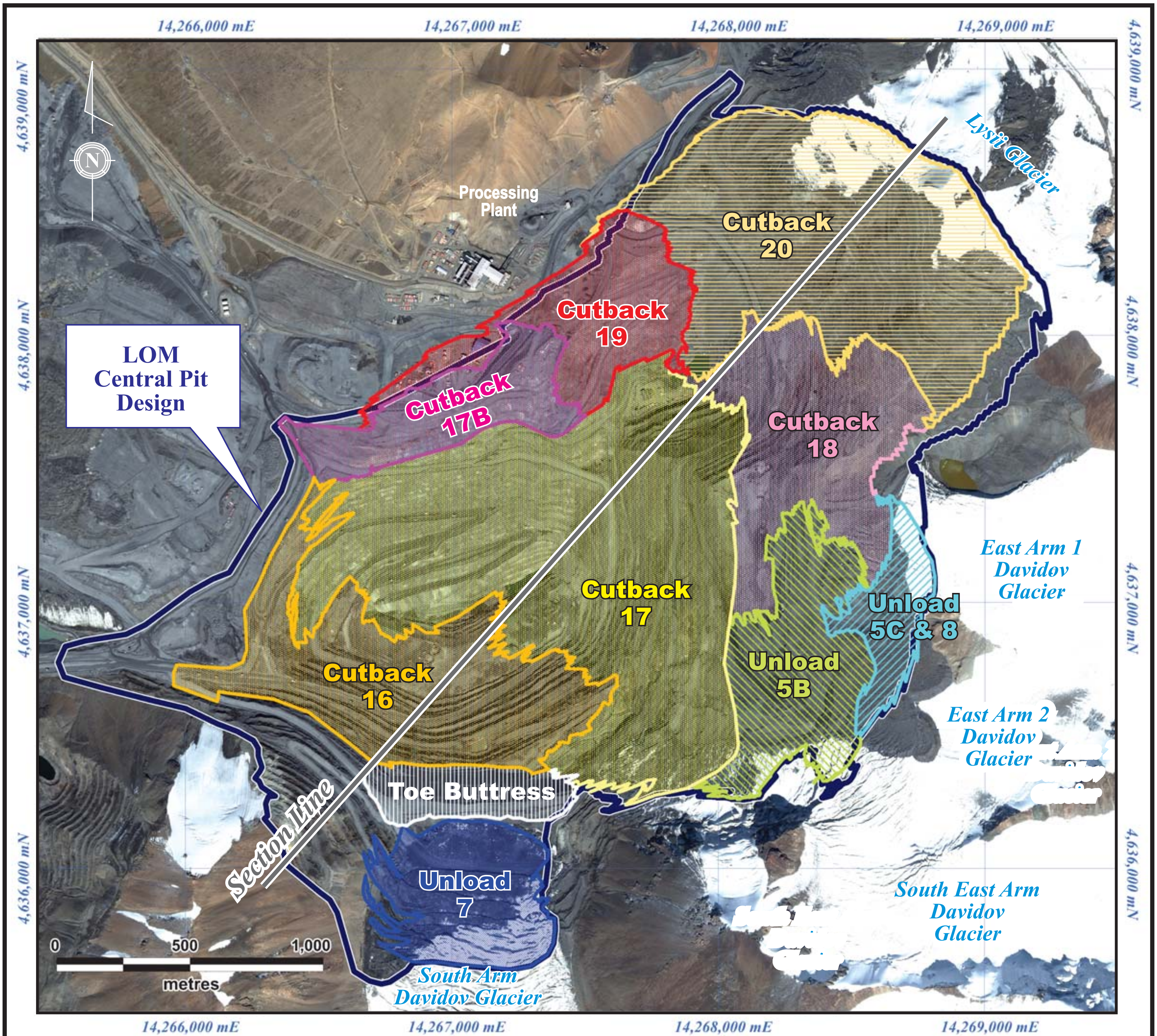
Waste dump movements for all three waste dumps are expected to continue to varying degrees for a period post mine closure. KGC has developed numerical models to predict the rate and extent of deformation of the Davidov Valley, Sarytor Valley, and Lysii Valley waste dumps. The deformations will continue to be monitored with the models updated on at least an annual basis.

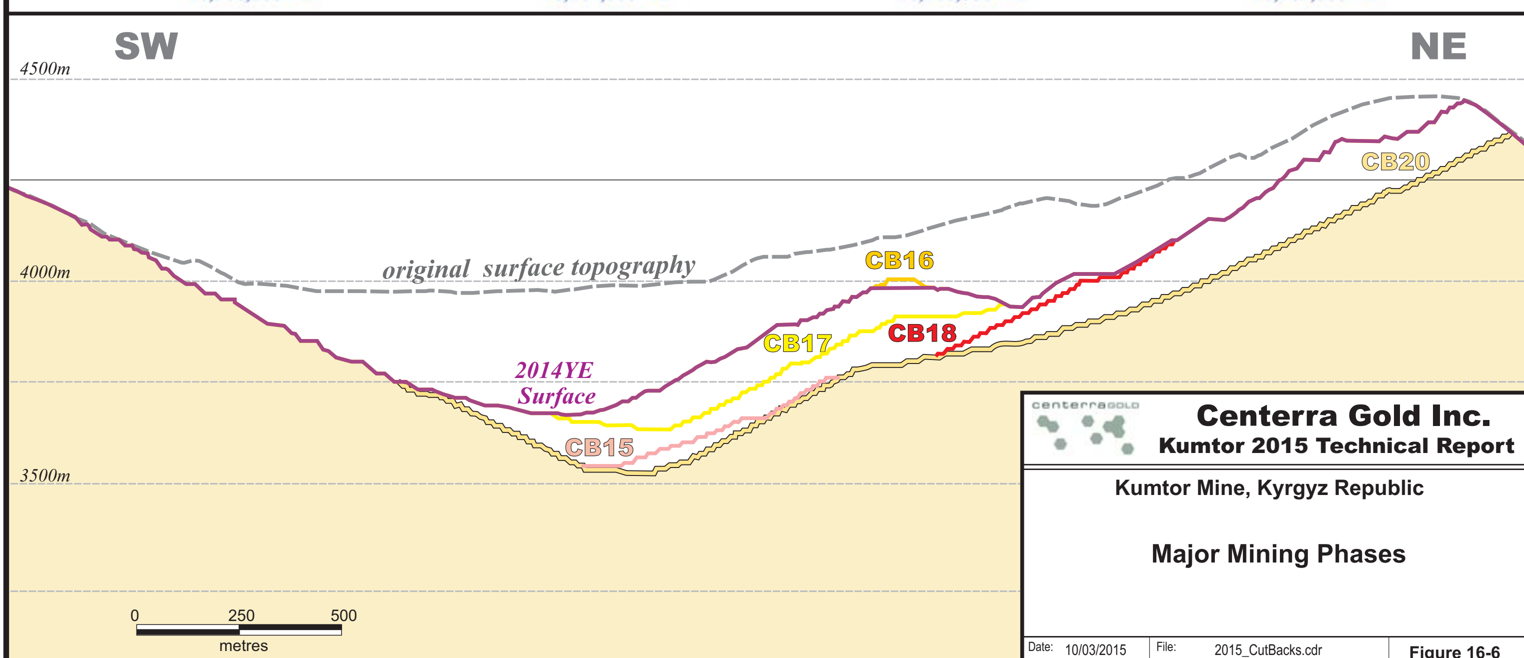
Safe operating procedures and monitoring have been established to ensure dump construction is carried out safety.

LIFE OF MINE PLAN

Based on the estimate of Mineral Reserves as of December 31, 2014 (Table 15-5) KGC has developed an updated LOM plan for the Central, Southwest, and Sarytor Pits that is summarized in Table 16-3. Figure 16-6 shows the major mining phases in the Central Pit for the duration of the LOM plan.

The new LOM plan expects open pit mining to continue to 2023 and milling operations of the Kumtor Mine to end in 2026. The LOM plan is based only on open pit Mineral Reserves and has no provision for production from any underground mining activities.





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Major Mining Phases

Date: 10/03/2015 File: 2015_CutBacks.cdr **Figure 16-6**

TABLE 16-3 KUMTOR MINE LOM PLAN, PROJECTED MINE AND MILL PRODUCTION

Thousands of tonnes of ore and waste, cubic metres of ice and ounces of gold

			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Totals
Central Pit	Ore	kt	4,641	7,614	2,184	5,288	13,920	-	4,726	6,252	-	-	-	-	44,625
	Grade	Au (g/t)	2.6	3.0	3.3	3.2	2.8	-	3.7	3.4	-	-	-	-	3.1
	Waste	kt	157,102	149,889	133,387	167,711	150,432	157,010	152,754	18,296	-	-	-	-	1,086,581
Sarytor Southwest	Ore	kt	444	-	2,988	-	-	-	-	4,033	8,702	-	-	-	16,167
	Grade	Au (g/t)	4.7	-	2.6	-	-	-	-	2.3	2.1	-	-	-	2.3
	Waste	kt	8,533	-	34,440	-	-	-	10,537	104,072	76,850	-	-	-	234,432
Total Mining	Ore	kt	5,085	7,614	5,172	5,288	13,920	-	4,726	10,285	8,702	-	-	-	60,792
	Grade	Au (g/t)	2.8	3.0	2.9	3.2	2.8	-	3.7	3.0	2.1	-	-	-	2.9
	Waste	kt	165,635	149,889	167,827	167,711	150,432	157,010	163,291	122,367	76,850	-	-	-	1,321,012
Stockpile Closing	Ore	kt	6,921	8,628	7,909	7,306	15,334	9,427	8,262	12,656	15,467	9,560	3,669	-	-
	Grade	Au (g/t)	1.5	1.6	1.3	1.3	2.0	1.1	1.1	1.3	1.2	1.0	1.2	-	-
Milling	Ore	kt	5,942	5,907	5,891	5,891	5,891	5,907	5,891	5,891	5,891	5,907	5,891	3,669	68,569
	Grade	Au (g/t)	3.4	3.4	3.1	3.0	3.1	3.4	3.3	3.8	2.6	1.5	1.0	1.2	2.8
	Recovery	%	80.0%	80.5%	77.6%	78.9%	80.1%	80.2%	82.5%	82.5%	74.7%	67.1%	54.3%	57.9%	78.0%
	Production	Au (koz)	**519**	**517**	**461**	**448**	**466**	**519**	**513**	**601**	**372**	**194**	**100**	**79**	4,789

Note: The LOM gold production shown in Table 21-1 includes carbon fines which are not shown in this table.

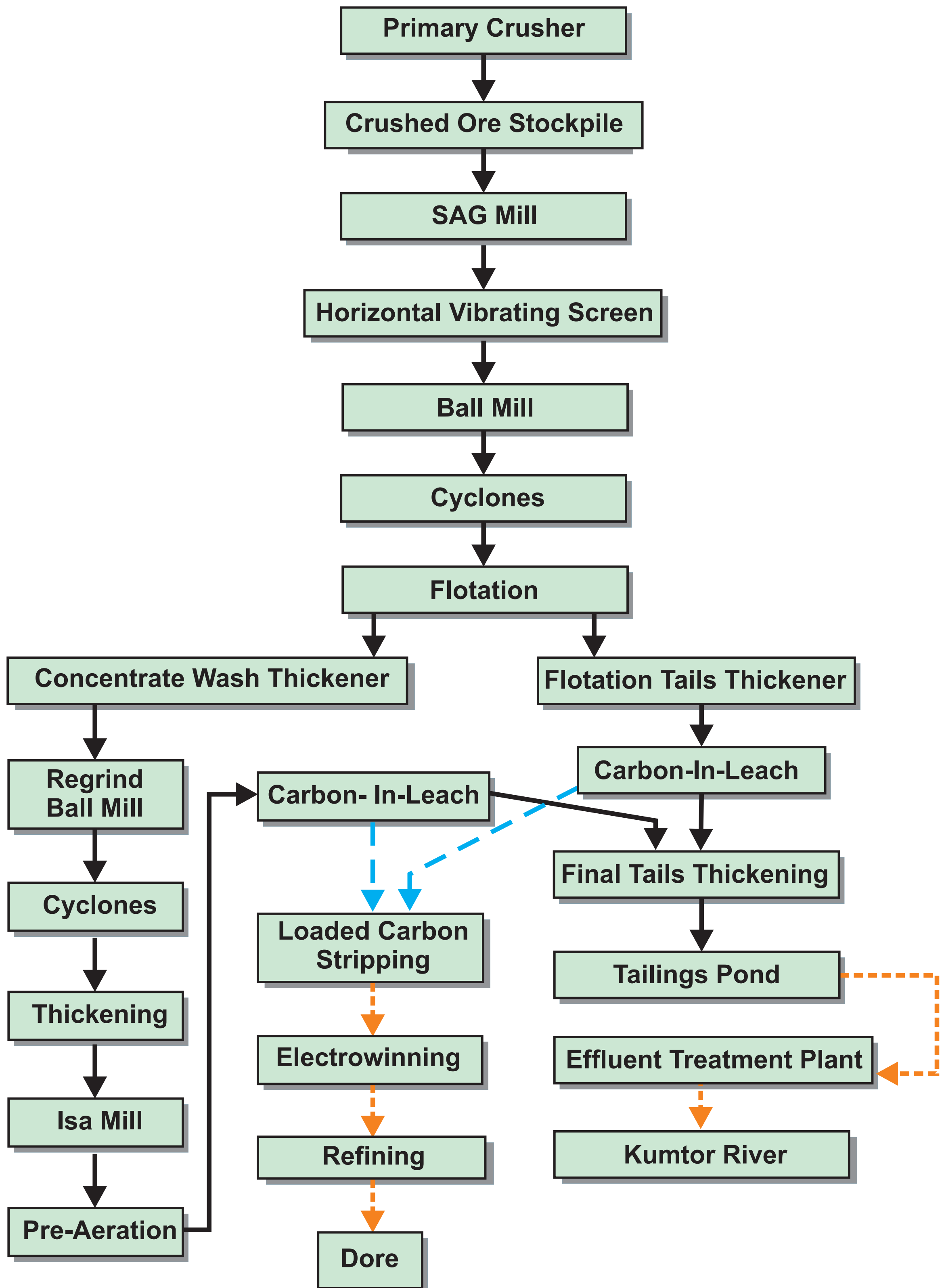
17 RECOVERY METHODS

PROCESS DESCRIPTION

The current plant flowsheet (Figure17-1) reflects the fine-grained nature of the gold and its intimate association with pyrite, and consists of crushing, grinding, pyrite flotation, and two-stage re-grinding of the flotation concentrate. Two separate carbon-in-leach (CIL) circuits extract the gold from the re-ground concentrate and from the flotation tails, with final gold recovery accomplished by electro-winning and refining. The Mill was originally designed with a capacity to process 4.8 million tonnes of ore per year. The Mill throughput is currently 5.9 million tonnes per year or a nominal capacity of 15,900 tonnes per day.

The ore to be milled is managed through a number of stockpiles that receive ore of different metallurgical character and of different grade ranges as determined by grade-control data and thus allow blending of the mill feed for optimum gold recovery. A gyratory crusher reduces ore to minus 200 millimetres. The ore is then fed to a coarse ore stockpile from which it is reclaimed for grinding. The stockpile has a nominal capacity of 100,000 tonnes and a live capacity of approximately 15,000 tonnes. Primary grinding is completed in a 9.14 metre diameter by 4.27 metres long 6,340 kW semi-autogenous (SAG) mill operating in closed circuit with a pebble crusher and a ball mill feed sizing screen. Secondary grinding is completed in a 5.49 metre diameter by 7.92 metres long 4,100 kW ball mill in closed circuit with 660 millimetre diameter hydrocyclones.

Hydrocyclone overflow at 80% passing 140 microns gravitates to the flotation circuit, comprised of two parallel banks of nine 42 cubic metre naturally aspirated flotation cells. A bulk sulphide flotation concentrate representing 7 to 11% of the original mill feed is produced with a grade of 30 to 50 g/t Au, about ten times the Mill head grade, and a flotation gold recovery of 87 to 92%. The flotation concentrate is thickened in a 15.2 metre diameter concentrate wash thickener.



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Schematic
Mill Flow Sheet

Date: 10/03/2015 | File: 2015_MillFlow.cdr | **Figure 17-1**

Ultra-fine grinding of flotation concentrate is completed in two stages. Flotation concentrate from the wash thickener underflow is first re-ground to 90% passing 20 microns in a 5.49 metre diameter by 7.92 metre long 4,100 kW ball mill in closed circuit with 150 millimetre diameter hydrocyclones. After thickening in the 15.2 metre diameter CIL feed thickener to 50% solids, it is further ground to 95% to 98% passing 20 microns in a 2,600 kW IsaMill that was commissioned in October 2005. The IsaMill provides additional liberation of the fine gold (2-5 microns) enclosed in pyrite.

The concentrate is diluted to 45% solids, pre-aerated for 40 hours and leached for 80 hours in the CIL circuit consisting of six 14.6 metre diameter by 14.6 metre tall agitated tanks in series. Cyanide solution, slaked quicklime, and activated carbon to maintain a concentration of 14 grams per litre (g/L) carbon are added to the concentrate CIL circuit.

The flotation tailings are thickened to 50% solids in a 25.9 metre diameter flotation tailings thickener and leached in the tailings CIL circuit, which consists of three 14.6 metre diameter by 14.6 metre tall agitated tanks in series. Cyanide additions are lower in the tailings CIL circuit compared to the concentrate CIL circuit and carbon concentration is 8 g/L.

Overflow from all four thickeners is recycled through the process.

The carbon in both CIL circuits is moved counter-current to the slurry flow, and the loaded carbon from the first flotation tailings CIL tank is pumped to the third concentrate CIL tank to continue loading. Loaded carbon from the first concentrate CIL tank is pumped to the carbon elution circuit. Total carbon inventory is approximately 300 tonnes.

The loaded carbon is stripped in two parallel 7-tonne carbon stripping circuits. Gold is subsequently recovered by electro-winning. Gold flake is washed from the cathodes, dried and smelted in an induction furnace and cast into doré bars. Carbon is reactivated in a 2,400 kW electrically heated horizontal kiln for reuse in the CIL circuits.

Tailings from both CIL circuits are combined in the 30.5 metre diameter tailings thickener and discharged by gravity to the tailings disposal area through a slurry pipeline (Figure 4-3). The tailings pipeline includes four choke stations for velocity control. The tailings line is twinned and is placed in a lined trench for containment in the instance of a leak. The tailings management facility is described Section 18 of this report.

Process control is provided by a Foxboro distributed control system, which allows the monitoring and control of the entire process. Six automatic samplers recover samples from all circuits. An automatic reagent addition system optimizes the performance of the flotation circuit. A particle-size monitor for the re-ground concentrate adjusts the grinding process in real time and thus reduces gold losses related to poor grinding. An automatic analyzer in the CIL circuit helps to maintain the optimum levels of sodium cyanide and the pH.

GOLD RECOVERY

Historically, the overall metallurgical recovery of gold in the Kumtor processing plant has averaged 79.4%. With KGC current knowledge, the LOM plan annual recoveries are expected to range from 54% to 83%, averaging 78% depending on the head grade and metallurgical characteristics of the ore. Work continues at the Kumtor Mine on implementing strategies to improve gold recoveries.

Gold recovery within the CIL circuits is 30% of the residual gold in the flotation tailings and 90% of the gold contained in the sulphide concentrate. Overall, 90% of the recoverable gold is from the concentrate CIL circuit, with the remainder from the tailings CIL circuit.

MILL EXPANSION

Subsequent to the 2012 Technical Report, Mill expansion studies were completed in 2013 and 2014. The decision was made not to proceed with the Mill expansion.

18 PROJECT INFRASTRUCTURE

TAILINGS MANAGEMENT FACILITY

GENERAL

The tailings management facility (TMF) is located in the Kumtor River Valley (Figure 4-3) and consists of twin tailings pipelines (each approximately 6.5 kilometres in length, one is the standby line), a tailings dam, an effluent treatment plant and two diversion ditches around the area to prevent runoff from natural watercourses from entering the tailings basin. These facilities received original approval in 1999 to be constructed to an ultimate dam crest elevation of 3,670.5 metres. The dam crest is regularly raised, and KGC is required to apply and obtain permits for the Government from time to time to address the interim raising and construction activities, as described in Section 20.

Tailings are deposited from the dam crest by spigoting. The tailings slurry is delivered through the pipeline by gravity from the Mill to the TMF. Beaches of 300 to 600 metres are maintained between the dam crest and the pond surface. During summer operations (May through October), approximately five million cubic metres of effluent from the tailings pond are treated and subsequently discharged into the environment, thereby lowering the water level in the pond. By October, the effluent treatment plant is shut down for the winter and the water levels slowly rise again.

The tailings dam was designed and constructed to account for the permafrost conditions at the site of the tailings management facility and to comply with standards consistent with the seismic design codes for the region. The tailings dam is approximately three kilometres long. The dam crest is ten metres wide and the dam side slopes are approximately 3 horizontal to 1 vertical (3H:1V). The dam is currently 37 metres high at its central part. The dam has been constructed of alluvial sands and gravels borrowed from a pit located approximately five kilometres from the dam. A geomembrane liner has been placed on its upstream face and extends 100 metres downstream of the dam toe on natural ground into the impoundment.

As of December 31, 2014, the dam crest elevation was 3,667.0 metres and the TMF contained approximately 68.7 million cubic metres of tailings representing 4.2 million tonnes of water and 64.6 million cubic metres of solid tailings. The currently approved ultimate dam (crest elevation

3,670.5 metres) and stabilizing toe berm was designed to store up to 87.7 million cubic metres of tailings; or some 19 million cubic metres above the current stored volume.

The dams and appurtenances are regularly inspected by KGC personnel during routine work at the facility and have been visually inspected on an annual basis since 2007 by geotechnical consultants Golder Associates Ltd., with the most recent inspection carried out in September 2014 (Golder, 2015a). Golder reported the dams and appurtenances to be in good condition and functioning as required.

EFFLUENT TREATMENT PLANT

At the Kumtor Mine, process water is discharged and accumulates along with the tailings in the TMF and requires treatment in an effluent treatment plant (ETP) and discharged on a seasonal basis. The purpose of the ETP is to treat excess tailings water that accumulates in the TMF. The ETP is designed to reduce cyanide and metal concentrations in tailing pond effluent prior to release to the environment. The designed purpose of the ETP is to ensure that discharge to the Kumtor River meets all water quality objectives as stipulated by the relevant Kyrgyz Environmental Permits and the EMAP. The effluent treatment system consists of three ponds designed for cyanide removal, metal removal, and polishing and pH adjustment before final discharge. The ETP has a nominal treatment capacity of 1,400 m^3/hr (reduced from 1,700 m^3/hr as a result of moving the facility in 2013).

DAM DEFORMATION

Since its construction, the dam foundation has experienced horizontal deformations, with the Kyrgyz Republic Institute of Rock Mechanics (KIRM) initially raising concerns in 1999. The tailings dam is founded on permafrost that includes zones of frozen silt containing ice lenses. The deformations were caused by creep deformation of the ice-rich silt induced by the load from the dam embankment.

Initial deformation monitoring indicated that the rate of creep was constant, but the magnitude and rate of deformations have been of concern to the regulatory authorities. The horizontal deformations, on the order of 100 to 200 mm until 2006, were well within the limits of deformations previously recorded on several large water and tailings dam structures reported in the literature (Golder, 2006).

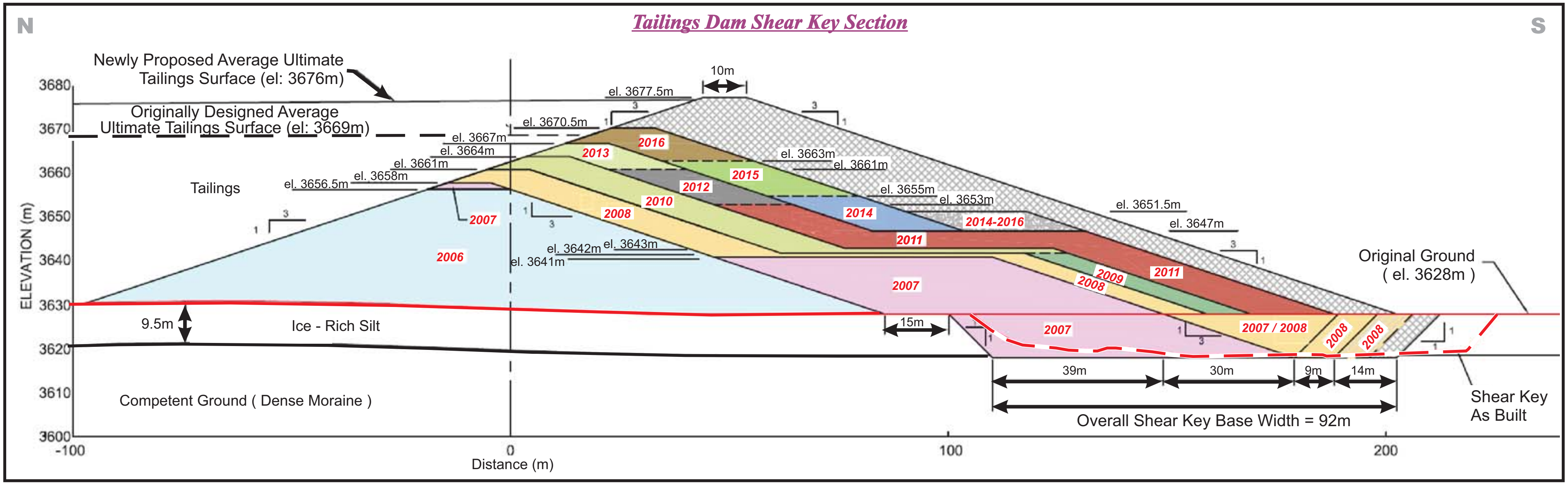
To satisfy the regulatory concerns, a shear key and toe berm were constructed in 2003 to reduce the rate of movement. However, initially, the deformations continued undiminished, and an additional engineering assessment indicated that the initial shear key did not penetrate the soils deep enough to completely stop the creep deformations of the ice-rich foundation silt (BGC, 2005).

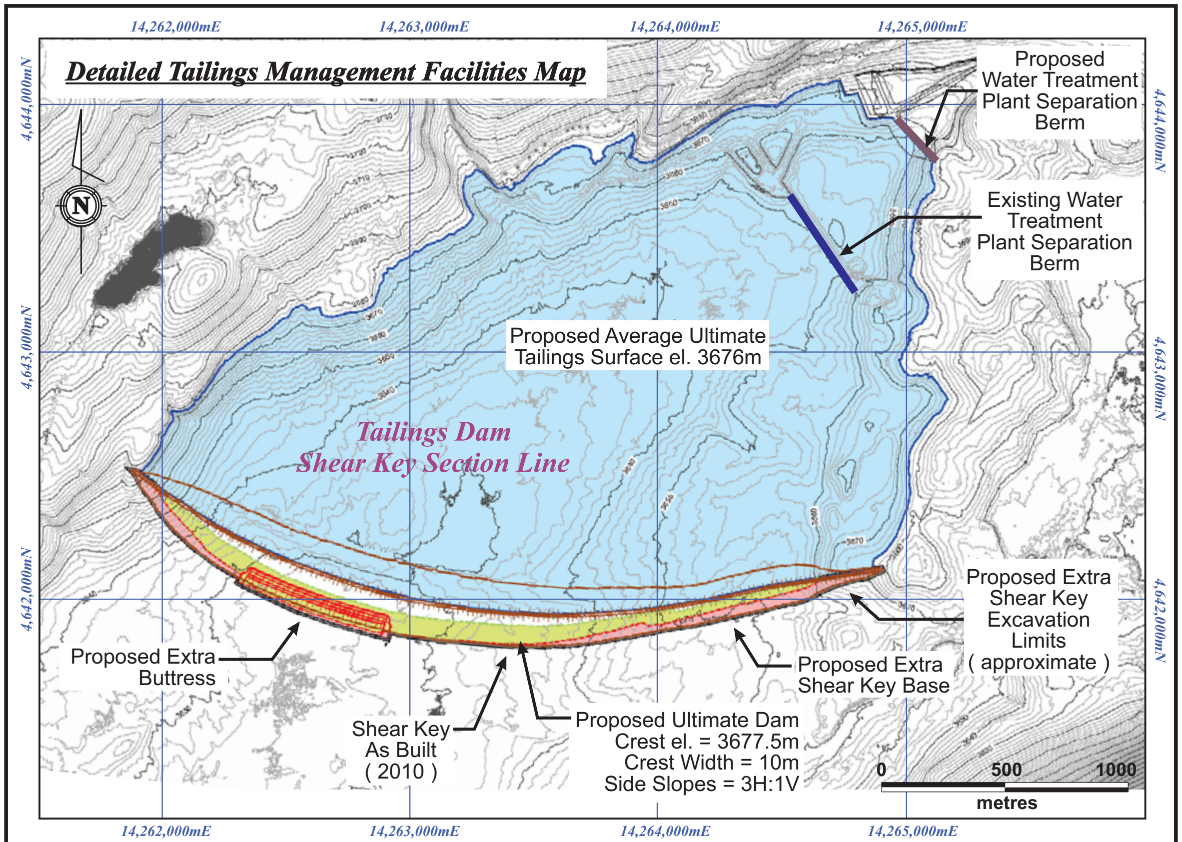
Since 2006, sections of the initial shear key have been deepened and expanded and new shear keys have been added. Design changes developed in close cooperation with KIRM and implemented since 2007 have assumed that the tailings dam will be raised to its ultimate permitted elevation of 3,670.5 metres. The new shear key has been excavated to an average depth of ten metres, so that it is keyed into soil that contains little ground ice (Figure 18-1).

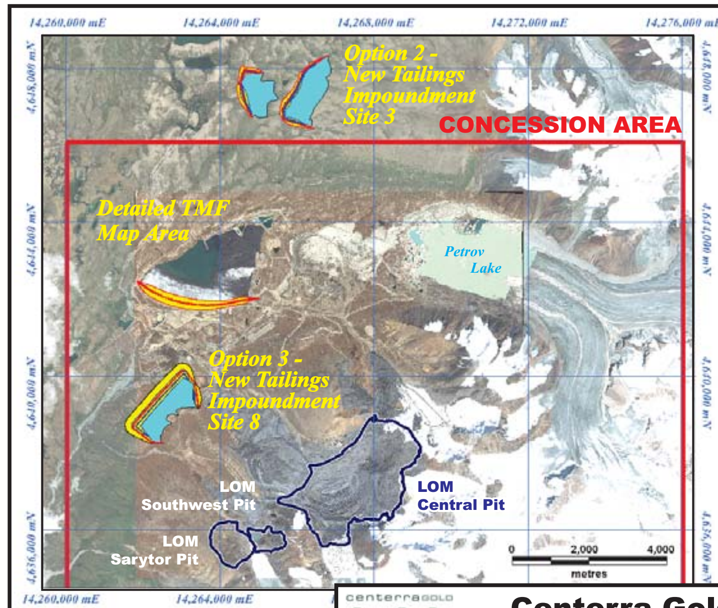
KGC has intermittently provided BGC with instrumentation monitoring data for developing a numerical model that predicted the observed deformations and provided guidance for constructing the dam to its ultimate dam crest elevation. The numerical model was initially developed based on observations up to 2006 (BGC, 2007) and later updated for measurements up to 2010 (BGC, 2010), and 2014 (BGC, 2015). All numerical models showed that the proposed shear key and buttress would effectively slow down deformations to about 3 mm per year by approximately 2030, given the same dam-raising schedule.

KGC has been regularly providing Golder Associates Ltd. and KIRM with information regarding tailings dam construction activities, the status of items of specific interest for geotechnical monitoring, and updated instrumentation monitoring data. As previously described, Golder (2015a) reported that at the time of their site inspection of September 2014 that the structures were in good condition and were functioning as required.

In their most recent report, for the first quarter of 2014 (Tolobekova, 2014), KIRM reported that the inclinometers installed throughout the dam indicate the consistent reduction of displacement rates, and which have reduced to almost zero values at the front of the shear key. The report also stated that the overall tailings dam condition was assessed as suitable for operation.







Source:
BGC Engineering Inc.
Kumtor Mine Additional Tailing Storage Options, Preliminary Report
July 13, 2012

Centerra Gold Inc.
Kumtor 2015 Technical Report

Kumtor Mine, Kyrgyz Republic

Tailings Management Facility and Alternate Sites

Date: 10/03/2015	File: 2015_Tailings.cdr	**Figure 18-1**

The responsible author concludes that, based on the geotechnical assessments referenced herein, that the shear key and buttress are performing as designed and that the tailings dam is under no threat of failing.

PETROV LAKE OUTBURST FLOOD POTENTIAL

Petrov Lake is a glacier lake that has formed with the retreat of Petrov Glacier and is located approximately 5 kilometres upstream of the tailings dam. The lake has formed due to meltwaters, fed from the receding glacier, being dammed by a natural terminal moraine which is mostly frozen and likely contains buried glacier ice. Petrov Lake has been increasing in size and volume due to the melting and recession of the glacier.

In 2012, BGC Engineering Inc. conducted a geohazard and risk assessment of a potential moraine dam outbreak flood from Petrov Lake (BGC, 2012a). BGC considered moraine dam thawing, to an extent that it allowed for piping or overtopping of the moraine dam, to be the most likely cause for a dam breach, with climate change being the most likely mechanism for initiating thawing.

BGC estimated that, without mitigation, the likelihood of moraine dam failure during mine operations would be unlikely, but may become very likely after mine closure. Two-dimensional flood routing models were carried out to identify the mine facilities most at risk due to a potential moraine dam outburst flood. The risk assessment identified the gravel crusher and roads as being at high risk during operations, and the tailings dam and shear key as being at high risk after closure due to the potential impacts of erosion. Other mine facilities that may be at risk during a dam outbreak flood include three bridges (one of which carries the tailings line) and the power transmission line. BGC (2012a) proposed a number of preventive measures to mitigate against the potential damage from a dam outburst flood.

Following this initial assessment, BGC developed conceptual risk reduction options for erosion protection of the toe and shear key of the tailings dam (BGC, 2012c) and an early-warning system for a potential moraine dam outbreak flood (BGC, 2014). In 2014, KGC adopted a system of monitoring of the water flow in Kumtor River, the water level of Petrov Lake, and thermistors installed within the moraine dam.

In 2014, CH2M Hill Canada Limited (CH2MHill) conducted a feasibility study investigating options to protect the TMF and minimize erosion in the event of a moraine dam outbreak flood from Petrov Lake. This work included an assessment of potential shear stresses at the toe of the TMF dam and identification and evaluation of alternatives for flood protection of the TMF.

Vasiliev and Butenko (2013) conducted a scoping-level options assessment for lake level control including three spillway channel configurations, siphoning, and pumping. These options continue to be evaluated.

OPTIONS TO INCREASE THE ULTIMATE TAILINGS CAPACITY

The remaining approved capacity of the tailings management facility is insufficient to store all of the 45 million cubic metres of tailings (68.6 million tonnes of ore) to be processed in the current LOM plan. To accommodate the shortfall storage options are being considered, including raising of the existing tailings dam and or constructing new tailings management facilities both within and outside the Concession Area. The LOM plan assumes raising of the existing tailings dam. If permitting of this option cannot be obtained, additional capital expenditures beyond those in the current capital budget for the new LOM plan would have to be incurred.

The existing facility will reach its permitted capacity (1.5 metre freeboard at a dam elevation of 3,670.5 metres) in 2020. In 2012, BGC Engineering Inc. conducted a preliminary tailings storage layout alternatives assessment (BGC, 2012b). Three options were investigated to provide storage for an additional 33 million cubic metres of tailings beyond what the TMF's currently-permitted capacity. The layout options are shown on Figure 18-1 and described below:

Option 1: Raising the existing tailings dam. The additional tailings can be stored in the existing tailings facility by raising the dam by seven meters to a crest elevation of 3,677.5 metres. The final dam height would likewise rise from 42.5 to 49.5 metres. The proposed final dam height will be marginally below 50 metres, at which height it would require a Class I designation from the existing Class II designation as defined by the 2007 Kyrgyz International Building Standards – Hydraulic Engineering Constructions. If the height reaches or exceeds 50 metres and is placed into Category 1, more stringent design, monitoring and reporting criteria would be applied to operate the structure

Updated stability analyses by BGC (2015) indicated that the dam could be safely raised by the seven metres beyond its currently-approved final elevation. Additional geotechnical investigations, including drilling and test pit excavations, were recommended to confirm the appropriateness of the design assumptions for the expanded shear key.

Option 2: New Tailings Facility at Site 3. This site consists of two cells. Site and subsurface conditions are expected to be favourable for the design, construction, and operation of the dams and runoff diversion works. However, a significant amount of geological and geotechnical investigation, monitoring, and design work will be needed to confirm the feasibility of this option for tailings storage. Furthermore, this site lies outside of the Kumtor Mine concession boundary (see Figure 4-3), and KGC would need to negotiate with the Government should they wish to use this site.

Option 3: New Tailings Facility at Site 8. As is the case for Option 2, a significant amount of geological and geotechnical investigations and design work are required to confirm the feasibility of this site. Furthermore, significant earthworks (excavation and construction material quantities) will be required.

The foundation conditions for Option 1 (adding to the existing facility) are reasonably well-understood from previous site investigations and would require only local additional site investigations. However, there is a clear lack of geotechnical data available for the other two layout options, and so the suitability of these sites cannot be confirmed until a comprehensive geotechnical investigation is completed.

Option 1 is the preferred solution. The capital budget in Table 21-3 in Section 21 includes provision for the annual raising of the dam to its currently-approved ultimate crest elevation. A provision for the capital required for the additional capacity for 33 million cubic metres has been included, anticipating that the dam of the existing facility will be permitted to be increased by seven metres (Option 1). If either of Options 2 or 3 turn out to be the required solution, additional capital expenditures would be required to make one of these two options operational by 2020.

For a description of the power supply, waste rock disposal areas, and processing plant site, see Sections 5, 16, and 17.

19 MARKET STUDIES AND CONTRACTS

All gold doré produced by the Kumtor Mine is purchased at the mine site by Kyrgyzaltyn under the Restated Gold and Silver Sale Agreement for processing at its refinery in the Kyrgyz Republic. Under the Restated Gold and Silver Sale Agreement, Kyrgyzaltyn is required to pay for all gold delivered to it based on the afternoon fixing of the price of gold on the London Bullion Market by the 12^{th} calendar day following the date on which a shipment of gold doré is collected by it from the Kumtor Mine. The obligations of Kyrgyzaltyn are partially secured by a pledge of a portion of the Centerra shares owned by Kyrgyzaltyn. All gold doré produced by the mine to date has been purchased by Kyrgyzaltyn pursuant to these arrangements without incident. The terms of the Restated Gold and Silver Sale Agreement are within industry norms.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

PERMITS AND LICENCES

The KGC Health, Safety, and Environment (HSE) Policy and Compliance Departments spend considerable time and resources ensuring that all permits and licenses are received and remain current.

KGC has experienced delays in receiving permits and approvals. See Section 4.

The Mineral Reserves of the Kumtor Mine are carried on the State balance, a process managed by the SAGMR. Annual depletion reports referred to "5GR" reports are produced by KGC in January or February of each year for the previous year, and the depleted metal is removed from the balance.

The Law on Protection of Atmospheric Air dated June 12, 1999 requires that each Kyrgyz enterprise with activities that have a potential negative impact on the environment must develop and maintain an ecological passport (Ecological Passport) providing for the basic levels of impact on the environment, including the level of Maximum Allowable Emission (MAE) and Maximum Allowable Discharge (MAD) and the volumes of waste disposal or utilization.

The Ecological Passport is developed by an enterprise every five years and must be approved by the SAEPF. The Ecological Passport expired on December 3, 2014. As discussed in Section 4, KGC has submitted a revised Ecological Passport for review which is pending approval. Furthermore the MAE will expire on March 31, 2015 and KGC is in discussions to renew the permit, which is dependent upon the approval of the 2015 annual mine plan.

In 2014, KGC also developed and obtained approval by the SAEPF for an Ecological Passport for the Balykchy Marshalling Yard, and this passport is valid until October 4, 2019.

Since May 2002, KGC has paid an environmental protection tax, for which the rate and method of calculation are approved by Order of the President and by the Government. The tax rate that KGC pays since 2009 is approved by the Government and Parliament. The tax is comprised of payments for the discharge of effluents and treated sewage, air emissions and waste deposited until 2009 and is forwarded to the Kyrgyz treasury. According to the Restated Investment Agreement, annual payments of the environmental protection tax are now set at $310,000.

On May 29 2014, KGC received the licence for placing toxic materials and substances in the tailings pond. The licence is valid until May 30, 2016. Due to the issues with the deformations of the tailings dam described in Section 18, meetings were conducted regarding stabilization of the dam. KGC received approvals from the Kyrgyz authorities for dam stabilization designs, authorizing the continued use of the tailings facility at the time of this report. The authors have been advised that, based on the findings of a working commission consisting of the Mines Inspectorate, the Kyrgyz Agency of Environmental Protection, the Institute of Rock Mechanics and KGC representatives, that the remedial measures taken on the tailings dam and shear key are suitable. Geotechnical reviews by Golder and BGC resulted in similar conclusions. A more detailed discussion of this issue is in Section 18.

The transportation route for dangerous goods such as chemicals and blasting materials must be approved every six months. The approval includes permits for the vehicles transporting the specific materials. Blasting materials are imported from UK, Kazakhstan, and China and require import licences issued by the Kyrgyz Ministry of Internal Affairs upon agreement with the SAGMR. Sodium cyanide is imported from China and requires an import licence issued by the Kyrgyz Ministry of Economics upon agreement with a number of other ministries and Government agencies. Such licences are issued for one year. KGC has obtained licences for Kazakh blasting materials and sodium cyanide to be imported in 2015 with an expiry date of December 31, 2015. KGC also has an import licence for UK and Chinese blasting materials with an expiry date of December 31, 2015.

In addition, an annual permit for transit of sodium cyanide through the territory of the Kazakh Republic is required. The permit is issued by the Kazakh Ministry of Industry and New Technology upon agreement with a number of other Kazakh ministries. The current transit permit expired on March 3, 2015 and at the present moment, a process of obtaining of a new one is in progress.

ENVIRONMENTAL COMPLIANCE

The authors have briefly reviewed, but have not independently verified, statements by KGC with respect to the environmental compliance of the Kumtor Mine. As per KGC's annual environmental reports posted on their webpage, and consistent with independent environmental due diligence review results by Prizma LLC (2012) and Environmental Resource Management (2012), KGC is in material compliance with Kyrgyz legislation and good international industry practice.

The Kumtor Mine is the subject of various court claims issued by Kyrgyz regulatory authorities alleging environmental damages which total approximately $467 million (at the applicable exchange rates when the claims were commenced). Other claims for alleged environmental damages have also been issued by the same regulatory authorities, but no attempts have been made to date to enforce such claims through the Kyrgyz courts. KGC refutes all allegations.

ENVIRONMENTAL MANAGEMENT ACTION PLAN

As part of its obligations to the original lending institutions in connection with the Kumtor Mine financing, KGC implemented an Environmental Management Action Plan (EMAP) in 1995. The EMAP outlines KGC's environmental and safety commitments, including the regulations applicable to the Kumtor Mine. The EMAP has been updated over the years, most recently in in 2010 to reflect the maturing operations.

The Restated Investment Agreement provides that KGC will continue to be obligated to operate in accordance with mine and operating plans that seek to limit the environmental impact of the project and protect human health and safety in accordance with good international mining practices. Specifically, KGC continues to be obligated to operate in material compliance with the standards applicable under the EMAP.

The standards applicable include the most stringent of:

1. The environmental laws of the Kyrgyz Republic and the current KGC Occupational Health and Safety guidelines; or

2. The World Bank Environmental Guidelines and the environmental laws of Canada and Saskatchewan.

Aspects Covered by the EMAP include:

- Handling of hazardous materials and emergency response;
- Environment protection, including wildlife conservation;
- Containment, control and elimination of seepage and spills;
- Policies, programs, training, regulating documents and reporting procedures; and
- Mine closure requirements.

ENVIRONMENTAL MANAGEMENT SYSTEM

To understand, evaluate, and manage KGC's environmental footprint, the KGC takes a systematic "plan-act-monitor-improve" approach, which is aligned with the International Organization for Standardization's ISO 14001 model. This approach began with an environmental impact assessment at the early planning stage of the Kumtor Mine, continues with the implementation of the environmental management program, and also incorporates mine closure planning for the future.

The system provides for scheduled monitoring, engineering controls, and performance requirements in line with good international mining practice, local regulations, and reporting. The system and its key elements are also subject to corporate and external audits and approval by relevant Kyrgyz authorities.

ENVIRONMENTAL AUDITS

KGC operations are subject to regular environmental audits by Kyrgyz and international companies and experts, as well as audits commissioned by Centerra and the EBRD. Over the past two years, this has included the following:

- In August 2013, AMEC Earth & Environmental UK Ltd (AMEC) carried out an engineering and environmental risk assessment of the Kumtor Mine, on behalf of Kyrgyzaltyn;

- In May 2014, EBRD inspected KGC operations and reviewed progress with various action plans agreed with the bank;

- In September 2014, AMEC was retained by Kyrgyzaltyn to carry out a repeat audit of the Kumtor Mine; and

- In September 2014, ERM Consultants Canada Inc. (ERM) conducted an audit of the KGC Safety, Health, and Environmental Management Systems on behalf of the Centerra Internal Audit Department.

The Kumtor Mine also receives inspections from relevant national agencies and in 2012, the number and scope of Kyrgyz environmental inspections increased significantly as part of various Kyrgyz commission reviews. In 2013, this high intensity of inspections continued with 36 separate visits by state authorities (up from 28 in 2012), involving 168 individuals and a total of 584 person-days spent at the mine site. In addition, a variety of documents and records were requested.

CLOSURE PLANNING

Under the EMAP, KGC is required to update its Conceptual Closure Plan (CCP) every three years. This approach allows for the development and adaptation of the CCP, provides a period for testing and monitoring of several years to evaluate the various options contemplated by the CCP, and is followed by the development of a Final Closure Plan (FCP) two years prior to the end of mine life. The FCP will consider the results of the testing and monitoring as well as any changes to the environmental, regulatory, and social environment that may have occurred over the LOM.

The KGC CCP was reviewed and updated during 2013, and the associated report was issued in early 2014. The most recent LOM plan is for open pit mining to end in 2023 and milling operations to conclude in 2026. The plan is guided by the following objectives:

- Materially comply with regulatory requirements
- Minimise residual environmental impacts
- Ensure mine site features are geotechnically stable
- Ensure protection of public health and safety
- Return the land to suitable post-mining land use

The updated CCP covers the existing components of the Kumtor Mine operations including the open pits, waste rock dumps, TMF with related water treatment facilities, and the Mill complex and associated mine infrastructure.

As a result of the latest CCP review, the LOM closure cost based on estimated current and LOM plan impacts as at December 31, 2014 is $50.0 million after allowing for additional mining and 2014 inflation of which $16 million has been funded. KGC is required to re-calculate closure liability on an annual basis, in accordance with International Financial Reporting Standards (IFRS), to take into account future discount and inflation rates.

In 1995, KGC established a reclamation trust fund to accrue cash funds for mine closure liabilities. This is funded by sales revenue, annually in arrears. On December 31, 2014, the balance in the fund was $16 million, with the remaining $34.0 million to be funded over the LOM as per the ANT.

EMERGENCY RESPONSE

KGC continues to conduct quarterly mock exercises to test different aspects of the Emergency Response Plan (ERP) including response time, effective communications, and the skills of the emergency response team. The ERP was most recently updated and approved in January 2015 to ensure notification protocols remain valid and improvements from the mock exercises are incorporated in the plan. The authors have been advised by KGC that this revision remains valid and meets all Kyrgyz legal requirements and follows international standards.

Medical staff, including two doctors, provide first aid occupational health care and operate a fully-equipped first-aid station and stand-by ambulances. Emergency medical evacuation from the mine site is available, when necessary.

Qualified, trained and skilled mine rescue and fire-fighting teams are on constant stand-by and available on site to address any emergencies. The site is equipped with a fire truck and associated fire-fighting equipment. Fire-hydrants and emergency stations are placed strategically throughout the mine site facilities.

First aid and fire-fighting training is provided at the site on a regular basis which accounts for approximately 50,000 man-hours of new employee and refresher training per year.

HEALTH AND SAFETY

KGC has developed and implemented a Health and Safety Management System (HSMS) that is aligned with the International Council on Mining and Metals (ICMM). KGC recently conducted a risk based audit (ERM, September 2014) of its HSMS. There were no major audit findings. Centerra, in conjunction with KGC, will continue to regularly audit the health and safety management systems. In addition, KGC recently underwent an on-site roads and vehicular audit (WESA September 2104) with no major audit findings.

Annual targets and objectives in the HSMS are set for both the operation and for individual departments. Annual reviews are conducted by senior management as well as with employees. Tracking of action items, targets, objectives, and deficiencies is done with the use of a Corrective and Preventative Action registers. These tracking systems are located on a centrally located data base allowing access to the registers by all departments in an effort to mitigate corrective actions, deficiencies, or non-conformances.

OVERVIEW OF KUMTOR'S HEALTH AND SAFETY PROGRAMS AND INITIATIVES

All KGC and contractor employees are encouraged (and trained) in identifying and reporting hazards and incidents using various methods and tools (pre-employment inductions, Neil George's 5 Point Safety System, employee safety recognition programs, field level risk assessments, etc.). At the Kumtor Mine, incidents involving injury and/or major damage or production loss are investigated to identify root causes.

Occupational health and hygiene monitoring programs are being developed and implemented within the various operating and supporting facilities. This includes fatigue monitoring and working at altitudes. Periodic health and hygiene audits and inspections are conducted at all food handling facilities and systems as well as regular training of kitchen staff in the safe handling and preparation of food and meals.

Safety and engineering elements are incorporated in the design of all facets of the operation. Facilities are designed to address issues of dust control, noise, toxic chemicals, mobile and stationary equipment hazards, and potential electrical and fire hazards.

The transportation of materials and personnel, both on- and off-site, is undertaken under specific accident prevention and safety procedures that include comprehensive training and traffic management plans as well as preventive maintenance programs.

HEALTH AND SAFETY PERFORMANCE

All occupational health and safety data (leading and lagging indicators) are tracked and recorded for opportunities of continuous improvement. In 2014 KGC's total reportable injury frequency rate (TRIFR) was 0.23, surpassing its 2014 target of 0.36. This would be considered one of the lowest rates of injury in the industry. KGC has targeted a 0.32 TRIFR for 2015. Historically, KGC has performed comparatively well with its industry peers.

21 CAPITAL AND OPERATING COSTS

The following material assumptions have been used in the LOM plans, estimates of operating and capital costs, and Mineral Reserve estimates:

- A gold price of $1,300 per ounce,
- Exchange rate: $1USD: 58 Kyrgyz Som;
- Diesel fuel price assumption: $0.70/litre delivered to the Balykchy yard.

The diesel price assumes that no Russian export duty will be paid on the fuel exports from Russia to the Kyrgyz Republic. Diesel fuel is sourced from several different Russian suppliers and only loosely correlates with world oil prices. The diesel fuel price assumptions were made when the price of oil was approximately $77 per barrel.

Based on the operating cost experience to date, and anticipating the additional haulage costs associated with the deepening of the Central Pit and with mining the more distant Southwest and Sarytor Pits, the LOM plan operating costs are summarized in Table 21-2. Note that the net revenue taxes in Table 21-2 are based on a gold price of $1,300 per ounce as assumed for the Mineral Reserve estimation process.

The all-in sustaining cost per ounce sold, which includes capital stripping but does not include growth capital or the revenue based tax, averages $779 per ounce for the period from 2015 to the end of the LOM.

All-in cost per ounce sold including net revenue based tax averages $985 per ounce for the period from 2015 to the end of the LOM.

All-in sustaining cost, all-in cost, and all-in cost including revenue based tax per ounce sold are non GAAP measures. For a complete description refer to Centerra's Management's Discussion and Analysis for the year ended December 31, 2014. Net revenue based taxes, as defined by the Restated Investment Agreement, have been calculated using a gold price of $1,300 per ounce.

The capital cost forecast (excluding capital stripping costs) shown in Table 21-1 for the LOM plan is further broken down in Table 21-2. The total LOM capital expenditures required to exploit the Mineral Reserves in the LOM plan is estimated at $540 million, which includes total sustaining capital amounts of nearly $424 million and growth capital of $116 million. The growth capital mainly consists of costs for the tailings dam construction, installation of dewatering systems, and the relocation of certain infrastructure as described below.

As part of the pit development and the continued growth and movement of the waste dump located within the Davidov Valley, KGC will continue to relocate and/or reconstruct several surface infrastructure facilities between 2015 and 2017 including the KGC camp facility, the water treatment plant, the heavy duty maintenance shop, the shovel maintenance shop, and the upper fuel farm.

Mill operating costs average $11.48/t from 2015 to 2023 as shown in Table 21-1. Mill operating costs decrease to $10.63/t from 2024 to 2026 due to reductions in Mill personnel, primarily in expatriate senior supervisory and technical staff.

Mill capital costs are $34.5 million as shown in Table 21-2. This includes both sustaining and growth capital costs. The sustaining capital costs reflect the age of the Mill and equipment replacement required to maintain the planned operating availability of 93%.

TABLE 21-1 KUMTOR MINE LOM, PROJECTED OPERATING AND CAPITAL COST

	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
PRODUCTION														
Mining (Operating)	(T x 1000)	25,456	79,529	37,470	114,155	89,992	-	91,221	36,803	29,212	-	-	-	503,838
Mining (Capital Stripping)	(T x 1000)	145,264	77,975	135,529	58,844	74,359	157,010	76,795	95,849	56,340	-	-	-	877,965
Mining Total	(T x 1000)	170,720	157,504	172,999	172,999	164,351	157,010	168,016	132,653	85,552	-	-	-	1,381,803
Milling	(T x 1000)	5,942	5,907	5,891	5,891	5,891	5,907	5,891	5,891	5,891	5,907	5,891	3,669	68,569
Gold Production	**(oz x 1000)**	**519**	**527**	**472**	**458**	**475**	**523**	**517**	**605**	**376**	**198**	**104**	**83**	**4,857**
Gold Sales	**(oz x 1000)**	**520**	**530**	**475**	**455**	**475**	**525**	**515**	**605**	**375**	**200**	**105**	**85**	**4,865**
DIRECT OPERATING COSTS														
Mining (Operating)	($ x 1000)	42,896	125,462	57,490	160,477	132,062	6,622	122,998	48,844	40,802	5,120	4,889	2,651	750,312
Milling	($ x 1000)	67,530	67,293	68,778	68,741	68,634	68,115	67,047	67,027	66,213	65,091	63,956	35,319	773,744
Administration	($ x 1000)	72,298	68,096	67,207	66,220	65,290	64,123	53,411	47,541	38,273	25,936	17,646	10,157	596,199
Refining and Other Management Fees	($ x 1000)	3,413	3,459	3,199	3,021	3,115	3,440	3,292	3,867	2,610	1,527	965	738	32,644
Other Costs	($ x 1000)	103	103	103	103	103	103	103	103	103	103	103	103	1,236
Total Direct Operating Costs	($ x 1000)	186,240	264,412	196,776	298,563	269,204	142,402	246,851	167,381	148,002	97,775	87,560	48,968	2,154,134
Direct Cash Cost - per ounce poured	**($/oz poured)**	**359**	**501**	**417**	**652**	**566**	**272**	**478**	**277**	**394**	**494**	**844**	**588**	**444**
Change in Inventories	($ x 1000)	(10,519)	(44,401)	25,540	(32,430)	(61,509)	101,119	(6,757)	15,141	(4,659)	24,109	18,113	22,629	46,376
By-Product Credit Revenue	($ x 1000)	(2,566)	(2,598)	(2,416)	(2,277)	(2,342)	(2,586)	(2,463)	(2,894)	(1,983)	(1,177)	(763)	(579)	(24,644)
OTHER PRODUCTION COSTS														
Mining (Capital Stripping)	($/t mined)	206,699	116,522	183,941	79,306	103,647	225,416	98,011	110,088	66,810	-	-	-	1,190,439
Revenue Based Taxes	($/t milled)	94,640	96,460	86,450	82,810	86,450	95,550	93,730	110,110	68,250	36,400	19,110	15,465	885,425
Total Other Production Costs	($/t milled)	301,339	212,982	270,391	162,116	190,097	320,966	191,741	220,198	135,060	36,400	19,110	15,465	2,075,865
Total Direct and Other Costs - per ounce poured	**($/oz poured)**	**939**	**905**	**991**	**1,006**	**966**	**886**	**848**	**641**	**754**	**678**	**1,028**	**773**	**871**
CAPITAL COSTS														
Open Pit Sustaining Capital	($ x 1000)	46,969	94,554	54,870	68,631	63,118	43,383	30,400	11,700	7,400	1,300	800	400	423,526
Open Pit Growth Capital	($ x 1000)	24,980	26,040	29,115	11,950	7,361	5,978	5,978	4,457	-	-	-	-	115,858
Total Capital	**($ x 1000)**	**71,949**	**120,594**	**83,985**	**80,581**	**70,480**	**49,360**	**36,378**	**16,157**	**7,400**	**1,300**	**800**	**400**	**539,384**
UNIT COSTS														
Mining (Operating)	($/t mined)	1.69	1.58	1.53	1.41	1.47	-	1.35	1.33	1.40	-	-	-	1.49
Mining (Capital Stripping)	($/t mined)	1.42	1.49	1.36	1.35	1.39	1.44	1.28	1.15	1.19	-	-	-	1.36
Milling	($/t milled)	11.36	11.39	11.68	11.67	11.65	11.53	11.38	11.38	11.24	11.02	10.86	9.63	11.28
Administration	($/t milled)	12.17	11.53	11.41	11.24	11.08	10.86	9.07	8.07	6.50	4.39	3.00	2.77	8.69
All-in Sustaining costs - per ounce sold	**($/oz sold)**	**821**	**808**	**966**	**905**	**783**	**971**	**711**	**498**	**575**	**610**	**1,007**	**840**	**779**
All-in costs - per ounce sold	**($/oz sold)**	**869**	**858**	**1,027**	**931**	**799**	**982**	**722**	**506**	**575**	**610**	**1,007**	**840**	**803**
All-in costs - per ounce sold (including taxes)	**($/oz sold)**	**1,051**	**1,040**	**1,209**	**1,113**	**981**	**1,164**	**904**	**688**	**757**	**792**	**1,189**	**1,022**	**985**

Note: The LOM gold production shown in Table 21-1 includes carbon fines.

TABLE 21-2 KUMTOR MINE LOM, DETAILED PROJECTED OPEN PIT CAPITAL COST

Category	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Mine Capital Stripping	($ x 1000)	206,699	116,522	183,941	79,306	103,647	225,416	98,011	110,088	66,810	-	-	-	**1,190,439**
Mine Equipment	($ x 1000)	-	31,449	5,820	19,007	14,168	2,763	7,950	1,200	-	-	-	-	**82,357**
Mine Support Equipment	($ x 1000)													**-**
Mine Equipment Maintenance	($ x 1000)	36,000	49,750	44,400	42,450	42,800	35,400	19,300	7,350	4,850	-	-	-	**282,300**
Mill	($ x 1000)	3,497	7,250	4,000	4,000	4,000	4,000	2,000	2,000	2,000	1,000	500	250	**34,497**
Tailing Facility	($ x 1000)	7,040	7,440	20,615	9,950	7,361	5,978	5,978	4,457	-	-	-	-	**68,818**
Surface Infrastructure	($ x 1000)	19,900	17,536	6,000	-	-	-	-	-	-	-	-	-	**43,436**
Other	($ x 1000)	5,512	7,170	3,150	5,174	2,150	1,220	1,150	1,150	550	300	300	150	**27,976**
TOTAL	**($ x 1000)**	**278,648**	**237,115**	**267,926**	**159,887**	**174,127**	**274,776**	**134,389**	**126,245**	**74,210**	**1,300**	**800**	**400**	**1,729,823**

22 ECONOMIC ANALYSIS

The material economic assumptions used for the calculations presented in this section have been stated in Section 21.

LOM CASH FLOW FORECAST

Using a price of gold of $1,300 per ounce, as assumed for the Mineral Reserve estimation process, the open pit LOM plan (Table 16-3) and the operating and capital cost forecasts (Table 21-2) have been used to estimate the net cash flow for the Kumtor Mine from 2015 to the end of 2026. As is shown in Table 22-1, the total net cash flow discounted at 8% amounts to $944 million dollars after accounting for all operating costs, capital expenditures related to the open pit operation and taxes under the Restated Investment Agreement.

TABLE 22-1 KUMTOR MINE LOM, PROJECTED NET CASH FLOW

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Gold Produced (oz x 1000)	**520**	**530**	**475**	**455**	**475**	**525**	**515**	**605**	**375**	**200**	**105**	**85**	**4,865**
Gold Price ($ US/ounce)	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Gross Revenue From Gold ($ x 1000)	676,000	689,000	617,500	591,500	617,500	682,500	669,500	786,500	487,500	260,000	136,500	110,467	6,324,467
Estimated Silver Credit ($ x 1000)	2,566	2,598	2,416	2,277	2,342	2,586	2,463	2,894	1,983	1,177	763	579	24,644
Total Gross Revenues ($ x 1000)	**678,566**	**691,598**	**619,916**	**593,777**	**619,842**	**685,086**	**671,963**	**789,394**	**489,483**	**261,177**	**137,263**	**111,046**	**6,349,112**
Operating Costs ($ x 1000)	186,240	264,412	196,776	298,563	269,204	142,402	246,851	167,381	148,002	97,775	87,560	48,968	2,154,134
Capital Costs ($ x 1000)	278,648	237,115	267,926	159,887	174,127	274,776	134,389	126,245	74,210	1,300	800	400	1,729,823
Closure Funding ($ x 1000)	2,985	3,101	2,843	2,837	3,037	3,465	3,578	4,434	3,032	1,887	1,300	1,587	34,085
14% Revenue Based Taxes ($ x 1000)	94,640	96,460	86,450	82,810	86,450	95,550	93,730	110,110	68,250	36,400	19,110	15,465	885,425
Total Cash Outflow ($ x 1000)	**562,513**	**601,088**	**553,996**	**544,097**	**532,818**	**516,192**	**478,548**	**408,170**	**293,493**	**137,362**	**108,770**	**66,421**	**4,803,468**
Net Cash Flow ($ x 1000)	**116,053**	**90,510**	**65,921**	**49,680**	**87,024**	**168,894**	**193,416**	**381,223**	**195,990**	**123,815**	**28,493**	**44,626**	**1,545,644**
Cumulative Net Cash Flow ($ x 1000)	116,053	206,563	272,484	322,164	409,188	578,081	771,497	1,152,720	1,348,711	1,472,525	1,501,018	1,545,644	

Discount Rate	Net Present Value ($ x M)
0%	1,546
5%	1,124
8%	944
10%	845

TAXATION AND ROYALTIES

The Restated Investment Agreement establishes effective January 1, 2008 (and continuing until the termination of the Restated Concession Agreement) a comprehensive tax regime for the Kumtor Mine. Except for the payments set out below, the Kumtor Mine is exempt from all other present and future taxes.

Except as expressly provided otherwise in the Restated Investment Agreement, the rates, amounts and other terms of any taxes or other payments are not subject to any future change in legislation or treaty provisions which would be more burdensome to the Kumtor Mine or Centerra. The Kumtor Mine and Centerra are entitled to benefit from any generally applicable future change in legislation or treaty provisions with respect to taxes or other payments payable under sections (2), (7), (8), (10), and (11) below which is beneficial to any of them. To the extent any such rates, capped by the provisions of sections (2), (7), (8), (10) and, (11), are decreased due to a change in legislation, they can be increased by a future change in legislation, provided that any such increased rates from time to time shall not exceed the rates in effect on April 24, 2009.

The taxes provided for in the Restated Investment Agreement are as follows:

1. A tax on gross revenue of 13%, payable monthly (the “Gross Proceeds Tax”);
2. A contribution of 1% of gross revenue to the Issyk-Kul Oblast Development Fund (the “Issyk-Kul Contribution”). Together, these taxes constitute the 14% revenue based taxes in Table 22-1;
3. Customs administration fees at generally applicable rates, which are not to exceed those rates in effect on April 24, 2009;
4. An annual payment of 4% of gross revenue against which all capital and exploration expenditures in the Kyrgyz Republic are fully credited, with expenditures not required for credit in any particular year carried forward for credit in future years;
5. An environmental pollution charge of $310,000 per year;
6. A land-use and access fee of $1,250,000 per quarter, against which the Gross Proceeds Tax and Issyk-Kul Contribution are credited in full;
7. Sales tax at generally applicable rates on goods and services purchased in relation to the Kumtor Mine;

8. Value added tax at generally applicable rates on goods and services purchased by KGC, except for good and services imported in relation to the Kumtor Mine;

9. Generally applicable fees for licences, registrations, travel visas and other fees for discrete government services, provided that such fees shall not exceed those in effect on April 24, 2009;

10. Payroll deductions for all employees subject to Kyrgyz income tax and contributions to the Social Fund of the Kyrgyz Republic in respect of employees who are Kyrgyz citizens, in each case at generally applicable rates; and

11. Excise taxes at generally applicable rates except on goods imported in relation to the Kumtor Mine.

The Kumtor Mine is exempt from certain other obligations, including the following:

1. KGC is exempt from all withholding obligations with respect to payments to third parties, but such third parties are not exempt from the relevant taxes to which the withholding would otherwise have related, subject to the benefits provided to such third parties in any applicable international treaties;

2. Centerra and its subsidiaries (including KGC) are exempt from paying taxes with respect to intra-group transactions, including for services, dividends, interest and other distributions or transactions; and

3. The Kumtor Mine is exempt from paying customs duties in relation to goods imported.

Effective June 6, 2009, the management fee payable to Kyrgyzaltyn is fixed at $1 per ounce, inclusive of any taxes.

SENSITIVITY ANALYSIS

Table 22-1 provides cash flow forecasts for the Kumtor Mine from December 31, 2014 to 2026 based on the current LOM plan and a gold price of $1,300 per ounce. Table 22-2 shows the sensitivity of the project NPV to gold prices from $1,100 to $1,500, discount rates of 0%, 5%, 8% and 10% and sensitivities to three other variables at the base-case gold price and an 8% discount rate.

TABLE 22-2 SENSITIVITIES OF MINE NET CASH FLOW

Millions of dollars

	Sensitivity to Gold Price at 0%, 5%, 8% and 10% Discount Rates			
Discount Rate	**0%**	**5%**	**8%**	**10%**
Gold Price ($/ounce)				
$1,100	709	475	378	327
$1,200	1,127	799	661	586
$1,300	**1,546**	**1,124**	**944**	**845**
$1,400	1,964	1,448	1,226	1,105
$1,500	2,382	1,773	1,509	1,364
	Sensitivities to other Variables at $1,300 per ounce and 8% Discount Rate			
Variable	**Operating Costs**		**Capital Costs**	**Gold Grade**
+10%	798		817	1,311
Base Case	**944**		**944**	**944**
-10%	1,090		1,071	576

The LOM $NPV_{8\%}$ is most sensitive to a change in the gold price followed by a change in gold head grade. A 10% gold grade reduction diminishes $NPV_{8\%}$ over the period of the LOM plan by about $368 million at a constant gold price of $1,300 per ounce.

23 ADJACENT PROPERTIES

The authors are not aware of any activities on adjacent properties to the Concession Area.

24 OTHER RELEVANT DATA AND INFORMATION

RISK FACTORS

This section addresses risk factors that the authors believe could have a material effect on the Kumtor Mine. Some of these risks have already been discussed in previous sections. The risks are both of a technical and non-technical nature. Only risks specific to the Kumtor operation, location or political situation are addressed in this section, while risks affecting the gold mining industry generally are not included.

TECHNICAL RISKS

MINERAL RESERVE ESTIMATION RISKS

The KS-2014YE Mineral Resource model was developed in December 2014 and was used as the basis for the December 31, 2014 Mineral Reserve estimate. Although the model has been calibrated to the previous five years production, there is no guarantee that the model will accurately predict future gold production.

RECOVERY RISKS

The occurrence and distribution of natural graphitic carbon in the ore body is not presently defined and not included in the KS-2014YE Mineral Resource model. High levels of graphitic carbon pose risk to Mill recovery as was experienced in September to November 2014. Additional drilling and metallurgical testing is planned in 2015 to provide additional information.

GEOTECHNICAL RISKS

Geotechnical risks arise with respect to the stability of the pit walls, with respect to glacier ice movement into the current and future pit, waste dumps, tailings management facility, and Petrov Lake.

PIT WALL STABILITY

The final pit walls will have a vertical extent of up to 620 metres in the SB Zone part of the Central Pit (up to 960 metres if the natural slope above is considered) and up to 750 metres in the Stockwork Zone area. In general, there is a higher risk associated with higher rock walls.

The pit wall slopes for the LOM pit design follow the recommendations by Golder Associates Ltd. (Golder, 2015b), who have been providing long-term geotechnical advice to KGC. Following two failures of the northeast highwall in 2002 and 2006, a comprehensive program of structural mapping, geotechnical drilling and modelling has resulted in a reduction of the design pit walls to generally between 26 and 34 degrees. The slope angles recommended by Golder will be validated by additional geotechnical drilling, particularly in the southeast and east parts of the Central Pit. The geotechnical drilling is scheduled to begin in the second half of 2015. The design slope angles assume that the pit walls are depressurized, and drilling to accomplish depressurization is part of the mine plan.

If the slope angles used for the design of the LOM pit need significant flattening or if the pit walls prove to be unstable at the slope angles assumed by the LOM pit design, there would be a negative impact on the LOM plan and on the current open pit Mineral Reserves.

The location of the LOM pit crest on the northwest wall reaches 90 metres from the Mill, representing a Factor of Safety of 1.34. This assumption is based on the current understanding of pore water pressure in the northwest wall sector. Given that the final pit crest will not reach 90 metres from the Mill until the final cutback of the LOM, work will continue on validating the current model.

GLACIER ICE MOVEMENT

In order to access the Mineral Reserve, KGC is required to mine glacial ice. From the information presented in Section 16, there is uncertainty in predicting the rate at which Davidov Glacier ice mining has to be accomplished to develop the southern part of Central Pit. The volume of ice mining and the additional mining equipment required to accomplish this are therefore subject to upward revision, possibly in a substantial way. In 2014, high deformation rates of the South Arm of Davidov Glacier required the construction of a 90 metre high toe buttress constructed of rock mined from Central Pit to provide for safe mining below. Should ice mining not keep up with the forward ice movement, or a similar toe buttress be ineffective for managing glacier ice movements from future cutbacks, interruptions to the LOM plan with respect to mining of the SB Zone would occur, with negative implications for the mine plan and the Project cash flow.

Should Kumtor be prevented from continuing its practice of mining ice, the entire December 31, 2014 Mineral Reserves, and LOM plan would be at risk, leading to an early closure of the operation.

WASTE DUMPS

The LOM plan requires waste rock to be deposited in waste rock dumps located in the Davidov, Sarytor, and Lysii Valleys. The waste dumps are on top of permafrost, fine-grained moraine soils, with high ground ice content within the Davidov and Sarytor Valleys and to a lesser extent, the Lysii Valley. Based on performance monitoring to date of the three waste dumps, continued deformation of the waste dumps has been incorporated into the waste-dump design. However, should the dumps become sufficiently unstable, their use will have to be reduced or stopped entirely. Such circumstance would adversely impact the LOM plan and economic performance of the Kumtor Mine operation.

TAILINGS MANAGEMENT FACILITY

To accommodate the additional future tailings that will be produced as a result of the enlarged Central Pit but that cannot be stored in the existing facility as currently approved, storage options are being considered, including raising of the existing tailings dam and or constructing new tailings management facilities both within and outside the Concession Area. The LOM plan assumes raising of the existing tailings dam. If permitting of this option cannot be obtained, additional capital expenditures beyond those in the current capital budget for the new LOM plan would have to be incurred.

PETROV LAKE

Petrov Lake is a glacier lake that has formed with the retreat of Petrov Glacier and is located approximately 5 kilometres upstream of the tailings dam. The lake has formed due to glacier meltwaters being dammed by a natural terminal moraine which is mostly frozen and likely contains buried glacier ice. Thawing of the moraine dam, to an extent that it allows for piping or overtopping of the dam, may lead to a dam breach and the uncontrolled release of lake water that can potentially erode a section of the tailings dam and damage other downstream facilities. KGC considers any damage to the tailings dam a serious threat. Climate change is considered the most likely mechanism for initiating thawing. While the risk of this outflow occurring in the next ten years is considered low, this is a future event that needs to be considered for mine closure. An early warning system is currently being installed to safeguard people working in the path of a potential outflow. Mitigation options are being evaluated.

NON-TECHNICAL RISKS

The Kumtor Mine operation is exposed to a number of non-technical risks which are related to the country of operation or derive from other external factors largely or entirely beyond the control of Centerra or KGC. The segment below covers certain key risks.

POLITICAL RISKS

The Kyrgyz Republic has experienced political difficulties in recent years including two revolutions (2005 and 2010) that have resulted in the ouster of the then incumbent president; the reconstitution of parliament; and the imprisonment of various political party members. The Kyrgyz economy continues to be impacted by a volatile political environment and lack of economic development.

The Kumtor Mine operation plays an important part in the Kyrgyz economy. In addition, the Kyrgyz state, through Kyrgyzaltyn, holds nearly one-third of the issued shares of Centerra. Political risk has affected the Kumtor Mine in various ways during the last several years, including through requests to renegotiate the agreement governing the Kumtor Mine (the “Kumtor Mine Agreement”), calls for nationalization of the Kumtor Mine, regulatory agencies making claims for alleged environmental damages, and court actions commenced by the Kyrgyz Republic General Prosecutor to rescind previously granted land use rights to Kumtor, and delays in obtaining necessary permits and approvals.

KUMTOR MINE AGREEMENTS

The agreement terms between the Kyrgyz Republic and the Kumtor Mine have been re-negotiated twice in the past, as discussed in Sections 1, 4, and 6. The initial agreements with Cameco dating from 1994 were re-negotiated in 2003 and then re-negotiated again in 2009. The direct benefits to the Kyrgyz state were increased in each case.

As outlined in Section 6, the Kumtor Mine was the subject of a Parliamentary Commission and the State Commission investigations in 2012 and 2013 respectively with the objective of reviewing and assessing all past and present agreements relating to the Kumtor Mine operations; the finances and operational processes of the Company, as well as its environmental, health and safety management systems. The State Commission was formed in July 2012 to “assess the environmental, industrial and social damage” caused by the Kumtor Mine, and to provide a “legal examination of agreements made on the Kumtor Mine in terms of protection of the state interests.” (Government decree as translated). The Government was instructed to negotiate with Centerra with a view of revising the agreements currently governing the Kumtor Mine to return to conditions that existed prior to the restructuring of the project in 2003, and to enter into new agreements on these terms. Centerra and the Kyrgyz parties, comprising the Government and Kyrgyzaltyn, negotiated at length and entered into a non-binding heads of agreement in January 2014 which contemplated Kyrgyzaltyn exchanging its 32.7% interest in Centerra for a 50% interest in a joint venture company that would own the Kumtor Mine. Discussions are ongoing and no definitive agreements have been entered to date. Pursuant to a Parliamentary decree dated February 26, 2015, the Kyrgyz Parliament acknowledged the duration of negotiation and requested resolution within a one-month period, and requested the Government to submit a draft law on nationalization of the Kumtor Mine and to start considering the implementation of such law. To date, no definitive agreements have been signed and the parties continue to negotiate.

ENVIRONMENTAL CLAIMS

There are also various court claims by the Kyrgyz regulatory authorities for approximately $467 million (at the applicable exchange rates when the claims were commenced) relating to alleged environmental damages at the Kumtor Mine, mainly with respect to the existing waste dumps, use of water, and damages to land. Other claims for alleged environmental damages have also been issued by the same regulatory authorities, but no attempts have been made to date to enforce such claims through the Kyrgyz courts.

GENERAL PROSECUTOR CLAIMS REGARDING LAND USE RIGHTS

In November 2013, KGC received a claim from the Kyrgyz Republic General Prosecutor’s Office requesting the Inter-District Court of the Issyk-Kul Province invalidate its land use certificate and seize certain lands within Kumtor’s concession area. This court claim remains before the Kyrgyz court. Centerra and KGC believe that the request to invalidate KGC’s land use rights violates the Restated Investment Agreement. However, there can be no assurance that cancellation of KGC’s land rights will not be upheld and enforced by the Kyrgyz courts. If KGC’s land rights are cancelled, this would have a material effect on the Kumtor Mine.

DELAYS IN MINE PERMITTING

The Restated Investment Agreement provides that KGC is entitled to all licences, consents, permits and approvals of the Government necessary for the operation of the Kumtor Mine. Despite the guarantees, KGC has experienced from, time to time, delays in receiving the required approvals and permits from Kyrgyz Republic authorities. This occurred in 2014 and is occurring now with respect to approvals of the 2015 mine plan and Ecological Passport.

Regulatory authorities have not provided the approvals on the basis that the Kyrgyz Republic Water Code prohibits the mining of ice (glaciers). Centerra and KGC have disputed the interpretation of the Water Code by the regulatory agencies, and have noted (as discussed above) that the current project agreements governing the Kumtor Mine require relevant Government authorities to be reasonable in relation to their approval of any mining plans submitted for approval, and with respect to permits and approvals, Kumtor is entitled to maintain, have renewed and receive such licenses, consents, permissions and approvals as are from time to time necessary or convenient for the operation of the Kumtor Mine. In addition, Centerra and KGC have noted that the mining of ice at the Kumtor Mine has consistently been a feature of the Kumtor Mine since its commencement and has been discussed in all earlier annual mine plans which were approved.

SUPPLY CHAIN

The Kumtor Mine is located in a remote location and long lead times are required for equipment and supplies which partly originate in other countries. Supply-chain risks are associated with the flow of materials, supplies, and services to the mine site, as well as timely delivery of equipment. Any significant delay in the delivery of equipment and/or materials due to border or customs clearance issues, road blockades or the failure of a key supplier to meet a delivery schedule for critical equipment may negatively affect the timely execution of the LOM plan.

25 INTERPRETATION AND CONCLUSIONS

The authors of this Technical Report make the following conclusions:

GEOLOGY AND MINERAL RESOURCES

- The Kumtor Central deposit is hosted by Vendian meta-sediments; primarily, grey carbonaceous quartz-sericite-chlorite schists or phyllites that are strongly folded and schistose, with a large proportion of faulted and sheared rocks.

- The geology of the deposits and controls to mineralization are reasonably well understood.

- The sample data is collected using protocols that are consistent with industry best practice. The sampling is appropriate for the mineralization type and the samples are representative of the deposit.

- The samples are kept and transported in a secure manner.

- Assays are carried out in a well-managed facility using conventional methods commonly used in the industry. During previous drilling campaigns, suitable levels of independent QA/QC samples are submitted to the laboratory to ensure reasonable results are being returned.

- The assay database is securely maintained, has been subjected to a reasonable and appropriate level of validation and verification, and is suitable for use in estimation of Mineral Resources.

- The assumptions, parameters, and methodology are generally appropriate for Mineral Resource estimation and consistent with the style of mineralization and mining methods.

- The grade interpolations were carried out using conventional methods, commonly used in the industry, and applied with reasonable geological inference and controls.

- Mineral Resources are reported exclusive of Mineral Reserves and are estimated effective December 31, 2014 as follows:
    - Open pit Measured and Indicated Mineral Resources total 29.5 million tonnes averaging 3.0 g/t Au and contain 2.8 million ounces of gold.
    - Open pit Inferred Mineral Resources total 2.7 million tonnes averaging 1.5 g/t Au and contain 126,000 ounces of gold.
    - Underground Measured and Indicated Mineral Resources total 156,000 tonnes averaging 10.8 g/t Au and contain 54,000 ounces of gold.
    - Underground Inferred Mineral Resources total 4.6 million tonnes averaging 10.9 g/t Au and contain 1.6 million ounces of gold.

MINING AND MINERAL RESERVES

- The Total Mineral Reserves as of December 31, 2014 have decreased by approximately 20% in tonnes and 28% in contained ounces compared to the estimate at the end of 2013, with the average gold grade dropping from 3.1 g/t to 2.8 g/t. Milling operations are expected to continue until 2026.

- Opportunities for further Mineral Reserve expansions are constrained by the topography in the southern part of the LOM Central Pit.

- The Kumtor Mine operation will continue to produce ore at a high strip ratio for most of its projected mine life, with the total annual tonnage mined in the range of 85 to 173 million tonnes for the period of 2015 to 2023 with an average waste-to-ore ratio of 21.7 to 1.

- Re-location of surface installations due to the encroachment of the Central Pit and because of the movement of the Davidov Valley waste dump requires additional capital expenditures until 2017. Other capital projects include the continuing expansion of the tailing facility.

- Gold production from the Central Pit has been negatively impacted on several occasions from 2002 to 2014 by geotechnical issues related to the poor quality of the host rocks resulting from the intensive and complex structural deformation in the area, and from the gradual movement into the pit of glacier ice and of waste dumps previously placed on top of the adjacent Davidov Glacier. While the understanding and resulting remedial plans for these issues have progressed significantly, pit wall stability issues remain a significant technical risk to achieving the gold production and associated cash flow as outlined in the LOM plan.

- This report discusses the potential of mining high grade resources utilizing underground mining. No underground test mining has yet been completed in what are very difficult ground conditions. Without additional drilling and a comprehensive test mining program, followed by a prefeasibility study, conversion of these resources into reserves will not be possible. These resources have not been included in the LOM plan.

PROCESS

- Historically, the overall metallurgical recovery of gold in the Kumtor processing plant has averaged 79.4%. With our current knowledge, the LOM plan annual recoveries are expected to range from 54% to 83%, averaging 78% depending on the head grade and metallurgical characteristics of the ore. Work continues at the Kumtor Mine on implementing strategies to improve gold recoveries.

- Subsequent to the 2012 Technical Report, Mill expansion studies were completed in 2013 and 2014. The decision was made not to proceed with the Mill expansion.

- The occurrence and distribution of natural graphitic carbon in the ore body is not presently defined and not included in the KS-2014YE Mineral Resource model. High levels of graphitic carbon pose risk to Mill recovery as was experienced in September to November 2014. Additional drilling and metallurgical testing is planned in 2015 to provide additional information.

GEOTECHNICAL

- There are no indications of geotechnical issues for the smaller Southwest and Sarytor Deposits that will be mined in the years 2015, 2017, and, 2021 to 2023;

- The LOM plan requires waste rock to be deposited in waste rock dumps located in the Davidov, Sarytor, and Lysii Valleys. The waste dumps are on top of permafrost, fine-grained moraine soils, with high ground ice content within the Davidov and Sarytor Valleys and to a lesser extent, the Lysii Valley. Based on performance monitoring to date of the three waste dumps, continued deformation of the waste dumps has been incorporated into the waste-dump design. However, should the dumps become sufficiently unstable, their use will have to be reduced or stopped entirely. Such circumstance would adversely impact the LOM plan and economic performance of the Kumtor Mine operation.

- Pit wall stability is strongly influenced by the level of water saturation of the rock, with dry conditions being more stable than saturated conditions. Piezometer installations, horizontal drainage wells, and pressure testing should be continued as required to assess water pressures.

- Structural mapping and additional geotechnical drilling should be continued over the LOM as necessary

- Relevant geotechnical information gathered for the northwest wall sector should be used to validate the current stability model.

POLITICAL

- The Kumtor Mine is subject to political risk. In the last several years, there have been requests to renegotiate the agreements governing the Kumtor Mine, calls for nationalization of the Kumtor Mine, regulatory agencies making claims for alleged environmental damages, and court actions commenced by the Kyrgyz Republic General Prosecutor to rescind previously granted land use rights to Kumtor, and delays in obtaining necessary permits and approvals.

- This report assumes 100% ownership of the Kumtor Mine by Centerra. The economic assumptions and projections in this report are based on the existing agreements concluded in 2009 that the environmental claims are resolved without material impact on the Kumtor Mine and that the required approvals, permits, and land use matters are resolved to the satisfaction of Centerra and KGC. Any changes regarding the ownership of the project or the terms and conditions pursuant to which it operates would alter the economic outcomes of the new LOM plan as presented in this report.

ENVIRONMENTAL

- KGC Health, Safety, and Environment (HSE) Policy and Compliance Departments proactively work to receive permits and licenses are received on a timely basis and remain current. However, delays have been experienced. Some permits remain outstanding as of the date of this report and discussions are ongoing.

- KGC operations are subject to regular environmental audits by Kyrgyz and international companies and experts, as well as audits commissioned by Centerra and the European Bank for Reconstruction and Development (EBRD).

- As per KGC's annual environmental reports KGC is in material compliance with Kyrgyz legislation and good international industry practice and specifically, continues to be obligated to operate in material compliance with the standards applicable under the Environmental Management Action Plan (EMAP).

- The KGC CCP was reviewed and updated during 2013 by international experts, and the associated report was issued in early 2014.

26 RECOMMENDATIONS

The authors of this Technical Report make the following recommendations:

GEOLOGY AND MINERAL RESOURCES

- Update mineralization wireframes for the Stockwork Zone as well as the Sarytor and Southwest Deposits.
- Create an underground resource block model for the Central Deposit using smaller blocks and new wireframes after the 2015 drilling campaign is completed.
- Continue to review and update high grade capping levels as new data becomes available.
- Perform additional density measurements using core from the 2015 drilling campaign to investigate densities at depth.
- Review blasthole sample splitting and preparation protocols.
- Update current resource classification criteria to define more continuous areas of each category.
- Produce a detailed report that summarizes all resource estimation work.
- Archive all Mineral Resource and Mineral Reserve files together at the site and corporate.

MINING AND MINERAL RESERVES

- Complete additional drill programs and an underground test mining program to determine the technical and economic parameters of underground mining for a prefeasibility study.

PROCESS

- Complete additional drilling and metallurgical testing to define the occurrences and distribution of natural graphitic carbon in the ore body.
- Continues to implement strategies to improve gold recoveries.
- Further define the capital expenditure program to address aging Mill equipment.

GEOTECHNICAL

- Implement additional geotechnical drilling and related studies to validate the pit slope design assumptions used for the LOM plan.
- Continue the program of monitoring and geotechnical analysis of the flow of glacier ice and of historical waste dumps deposited on glacier ice towards the Central Pit and of the deformations of the historical waste dumps.

- Continue monitoring of the groundwater pressure of all of the Central Pit walls and particularly of the highwalls.

- Continue drilling depressurization wells, where necessary.

- Carry out a program of geotechnical investigations, instrumentation and monitoring, and analysis to assess the potential impacts of continued waste dump deformations on closure plans.

- Evaluate and select an option for lake level control of Lake Petrov.

- Continue to refine the stability modelling completed on the northwest wall to evaluate final wall Factors of Safety with respect to the crest distance to the Mill.

POLITICAL

- Continue to discuss and negotiate with Kyrgyz authorities and Government outstanding matters, including a proposed restructuring, outstanding environmental claims, delays in permitting and land use matters.

ENVIRONMENTAL

- Seek approval of the annual mine plan and obtain a valid Ecological Passport.
- If deemed appropriate update the Environmental Management Action Plan (EMAP) to reflect the maturing operations.
- Continue the iterative updates of the Conceptual Closure Plan (CCP) with the next version due in 2016.
- Continue to regularly audit the environmental and health & safety management systems.

27 REFERENCES

BGC Engineering Inc., 2005

Kumtor Mine Tailings Verification Assessment and Technical Review. Unpublished report for Centerra Gold Inc. dated September 23, 2005

BGC Engineering Inc., 2007

Creep Deformation Analysis of Ultimate Tailings Dam. Unpublished report submitted to Kumtor Operating Company, May 16, 2007

BGC Engineering Inc., 2010a

Central Valley Waste Dump Design Concepts, Kumtor Mine, Kyrgyzstan. Unpublished project memorandum dated September 22, 2010

BGC Engineering Inc., 2010b

Ultimate Tailings Dam Creep Deformation Analysis Update – Final Report. Unpublished report submitted to Kumtor Operating Company, December 22, 2010.

BGC Engineering Inc., 2012a

Geohazard hazard and Risk Assessment for Potential Moraine Dam Outbreak Flood at Petrov Lake, Kyrgyzstan, Kumtor Mine. . Unpublished report submitted to Kumtor Operating Company and dated March 23, 2012

BGC Engineering Inc., 2012b

Kumtor Mine Additional Tailings Storage Options. Preliminary Report. Unpublished draft report submitted to Centerra Gold Inc. and dated July 13, 2012

BGC Engineering Inc., 2012c

Tailings Dam Shear Key and Toe Protection. Unpublished draft memorandum submitted to Centerra Gold Inc. and dated December 3, 2012

BGC Engineering Inc., 2014

Kumtor Mine: A Warning System for a Potential Moraine Dam Outbreak Flood at Petrov Lake. Unpublished report submitted to Kumtor Gold Company and dated May 15, 2014

BGC Engineering Inc., 2015

Kumtor Ultimate Tailings Dam Creep Deformation and Stability Assessment – 2014 Update. Unpublished report submitted to Kumtor Gold Company, January 16, 2015

Bloom, Lynda, 2012

Technical notes regarding Kumtor's assay laboratory. Unpublished report in two parts by Analytical Solutions Ltd. dated September 11, 2012.

Canadian Institute of Mining, Metallurgy, and Petroleum, 2014

CIM Definition Standards for Mineral Resources and Mineral Reserves (adopted by CIM Council May 10, 2014).

Chernomorets S.S., Tutubalina O.V., Petrakov D.A., Lavrentiev I.I., Usubaliev R.A., Gelman R.N., Doronkin Y.I., Mikhayluykova P.G. 2012

Geophysical survey, mapping and glaciological assessment of Davydov Glacier in order to optimize ice removal activities for mining. Contract report (Service Agreement No. C-3221). Moscow: UCEGM. 76 p.

Cole, A., 1992:

Gold Mineralisation in the Southern Tien Shan, Central Asia: Tectonic Setting, Characteristics and Regional Exploration Criteria. International Geology Review, 34, 1992, 88-94.

Cole, A., Wilkinson, J.J., Halls, C. & Serenko, T.J., 2000

Geological Characteristics, Tectonic Setting and Preliminary Interpretations of the Jilau Gold-Quartz Vein deposit, Tajikistan. Mineralium Deposita, v. 35, p. 600-618.

Environmental Resources Management, 2012

Environmental Due Diligence: Kumtor Gold Mine, Kyrgyz Republic. Final Report dated October 22, 2012 and available from the Kumtor web site

Golder Associates Ltd., 2006

Risk Assessment of Kumtor Tailings Facility, Unpublished report dated December 2006.

Golder Associates Ltd., 2015a

Report on September 2014 Inspection of Dams and Appurtenances. Unpublished report submitted to Kumtor Gold Company and dated January 2015.

Golder Associates Ltd., 2015b

Kumtor Gold Company 2014 Life of Mine Pit Slope Stability Review. Unpublished report to Kumtor Gold Company, March 11, 2015.

Ivanov, S. M., Ansdell, K. M. & Melrose, D. L., 2000

Ore Texture and Stable Isotope Constraints on Ore Deposition Mechanisms at the Kumtor Lode Gold Deposit. In: Bucci, L.A. and Mair, J.L. (eds), Gold in 2000. Poster session extended abstracts, p.47-52. Downloaded from http://homepage.usask.ca/~smi454/project/articles/golkd2000_ext_abs.htm

Ivanov, S. M. and Ansdell, K. M., 2002

Mineralization Styles and Fluid Evolution at the Kumtor Gold Deposit, Kyrgyz Republic: Textures, Stable Isotopes, and Fluid Inclusions. Geol. Ass. Can. Annual Meeting, Saskatoon 2002, Abstracts.

Kilborn Western Inc., 1993-1995

Kumtor Gold Project - Feasibility Study for Kumtor Gold Company. Unpublished document dated November 1993, updated April 1994 and May 1995

Kumtor Gold Company

Monthly Production Reports from December 1996 to December 2014.

Mao, J., Konopelko, D., Seltmann, R., Lehmann, B., Chen, W., Wang, Y., Eklund, O., & Usubaliev, T., 2004

Postcollisional Age of the Kumtor Gold Deposit and Timing of Hercynian Events in the Tien Shan, Kyrgyzstan. Economic Geology, v.99, pp. 1771-1780.

Porter, T.M., 2006
The Tien Shan Belt: Golden Heart of Central Asia. The Gangue, Issue 88, January 2006. Published by the Mineral Deposits Division of GAC and the Geological Society of CIM.

Prizma LLC, 2012
Independent Assessment of the Parliamentary Commission Report. Final Report - 23 September 2012. Available on Kumtor website

Redmond, D., Raponi, T. R. & Seto, J., 2009
Technical Report on the Kumtor Gold Mine, Kyrgyz Republic for Centerra Gold Inc. and Cameco Corporation. filed on Sedar, dated December 16, 2009

Redmond, D., Thalenhorst, H. & Seto, J., 2011
Technical Report on the Kumtor Mine, Kyrgyz Republic for Centerra Gold Inc.. Filed on Sedar, dated March 22, 2011

Seago, R., 2006a
Geological/Structural Appraisal of the North Wall Of Kumtor Open Pit, Incorporating Analysis of the July 13 2006 Slope Failure. Unpublished private report, SRK Consulting (UK) Ltd., for Kumtor Operating Company. Dated July 2006

Seago, R., 2006b
Structural Geology Update of the Central Pit, Kumtor Mine Area, Kyrgyzstan. Unpublished private report, SRK Consulting (UK) Ltd., for Kumtor Operating Company. Dated December 2006

Seago, R., 2006c
Structural Geology Update of the SW Zone Open Pit, Kumtor Mine Area, Kyrgyzstan. Unpublished private report, SRK Consulting (UK) Ltd., for Kumtor Operating Company. Dated December 2006

Seago, R., 2007a

Kumtor Open Pit Site Visit May 2007. Structural Geology of the Sarytor Area. Unpublished PowerPoint Presentation), SRK Consulting (UK) Ltd., for Kumtor Operating Company. Dated May 2007

Seago, R., 2007b

Kumtor Open Pit August 2007 Review. Structural Geology of the Great South Pit. Unpublished PowerPoint Presentation), SRK Consulting (UK) Ltd., for Kumtor Operating Company. Dated August 2007

Seago, R., 2010

Kumtor Open Pit Review January and June 2010. Review of the Structural Geology of the SB Zone, Kumtor Open Pit. Unpublished Power Point Report dated July 5, 2010

Smith, J., 2014

Mineral Resource Estimation Report for the Sarytor and Southwest Deposits. Report for Centerra Gold Inc. dated July 7, 2014

SRK Consulting (Canada) Inc., 2011

Review & Optimisation of the Kumtor Grinding Circuits. Report for Kumtor Operating Company dated July 6, 2011

Telluris Consulting, 2006

Field Structural Review of the Kumtor Mine and District, Kyrgyzstan. Field Report 2006. Unpublished report dated December 2006

Telluris Consulting, 2007

Structural Review of the NB and SB Ore Zones, Kumtor Mine, Kyrgyzstan. Field Report 07-07. Unpublished report dated October 2007

Telluris Consulting, 2009

Data Review and summary of current Geological Models for the Kumtor Mine, Kyrgyzstan. Characterization report 05-09. Unpublished report dated May, 2009.

Thalenhorst, H., Redmond, D., Raponi T.R., Vdovin, V., 2012
Technical Report on the Kumtor Gold Project, Kyrgyz Republic for Centerra Gold Inc., filed on Sedar, dated December 20, 2012.

Tolobekova, B., 2014
Kumtor Tailings Dam Monitoring Report for the period of January 1 to March 31, 2014 based on monitoring data analysis. Unpublished report by the Rock Mechanics and Reserves Development Institute under the Kyrgyz Academy of Sciences Geoservice Scientific and Designing Centre, dated April 14, 2014.

Vasiliev, B.V. and Butenko, A.A., 2013
Controlled Water Level Drawdown in the Petrov Lake located in the Issyk-Kul Oblast of the Kyrgyz Republic. Volume 2: Technical and Economical Comparison of Options of Discharge Structures, Water Drawdown Mode. Unpublished report by Sevkavgiprovodkhoz OJS, dated 2013.

Wilde, A. R., Layer, P., Mernagh, T. & Foster, J., 2001
The Giant Muruntau Gold Deposit: Geology, Geochronologic, and Fluid Inclusion Constraints on Ore Genesis. Economic Geology v. 96, No. 3, pp. 633 to 644

28 DATE AND SIGNATURE PAGE

This report titled Technical Report on the Kumtor Gold Project, Kyrgyz Republic and dated March 20, 2015 was prepared and signed by the following authors:

(Signed) "*Gordon D. Reid*"

Dated at Toronto, ON March 20, 2015	Gordon D. Reid, P.Eng. Vice President, and Chief Operating Officer Centerra Gold Inc.

(Signed & Sealed) "*Judy Wong*"

Dated at Toronto, ON March 20, 2015	Judy Wong, P.Geo Computer Applications Geologist and Database Manager Centerra Gold Inc.

(Signed & Sealed) "*Tommaso Roberto Raponi*"

Dated at Toronto, ON March 20, 2015	Tommaso Roberto Raponi, P.Eng. Director, Metallurgy. Centerra Gold Inc.

(Signed & Sealed) "*Kevin D'Souza*"

Dated at Toronto, ON March 20, 2015	Kevin D'Souza, MEng, ARSM, CEng, FIMMM, FRGS Vice President Sustainability & Environment Centerra Gold Inc.

(Signed & Sealed) "*Pierre Landry*"

Dated at Toronto, ON March 20, 2015	Pierre Landry, P.Geo Senior Geologist Roscoe Postle Associates Inc.

(Signed & Sealed) "*Jack Seto*"

Dated at Edmonton, AB
March 20, 2015

Jack Seto, P.Eng.
Senior Geotechnical Engineer
BGC Engineering Inc.

(Signed) "*Al Chance*"

Dated at Vancouver, BC
March 20, 2015

Al Chance, P.Eng.
Principal Mining Geotechnical Engineer
Golder Associates Ltd.

29 CERTIFICATE OF QUALIFIED PERSON

GORDON D. REID

I, Gordon D. Reid, P.Eng., as a co-author of this report entitled “Technical Report on the Kumtor Mine, Kyrgyz Republic, prepared for Centerra Gold Inc.”, dated March 20, 2015, with an effective date of December 31, 2014 do hereby certify that:

1. I am Gordon D. Reid, Vice President, and Chief Operating Officer of Centerra Gold Inc., a corporation with a business address of 1 University Avenue, Suite 1500, Toronto, Ontario, Canada M5J 2P1.

2. I am a graduate of the University of Manitoba in 1994 with a Master’s degree in Business Administration, and a graduate of Michigan Technological University in 1981 with a Bachelor of Science degree in Mining Engineering.

3. I am registered as a Professional Engineer in the Province of Ontario (Reg.# 38536504). I have worked as a mining engineer for a total of 30 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Since 2004, employed by Centerra Gold Inc. in various positions including VP & COO, Corporate VP Operations, President Kumtor Operating Company, and VP Business Development, involved in preparation of and adherence to annual mine plans and budgets, review and approval of capital programs, mine optimization studies, and other engineering and management related tasks.
   - From 1998 to 2002 was the Director – Technical Services responsible for the development of a feasibility study and Environmental Impact Assessment for a mine development project in Wisconsin.
   - From 1986 to 1992 was Chief Mine Engineer and Mine Superintendent at an operating mine in Ontario responsible for planning and implementing long term and short term mine development and production strategies to achieve budgeted production and cost targets.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I visited the Kumtor property from February 27 to March 5, 2014, a duration of 7 days. Prior to this, I have completed numerous inspections of the Kumtor property since 2005.

6. I am responsible for overall production of the Technical Report and all sections of the Technical Report other than: Sections 9, 10, 11, 12, 13, 14, Section 15 under the heading “Pit Design Parameters”, Section 17, Section 16 under the headings “Geotechnical Summary”, ““Glacier-Related Issues”, and “Waste Dumps Design and Capacity” and Sections 18 and 20.

7. I am not independent of the Issuer, Centerra Gold Inc., applying the test set out in Section 1.5 of NI 43-101, as a result of my employment with Centerra Gold Inc.

8. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

9. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated 20th day of March, 2015

(Signed) "*Gordon D. Reid*"

Gordon D. Reid, P.Eng.

JUDY WONG

I, Judy Wong, P.Geo., as a co-author of this report entitled "Technical Report on the Kumtor Mine, Kyrgyz Republic, prepared for Centerra Gold Inc.", dated March 20, 2015, with an effective date of December 31, 2014 do hereby certify that:

1. I am Judy Wong, Computer Applications Geologist and Database Manager, of Centerra Gold Inc., a corporation with a business address of 1 University Avenue, Ste. 1500, Toronto, Ontario, M5J 2P1.

2. I am a graduate of the University of Toronto in 1984 with a Bachelor's of Science Specialist Geology degree.

3. I am a member in good standing registered with the Association of Professional Geoscientists of Ontario (APGO) (Reg. #0708). I have worked as a geologist for over 30 years since my graduation. My relevant experience for the purpose of the Technical Report is in database management, resource modelling and mineral resource estimation for precious and base metal projects in Canada, US, Mexico, Dominican Republic, Brazil, Chile, Saudi Arabia, Yemen, Mali, Madagascar, Tanzania, Ivory Coast, Australia, New Caledonia, Turkey, Russia and Vietnam.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I visited the Kumtor property on November 17, 2014 for a duration of 6 days. Prior to this, I have completed numerous inspections of the Kumtor property since 2007.

6. I am responsible for Sections 9, 10 and 11 of the Technical Report.

7. I am not independent of the Issuer, Centerra Gold Inc., applying the test set out in Section 1.5 of NI 43-101, as a result of my employment with Centerra Gold Inc.

8. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

9. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, those Sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated 20th day of March, 2015

(Signed & Sealed) "*Judy Wong*"

Judy Wong, P.Geo.

KEVIN D'SOUZA

I, Kevin D'Souza, MEng, ARSM, CEng, FIMMM, FRGS as a co-author of this report entitled "Technical Report on the Kumtor Mine, Kyrgyz Republic, prepared for Centerra Gold Inc.", dated March 20, 2015, with an effective date of December 31, 2014 do hereby certify that:

1. I am Kevin D'Souza, Vice President Sustainability & Environment of Centerra Gold Inc., a corporation with a business address of 1 University Avenue, Suite 1500, Toronto, Ontario, Canada M5J 2P1.

2. I am a graduate of Royal School of Mines, Imperial College of Science Technology and Medicine University of London in 1993 with a Master's (MEng) degree in Mining Engineering.

3. I am registered as a Charted Engineer (1997, Reg.500601) through the Institute of Materials, Minerals and Mining. I have worked as a sustainability and environment professional in the mining industry for a total of 22 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Worked in a range of mining environmental, sustainability, and Corporate Social Responsibility (CSR) issues, from remote exploration camps and operational mines to Corporate head offices.
   - Managed macro-level environmental and sustainable mining programmes for international non-governmental organizations (NGOs) and with the public sector (UN agencies, World Bank and the UK's Department for International Development).
   - Worked as a consultant with many junior exploration and mining companies and many of the industry's majors including Barrick, AngloGold Ashanti, Gold Fields, Rio Tinto, BHP Billiton, Kinross and De Beers.
   - Direct mining experience in around fifty countries worldwide largely in Asia, Latin America and sub-Saharan Africa.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I visited the Kumtor property on September 23, 2014 for a duration of 6 days. Prior to this, I have completed numerous inspections of the Kumtor property since 2013.

6. I am responsible for Section 20 of the Technical Report.

7. I am not independent of the Issuer, Centerra Gold Inc., applying the test set out in Section 1.5 of NI 43-101, as a result of my employment with Centerra Gold Inc.

8. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

9. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, those parts of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated 20th day of March, 2015

(Signed & Sealed) "*Kevin D'Souza*"

Kevin D'Souza, MEng, ARSM, CEng, FIMMM, FRGS

PIERRE LANDRY

I, Pierre Landry, P.Geo., as an co-author of this report entitled “Technical Report on the Kumtor Mine, Kyrgyz Republic, prepared for Centerra Gold Inc.”, dated March 20, 2015 with an effective date of December 31, 2014, do hereby certify that:

1. I am a Geologist with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON, M5J 2H7.

2. I am a graduate of Queen’s University, Kingston, Ontario, in 2006 with a B.Sc.H degree in Geological Science (Major) and Economics (Minor).

3. I am registered as a Professional Geologist in the Province of Ontario (Reg. #2319). I have worked as a geologist for a total of seven years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Review and creation of block models as part of NI 43-101 Mineral Resource estimates, audits, and due diligence reports.
   - Mine Exploration Geologist at operations and mine development projects in Canada, Africa, and South America.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I visited the Kumtor property on February 26, 2015 for a duration of five days.

6. I am responsible for preparation of Sections 12 and 14 of the Technical Report.

7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8. I have had no prior involvement with the property that is the subject of the Technical Report.

9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, those Sections of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated 20th day of March, 2015

(Signed & Sealed) “*Pierre Landry*”

Pierre Landry, P.Geo.

TOMMASO ROBERTO RAPONI

I, Tommaso Roberto Raponi, P.Eng., as a co-author of this report entitled "Technical Report on the Kumtor Mine, Kyrgyz Republic, prepared for Centerra Gold Inc.", dated March 20, 2015 with an effective date of December 31, 2014, do hereby certify that:

1. I am Tommaso Roberto Raponi, Director, Metallurgy of Centerra Gold Inc. (the "Corporation"), a corporation with a business address of 1 University Avenue, Suite 1500, Toronto, Ontario, Canada M5J 2P1.

2. I am a graduate of the University of Toronto in 1984 with a Bachelor of Applied Science in Geological Engineering.

3. I am registered as a Professional Engineer in the Province of Ontario (Reg. # 90225970) and the Association of Professional Engineers and Geoscientists of BC (Reg. #23536). I have worked as a mineral processing engineer for a total of 31 of years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - design, commissioning and operation of mineral processing plants in Canada, United States, Mexico, Brazil, Venezuela, Surinam, Chile, Kyrgyzstan, Mongolia, Turkey, and Saudi Arabia.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I visited the Kumtor property on December 6, 2014 for a duration of 3 days. Prior to this, I have completed numerous inspections of the Kumtor property since 2006.

6. I am responsible for Sections 13 and 17 of the Technical Report.

7. I am not independent of the Issuer, Centerra Gold Inc., applying the test set out in Section 1.5 of NI 43-101, as a result of my employment with Centerra Gold Inc.

8. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

9. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, those Sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated 20th day of March, 2015

(Signed & Sealed) "*Tommaso Roberto Raponi*"

Tommaso Roberto Raponi, P.Eng.

JACK T.C. SETO

I, Jack T.C. Seto, as an author of this report entitled "Technical Report on the Kumtor Mine, Kyrgyz Republic, prepared for Centerra Gold Inc." dated March 20, 2015, with an effective date of December 31, 2014, do hereby certify that:

1. I am a Senior Geotechnical Engineer with BGC Engineering Inc. of Suite 200, 8204 104 Street N.W., Edmonton, AB T6E 4E6.

2. I am a graduate of University of Waterloo, Waterloo, ON, in 1990 with a B.A.Sc. in Geological Engineering, and of Laval University, Quebec, QC, in 1992 with a M.Sc. in Civil Engineering (Geotechnical).

3. I am registered as a Professional Engineer in the Province of Alberta (M56912). I have worked as a geotechnical engineer for a total of 21 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Glacier pit stability
   - Waste dumps
   - Tailings management facility

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I visited the Kumtor Mine on February 27 to March 2, 2015 for a duration of 4 days.

6. I am responsible for those parts of Section 16 under the headings "Glacier-Related Issues", and "Waste Dumps Design and Capacity" and all parts of Section 18.

7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8. I have had involvement with the property that is the subject of the Technical Report since 2009.

9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, those parts of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated 20th day of March, 2015

(Signed & Sealed) "*Jack T.C. Seto*"

Jack T.C. Seto, P.Eng.

AL CHANCE

I, Al Chance, P.Eng., as a co-author of this report entitled "Technical Report on the Kumtor Mine, Kyrgyz Republic, prepared for Centerra Gold Inc.", dated March 20, 2015, with an effective date of December 31, 2014 do hereby certify that:

1. I am Al Chance, Principal Mining Geotechnical Engineer at Golder Associates Ltd. with an address of 2nd Floor, 2920 Virtual Way, Vancouver, British Columbia, V5M 0C4.

2. I am a graduate of the University of British Columbia in 1982 with a Bachelor of Applied Science Degree in geological Engineering.

3. I am registered as a Professional Engineer in the Province of British Columbia (Reg.# 16,370). I have worked as a geological engineer for a total of 33 since my graduation. My relevant experience for the purpose of the Technical Report is open pit mine slope stability studies.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I visited the Kumtor property on February 26, 2015 for a duration of 4 days. Prior to this, I have completed numerous inspections of the Kumtor property since 2005.

6. I am responsible for the part of Section 15 under the heading "Pit Design Parameters" and the part of Section 16 under the heading "Geotechnical Summary" of the Technical Report.

7. I am independent of the Issuer, Centerra Gold Inc., applying the test set out in Section 1.5 of NI 43-101.

8. I have had involvement with the property that is the subject of the Technical Report since 2005.

9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, those parts of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated 20th day of March, 2015

(Signed) "*Al Chance*"

Al Chance, P.Eng.