NI 43-101 Technical Report

Preliminary Economic Assessment for the Ivana Uranium-Vanadium Deposit, Amarillo Grande Project.

Rio Negro Province, Argentina

Prepared for:

Blue Sky Uranium Corp.

Suite 312 – 837 West Hastings St.
Vancouver BC, V6C 3N6

By

Ken Kuchling, P.Eng.
KJ Kuchling Consulting Ltd.

Dr. Jon P. Thorson, PhD, CPG
Consulting Geologist

Chuck Edwards, P.Eng., FCIM
Chuck Edwards Extractive Metallurgy Consulting

Dr. Bruce Davis, PhD, FAusIMM
BD Resource Consulting, Inc.

Ken Embree, P.Eng.
Knight Piésold Ltd.

Susan Lomas, P.Geo.
Lions Gate Geological Consulting, Inc.

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Cautionary Note Regarding Forward-Looking Information

This NI 43-101 Technical Report ("Technical Report") contains forward-looking information which is not comprised of historical facts. Forward-looking information involves risks, uncertainties and other factors that could cause actual events, results, performance, prospects and opportunities to differ materially from those expressed or implied by such forward-looking information. Forward looking information in this Technical Report includes, but is not limited to, Blue Sky's objectives, goals or future plans, statements regarding the estimation of mineral resources, exploration results, potential mineralization, exploration and mine development plans, timing of the commencement of operations and estimates of market conditions. Factors that could cause actual results to differ materially from such forward-looking information include, but are not limited to, failure to convert estimated mineral resources to reserves, capital and operating costs varying significantly from estimates, the preliminary nature of metallurgical test results, delays in obtaining or failure to obtain required governmental, environmental or other project approvals, political risks, uncertainties relating to the availability and costs of financing needed in the future, changes in equity markets, inflation, changes in exchange rates, fluctuations in commodity prices, delays in the development of projects and the other risks involved in the mineral exploration and development industry, and those risks set out in Blue Sky's public documents filed on SEDAR. Although Blue Sky believes that the assumptions and factors used in preparing the forward-looking information in this Technical Report are reasonable, undue reliance should not be placed on such information, which only applies as of the effective date of this Technical Report, and no assurance can be given that such events will occur in the disclosed time frames or at all. Blue Sky disclaims any intention or obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, other than as required by law. We advise U.S. investors that the SEC's mining guidelines strictly prohibit information of this type in documents filed with the SEC. U.S. investors are cautioned that mineral deposits on adjacent properties are not indicative of mineral deposits on our properties.

1 Summary

1.1 Introduction

Blue Sky Uranium (TSX-V: BSK) is the owner of the Amarillo Grande Project, including the Ivana uranium-vanadium deposit, in Rio Negro Province, Argentina (Figure 1-1).

Figure 1-1: Location of the Amarillo Grande project, including the Ivana uranium-vanadium deposit, in Rio Negro Province, Argentina.

This Technical Report supports the initial Preliminary Economic Assessment ("PEA") completed on the project, including an updated inferred mineral resource estimate for the Ivana deposit. The study results were disclosed on February 27, 2019 (Blue Sky, 2019b).

The PEA, resource estimate and this report were completed by independent Qualified Persons, using industry accepted Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") "Best Practices and Reporting Guidelines" for disclosing mineral exploration information, and the Canadian Securities Administrators revised regulations in NI 43-101 (Standards of Disclosure for Mineral Projects), and

Companion Policy 43-101CP. The resources reported herein are compliant with "CIM Standards on Mineral Resources and Reserves: Definitions and Guidelines".

1.2 Project Overview

The Amarillo Grande Project encompasses a uranium-vanadium exploration trend stretching for approximately 145 km, within which Blue Sky Uranium, through its local wholly owned subsidiary Minera Cielo Azul S.A., has claimed over 280,000 hectares of mineral exploration rights. In addition to Ivana, the Amarillo Grande Project contains two other advanced prospect areas: Anit and Santa Barbara. The recent exploration activity resulting in the Ivana deposit resource has been conducted on five properties within the Ivana area totaling less than 7,000 hectares, which hold the advanced tenure application status of Discovery Manifestation.

The Ivana deposit is located about 25 km north of the town of Valcheta, in a sparsely populated, semi-arid area of flat topography. Access is via paved Provincial Highway #4 to within 10 km of the deposit, then by dirt ranch roads. Blue Sky Uranium has been exploring the greater Amarillo Grande Project since 2006; the Ivana prospect is the most advanced area of the Project.

1.3 Geology and Exploration

The Ivana deposit occurs in the Oligocene-early Miocene Chichinales Formation at the distal, thin, southeastern edge of Neuquen Basin sedimentary sequences. The Chichinales Formation consists of conglomerate, tuffaceous sandstone, siltstone and mudstone, deposited unconformably on older basement rocks.

The uranium mineralization at Ivana has been divided into two types based on dominant uranium mineralogy and/or alteration and gangue mineralogy; 1) Oxide mineralization characterized by visible carnotite and oxide alteration minerals, and 2) Altered “primary” mineralization characterized by variant of coffinite, that has been named β-coffinite (beta-coffinite) by the Company and which contains mainly U^{+6} rather than U^{+4} which is normal for coffinite, and pyrite.

In plan view the Ivana uranium-vanadium mineralization has a broad coherent C-shaped pattern with some isolated outlying areas of mineralization. The Ivana deposit is characterized by two stacked zones of uranium mineralization, the upper zone and the lower zone. The upper zone is comprised of oxidized mineralization, and the lower zone contains a mixture of oxidized and altered primary-style mineralization. The two zones occur together through most of the deposit, but there are localized areas where only one zone is present.

The two varieties of uranium mineralization are associated with alteration assemblages that suggest aspects of at least two types of uranium deposits, and related depositional environments, are present in the Ivana deposit.

Four alteration types have been defined at the Ivana prospect through the geological description and logging of RC cuttings samples: reduced alteration, reduced carbonaceous alteration, oxidized alteration and hematitic alteration. The distribution of alteration types at Ivana commonly appears as a redox boundary or complex roll-front where tongues of oxidized alteration are penetrating and replacing reduced alteration. Some of the best uranium assays occur at the redox boundary between oxidized alteration and reduced carbonaceous alteration.

The uranium-vanadium deposit at Ivana has similarities to other uranium deposits but does not fit the existing categories precisely. The work to date confirms that the Ivana uranium-vanadium deposit is, in part, a sandstone-hosted deposit, and, in part, a surficial deposit. The Ivana oxide mineralization has

similarities to the surficial uranium deposits in Australia (Yeelirrie, and others) and Namibia (Langer-Heinrich). The altered primary-type uranium mineralization at Ivana is similar to the sandstone-hosted primary uranium mineralization of the Grants District, New Mexico, USA, However, the primary mineralization at Ivana hugs the basement unconformity, similar to the Blizzard deposit in Canada, or the Honeymoon and Four Mile deposits in Australia and therefore it is most like a basal channel sandstone-hosted uranium deposit.

Exploration of the Ivana uranium-vanadium deposit has been largely conducted through the shallow geophysical technique electrical tomography, ("ET") and drilling. Three phases of drilling included 488 Reverse Circulation ("RC") drill holes for a total of 7,620 m drilled, at an average drill hole depth of 15.6 m. Exploration drilling was done with track-mounted RC rigs for ease and rapidity of movement between shallow drill holes, and to minimize environmental impact. Samples were collected for each metre drilled, logged, and transported for assay preparation in Mendoza, Argentina. Assays were completed at Bureau Veritas Commodities Canada Ltd., Vancouver, BC, Canada and reported in parts per million uranium and vanadium. The inferred resource estimate supported by this report is entirely based on chemical assays of uranium and vanadium; no equivalent-uranium ("eU" or "eU_3O_8") data, such as from a Gamma probe, has been used in the calculations.

1.4 Mineral Resource Estimate

In preparation for the resource estimation, various tests were performed on the drilling data to validate its completeness and accuracy; no irregularities were found. The mineral resource estimation was performed on two layers of mineralization, an upper zone comprised of oxidized mineralization, and a lower zone which contains a mixture of oxidized and altered primary-style mineralization associated with reduced alteration minerals.

In the areas assigned to Inferred Mineral Resources, all blocks above cut-off were selected without the use of a pit shell for the following reasons:

- The deposit is essentially flat lying and located at or very near to surface. There are no blocks deeper than 25 m from surface above the 100 ppm U reporting cut-off.
- Due to the broad horizontal extent of the resource material and its shallow depth the vertical strip ratio of the mineralized material is approximately 1:1 and the economic impacts from waste along pit sidewalls will be minimal.
- The material to be extracted comprises unconsolidated sands and gravels. The shallow depth and unconsolidated nature of the resource material at Ivana suggest the surface mine can be developed using conventional mining methods. The shallow nature allows the mine to be excavated to full depth initially, and then advanced laterally across the property, backfilling behind the mining advance. Consequently, very little of the resource will be exposed at any given time and there is no need to permanently maintain high pit slopes like in a conventional hard rock open pit. Therefore, all areas of the resource are potentially available for extraction at any time. Hence the primary constraint on economic extraction is the cut-off grade and not the physical design parameters of the pit.
- As a check, a pit shell was generated using uranium price of \$50/lb U_3O_8, \$1.50/tonne mining costs, \$4.00/tonne processing costs, \$2.30/tonne G&A, 84.6% Uranium recovery and 32° pit slopes to support this decision, resulting in a less than 1% difference in accumulated pounds of U_3O_8 at the reporting cut-off of 100 ppm U.

The estimate of Inferred Mineral Resources is presented in Table 1-1. Based on the assumed uranium price of \$50/lb U_3O_8, operating cost of \$12/tonne and process recovery of 90%, the base case cut-off grade for mineral resources is estimated to be 100 ppm uranium. The uranium price selected for determination of the cut-off grade is based on long term analyst consensus pricing for uranium; further details of uranium price fundamentals, and reasoning behind selection of \$50/lb U_3O_8 as a long-term price, are discussed in Section 19 of this report. Operating cost assumptions for determination of the cut-off grade were made based on general experience with shallow open pit mines, uranium leach operations, and the unconsolidated nature of the deposit, as well as review of data from similar near-surface uranium operations. Based on initial process design work, in-situ material will be upgraded using wet attrition scrubbing and screening and uranium and vanadium subsequently recovered from the resultant concentrate by alkaline leaching. The assumed process recovery was based on preliminary metallurgical information available at the time of resource estimation for uranium.

There are no known factors related to environmental, permitting, legal, title, taxation, socio-economic, marketing, or political issues which could materially affect the mineral resource. Resources in the Inferred category have a lower level of confidence than that applying to Indicated resources and, although there is sufficient evidence to imply geologic grade and continuity, these characteristics cannot be verified based on the current data. It is reasonably expected that the majority of Inferred mineral resources could be upgraded to Indicated Mineral Resources with continued exploration.

Mineral resources, which are not mineral reserves, do not have demonstrated economic viability.

Table 1-1: Estimate of Inferred Mineral Resource reported at 100 ppm Uranium Cut-off

Zone	Tonnes (t)	Average Grade				Contained Metal	
		U (ppm)	U_30_8 (%)	V (ppm)	V_2O_5 (%)	U_30_8 (lb)	V_2O_5 (lb)
Upper	3,200,000	133	0.016	123	0.022	1,100,000	1,500,000
Lower	24,800,000	335	0.040	105	0.018	21,600,000	10,000,000
Total	28,000,000	311	0.037	107	0.019	22,700,000	11,500,000

Notes to Table 1-1:

1. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
2. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.
3. The Mineral Resources in this estimate were not constrained within a conceptual pit shell owing to the shallow nature of the deposit (<25 m).
4. The 100 ppm uranium reporting cutoff grade is based on operative costs of \$12/t, a price of \$50/lb U_3O_8, and a process recovery of 90%. A density of 2.1gr/cm^3 was applied.
5. The resource was estimated within distinct zones of elevated uranium concentration occurring within the host sediments. Vanadium is associated with uranium and is estimated within the same zones. There is no indication that Vanadium occurs outside of the elevated uranium zones in the Ivana deposit area in sufficient concentrations to justify developing estimation domains focused on Vanadium.

1.5 Proposed Development Plan

The proposed Ivana operation will consist of surface mine delivering mill feed to a nearby processing plant. The annual mining rate will be approximately 4.7 Million tonnes per annum ("Mtpa") (13,000 tonnes per

day; “tpd”) consisting of both waste material and mill feed. The average strip ratio (waste:ore) is approximately 1.1:1.

Table 1-2 presents the potentially excavated waste and mill feed tonnages. Mill feed may be delivered directly to the process plant or placed into stockpiles for blending purposes.

Table 1-2: Potentially Extractable Portion of the Mineral Resource

	kt	U_3O_8 (%)	V_2O_5 (%)
Waste stripped	30,100	-	-
Strip Ratio	1.1:1		
Mill Feed (diluted)	27,690*	0.034%	0.019%
**Assumes 3% dilution and ore loss*			

Note: cut-off grade of 60 ppm U used to define potentially extractable portion of mineral resource

The surface mine will be relatively shallow, with a maximum depth of 30 metres. The length of the mine will be approximately 3,000 metres with widths ranging from 100 to 400 metres.

Mining will be done with a fleet of two (5 cubic metre) excavators, a front-end loader and six 31-tonne articulated trucks along with a fleet of support equipment. The materials mined are free digging unconsolidated gravels and sands, therefore drill and blast operations will not be required.

All waste materials will be placed on surface for the initial few years. Waste will then be placed either into external dumps or used as backfill for the mine area.

1.6 Processing & Recovery

Mined mill feed may be delivered directly to the processing plant or stockpiled. Stockpiles provide a surge capacity between the mining and processing, and enable blending, to manage the head grade of the process plant feed. Mill feed will then be processed in two stages.

The overall process plant recovery is 85% for uranium (derived from 89% leach feed concentrate preparation recovery and 95% subsequent alkaline leach circuit recovery); and 53% for vanadium (derived from 89% leach feed concentrate preparation recovery and 60% subsequent alkaline leach circuit recovery). Recoveries were determined through the mineralogical, metallurgical and process engineering test work program completed by The Saskatchewan Research Council (“SRC”), as detailed in the Blue Sky press release dated February 7, 2019 (Blue Sky 2019a).

Feed material will initially be processed through the Leach Feed Concentrate Preparation Plant, (“LFCPP”) a semi-mobile screening and scrubbing facility located at the proposed mining site. The LFCPP will separate fine material (<100 um) from the larger particles (>100 um) and scrub away and recover fine uranium and vanadium mineral particles coating the large particles, into a leach feed concentrate slurry. The rejected coarse fraction (approx. 77% of the mill feed mass from which most of the original uranium and vanadium has been stripped) will be dewatered, stockpiled, and backhauled by the mine fleet to a surface stockpile or backfilled into the mine excavation.

In the second process stage the slurry containing the fine fraction of the mineralized material will be pumped to the leach plant. An alkaline leach circuit (sodium carbonate and bicarbonate) will be used to dissolve uranium and vanadium from the leach feed minerals. No oxidant is required. Subsequently, uranium and vanadium will be separated by selective chemical precipitation, with uranium solids then calcined to U_3O_8 or UO_3 and vanadium solids calcined to V_20_5.

Tailings slurry from the alkaline leach circuit (approx. 23% of the mill feed mass and from which the majority of uranium and vanadium has been stripped) will initially be pumped to a surface Tailings Management

Facility ("TMF") where it will settle and release water. This released water will be reclaimed and pumped to the water treatment circuit in the process plant where it will be further treated, resulting in solids that are pumped back to the TMF with the alkaline leach tailings. The final pH adjusted water will be returned to the process water tank for reuse. In later years, the fine tailings will be pumped into containment cells in mined out sections of the mine area, for co-disposal with mine waste and LFCPP reject. Long term storage of all waste material from mining operations will comply with all local and international regulations and requirements.

1.7 Infrastructure

The Ivana operation will take advantage of local infrastructure whenever possible. Employees will reside in local communities, most likely the town of Valcheta, approximately 25 km from the mine site. Grid power will be accessible to the project via the construction of a 30 km powerline. For the PEA it is assumed that process water will be supplied from on-site pumping wells. Ground water at the mine site is classified as non-potable for humans and animals but suitable for processing use. Future studies will further assess the local water resources.

Other site infrastructure will include maintenance shops, administration offices, a mine dry, diesel fuel storage, and warehouses.

1.8 Capital and Operating Cost

The life-of-mine capital and operating costs are summarized in Tables 1-3 and 1-4. The costs assume a fully owner-operated project. The closure and reclamation costs are estimated at $22.6 million and include costs for site remediation and final backfilling of the remaining mine excavation.

Table 1-3: Capital Cost Summary

Area	Units	Pre-Production	Sustaining (LOM)	Total LOM
Mine	$M	16.5	9.4	25.9
Process Plant	$M	75.5	9.7	85.2
Waste & Water Management	$M	4.6	8.1	12.7
Other Infrastructure	$M	3.2	1.1	4.3
Contingency (avg.)	$M	28.3	7.2	35.5
Total Capital	$M	128.1	35.5	163.5

Note: cost accuracy is commensurate with a PEA level study, with +/- 30% accuracy.

Table 1-4: Operating Cost Summary

Area		Unit Cost ($/t)	Total LOM ($M)
Mining Cost, incl stockpiling & LFCPP Reject backhauling	$/t mined	2.26	128.0
Mining Cost, incl stockpile & rejects	$/t feed	4.62	128.0
Processing Cost	$/t feed	6.50	180.0
Waste and Water Management	$/t feed	0.08	2.3
G&A	$/t feed	1.80	49.9
Total Operating Cost	$/t feed	13.00	360.1

1.9 Project Economics and Sensitivities

The economic results of the PEA are summarized in Table 1-5 on both a before-tax and after-tax basis. For the PEA Base Case a long-term uranium price of $50/lb U_3O_8 and a vanadium price of $15/lb V_2O_5 were used. Sensitivity to various uranium prices are shown in Table 1-5 while the vanadium price is kept fixed. Commodity pricing for base case and sensitivity pricing models is based on long term projections being used by uranium industry peers and industry analysts.

Uranium provides approximately 90% of the project's revenue stream.

The reader is cautioned that the PEA is preliminary in nature and is based solely on Inferred Mineral Resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability and there is no certainty that the PEA will be realized.

Table 1-5: Economics and Sensitivity

	Units	Uranium Price Sensitivity								
Price - U_3O_8	$/lb	30	35	40	45	**50**	55	60	65	70
Price - V_2O_5	$/lb	15	15	15	15	**15**	15	15	15	15
Pre-Tax										
NPV (0%)	$M	61.9	147.8	233.6	319.5	**405.3**	491.2	577.0	662.9	748.7
NPV (8%)	$M	9.0	60.4	111.8	163.2	**214.6**	266.0	317.5	368.9	420.3
IRR	%	9.8	18.2	24.9	30.8	**36.1**	41.2	45.9	50.4	54.8
After-Tax										
NPV (0%)	$M	42.1	100.3	155.8	211.2	**266.7**	322.2	377.6	433.1	488.5
NPV (8%)	$M	-2.1	33.4	67.8	101.5	**135.2**	168.9	202.3	235.6	269.0
IRR	%	7.5	14.5	20.0	24.8	**29.3**	33.5	37.3	40.9	44.4
Payback	years	4.7	3.8	3.0	2.7	**2.4**	2.1	1.9	1.8	1.7

1.10 Conclusions and Recommendations

The Amarillo Grande Project demonstrates attributes well suited for a potential 13 year mining operation, including near-surface mineralization, favorable uranium grades, access to infrastructure and amenability to simple processing via pre-concentration and leaching.

Possible extensions to the mineralization at Ivana may be found outside of the current drilling pattern, which has not yet defined the final limits of the mineralized horizons, or in the discovery of satellite deposits nearby.

Upgrading of the resource categories will be required to further advance the project.

The Qualified Persons have recommended an initial phase of exploration work to fully delineate the Ivana deposit and upgrade the mineral resource to at least the Indicated category, while concurrently exploring throughout the Amarillo Grande project area for additional resources so that any future operational design takes full advantage of available resources and is of an appropriate size and configuration. The budget for this work, and baseline environmental studies, is estimated at $2,850,000, $1,500,000 of which is for exploration outside of the immediate Ivana deposit area.

A second phase of recommended work to advance the Project towards a Pre-Feasibility study (PFS) includes: additional processing and metallurgical studies, engineering-related field investigations, and a marketing study. The overall budget for this work is estimated at $1,350,000.

2 Introduction

2.1 Introduction and Terms of Reference

The purpose of this Technical Report is to summarize the results of a Preliminary Economic Assessment ("PEA") for the Ivana uranium-vanadium deposit at the Amarillo Grande Project ("AGP" or "the Project") in Rio Negro province, Argentina, under the guidelines of the Canadian Securities Administrator's National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and form 43-101F (CSA 2011). This report includes supporting disclosure for an updated mineral resource estimate for the Project, estimated in conformity with generally accepted CIM Estimation of Mineral Resources and Mineral Reserves Best Practices Guidelines (CIM, 2003) and reported according to the CIM Definition Standards for Mineral Resources and Mineral Reserves, (CIM, 2014).

This report was commissioned by Blue Sky Uranium Corporation, a mineral exploration company with its primary public listing on the TSX Venture Exchange under the symbol BSK ("Blue Sky Uranium", "Blue Sky", or "the Company"). Blue Sky owns a 100% interest in the Project.

The report supports the disclosure by Blue Sky in the news release dated February 27, 2019 entitled, "Blue Sky Uranium Announces a Positive Preliminary Economic Assessment for the Ivana Uranium-Vanadium Deposit, Amarillo Grande Project, Argentina" (Blue Sky, 2019b).

The PEA envisions a surface mining operation at the Ivana deposit followed by a simple two-step recovery process, providing 13 years of uranium and vanadium production. The PEA is preliminary in nature and is based solely on Inferred Mineral Resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability and there is no certainty that the PEA will be realized.

2.2 Definition of Terms

Unless otherwise stated, all units in this report are metric. All currency values are expressed in US dollars. Analytical results are reported as parts per million ("ppm") for uranium ("U") and vanadium ("V"). This report also states uranium and vanadium as ppm and percent (%) U_3O_8 and V_2O_5, respectively. The mineral resource estimate is also reported in pounds of contained U_3O_8. The conversion factor used herein for converting U in ppm to U_3O_8 in ppm is 1.179; the factor used for V in ppm to V_2O_5 in ppm is 1.785. One percent (%) is equivalent to 10,000 ppm.

2.2.1 Terminology: Project, Area, Prospect, Deposit

The Amarillo Grande Project owned by Blue Sky Uranium is a uranium-vanadium exploration project covering over 280,000 hectares, and stretching across about 145 km of Rio Negro Province, Argentina. The Amarillo Grande Project, as used in this report, refers to the regional exploration area, within which Blue Sky Uranium has conducted historical uranium programs, and is currently conducting exploration activities (Figure 4-1).

The Amarillo Grande Project includes four smaller sub-areas, named Santa Barbara, Anit, Ivana, and Bajo Valcheta, within which exploration is more advanced. Reference to those sub-areas in generality, in this report, will be to the "Ivana area" or "Anit area".

Within the Ivana area, the five land blocks Ivana VIIIA, Ivana VIIIB, Ivana VIIID, Ivana VIIIF, and Ivana IXA (Figure 4-2) will be referred to as the "Ivana prospect". One of the areas mineralized with uranium and vanadium, within the Ivana prospect, and on which the current mineral resource has been estimated, will

be referred to as the "Ivana deposit". The proposed mining operation at Ivana, as described in this report, will be termed the “Ivana operation” or “the Operation”.

2.3 Qualified Persons and Site Visit

Independent consultants were commissioned to complete the mineral resource estimate, PEA and this Technical Report on behalf of Blue Sky. The consultants were selected for their expertise in the fields of geology, exploration, mineral resource estimation and classification, geotechnical, environmental, permitting, metallurgical testing, mineral processing, processing design, capital and operating cost estimation, and mineral economics. The consultants are considered independent Qualified Persons (QPs) as defined in the NI 43-101, by virtue of their education, experience, membership in good standing of appropriate professional associations and independent consulting relationships with Blue Sky Uranium.

Dr. Jon P. Thorson, PhD, C.P.G, conducted a site visit and geological review of the Ivana prospect on January 29 and 30, 2017. Chuck Edwards, P.Eng., FCIM, conducted a site visit to Ivana on April 21st and 22nd, 2018, and visited the INVAP facilities involved in the metallurgical testing described in Section 13.1 on April 24th, 2018. Mr. Edwards also regularly visited the Saskatchewan Research Council laboratory while overseeing the metallurgical testing program described in sections 13.2 and 13.3.

Table 2-1 summarizes the QPs responsible for specific chapters of the report. Mr. Kuchling supervised the overall preparation of this report.

Table 2-1: Qualified Persons Sections of Responsibility

Qualified Person	Company	Report Sections of Responsibility
Ken Kuchling, P. Eng.	KJ Kuchling Consulting Ltd	1-3, 15,16,19,21,22, 24, 25, 26, 27
Jon P. Thorson, Ph.D. C.P.G.		4-11, 23
Bruce Davis, Ph.D., F.AusIMM	BD Resource Consulting Inc	12
Susan Lomas, P.Geo	Lions Gate Geological Consulting Inc.	14
Chuck Edwards, P.Eng. FCIM		13, 17
Ken Embree, P.Eng.	Knight Piésold Ltd. (“KP”)	18, 20

2.4 Sources of Information and Data

In order to prepare the content of the report, the authors held discussions with personnel of Blue Sky, including Mr. Guillermo Pensado, VP Exploration & Development and Dr. David Terry P.Geo., Director. Mr. Pensado and Dr. Terry are non-independent Qualified Persons for the Company.

In addition, the information, conclusions, opinions and estimates contained herein are based on:

- Geological information supplied by Blue Sky Uranium, in the form of memos and reports prepared for the Company. That information is believed to be credible, and significant parts of critical reports or memos were translated from Spanish to English to verify that credibility, to the extent possible. Significant details of the discovery and early history of the Amarillo Grande Project were discussed with, and clarified by, Dr. Jorge Berizzo, Technical Advisor to Blue Sky Uranium.
- Data, geological reports, maps, documents, Technical Reports and other information supplied by Blue Sky employees and consultants. The QPs used their experience to determine if the information from the previous Technical Report was suitable for inclusion in this Technical Report and adjusted information that required amending.
- Third party reports and papers as indicated in the text and detailed in Section 27, (References).
- Other experts as detailed in Section 3.
- The field observations from site visits

2.5 Effective Date

The resource estimate is based on drill data from three campaigns, as provided by Blue Sky. The effective date of the resource model is September 28th, 2018 when the final drill data was received by the QP's. The effective date of this Technical Report is February 27th, 2019. All other information is current as of the original report date of April 12th, 2019.

3 Reliance on Other Experts

In the preparation of this report the Qualified Person has relied upon the legal opinions of Maria Mercedes Ledezma Negron, Lawyer, Property Manager and Legal Advisor South America for Blue Sky Uranium Corp., in regard to the validity of the five properties discussed in Section 4.0, and the opinions of Carlos D'Amico, Engineer, and Environmental and Social Responsibility Manager for Blue Sky, in regard to the validity of the environmental permits applicable to five properties discussed in Section 4.0 (M. Ledezma, personal communication, February 8, 2019).

4 Property Description and Location

4.1 General Description

The Amarillo Grande Project currently includes approximately 100 registered properties with a total area of over 280,000 hectares and is 100% controlled by Blue Sky Uranium through its local wholly owned subsidiary Minera Cielo Azul S.A. The resource estimate described in this report specifically pertains to five properties located in the Ivana area at the southernmost edge of the AGP, centered at latitude 40°25'S and longitude 66°10'W (or E 3,485,000 / N 5,525,000 Gauss Kruger Posgar 94 Zone 3) ("the Ivana prospect"; Figure 4-1 and Figure 4-2). These five properties, totaling over 6,700 hectares, have been registered with the Provincial Mining Secretary as presented in Table 4-1.

Table 4-1: Properties of the Ivana Prospect

FILE #	NAME	TYPE	AREA (hectares)
38.002-13	Ivana VIII-A	Discovery Manifestation	1,400.00
38.003-13	Ivana VIII-B	Discovery Manifestation	1,616.25
40.005-15	Ivana VIII-D	Discovery Manifestation	566.74
41.048-16	Ivana VIII-F	Discovery Manifestation	1,390.50
41.038-16	Ivana IX-A	Discovery Manifestation	1,781.00
TOTAL AREA			**6,754.49**

4.2 Land Tenure

4.2.1 Regulatory Framework

Mining and mineral exploration in Argentina are subject to the National Mining Code, which is regulated on a province-by-province basis by provincial mining laws and regulations. The National Mining Code and the Rio Negro Provincial Law No. 4941, named the Code of Mining Procedure, regulates the exploration and mining permits of the Amarillo Grande Project.

Under the National Mining Code and Rio Negro Code of Mining Procedure an applicant for mineral rights must apply for an exploration permit or "cateo" corresponding to specific minerals or elements classified within defined Mineral Categories. As per the Mining Code and Law 24.498 (1995) uranium is a nuclear mineral and is regulated by the same provisions as the First Category minerals in the Mining Code, with some specific minor regulations included in Chapter XI of the National Mining Code. Vanadium is also a First Category mineral. As per article 209 of the National Mining Code (included in the above referenced Chapter XI), the Argentinean Federal State, through the National Commission of Atomic Energy ("CNEA"), has the first option to purchase nuclear minerals, under usual market conditions. Further, Section 210 of the National Mining Code requests the prior approval from CNEA for export contracts, which can only be restricted for the satisfaction of the internal market, and satisfactory disclosure of the exported materials final destination.

The boundary locations of cateos are specified by corner co-ordinates on permit applications and therefore boundaries are not surveyed or marked out on the ground. The size of a cateo is measured in units of 500 hectares ("ha") and can be from one to twenty units (10,000 ha) in size.

Following the permit application, surface landowners must be notified of the intent to acquire mineral rights in the area. Finally, an environmental impact report for prospecting ("EIR1") must be submitted to the Mining Authority. An EIR1 allows a company to conduct prospecting exploration work of low impact such as mapping, soil or outcrop sampling and geophysical surveys. More intensive exploration work such as trenching or drilling requires a Phase 2 environmental impact report ("EIR2") to be submitted to the Mining Authority. Following the acceptance of the initial EIR report the formal cateo is granted, along with an Environmental Resolution license (Resolutions Ambientales, or "RA" in Spanish) enacted by the Provincial

Authority, which must be renewed at a minimum of every 2 years. Although environmental permits during the exploration phase are exclusively of provincial jurisdiction, mine development environmental permits must also conform to National Law #24.804 (the Nuclear Activity Act) and related regulations, in some technical aspects related to nuclear and radiological security.

The cateo permit holder can apply for conversion of the full concession area into Mining Exploitation concession or "Mina". Granting of a Mina requires the properties be surveyed, and prior to that time their status is called "Discovery Manifestation". The size of the Mina unit, or "Pertenencia", is 100 hectares for disseminated mineralization. In Rio Negro it is not permitted to apply for less than 100 hectares "pertenencias", therefore if any area of less than 100 hectares is remnant it can be covered by the permit holder with "demasias" units, after surveying. Annual fees are payable to the Province in order to maintain a Mining Exploitation concession in good standing. The amount for disseminated mineralization is $3,200 Pesos (approximately US$160) per year for each Pertenencia.

When a mine starts production, there is a sliding royalty payable to the provinces with a maximum of 3% on the value of mineral production on an exploitation concession as indicated by National Mining Investment Law 24.196 and ratified by Provincial Laws 2.819 and 8.900.

According to the Rio Negro Code of Mining Procedure, the mining authority cannot grant mining properties (cateos, Discovery Manifestations or Minas) within 50 m from roads, pipelines, electrical lines or similar constructions. The title-holder could eventually and if needed, access such areas with a permit from a mining engineer and proof that there is no inconvenience to work in those areas.

Section 20.1 includes additional details on the legal framework and permitting required for mining.

4.2.2 Ivana Prospect, Property Tenure

The five Ivana area properties discussed in this report and detailed in Table 4-1 hold the status of Discovery Manifestation claims and are in good legal standing. The EIR2 for exploration, including geophysics and drilling, were submitted and accepted and the RA were granted at the end of 2016 and early 2017, and renewed late in 2018 (see Table 4-2).

Mining properties overlap surface rights held by private individuals. All surface occupants have provided access for exploration work at Ivana. BSK has signed formal access and land use agreements with the land occupants where the exploration programs are occurring, such as trenching and drilling. BSK maintains active agreements with landowners covering most of the area of the five mining properties and the entire area of current exploration.

There are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the Ivana prospect that have been disclosed to or that the Qualified Person, through his investigation, is aware of.

Table 4-2: Environmental Permits

MINING FILE #	NAME	RA Resolution#	DATE GRANTED
38.002-13	Ivana VIII-A	1686/18	November 24th, 2018
38.003-13	Ivana VIII-B	1651/18	November 23rd, 2018
40.005-15	Ivana VIII-D	1688/18	November 22nd, 2018
41.048-16	Ivana VIII-F	344/17	April 18, 2017
41.038-16	Ivana IX-A	1650/18	November 23rd, 2018

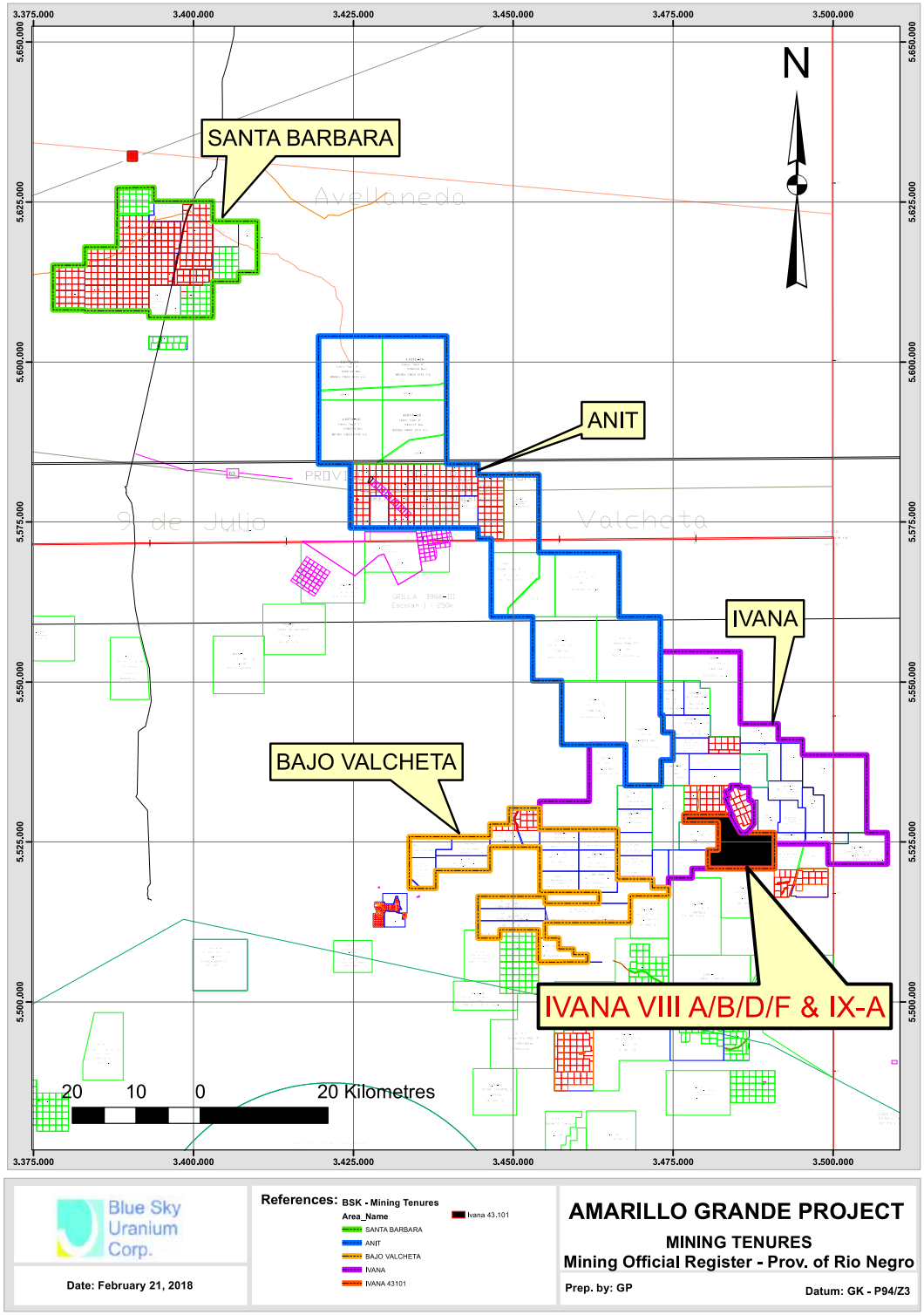


Figure 4-1: Amarillo Grande Project mining tenures, Rio Negro Province, Argentina (coordinates in Gauss Kruger Posgar 94 Zone 3). The Ivana area is outlined in purple, with the 5 Discovery Manifestations of the Ivana prospect (Figure 4-2) shown in solid black colour.

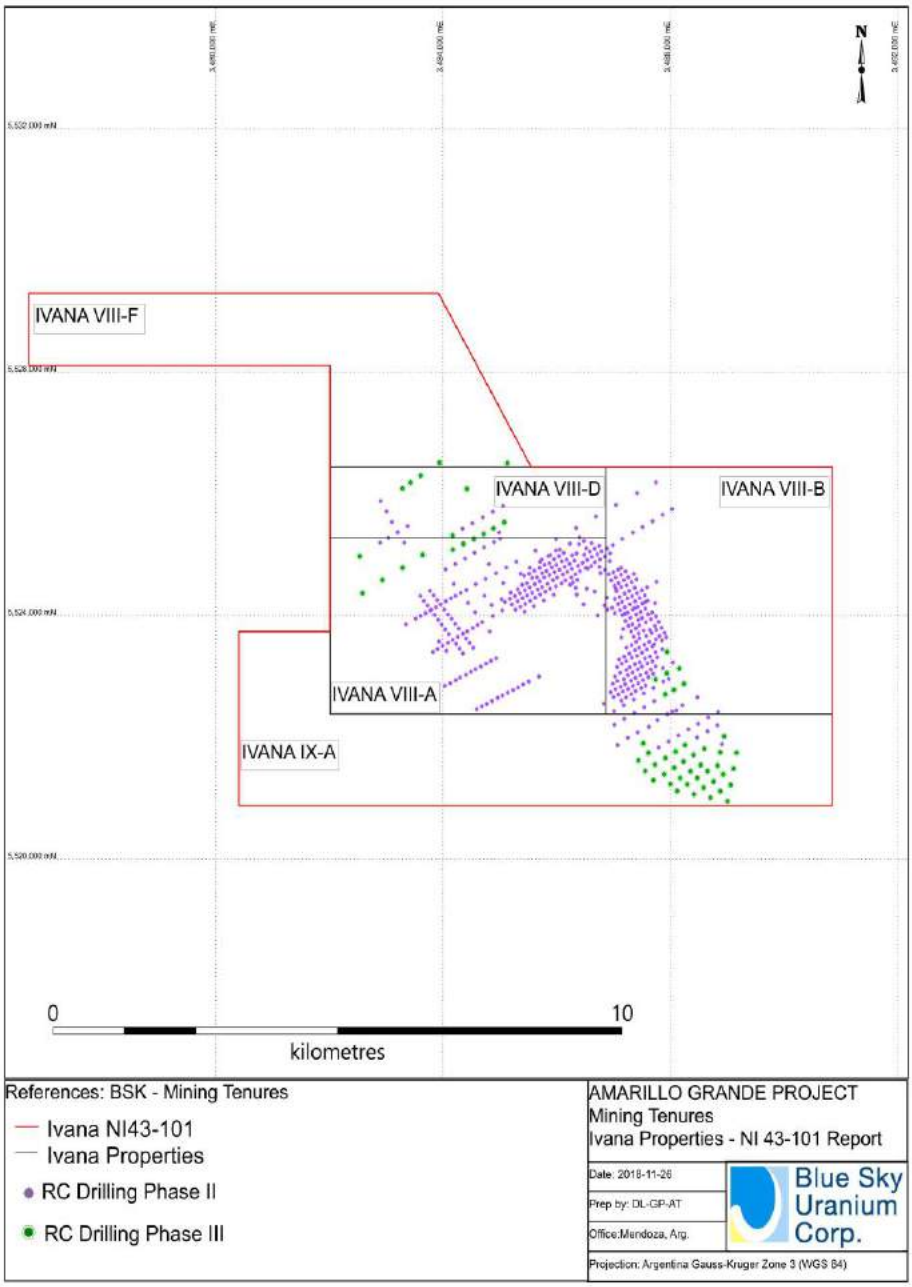


Figure 4-2: The Ivana Prospect. Properties as pertaining to the exploration programs of Blue Sky Uranium and the resource estimation discussed in this report (coordinates in Gauss Kruger Posgar 94 Zone 3). Figure 4-1 shows these properties in relation to the greater Amarillo Grande Project.

5 Accessibility, Climate, Local Resources, Infrastructure & Physiography

5.1 Accessibility

The Ivana prospect is located approximately 25 km north of the town of Valcheta in Rio Negro Province, Argentina (Figure 5-1). The Ivana area is accessed via Provincial Road #4, which is paved from Valcheta to within 10 km of the properties. Final access from Provincial Road #4 to Ivana is via dirt roads used by local ranchers.

Valcheta is the capital of the county with the same name and is located at the junction of Provincial Road #4 and National Road #23. National Road #23 connects to the deep ocean port of San Antonio Oeste, 120 km to the east. Viedma, the capital of the Rio Negro Province, is located 285 km east of Valcheta.

The rail line at Valcheta is operational and ultimately connects to the Federal Capital of Buenos Aires but is currently only used as a tourist attraction running once a week from Viedma to the ski centre of Bariloche, 540 km west of Valcheta.

San Antonio Oeste and Viedma have the closest airports; Viedma has scheduled flights to Buenos Aires.

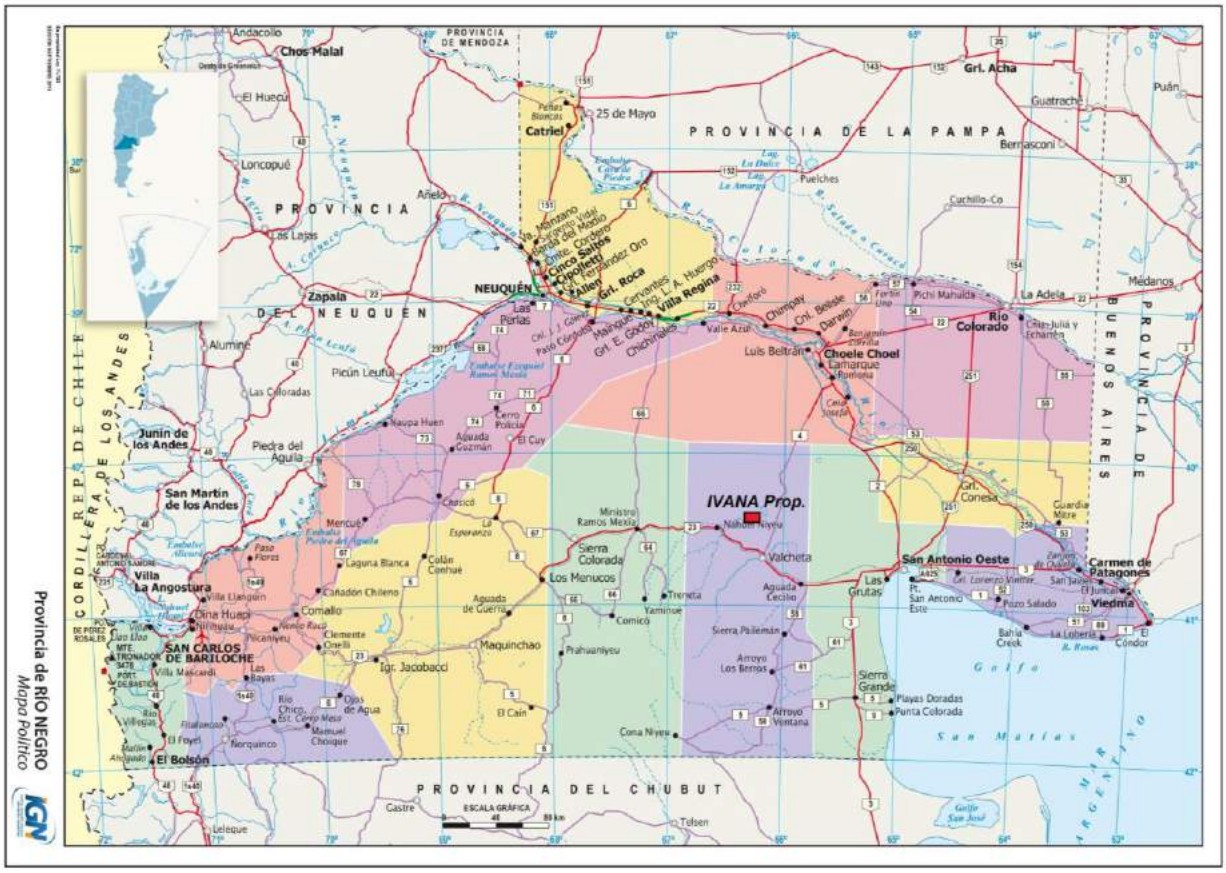


Figure 5-1: Location Map (Ivana area not to scale; source, Instituto Geográfico Nacional, Argentina, reference Provincia de Río Negro - Mapa Político)

5.2 Site Topography, Elevation, Flora and Fauna

The Ivana area covers flat topography in a local depression with an average elevation of 100 m above sea level, and 100 m below the elevation of Valcheta (figure 5-2). This depression or “bajo” is recognized as “Bajo de Valcheta” and connects to the northwest with “Bajo de Santa Rosa”. Both depressions are part of the northwest-southeast Bajo del Gualicho lineament. These bajos contain the lowermost portions of the alluvial fans descending from the North-Patagonia Massif, located to the southwest. These alluvial fans terminate at a series of ponds or “lagunas” caused by the closure of the fluvial system in the depressions. A low plateau separates the depressions of the Bajo del Gualicho lineament from the Rio Negro river to the north.

The soils at Ivana are described as entisol, meaning soils with no development of horizons and poor fertility. The area is covered by a low scrub consisting mostly of bushes known locally as jarilla (Figure 5-2).

The fauna is typical of northern Patagonia and includes guanacos, mountain lions, wild pigs, hares, foxes, turtles, lizards, and snakes.

Figure 5-2: Topography and vegetation typical of the Ivana area; most of the vegetation seen in this view is known by the local name, jarilla.

5.3 Climate

The climate is semi-arid with low annual precipitation, between 200 and 250mm, although with significant variability from year to year. Temperatures range from near freezing at night in southern winter months to over 30° Celsius during the day in southern summer months. Average daily temperature for the area is 14°-15° Celsius. The length of the operating season is 12 months.

5.4 Local Resources and Infrastructure

The southern portion of Rio Negro Province has access to power lines carrying energy produced at dams in the Cordillera region to the west, as well as deep-water ports at the Atlantic coast, and a railway and highway network with access to the main population and commercial centres of the Country. Tourist areas are concentrated at the coast to the east, or in the Cordillera to the west. The arid climate has made Valcheta a poor undeveloped county with low population density. Cattle or sheep ranching represent the main economic activities in the region, followed by industrial minerals mining (clays) and commercial services.

Sufficient surface area exists at the Ivana properties to conduct mining operations, including potential tailings storage areas, potential waste disposal areas, and potential processing plant sites. Surface use agreements with landowners will need to be negotiated prior to any development.

Fresh water is limited; however, saline groundwater is abundant and may be useful for mineral processing operations. It is important to note that the Ivana area is nearly 100 m below the elevation of Valcheta, within a closed hydrologic system. Therefore, any mining and processing activity developed in the area would likely have a low potential risk to local fresh water aquifers.

There is readily available labour to support mining operations, but some technical and administrative staff may need to be brought in from other parts of the Province or the Country. Valcheta is the principal commercial centre in the region and offers access to hospital, education, banking, and services like restaurants and motels.

5.5 Local Population

Valcheta County covers an area of about 20,500 km^2, with a population of 7,100 inhabitants in 2010, including 3,555 living in the town of Valcheta, resulting in a population density of <0.2 persons/km^2 (Censo Nacional de Población, 2010). The population outside of the town of Valcheta is represented by ranchers living at isolated ranches.

6 History

The earliest reported uranium exploration in Rio Negro Province, Argentina, was conducted by CNEA in the late 1960s in a small area in the western part of the province, west of El Cuy (Dr. Jorge Berizzo, written communication, 2/26/18). The broader potential for uranium mineralization in Rio Negro was recognized by Dr. Berizzo in 2006 when he led a small reconnaissance team on road prospecting traverses across potential Cretaceous sequences within the southeastern edge of the Neuquen Sedimentary Basin and discovered uranium mineralization in the area that became the Santa Barbara prospect. As a result of the discovery, a private Argentine company, Argentina Uranium Corporation ("AUC"), claimed exploration rights covering almost 500,000 hectares in a previously unknown uranium exploration terrain located where the southern edge of Cretaceous and Tertiary strata of the Neuquen Basin lap onto the North Patagonian Massif.

Shortly after the discovery, Blue Sky entered into an option agreement with AUC on two of its prospect areas, Anit and Santa Barbara. In 2008, Blue Sky acquired all of the outstanding shares of AUC and thereby acquired 100% interest in the Anit and Santa Barbara areas. Continued exploration work (see Section 9) led to the delineation of a principal uranium trend southeastward and cateos were claimed to cover the southernmost area, termed Ivana.

6.1 Historical Resources and Reserves

There are no historical uranium mineral resources or reserve estimates prior to Blue Sky's work at Ivana, and there has not been any uranium production from the properties included in the Amarillo Grande Project.

7 Geological Setting and Mineralization

7.1 Regional Geology

The Amarillo Grande Project is situated near the boundary between the northwestern North Patagonian Massif (Paleozoic and Mesozoic basement) and the southeastern Neuquén basin. The basement rocks contain units of Neoproterozoic-Cambrian metamorphic rocks, Ordovician to Devonian marine sequences, Permo-Triassic intrusives, and Triassic-Jurassic magmatic-volcanic units. Near horizontal sequences of Late Cretaceous and Tertiary sedimentary and epiclastic volcanic formations, representing the thin distal edge of the Neuquén Basin, lap on to the basement rocks near the Project (Gregori et. al, 2016). Quaternary alluvial-colluvial deposits are widely developed over the Project.

The North Patagonian Massif is characterized by the presence of several mylonitic belts and regional structural lineaments (Gregori, 2008). The basement at the AGP has older structures reactivated during the Neogene by tectonic inversion of Triassic normal faults (Folguera et al, 2015). Three main lineament orientations can be recognized: NE–SW trending, NW–SE trending and the E–W trending Huincul Fault zone. The NE-SW Nahuel Niyeu lineament is a structural zone about 25 km wide that includes the Tardugno, Musters and Huanteleo faults and the Nahuel Niyeu, Railer and Rana thrust sheets (Gregori et al, 2008). The Ivana prospect, in the southern end of the outline of the Amarillo Grande Project (see Figure 7-1), is located near the intersection of the NW-trending Bajo del Gualicho Lineament ("BGL") and the NE-trending Nahuel Niyeu lineament.

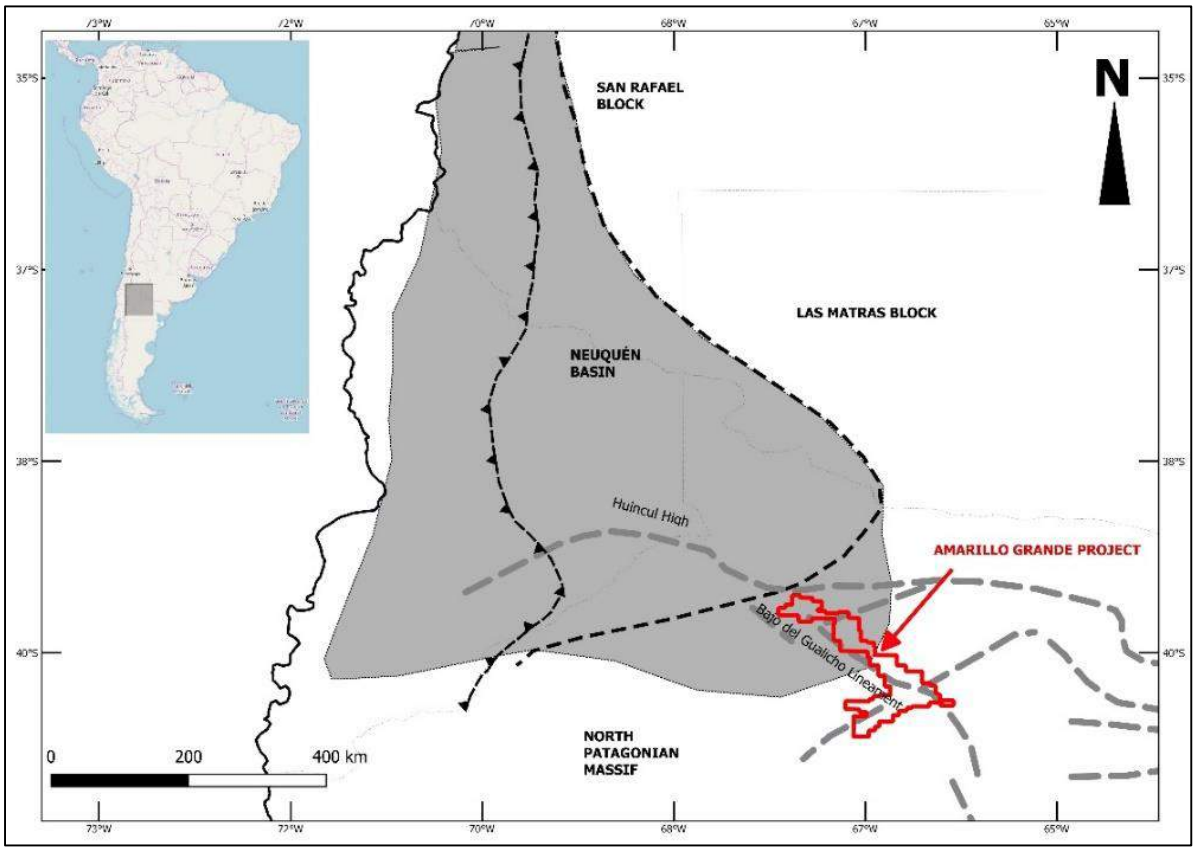


Figure 7-1: Location of the main morphotectonic features including the Andean thrust front, Huincul High, and Bajo del Gualicho Lineament, and the Amarillo Grande Project; modified from Gregori, et al., 2008. The gray shaded pattern is strata of the Neuquen Basin which lap unconformably onto the North Patagonia basement as illustrated in Figures 7-2 and 7-3.

The Neuquén Basin formed as a foreland basin related to the Andean thrust front and filled with Mesozoic and Cenozoic sedimentary and volcanic deposits. In the Late Triassic to Early Jurassic, the infill of the basin began in depocenters in the northern and northwestern parts of the basin, which were filled with volcanics, volcaniclastics, and coarse conglomerates. A subduction system began in the Early Jurassic and the Basin went through a thermal subsidence post-rift stage that continued until the Early Cretaceous. During this regime, three major transgression–regression cycles, manifested as four stratigraphic groups, can be related to the Paleo-Pacific Ocean. The four groups comprise the Cuyo, Lotena, Mendoza and Rayoso Groups (Figure 7-2).

Deposition of the Cuyo Group began in the retroarc-sag phase of the Neuquén Basin (Early to Middle Jurassic) with a marine transgression that deposited the black shale facies of Los Molles Formation. The following regression culminated with fluvial and evaporite deposits in the central part of the basin. The Lotena Group accumulated with the next transgression-regression cycle, which consisted of continental sandstone, marine carbonate facies and evaporite units.

The Mendoza and Rayoso groups were deposited in the third cycle, which extended over the greatest time. The Mendoza Group comprises typical red beds, fluvial and eolian sandstones, and a black shale facies of the Vaca Muerta Formation. Near the end of deposition of the Mendoza Group a sharp sea-level drop resulted in continental, mixed, and marine siliciclastic facies. The Rayoso Group represents the last basinal stages of shallow-marine carbonates, fluvial and eolian sandstones, and evaporites. The Rayoso Group concluded with a thick sequence of continental clastic and evaporitic units.

The retroarc-sag phase ended during the Early Cretaceous and the tectonic regime transformed to compressive in the southern Central Andes (Ramos, 2010). Thereafter, the first synorogenic deposits of the Neuquén foreland basin were deposited from the migration of the orogenic front to the east. This new tectonic setting began at 100 Ma and developed the red beds of the Neuquén Group and Malargüe Group (Tunik et al, 2010). The Neuquén Group consists of several continental red bed formations of fine sandstones, siltstones, mudstone and minor conglomerates. The Malargüe Group is separated into two domains; western and eastern. The eastern region of the Malargüe Group recorded the first Atlantic ingression that was developed during Maastrichtian–Danian times (Late Cretaceous and early Paleocene) and is represented by the Allen, Roca-Arroyo, Barbudo and Carrizo Formations. The western facies of the Malargüe Group is represented by the Loncoche, Roca and Pircala Formations.

In the Cenozoic, the North Patagonian Massif basement structures were reactivated by tectonic inversion of Triassic faults (D'Elia et al., 2012), and the Neuquén Basin received deposition of continental fluvial volcaniclastic and epiclastic sediments separated by periods of erosion. Miocene and Pliocene units are interpreted as distal synorogenic successions associated with Andean uplift (Folguera et. al, 2015). These deposits are dominated by fluvial conglomerates and sandstones arranged as five fan-shaped successions with younger units occurring to the east. This process generated extensive Neogene high-energy deposits, extending from the central Neuquén Basin to the Atlantic coast (Figure 7-3).

During the Eocene, the Neuquén and the Malargüe Groups were deformed and then covered by fluvial systems of the Chichinales Formation, developed during the Oligocene and early Miocene. The lower part of the Chichinales Formation contains brownish-gray tuffaceous sandstone, conglomerates, and thin layers of sandstone with carbonate cement and silicified wood. The Chichinales sequence continues with interbedded greyish-green to brownish mudstones with fine tuffaceous sandstone (Huyghe et al, 2014). East and southeast of the Amarillo Grande Project, estuarian sediments of Gran Bajo del Gualicho Formation, consisting of dark sands and tuffaceous mudstones, interfinger with the upper part of the Chichinales Formation (Reichler et al, 2010).

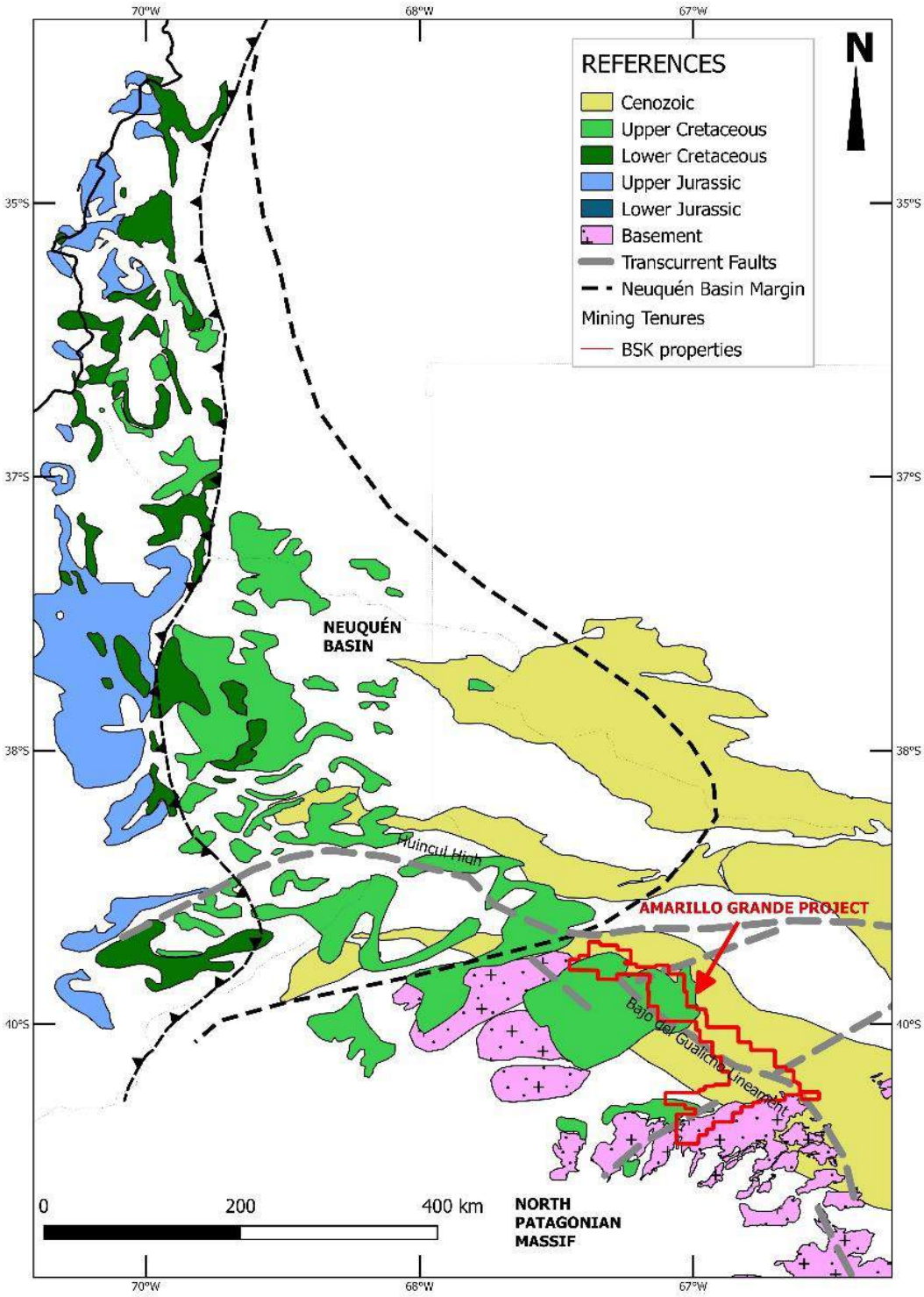


Figure 7-2: Regional geological map of the Neuquén Basin: Lower Jurassic (Precuyano, Cuyo and Lotena Groups); Upper Jurassic (Mendoza Group); Lower Cretaceous (Rayoso Group); Upper Cretaceous (Neuquén-Malargüe Groups); and Cenozoic (Chichinales, Gran Bajo del Gualicho and Río Negro Formations); modified after Legarreta et al, 1999 & Folguera et al, 2015. The overlap of Upper Cretaceouis and Cenozoic units related to the Neuquén Basin, southeastward beyond the Basin margin and onto the basement rocks, is illustrated in Figure 7-3.

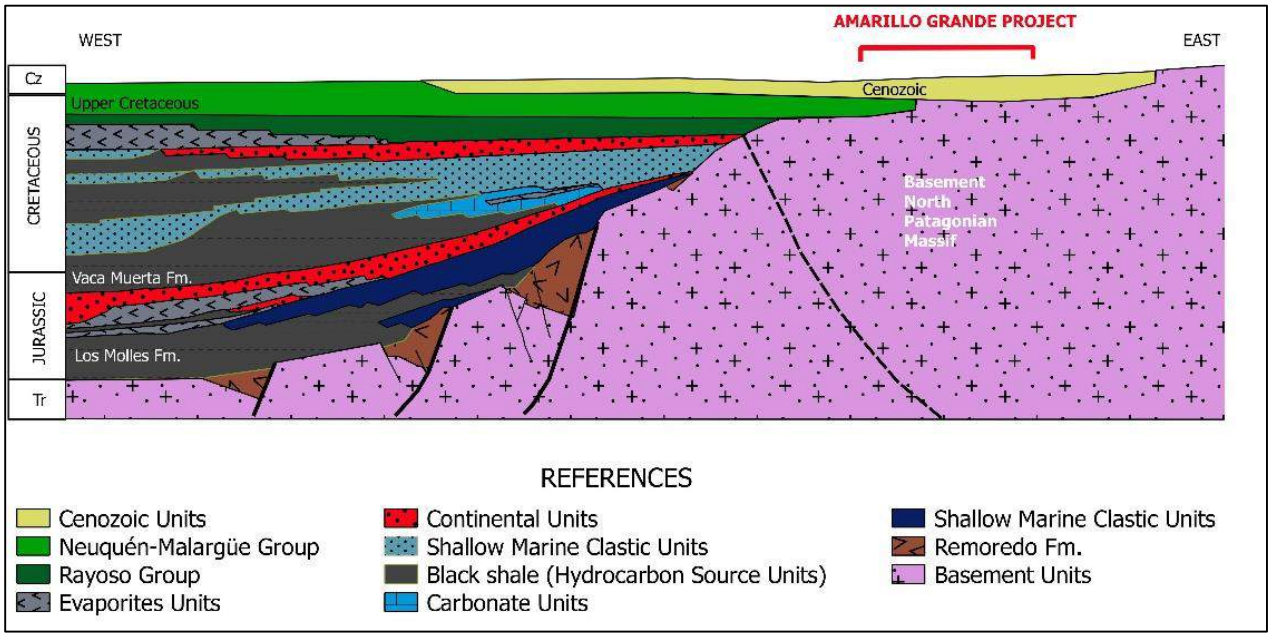


Figure 7-3: Schematic cross section of Neuquén Basin; modified after Legarreta et al, 1999 & Folguera et al, 2015. The overlap of Upper Cretaceous Neuquén and the Malargüe Groups, and Cenozoic units, beyond the nominal Neuquén Basin margin, and unconformably onto basement rocks, as illustrated in Figure 7-2, is shown diagrammatically above. The approximate location of the Amarillo Grande Project is also shown above; for a more detailed map view of the relation of the Cenozoic units with basement rocks at the Ivana prospect, see Figure 7-5.

The Ivana prospect is located near the intersection of two significant structural zones; the NW-SE Bajo del Gualicho Lineament and the NE-SW Nahuel Niyeu structure (Figure 7-4). The BGL is interpreted to be the deep-seated suture between the Nahuel Niyeu Cambrian forearc basin (≈520-510 Ma) and its source area (Greco, 2017). This lineament has exerted control on the development of local sedimentary sequences from Late Cretaceous to Quaternary times, and may have controlled the location of both modern salars and paleo-salars (barren, highly evaporative ponds and salt-flats). The reducing diagenetic environment of the salars, both ancient and modern, may have had an effect on the localization of uranium occurrences by providing a reductant to precipitate U from oxidized solutions.

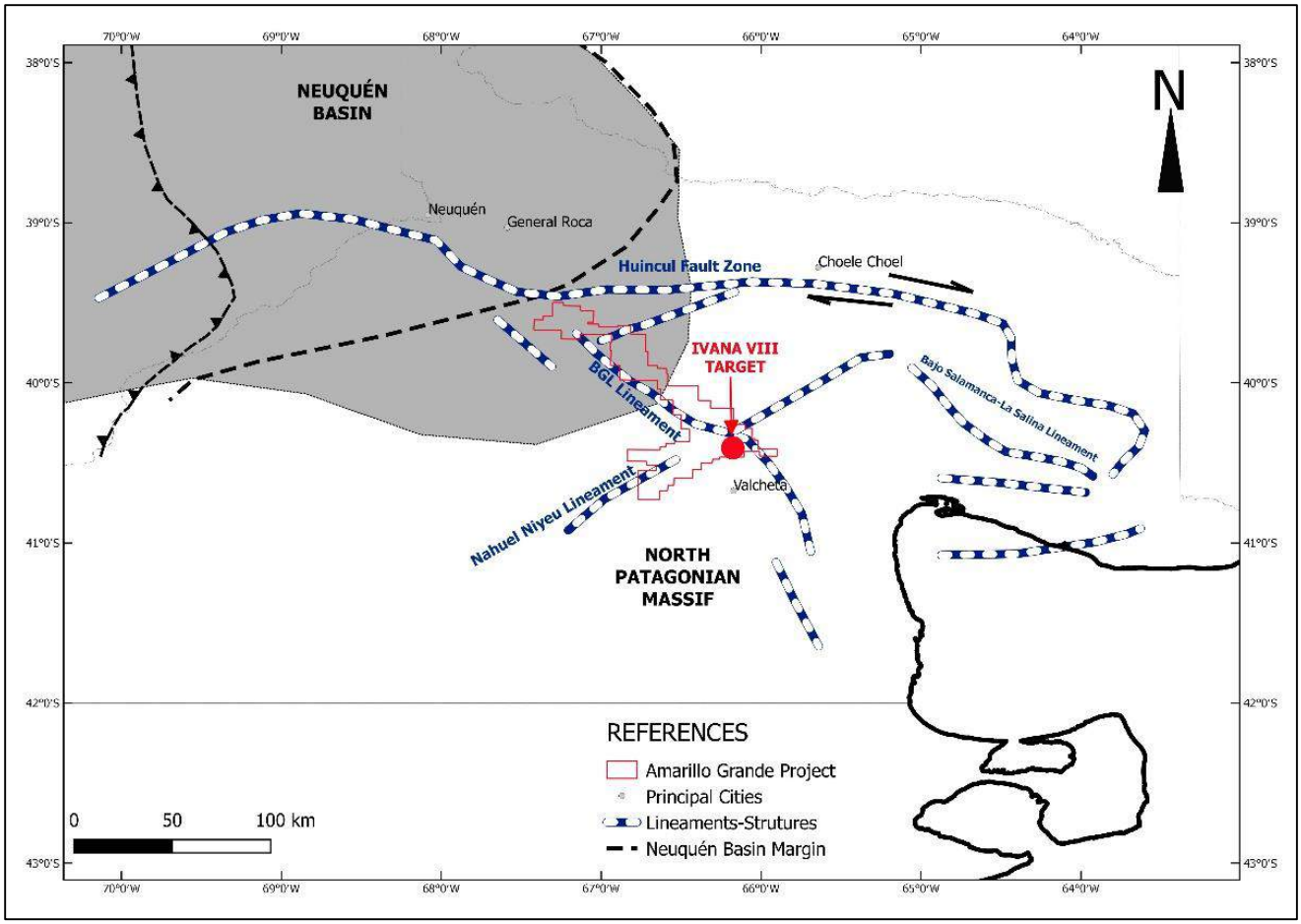


Figure 7-4: Regional North Patagonian mylonitic belts and lineaments; modified from Gregori et. al, 2008.

7.2 Property Geology

The strata present at the Ivana prospect are continental epiclastic and pyroclastic rocks of the Oligocene-early Miocene Chichinales Formation that were deposited unconformably over the rocks of the North Patagonian Massif, or over a marine sequence of Arroyo Barbudo Formation and red beds section of Neuquén Group (Figure 7-5).

The basement units are Nahuel Niyeu Formation (515-507 Ma) that comprises phyllites intercalated with metagreywackes, slates and lesser amounts of meta-igneous rocks with WNW-ESE and NE-SW fabric orientations. Near the Ivana prospect, isolated outcrops of Silurian-Devonian sandstone of the Sierra Grande formation unconformably overlie the Nahuel Niyeu rocks. Late Cretaceous red beds strata of the Neuquén Group, and marine transgressive strata of the Arroyo Barbudo Formation were described by Reichler, 2010, and confirmed by drill holes at northern part of the Ivana prospect.

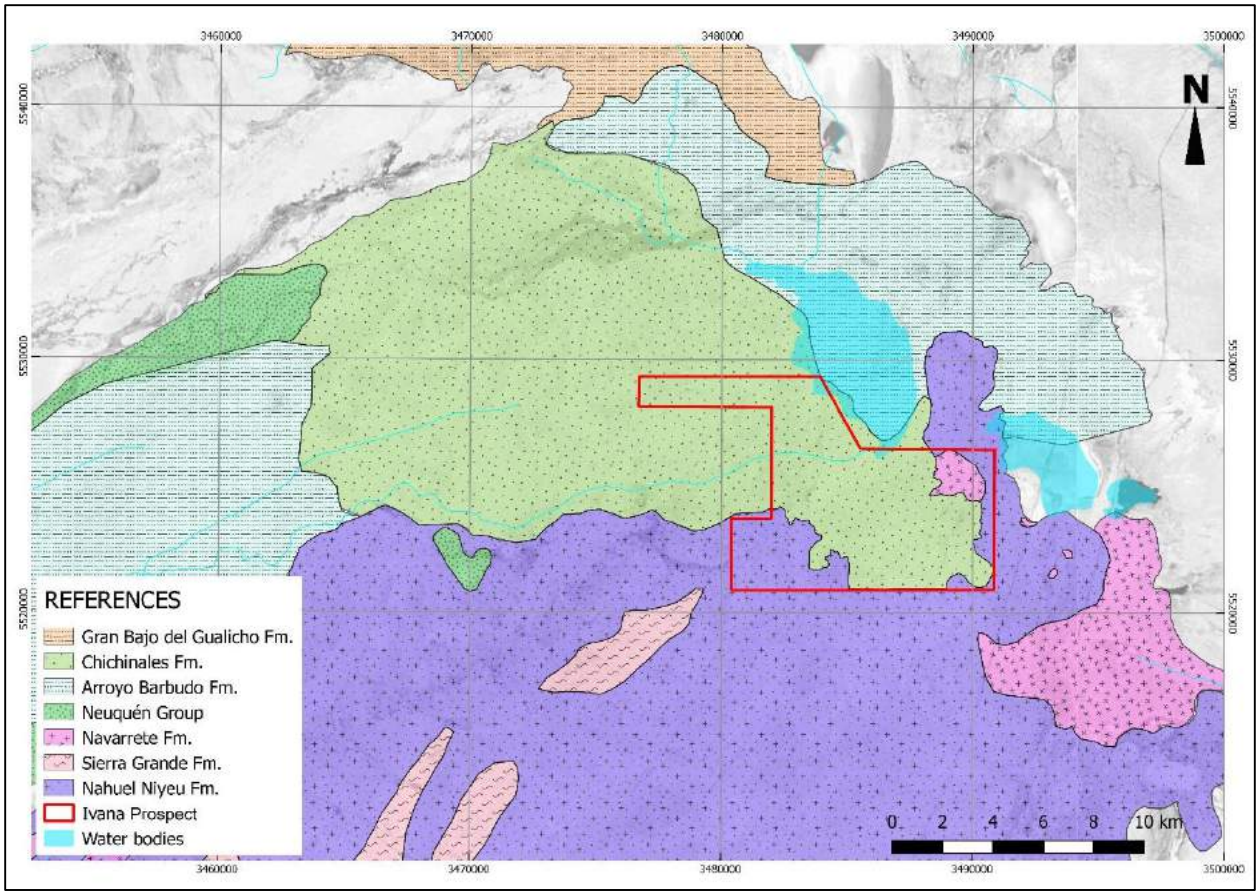


Figure 7-5: Property geology around the Ivana prospect (coordinates in Gauss Kruger Posgar 94 Zone 3); Blue Sky, 2018.

The Chichinales Formation is generally comprised of soft tuffaceous poorly consolidated sandstone with mudstone and conglomerate intercalations. The formation is usually light-gray to brownish-gray colour but is black-coloured where impregnated with the amorphous carbonaceous material associated with primary uranium mineralization.

The Chichinales Formation has been divided into three members (Figure 7-6). The lower member, host to the Ivana uranium-vanadium mineralization, is commonly cross-bedded medium to coarse sandstone with silicified logs and fossil-wood debris. The lower Chichinales, at the Ivana prospect, contains layers of coarse, poorly sorted conglomerate, pebbly tuffaceous sandstone and small discontinuous layers and interbeds of mudstone and sandstone with carbonate cement.

The Middle Members contains characteristic paleosols in sequences of siltstone, mudstone and minor layers of fine sandstone. Finally, the Upper member comprises uniform thick sequences of coarse to fine tuffaceous sandstone and siltstone with interstratified mudstone at the bottom and mostly siltstone to fine sandstone at the top (Bjerg, 1997). Regionally some alteration patterns have been defined by diagenetic red beds style oxidation and gray reduction-bleaching in Chichinales sandstone.

Outside the Ivana prospect outlined in Figure 7-5, the upper part of the Chichinales interfingers with marginal marine sediments of the Bajo del Gualicho formation. Unconsolidated Quaternary deposits consisting of fine lacustrine salar sediments, sand dunes, and alluvial and colluvial accumulations cover parts of the area.

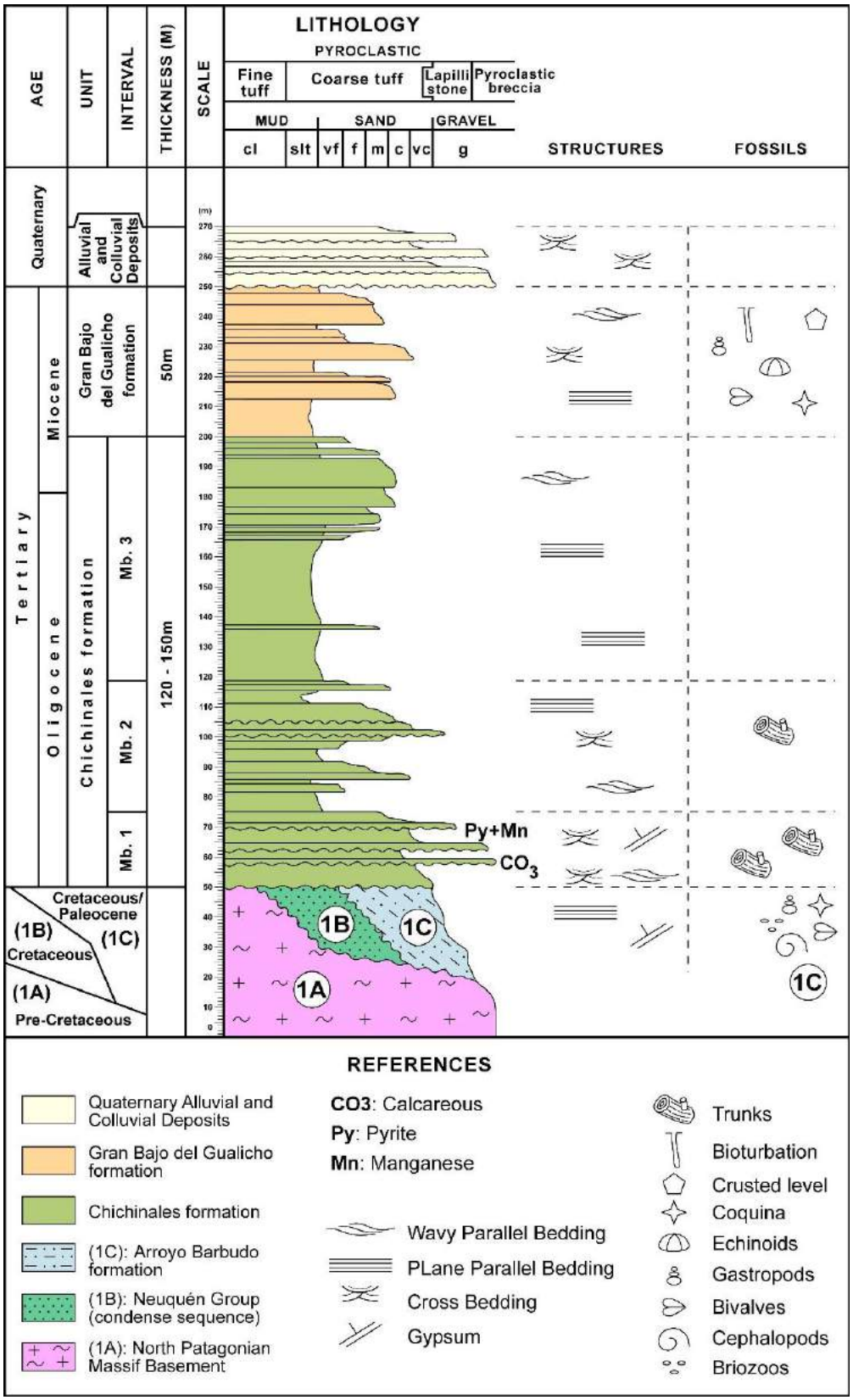


Figure 7-6: Schematic Stratigraphic Column at the Ivana prospect; Blue Sky, 2018

7.3 Mineralization

The uranium-vanadium mineralized horizons are hosted mostly in medium to coarse-grained, poorly consolidated sandstones, minor conglomerates, and mudstones of the lower Chichinales Formation; in weathered basement in fractures and secondary porosity; and in the regolith debris at the basement unconformity. Occasionally, uranium occurrences have been intercepted in the Arroyo Barbudo Formation and in red beds of the Neuquén group. The majority of uranium (~90%) in uranium-bearing minerals identified at Ivana is U^{+6} and therefore can be classified as secondary or oxide mineralization. The uranium mineralization has been divided into two types based on dominant uranium mineralogy and/or alteration and gangue mineralogy; 1) Oxide mineralization characterized by carnotite and oxide alteration minerals, and 2) Altered "primary" mineralization characterized by variant of coffinite, that has been named β-coffinite (beta-coffinite) by the Company and which contains mainly U^{+6} rather than U^{+4} which is normal for coffinite, and pyrite. These two varieties of uranium mineralization are associated with alteration assemblages that suggest aspects of at least two types of uranium deposits, and related depositional environments, are present in the Ivana deposit.

7.3.1 Oxide Mineralization

The oxide mineralization at Ivana is visibly dominated by carnotite, the yellow potassium uranium vanadate [$K_2(UO_2)_2(VO_4)_2 \cdot 3H_2O$] that occurs as coatings on pebbles and sand grains, and as disseminations in poorly consolidated sandstone and conglomerate. This mineralization style is closely associated with silicified or carbonized fossil wood and clusters of gypsum crystals that have grown in soft fine sediments. The most abundant uranium mineral identified by the recent QEMSCAN® work (Creighton, 2018) on "oxide" type mineralization, however, was β-coffinite (beta-coffinite), described in more detail in Section 7.3.2 below.

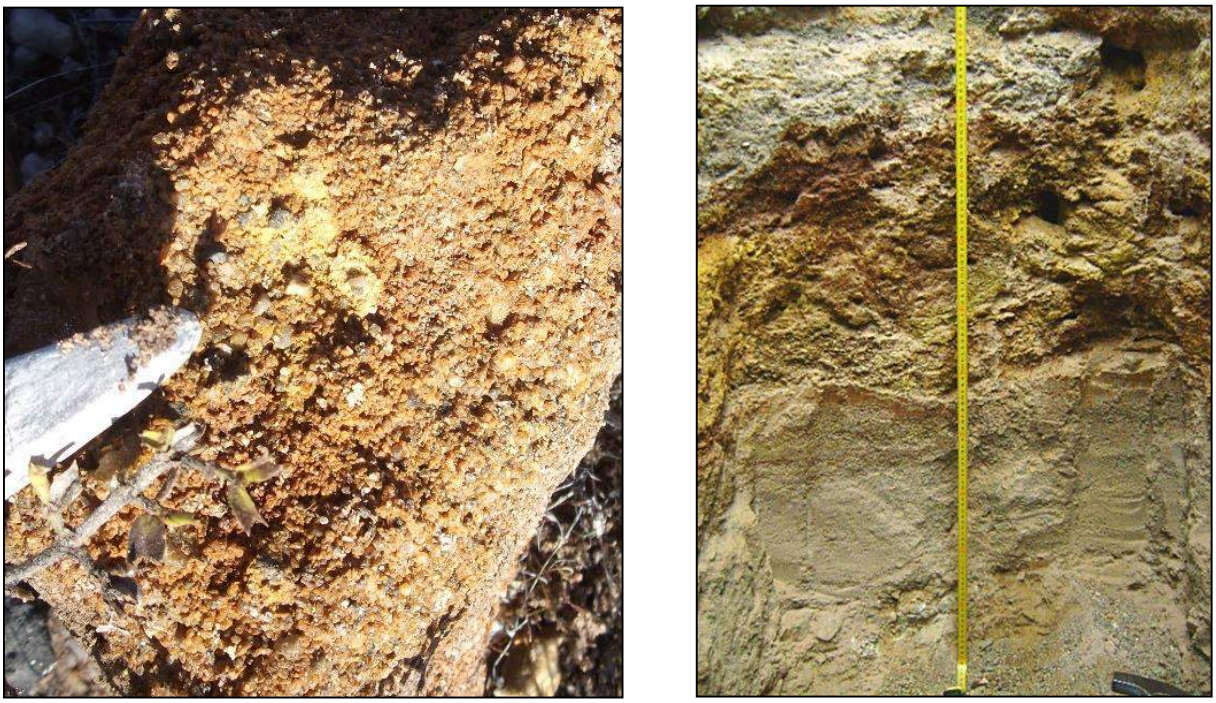


Figure 7-7: Oxide mineralization at the Ivana prospect; the yellow material in conglomerate and sandstone is carnotite, a potassium uranium vanadate. Blue Sky, 2018

The mineralogy of all secondary uranium (U^{+6}) minerals in the oxide mineralization at Ivana has not been completely determined. The term carnotite has been used in sample and RC drill cuttings descriptions as

a field description for the yellow-coloured radioactive mineral. In a recent QEMSCAN analysis of samples from the Ivana deposit (Creighton, 2018) carnotite was confirmed and lesser tyuyamunite, leibigite, and a previously unreported uranium mineral were detected. Leibigite is a hydrated calcium-uranium carbonate [$Ca_2(UO_2)(CO_3)_3 \cdot 11H_20$] and appears to belong with the oxide mineralization, as does tyuyamunite, a hydrated calcium-uranium vanadate [$Ca(UO_2)_2V_2O_8 \cdot (5\text{-}8)H_2O$]. The "previously unreported uranium mineral" may be a complex mixture of a uranium mineral and a clay mineral such that the QEMSCAN cannot resolve a match with the any known uranium mineral. For the present, the "previously unreported uranium mineral" is informally being called "ivanaite", after the Ivana deposit,

Oxide mineralization is associated with yellow or brown iron oxides derived from oxidized pyrite, and red iron oxides from altered iron or iron-titanium minerals, which are relatively common as disseminations in sandstones or as components in heavy mineral layers. The oxidation of these iron minerals has produced irregular iron oxide stained zones associated with oxide mineralization.

7.3.2 Altered Primary Mineralization

In the Ivana deposit altered primary mineralization has been found only in RC drill hole interceptions from 5-20 m in depth and has not been identified at the surface. The altered primary mineralization is characterized by disseminated pyrite and gray-coloured bleaching, and some of the primary mineralization contains a dark-brown to black vitreous carbonaceous looking material associated with disseminated pyrite, (Figure 7-8). The high-grade mineralization also contains smoky quartz grains, and minor natural organic carbon. Different forms of overgrowths of pyrite (Figure 7-9) have been documented including cubic crystals (10 µm) with overgrowths of sub-euhedral crystals (2 to 3 µm) and/or overgrowths of botryoidal pyrite (1 to 2 µm).

A preliminary mineralogical study of Ivana primary mineralization by Scanning Electron Microscope (SEM) identified predominantly coffinite with lesser amounts of possible uraninite and probable unidentified organic-uranium oxide complexes (Arce, 2017). A vanadium mineral was described as micaceous and tentatively identified as roscoelite [$K(V^{+3}, Al)_2(AlSi_3O_{10})(0H)_2$] and the carbonaceous material was characterized as "non-woody" amorphous organic matter (Arce, 2017).

A more recent QEMSCAN study of the primary uranium mineralization at Ivana (Creighton, 2018) recognized an anomalous coffinite-like uranium silicate, plus pyrite, but found no primary vanadium mineral. Coffinite has a formula of [$U(SiO_4)_{1-x}(OH)_{4x}$] and usually occurs as [$U(SiO_4)_{0.9}(OH)_{0.4}$] (Edwards, 2018a), but in the QEMSCAN samples tested from Ivana the “Si content is not consistent with the accepted composition of coffinite.” (Creighton, 2018, p.4). The anomalous "coffinite" was found to be susceptible to alkaline carbonate leaching without oxidation, from which Edwards (2018b) concluded that the anomalous "coffinite' is likely a hydrated U^{+6} silicate of possible U6+(SiO4)?(OH)? formula. Blue Sky Uranium has chosen to refer to the anomalous Ivana "coffinite" as β-coffinite (beta-coffinite) to simplify future discussions and avoid confusion (G. Pensado, 2018, written commun.) The QEMSCAN study of the altered primary mineralization from the Ivana deposit also included the "previously unreported uranium mineral" that has been named "ivanaite" by the Blue Sky staff. The Ivana primary mineralization appears to contain largely oxidized uranium in a ratio of about 10:90 (U^{+4}:U^{+6}; Carlevaris, 2018b).

The QEMSCAN study of the primary uranium mineralization from the Ivana deposit did not address the identity and character of the "non-woody carbonaceous material" shown in Figure 7-8, which occurs in parts of the primary mineralization and is shown as "reduced alteration with carbonaceous materials" in the cross sections A-A' and B-B' (Figures 7.11 and 7.12). The total organic carbon (TOC) content of composite samples of uranium-vanadium mineralization is quite low, from 360 to 1900 ug/g (0.036% to 0.19%; Carlevaris, 2018b).

SRC QEMSCAN results for Ivana samples from two composites representing the “oxide” and “altered primary” domains (Comp1 and Comp2) determined average relative mineral contents are similar with β-coffinite = 10.0, “uranium mineral” or ivanaite = 3.7, carnotite = 2.9, tyuyamunite = 1.1, and liebigite = 0.3.

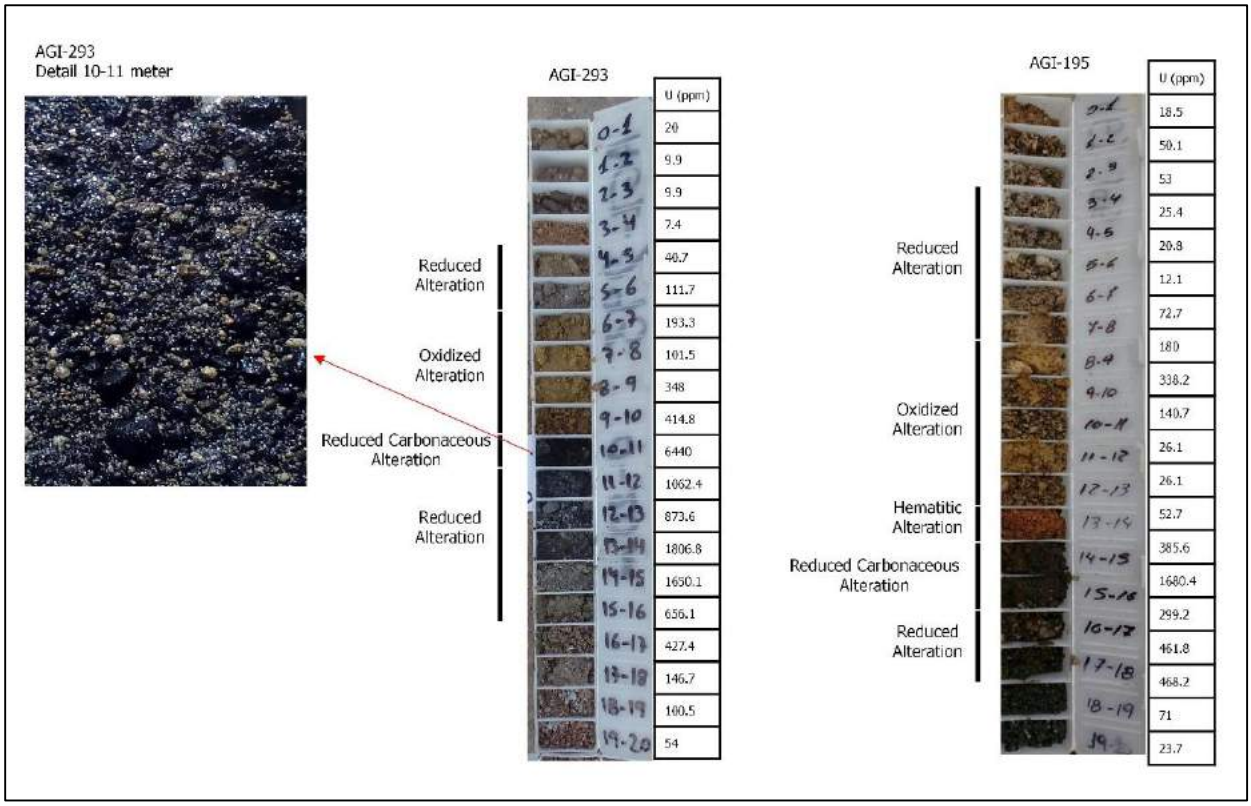


Figure 7-8: Altered primary mineralization and alteration appearance from drill holes AGI-293 and AGI-195; left, detail of appearance of vitreous "non-woody" carbonaceous matter from drill hole AGI-293, 10-11 m; center, cuttings chip tray from AGI-293 showing the alteration zones and uranium analyses (U ppm); right, cuttings chip tray from AGI-195 showing the alteration zones and uranium analyses (U ppm) (Arce, 2017).

7.4 Trace element geochemistry

An analysis of trace element geochemistry on 6,573 assay samples from 427 drill holes used for the Ivana initial mineral resource estimation (Thorson, et al., 2018) indicates that the Ivana uranium-vanadium mineralization shows strong positive correlations between uranium and Ag, As, Cd, Co, Mo, Re, S, Se, Th, Tl, and V. Selenium assays are commonly elevated in the Ivana mineralized zones; its concentration generally follows uranium grades. Selenium ranges from 10 to 1000 ppm with background values generally less than 1 ppm Se.

7.5 Alteration

Four alteration types have been defined at the Ivana prospect through the geological description and logging of RC cuttings samples: reduced alteration, reduced carbonaceous alteration, oxidized alteration and hematitic alteration.

Reduced alteration is characterized by light- to medium-gray colours of cuttings and by secondary porosity. Disseminations of pyrite are common but variable, as is undifferentiated carbonaceous material. This

alteration appears to be associated with dissolution of carbonate and magnetite, and is speculated to be the effects of aqueous organic acids associated with petroleum hydrocarbons.

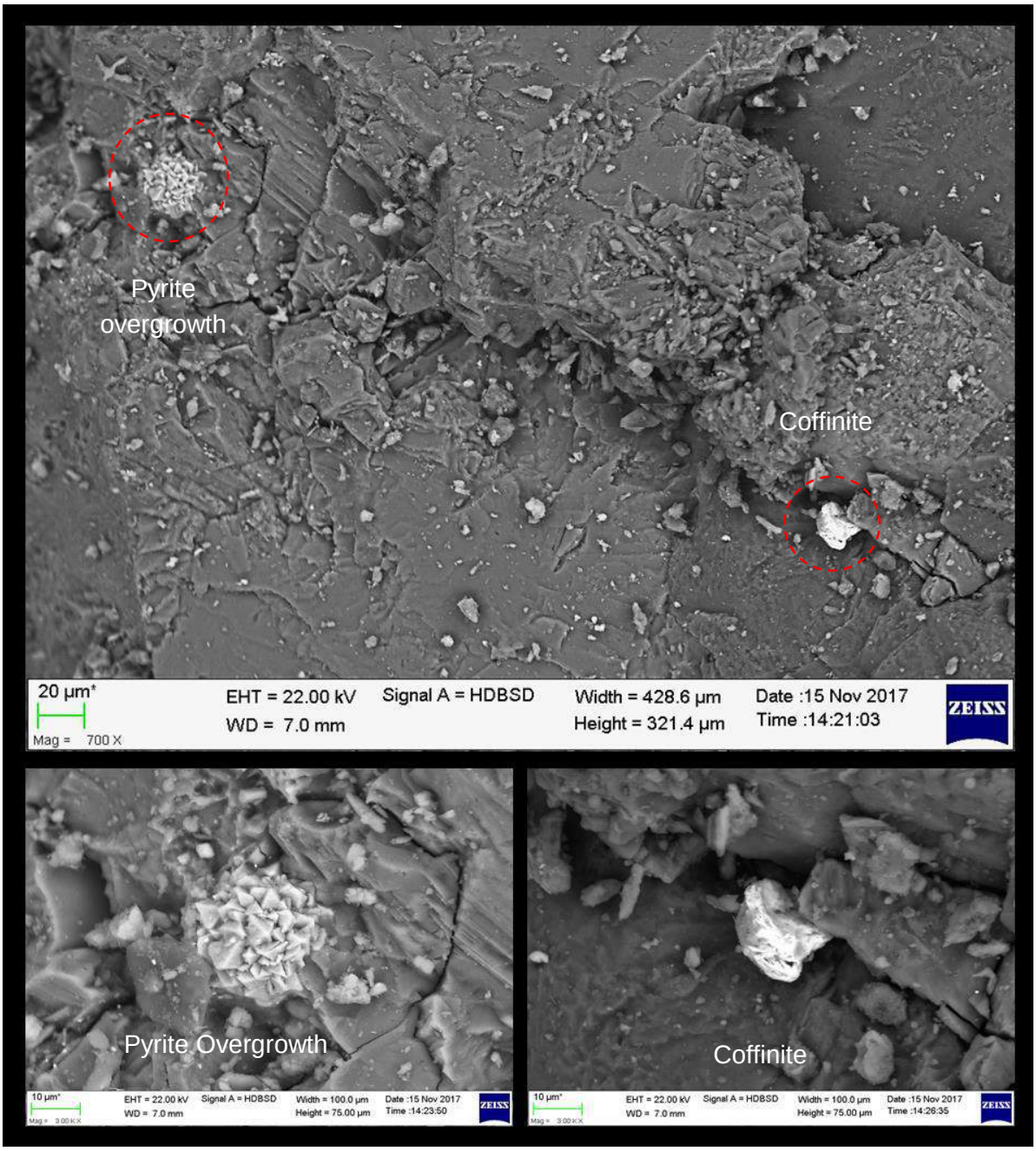


Figure 7-9: Scanning electron microscope images of Ivana primary mineralization from drill hole AGI-100, showing complex crystals of fine pyrite and a grain of "coffinite" (Arce, 2017). "Coffinite" in the Ivana mineralization has been recognized to be an anomalous coffinite-like mineral now referred to by Blue Sky Uranium as β-coffinite; see text for discussion.

Reduced carbonaceous alteration in cuttings is spatially associated with reduced alteration but is coloured dark brown to black by impregnation with carbonaceous material. The non-woody carbonaceous matter described by Arce (2017) and illustrated in Figure 7-8 is characteristic and abundant, as is disseminated pyrite.

Oxidized alteration contains limonitic iron hydroxides that give it a yellow to ochre colour in cuttings, apparently from the oxidation of magnetite and pyrite. Near redox boundaries more strongly coloured brownish-red cuttings reflect higher amounts of iron oxides and iron hydroxides in thin zones adjacent to the boundary.

Hematitic alteration is a variation of the oxidized alteration but characterized by intense red colours from hematitic iron oxides and possible iron enrichment in thin zones with limited distribution. Iron in these zones may be enriched from 2% to as high as 9% total iron.

The distribution of alteration types at Ivana commonly appears as a redox boundary or complex roll-front where tongues of oxidized alteration are penetrating and replacing reduced alteration, as in the cuttings examples in Figure 7-8. Note that some of the best uranium assays occur at the redox boundary between oxidized alteration and reduced carbonaceous alteration.

7.6 Distribution of mineralization types

In plan view the Ivana uranium-vanadium mineralization has a broad C-shaped pattern with some isolated outlying areas of weaker mineralization (Figure 7-10). Cross-sections help illustrate the distribution of both mineralization and alteration types (Figures 7-11, 7-12, and 7-13). The “C”-shaped channel controlled high-grade mineralization that is found mostly on the edges of a river channel where mudstone-sandstone ratios are increasing, and at a redox contact zone between yellow or ochre oxidized alteration and primary grayish to black reduced alteration.

The Ivana deposit is characterized by two stacked zones of uranium mineralization, the upper zone and the lower zone. The upper zone is comprised of oxidized mineralization, and the lower zone contains a mixture of oxidized and reduced primary-style mineralization. (See Figures 7-11, 7-12, and 7-13) The two zones occur together through most of the deposit but there are localized areas where only one zone is present. The upper zone averages 2.7 m in thickness, with a maximum of 10 m, while the lower zone has a maximum of 20 m and has an average thickness of 6.2 m.

These relationships support the interpretation that the oxide mineralization represents uranium and vanadium that has been oxidized and re-distributed from primary mineralization by oxygenated groundwater, and perhaps by fluctuations of rising and falling groundwater levels.

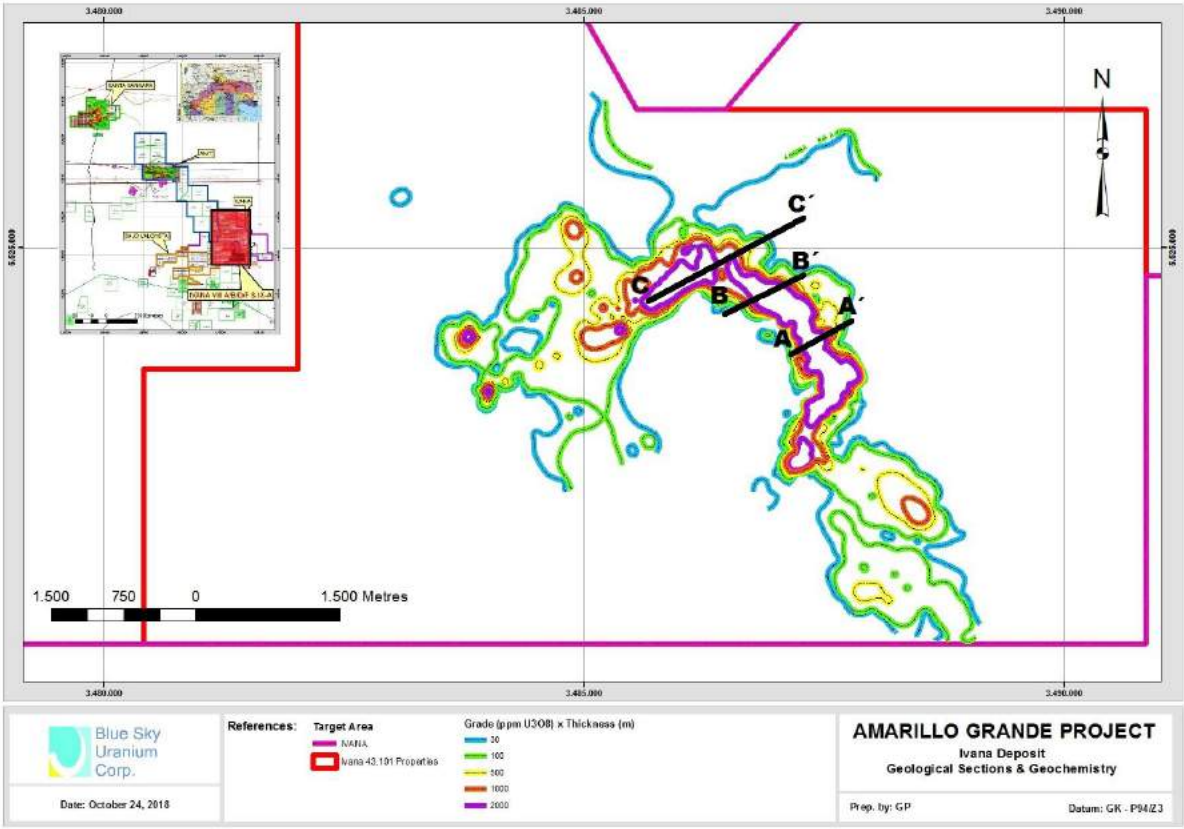


Figure 7-10: Thickness x grade map showing distribution of Ivana uranium mineralization and location of cross-sections A-A', B-B', and C'C'; Blue Sky, 2018

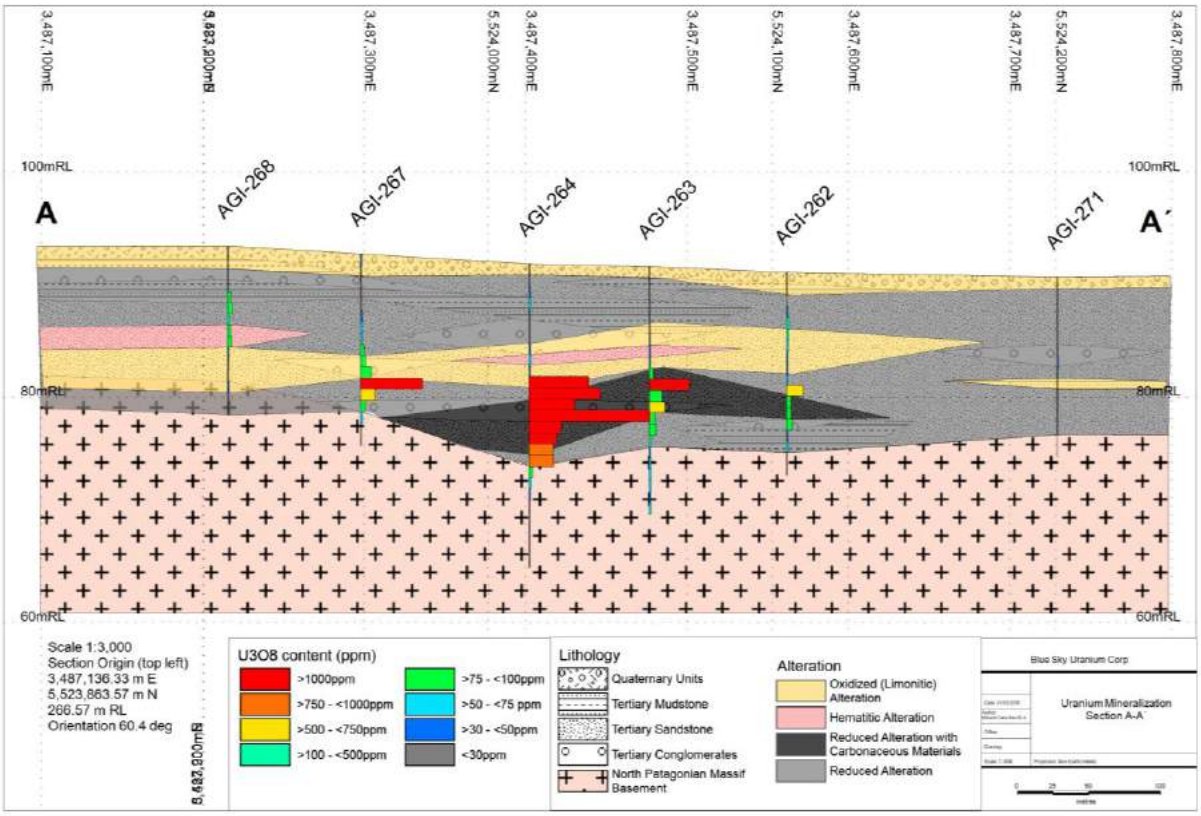


Figure 7-11: Cross section A-A' (Figure 7-10) showing high-grade primary uranium mineralization associated with reduced alteration and reduced carbonaceous alteration in the base of the Ivana paleo-channel; Blue Sky, 2018.

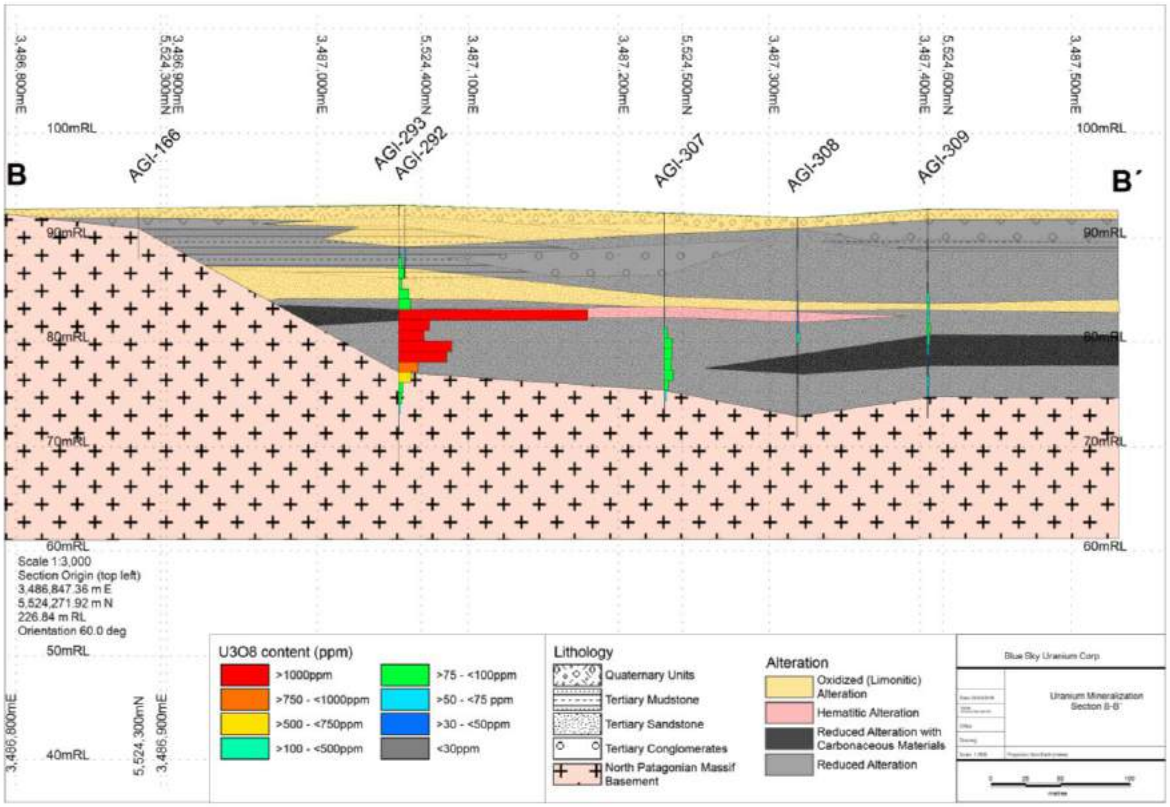


Figure 7-12: Cross section B-B' (Figure 7-10) showing high grade primary uranium mineralization associated with reduced alteration and reduced carbonaceous alteration in a steeper margin of Ivana paleo-channel; Blue Sky, 2018.

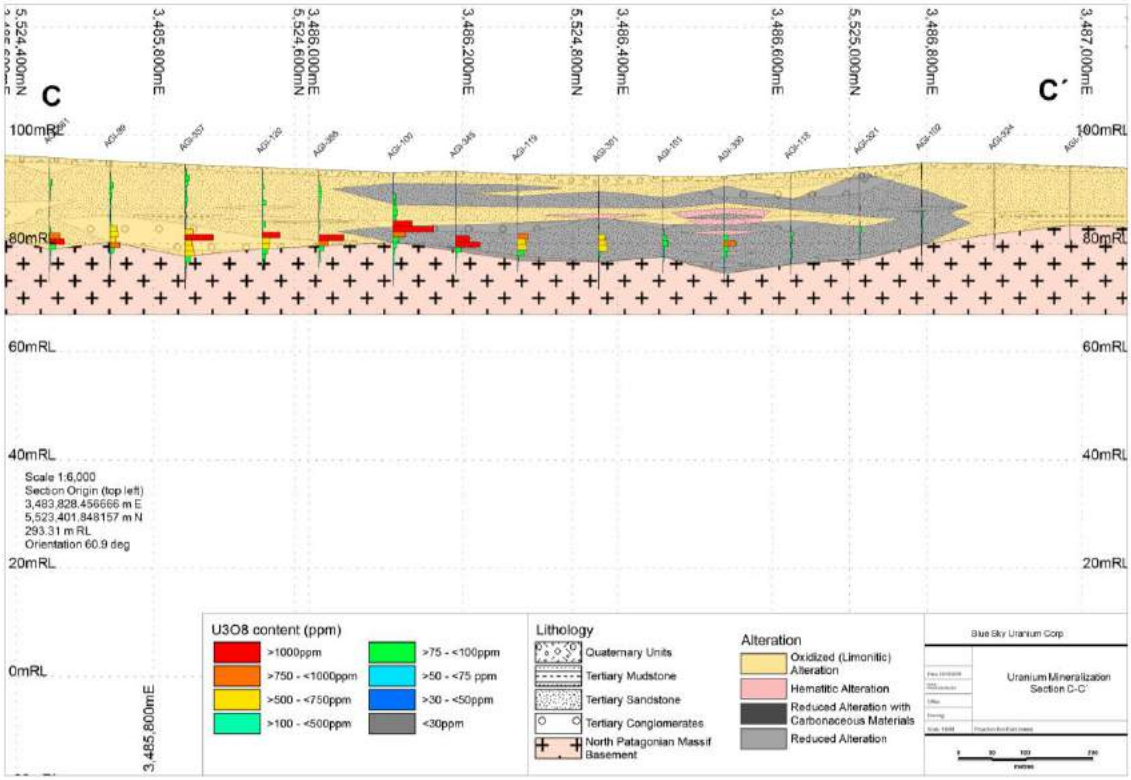


Figure 7-13: Cross section C-C' (Figure 7-10) showing the general flattened "C"-shaped distribution of reduced alteration, and both oxide and primary high-grade uranium mineralization along the bottom of the Ivana paleo-channel; Blue Sky, 2018

7.7 Comparison to other deposit types

The uranium-vanadium deposit at Ivana has similarities to other uranium deposits, but does not fit the existing categories precisely. The Ivana oxide mineralization, consisting of carnotite and lesser other oxidized uranium+/-vanadium minerals coating pebbles and sand grains, and as disseminations in poorly consolidated sedimentary rocks, is similar to the surficial uranium deposits in Australia (Yeelirrie, and others) and Namibia (Langer-Heinrich); see Section 8. However, most of the well-described surficial uranium deposits contain significant calcrete, layers of sand or gravel densely cemented with calcium or magnesium carbonates, often occurring above the uranium mineralization. The Ivana deposit contains layers of poorly consolidated sediments that are calcareous, but the strength of the calcite cement is far from being considered calcrete. The lack of calcrete layers at Ivana suggests that Ivana, in part, could be considered a surficial uranium deposit, but not a calcrete-type surficial uranium deposit. But, describing the Ivana uranium deposit as "surficial type" only describes the oxide part of the deposit, although the altered primary-type mineralization at Ivana is located near surface.

A large part of the Ivana uranium deposit, and the predominant amount of the pounds of U_3O_8, is altered primary-type mineralization, which is gray in colour, and contains smokey quartz, carbonaceous material and pyrite. This originally reduced primary mineralization in sandstone is very similar to the sandstone-hosted primary uranium mineralization on the Colorado Plateau, especially that from the Grants District, New Mexico, USA, where primary uranium mineralization occurs within reduced sandstone beds at some distance from any redox boundaries (see Section 8: Figure 8-5). The similarities to the Grants District are

enhanced by the fact that the carbonaceous matter at Ivana is "non-woody" amorphous hydrocarbon, very similar in description to the "amorphous humic organic material" associated with uranium at Grants (Burrows, 2010). The organic material associated with uranium mineralization in many of the Colorado Plateau sandstone-hosted uranium deposits is carbonaceous fossil plant material with clearly recognizable "woody" textures and structures.

However, the Ivana uranium deposit does not occur stratigraphically well up in a basin filling sequence, like the Colorado Plateau sandstone-hosted uranium deposits. Instead, the Ivana deposit closely hugs the basement unconformity, like a basal channel uranium deposit, similar to the Blizzard deposit in Canada, or the Honeymoon and Four Mile deposits in Australia. So, although the primary uranium mineralization at Ivana is clearly a sandstone-hosted type deposit, it is most like a basal channel sandstone-hosted uranium deposit.

Further, the as-yet untested speculation that uranium occurrences in the Amarillo Grande Project may be related to one or more regional redox boundaries in the Chichinales Formation (Thorson, 2017), suggests some similarities to the huge uranium systems of Kazakhstan (see Section 8; Figure 8-3 and 8-4). The work to date at Ivana confirms that the Ivana uranium-vanadium deposit is, in part, a sandstone-hosted deposit, and, in part, a surficial deposit.

8 Deposit Types

The uranium-vanadium deposit on the five properties at Ivana discussed in Section 4.0, and on which a mineral resource has been estimated (Section 14.0), have some of the characteristics of two types of uranium deposits widely recognized around the world: sandstone-hosted uranium deposits and surficial uranium deposits.

The US Geological Survey and the International Atomic Energy Agency ("IAEA") have classified uranium deposits into numerous different types based on their geology and host rocks (IAEA, 2009; Cox and Singer, 1992). The sandstone-hosted type, with its many variants, has been recognized for many years, but surficial uranium deposits are a relatively newly recognized uranium deposit type, new enough that they were not even mentioned by Cox and Singer (1992). Sandstone-hosted uranium deposits have recently accounted for approximately 30% of world uranium production (Burrows, 2010); surficial deposits, because of their recent recognition and lower grades, account for much lower production and resources.

8.1 Sandstone-hosted Uranium Deposits

Sandstone-hosted uranium deposits are generally found in continental or marginal marine sedimentary rocks, often where permeable sandstones or conglomerates are confined between less permeable siltstone or mudstone strata. Uranium is precipitated under reducing conditions created by various reducing agents in the sandstone host such as carbonaceous material, hydrocarbons, sulfides (pyrite), or ferro-magnesian minerals like chlorite. Three of the sandstone-hosted uranium deposit types described by IAEA (2009) and Kyser and Cuney (2015a) are applicable for comparison with the deposit at Ivana: roll-front type, tabular type, and basal channel type.

Roll-front deposits occur as C-shaped or complexly curved mineral zones that are convex down the hydrologic gradient, with reductant-bearing sandstone on the down-gradient side and oxidized sandstone on the up-gradient side (Figures 8-1, 8-2). The interface between these mineral zones is a reduction-oxidation ("redox") chemical boundary. The mineralized zones may be elongate and sinuous, often parallel to the strike of the host-sandstone unit, and roughly perpendicular to the direction of deposition and groundwater flow. Examples can be found in: the Powder River Basin of Wyoming, USA; the Coastal Plain of Texas, USA; and Chu-Sarysu and Syrdarya Basins of Kazakhstan where mapable redox boundaries have been followed for hundreds of kilometres and contain many deposits of this type (Figure 8-3). These uranium deposits along regional redox boundaries can be truly huge deposits, as at Inkai, Kazakhstan where the proven and probable reserves are about 270 Mlbs of U_3O_8 at a grade of 0.03% U_3O_8 (Figure 8-4; Cameco, 2018b).

Tabular deposits consist of sandstone-hosted uranium impregnations, which form irregularly-shaped masses within reduced sediments, generally near-parallel to bedding. The significant difference between tabular deposits and roll-front deposits is the occurrence of the tabular mass being completely separated from any oxidized zone. Tabular deposits may be modified by later oxidation, in the style of uranium deposits in the Grants District of the Colorado Plateau, New Mexico, USA (Figure 8-5), but the ore occurrence completely enveloped in reduced sandstone requires different uranium transportation chemistry than roll-front deposits.

Basal channel deposits are transitional between surficial-type and other sandstone-type uranium deposits, occurring in poorly consolidated, highly permeable, fluvial to lacustrine, carbonaceous gravels and sands deposited in paleovalleys directly incised into basement rocks. The Blizzard deposit in Canada (Boyle, 1982; Christopher, 2005) and the Four Mile uranium deposits in the Beverley district of Australia are typical basal channel uranium deposits.

At Blizzard, uranium mineralization occurs in a late Miocene paleo-channel eroded into an underlying Laramide-age intrusive complex. The paleo-channel is filled with a complex sequence of interfingering conglomerate, arkosic sandstone and mudstone containing abundant organic matter in the form of carbonaceous fossil plant material, and capped by basalt. Most of the uranium mineralization is uranyl and uranous phosphate minerals such as saleeite [$Mg(UO_2)_2(PO_4)_2 \cdot 8\text{-}10(H_2O)$], ningyoite [$(U,Ca)_2(PO_4)_2 \cdot 1\text{-}2(H_2O)$], and autunite [$Ca(UO_2)_2(PO_4)_2 \cdot 8\text{-}10(H_2O)$], although there are reported small amounts of pitchblende (UO_2). A notable component of the Blizzard deposit is the presence of large amounts of limonite in the sandstone and conglomerate members of the sedimentary sequence that appears to be the oxidation product of diagenetic iron sulfide. Also notable is the occurrence of significant uranium mineralization in the regolith between the base of the paleo-channel and the underlying basement rocks. Figures 8-6 and 8-7 illustrate the concentration of uranium near the base of the paleo-channel at Blizzard. Christopher (2005) reported that the Blizzard deposit contains non-compliant indicated resources of about 4,700,000 Kg (10,360,000 lbs) of U_3O_8 at a grade of about 0.25% U_3O_8 (recalculated and restated from Kilborn, 1979).

Australia contains several significant basal channel uranium deposits in the Frome Embayment Uranium Field of South Australia. The Honeymoon uranium deposit in the southern part of the Frome Embayment Uranium field occurs in Tertiary fluvial sediments in a paleochannel eroded into Precambrian basement (Figure 8-8). Mineralization is in porous, coarse-grained basal sands containing pyrite, humic carbonaceous material, and coffinite. Oxidized paleochannel sands are orange- to yellow-coloured, but reduced material is gray, or black where it contains high amounts of organic material. The Honeymoon deposit is reported to contain about 7 Mlbs of U_3O_8 (McKay and Meizitis, 2001).

The Four Mile portion of the Beverley uranium district, also in the Frome Embayment Uranium Field, contains two basal channel uranium deposits; Four Mile East and Four Mile West. The inferred mineral resource at these two deposits is 61 Mlbs of U_3O_8 at a grade of 0.35% U_3O_8 (Alliance Resources Ltd., 2009). Reduced ore at these deposits contains predominantly pyrite and uraninite associated in dark gray sediments coloured by high amounts of organic material (Skirrow, 2009).

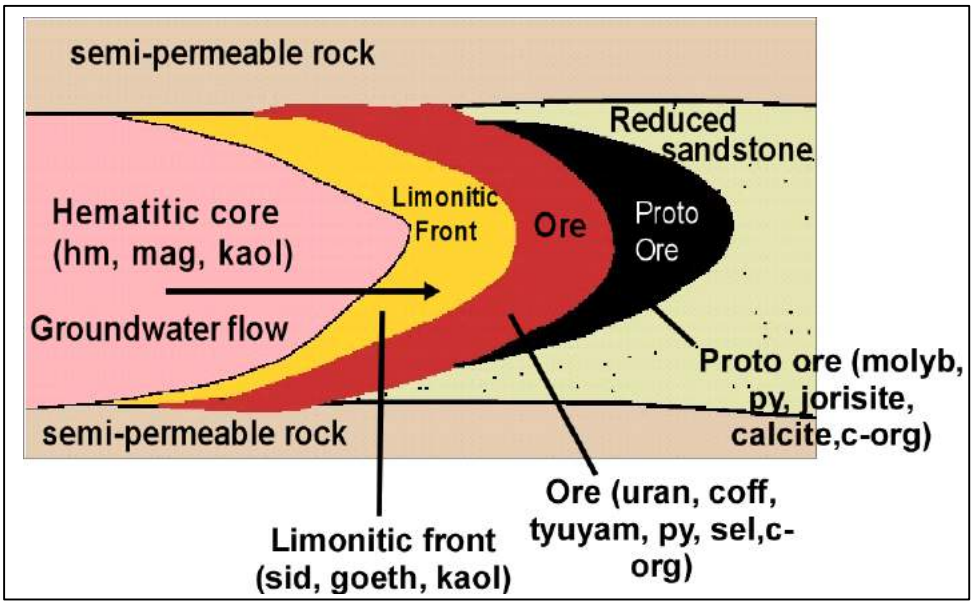


Figure 8-1: Simple roll-front uranium occurrence; reduced sandstone (right) contains some reductant (carbonaceous fossil plant material, hydrocarbons, pyrite or chlorite in advance of the roll-front chemical cell that is being driven from left to right by advancing oxidized groundwater containing U, V, Mo, Se, and other elements characteristic of roll front deposits; modified after Kyser and Cuney, 2015a.

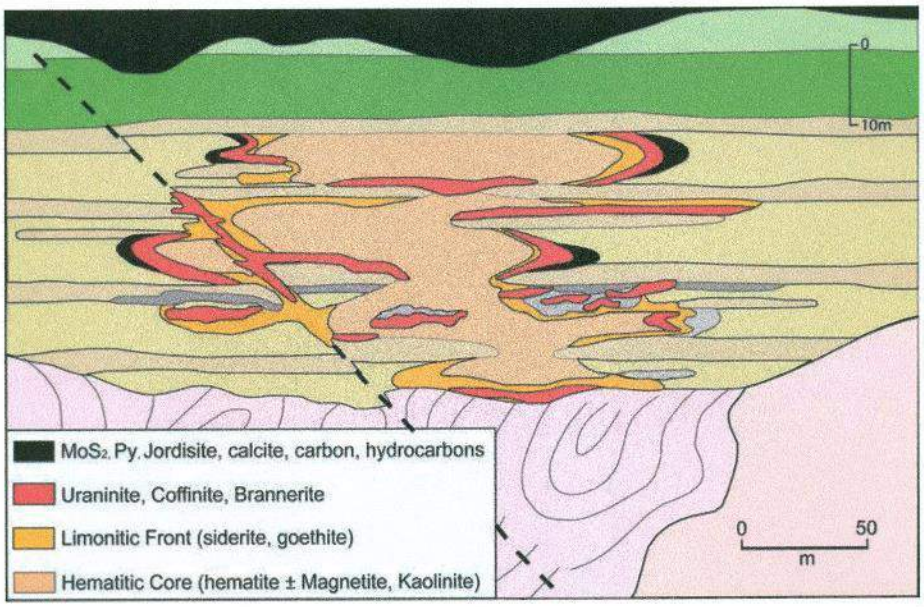


Figure 8-2: Complex geometry of roll-front deposits in a layered sequence of sandstone and shale cut by a fault; from Burrows, 2010. The uranium occurrence illustrated at the basement contact in the center is a diagrammatic representation of a possible basal-type deposit.

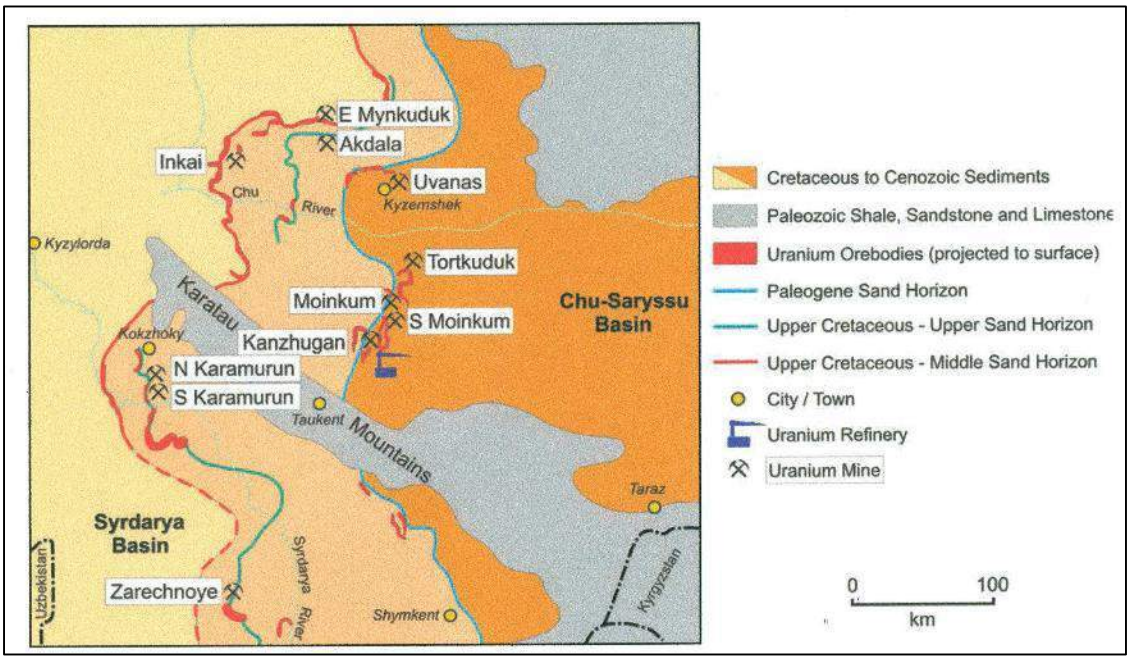


Figure 8-3: Redox boundaries and roll-front uranium deposits in Cretaceous and Paleogene sandstones of the Chu-Sarysu and Syrdarya Basins of Kazakhstan; from Burrows, 2010. Note that these regional roll fronts can contain uranium ore bodies over distances on the order of one hundred kilometres, as at Inkai, see Figure 8.1-4.

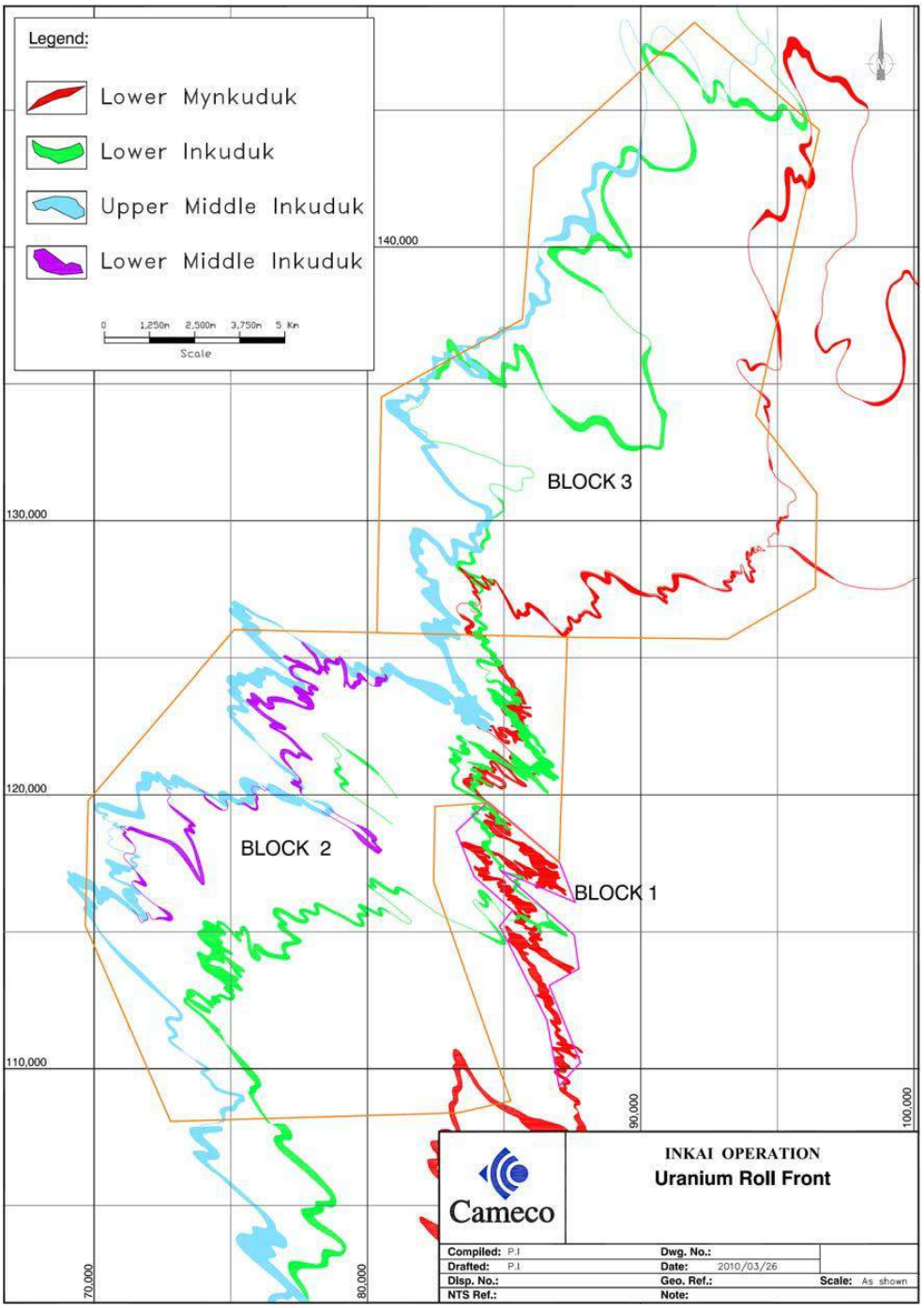


Figure 8-4: Inkai roll fronts, Kazakhstan; regional roll fronts containing uranium ore bodies over distances of one hundred kilometres and occurring at multiple stratigraphic levels; from Foldenauer and Mainville, 2009.

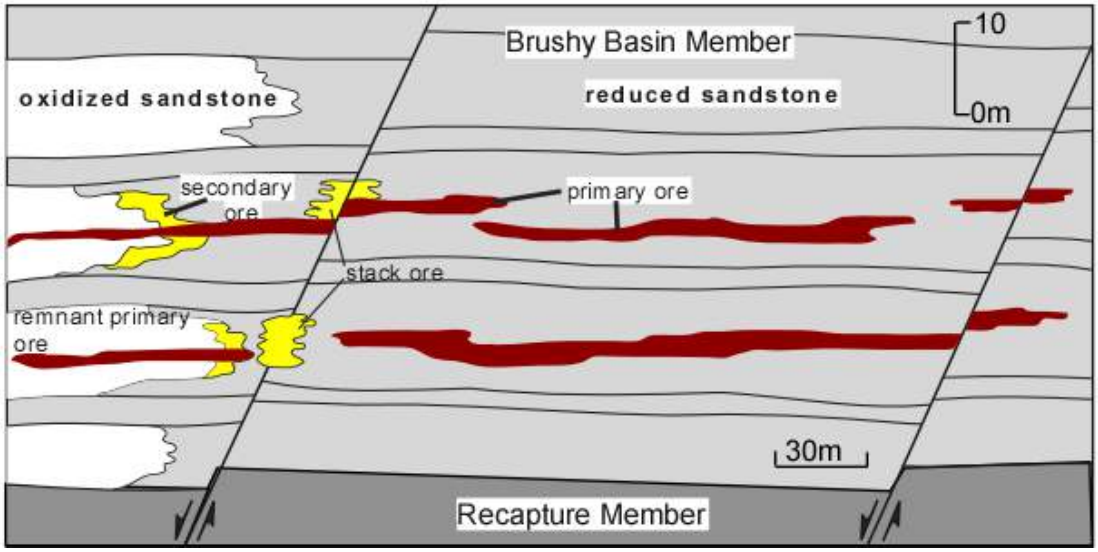


Figure 8-5: Tabular uranium deposits; diagrammatic representation of deposits in the Grants District, New Mexico, USA. Primary ore in tabular uranium deposits (centre) is completely enveloped in reduced sandstone containing pyrite and humic hydrocarbon; tabular uranium deposits (left) are being oxidized and altered to secondary ore by the later influx of oxidized groundwater to create roll-front type modifications of tabular deposits. Primary ore consists of coffinite, pyrite and black amorphous humic hydrocarbon impregnating sandstone; secondary ore is largely carnotite and other oxidized uranium-vanadium mineral species; from Burrows, 2010.

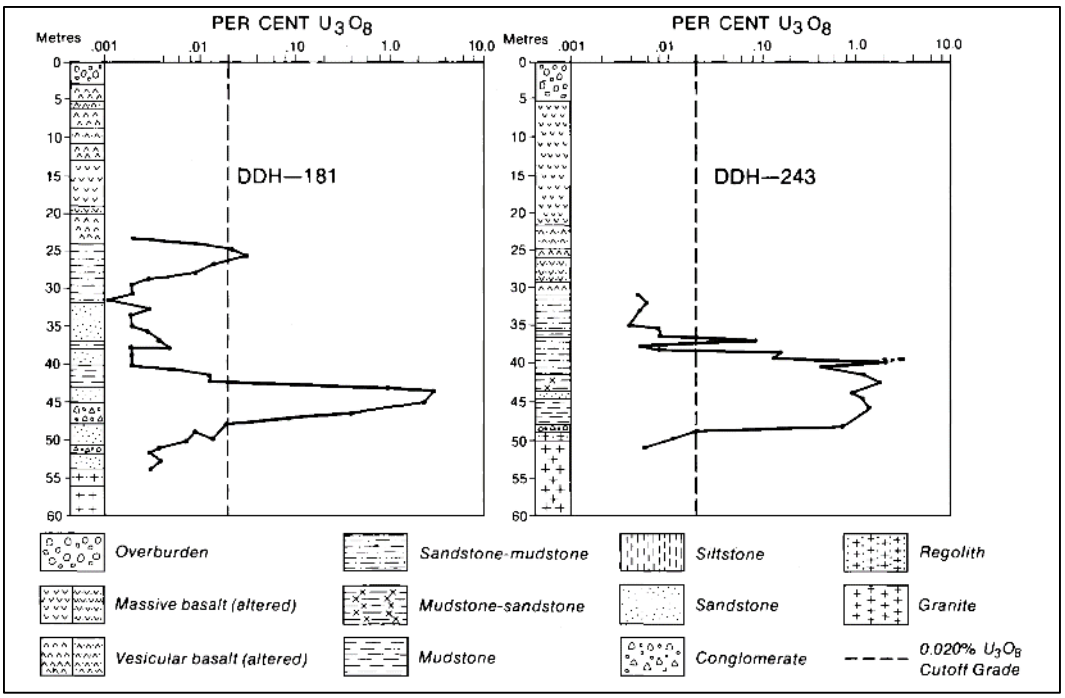


Figure 8-6: Representative stratigraphic drill logs and chemical assays for the Blizzard uranium deposit, British Columbia, Canada (Percent U_3O_8 scale in logarithmic); from Boyle, 1982.

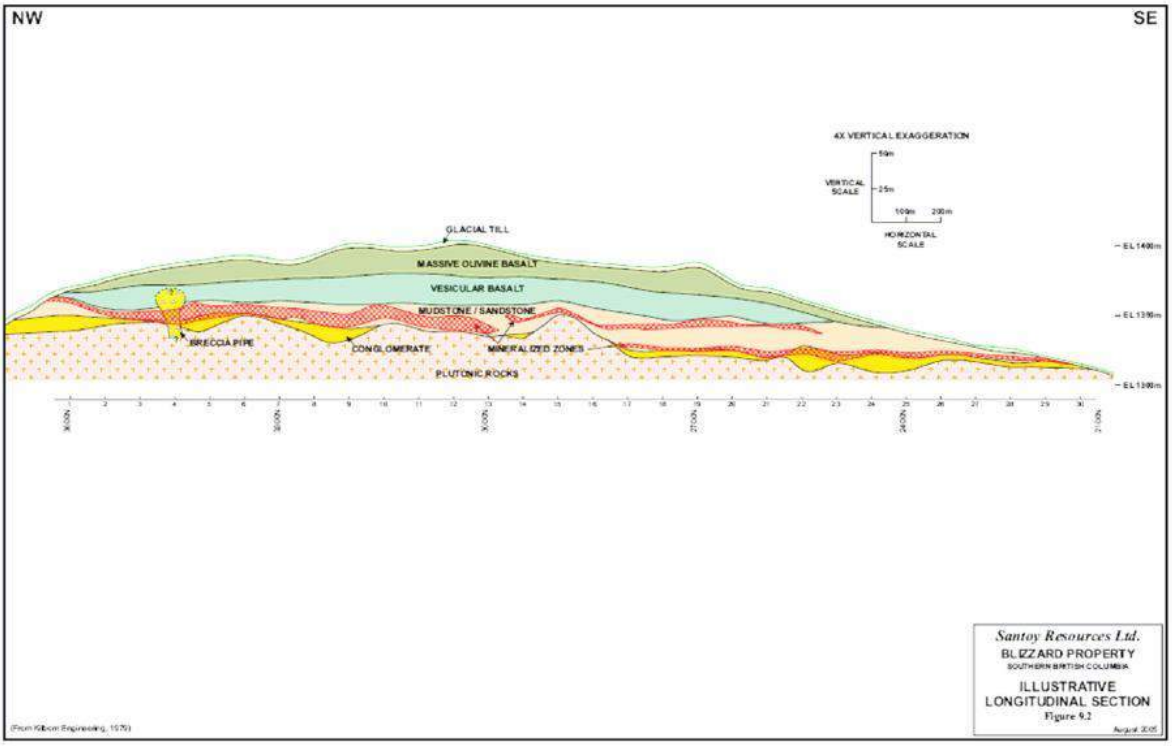


Figure 8-7: Longitudinal section through the Blizzard uranium deposit, British Columbia, Canada, showing the paleo-channel and uranium mineralization preserved beneath a capping of basalt; from Christopher, 2005.

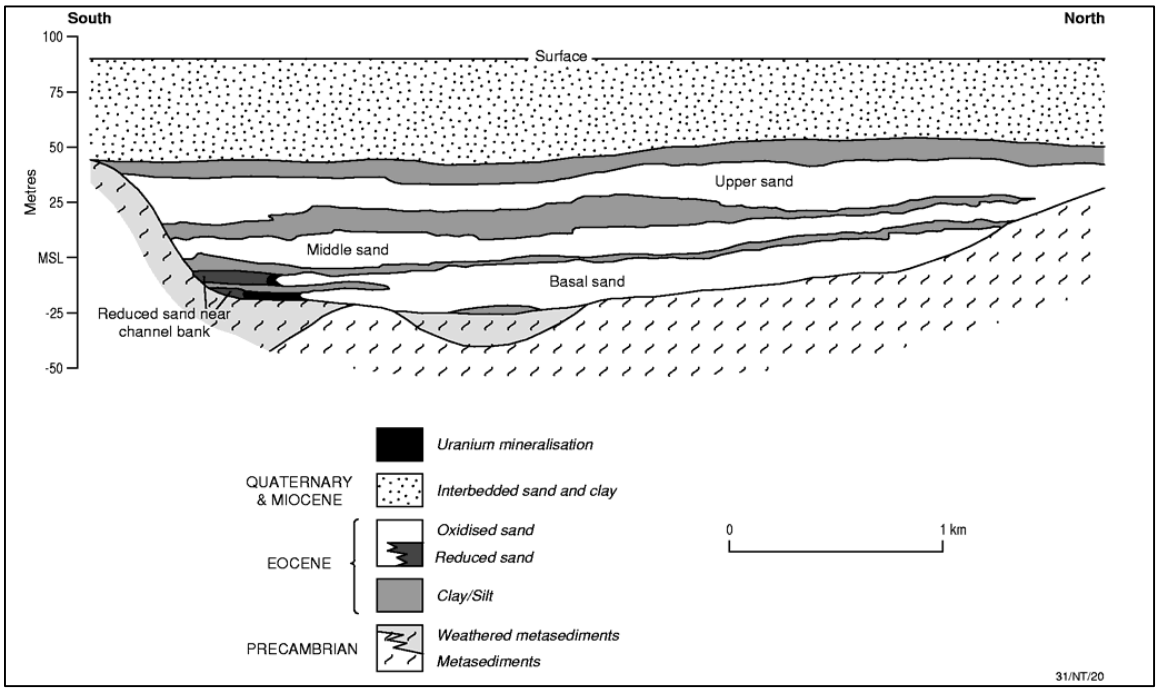


Figure 8-8: Diagrammatic cross section through the Yarramba paleochannels and the Honeymoon uranium deposit in the Frome Embayment Uranium Field, South Australia; MSL = mean sea level (from McKay and Meizitis, 2001).

8.2 Surficial Uranium Deposits

Surficial uranium deposits are broadly defined as young (Tertiary to Recent) near-surface uranium concentrations in sediments or soils (IAEA, 2009). These deposits usually have secondary cementing minerals including calcite, gypsum, dolomite, ferric oxide and halite. Surficial deposits have been found in a wide variety of environments, but the setting of the largest is hot-dry deserts where uranium mineralization is associated with calcrete (calcium and magnesium carbonates) cementing sand or gravel. The calcrete bodies are interbedded with Tertiary sand and clay, which are usually cemented by calcium and magnesium carbonates as well. The main uranium mineral is carnotite (hydrated potassium uranium vanadium oxide).

In Western Australia, surficial calcrete-related uranium deposits occur in valley-fill sediments along Tertiary drainage channels (e.g. Yeelirrie) and in playa lake sediments (Figure 8-9). These deposits overlie Archean granite and greenstone basement of the northern portion of the Yilgarn Craton. Calcrete uranium deposits also occur in the Central Namib Desert of Namibia, the largest being the Langer Heinrich deposit.

A variety of fixation mechanisms have been proposed for surficial uranium deposits (Otton, 1884) including:

1. disassociation of soluble complexes,
2. evaporative concentration of solute species in near-surface groundwaters,
3. change of valence state of U or V which decreases the solubility of the ore mineral,
4. mixing of waters creating local supersaturation with respect to ore minerals,
5. sorption by organic matter followed by reduction of U, and
6. sorption by silica, iron hydroxides or oxyhydroxides, and clay.

The Yeelirrie uranium deposit in Australia, now owned by Cameco, is an excellent example of the surficial type deposit. The Yeelirrie deposit is a 9 km by 1.5 km horizontal sheet of poorly consolidated fine sediments in which the bulk of uranium mineralization is confined to an interval between 4 m and 8 m below the surface. Approximately 90% of the mineralization is in a zone 4 m thick, below the water table and at a transition between calcrete and an underlying alluvium consisting of red clay with disseminated detrital quartz grains and quartz-rich bands. IAEA (2009) reports that carnotite is the only important uranium mineral at Yeelirrie, occurring as a thin film coating cavities and fractures, or disseminated through earthy calcrete. Yeelirrie may be the world's largest reported surficial uranium deposit with measured and indicated resources of 128 Mlbs of U_3O_8 at a grade of 0.16% U_3O_8. (Cameco, 2018a).

The Langer-Heinrich uranium deposit in Namibia is another significant surficial deposit with 2015 ore reserves of about 119 Mlbs of U_3O_8 at a grade of 0.052% U_3O_8, using a cut-off grade of 250 ppm U_3O_8 (Paladin, 2015). The deposit is about 15 km long, located in a channel filled with fluvial sediments beneath a layer of calcrete (Figure 8-10). Uranium mineralization occurs as carnotite in thin films lining cavities and fracture planes, and as grain coatings and disseminations, in calcrete-cemented sediments. Mineralization is very near surface, and from 1 m to 30 m thick.

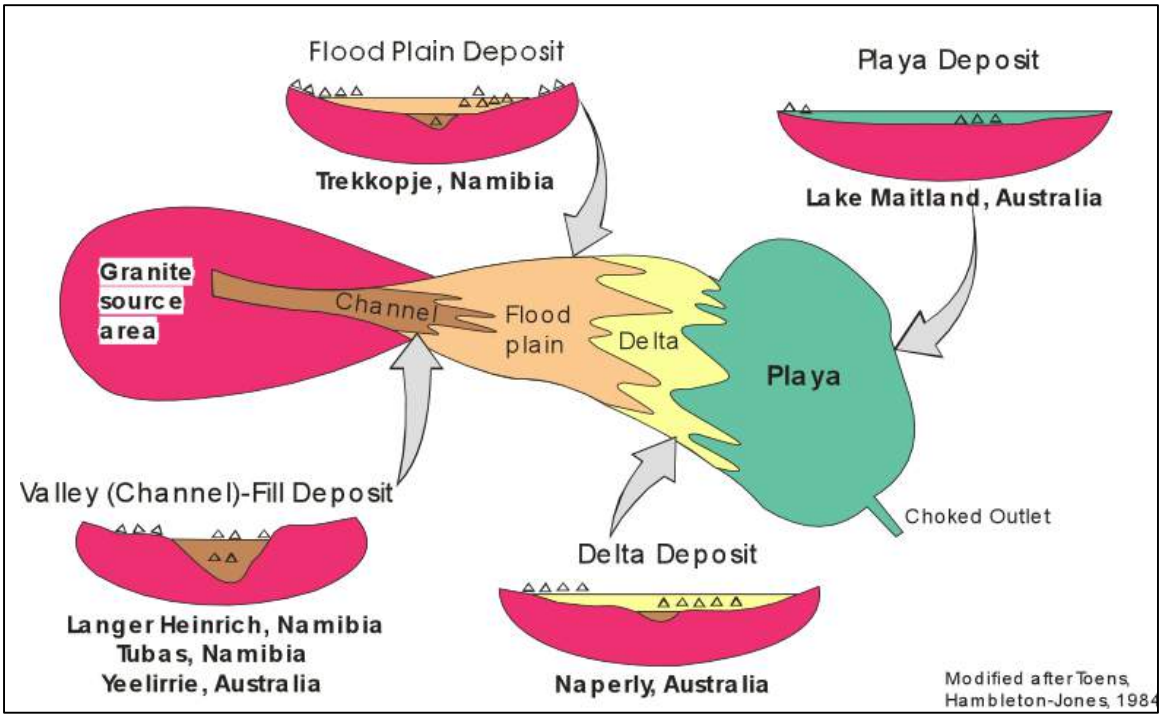


Figure 8-9: Surficial uranium deposits occurring in a wide variety of geological settings in desert environments; from Kyser and Cuney, 2015b.

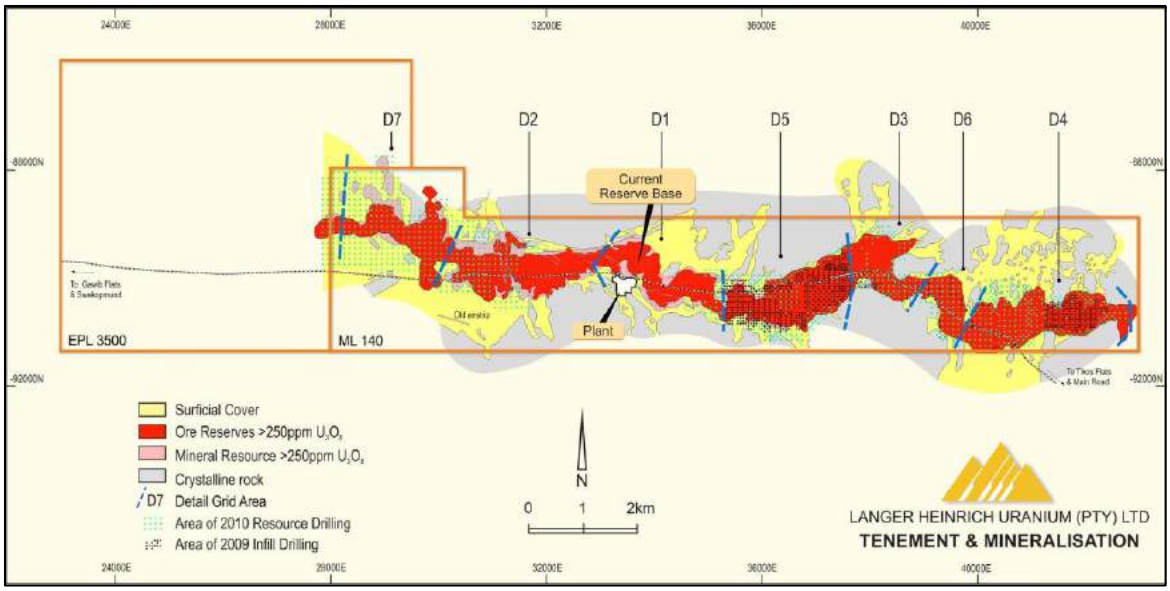


Figure 8-10: The Langer Heinrich uranium deposit, Namibia, along about 15 km of calcrete cemented paleochannels (Paladin, 2015).

9 Exploration

9.1 Early Regional Exploration

Shortly after entering into the option agreement with AUC for Anit and Santa Barbara, Blue Sky launched an aggressive exploration program that included surface traverse and car-borne radiometric surveys, radon gas soil surveys, pitting, trenching and auger drilling and sampling, as well as an airborne radiometric survey covering approximately 2,200 km^2 (Figure 9-1; Urquhart, 2007).

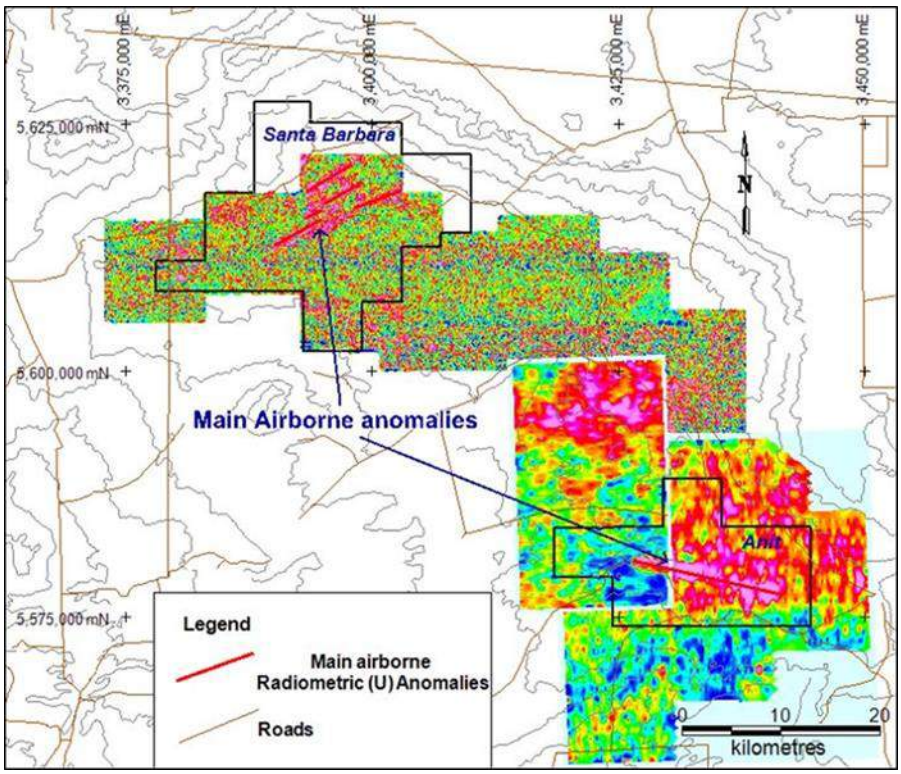


Figure 9-1: Airborne radiometric surveys flown in 2007 over the Santa Barbara and Anit areas (Urquhart, 2007).

The early exploration programs were successful in expanding the two initial target areas at Anit and Santa Barbara, and also led to the recognition of significantly more extensive exploration potential of the region. Follow-up exploration programs included systematic work to evaluate the economic potential of the Anit area, initially believed to be the more significant target. Regional exploration also included a second airborne radiometric survey, which was conducted in 2010 covering approximately 22,650 km^2 (APG, 2010). This airborne survey, covering almost ten times the area of the previous survey, confirmed that the exploration team had already recognized the regional potential of the district. The 2010 survey showed multiple well-defined uranium-equivalent radiometric anomalies, mainly along a northwest-southeast trend. Following the principal trend southeastward, the survey defined a new potential target area named Ivana (Figure 9-2) and cateos were claimed to cover the area.

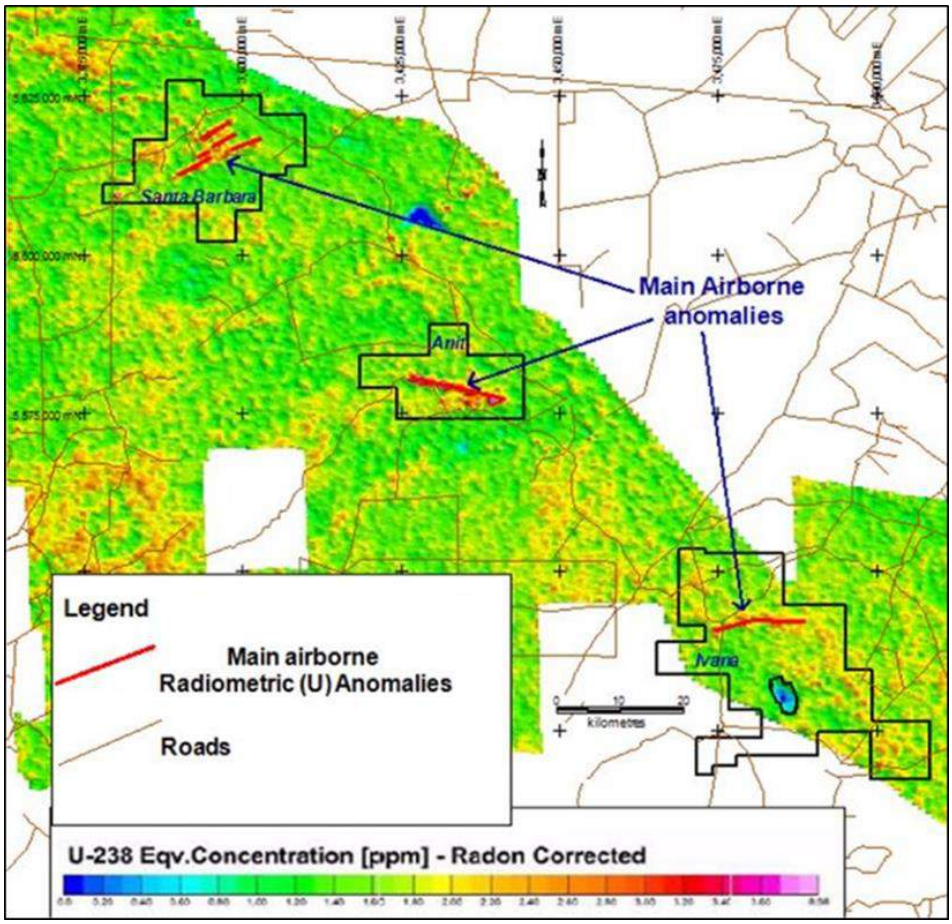


Figure 9-2: Airborne radiometric survey coverage over the Amarillo Grande Project; this radiometric map includes both the survey flown in 2007 over the Santa Barbara and Anit areas (Figure 9-1; Urquhart, 2007) as well as the survey flown in 2010 that extended airborne radiometric exploration and discovered the Ivana area (APG, 2010).

Exploration programs conducted on the Santa Barbara and Anit areas by Blue Sky Uranium through early 2012 are described in more detail in a NI 43-101 Technical Report entitled: Report on the Anit, Ivana and Santa Barbara Uranium Properties of Blue Sky Resources Corp., Rio Negro Province, Argentina, with effective date May 18, 2012 (Verley, 2012). Descriptions of the early work on Santa Barbara and Anit will not be repeated in this report as they are not considered relevant to the Ivana resource.

9.2 Ivana Exploration Pre-2012

After the airborne radiometric survey in 2010, the Blue Sky exploration team undertook a field program that included airborne radiometric anomaly follow-up with handheld scintillometer, water well sampling for geochemical characterization, and handheld radiometric traverse surveys. Hydro-geochemical anomalies located outside of the area covered by the airborne survey were also followed-up with handheld scintillometer surveys. Significant ground radiometric anomalies were detected in 2011 two to three kilometres outside of the airborne survey limits. Based on hydro-geochemical anomalies, another potential target area outside of the airborne survey was defined, located close to the outcropping basement, and cateos named Ivana VIII & Ivana IX were acquired over the area. Pit sampling confirmed the presence of uranium mineralization as carnotite in unconsolidated sediments. Additional prospecting was completed via 31 auger holes and down-hole gamma probe readings, as described by Verley (2012).

9.3 AREVA Participation

At the beginning of 2012, Blue Sky signed a Memorandum of Understanding ("MOU") with the French state-owned AREVA Mines Company ("AREVA") to jointly explore its portfolio of uranium projects in Argentina. The MOU established that AREVA could select one or two projects and earn 51% by funding exploration programs. AREVA funded almost US$3M in exploration at Blue Sky properties in Rio Negro and Chubut Provinces, which included geological mapping, geophysical surveys and core diamond drilling in the area southwest and north of the Ivana VIII property (Lescuyer, 2011). The MOU was terminated by AREVA in May 2014 and Blue Sky regained 100% control of the entire package of mining properties included in the Amarillo Grande Project. No final report of the AREVA exploration is available.

9.3.1 AREVA Geophysics

While AREVA did not explore the Ivana uranium-vanadium deposit area described in this report, their work did contribute to the exploration of the Ivana area.

AREVA's primary interest was an area to the west of the Ivana prospect named the Bajo Valcheta and extending into the Ivana area to the north of the Ivana prospect (Figure 4-1). In this area AREVA completed a geophysical survey (Sol, 2012) comprised of 4 diploe-dipole lines on which they measured resistivity and induced polarization ("IP") effect. The AREVA geophysical program identified the presence of low-resistivity (high-conductivity) surficial layers.

9.4 2014 to 2016

Due to challenging market conditions for exploration companies, Blue Sky maintained its property portfolio but did not carry out further exploration until mid-2016 when a Project-wide data review and compilation was completed (Pensado, 2016), and exploration resumed with a focus on the Ivana target.

9.5 2016 Onward

In 2016, Blue Sky re-evaluated the regional potential of the entire Amarillo Grande Project and launched a staged exploration program. The first stage of the new program was focused on reviewing the main potential targets explored previously, including the properties Ivana VIII A/B/D/F and Ivana IX-A, subject of this report, as well as the Anit and Santa Barbara prospect areas. Exploration work carried out at Anit and Santa Barbara contributed to the understanding of the overall Amarillo Grande uranium-vanadium system, and thus indirectly contributed to exploration at the Ivana prospect. Promising results from the first stage of the program resulted in focusing on the Ivana prospect with a follow-up program.

This Section is focused on the exploration and other work since 2016 at the Ivana prospect (Figure 4-2) that is considered relevant to the delineation of resources and development of the PEA. The exploration program included an electrical-geophysical survey over areas previously recognized by sampling, trenching or augering, to identify potential paleochannels, and to assist in definition of potential drilling targets.

9.5.1 ET Geophysical Survey

The Company selected an electrical survey procedure for exploration at Ivana based on a comparison of three methods: 1) Dipole-Dipole IP survey, which was previously carried out in the Ivana VIII property area by AREVA; a testing program of Electrical Tomography ("ET") at the Anit area; and, a Vertical Electrical Sounding Survey conducted at the Anit area. Those programs all indicated that paleo-channels, potentially hosting uranium mineralization, were detectable high-conductivity features, likely due to higher porosity and the presence of salty water in the channel-fill material.

The survey methodology selected to be used at Ivana in 2016 was Electrical Tomography with the following technical parameters:

Table 9-1: Electrical Tomography Survey Technical Parameters

Receptor	Iris ELREC PRO (10 channels/Time Domain)
Transmitter	Iris VIP 5000
Generator	FEMA 5.5 KVA
Array	ET Pole-Dipole
Mode	“roll along”
D (a)=	15m
Movement	15m
Number of Dipoles (n)	10
Depth of survey	n10= na/3 approx. 50m
Infinite	>3*na

Four lines perpendicular to the interpreted paleo-channel orientation were laid out for the first survey (lines 8, 9, 10 and 11, about 9.5 km in total, Figure 9-3). The survey results confirmed high conductivity anomalies (or low resistivity, the inverse) generated from sub-horizontal layers, up to about 20 m thick, with values in general terms defined as over $50x10^{-3}$ Siemen/m. These high-conductivity units occur over low to medium conductivity basement identified in nearby outcrops and were interpreted as paleo-channels that could potentially contain deeper and more extensive carnotite mineralization similar to that observed on the surface. The ET results were presented as a "pseudo-section" from which an interpretation of the shallow surficial geology could be made. A good example was observed at ET Line 8, where trench sampling in 2011 over surficial radiometric anomalies (discovered with a hand-held scintillometer) had led to the discovery of shallow high-grade carnotite mineralization on the left (southwest) side of section (near data-point 240) (Figure 9-4). In the initial ground radiometric survey, anomalies had not been observed on the right (northeast) side of the ET line 8, but extensions of the surface-detected uranium mineralization were confirmed by drilling at depth.

Initially the drilling program was laid out along the ET geophysical survey lines in order to calibrate and adjust both the geological and geophysical interpretation as drilling progressed. The drilling (more thoroughly described in Section 10) confirmed the presence of a sequence of carnotite-mineralized fluvial sandstones and conglomerates, with minor siltstones, deposited above the unconformity on a 1-2-metre-thick regolith of basement lithologies. Drilling also discovered that the regolith was frequently mineralized with uranium, in similar concentrations to the overlying sediments.

The initial RC drilling program confirmed that the ET geophysical lines were useful in predicting both the presence and the relative depth of paleo-channels, and that uranium mineralization extended beyond the east ends of lines 8 and 9 (Herrera, 2017a). The ET geophysical surveying was amended to extend lines 8 and 9, and include line 12 (Herrera, 2017b, Figure 9-5), and finally to add lines 13 through 16 (Herrera, 2017c; Figure 9-3).

In addition to assisting in the identification of paleo-channels, the ET survey data can be interpreted and displayed in both resistivity and induced polarization (IP chargeability) sections (Figure 9-6). IP chargeability appears to detect pyrite related to primary-type uranium mineralization discovered between data-points 1770 and 2010 on ET line 15. IP interpretation of the ET survey data will be used to test for primary pyritic uranium mineralization as exploration at Ivana, and the greater Amarillo Grande Project, progresses.

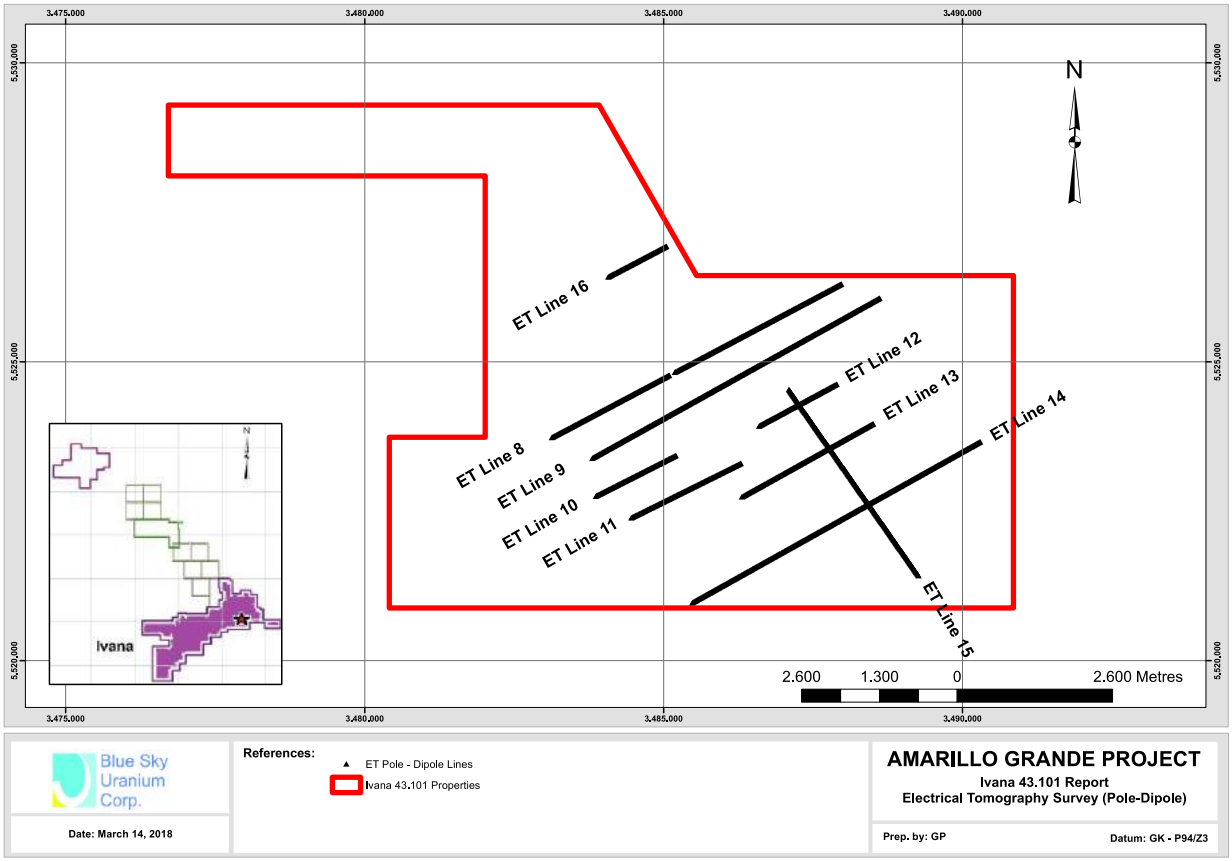


Figure 9-3: Locations of Electrical Tomography survey lines at the Ivana prospect.

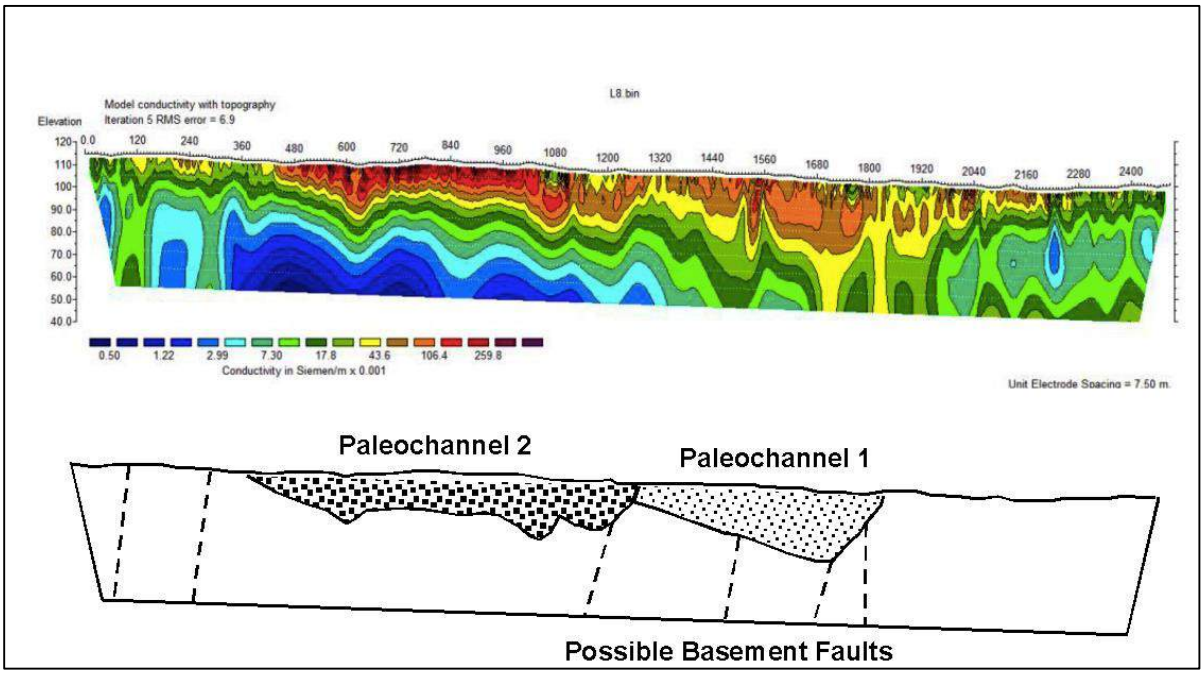


Figure 9-4: ET pseudo-section depicting the shallow surficial geology along ET line 8, with a proposed geological interpretation of the style that was used to guide RC drilling.

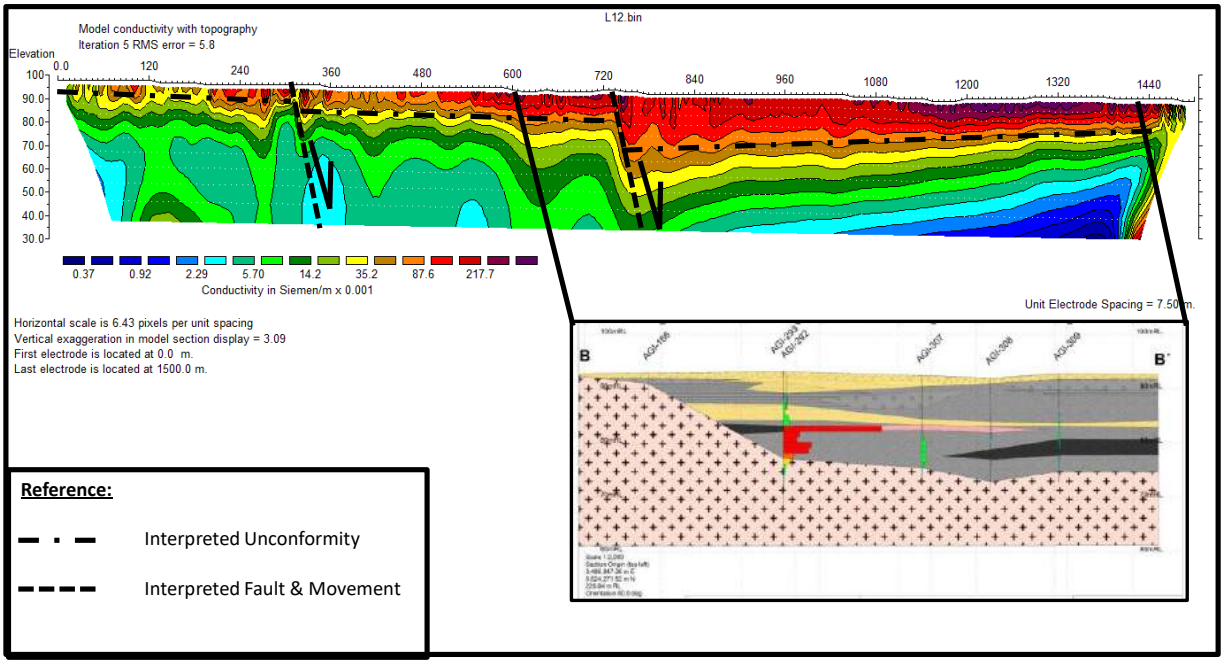


Figure 9-5: Pseudo-section for ET line 12 (Figure 9-1) compared to the geological cross section constructed after drilling and assaying of holes drilled along that line; for explanation and discussion of the cross section, see Section 7. The ET geophysical survey was proven to be very effective in predicting the presence and relative thickness of paleochannels.

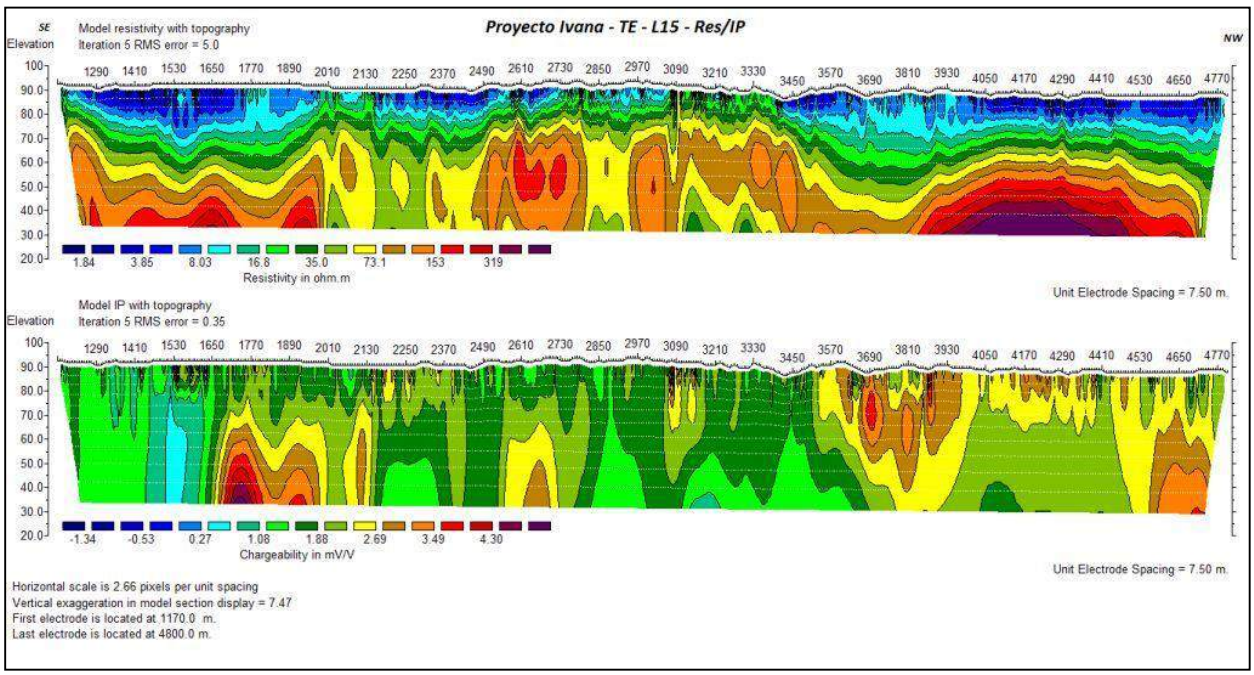


Figure 9-6: Resistivity and induced polarization effect (IP chargeability) interpretations for ET line 15 (upper and lower pseudo-sections, respectively); the resistivity section is the inverse of conductivity so the paleochannels are shown as areas of low-resistivity (cool colours, rather than warm colours as in Figure 9-2); the areas of pyritic primary uranium mineralization (confirmed by drilling) between data-point 1770 and 2010 appear to correlate with an IP chargeability anomaly.

9.5.2 Initial Mineral Resource Estimate

In March 2018, Blue Sky Uranium announced an initial mineral resource estimate for the Ivana deposit (Blue Sky, 2018b) and a supporting NI43-101 Technical Report (Thorson, et al., 2018), both of which are no longer current. This initial mineral resource estimate was based on 427 reverse circulation (RC) drill holes completed between January 2017 and January 2018. Details of this drilling campaign can be found in Section 10 of this report.

9.5.3 Additional Drilling, 2018

Since the above referenced initial mineral resource estimate Blue Sky Uranium has drilled an additional 61 RC drill holes (Blue Sky, 2018c), which have been incorporated in the revised and updated mineral resource included in this report. Details of this drilling campaign can be found in Section 10 of this report.

9.5.4 Mineralogical, Metallurgical, and Process Engineering Studies

Mineralogical, metallurgical, and process engineering studies to support the Preliminary Economic Assessment presented in this report were conducted at the Saskatchewan Research Council (SRC) under the guidance of Blue Sky's Technical Advisor Charles Edwards, P.Eng. The work is summarized in Section 13, with preliminary QEMSCAN mineralogical descriptions incorporated in Section 7.

9.5.5 Density

Density determinations on the mineralized material are an integral part of a mineral resource estimate. A density figure of 1.84 g/cc was used in the initial mineral resource estimation (Blue Sky, 2018a; Thorson, et al., 2018) based on the best available data at that time. Twenty additional density measurements have been made on Ivana deposit mineralized material (Gurevich, 2018). The average of those density measurements (2.1 g/cc; 2.1 t/m^2) has been used in the revised and updated mineral resource estimate that is the subject of this report.

9.5.6 Pit Sampling, SW Ivana VIII area

The exploration staff of Blue Sky has recently discovered additional occurrences of oxide uranium mineralization at very shallow depths near the Ivana deposit in an area named the 38 Sector (Figure 9-7). In this area where shallow Chichinales Fm. and basement rock sub-outcrops, uranium-vanadium mineralization occurs in one area of about 1000 m x 300 m, and in a second area of about 1000 m x 1000 m. Systematic sampling of these two areas on a 100 m grid, with hand dug pits up to 2.1 m depth, has revealed very encouraging uranium and vanadium assays (Blue Sky, 2018d). This area is being evaluated with hand-dug pits because of the shallow depths of mineralization. Blue Sky staff collects very detailed and precise channel samples from the four walls of each pit (Blue Sky, 2018e), resulting in a sample that is more representative of the distribution of mineralization than could be achieved by drilling shallow 2-3 m holes.

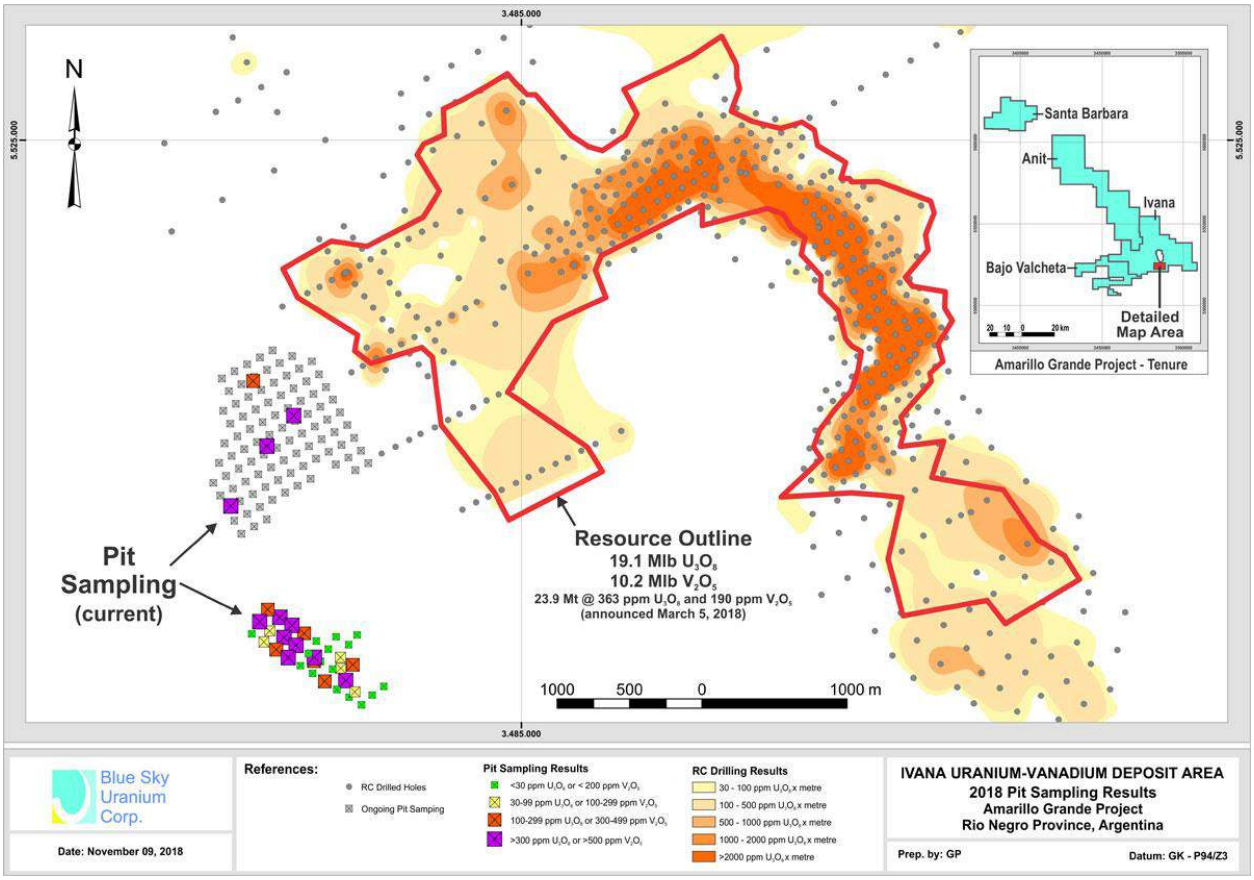
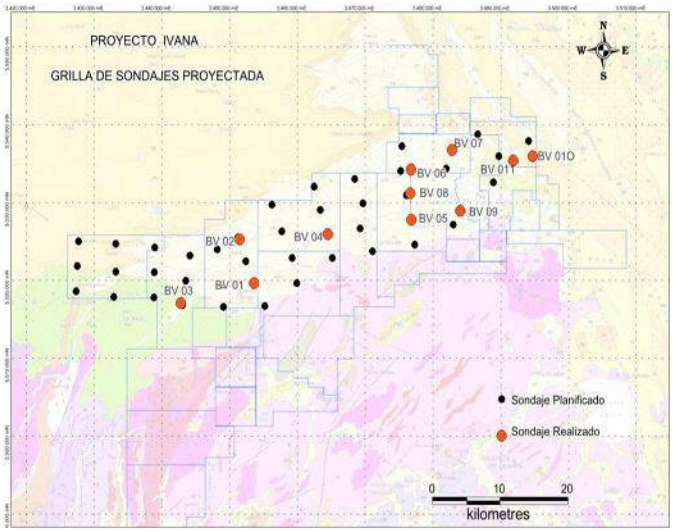


Figure 9-7: Location of the newly discovered uranium mineralization in the SW Ivana VIII, Sector 38 area southwest of the Ivana deposit (red outline is the foot-print of the Ivana deposit initial resource announced March 5, 2018 (Blue Sky, 2018b, Thorson, et al., 2018).

10 Drilling

10.1 AREVA Joint Venture Drill Program

AREVA conducted diamond core drilling near the Ivana prospect between 2012 and 2014 as part of its joint venture agreement with Blue Sky. This included 11 diamond core holes at locations shown on Figure 10-1. Although this drilling identified small amounts of bleaching alteration in red-beds sedimentary rocks, it was not successful in finding uranium, with a maximum radiometric anomaly equivalent to equivalent to 151 ppm eU (equivalent uranium) over a core length of1 m (Bussandri, 2014). Some of the AREVA drill holes were located near the Ivana prospect (Figure 10-2) but did not intercept the mineralized horizons subsequently discovered by Blue Sky.



PROYECTO IVANA			
Ubicación de Sondajes y Plataformas			
Pozo	Profundidad (mts)	POSGAR WGS 84 FAJA 3 Este	POSGAR WGS 84 FAJA 3 Norte
BV_01	153	3453483,45	5519715,58
BV_02	280,5	3451346,67	5525178,35
BV_03	179	3442766,89	5517070,63
BV 04	185,5	3464303,34	5525866,74
BV05	162	3476651,52	5527776,58
BV06	110	3476530,29	5534070,86
BV07	262,5	3483765,2	5536241,61
BV08	122	3476087,4	5531054,15
BV09	130	3483960,917	5528856,13
BV10	188	3495163,323	5535892,33
BV11	251	3490158,509	5535834,85

Figure 10-1: Location of the AREVA diamond drill holes in the Bajo Valcheta area (Figure 4-1); red dots represents completed drill holes listed in the attached table, black dots are proposed locations that were not drilled. All completed holes completed were drilled vertically (Bussandri, 2014).

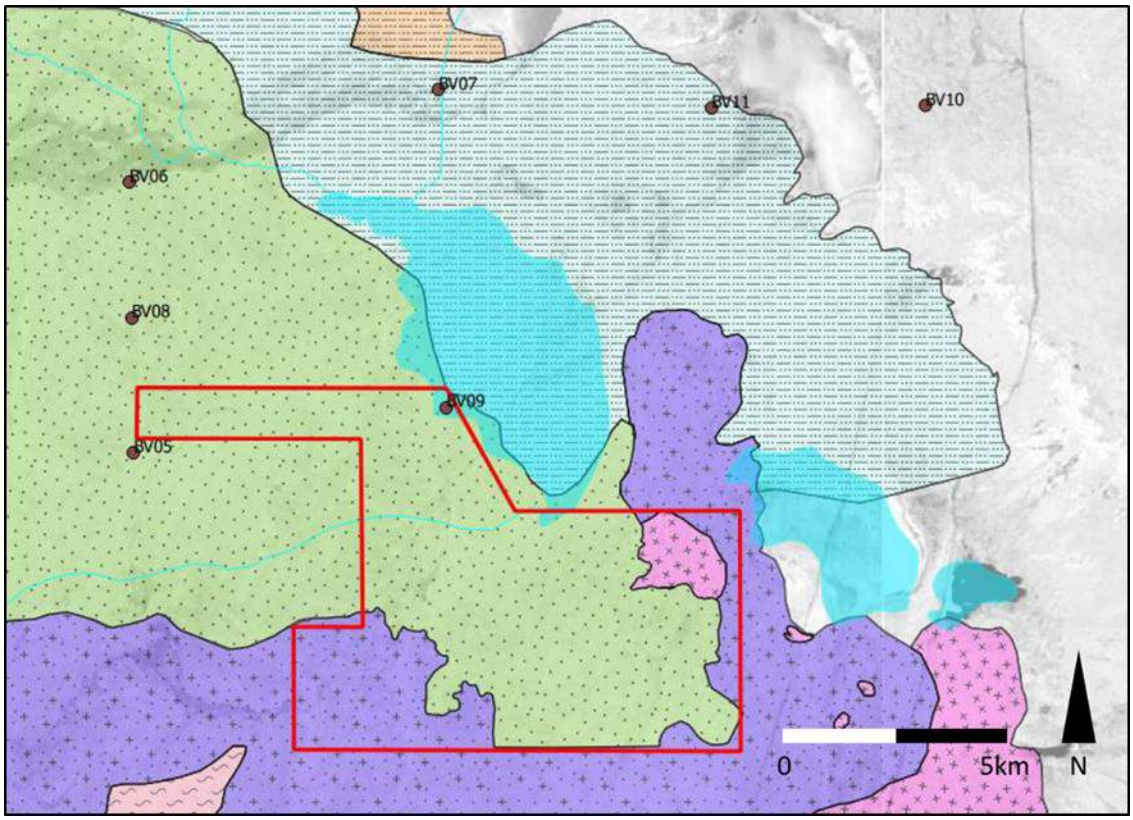


Figure 10-2: Locations of the AREVA diamond drill holes (2012 - 2014) in relation to the Ivana prospect; for geology explanation, see Figure 7-5; Blue Sky, 2018.

No other drilling exploration was done at these properties until January 2017, when the reverse circulation (RC) drilling program was launched.

10.2 Blue Sky Reverse Circulation Drilling Programs

Between January 2017 and January 2018, two phases of RC drilling were conducted, totalling 427 drill holes. The assays of uranium-vanadium mineralization in holes of the first two drilling phases were the basis for the initial mineral resource estimation for the Ivana deposit (Blue Sky, 2018b; Thorson, et al. 2018). Between January 2018 and October 2018 a third phase of RC drilling was conducted, confirming extensions of the Ivana deposit. The assays from all three RC drilling programs were used in the mineral resource estimate documented in this report.

The first phase of RC drilling was designed to test exploration potential recognized by previous geological and geophysical exploration, as described in Section 9, and the second phase followed up initial results and infilled the main area of economic potential. A total of 6,577 m in 427 holes were drilled between January 2017 and January 2018 as presented in Table 10-1. Collar locations, drill orientation data and significant intervals are summarized in Appendix I.

The initial 98 holes were drilled by Cono Sur SA, an Argentine drilling company, using an ROC L8 drill rig from Atlas Copco, with a double cyclone for dust control during sampling. The remaining 329 holes were drilled by Patagonia Drilling SA, another Argentine drilling company. The second phase drill rig was similar to the initial drill rig, but used a newer version, a FlexiRoc D65 drill, also from Atlas Copco, adapted for fine-mineralization control with a triple cyclone for better recovery of fines, and an automatic splitter. Both rigs were track-mounted and designed for reverse circulation drilling. All except two of the RC holes in the first

two phases were vertical, as this direction was understood to be perpendicular to bedding and mineralized horizons.

The third phase of RC drilling at the Ivana deposit included 61 drill holes, all vertical and drilled with the same type of adapted track-mounted FlexiRoc D65 rig used in Phase II, operated by Patagonia Drilling SA. Locations of the phase three drill holes are shown on Figure 10-3.

Table 10-1: Blue Sky RC Drilling Programs at Ivana Properties used in the Resource Estimate

EXPLORATION PHASE	HOLES DRILLED	METRES DRILLED	AVERAGE DEPTH	DRILLING COMPANY
I	158	2,250	14.2	Cono Sur SA (98) Patagonia Drilling SA (60)
II	269	4,327	16.0	Patagonia Drilling SA (269)
III	61	1,043	17.1	Patagonia Drilling SA

Depth of drilling ranged from 2 m to 42 m in the first two phases, and 4.0 m to 49.0 m in the third phase, and the bit diameter ranged between 5¼ inches and 5¾ inches. Bits used were tricone and frontal hammers, depending on the advance and recovery. Until hole AGI-193, every hole was finished with a 62mm casing for later down-hole gamma reading. The casing program was later limited to a few holes (for future test holes) due to the significant delays and problems while casing in water saturated, poorly consolidated sandstones. Sampling was carried out every metre, after which the advance was paused in order to blow the hole clean and reduce probable contamination of the following sample. Every sample was weighed to monitor sample recovery.

The Phase I program was initially conducted as fences of holes, along or perpendicular to the geophysical surveying lines described in Section 9.0. Hole-spacing ranged from 100 m in areas previously recognized as potential targets, to 200 m for prospecting new areas. Phase II followed-up a new target area to the east. It was initially drilled with 200 to 400 m spacing and later infilled with a 100 to 200 m pattern in higher potential zones (Figure 10-3).

Every collar was identified in the field using a plastic tube with a marker (Figure 10-4). The location and elevation of every hole was surveyed at the end of the program using a differential global positioning system ("DGPS") unit. Appendix 1 contains a summary of RC drill hole locations and results at Ivana. Figure 10-5 displays the results of Phase lll drilling in grade times thickness contours.

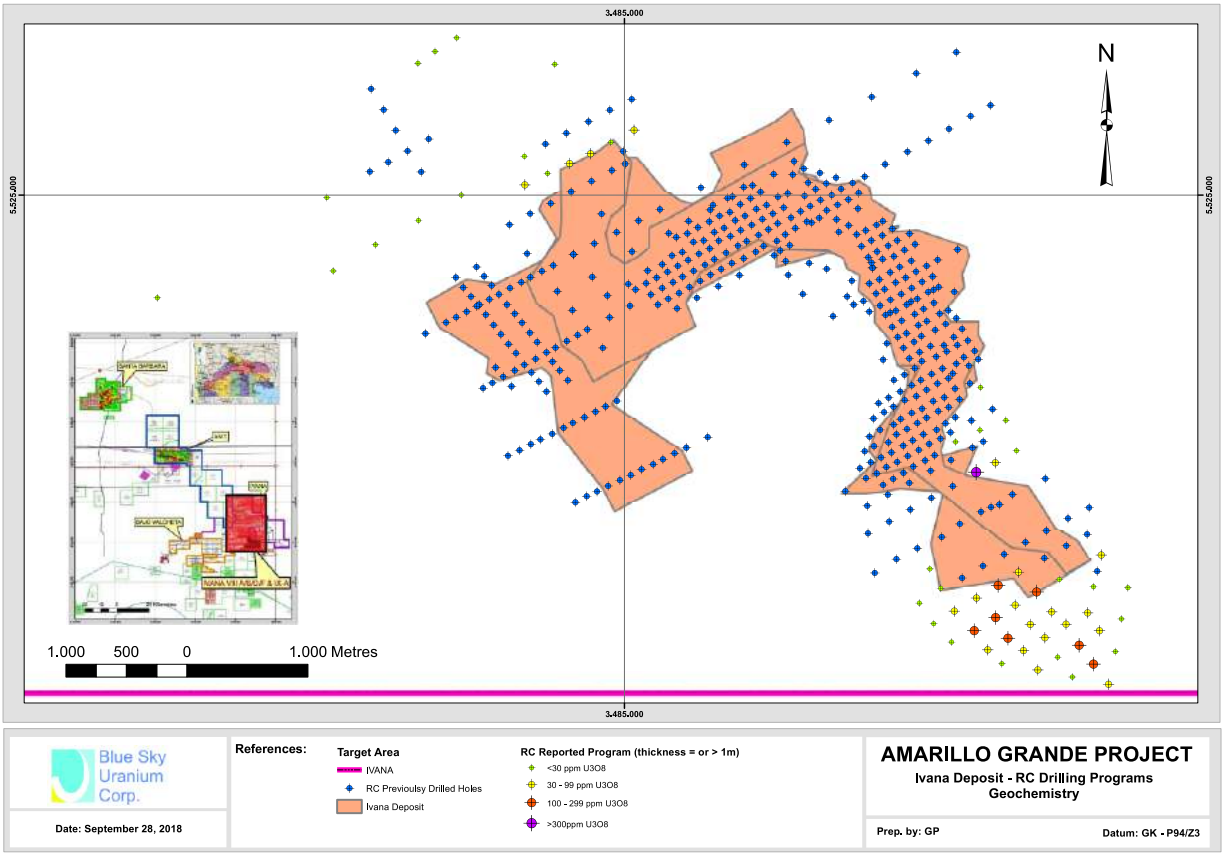


Figure 10-3: Ivana RC drill hole locations; Phase I and Phase II, blue; Phase lll color-coded with approximate mineralization grade; shaded orange blocks are the resource blocks from the initial resource estimate.

Figure 10-4: Ivana drill hole site with markers

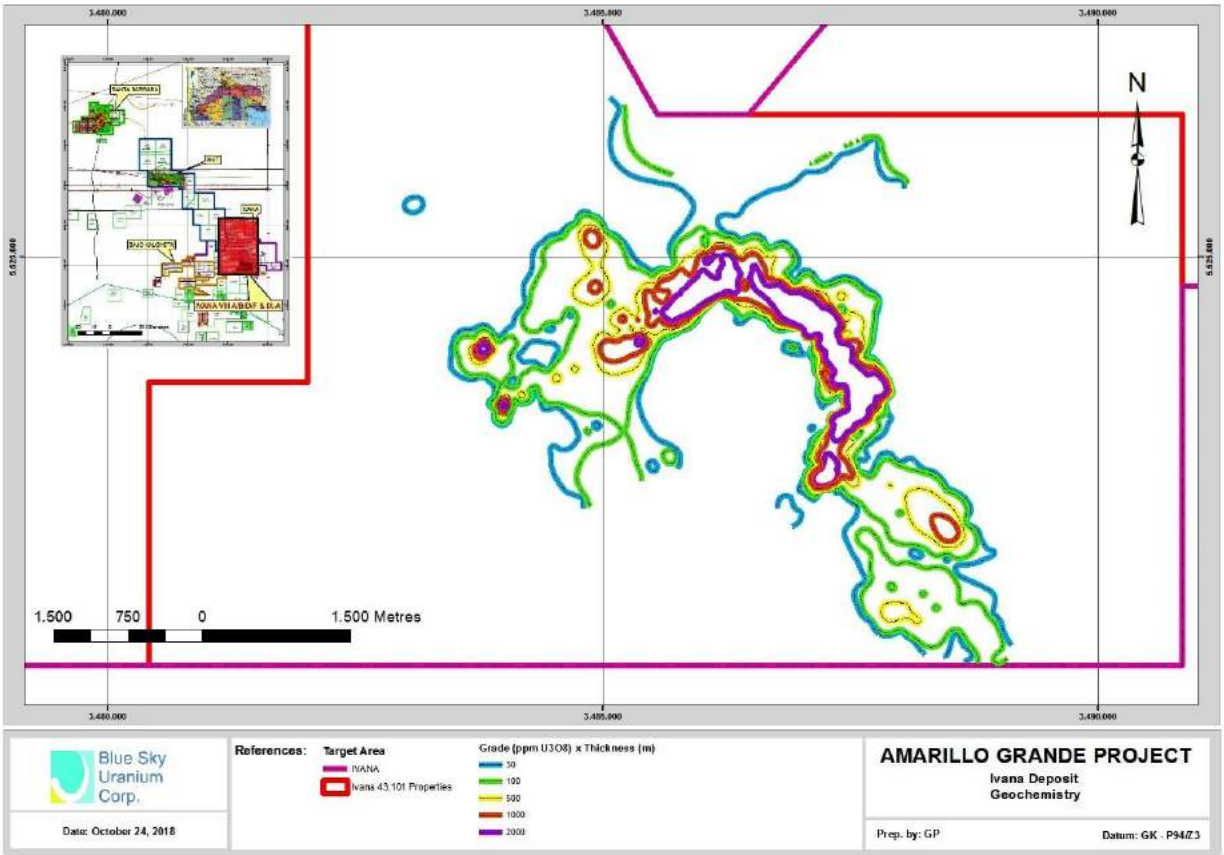


Figure 10-5: Ivana drill assay results as Grade x Thickness contours (ppm U_3O_8 x metre); this figure includes drill holes from all three phases of Ivana RC drilling.

11 Sample Preparation, Analysis and Security

11.1 Reverse Circulation Drill Sample Preparation

During the three RC drilling programs at Ivana samples were collected every metre. Two methodologies of sampling were applied during the RC drilling program due to the change of the rig as explained in Section 10.0.

The Roc L8 rig was used to drill holes AGI-001 to AGI-098. Samples were collected with a double cyclone sample recovery system to maximize the amount of sample fines that were collected. Even with two cyclones there were still periodic small losses of fine dust from the fine cyclone. Since the uranium mineralization was known at this point to be fine powdery carnotite it was expected that there would be unavoidable small losses from the sample that may be on the order of magnitude of a few grams per sample. The samples from the fine and coarse cyclones were combined, mixed, and weighed to monitor sample recovery. The combined sample was split several times through a riffle splitter to collect 2 representative smaller samples of about 3 kg each; one sample for assay and one sample as an archive sample. The rejects from the riffle splits were combined in one large plastic bag, labeled with the drill hole and depth interval.

The FlexiRoc D65 rig drilled holes AGI-099 to AGI-427. Samples were collected through a triple cyclone sample recovery system connected to an automatic riffle splitter. The amount of fines-loss was reduced to a minimum by incorporating this type of cyclone. The riffle splitter was regulated to provide two smaller samples of about 3 kg each, one sample for assay and one sample as an archive sample. The rejects were directly collected at the bottom of the riffle splitter with an average weight of about 25 kg.

Dry samples were collected in 8 mil polyethylene bags of approximately 30 cm by 40 cm for the smaller samples, and 50 cm by 80 cm for the rejects. When the sample was wet the entire sample was collected, with no splitting, within a micropore sample bag. In this case, the smaller samples were prepared only once the sample was totally dry. Drying was done at the project site during summer; or, if the sample was still wet by the time of shipment to the lab, the entire sample was sent to the lab in order to be dried in an oven, then split when dry by lab personnel.

Each sample was labeled with a unique sample number and secured closed with staples in the case of plastic bags, or tied, when micro-pore bags were used for wet samples. The labeled assay samples were collected in rice-bags for later shipment to the assay lab. The archive samples were also collected in rice-bags for storage in a secure facility at the project site.

A temporary sample of standard 1-liter volume was removed from the reject sample bag, placed in a plastic tray, and placed in a lead lined box for radiometric measurement with a hand-held scintillometer. The temporary radiometric sample was returned to the reject sample. A small sample of about 200 grams was removed from the reject sample for washing and geological description. This sample was discarded after use.

A small sample of about 10 grams was removed from the reject sample and placed in a plastic geological sample tray as a record of the interval drilled and sampled. The geological sample tray was labeled with the drill-hole number and interval for each sample.

Reject samples were stored on the drill site until assay results were received. Reject samples of uranium-mineralized material were preserved for possible future metallurgical studies.

11.2 Sample Chain of Custody and Security

The rice-bags containing samples for assay were stored at an on-site secure facility before shipment to the laboratory. Rice-bags were labeled with identification numbers that were then registered by a technician in a table along with the number of the samples contained in the bag. Dispatches to the assay laboratory were shipped when between 500 and 1,000 samples were accumulated. Due to Provincial Mining Authority regulations, an Official Rock Sample Transportation Certificate was prepared for each shipment, which included the total weight of samples, the mining property file numbers where those samples had been collected; as well as identification of the type of transportation and the final destination. This certificate was verified by authorities before shipment and verified by the laboratory when samples were received. Certificates verified by both parties are registered and filed at the Mining Authority.

Blue Sky Uranium used the same transportation contractor for all samples included in the resource estimation. Blue Sky field personnel checked each sample shipment, prepared the list of samples shipped, and reported to the BSK office the date of shipment, total samples, numbering of samples included, and the identification of QA/QC samples.

Blue Sky personnel then informed the contracted assay lab of the expected date of arrival, the number of rice-bags and the identification of the samples included in the shipment. When received, the assay laboratory confirmed the reception of the shipment, and confirmed the number of samples included and correct sample numbers.

11.3 Geological Logging

Since the start of drilling on the Ivana prospect in January 2017, all RC drill chips have been logged in detail using standard industry practices. Geologists overseeing sample collection procedures set up azimuth and dip for each drill hole and validate the final depth. The geologists also logged the chips and cuttings at each drill hole site in one-metre intervals using standard binocular microscope and field equipment. Lithology, alteration type and intensity, colour, sulphide content, visual mineralization, and scintillometer survey reading were manually logged on paper field forms and transferred to Excel® spreadsheet files at the field camp. At the office, the information was migrated to a master database with validation controls.

The hand-held scintillometer was used to measure radiometric counts per second, and the count rates were recorded manually by a technician for every metre interval of the RC chips. Site geologists used the radiometric response as qualitative data only, to identify mineralization in the drill hole, and to select intervals for priority geochemical sampling.

Geological cross section interpretation was carried out at the same time as the logging process. At the office, with the field log completed, the chips and log were reviewed and compared with nearby holes for supervision. The sample chips in sample trays are stored at the secure sample storage facility at the project site.

11.4 Assaying

All the original samples used for the resource estimation in this report were analysed by Bureau Veritas Commodities Canada Ltd. (“BV”) at their lab in Vancouver, BC, Canada. The BV subsidiary in Mendoza, Argentina, named ACME Analytical Laboratories Argentina S.A., was used for sample preparation.

RC samples received were initially organized following Blue Sky's numbering system and entered into the Laboratory Information Management System, re-labelled with internal codes and placed in new plastic bags. Every sample was weighed and if wet, dried in an oven. For those samples shipped while still wet, the whole sample was dried before splitting into a smaller sample.

Once dry, the sample was crushed to 80% passing 10 mesh, and then a 250g split was pulverized to 95% passing 150 mesh. At random intervals, and at the start of each shift, QC testing was completed on both crushed and pulverized material to ensure that the previous specifications were met.

Pulps generated were packaged in envelopes and sent by air-courier to the BV laboratory in Canada. Coarse rejects and pulps were stored at the Argentine lab. Most of the coarse rejects have been shipped back to the project facility for archive storage, with some pending return.

Samples received by BV were prepared and analyzed following internal procedure MA-200. Samples were digested to complete dryness with an acid solution of H_2O-HF-$HClO_4$-HNO_3 in the ratio of 2:2:1:1. Hydrochloric acid at 50% strength was added to the residue and heated using a mixing hot block. After cooling, the solutions were transferred to test tubes and brought to volume using dilute HCl. Samples splits of 0.25 g were analysed for 45 elements by means of Inductively Coupled Plasma Mass Spectrometry. Samples over 4,000 ppm uranium were re-assayed after phosphoric acid leach by Inductively Coupled Plasma Atomic Emission Spectrometry.

Blank and references samples were introduced by Blue Sky initially, and BV introduce their own internal blanks and reference samples. Both QA/QC procedures are detailed at Section 12.

Results were reported in three different digital certificate formats: CSV, XML and PDF. Assay certificates were archived in the Blue Sky database.

12 Data Verification

12.1 Database Validation

12.1.1 Collar Coordinate Validation

Validation of collar elevation data was done by comparing elevations from DGPS field surveys against the satellite photo digital elevation model. Most elevation differences in the collars were less than one metre, and there were no significant deviations between drill collars and the DEM.

12.1.2 Assay Verification

All the collars, surveys, geology and assays were exported from EXCEL® files into GEMS® software. There are no identical sample ID's, all FROM_TO data are zero or positive and no interval can exceed the total depth of the hole. To validate the data, the following checks were confirmed:

- The maximum depth of samples was checked against hole depth;
- The assay values were positive numbers;
- The highest uranium and vanadium values and at least one random value from select drill holes were checked against the original assay certificate

Reverse Circulation drilling recovery varied metre by metre and by rig and cyclone type with lows of around 7% to maximums of around three times the expected weights; however, averages over the holes were near 100%. There is no indication that grade is related to sample recovery.

12.2 QA/QC protocol

A review of the QA/QC protocols was conducted prior to drilling and formalized in a detailed QA/QC manual developed by Blue Sky. Reviews were conducted by a Qualified Person. The procedures for reverse circulation drill cuttings processing, and the insertion of blanks and standards were examined. The QA/QC program has been conducted in accordance with industry best practice. After each batch of analytical results arrived, the QA/QC samples were reviewed by a Blue Sky geologist. The QP also reviewed this data on a regular basis. Remedial assay work for all QC failures validated the original results.

Assay results are sufficiently accurate and precise to support the estimation of Inferred resources.

12.3 Geological Data Verification and Interpretation

Several geology variables were captured during core logging. Geology data verification involved determining that the geology designations were correct in each sample interval. This included the following:

- Examining "from – to" intervals for gaps, overlaps and duplicated intervals;
- Looking for collar and sample id mismatches;
- Verifying correct geology codes.

A geological legend was provided and compared to the values logged in the database. The geological model is reasonable and adequate for use.

12.4 Assay Database Verification

The assay data from 39 randomly selected drill holes that intersected the mineralization, representing approximately 10% of the database used for estimation, was dumped from the GEMS software system and manually compared to the original assay certificates. No differences were discovered.

12.5 Conclusion

No irregularities in the uranium or vanadium samples or assays were identified by the QP's during the review of the drill data and assays. Observation of the drill cuttings during the site visits and inspection and validation of the data collected indicate that the drill data is adequate for interpretation and resource estimation.

13 Mineral Processing and Metallurgical Testing

Metallurgical test work was undertaken in two stages. In 2017 preliminary testing was undertaken at INVAP (see Section 13.1) and in 2018-19 additional mineralogical (Section 13.2) and metallurgical testing (Section 13.3) was completed at the Saskatchewan Research Council.

The results of this test work are described in the following sections.

13.1 Preliminary Testing at INVAP

Preliminary metallurgical testing of the carnotite mineralization from the Ivana properties was done at INVAP S.E., ("INVAP") the Argentina state-owned company involved in nuclear technology, nuclear reactor construction, aerospace, and other complex industrial and medical systems. For additional information on the capabilities of INVAP, see the company website http://www.invap.com.ar/en/.

INVAP conducted alkaline carbonate leaching tests on composite samples from the Ivana drilling, and reported 95% leaching of uranium and 60% leaching of vanadium in 3 hours at 80°C and no oxidation (Carlevaris, 2017). Consumption of sodium carbonate and sodium bicarbonate are reported to be low at less than 10 kg/t and less than 8 kg/t, respectively.

Exploratory studies were done on the separation of uranium and vanadium with ion exchange resins. Blue Sky Uranium reported the results of these tests in a press release dated January 22, 2018 (Blue Sky Uranium, 2018a) The ion exchange process was not further pursued because of the local ground water brine that will be used as process water.

Further preliminary metallurgical testing at INVAP on samples of carnotite mineralization from Ivana showed that virtually all the uranium and vanadium mineralization occurs in mineral particles less than 100 µm diameter, and that scrubbing and wet screening could result in a higher-grade lower-mass concentrate with high recovery rates for uranium and vanadium. (Carlevaris, 2018a).

Prior tests carried out on Blue Sky Uranium's Anit deposit carnotite-mineralized material had shown similar upgrading from mineral scrubbing and wet screening (Furfaro, 2010).

13.2 Mineralogical Investigations at the Saskatchewan Research Council

In May 2018, Blue Sky Uranium sent two composite samples from Ivana drilling to the Saskatchewan Research Council ("SRC") for QEMSCAN mineralogical analysis. Sample Comp1 was described as oxidized uranium mineralization from the Ivana deposit (Figure 13-1). Sample Comp2 was described as primary + oxidized mineralization from the Ivana deposit (Figure 13-2).

Figure 13-1: Photograph of Sample Comp1

Figure 13-2: Photograph of Sample Comp2

QEMSCAN analysis of these two samples identified five uranium-bearing minerals (Creighton, 2018; See Figures 13-3 and 13-4 below):

1. "Coffinite" - This mineral is similar to coffinite, but its Si content is not consistent with the accepted composition of coffinite. Coffinite is $(U^{4+},Th)(SiO_4)_{1-x}(OH)_{4x}$, normally observed to be $U(SiO_4)_{0.9}(OH)_{0.4}$. To dissolve the uranium in coffinite an alkaline carbonate leach requires an oxidant to oxidize the U^{4+} to U^{6+}. However, the Ivana "coffinite" releases its uranium without oxidation. Thus, Ivana "coffinite" is evidently $U^{6+}(SiO_4)_?(OH)_?$. For this project this mineral is referred to as "beta-coffinite."

2. Carnotite - Carnotite is $K_2(UO_2)_2(VO_4)_2 \cdot 3H_2O$. Both the uranium and vanadium in carnotite can be leached by an alkaline carbonate leach without oxidant.

3. Liebigite - Liebigite is $Ca_2(UO_2)(CO_3)_3 \cdot 11H_2O$, essentially a uraniferous limestone. The uranium in liebigite can be leached by an alkaline carbonate leach without oxidant.

4. Tyuyamunite – Tyuyamunite is $Ca(UO_2)_2(VO_4)_2 \cdot 5 - 8H_2O$, the calcium version of potassium-containing carnotite. Both the uranium and vanadium in tyuyamunite can be leached by an alkaline carbonate leach without oxidant.

Note that liebigite and tyuyamunite are relatively rare globally. The SRC QEMSCAN has seldom identified liebigite in uranium-bearing samples, and this is the first time it has identified tyuyamunite.

5. Uranium "mineral", the fifth uranium bearing mineral identified, is the name SRC applied to mineral particles that contain uranium and other elements such as Ca, Mg, Na, Si, and Al, so it is not uraninite (UO_2). Current thinking is that the uranium "mineral" is uranium trapped in clays. Since both of the Blue Sky Uranium samples contain the "tight" clays illite and montmorillonite, one would expect that the uranium in the uranium "mineral" might not dissolve in an alkaline carbonate leach. Based on leaching test results, this does appear to be the case. For this project this mineral is referred to as "ivanaite."

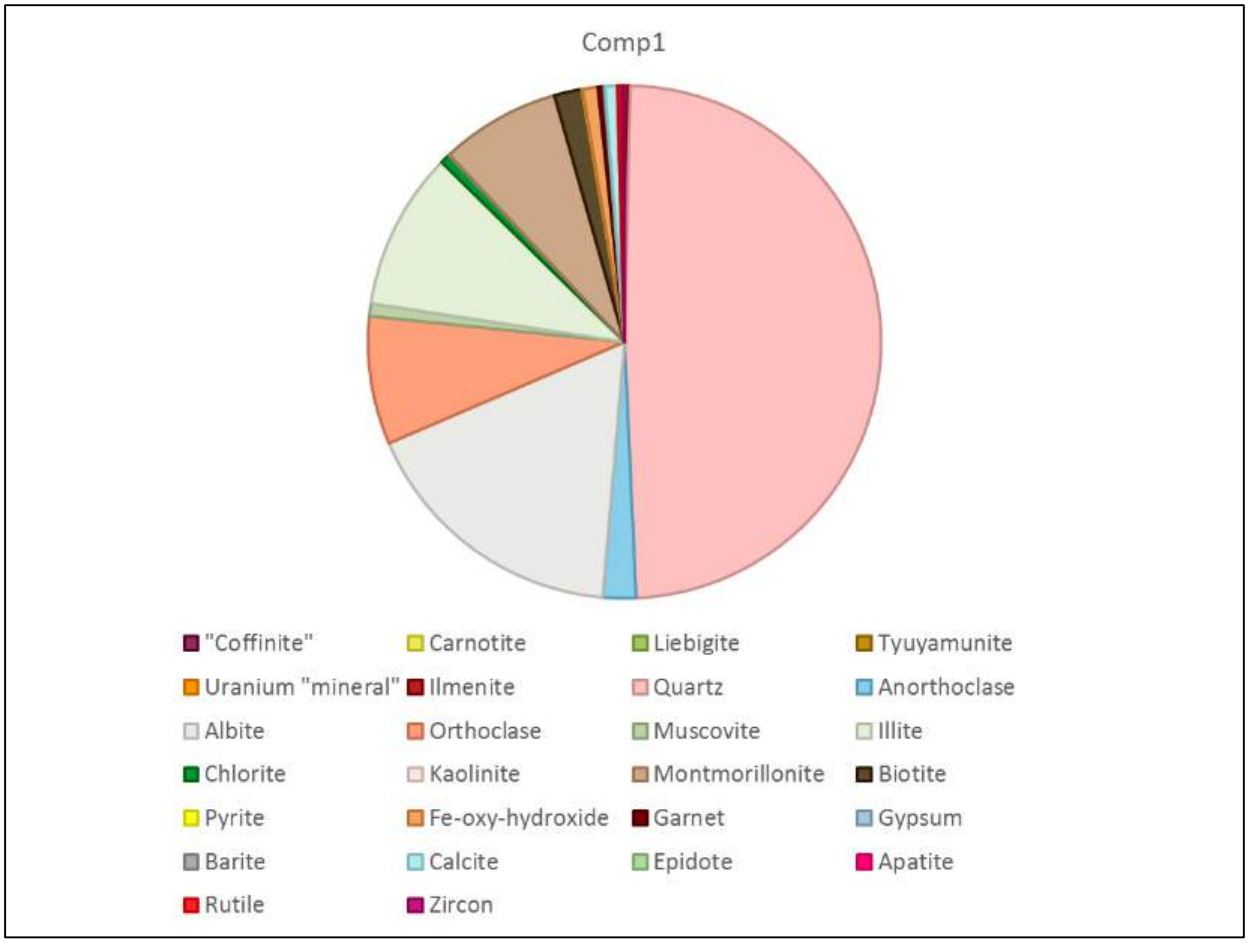


Figure 13-3: Comp1 Mineralogy; Source: Creighton, 2018

Given this uranium mineralogy, with more than 90% of the uranium minerals containing uranium with the oxidized U+6 valence, no oxidant is needed in the Ivana mill leach process.

As for the grain size distribution of U ± V minerals, the SRC QEMSCAN data confirm that for both samples the grain size is <100 µm. A series of 50 screen tests at the Bureau Veritas local laboratory in Argentina, Acme Analytical Laboratories SA, showed that the minus 100 µm fraction constitutes on average 23 weight % of the Ivana raw mineralized material.

The uranium-vanadium ("U-V") mineralization in the representative composites can be classified into two main types:

1. The majority of U-V mineral particles occur as free mineral grains with a maximum particle size of 100 µm and,
2. The remainder of the U-V mineral particles occur as a coating adhering to larger coarse U-V-free granules in a size range from 100 to 6000 µm. The coating mineral particles have a maximum particle size of 100 µm.

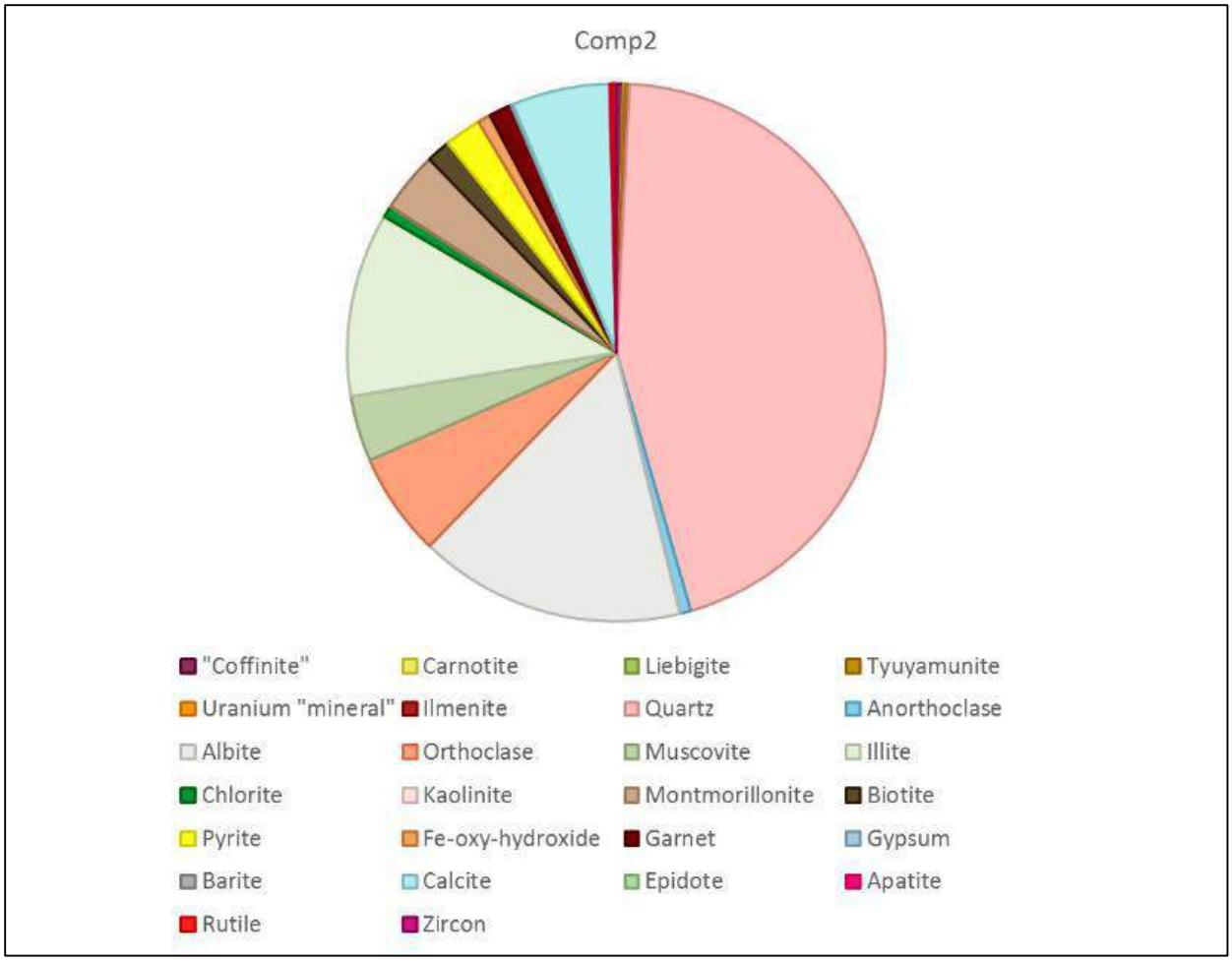


Figure 13-4: Comp2 Mineralogy; Source: Creighton, 2018

13.3 Leach Feed Concentrate and Alkaline Leach Tests at SRC

In July 2018, Blue Sky Uranium sent a large (40 kg) sample to SRC for leach feed concentrate preparation and alkaline leaching tests of the leach feed concentrate. This representative Ivana deposit sample was prepared from material from 12 selected reverse circulation drill holes. SRC assays for the sample are summarized in Table 13.1 (Oleniuk, 2018):

Table 13-1: SRC Assay Results for Leach Feed Composite Sample

Analyte	Grade (ppm)
U	470
U_3O_8	554
V	230
V_2O_5	411

13.3.1 Leach Feed Concentrate Preparation Optimization

Considering the uranium and vanadium minerals particle size data from SRC and INVAP led to a simple mill feed concentrate preparation process to recover and concentrate the coating particles along with the fine uranium and vanadium minerals particles, with U and V grades increased approximately four-fold, as shown in Figure 13-5.

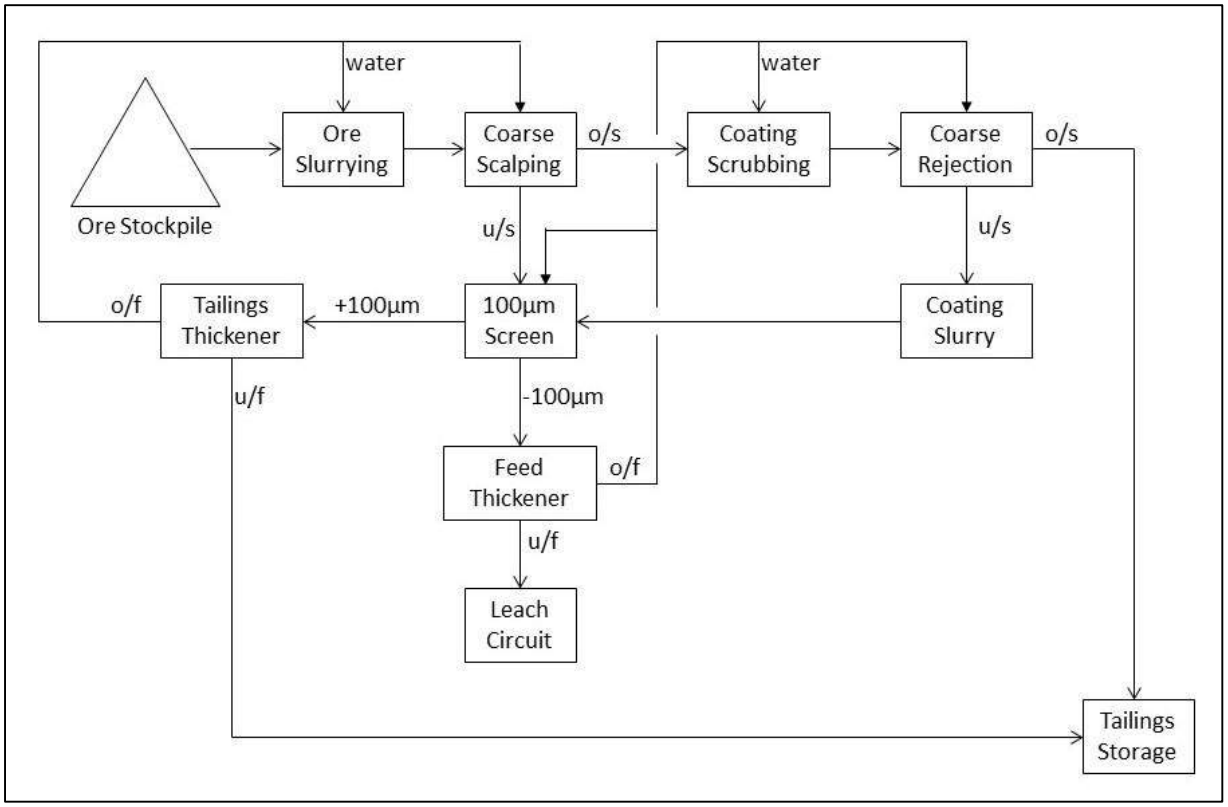


Figure 13-5: Initial Leach Feed Concentrate Preparation Process Flow Diagram

The leach feed concentrate preparation process uses operationally proven and simple wet screening and attrition scrubbing procedures. The 100 µm screen separation is a key unit operation of this process. It is a proven industrial scale process. Eldorado Nuclear's Beaverlodge Mill in northern Saskatchewan operated successfully for many years (April 1953 to June 1982) with the ultimate ore feed rate to the mill at 85 t/h and the ore ground to 88% minus 104 µm. In Namibia, the coating scrubbing process is used in Paladin Energy's Langer Heinrich mill. The mill started up in Q4 2006 and operated successfully. However, with persistently low uranium prices, the Langer Heinrich operation was put in care and maintenance in Q2 2018 (Paladin, 2018).

For the initial leach feed concentrate preparation at SRC, coarse scalping and coarse rejection screens were 2.830 mm. The coating attrition scrubbing used a Denver Model D-12 flotation machine with a 1 L cell and attrition scrubber impeller. See Figures 13-6 to 13-8 below. The attrition scrubbing residence time was 10 minutes with a slurry density of 60% solids in deionized water. The uranium and vanadium mass recoveries to the leach feed concentrate were 84% and 82% respectively.

Figure 13-6: Attritioner Cell (1 L)

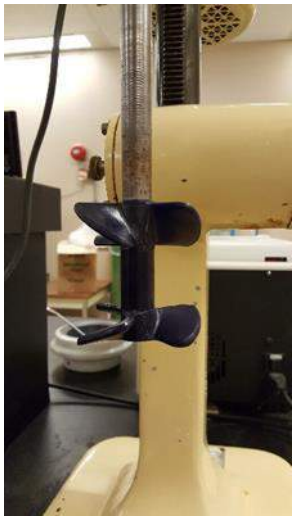


Figure 13-7: Attritioner Impeller

Figure 13-8: Attritioner in Operation

To increase the uranium and vanadium mass recoveries to the leach feed concentrate, 22 attrition scrubbing optimization test were completed using impeller speed (800, 1200 and 1700 rpm), attritioning slurry weight % solids (50%, 60%, 70% and 80%) in alkaline carbonate leach solution (60 g/L sodium carbonate and 10 g/L sodium bicarbonate), and attritioning time (4, 8 and 12 minutes) as variables. An optimized processing arrangement, shown below in Figure 13-9, was used in these tests. The optimum process conditions found were: 1200 rpm impeller speed, 70% solids and 12 minutes duration. Resulting mass recoveries to the leach feed concentrate improved to 89% for each of uranium and vanadium.

13.3.2 Alkaline Carbonate Leach Optimization

Uranium leaching may be either acidic (normally sulphuric acid) or alkaline (normally with a combination of sodium carbonate and sodium bicarbonate). Alkaline carbonate leaching was selected for the Ivana leach process because of the relatively high concentration of acid-consuming minerals in the leach feed.

The optimized leach feed concentrate process was used to prepare the feed for alkaline leach optimization tests. All leach tests used the same feed concentrate with 1274 ppm U_3O_8 and 910 ppm V_2O_5.

Leach test #1 was done at 80°C in a leach solution containing 50 g/L sodium carbonate and 20 g/L sodium bicarbonate to duplicate the leach test conditions used at INVAP; see Section 13.1 above. The SRC leach recovery results were 94.6% for U and 57.6% for V. This was a satisfactory match to the INVAP leach recoveries of 96% for U and 60% for vanadium.

The QEMSCAN results shown above in Section 13.2 indicate the presence of pyrite in the samples. Pyrite is deleterious in an alkaline carbonate leach because it will consume the sodium carbonate reagent:

$$4FeS_2 + 15O_2 + 16Na_2CO_3 + 14H_2O \rightarrow 4Fe(OH)_3 + 8Na_2SO_4 + 16NaHCO_3 \qquad \text{Equation 1}$$

A leach feed flotation test was done to check for sulphide flotation. The test used a high dose of both frother and collector, a high air flow rate, and a long duration in order to maximize sulphide flotation. Despite this, negligible sulphide floated.

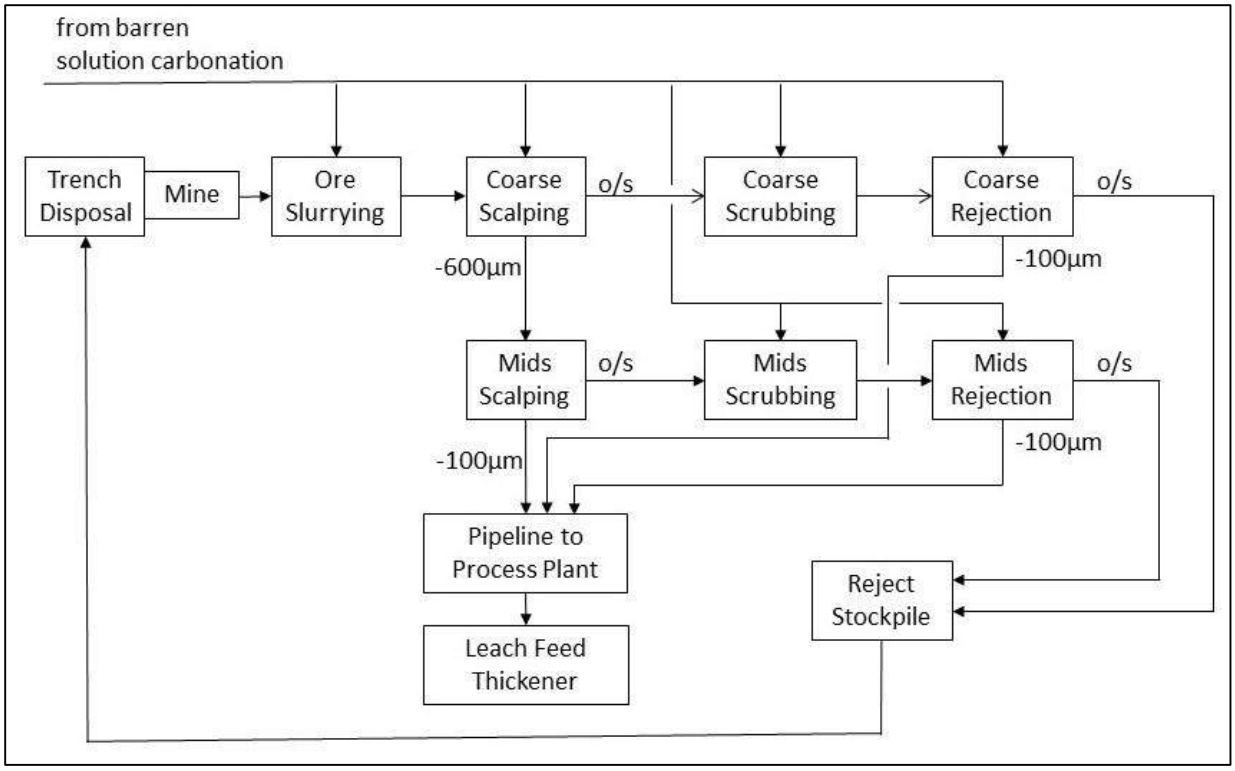


Figure 13-9: Optimized Leach Feed Concentrate Process Flow Diagram

To assure the absence of pyrite interference, leach test #2 was performed with the same conditions as leach test #1 (80°C in a leach solution containing 50 g/L sodium carbonate and 20 g/L sodium bicarbonate) but with addition of oxygen gas at 300 kPa. Compared to leach test #1, in leach test #2 U leach recovery was slightly reduced from 94.6% to 93.5%, but V leach recovery was substantially reduced from 57.6% to 36.3%. From these results it appears likely that the pyrite in the Ivana leach feed consists of particles with a pyrite core surrounded by an iron oxide coating. QEMSCAN would see these as pyrite particles, but the alkaline carbonate leach solution would see them as harmless iron oxide particles.

Leach tests #3 to #6 were performed to optimize leaching conditions. The variables in this optimization procedure were temperature and carbonate/bicarbonate ratio. The leach duration, based on the leach kinetics in leach tests #1 and #2, was held steady at 8 hours. Results were as follows:

Table 13-2: Leaching Optimization Tests

Test	Conditions			Leached after 8 hours	
	Temperature	Na_2CO_3	$NaHCO_3$	U	V
	°C	g/L	g/L	%	%
3	95	60	10	94.5	60.1
4	45	60	10	80.1	36.7
5	95	40	30	94.7	57.0
6	45	30	30	79.6	33.4

For both U and V leaching, the optimum conditions are: temperature = 95°C, carbonate/bicarbonate ratio = 60/10, and leach duration = 8 hours. In addition, under the optimized leach conditions, reagent consumptions are low: Na_2CO_3 = 3.2 kg/t and $NaHCO_3$ = 6.6 kg/t.

Process design is simplified because neither sulphide flotation nor introduction of oxygen to the leach is required.

13.4 Recommended Metallurgical Test Work for Next Project Stage; PFS

The recommended scope of work for the next stage of metallurgical test work includes:

- Confirmation of previous test results (particle size distribution, leach feed concentrate preparation, leaching) for samples from new deposits to be included for the first time in the PFS. Such new deposits would also require QEMSCAN work.
- Confirmation of previous test results using the local ground water, which is a brine, in place of the demineralized water used in metallurgical tests to date.
- Solid/liquid separation tests (either settling or filtration, as dictated by the process).
- Membrane filtration tests.
- Uranium-vanadium separation process optimization.
- U-product and V-product precipitation optimization.
- Locked cycle test of the entire process, to be run until equilibrium is reached.
- A budget cost for this test work is approximately $100,000.

14 Mineral Resource Estimate

14.1 Introduction

The mineral resource estimate was prepared under the direction of Bruce Davis, PhD, FAusIMM, with the assistance of Susan Lomas, P.Geo. This section of the technical report describes the resource estimation methodology and summarizes the key assumptions considered by the Qualified Persons to prepare the resource model for the uranium and vanadium mineralization at the Ivana Deposit within the Amarillo Grande Project in Argentina.

This is the second mineral resource estimate completed on the Ivana Deposit and it has been estimated in conformity with generally accepted CIM *Estimation of Mineral Resources and Mineral Reserves Best Practices Guidelines* (November 23, 2003).

Mineral resources are not mineral reserves and they do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into a mineral reserve upon application of modifying factors.

Estimations are made from 3D block models based on geostatistical applications using commercial mine planning software (Geovia GEMS 6.7.4). The project limits are based in the UTM coordinate system using a nominal block size measuring 25 m x 25 m x 2 m. The Reverse Circulation (RC) drill holes intersect the uranium mineralization of the Ivana deposit vertically to depths not exceeding 25 m below surface. The resource estimate was generated using drill hole sample assay results and the interpretation of a uranium model that relates to the spatial distribution of uranium and vanadium. Interpolation characteristics were defined based on the geology, drill hole spacing, and geostatistical analysis of the data. The resources were classified according to their proximity to the sample data locations and are reported, as required by NI 43-101, according to the CIM *Definition Standards for Mineral Resources and Mineral Reserves* (May, 2014).

This report includes estimates for mineral resources. No mineral reserves were prepared or reported.

14.2 Data

Blue Sky provided the final drill hole sample data for the Ivana Deposit on September 25, 2018. This comprised a series of Excel® (spreadsheet) files containing collar locations, down-hole survey results, geologic information and assay results for a total of 488 drill holes representing 8,792 m of drilling. Of these, 345 drill holes intersect the uranium mineralization and contribute to the estimation of mineral resources. All holes are RC drill holes. The distribution of uranium grades in the drill holes is shown in plan view in Figure 14-1.

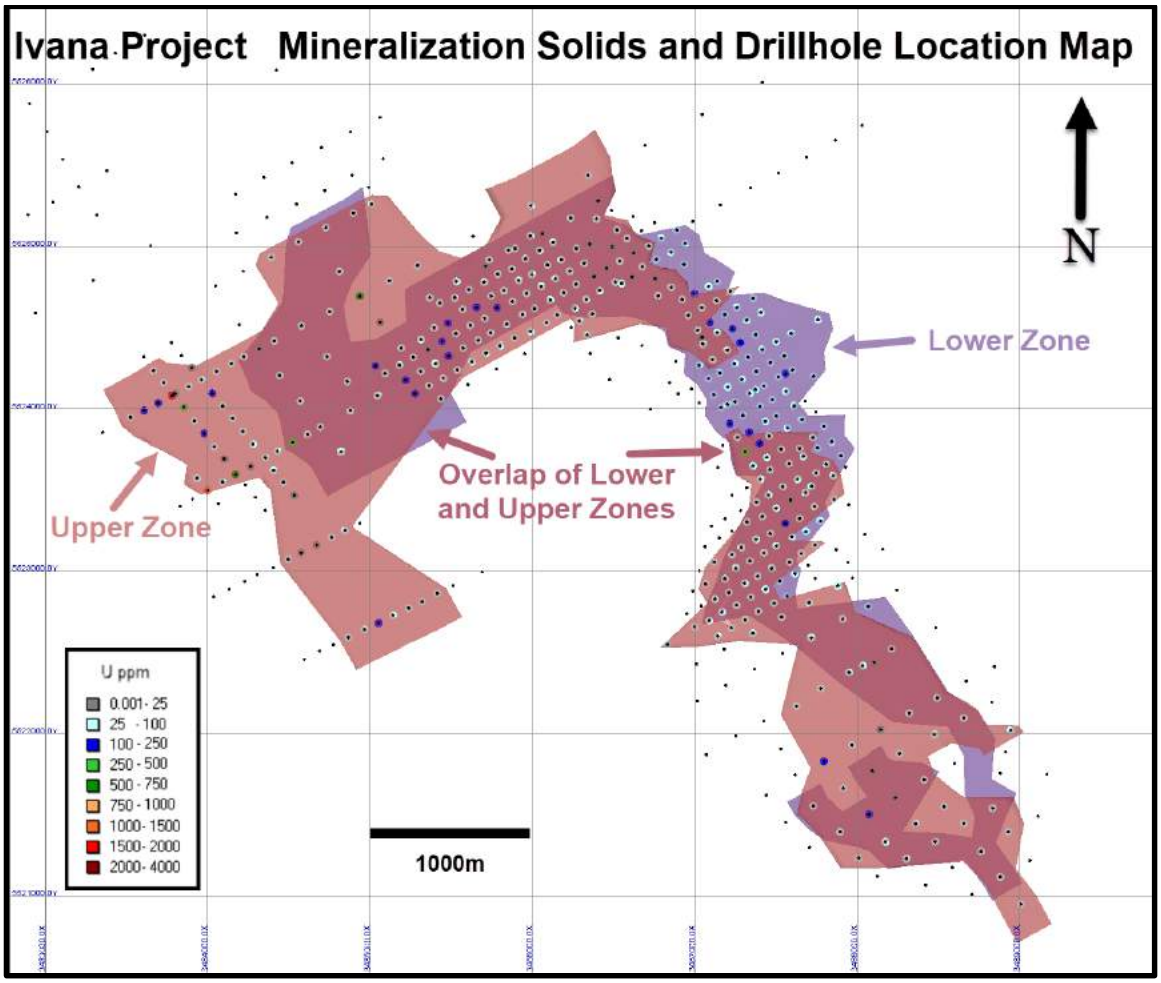


Figure 14-1: Plan View of Upper and Lower Zones and Uranium Grades in RC Drilling.

There are 8,756 samples in the project database and 2,258 of them intersected the Upper and Lower zones of uranium mineralization (see Section 7.6). The samples were taken every 1 m down the RC drill holes with the exception of two samples that measure 0.5 m in length.

Density testing was conducted by SEMAT (Gurivich, 2018). The test estimated the in-situ density from 25 samples to be 2.1 t/m^3.

No topographic data was provided at the time of the resource estimation. A topographic surface was generated to cover the area of the resource estimation using the 3D coordinate data of the surveyed drill hole collars.

Geologic information, derived from observations during drill sample logging, provide lithology code designations for the various rock units present on the property.

The summary statistics for the uranium and vanadium assay data, included in the resource estimate, are shown in Table 14-1.

Table 14-1: Summary of Basic Statistics for Assays included in the Resource Estimate

Element	# of Samples	Min	Max	Mean	Coefficient of Variation
Upper Zone					
Uranium (ppm)	748	4	1,965	76	1.9
Vanadium (ppm)	748	13	1,060	97	0.9
Lower Zone					
Uranium (ppm)	1509	7	17,780	289	2.7
Vanadium (ppm)	1509	7	2,086	93	1.6

14.3 Geological Model, Domains and Coding

The uranium mineralization is hosted in both the sedimentary and basement intrusive rocks. Two 3D wireframe domains were modelled at the Ivana Deposit that encapsulated the uranium mineralization above 25 ppm uranium. The contact between the overlying sedimentary rocks and the basement rocks was modelled as a surface over the deposit (Figure 14-2).

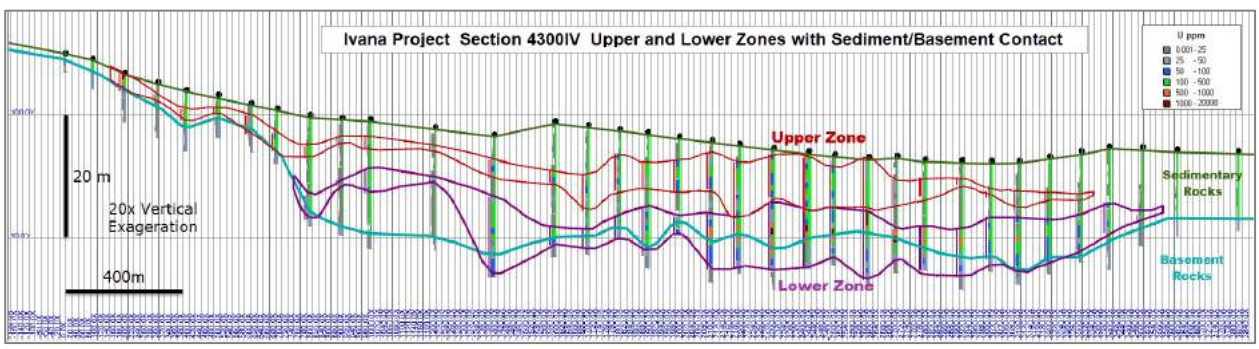


Figure 14-2: Section 4300, View of the Interpreted Upper and Lower Zones with Basement/Sediment Contact and Uranium Data in Drilling.

14.4 Compositing

Assay data were not composited for grade interpolation due to the uniform nature of the sampling. All samples were taken at 1 m intervals.

14.5 Exploratory Data Analysis

Exploratory data analysis ("EDA") involves the statistical summarization of the database to better understand the characteristics of the data that may control grade. One of the main purposes of this exercise is to determine if there is evidence of spatial distinctions in grade which may require separation and isolation of domains during interpolation. The application of separate domains prevents unwanted mixing of data during interpolation and, therefore, the resulting grade model will better reflect the unique properties of the deposit. However, applying domain boundaries in areas where the data is not statistically unique may impose a bias in the distribution of grades in the model.

A domain boundary, which segregates the data during interpolation, is typically applied if the average grade in one domain is significantly different from that of another domain. A boundary may also be applied if there is evidence that a significant change in the grade distribution has occurred across the contact.

The two zones at Ivana, the upper and lower zone, have distinct grade distributions and a hard boundary was placed between them during grade interpolation.

14.5.1 Basic Statistics by Domain

The boxplots for uranium in Figure 14-3 show the lower zone (20) average uranium grade tends to be about three times higher than the upper zone (10). The boxplots for vanadium in Figure 14-3 show similar distributions among all of the zone categories.

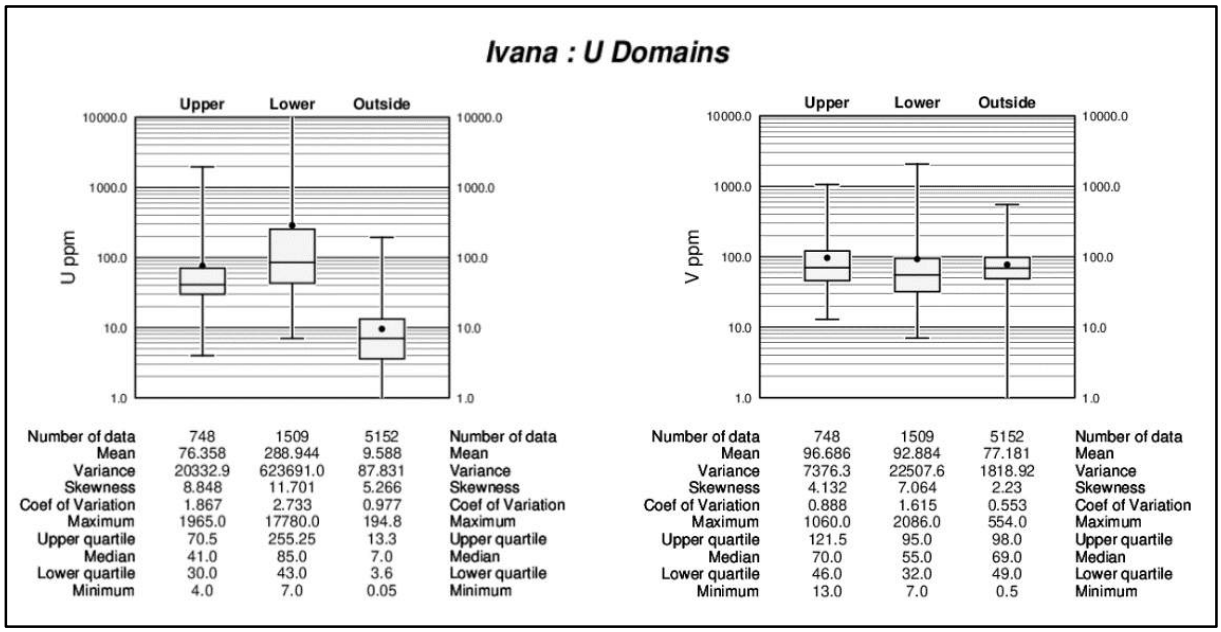


Figure 14-3: Boxplots Comparing Uranium and Vanadium Sample Data in Upper and Lower Zones and Waste.

14.5.2 Contact Profiles

Contact profiles evaluate the nature of grade trends between two domains: they graphically display the average grades at increasing distances from the contact boundary. Those contact profiles that show a marked difference in grade across a domain boundary indicate that the two datasets should be isolated during interpolation. Conversely, if a more gradual change in grade occurs across a contact, the introduction of a hard boundary (e.g., segregation during interpolation) may result in a much different trend in the grade model; in this case, the change in grade between domains in the model is often more abrupt than the trends seen in the raw data. Finally, a flat contact profile indicates no grade changes across the boundary; in this case, hard or soft domain boundaries will produce similar results in the model.

A series of contact profiles were generated to evaluate the nature of uranium and vanadium across the uranium-based grade shell boundary (Figure 14-4). Abrupt changes in grade occur in uranium at the domain boundary. There is little evidence of changes in grade for vanadium due to the shell being based on uranium grades and not vanadium.

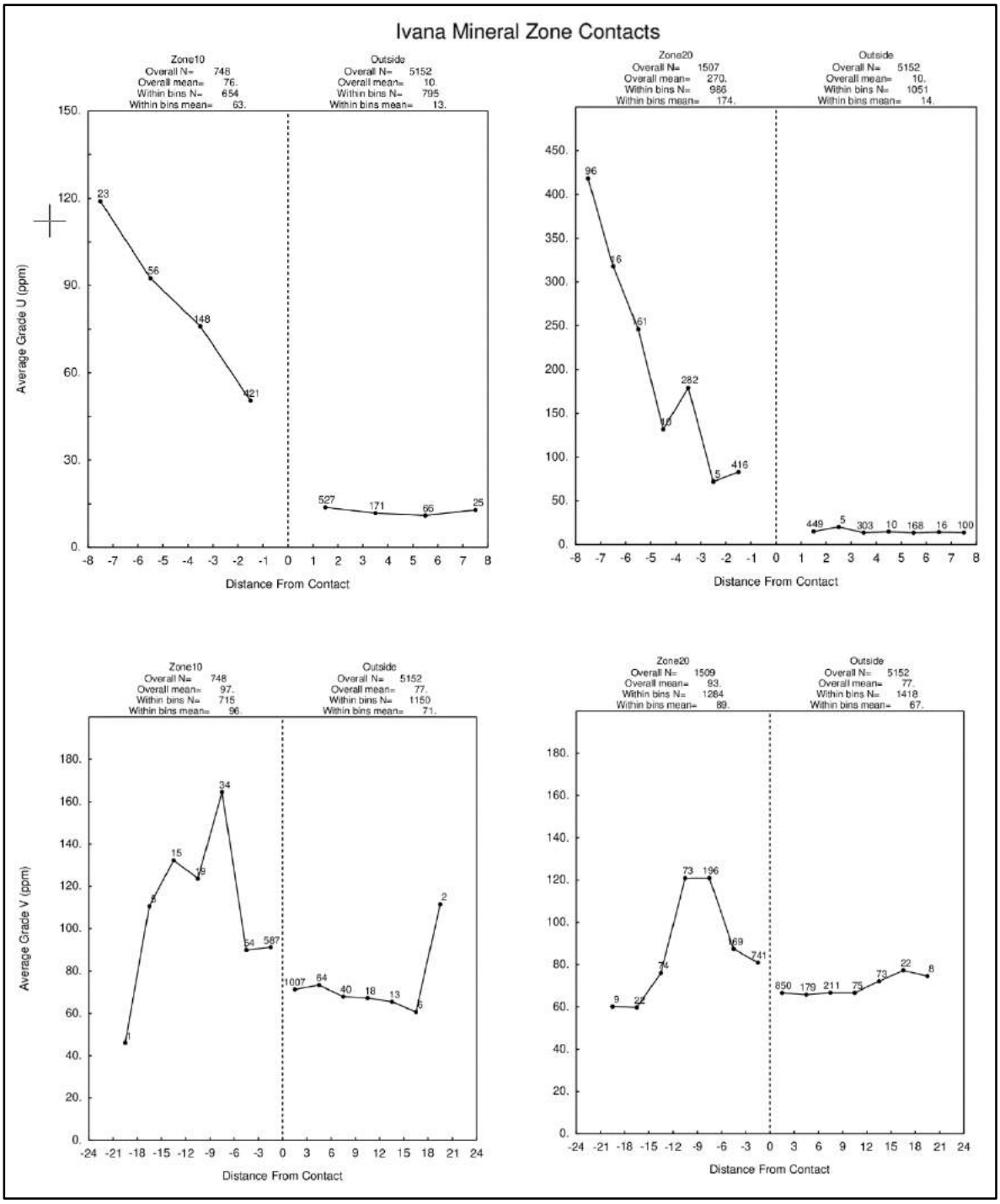


Figure 14-4: Contact Profiles for Samples Inside vs. Outside the Uranium Based Grade Shell domain for Uranium and Vanadium.

14.5.3 Conclusions and Modelling Implications

The results of the EDA indicate that the uranium and vanadium grades within the upper and lower zone solids are significantly different than those in the surrounding area, and that the two zones should be treated as distinct or hard domains during block grade estimations.

14.6 Evaluation of Outlier Grades

Histograms and probability plots for the distribution of uranium and vanadium were reviewed to identify the presence of anomalous outlier grades in the assay database. Following a review of the physical location of potentially erratic samples in relation to the surrounding sample data, it was decided that these would be controlled during block grade interpolations using a combination of traditional top-cutting and also applying outlier limitations. An outlier limitation controls the distance of influence of samples above a defined grade threshold. During grade interpolations, samples above the outlier thresholds are limited to a maximum distance-of-influence of 75 m horizontally and 6 m vertically. The grade thresholds for uranium and vanadium are shown in Table 14-2.

Overall, these measures result in a 7% reduction in contained uranium in both the upper and lower zones combined. The high metal loss for uranium is due to a combination of a skewed distribution of data and the spacing of drill holes. These measures are considered appropriate for a deposit with this distribution of delineation drilling.

Table 14-2: Treatment of Outlier Sample Data

Element	Domain	Maximum	Top-cut Limit	Outlier Limit
Uranium (ppm)	Upper Zone (10)	1,964.60	800	400
	Lower Zone (20)	17,780.00	4000	2000
Vanadium (ppm)	Upper Zone (10)	1,060.00	400	-
	Lower Zone (20)	2,086.00	1000	-

14.7 Variography

The degree of spatial variability in a mineral deposit depends on both the distance and direction between points of comparison. Typically, the variability between samples increases as the distance between those samples increases. If the degree of variability is related to the direction of comparison, then the deposit is said to exhibit anisotropic tendencies which can be summarized with the search ellipse. The semi-variogram is a common function used to measure the spatial variability within a deposit.

The components of the variogram include the nugget, the sill and the range. Often samples compared over very short distances, even samples compared from the same location, show some degree of variability. As a result, the curve of the variogram often begins at some point on the y-axis above the origin: this point is called the *nugget*. The nugget is a measure of not only the natural variability of the data over very short distances but also a measure of the variability which can be introduced due to errors during sample collection, preparation, and the assay process.

The amount of variability between samples typically increases as the distance between the samples increases. Eventually, the degree of variability between samples reaches a constant, maximum value: this is called the *sill*, and the distance between samples at which this occurs is called the *range*.

In this report, the spatial evaluation of the data was conducted using a correlogram rather than the traditional variogram. The correlogram is normalized to the variance of the data and is less sensitive to outlier values, generally giving better results.

Correlograms were generated using the commercial software package Sage 2001© developed by Isaaks & Co. Multidirectional variograms for uranium and vanadium were generated from the distributions of data located inside the uranium-based grade shell domains in the north and south areas of the deposit. The results are summarized in Table 14-3.

Table 14-3: Variogram Parameters

				1st Structure			2nd Structure		
Element	**Nugget**	**Sill 1**	**Sill 2**	**Range (m)**	**Azimuth (°)**	**Dip**	**Range (m)**	**Azimuth (°)**	**Dip**
Uranium North Area	0.300	0.571	0.129	3	90	90	5	90	90
	Spherical			96	277	0	4689	34	0
				177	7	0	1107	124	0
Uranium South Area	0.300	0.625	0.075	5	90	90	8	90	90
	Spherical			77	350	0	1547	317	0
				117	80	0	295	47	0
Vanadium North Area	0.148	0.629	0.222	4	90	90	6	90	90
	Spherical			164	3	0	642	22	0
				19	93	0	902	112	0
Vanadium South Area	0.176	0.662	0.162	5	90	90	2	90	90
	Spherical			27	196	0	1104	335	0
				51	286	0	259	65	0

Note: Correlograms conducted on 1 m sample data.

14.8 Model Setup and Limits

A block model was initialized in Geovia GEMS, and the dimensions are defined in Table 14-4. The selection of a nominal block size measuring 25 x 25 x 2 m is considered appropriate with respect to the current drill hole spacing as well as the selective mining unit size typical of an operation of this type and scale.

Table 14-4: Block Model Limits

Direction	Minimum	Maximum	Block Size(m)	# of Blocks
X (east)	3,482,975	3,489,650	25	267
Y (north)	5,520,400	5,526,050	25	226
Z (elevation)	38	124	2	43

Blocks in the model were coded on a majority basis with the upper and lower domain codes. Geovia GEMS software uses a percent model to of the block inside the solid to account for the volume of the block inside.

Only blocks that were more than 51% below the topography surface were available for coding to either the upper or lower mineralized domains.

14.8.1 Interpolation Parameters

The block model grades for uranium and vanadium were estimated using ordinary kriging ("OK") as the main method while blocks were also estimated using inverse distance squared ("ID^2") and nearest neighbour ("NN") methods for validation purposes. The results of the OK estimation were compared with the Hermitian Polynomial Change of Support model ("Herco"; also referred to as the Discrete Gaussian Correction). This method is described in more detail in section 14.9.

The estimation parameters for the various elements in the resource block model are shown in Table 14-5.

Table 14-5: Interpolation Parameters

Element	Search Ellipse[1] Range (m)			# of Composites		
	X	Y	Z	Min/block	Max/block	Max/hole
Uranium	400	400	100	4	10	3
Vanadium	400	400	100	4	10	3

[1] Ellipse orientation with long axes N-S and W-E and vertical short axis.

14.9 Validation

The results of the modelling process were validated using several methods. These include a thorough visual review of the model grades in relation to the underlying drill hole sample grades, comparisons with the change of support model, comparisons with other estimation methods and grade distribution comparisons using swath plots.

14.9.1 Visual Inspection

A detailed visual inspection of the block model was conducted in both section and plan to ensure the desired results following interpolation. This includes confirmation of the proper coding of blocks within the upper and lower shell domains. The estimated uranium and vanadium grades in the model appear to be a valid representation of the underlying drill hole sample data.

14.9.2 Model Checks for Change of Support

The relative degree of smoothing in the block model estimates were evaluated using the Discrete Gaussian of Hermitian Polynomial Change of Support method (Rossi and Deutsch, 2014).

With this method, the distribution of the hypothetical block grades can be directly compared to the estimated (OK) model through the use of pseudo-grade/tonnage curves. Adjustments are made to the block model interpolation parameters until an acceptable match is made with the Herco distribution. In general, the estimated model should be slightly higher in tonnage and slightly lower in grade when compared to the Herco distribution at the projected cut-off grade. These differences account for selectivity and other potential ore-handling issues which commonly occur during mining.

The Herco distribution is derived from the declustered composite grades which have been adjusted to account for the change in support, going from smaller drill hole composite samples to the large blocks in the model. The transformation results in a less skewed distribution but with the same mean as the original declustered samples.

The Herco analysis was conducted on the distribution of uranium in the block model and level of correspondence was achieved in all cases.

An example showing the distribution of the uranium models in the Upper and Lower domains is shown in Figure 14-5.

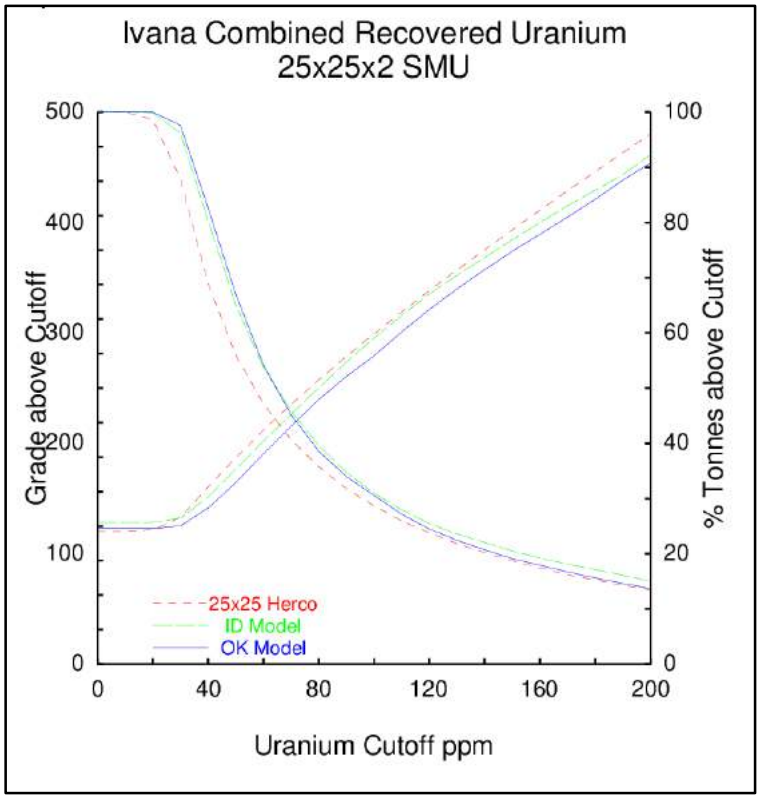


Figure 14-5: Herco Grade/Tonnage Plot for the Combined Upper and Lower Zone Uranium Models

14.9.3 Swath Plots (Drift Analysis)

A swath plot is a graphical display of the grade distribution derived from a series of bands, or swaths, generated in several directions through the deposit. Grade variations from the OK model are compared using the swath plot to the distribution derived from the inverse distance (ID^2) and declustered (NN) grade model.

On a local scale, the NN model does not provide reliable estimations of grade, but, on a much larger scale, it represents an unbiased estimation of the grade distribution based on the underlying data. Therefore, if the OK model is unbiased, the grade trends may show local fluctuations on a swath plot, but the overall trend should be similar to the NN distribution of grade.

Swath plots have been generated in three orthogonal directions for all models. An example of the uranium distribution in north-south swaths is shown in Figure 14-6.

There is good correspondence between the models in most areas. The degree of smoothing in the OK model is evident in the peaks and valleys shown in the swath plots. Areas where there are large differences between the models tend to be the result of “edge” effects, where there is less available data to support a comparison. The validation results indicate that the OK model is a reasonable reflection of the underlying sample data.

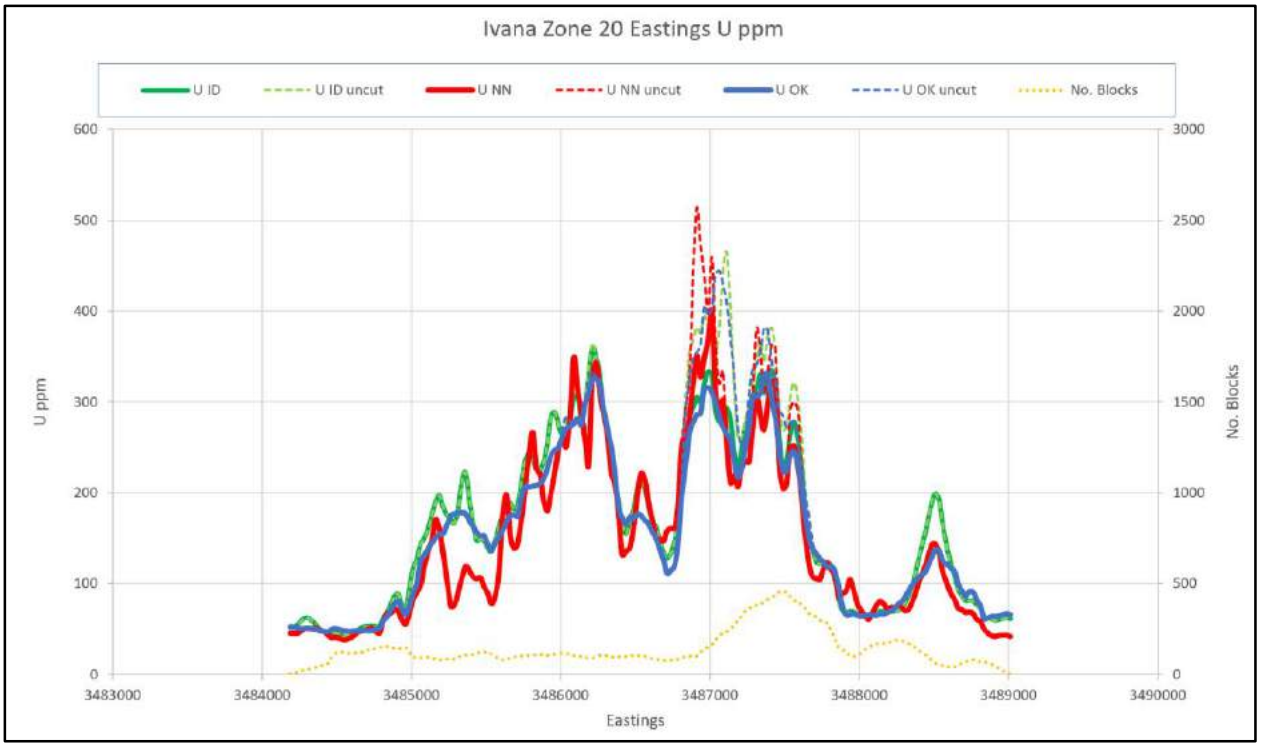


Figure 14-6: Swath Plot of Lower Zone Uranium OK, ID2 and NN Models by Easting

14.10 Resource Classification

The mineral resources for the Ivana Deposit within the Amarillo Grande Project were classified in accordance with the CIM *Definition Standards for Mineral Resources and Mineral Reserves* (May, 2014). The classification parameters are defined relative to the distance between uranium sample data and are intended to encompass zones of reasonably continuous mineralization that exhibit the desired degree of confidence. These parameters are based on visual observations and statistical studies. Classification parameters are based primarily on the nature of the distribution of uranium data as it is the main contributor to the relative value of the deposit.

The following criteria were used to define resources in the Inferred category. At this stage of project evaluation, the data only supports resources in the Inferred category. There are no mineral resources included in the Indicated or Measured categories.

14.10.1 Inferred Mineral Resources

Mineral resources in the Inferred category include model blocks that are located within a maximum distance of 200 m from a drill hole.

A domain has been interpreted that encompasses model blocks that are included in the Inferred category. This step insures consistency of classification across the deposit.

CIM *Definition Standards for Mineral Resources and Mineral Reserves* (May 2014) define a mineral resource as:

"[A] concentration or occurrence of solid material of economic interest, in or on the Earth's crust in such form, grade or quality and quantity, that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling."

The “reasonable prospects for eventual economic extraction” requirement generally implies that quantity and grade estimates meet certain economic thresholds and that mineral resources are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recovery.

In the areas assigned to Inferred Mineral Resources, all blocks above cut-off were selected without the use of a pit shell for the following reasons:

- The deposit is essentially flat lying and located at or very near to surface. There are no blocks deeper than 25 m from surface above the 100 ppm U reporting cut-off
- Due to the broad horizontal extent of the resource material and its shallow depth the vertical strip ratio of the mineralized material is approximately 1:1 and the economic impacts from waste along pit sidewalls will be minimal.
- The material to be extracted comprises unconsolidated sands and gravels. The shallow depth and unconsolidated nature of the resource material at Ivana suggest the surface mine can be developed using conventional mining methods. The shallow nature allows the mine to be excavated to full depth initially, and then advanced laterally across the property, backfilling behind the mining advance. Consequently, very little of the resource will be exposed at any given time and there is no need to permanently maintain high pit slopes like in a conventional hard rock open pit. Therefore, all areas of the resource are potentially available for extraction at any time. Hence the primary constraint on economic extraction is the cut-off grade and not the physical design parameters of the pit.
- As a check, a pit shell was generated using a uranium price of \$50/lb U_3O_8, \$1.50/tonne mining costs, \$4.00/tonne processing costs, \$2.30/tonne G&A, 84.6% Uranium recovery and 32° pit slopes to support this decision, resulting in a less than 1% difference in accumulated pounds of U_3O_8 at the reporting cut-off of 100 ppm U.

The estimate of Inferred Mineral Resources is presented in Table 14-6. Based on the assumed uranium price of \$50/lb U_3O_8, operating cost of \$12/tonne and process recovery of 90%, the base case cut-off grade for mineral resources is estimated to be 100 ppm uranium. The uranium price selected for determination of the cut-off grade is based on long term analyst consensus pricing for uranium; further details of uranium price fundamentals, and reasoning behind selection of \$50/lb U_3O_8 as a long-term price, are discussed in Section 19 of this report. Operating cost assumptions for determination of the cut-off grade were made based on general experience with shallow open pit mines, uranium leach operations, and the unconsolidated nature of the deposit, as well as review of data from similar near-surface uranium operations. The assumed process recovery was based on preliminary metallurgical information available at the time of resource estimation.

The distribution of the base case mineral resource is shown from a series of planametric viewpoints in Figures 14-8, 14-9 and 14-10 and in sections shown in Figures 14-11 to 14-13.

There are no known factors related to environmental, permitting, legal, title, taxation, socio-economic, marketing, or political issues which could materially affect the mineral resource. Resources in the Inferred category have a lower level of confidence than that applying to Indicated resources and, although there is sufficient evidence to imply geologic grade and continuity, these characteristics cannot be verified based on the current data. It is reasonably expected that the majority of Inferred mineral resources could be upgraded to Indicated Mineral Resources with continued exploration. Mineral resources, which are not mineral reserves, do not have demonstrated economic viability.

Table 14-6: Estimate of Inferred Mineral Resource reported at 100 ppm Uranium Cut-off

Zone	Tonnes (t)	Average Grade				Contained Metal	
		U (ppm)	U_3O_8 (%)	V (ppm)	V_2O_5 (%)	U_3O_8 (lb)	V_2O_5 (lb)
Upper	3,200,000	133	0.016	123	0.022	1,100,000	1,500,000
Lower	24,800,000	335	0.040	105	0.018	21,600,000	10,000,000
Total	28,000,000	311	0.037	107	0.019	22,700,000	11,500,000

Note: Estimate is not limited inside a pit shell due to the shallow nature of the deposit (<25m below surface). Base case cut-off is 100 ppm uranium. Mineral resources are not mineral reserves because the economic viability has not been demonstrated.

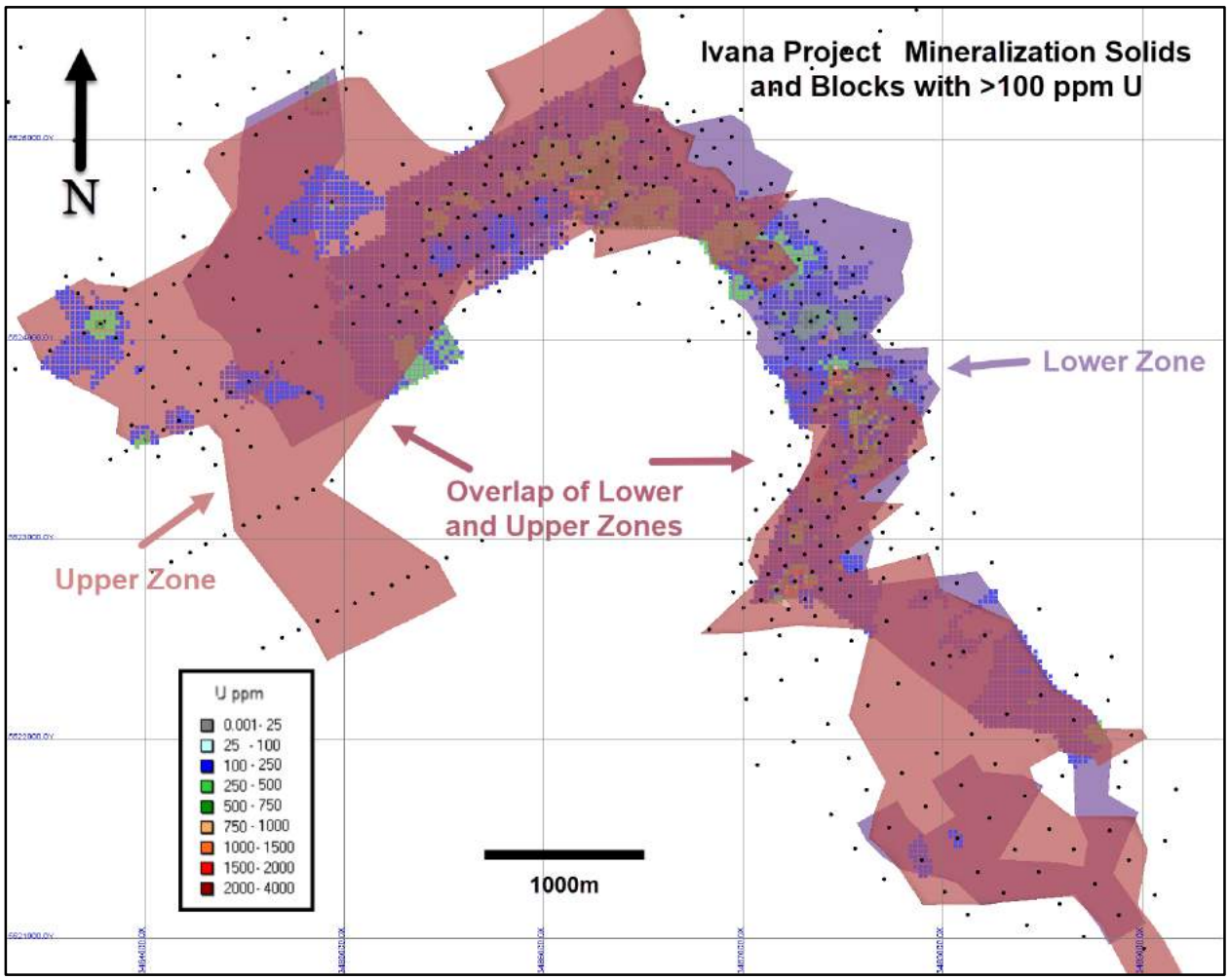


Figure 14-8: Plan View of Base Case Inferred Mineral Resource within the Upper and Lower Zones

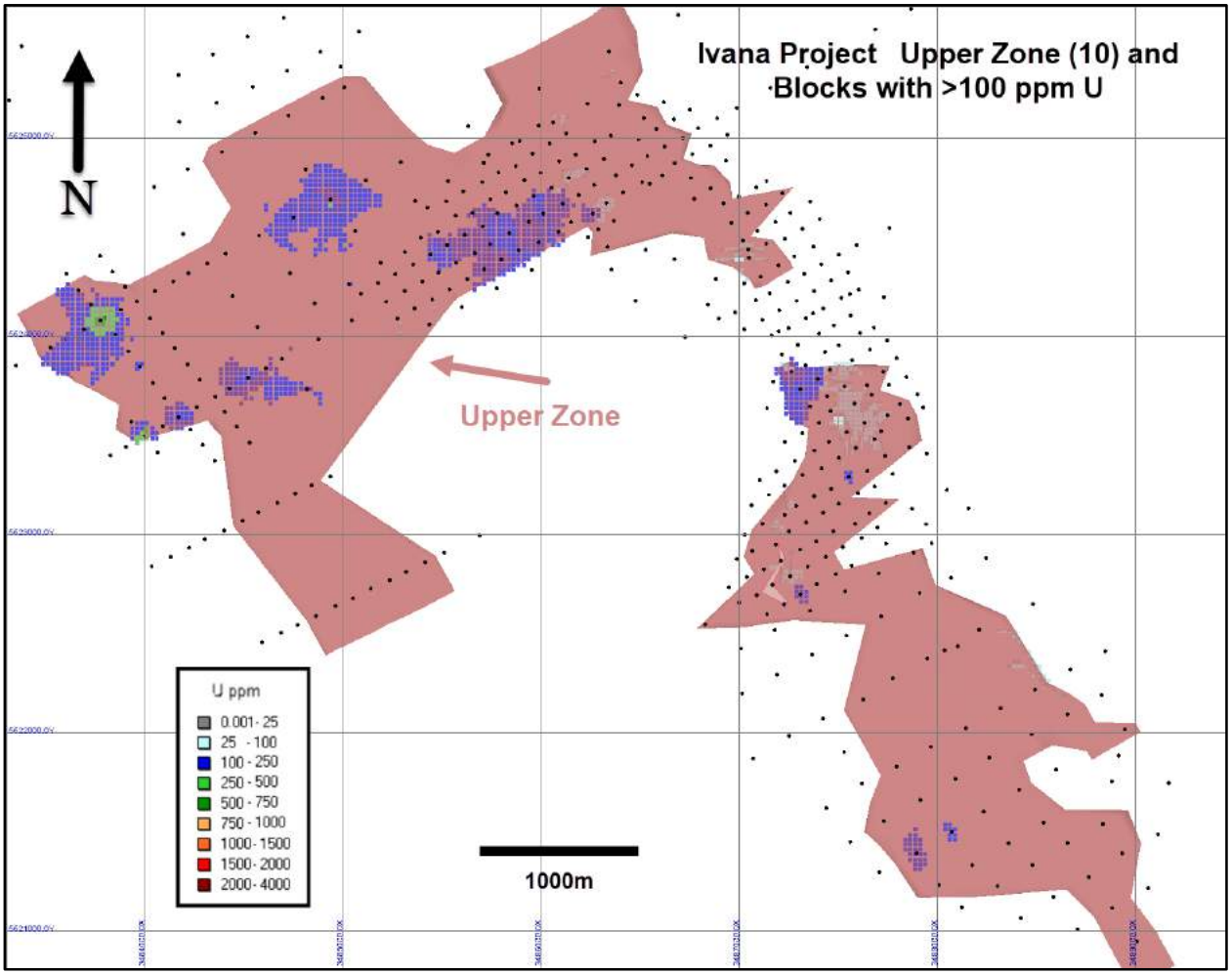


Figure 14-9: Plan View of Base Case Inferred Mineral Resource within the Upper Zone

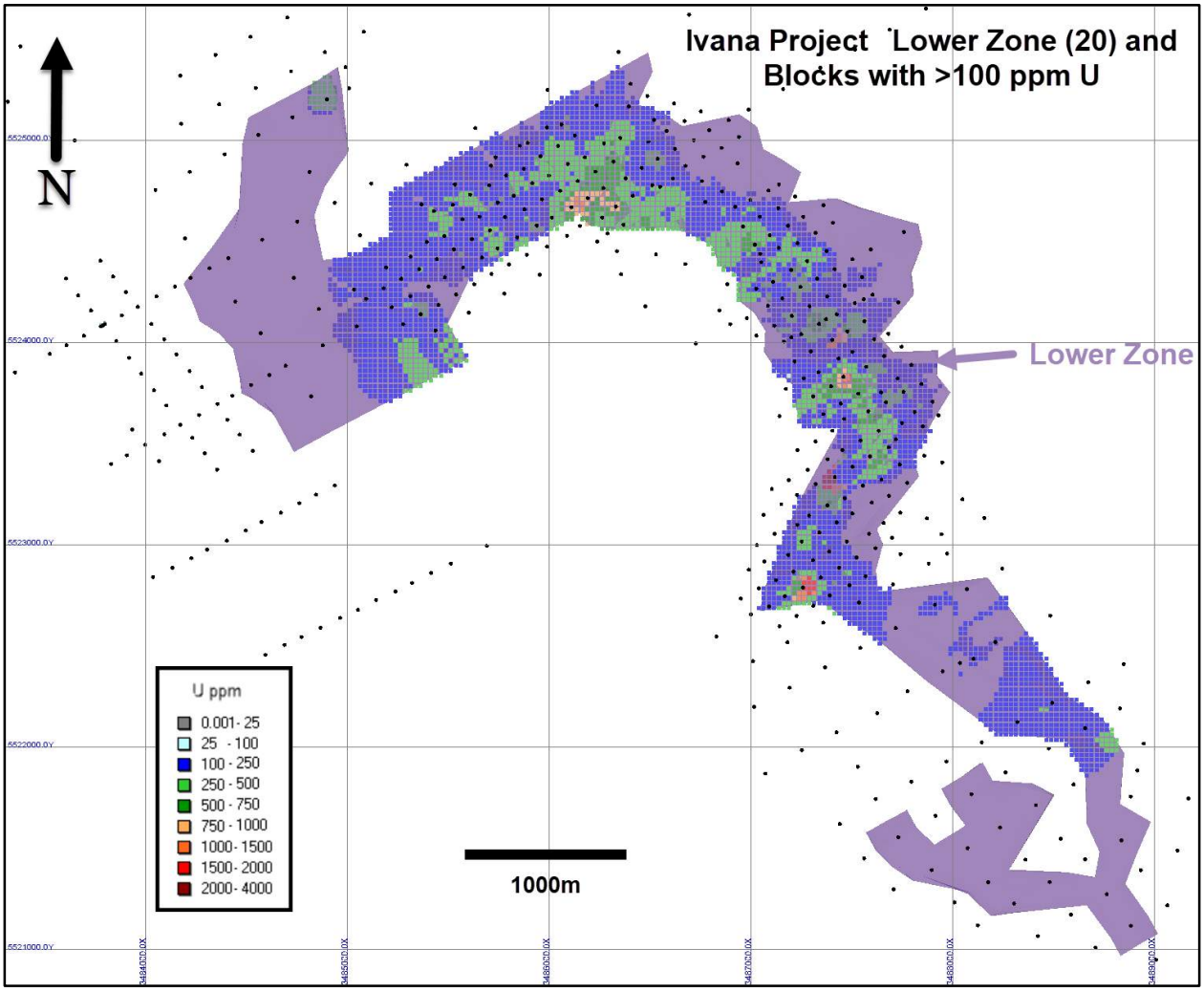


Figure 14-10: Plan View of Base Case Inferred Mineral Resource within the Lower Zone

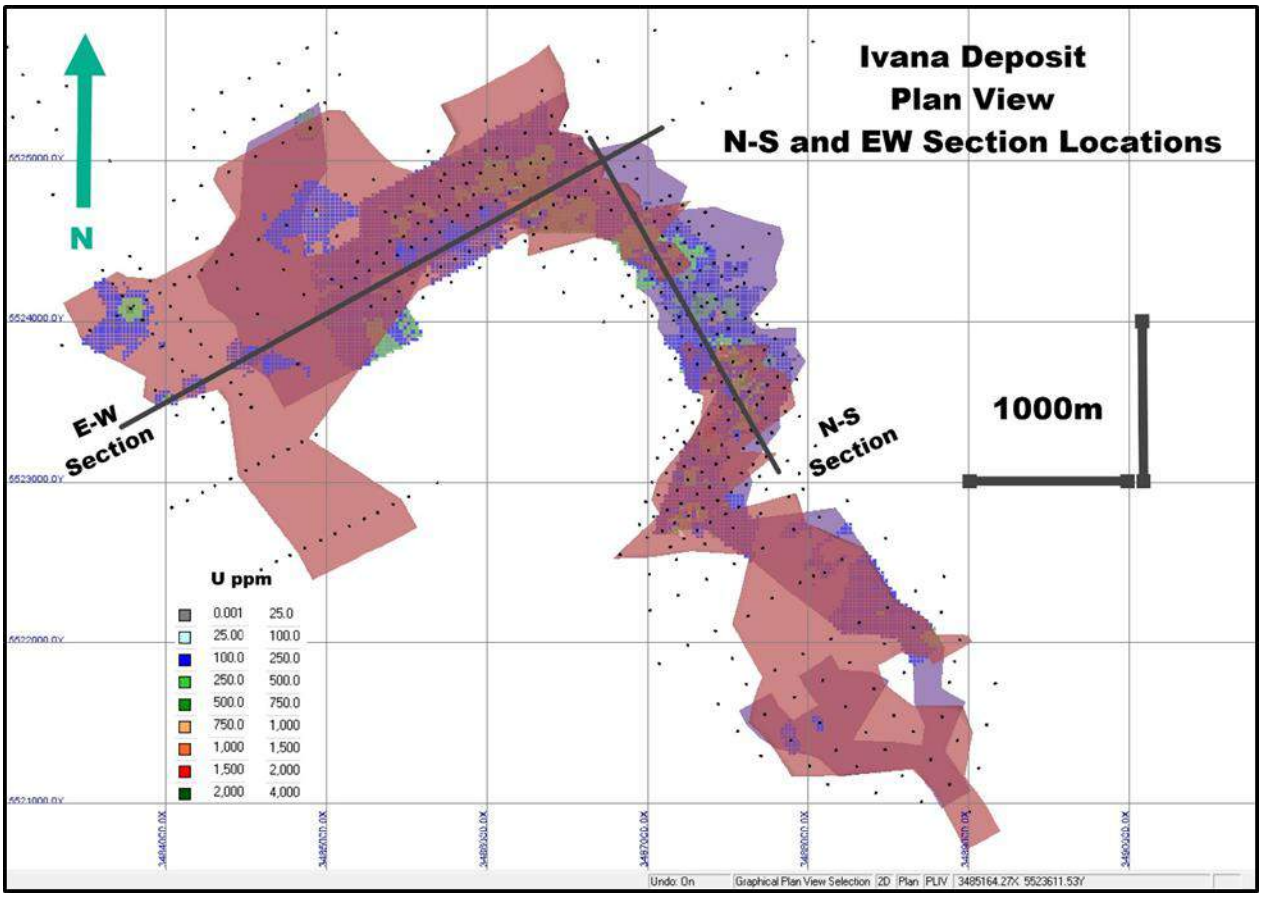


Figure 14-11: Plan View of Base Case Inferred Mineral Resource within E-W and N-S Section Lines (see sections in Figures 14-12 and 14-13)

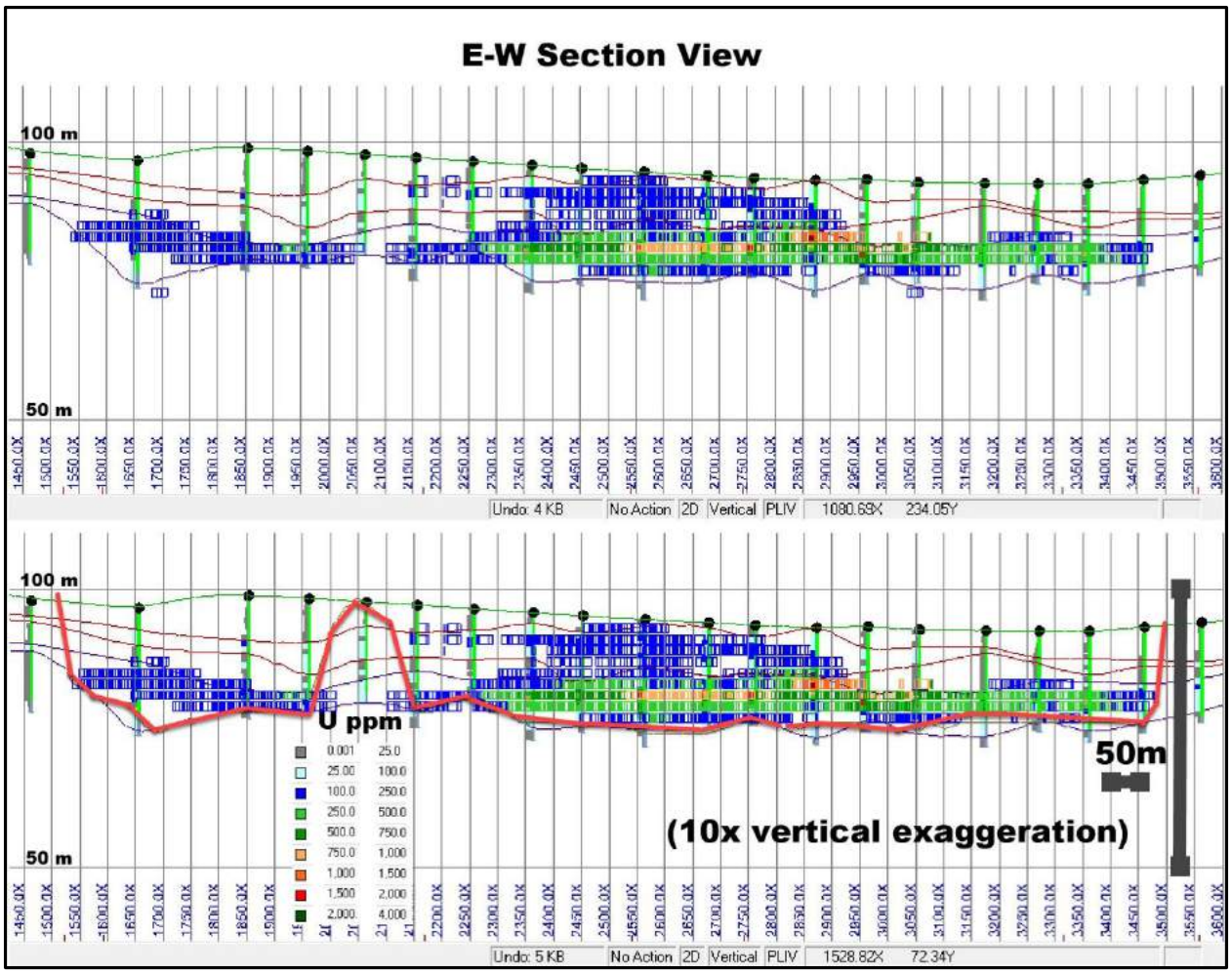


Figure 14-12: E-W Section View of Base Case Inferred Mineral Resource Showing Inferred Classed Blocks above 100 ppm U Reporting Cut-off (Top) and Inferred Classed Blocks within a Pit shell (Bottom)

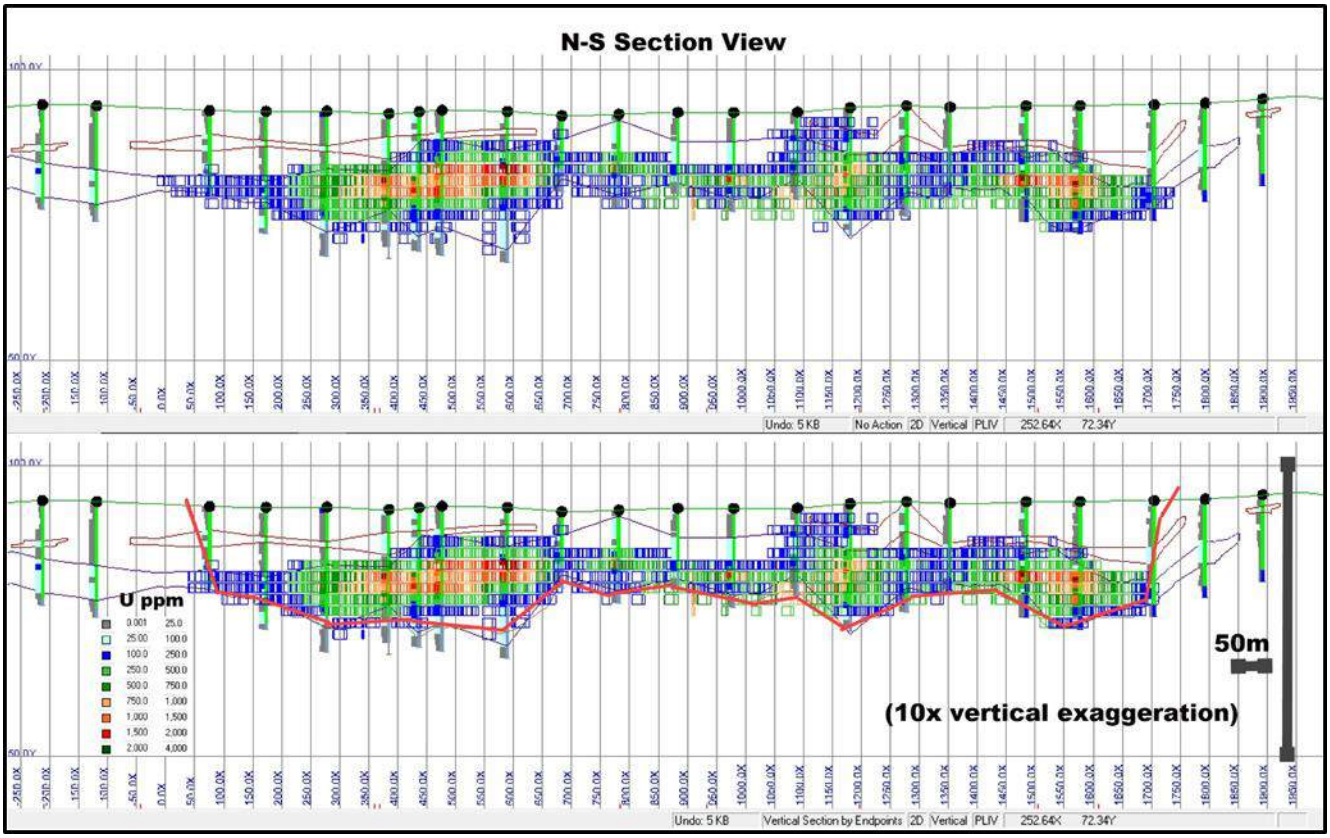


Figure 14-13: N-S Section View of Base Case Inferred Mineral Resource Showing Inferred Classed Blocks above 100 ppm U Reporting Cut-off (Top) and Inferred Classed Blocks within a Pit shell (Bottom)

14.10.2 Sensitivity of Mineral Resources

The sensitivity of mineral resources is demonstrated by listing resources at a series of cut-off thresholds as shown in Table 14-7.

Table: 14-7: Inferred Mineral Resources Declared at 100 ppm U Cut-off and Additional Grade Cut-offs for Comparative and Sensitivity Purposes

Cutoff U ppm	Zone	Tonnes	U ppm	U_3O_8 ppm	U_3O_8%	U_3O_8 lb	V ppm	V_2O_5 ppm	V_2O_5 %	V_2O_5 lb
100	**Upper**	**3,200,000**	**133**	**157**	**0.016**	**1,100,000**	**123**	**215**	**0.022**	**1,500,000**
100	**Lower**	**24,800,000**	**335**	**395**	**0.040**	**21,600,000**	**105**	**184**	**0.018**	**10,000,000**
100	**U+L**	**28,000,000**	**311**	**367**	**0.037**	**22,600,000**	**107**	**187**	**0.019**	**11,500,000**
50	Upper	14,000,000	83	98	0.010	3,000,000	105	183	0.018	5,700,000
50	Lower	38,500,000	241	284	0.028	24,100,000	94	164	0.016	14,000,000
50	U+L	52,600,000	198	233	0.023	27,100,000	97	169	0.017	19,600,000
150	Upper	600,000	214	252	0.025	300,000	174	304	0.030	400,000
150	Lower	8,200,000	412	486	0.049	19,500,000	114	199	0.020	8,000,000
150	U+L	18,700,000	405	478	0.048	19,700,000	115	201	0.020	8,300,000
200	Upper	200,000	289	340	0.034	200,000	224	393	0.039	200,000
200	Lower	14,000,000	484	571	0.057	17,600,000	122	214	0.021	6,600,000
200	U+L	14,100,000	480	566	0.057	17,600,000	123	215	0.022	6,700,000
250	Upper	100,000	334	394	0.039	100,000	256	448	0.045	100,000
250	Lower	11,200,000	549	648	0.065	16,000,000	131	229	0.023	5,600,000
250	U+L	11,200,000	546	644	0.064	16,100,000	132	230	0.023	5,700,000

Note: Not limited inside a pit shell due to shallow nature of deposit (<25 m from surface).

14.11 Summary and Conclusions

Based on the current level of exploration, the Ivana Deposit contains an inferred mineral resource of 28 Mt at a grade of 311 ppm U (0.037 % U_3O_8) and 107 ppm V (0.019% V_2O_5).

15 Mineral Reserve Estimates

Section 15 (Mineral Reserve Estimate) is not applicable to this technical report on mineral resources. There are no Mineral Reserves estimated for the Ivana deposit.

16 Mining Methods

The Ivana uranium-vanadium deposit is shallow and flat-lying, hence it is amenable to conventional surface mining methods. The materials to be excavated from the mine are comprised of unconsolidated free digging sands and gravels.

A conceptual mine plan and production schedule have been provided for the PEA. The development of this plan entailed several technical aspects:

1. Complete pit optimization analysis to select an optimal shell for the mine design.
2. Create a conceptual mine design.
3. Select mining phases to facilitate production scheduling.
4. Prepare life-of-mine production and processing schedules.
5. Estimate mining equipment fleet and manpower requirements.

The operation of the Ivana mine will require the excavation of two types of materials:

- **Waste Material**: barren or low-grade material that will either be hauled to a waste dump outside the mine, backfilled into the excavated mine, or used to construct the initial tailings cell. Additional test work will confirm that the mined waste meets legal and environmental requirements for disposal as indicated for local and international authorities.
- **Mill Feed:** material above the economic cutoff grade that will be hauled either to the Leach Feed Concentration Preparation Plant ("LFCPP") or to feed stockpiles for blending purposes. It should be noted that the term "ore" is not used in this PEA to describe the mineralized material to be processed; instead the term "mill feed" is used.

16.1 Mine Optimization

A series of pit optimization analyses were undertaken on the resource block model using the Inferred resource category. No Measured or Indicated resources exist in the block model. The pit optimization process creates a series of nested shells each containing mineralized material that is economically mineable according to a set of physical and economic parameters.

The optimizations were run using the uranium and vanadium block grades and the economic parameters shown in Table 16.1.

Table 16.1: Optimization Parameters

	Unit	Value
Uranium Price (U_3O_8)	$/lb	$50.00
Uranium Price (U)	$/lb	$58.96
Vanadium Price (V_2O_5)	$/lb	$15.00
Vanadium Price (V)	$/lb	$26.78
Discount Rate for optimization		8.0%
Waste Mining Cost	$/t waste	$2.00
Ore Mining Cost	$/t feed	$2.00
Grade Control/Other Cost	$/t feed	$0.50
Processing Cost (Prep & Leaching)	$/t feed	$4.00
G&A Cost	$/t feed	$3.76
Process and G&A	$/t feed	**$8.26**
Mining Dilution	%	3.0%
Mining Ore Loss	%	3.0%
Metallurgy		
Uranium Recovery	%	84.6%
Vanadium Recovery	%	53.4%

The results of the optimization analysis are shown graphically in Figure 16-1. The optimizations were carried out for revenue factors ranging from 20% (Shell 1) to 100% (Shell 33).

As shown in Figure 16-1, the operational cashflows curves flatten off beyond Shell 26 (Revenue Factor 82.5%). This is due to the addition of lower grade mill feed ("ore") at higher revenue factors. Although the mill feed tonnage increases, the economics of this additional material are marginal.

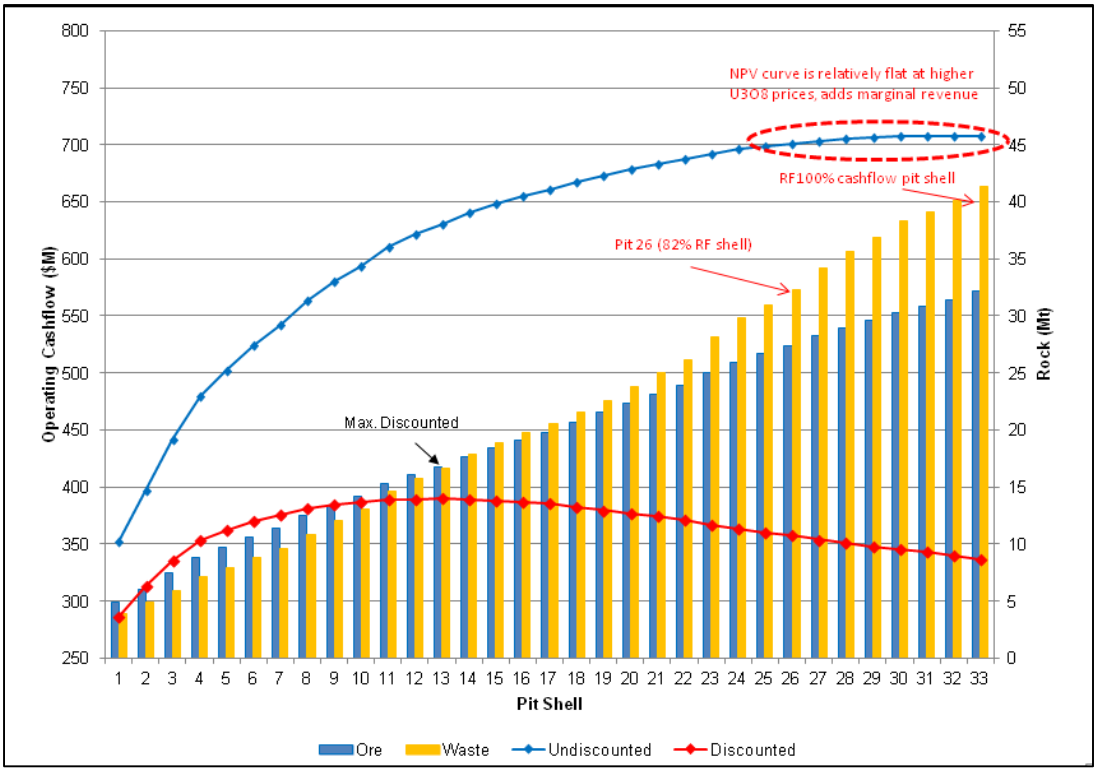


Figure 16-1: Summary of the Mine Optimization

Two specific optimized shells are shown in Figure 16-2. The largest shell corresponds to the revenue factor (RF) of 100%. The smaller shell is for Pit Shell 26 (RF=82.5%). The additional tonnage contained in the RF100% shell is mainly due to the inclusion of lower grade outlier zones on the west side of the deposit.

In the main deposit, Shells #26 and #33 are very similar, with an identical configuration in many places.

Given the marginal economics for shells greater than #26 (82.5%), this shell was used as the basis for the north and west sides of the deposit. Shell #33 (100%) was used as the basis for the mine design and production schedule for the main deposit.

Additionally, selecting Shell #33 in the main deposit area is done to maximize the extraction of the mill feed from the deposit.

Many of the smaller isolated zones were omitted from the mine plan due to their small size, lower grade, higher strip ratio, and in general their marginal economics. However, they could be reintroduced with further drilling, better geological definition, and more favorable economics in the next stage of study.

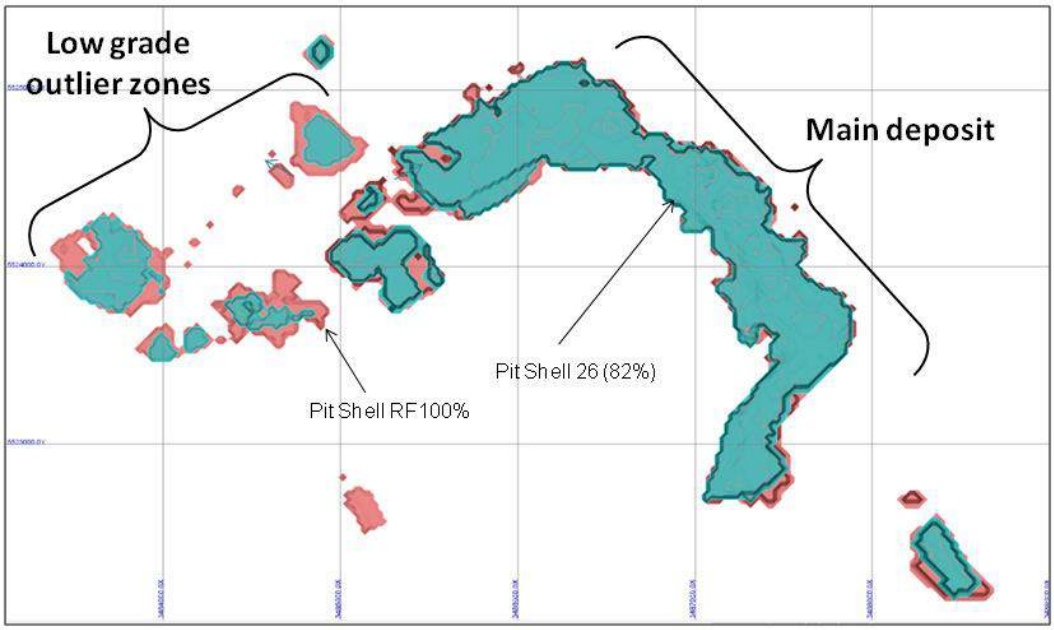


Figure 16-2: Plan View of the Selected Shells

16.2 Mine Layout

The conceptual mine design used to prepare the PEA production scheduling is shown in Figure 16-3. The mine is approximately 3,000 metres long and generally ranges in width from 100m to 400m.

The mine wall angles are designed at 30 degrees. The final mine floor will be undulating, as shown in Figure 16-4, however the average mined depth is about 20 metres.

In order to optimally schedule the mining tonnages and to accelerate access to higher grade material, the mine was sub-divided into multiple phases. These phases are shown in Figure 16-3.

The waste material and mill feed tonnages within each mining phase are summarized in Table 16.2. The higher grades are encountered near the centre of the deposit while lower grades are found along the

northwest sides (Phases F, G, H). The initial starter excavation will be located in the central part of the deposit (Phases A-W and A-M).

A general site layout showing the mine, roads and waste dumps is provided in Figure 18-1.

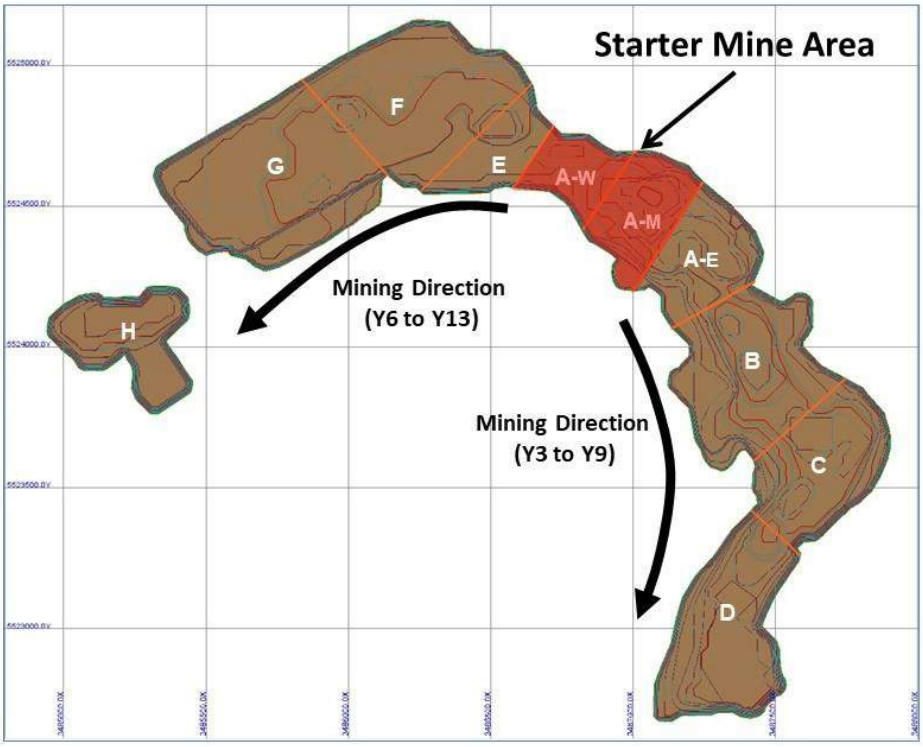


Figure 16-3: Final Mine Design

Table 16.2: Potentially Mineable Portion of the Resource

Mining Area	Total Feed (undiluted)			Waste	Total	Strip
	Mill Feed (kt)	U (ppm)	V (ppm)	kt	kt	Ratio
A-E	2,317	346	90	1,891	4,207	0.82
A-M	1,857	455	144	2,005	3,862	1.08
A-W	612	279	93	1,466	2,079	2.39
B	5,025	403	118	2,920	7,945	0.58
C	3,319	355	139	3,214	6,532	0.97
D	3,504	241	171	4,364	7,867	1.25
E	756	203	108	1,590	2,346	2.10
F	3,711	240	67	5,080	8,791	1.37
G	5,975	182	64	4,717	10,692	0.79
H	1,540	142	79	2,855	4,395	1.85
Total	**28,615**	**287**	**105**	**30,100**	**58,715**	**1.05**

Note: the potentially mineable tonnages utilized in the PEA contains Inferred resources. The reader is cautioned that Inferred Resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that value from such Resources will be realized either in whole or in part.

*Note: A Uranium Equivalent ("U-Eq") cutoff grade of 60 ppm is used for defining waste and mill feed for scheduling purposes. The U-Eq formula is U-Eq = %U + (%V*0.287), which is based on a U_3O_8 price of $50/lb with 84.6% recovery and a V_2O_5 price of $15/lb WITH 53.4% recovery.*

16.2.1 Geotechnical Studies

No geotechnical field investigations have been completed at this stage of the project.

The mine excavation is fairly shallow, ranging from 20 to 30 metres in depth. A wall slope angle of 30 degrees was used based on experience mining within similar sands and gravels.

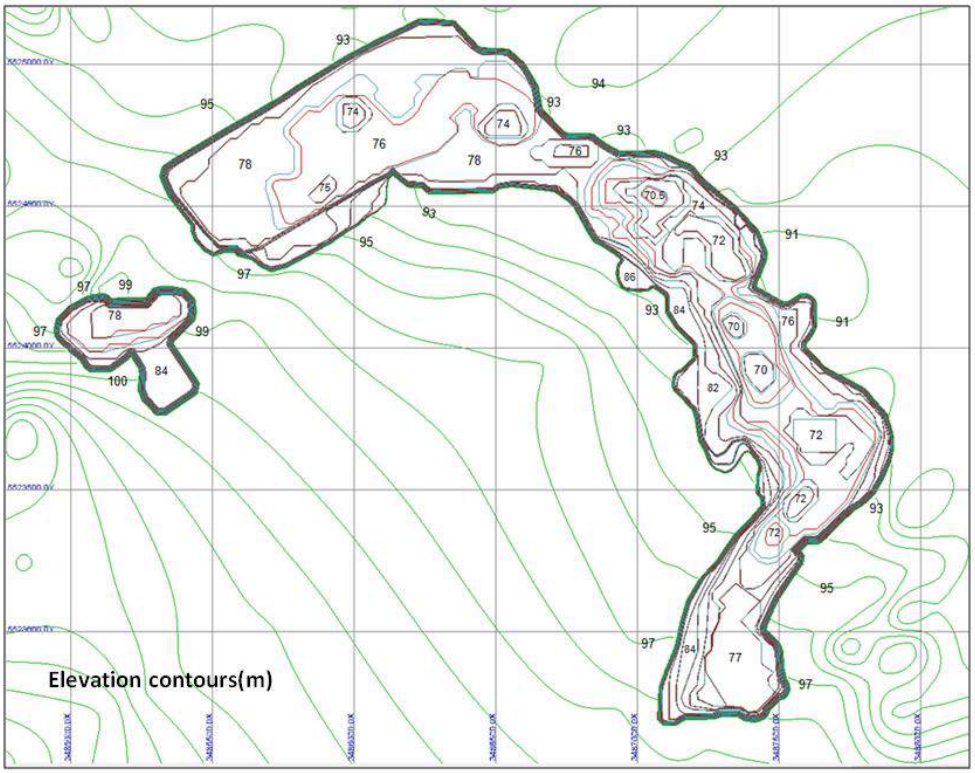


Figure 16-4: Final Mine Plan (Conceptual)

16.2.2 Hydrogeological Studies

No detailed hydrogeological studies have been completed at this stage assessing groundwater conditions. However, based on exploration drilling results, the groundwater table is approximately 7-10 m below surface. Therefore, dry mining conditions are expected in the upper elevations of the mine, gradually trending to wetter conditions at depth.

16.2.3 Mining Dilution and Ore Losses

During mining operation, some waste dilution and ore loss will occur. The amount of dilution that occurs will be dependent on the nature of the mineralized zones being mined. Better definition of the shape of the ore zones can be done with infill drilling and perhaps grade control drilling during operations. For this PEA study, no detailed dilution assessment has been completed. An assumed 3% dilution and 3% ore loss was applied.

16.3 PEA Production Schedule

The PEA mine production schedule consists of one year of pre-stripping and then 13 years of commercial mining operations. Table 16.3 presents the life-of-mine conceptual mining schedule, including stockpile operations. The processing schedule is described in Section 16.4 and includes stockpile reclaim.

Approximately 1.97 million tonnes of waste will be pre-stripped in Year -1 from the upper benches of the initial phases. This waste will be used to build the initial fine tailings cell prior to the start of processing operations.

The initial starter excavation location is shown in Figure 16-3. Details for the starter area are shown in Figure 16-5.

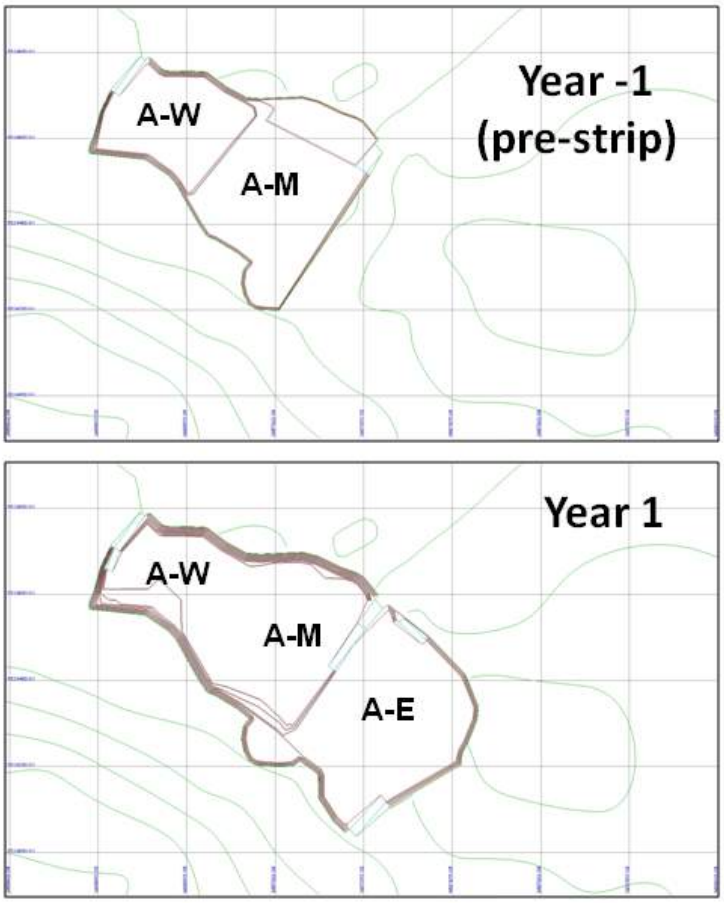


Figure 16-5: Starter Area Configurations (Conceptual)

Annual mining rates for waste and mill feed will peak at 4.8Mt per year in Years 3 and 4 of the operation. This corresponds to daily mining rates of about 13,500 t/day.

The mining advance direction will initially be from the centre area towards the south. Once the south end of the mine is depleted, mining will then progress along the north side of the deposit. Figure 16-6 details the phase sequence and timing.

Mill feed stockpiles will be used for plant feed blending purposes to ensure consistent feed quality as well as to defer the processing of low-grade material. Maximization of blending within the mine from different working faces could potentially be used as a means to minimize the use of stockpiles, hence reducing the stockpile re-handling and mining costs.

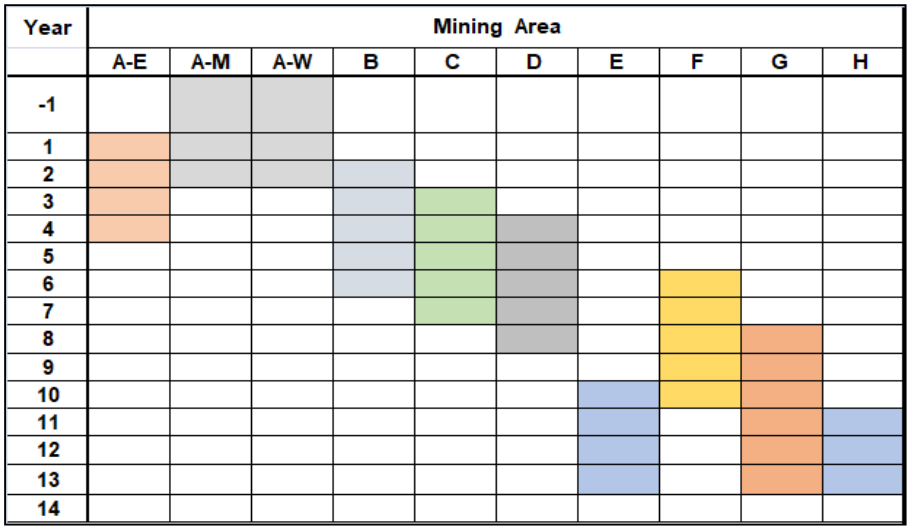


Figure 16-6: Phase Mining Sequence

As the individual mining phases are depleted, storage capacity will be created within the mine for waste disposal. Waste materials backfilled into the mine include mine waste, coarse rejects from the Leach Feed Concentrate Prep Plant, and tailings.

For the tailings and LFCPP Reject backfill, containment cells will be constructed using mine waste materials. Once the backfilled mine areas are full, they will be buried by trucked waste and/or LFCPP Rejects. This enables progressive reclamation to occur on a continuous basis. Waste material management is described in more detail in Section 18.2.

The first phases to be mined out are A-M and A-W by the end of Year 2. Mine backfilling can commence in Year 3. Every few years additional backfilling space is created as the other phases are mined out.

Table 16.3: PEA Mine Production Schedule

Year	U-Eq > 120ppm				Low-Grade Stockpile U-Eq 90-120 ppm				Very Low-Grade Stockpile U-Eq 60-90 ppm				Mined Feed	Mine Grade	Mine Grade	Waste	Total	Strip Ratio
	kt	U (ppm)	V (ppm)	U-Eq (ppm)	kt	U (ppm)	V (ppm)	U-Eq (ppm)	kt	U (ppm)	V (ppm)	U-Eq (ppm)	kt	U (ppm)	V (ppm)	kt	kt	
-1	18	248	221	311	16	43	80	66					33	152	155	1,967	2,000	NA
1	1,541	419	174	469	229	52	88	78					1,770	372	163	2,631	4,400	1.49
2	2,118	393	103	422	508	70	74	91					2,626	330	97	2,174	4,800	0.83
3	2,154	385	122	420	836	59	87	84					2,990	293	112	1,809	4,799	0.60
4	1,820	415	162	462	351	61	79	84					2,170	358	149	2,531	4,701	1.17
5	1,099	692	140	733	571	49	91	75					1,670	473	123	2,930	4,600	1.75
6	1,609	501	94	527	239	63	96	91	94	44	99	72	1,943	425	94	2,558	4,500	1.32
7	2,023	300	137	340	205	70	115	103	342	41	110	72	2,570	247	132	1,830	4,400	0.71
8	1,682	319	202	377	142	77	101	106	185	41	105	71	2,009	277	186	2,291	4,300	1.14
9	1,862	336	59	353	275	83	68	103	223	61	64	79	2,359	281	60	1,941	4,300	0.82
10	1,504	206	68	225	477	84	69	104	256	56	71	76	2,237	163	68	2,063	4,300	0.92
11	1,506	206	68	225	588	84	69	104	368	56	71	76	2,463	154	68	1,837	4,300	0.75
12	1,482	257	68	277	247	80	64	98	159	62	50	77	1,888	218	66	2,212	4,100	1.17
13	1,482	257	68	277	247	80	64	98	159	62	50	77	1,888	218	66	1,327	3,215	0.70
14																		
Total	21,898	355	113	388	4,929	69	80	92	1,787	52	79	75	28,615	287	105	30,100	58,715	1.05

16.4 Processing Schedule

The target processing rate through the Leach Feed Concentrate Prep Plant is 2.17 million tonnes per year, or approximately 6,300 tonnes per day. Feed material from the mine may be delivered directly to the plant or placed into stockpiles.

Two mill feed stockpiles will be utilized. A Low-Grade (LG) stockpile with material in the grade range of 90-120 ppm U-Eq and a Very Low-Grade (VLG) stockpile with grades in the range of 60-90 ppm U-Eq.

From time to time, material will be moved from the stockpiles to the plant. It will be important to maintain relatively consistent daily head grades to the plant to ensure efficiency of the recovery process. Extreme peaks or dips (+/-10% variation) in head grade are to be avoided. Table 16.5 describes the stockpile movements on an annual basis.

At the end of the project life, approximately 925 kt of VLG material remains unprocessed due to the marginal economics of this feed material.

Table 16.4: Processing Schedule (Conceptual)

Year	Plant Feed kt	U ppm	V ppm	U-Eq ppm
Pre-strip				
1	1,650	385	165	433
2	2,170	377	102	402
3	2,170	371	118	405
4	2,170	357	158	402
5	2,170	368	109	400
6	2,170	376	90	402
7	2,170	282	140	322
8	2,170	255	172	304
9	2,170	291	59	308
10	2,170	162	67	181
11	2,170	162	67	181
12	2,170	190	66	209
13	2,170	190	66	209
Total/average	27,690	288	105	318

Table 16.5: Stockpiling Schedule (Conceptual)

Year	LG Stockpile (U-Eq 90-120 ppm)			VLG Stockpile (U-Eq 60 - 90 ppm)			Total Stockpiles
	IN	OUT	Year End	IN	OUT	Year End	
	kt	kt	kt	kt	kt	kt	kt
-1	33		33				33
1	153	33	153				153
2	456		609				609
3	820		1,429				1,429
4			1,429				1,429
5		500	929				929
6		322	607	94		94	702
7	58		665	342		437	1,102
8		346	319	185		622	940
9		33	286	223		844	1,130
10		133	153	312		1,156	1,309
11		133	20	312		1,469	1,489
12		20	0		272	1,197	1,197
13					272	925	925
14						925	925
	1,519	1,519		1,469	544		

16.5 Mining Practices

It is assumed that the Amarillo Grande Project will be an owner-operated conventional surface mine. While contract mining is a future option, it has not been considered at this time. Various mining activities will be undertaken as part of the mine operations scope, as described in the following sections.

16.5.1 Drilling and Blasting

No drilling and blasting operations will be required due to the unconsolidated nature of the sands and gravels being mined.

16.5.2 Loading and Hauling

Diesel powered hydraulic backhoe excavators with 5 m^3 buckets will be used to dig the waste and feed materials. The excavators will load the 31-tonne articulated haul trucks with 4 pass loading. Articulated trucks are assumed due to potential trafficability issues when mining below the groundwater table.

Loading operations will also be supported by a wheel loader with a 5 m^3 bucket. This unit is a backup loading unit and available for stockpile and LFCPP reject re-handling operations.

16.5.3 Stockpiling

The mined feed will either be hauled directly to the process plant feeder or to stockpiles. The stockpiles will be used for blending purposes. When needed, a front-end loader will be used at the stockpile to transfer material directly to the feeder or to reload the trucks.

16.5.4 LFCPP Reject Backhaul

The Leach Feed Concentration Prep Plant will produce a coarse reject product as part of the attrition scrubbing process. The quantity of this rejected material will be about 77% of the plant feed tonnage.

This material is sand-like, free draining, and will be backhauled by the mine trucks that delivered feed to the plant. The LFCPP Rejects will either be hauled to the external LFCPP stockpile or backfilled in mined-out cells within the mine area.

Once floor space is created after mining out phases AM and AW, backfilling operations can follow behind the mine face advance, as illustrated by the schematic diagram in Figure 16-7. The mining sequence will endeavour to backfill as much of the LFCPP reject, mine waste, and fine tails as possible.

A dedicated front-end loader (5 m^3) will be maintained at the LFCPP pile to load the mine trucks.

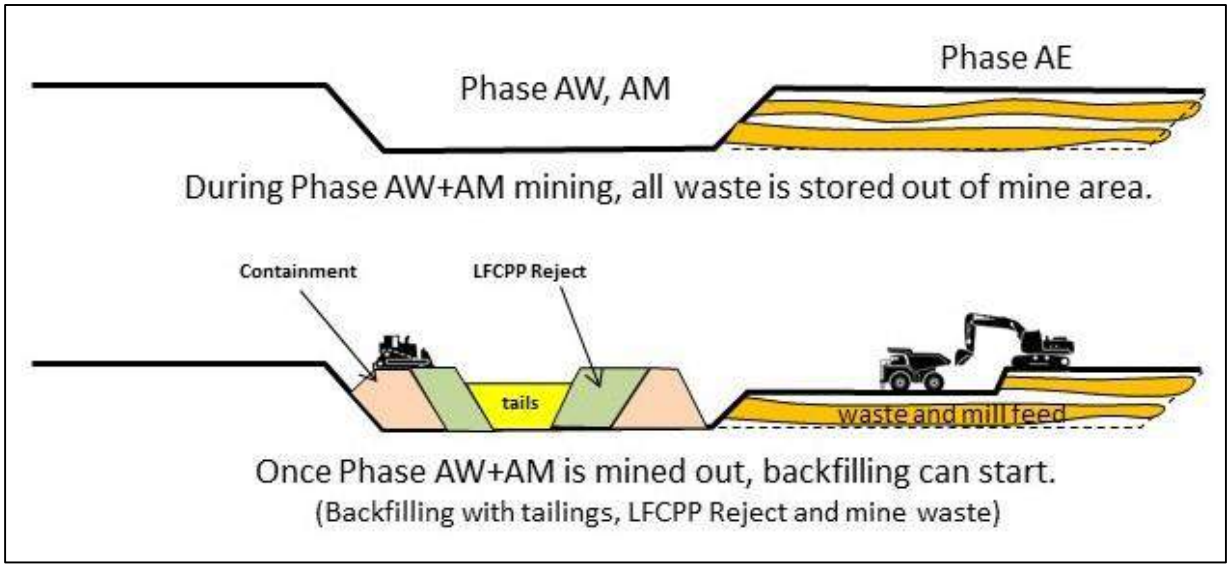


Figure 16-7: Backfilling Concept

16.5.5 Mine Dewatering

The mine will likely experience groundwater seepage at depth. An allowance has been included in the operating and capital costs for a groundwater inflow dewatering system to pump water from sumps located at depressions within the mine area.

Staged skid or trailer mounted centrifugal pumps will be used to remove water from the mine sump locations on every level during the mine development. Section 18.3 describes the water management strategy in more detail.

16.5.6 Support Equipment

The primary mining operations will be supported by a fleet of support equipment consisting of bulldozers, graders, water trucks, as well as maintenance and service vehicles. A list of major and support equipment is provided in Table 16.6.

16.5.7 Waste Storage Area

The sequencing of the surface mine will endeavour to backfill as much LFCPP Reject and tailings material in the excavated sections of the mine during operations as possible (see Section 18.2). This will enable early reclamation of the starter Tailings Management Facility ("TMF") and allow for progressive reclamation of tailings storage areas during operations. The majority of the mined waste material will be placed into a single waste storage area to the southwest of the mine (see Figure 18-2).

Some of the mined waste material will be used to construct the starter TMF embankments, separation berms within the mine area for backfilling, and closure covers during reclamation. A portion of the waste stored in the waste storage area will be re-handled at closure to complete backfilling and reclamation of the mine.

The waste management strategy is summarized in Section 18.2.1.

16.6 Mine Equipment

The mine operations at Ivana will employ methods and technologies used at other locations globally where similar material and climatic conditions are found. Table 16.6 lists the mine equipment fleet requirements on an annual basis.

Table 16.6: Preliminary Mining Equipment Fleet

Equipment List	-1	1	2	3	4	5	6	7	8	9	10	11	12	13
Excavator, 5 cu.m	2	2	2	2	2	2	2	2	2	2	2	2	2	1
Wheel Loader 5 cu.m		1	1	1	1	1	1	1	1	1	1	1	1	1
Haul Truck ADT 30 t class	4	4	5	5	5	6	6	6	6	6	6	6	5	4
Personnel Van	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Crane, Grove 40T	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Dozer (D275A)	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mechanic & Welding Truck	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Excavator, 5 cu.m	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fuel & Lube Truck	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Grader 12' blade	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Flat Deck w Hiab	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Light Plant	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Pickup Truck	4	8	8	8	8	8	8	8	8	8	8	8	8	8
Forklift	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Wheel Loader 5 cu.m	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Tractor MF 375/4WD	1	1	2	2	2	2	2	2	2	2	2	2	2	2
Water Truck	2	2	2	2	2	2	2	2	2	2	2	2	2	2

16.7 Support Facilities

The Ivana mine will require mine offices, change house facilities, maintenance facilities, warehousing and cold storage areas. The mine office will provide for mine management, engineering, geology, mine maintenance services. These are part of the project infrastructure described in Section 18.

A maintenance shop which will provide mine support services will be located near the plant site. The mine maintenance facility will consist of a truck shop which will include a wash facility, tire shop, welding

equipment and a dedicated preventive maintenance bay. The facility will have adjoining indoor parts storage and tool crib.

A fuel and lube station will be conveniently located near the maintenance facility and main haul road for equipment access.

A mobile truck mounted fuel and lube system will be available to service less mobile equipment in the field.

16.8 Mining Manpower

The Ivana mining operation will require a workforce ranging approximately 100 personnel, as summarized in Table 16.7. Manpower numbers will fluctuate as mining volumes and equipment operating hours change.

The mining operations manning list includes all aspects involved with the surface mine operations, including;

- Senior mine and maintenance supervision
- Office technical staff, engineering, geology, surveying, etc.
- Clerical, maintenance planning, training
- Mine operations crews
- Mine support crews
- Mine maintenance crews

Table 16.7: Mining Manpower

List of Personnel	-1	1	2	3	4	5	6	7	8	9	10	11	12	13
Truck Drivers	12	16	18	19	19	20	20	21	21	22	22	23	19	15
Excavator 1 Operators	4	5	5	5	5	5	5	5	5	5	5	5	5	4
Loader Operators		2	3	3	3	3	3	3	3	3	3	3	3	3
HD Mechanic	4	10	11	11	11	11	11	11	11	11	11	12	11	9
Mine Services (dewatering)		1	1	1	1	1	1	1	1	1	1	1	1	1
Grader Operator		4	4	4	4	4	4	4	4	4	4	4	4	4
Dozer Operator		8	8	8	8	8	8	8	8	8	8	8	8	8
Water/Sand Truck Operator		4	4	4	4	4	4	4	4	4	4	4	4	4
Utility Operators		4	4	4	4	4	4	4	4	4	4	4	4	4
Mine Superintendent	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mine Foremen		8	8	8	8	8	8	8	8	8	8	8	8	8
Mine Clerk	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Equipment Trainer	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Maintenance Foreman		4	4	4	4	4	4	4	4	4	4	4	4	4
Shop Foreman		1	1	1	1	1	1	1	1	1	1	1	1	1
Maintenance Clerk	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Planner		1	1	1	1	1	1	1	1	1	1	1	1	1
Welder	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Gas Mechanic	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fuel and Lube Person	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Partsman		1	1	1	1	1	1	1	1	1	1	1	1	1
Laborer	1	4	4	4	4	4	4	4	4	4	4	4	4	4
Chief Mine Engineer	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Senior Mine Area Engineer	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Engineer	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Geologist	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Surveyor	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Survey Technician	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mine Technician	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ore Control Technician	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Total	39	92	96	97	97	98	98	99	99	100	100	102	97	90

17 Recovery Methods

17.1 Process Selection

Uranium leaching may be either acidic (normally sulphuric acid) or alkaline (normally with a combination of sodium carbonate and sodium bicarbonate). Alkaline carbonate leaching was selected for the Ivana leach process because of the relatively high concentration of acid-consuming minerals in the leach feed. The processing route selected for the Ivana operation uses processes commonly used in alkaline carbonate leach plants globally, while including some innovative processes to optimize plant performance.

17.2 Summary

The Ivana operation is a proposed uranium-vanadium mine and process plant in Rio Negro Province, Argentina. Processing will be by alkaline carbonate leach with uranium peroxide precipitation followed by calcination to tri-uranium octoxide (U_3O_8) or uranium trioxide (UO_3), and with ammonium metavanadate precipitation followed by calcining to vanadium pentoxide (V_2O_5). This section describes the process plant. Process design criteria will be refined in the future based on the results of ongoing exploration and process testing.

17.3 Process Plant Summary

Over its 13-year operating life, the conceptual process plant is designed to process 27,690kt of uranium-vanadium process plant feed, grading on average 0.033% U_3O_8 (280 ppm U) and 0.018% V_2O_5 (104 ppm V).

The conceptual process plant design feed rate is 2,170 kt/year. Uranium production averages 1.35 Mlb U_3O_8 per year and totals 17.5 Mlb U_3O_8 over the life of mine. Vanadium production averages 0.5 Mlb V_2O_5 per year and totals 6.5 Mlb V_2O_5 over the life of mine.

Process plant recovery is 85% for uranium (derived from 89% leach feed concentrate process recovery and 95% recovery in the subsequent process unit operations); and 53% for vanadium (derived from 89% leach feed concentrate process recovery and 60% recovery in the subsequent process unit operations).

The conceptual process plant design can accommodate fluctuations in feed grade which are expected over the project life.

17.4 Process Plant Description

Mined mill feed material will be stockpiled to provide a surge capacity between the mine operations and the processing operations, and to enable ore blending if and as required to manage the grade of the process plant feed.

17.4.1 Leach Feed Concentrate Preparation Plant

The first stage of processing is leach feed concentrate production. Virtually all of the uranium and vanadium mineralization in the mined material occurs in particle sizes less than 100µm. The Leach Feed Concentrate Preparation Plant has two functions. First, to separate the -100µm material from the larger barren particles; and second, to scrub away and recover the -100µm uranium and vanadium mineral particles coating the larger barren particles. Figure 17-1 shows the conceptual leach feed concentrate process flow diagram.

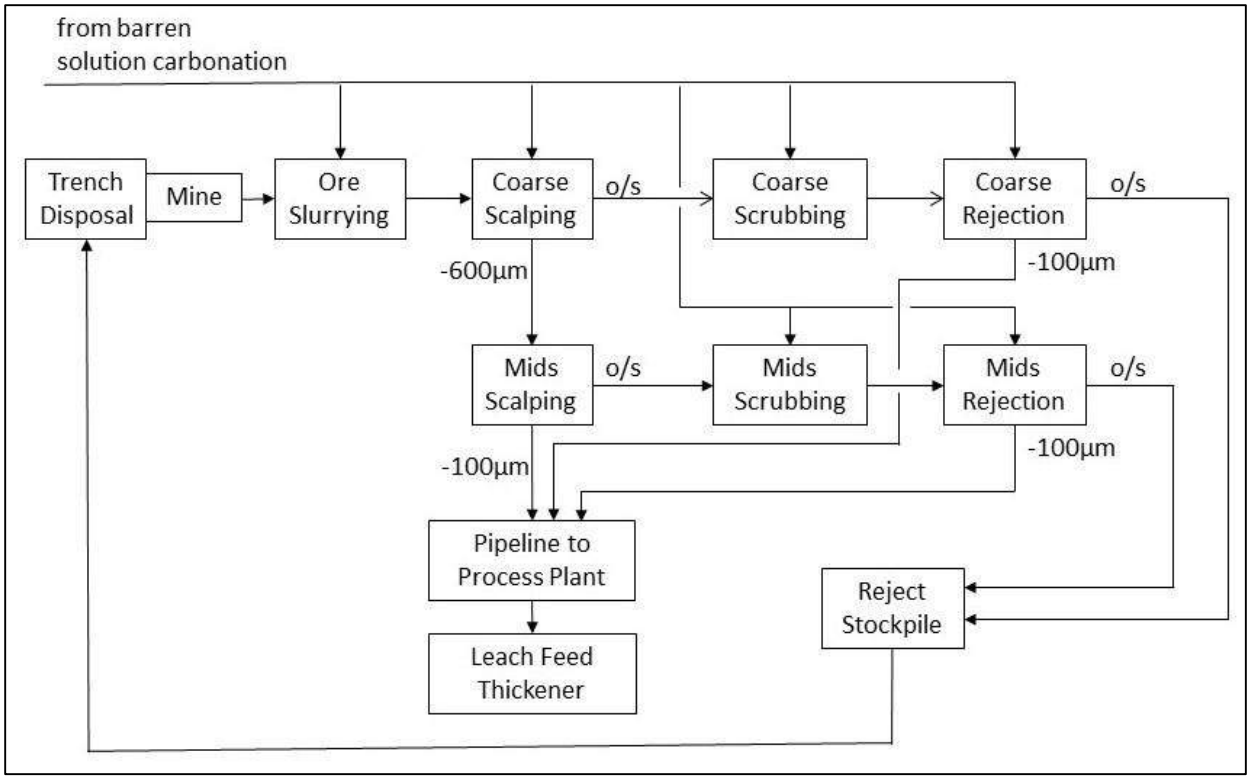


Figure 17-1: Leach Feed Concentrate Preparation Process Flow Diagram

The Leach Feed Concentrate Preparation Plant is a semi-mobile screening and scrubbing facility, located near the proposed mining site. Mineralized material reclaimed from the mine stockpiles is slurried and passed over a 600µm scalping screen. The 600µm oversize is the coarse fraction. The coarse fraction is scrubbed in a series of attrition scrubbers. The scrubbed coarse material is rejected by screening at 100µm. The mids fraction is scalped over a 100µm screen. The mids fraction is scrubbed in a second series of attrition scrubbers. The scrubbed mids material is rejected by screening at 100µm.

Note that separating the coarse fraction and the mids fraction at 600µm gives two +100µm fractions of approximately equal mass, simplifying the design and operation of the scrubbing and rejection unit operations. The rejected coarse fraction and mids fraction resemble a clean coarse sand and are sent to a reject stockpile for onsite disposal. The U grade of each of the rejected coarse fraction and the rejected mids fraction is less than 0.03% U.

In the leach feed concentrate preparation process the mass recovery from mined material to leach feed concentrate averages approximately 23%. The leach feed preparation process recovers 89% of the uranium and vanadium mineralization from the mined material. Thus, the leach feed concentrate preparation process increases the leach feed grade approximately fourfold relative to the mined material.

17.4.2 Process Plant

The slurry containing the -100µm fraction of the mined material is pipelined to the leach feed thickener in the process plant.

Figure 17-2 shows the conceptual process plant layout.

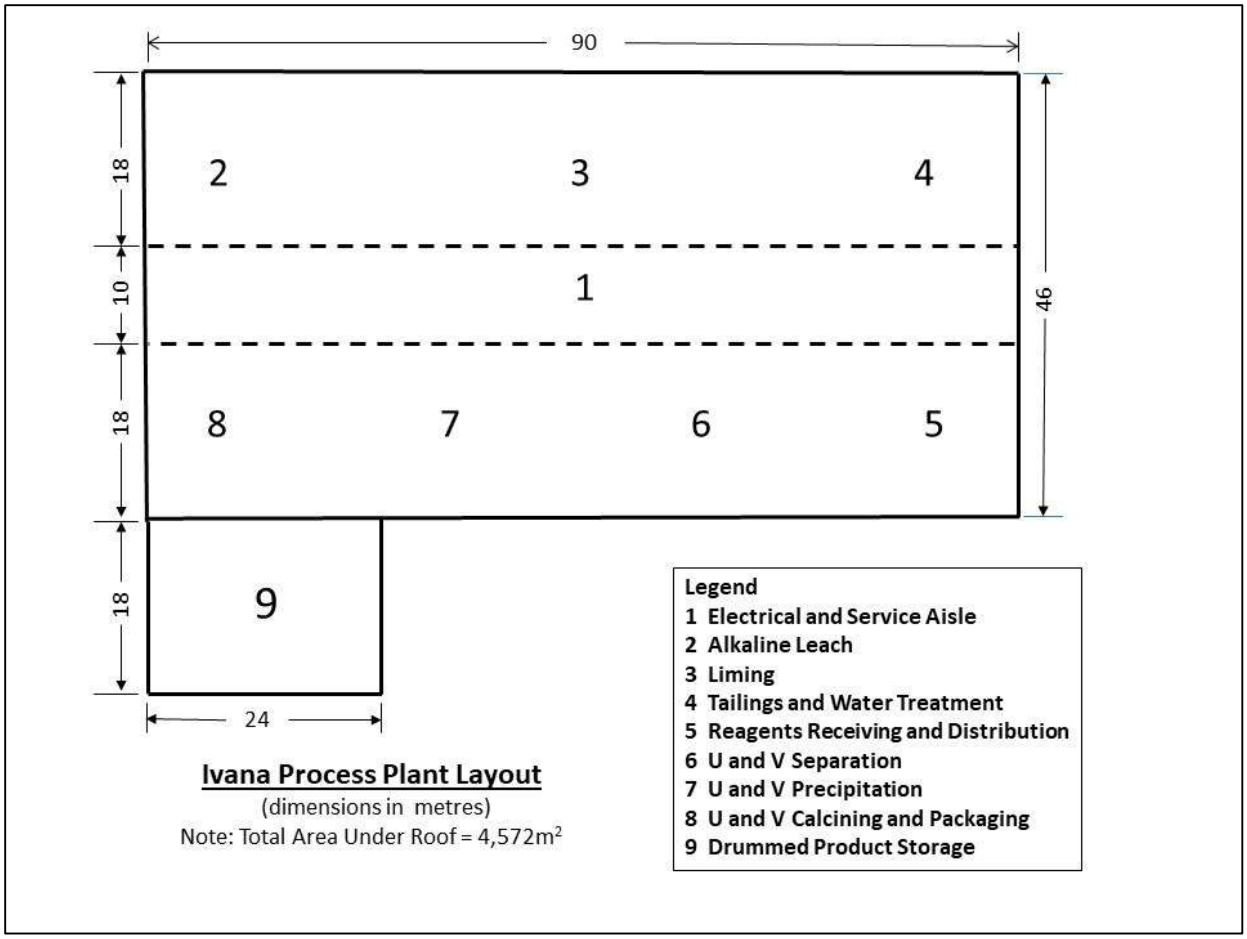


Figure 17-2: Conceptual Process Plant Layout.

Figure 17-3 shows the conceptual process plant process flow diagram.

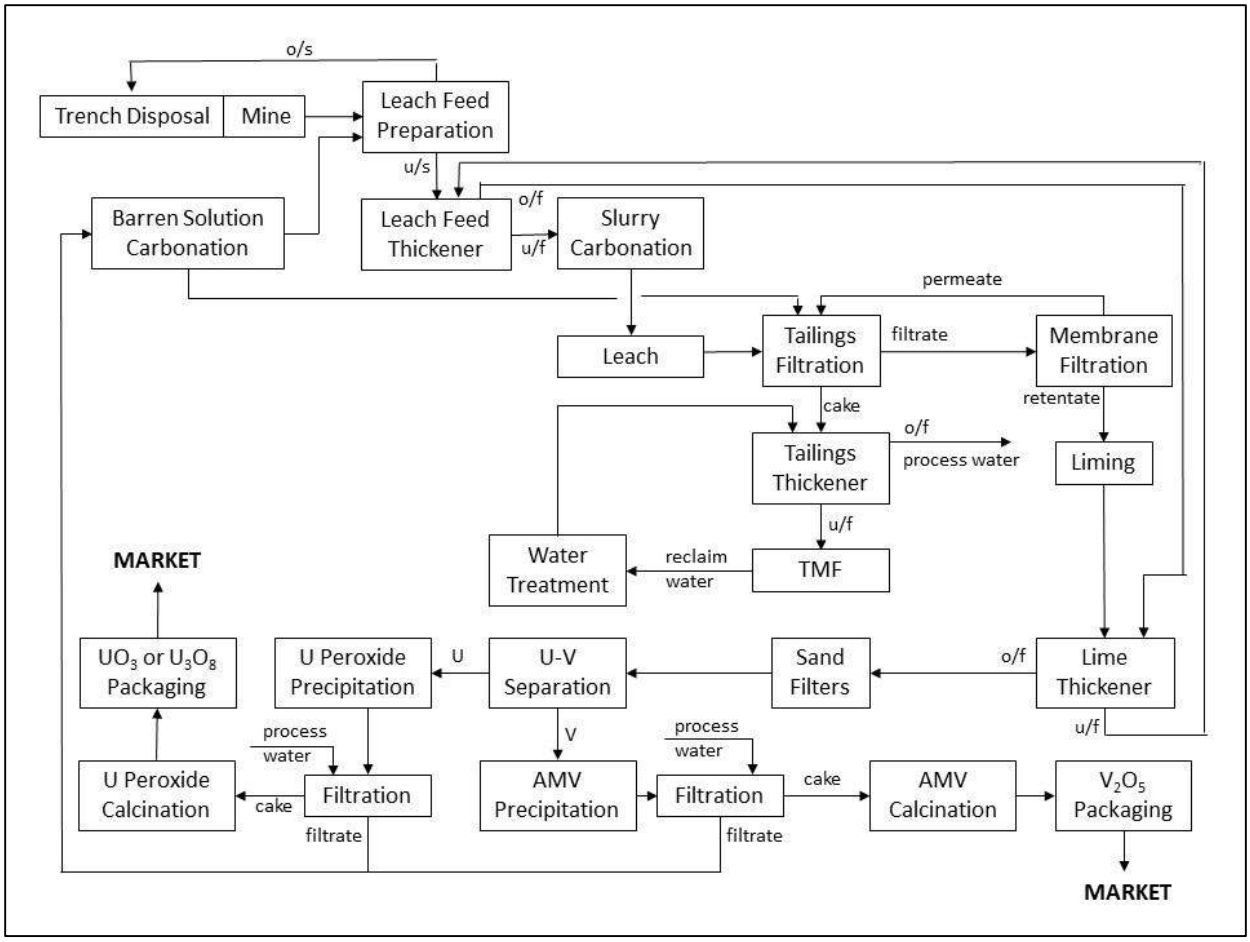


Figure 17-3: Conceptual Process Plant Process Flow Diagram

Leach feed thickener overflow is pumped to the lime thickener feed well. Leach feed thickener underflow is pumped to slurry carbonation, where flue gas from the site steam boilers is mixed into the slurry to dissolve carbon dioxide from the flue gas.

The carbonated slurry feeds the alkaline carbonate leach circuit where uranium and vanadium are dissolved from the leach feed minerals. The alkaline carbonate leach runs at 95°C and is heated by steam injection. No oxidant is required. Tests using oxygen as oxidant did not increase uranium leach recovery, and decreased vanadium leach recovery.

The slurry feed to the alkaline carbonate leach circuit will pass through a pipe-in-pipe heat exchanger to recover heat from the slurry exiting the alkaline carbonate leach circuit.

The alkaline carbonate leach circuit product slurry feeds tailings filtration. The filter cake is pumped to the tailings thickener. Filtrate is pumped to membrane filtration. The membrane permeate, essentially clean water, is used as the secondary wash for tailings filtration. The membrane retentate, a relatively low flow rate and a more concentrated pregnant solution, is pumped to liming.

In this circuit, lime slurry is added to reduce bicarbonate ion concentration and to precipitate impurities such as sulphate ion, molybdenum, iron, thorium, and radium. The resulting slurry is pumped to the lime thickener.

Lime thickener underflow is pumped to the leach feed thickener to recover any uranium unintentionally precipitated in the lime circuit. Lime thickener overflow solution is polished in sand filters, from which it enters the U-V separation circuit. Figure 17-4 shows the conceptual U-V separation process flow diagram.

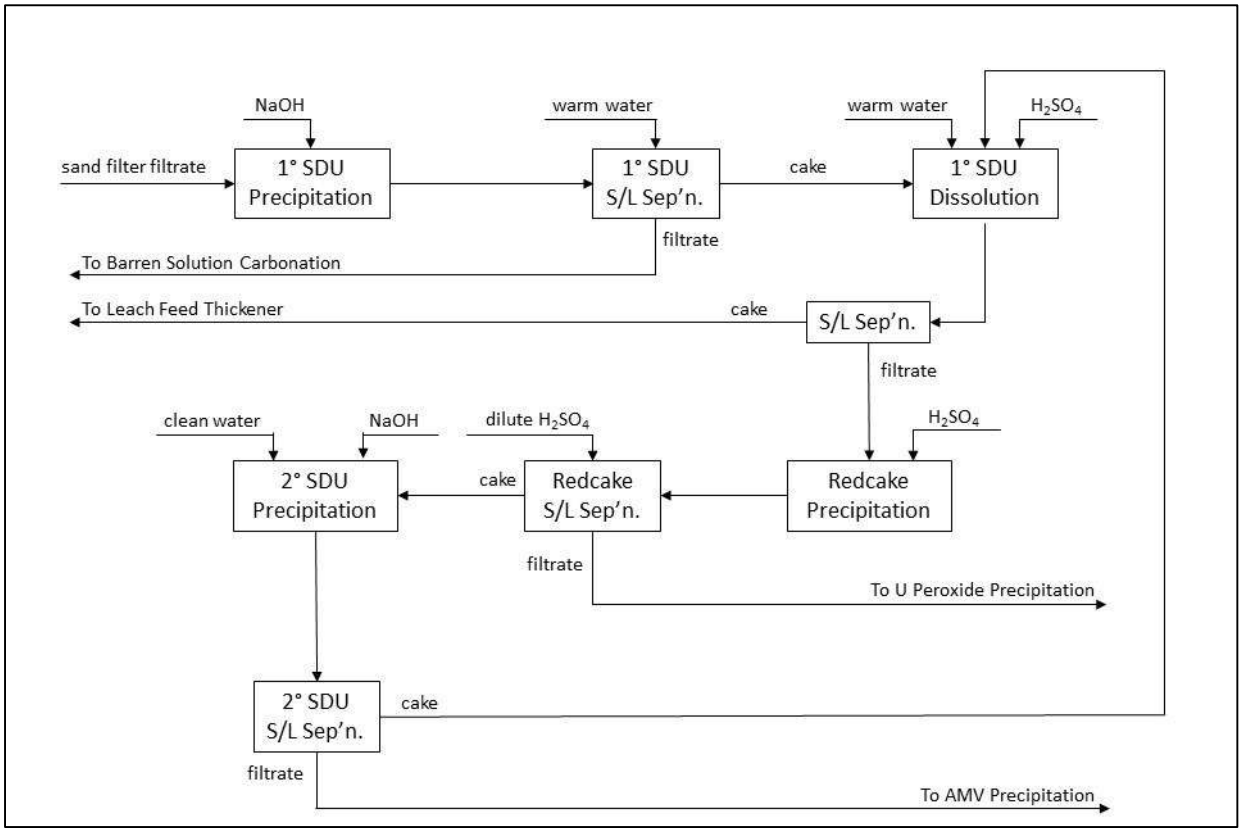


Figure 17-4: Conceptual U-V Separation Circuit Process Flow Diagram

Note 1: SDU is sodium diuranate, $Na_2U_2O_7$
Note 2: Redcake is sodium hexavanadate, $Na_4V_6O_{17}$

As shown, in the U-V separation circuit, uranium and vanadium are separated by selective chemical precipitation.

The uranium solution from the U-V separation circuit passes to the uranium peroxide precipitation stage, where dissolved uranium is precipitated with hydrogen peroxide. The uranium precipitate, uranium peroxide, is $UO_4 \cdot 2H_2O$. The uranium precipitate solids are filtered from the barren solution using process water as cake wash, then calcined to U_3O_8 or UO_3, packaged in steel drums and shipped to market.

The vanadium solution from the U-V separation circuit passes to the ammonium metavanadate (AMV) precipitation stage, where dissolved vanadium is precipitated with ammonium hydroxide. The vanadium precipitate, ammonium metavanadate, is NH_4VO_3. The vanadium precipitate solids are filtered from the barren solution using process water as cake wash, then calcined to vanadium pentoxide (V_2O_5), packaged in steel drums and shipped to market.

The combined barren solution undergoes carbonation, where flue gas from the site steam boilers is mixed into the solution to dissolve carbon dioxide from the flue gas. The carbonated barren solution is pumped to the leach feed concentrate preparation plant, and to tailings filtration as the primary cake wash.

Tailings thickener underflow is pumped into the starter TMF. In the starter TMF the tailings slurry settles and consolidates, releasing entrained water. This released water is reclaimed and pumped to the water treatment circuit in the process plant. In this circuit the water is treated first to precipitate dissolved radium, then to precipitate any remaining dissolved sulphate ion, molybdenum, iron, and thorium. Finally, the solution pH is adjusted to 7.0 (that is, neutral). The resulting low-density slurry is pumped to the tailings thickener, in which the water treatment precipitate solids settle for pumping into the TMF, along with and mixed into the alkaline carbonate leach tailings. Tailings thickener overflow is pumped to the process water tank, in which the pH is adjusted to 7.0.

18 Project Infrastructure

The Ivana Uranium-Vanadium deposit at the Amarillo Grande Project will make use of existing regional infrastructure to the greatest degree possible. Existing infrastructure at site is minimal.

The proposed site layout is configured for optimal construction access and operational efficiency. The siting of primary buildings allows easy access from the site access road, with proximity to the mining areas. Local mine roads will be constructed around the mining and waste management areas. The proposed locations for the starter Tailings Management Facility (TMF) and stockpiles (Waste Rock, Leach Feed Concentrate Preparation Plant Reject and Surface Soil) are close to their sources to minimize pumping and haul distances and construction earthwork volumes.

A general site plan is shown on Figure 18-1. The site infrastructure detail is shown on Figure 18-2. This plan shows the location of the mining areas, waste rock storage area, Process Plant, starter TMF and other site infrastructure.

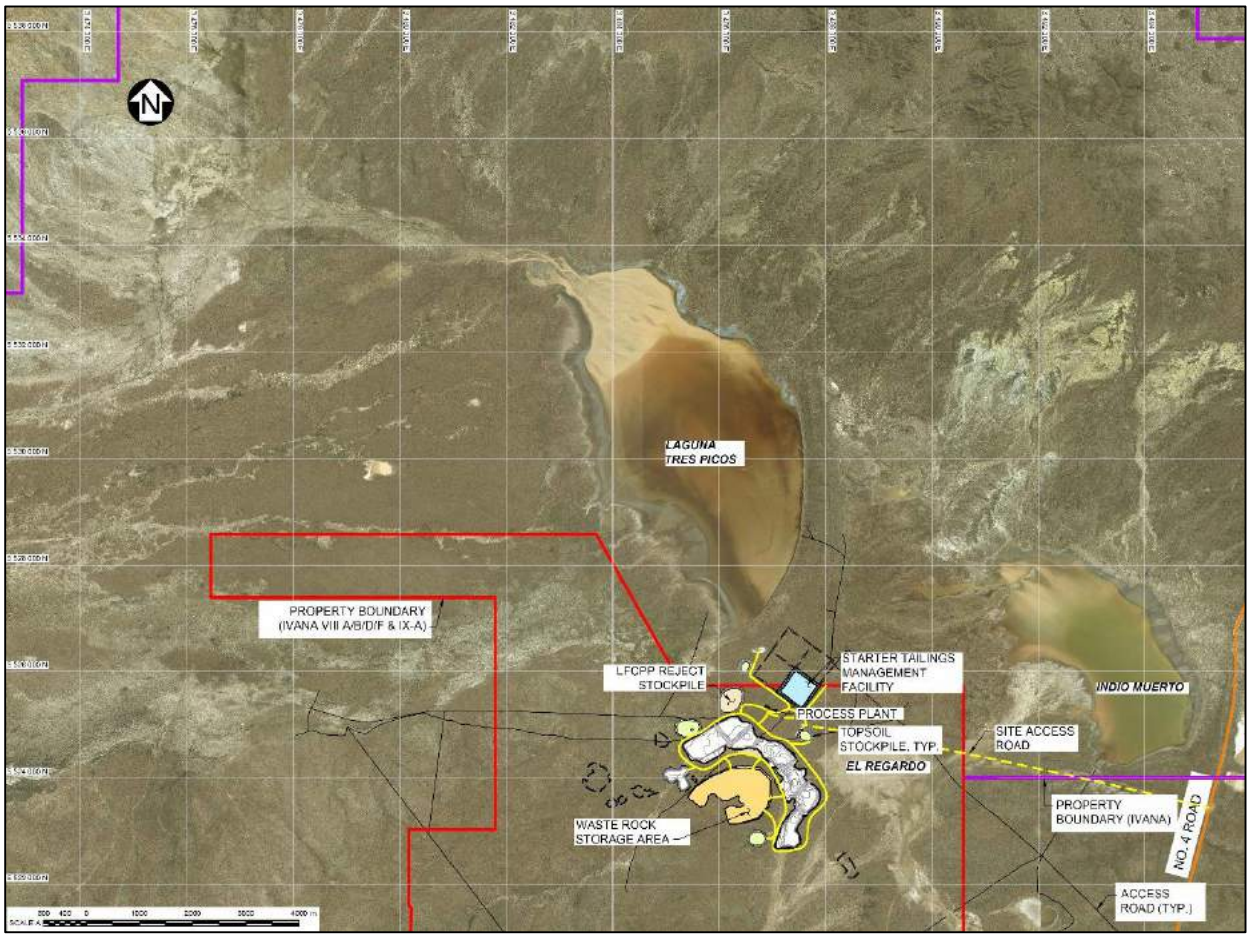


Figure 18-1: Site Plan Source: KP (2019)

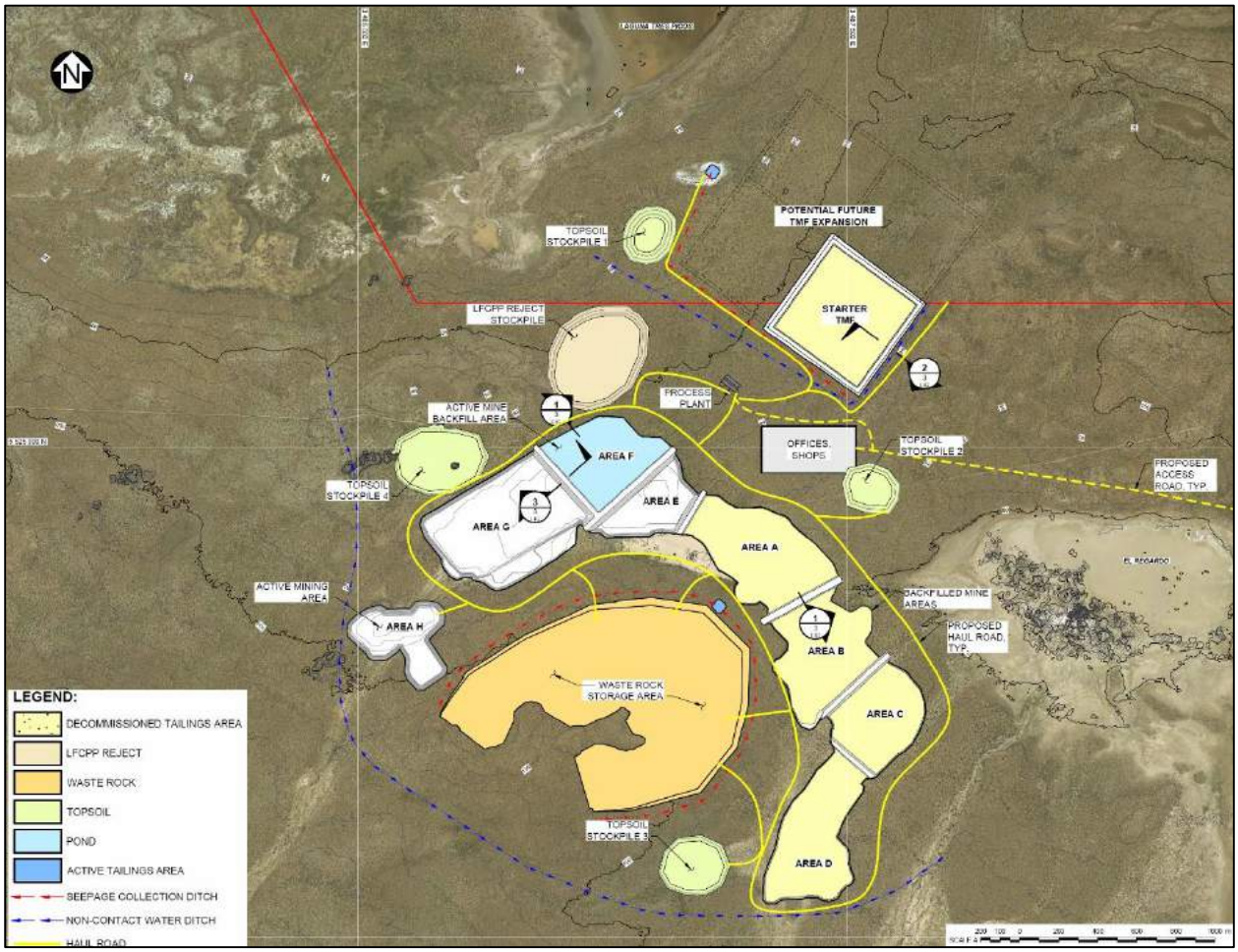


Figure 18-2: Site Infrastructure Layout Source: KP (2019)

18.1 Building and Site Infrastructure

Various earthworks, buildings, and facilities are required to support the mining and processing operation:

- Site access and haul roads
- Process plant
- Electrical power distribution via overhead power lines
- Tailings Management Facility (TMF)
- Site water management facilities (diversion ditches, collection ditches, ponds)
- Security building with first aid office
- Administration office complex
- Maintenance shop
- Mine dry change house
- 3-bay truck shop
- Warehouse and laydown yards

- Diesel fuel storage and refueling station
- Sewage treatment plant
- Fire water system

18.1.1 Site Roads

A site access road will be located along the east side of the plant and connect with provincial road RP4, which runs north from the town of Valcheta. This will be the route for public access as well as for outgoing concentrate shipments.

The nearest community is Valcheta with a population of about 5,000. The majority of the workforce will reside in this community. No operating camp accommodation is planned at the mine site.

Various haul roads will be used to move material from the mining areas to the Leach Feed Concentrate Preparation Plant, to the mill feed stockpile area, and to the waste rock storage area. A haul road will also connect the Leach Feed Concentrate Preparation Plant Reject discharge pile and the Reject Stockpile.

18.1.2 Power Supply

The Ivana operation will be supplied with grid power. A 30 km power line will be constructed connecting with the regional power grid at Valcheta or Federal Road No. 3. The estimated connected load for tailings, reclaim and water management pump systems is estimated at 90 kW (equivalent to 765 MWhr/year).

18.1.3 Process Water Supply

The process water will be reclaimed from the supernatant pond at the starter TMF (Phase I) and the active backfill cells at the mining areas (Phase II). Makeup water will be sourced from dewatering in the active mining areas and groundwater wells that will pump directly to the Process Plant.

Makeup water requirements are approximately 11 L/sec in Phase I of operations and range from 8 L/sec to 9 L/sec in Phase II of operations.

18.2 Waste Management

18.2.1 Waste Management Strategy

Granular deposits and weathered/rippable bedrock (unconsolidated to weakly consolidated sand/gravel) will be excavated from the mineralized zone via surface mining methods to establish a mine area. The mill feed material will initially undergo a wet screening and scrubbing process to remove unmineralized coarser particles that are unsuitable for the alkaline leach portion of the uranium and vanadium recovery process (i.e. particles larger than 100 µm). The coarse material removed through the scrubbing and screening is termed the Leach Feed Concentrate Preparation Plant Reject ("LFCPP Reject") and comprises on average 77% of the mass of the mineralized material.

The remaining 23% of mineralized material is the finer fraction (fraction with particles smaller than 100 µm). This material will undergo alkaline leaching to remove and recover uranium and vanadium. The residue from the leach process will be re-pulped to a solids content of approx. 40% solids by weight and managed as slurry tailings.

Mill feed will be processed at a rate of approx. 6,300 tonnes per day ("tpd") for a period of 13 years, totalling 27.7 million tonnes ("Mt") of mill feed.

LFCPP Reject and tailings will be stored in separate facilities on surface for the first three years of operations. The LFCPP Reject material will be stored in a surface stockpile and tailings will be stored in an engineered TMF, the starter TMF. From Year 4 onwards, LFCPP Reject and tailings will be stored in

decommissioned mining areas. LFCPP Reject stored on surface will be re-handled at closure and backfilled into the mining area.

Waste material (barren material) generated during mining will be stored on surface in the Waste Rock Storage Area for the life of mine. Mined waste will also be used to construct the starter TMF embankments, separation berms within the mine (to contain tailings in decommissioned cells while development of adjacent mine areas is ongoing), and closure covers for the starter TMF and backfilled mine areas. Approximately 30 Mt of mined waste will be generated over the life of mine.

The waste management strategy is summarized in Table 18-1 while the mine backfill schedule is summarized in Table 18-2.

Table 18-1: Waste Management Strategy

Year of Operation	Waste Production and Surface Storage Schedule (Mtonnes)									
	Mined Waste Production				Tailings			LFCPP Reject		
	Total (Mt)	To TMF	To Mine	To Stockpile	Total (Mt)	To Starter TMF	To Mine	Total (Mt)	To Stockpile	To Mine
Year -1	1.97	0.69	0	1.28	0	0	0	0	0	0
Year 1	2.63	0	0	2.63	0.38	0.38	0	1.27	1.27	0
Year 2	2.17	0	0.36	1.81	0.50	0.50	0	1.67	1.67	0
Year 3	1.81	0	0	1.81	0.50	0.50	0	1.67	1.67	0
Year 4	2.53	0.07	0.76	1.69	0.50	0	0.50	1.67	0	1.67
Year 5	2.93	0	0	2.93	0.50	0	0.50	1.67	0	1.67
Year 6	2.56	0	1.08	1.48	0.50	0	0.50	1.67	0	1.67
Year 7	1.83	0	0.49	1.34	0.50	0	0.50	1.67	0	1.67
Year 8	2.29	0	0.23	2.06	0.50	0	0.50	1.67	0	1.67
Year 9	1.94	0	0	1.94	0.50	0	0.50	1.67	0	1.67
Year 10	2.06	0	1.26	0.80	0.50	0	0.50	1.67	0	1.67
Year 11	1.84	0	0.22	1.62	0.50	0	0.50	1.67	0	1.67
Year 12	2.21	0	0	2.21	0.50	0	0.50	1.67	0	1.67
Year 13	1.33	0	0.99	0.33	0.50	0	0.50	1.67	0	1.67
TOTAL	**30.10**	**0.76**	**5.40**	**23.94**	**6.37**	**1.38**	**4.99**	**21.32**	**4.61**	**16.71**
Closure	**0**	**0**	**5.45**	**-5.45**	**0**	**0**	**0**	**0**	**-4.61**	**4.61**

Source: KP (2019)

NOTES:

1. Placed density of waste material and LFCPP Reject assumed as 2 tonnes per cubic metre (t/m^3).
2. Negative values at Closure indicates material re-handled from stockpiles for backfill and/or closure cover of backfilled areas.
3. Final dry density of tailings assumed as 1.3 t/m^3.
4. Waste management strategy based on production schedule dated January 31, 2019.
5. Mine backfill schedule based on pit shells and separation berms provided by Blue Sky (Jan 30, 2019).

Table 18-2: Mine Backfill Schedule

Year of Operation	Mine Backfill Schedule				
	Waste for Closure Cover and Backfill	Waste to Mine Area Separation Berms	Tailings Backfill to Mine	LFCPP Reject Backfill	Active Mine Backfill Cell
	m^3	m^3	m^3	m^3	
Year -1	0	0	0	0	-
Year 1	0	0	0	0	-
Year 2	0	180,460	0	0	-
Year 3	0	0	0	0	-
Year 4	0	381,360	383,923	835,450	**Cell A**
Year 5	0	0	383,923	835,450	**Cell A**
Year 6	0	539,580	383,923	835,450	**Cell A / Cell B**
Year 7	0	242,800	383,923	835,450	**Cell B**
Year 8	0	114,725	383,923	835,450	**Cell B / Cell C**
Year 9	0	0	383,923	835,450	**Cell C**
Year 10	0	631,500	383,923	835,450	**Cell C / Cell D**
Year 11	0	110,450	383,923	835,450	**Cell D / Cell F**
Year 12	0	0	383,923	835,450	**Cell F**
Year 13	0	497,220	383,923	835,450	**Cell F / Cell G**
Closure & Reclamation	**2,723,773**	**0**	**0**	**2,306,150**	**Cell G / Cell E / Cell H**
TOTAL	**2,723,773**	**2,698,095**	**3,839,231**	**10,660,650**	**-**

Source: KP (2019)

NOTES:

1. Placed density of waste material and LFCPP Reject assumed as 2 t/m^3.
2. Final dry density of tailings assumed as 1.3 t/m^3.
3. Waste Management strategy based on production schedule dated January 31, 2019.
4. Mine backfill schedule based on pit shells and separation berms provided by Blue Sky (January 30, 2019).

18.2.2 Design Basis

The basic design criteria for waste and water management are summarized in Table 18-3.

Table 18-3: Design Criteria Summary

Parameter	Units	Value
Average Mill Throughput	tpd	6,300
Design Life	yrs	13
Total Mill Processing Tonnage	Mt	27.7
LFCPP Reject Fraction (>100 µm)	%	77
Total Tonnes LFCPP Reject	Mt	21.3
LFCPP Plant Reject Placed Density (assumed)	t/m^3	2.0
Tailings Fraction (<100 µm)	%	23
Total Tonnes Tailings	Mt	6.4
Tailings Solids Content	%	40
Final Tailings Settled Density (assumed)	t/m^3	1.3
Total Tonnes Mined Waste Material	Mt	30.1
Mined Waste Placed Density (assumed)	t/m^3	2.0
Starter TMF Embankment Crest Width	m	20
Starter TMF Embankment Upstream Slope	-	2.5H:1V
Starter TMF Embankment Downstream Slope	-	2H:1V
Mine Area Separation Berm Crest Width	m	25
Mine Area Separation Berm Side Slopes	-	2H:1V

Source: KP (2019)

18.2.3 Starter Tailings Management Facility (Phase I)

The starter TMF has the following specific features for tailings and water management:

- Embankment constructed with waste material from pre-stripping of the mine
- Low-permeability core zone (sourced from local borrow sources) to minimize seepage
- Filter and transition zones (processed from waste material and local borrow sources) to limit migration of fines through the embankment
- Seepage collection system
- Non-contact water diversion ditches to route non-contact water around the starter TMF

The starter TMF will be constructed to contain the first three years of tailings with associated water management. A general arrangement for the starter TMF is shown on Figure 18-3. There is potential for future expansion of the facility, as shown with a dashed outline.

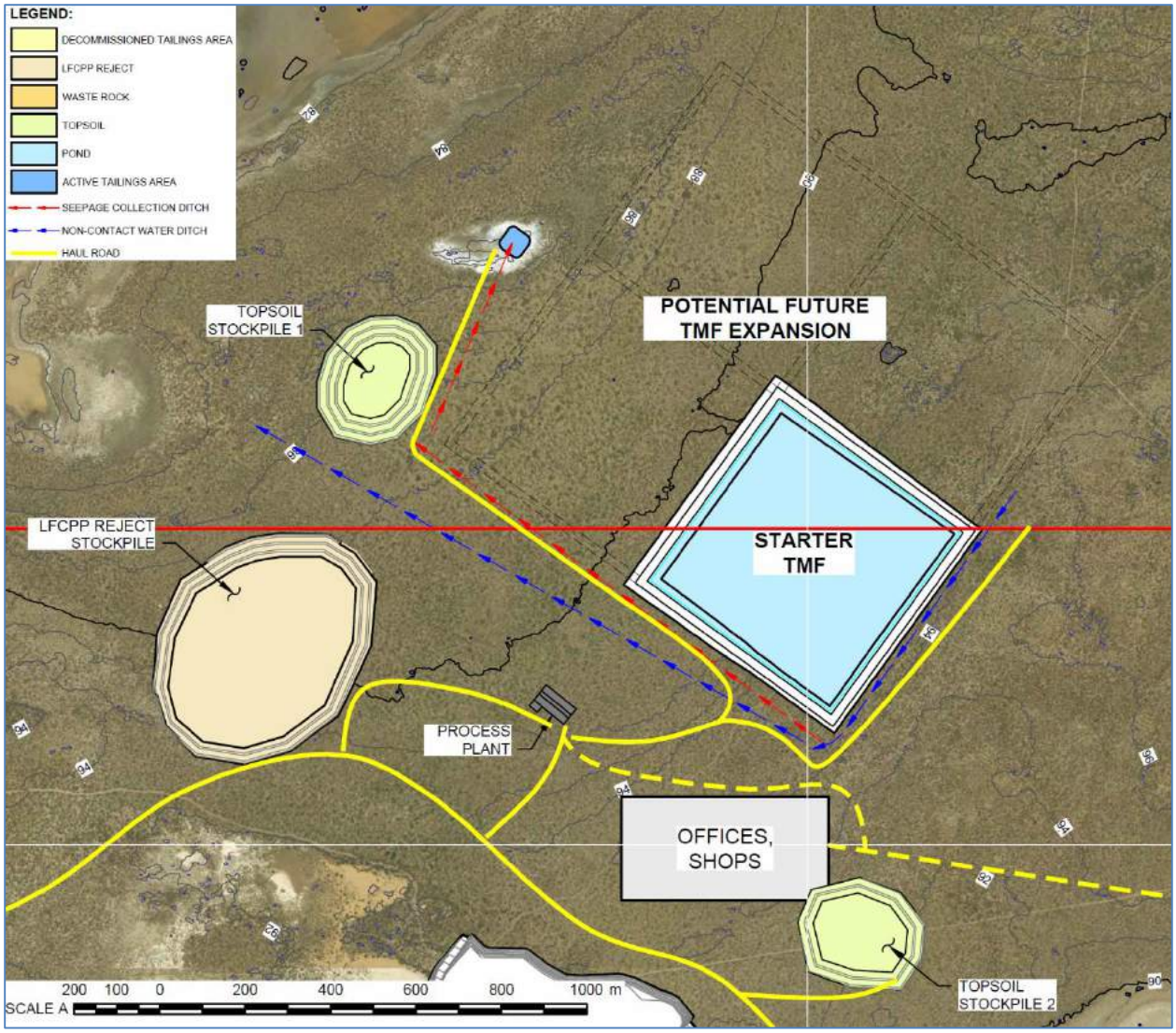


Figure 18-3: Starter TMF General Arrangement Source: KP (2019)

18.2.3.1 Starter TMF Cross-Section

The starter TMF is created by constructing a 500 m x 500 m impoundment, approx. 10 m high, using mined waste material and local borrow sources.

The embankment will be constructed with 2H:1V downstream and 2.5H:1V upstream side slopes with a minimum embankment crest width of 20 m. The embankment will be constructed using waste material from mining activities with a low-permeability core zone sourced from local borrow sources (5 m thick) with a 1 m layer of transition zone and 1 m layer of filter zone material processed from waste material and local borrow sources on the upstream side of the embankment, to prevent the migration of fines.

The starter TMF will be reclaimed during operations as tailings deposition moves to backfilling of decommissioned mine areas (Phase II). The reclamation of the TMF includes a closure cover on the surface of the tailings, and revegetation of all exposed erodible materials.

The starter TMF cross-section (post-reclamation) is shown on Figure 18-4.

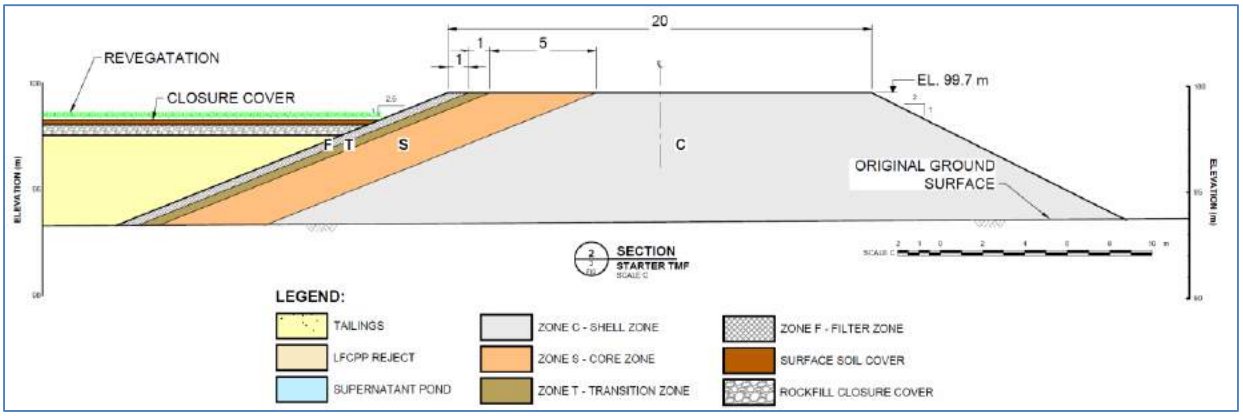


Figure 18-4: Starter TMF Cross-Section (Year 13) Source: KP (2019)

18.2.4 Mine Backfill (Phase II)

From Year 4 onward, Phase II of the waste management plan will entail the backfilling of Leach Feed Concentrate Preparation Plant Reject and tailings into decommissioned mine areas. This operation will have the following features for tailings and water management:

- Separation berms constructed with waste material generated from active mining operations
- Low-permeability core zone to minimize seepage
- Filter and transition zones to limit migration of fines through the embankments
- Supernatant pond and site water management pond will be maintained in the active backfilling area
- Seepage to active mining areas will be pumped back to active backfilling areas along with groundwater inflows (dewatering)

Backfill of mined out areas will be completed as per the schedule in Table 18-2. LFCPP Reject will be backhauled from the Leach Feed Concentrate Preparation Plant and placed along the face of the separation berms, towards the sides of the active backfilling area. Tailings slurry will be pumped from the Process Plant to the active backfilling area. The supernatant pond will be maintained in the active backfilling area during backfilling operations and will move from area to area along with backfilling operations throughout the life of mine. Water will be reclaimed from the supernatant pond to the Process Plant. A general arrangement for the ongoing backfill is shown on Figure 18-5.

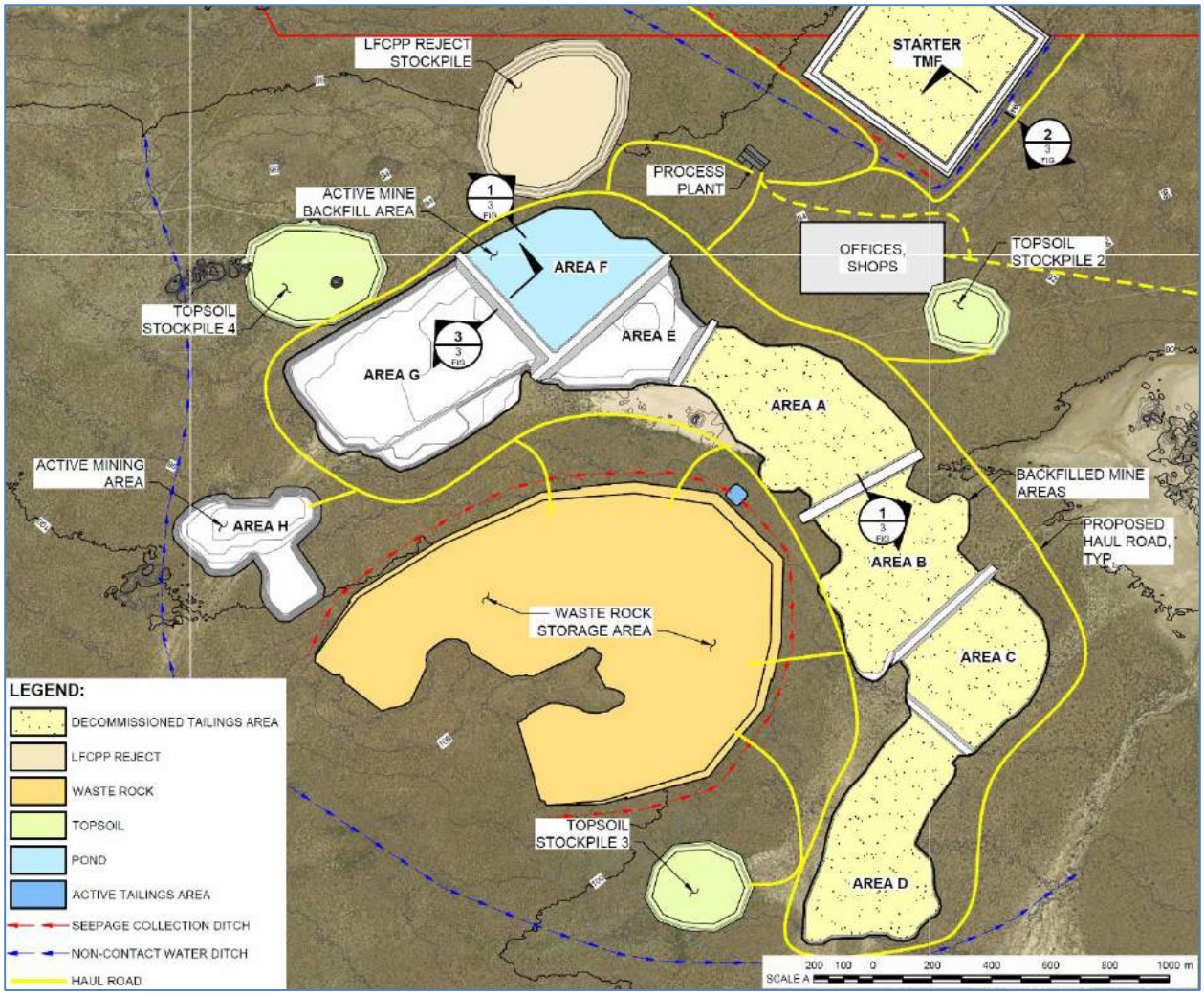


Figure 18-5: Mine Backfill General Arrangement (Year 13) Source: (KP, 2019)

18.2.4.1 Mine Area Separation Berm Cross-Section

Separation berms will be constructed in each mined out cell to separate the active mining areas and to facilitate Leach Feed Concentrate Preparation Plant Reject and tailings backfill. The berms will be constructed with 2H:1V side slopes with minimum embankment crest width of 25 m. The embankments will be constructed with low-permeability core zones, approx. 5 m thick. Filter and transition zones (1 m thick), processed from local borrow sources, will be constructed on either side of the core zone with waste material from mining used to construct the shell zones of the embankments.

A cross-section of backfill operations is shown on Figure 18-6.

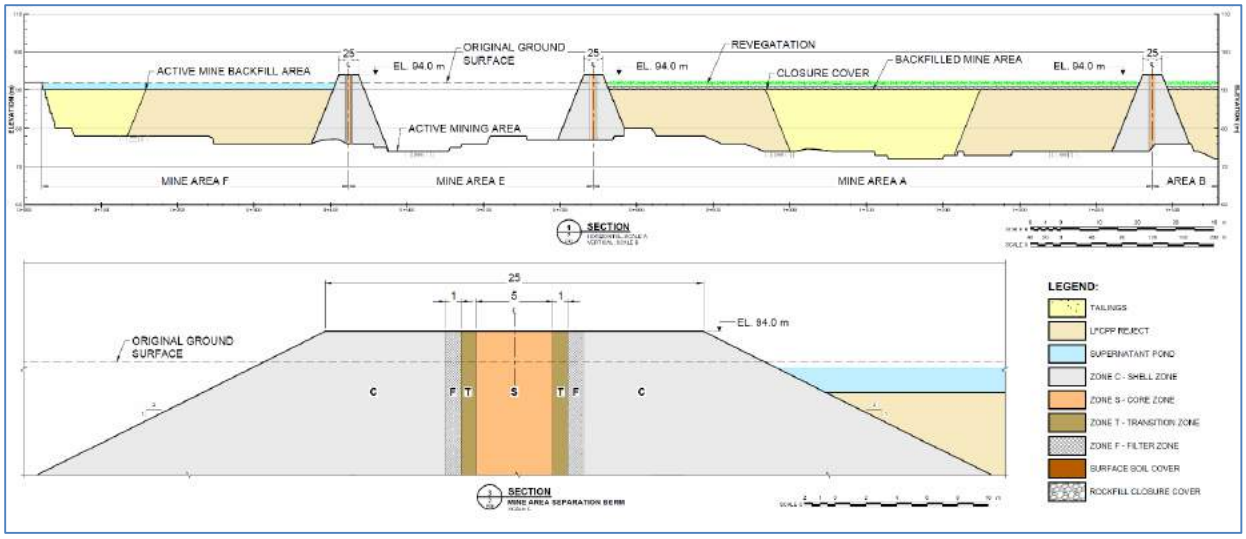


Figure 18-6: Mine Area Backfilling Cross-Section Source: (KP, 2019)

18.3 Site Water Management

Site water will be managed through a system of collection ditches and ponds. Non-contact water will be diverted around site infrastructure to the maximum practical extent. Contact water will be collected in ponds and either evaporated or pumped to the active tailings deposition area (which will function as the site water management pond).

Due to the arid climate of the Ivana operation setting (Mean Annual Precipitation = 248 mm, Mean Annual Evapotranspiration = 482 mm), the Operation functions in an annual average deficit for water. Makeup water to meet process plant water requirements will be sourced from inflows to the mining areas (dewatering) and local groundwater wells.

The water management strategy for the two phases of waste management (i.e. surface storage and mine backfill) are described below.

18.3.1 Phase I (Years 1-3)

For Phase I, Leach Feed Concentrate Preparation Plant (LFCPP) Reject will be stockpiled on surface in an area close to the Process Plant and the Mine Area to minimize haul distances during operations, and for re-handling at closure. Tailings will be pumped to the starter TMF located to the north of the Plant. The general arrangement for Phase I is shown on Figure 18-7.

The TMF supernatant pond will be used as the main water management pond for Phase I. Seepage from the TMF will be collected in a seepage collection pond downstream of the TMF and recycled to the starter TMF. Dewatering flows from the mine will be pumped to the TMF pond.

For Phase I the Project will operate in an average annual deficit. Makeup water requirements to account for this deficit are approximately 11 L/sec. This volume will be sourced from several groundwater wells which will pump directly to the Process Plant for use in mill operations. The water management strategy for Phase I is shown on Figure 18-8.

The starter TMF will be decommissioned and reclaimed in a manner which satisfies closure and reclamation requirements for the Operation.

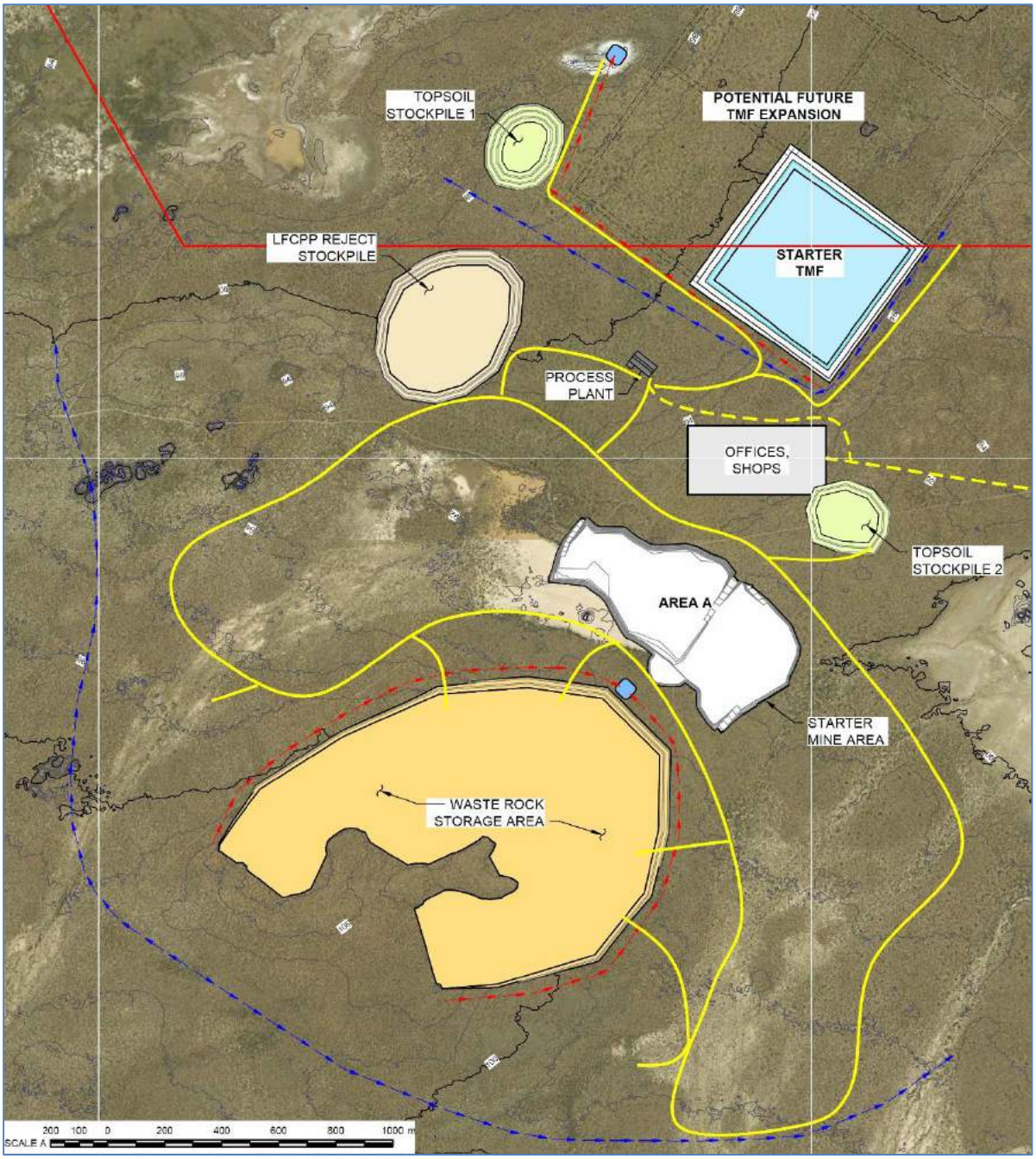


Figure 18-7: Phase I Water Management Layout Source: KP (2019)

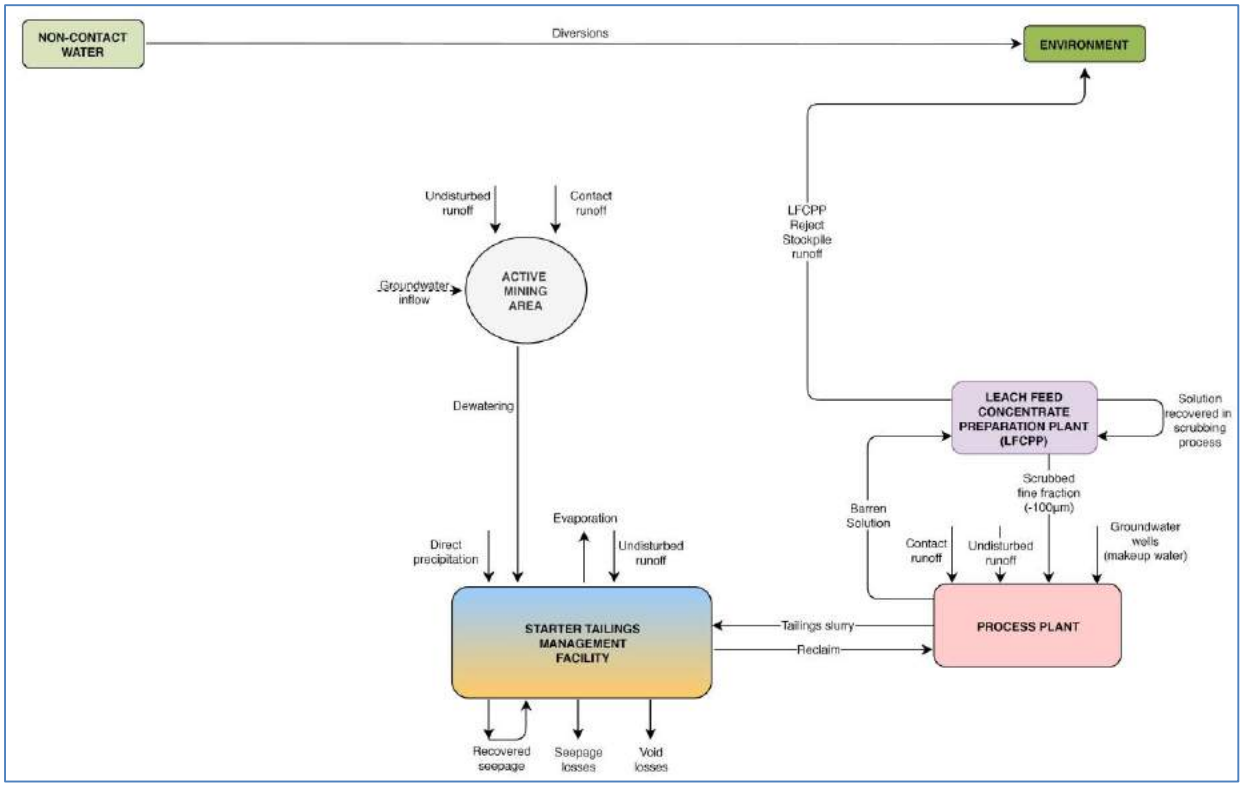


Figure 18-8: Phase I Water Management Flow Schematic Source: KP (2019)

NOTES:

1. Facilities are not drawn to scale.

18.3.2 Phase II (Years 4-13)

From Year 4 onwards, LFCPP Reject and tailings will be backfilled into decommissioned mine areas. Engineered berms will be constructed in the mined-out areas to contain material to allow for ongoing strip mining in adjacent areas of the mine, and to minimize seepage of supernatant water to areas where active mining is in process.

Backfilling of tailings and LFCPP Reject will move from mine area to mine area within the mine as each area is mined out and becomes available for backfill, with separation berms constructed for each area.

Groundwater seepage and dewatering flows from active mining areas will be pumped to the active tailings backfilling cell. The active backfilling cell will be used as the water management pond. This pond will move from cell to cell along with active backfilling operations. Once cells have been backfilled completely, they will be reclaimed in accordance to the closure and reclamation strategy and backfilling will progress to the next available cell (along with water management infrastructure).

Like Phase I, groundwater wells will be used to makeup the average annual deficit. Makeup water requirements for Phase II are anticipated to be in the order of 8 to 9 L/sec for Phase II. The general arrangement for Phase II is shown on Figure 18-9 and the water management strategy is shown on Figure 18-10.

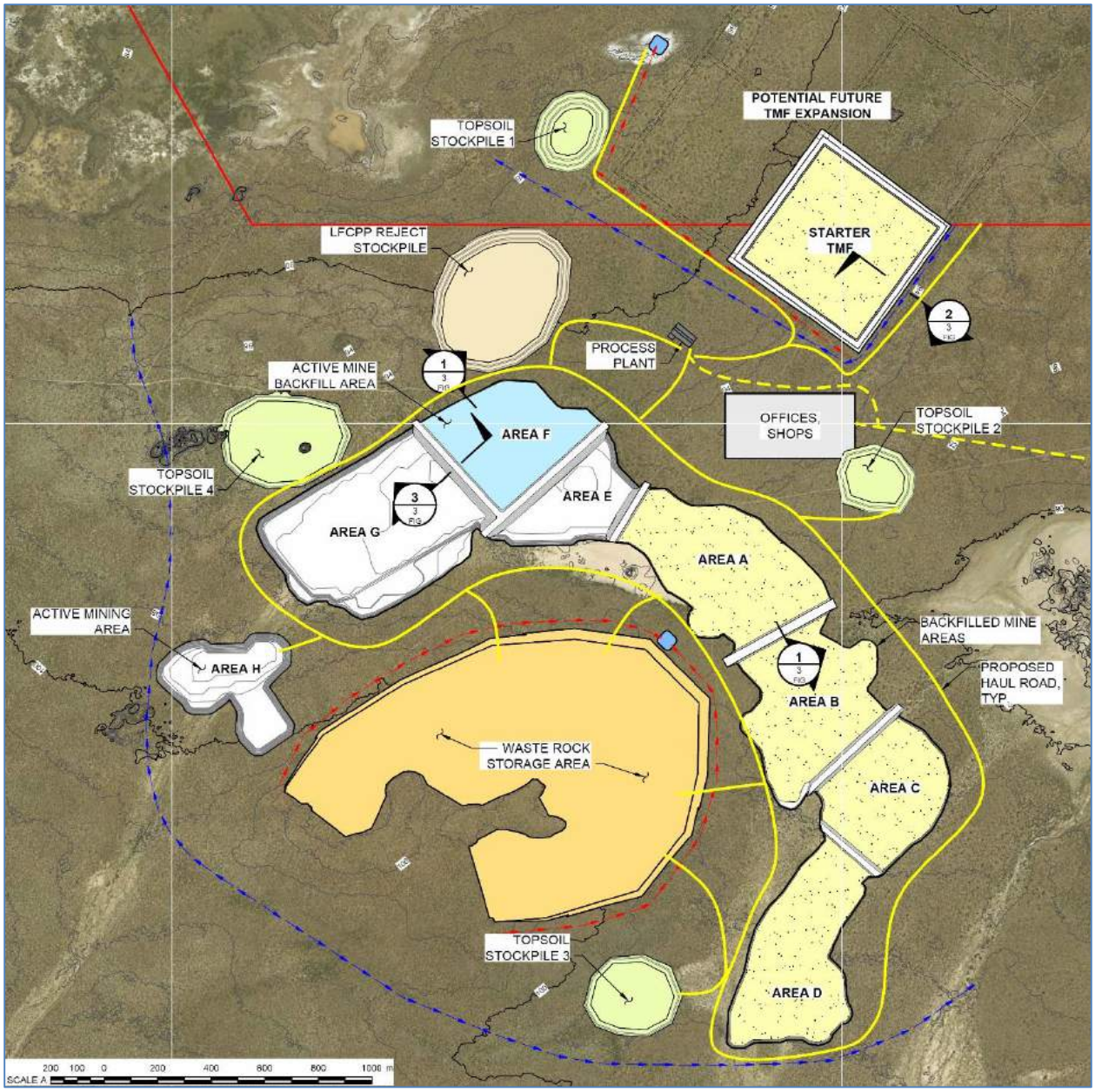


Figure 18-9: Phase II Water Management Layout Source: KP (2019)

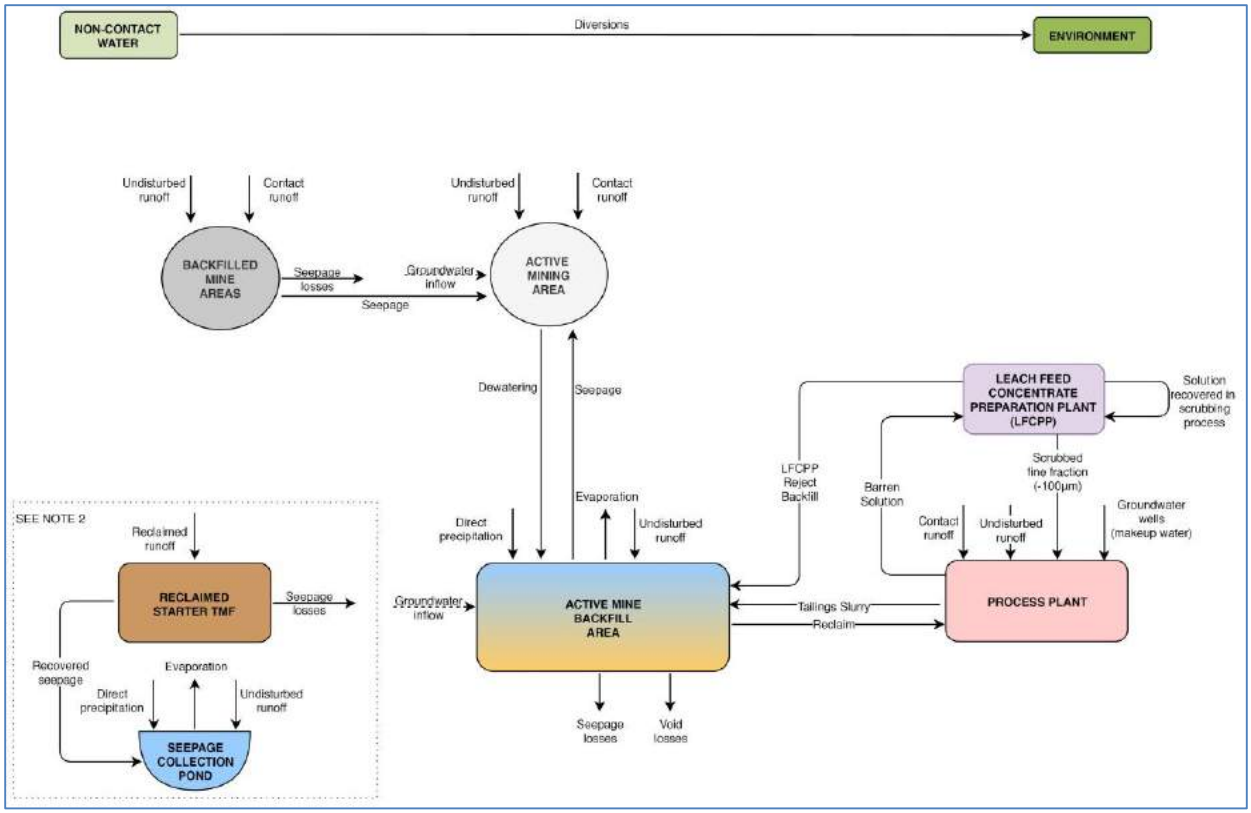


Figure 18-10: Phase II Water Management Flow Schematic Source: KP (2019)

NOTES:

1. Facilities not drawn to scale.
2. Seepage Collection Pond and reclaimed Starter TMF are shown for reference only and do not contribute to site wide water balance for Phase II.

18.3.3 Site Wide Water Balance

A preliminary water balance model was prepared to estimate the magnitude of annual surplus or deficit at site, and to provide a summary of required annual makeup water volumes from groundwater wells. The model was developed for average annual conditions for both Phase I and Phase II of the Waste and Water Management Strategy (Figure 18-8 and Figure 18-10).

The preliminary water balance indicates that the site will operate in an annual deficit condition with annual deficits of approx. 340,000 m^3/year in Phase I, and between 250,000 m^3/year and 280,000 m^3/year in Phase II anticipated. The makeup water for these deficit volumes will be sourced from groundwater wells and pumped to the Process Plant.

18.4 Waste and Water Management Recommendations

Recommendations for the next phase of engineering for the Project are summarized below:

- Complete geotechnical and hydrogeological site investigation programs at the starter TMF, Mine and Process Plant to support a Pre-Feasibility Level Design and to comply with regulatory requirements
- Complete testing on embankment construction materials to confirm material parameters

- Complete testing on LFCPP Reject and tailings materials to confirm suitability for proposed management strategy, and estimate material parameters for stability modelling and confirm design assumptions (dry density, specific gravity, etc.)
- Optimize design of starter TMF embankments and mine area separation berms (materials, zonation modelling, crest width, embankment slopes, etc.)
- Complete seepage and stability analyses for starter TMF and backfilled mine areas to confirm designs comply with regulatory requirements for static and seismic stability
- Evaluate hydrometeorology for the Ivana area to define return period precipitation events, etc.
- Develop a monthly stochastic water balance and evaluate climate variability conditions
- Complete dam classification for the starter TMF embankments and mine area separation berms to provide guidance on the selection of appropriate seismic design criteria and inflow design flood (IDF)
- Complete seismicity assessment to define seismic hazard design parameters for the Operation
- Develop a full closure plan for the waste and water management facilities based on the final design configuration
- Investigate groundwater supply options for make-up water.

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19 Market Studies and Contracts

19.1 Market Studies

Blue Sky Uranium has not completed any detailed market studies to date. However, an overview of the nuclear industry based on public sources is provided below. Blue Sky Uranium has also reviewed commodity pricing being used by uranium industry peers and industry analysts to determine base case and sensitivity pricing models.

19.1.1 Uranium Market Overview

Globally in 2018, nine new nuclear reactors commenced operation, for a total of 450 nuclear reactors operating around the world; fifty-five additional nuclear reactors were under construction in 2019 (World Nuclear Association, February 2019).

Uranium from the Ivana project may be sold regionally and/or to international markets. Argentina has three nuclear reactors generating about five percent of its electricity. Their current annual consumption is approximately 300 tonnes U_3O_8 (or 660,000 lb U_3O_8). The country's first commercial nuclear power reactor began operating in 1974 and collectively the three plants produce 1667 MWe. The current reactors include a CANDU 6 and a Siemens design; the next two planned reactors are to be built by China National Nuclear Corporation. Additionally, five research reactors are operated by the National Commission of Atomic Energy ("CNEA") and others. Two further research reactors are under construction. The CAREM-25 nuclear reactor, which has been developed by CNEA with INVAP and others, since 1984, is a modular 100 MWt simplified pressurised water reactor designed to be used for electricity generation (27 MWe gross, 25 MWe net) or as a research reactor or for water desalination. The prototype will be followed by a larger version, possibly 200 MWe with potential to upscale to 300 MWe. Sites in Argentina, and internationally are being considered for the CAREM-25.

Argentina requires 100% importation of their uranium supply. As shown in Figure 19-1 below, sourced from the Mining and Energy Industry of Argentina, the 2015 price paid for uranium was more than double the international market price for uranium (US$ 172/kg = US$ 77.80/lb).

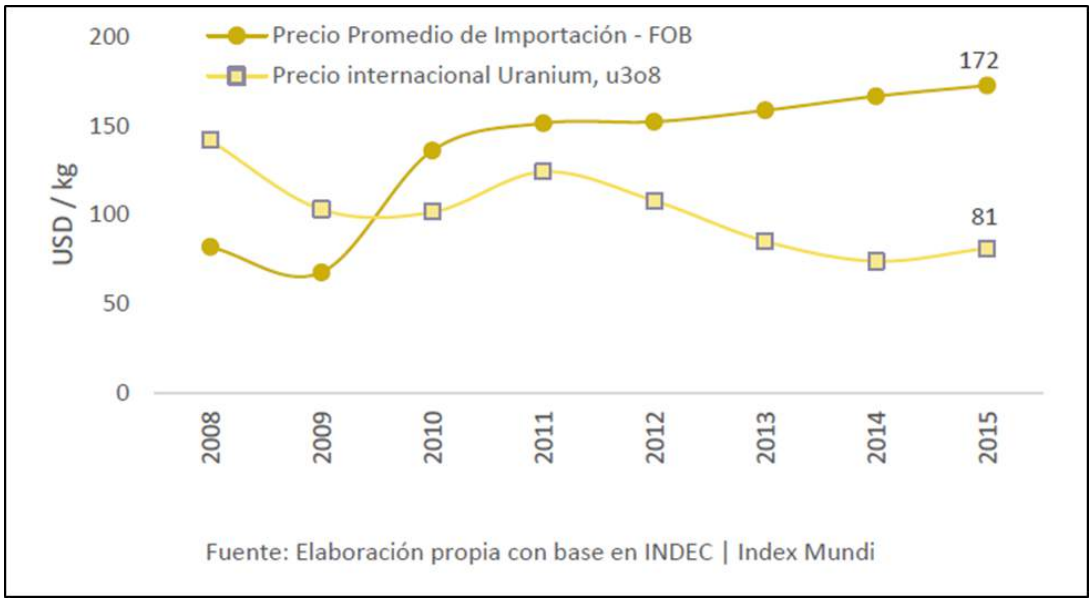

Figure 19-1: Evolution of the Price of Uranium Imported into Argentina

(Source: Ministerio de Energía y inería (Argentina), 2016, p9.)

As detailed in the Argentine Mining Code Section 4, uranium is legally designated a nuclear mineral in Argentina. Article 209 of the Code states that the Argentinean Federal State, through the CNEA, has the first option to purchase, under prevailing market conditions, nuclear minerals. Further, Section 210 of the Code requires approval from CNEA for export contracts, including approval of final destination and use of the exported material; export can only be restricted to fill internal (national) market requirements.

The Federal Government controls, directly or through CNEA, 99% of Dioxitek S.A., a company that produces UO_2 and Co_60 from yellowcake, historically from local production and currently from imported material (http://www.dioxitek.com.ar/). CNEA also controls 33%, in a joint-venture with a local private company, Combustibles Nucleares Argentinos S.A. ("Conuar"). Canuar produces nuclear fuel from the UO_2 produced by Dioxitek or from imported material (http://www.conuar.com/).

19.1.2 Vanadium Market Overview

Currently 85 percent of the world's vanadium is produced by three countries: China, Russia and South Africa. Metallurgical use accounts for most of the current annual vanadium consumption, with an estimated 90% used as a steel strengthening alloy. Vanadium production and consumption has been growing in recent years as demand for vanadium is foreseen to increase as current and emerging applications expand (e.g. lithium-vanadium phosphate batteries). Argentina currently has no primary vanadium production.

19.2 Commodity Pricing

Commodity price assumptions were evaluated by the Company, incorporating a review of historical average pricing, recent comparable peer reports, public disclosure of sales and contract prices, and industry surveys of price projections. The assumptions were deemed reasonable by the Qualified Person.

19.2.1 Uranium

The uranium price is quoted by various sources on a spot and long-term spot basis, however, variability in these prices, combined with the need for security of supply, has generally resulted in utilities and producers entering into long-term contracts for the majority of uranium consumed as nuclear fuel. The spot price for uranium has ranged over the past ten years from $18.00/lb to $72.63/lb. Contract pricing for uranium has historically been significantly higher than spot pricing , and over the past ten years average contract pricing, as reported by independent market consultants (https://www.cameco.com/invest/markets/uranium-price), has ranged from $29.00/lb to $71.50/lb.

The Fukushima-Daiichi nuclear accident in Japan in March 2011 resulted in the subsequent shut-down of the country's entire fleet of nuclear reactors, causing a global supply glut that has temporarily reduced spot uranium prices. Market analysts are forecasting higher long term prices ranging from $30/lb to $55/lb. with the ongoing restart of the Japanese nuclear reactor fleet, production cuts from several major producers, new reactor construction and uranium demand growth in several emerging economies, and uncertainty around supply sources for uranium over the longer term.

Blue Sky's market review has resulted in the Ivana PEA being based on a long-term uranium price of $50/lb ($U_3O_8$). The Ivana project is still in the early study stages and several years away from a production decision and commercial production.

19.2.2 Vanadium

Figure 19-1 provides a chart of the historical vanadium (V_2O_5) prices, including the recent upsurge reflecting the increased market interest.

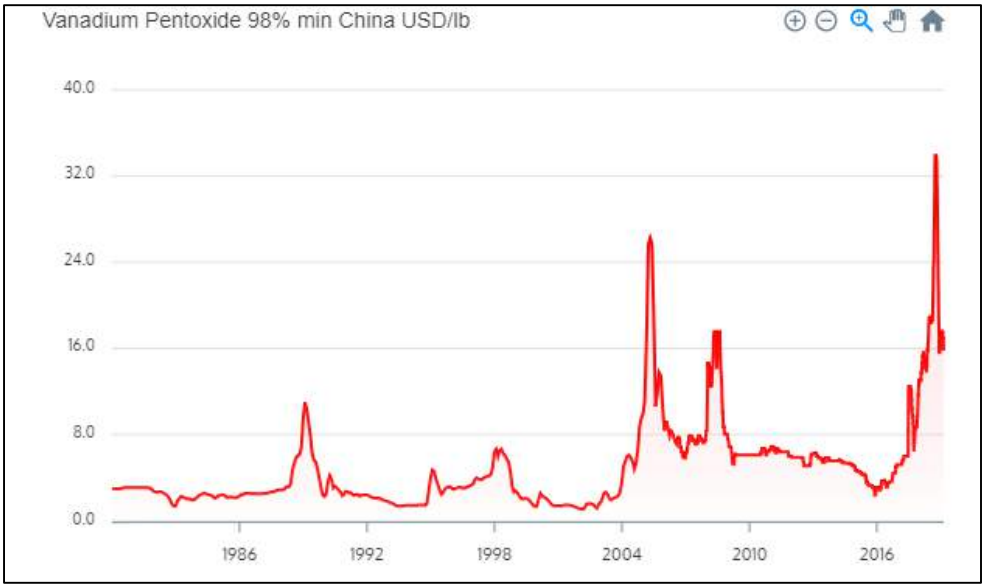

Figure 19-2: Vanadium Price History

(Source: www.vanadiumprice.com, 3/25/17)

The Ivana PEA is based on a vanadium price of $15/lb ($V_2O_5$). Vanadium will comprise about 10% of the Ivana operation revenue stream.

19.3 Contracts

At this time, no marketing or sales contracts are in effect for the Ivana operation.

20 Environmental Studies, Permitting, and Social or Community Impact

20.1 Legal Framework and Permitting

Environmental and social permits required for mineral activity are established at the national level in the following:

- Articles 41,43, and 124 of the Constitution of Argentina,
- The General Law of the Environment (Ley General de Ambiente No. 25.675),
- Title 13, Section 2 of the Mineral Code of the Nation,
- The National Law of Environmental Protection for Mineral Activities (Ley Nacional de Protección Ambiental para la Actividad Minera Nº 24.585), and
- The National Law 24.804, which regulates Nuclear Activity

At the Provincial level in Rio Negro, the relevant legislation is:

- The Provincial Constitution, Articles 78 and 79 of Section V Natural Resources and Articles 84 and 85 of Section VII Environmental Policy,
- The Environmental Impact Evaluation Law (Ley de Evaluación del Impacto Ambiental de la Provincia de Río Negro Ley Nº 3.266)
- The Regulatory Decree for the mining sector No. 1,224/02, and
- The new Mining Code Procedures, as sanctioned by Provincial Law No. 4,941.

20.1.1 Uranium Mining

In Argentina, uranium is considered a nuclear mineral, according to the Mining Code. Exploitation of nuclear minerals require development of a Restoration Plan for the natural area affected by the waste; and to neutralize or contain liquid or solid tailings and other products that possess radioactive elements.

Nuclear activity in Argentina is governed by two specific rules: Law No. 22,498/56; and Law No. 24,804 "National Law of Nuclear Activity". Law No. 24,804, in Art.16, assigns the Nuclear Regulatory Authority (Autoridad Regulatoria Nuclear, or “ARN”) the power to dictate the regulatory norms required for radiological and nuclear safety.

Law No. 25.018 establishes the management regime for radioactive waste (tailings) and specifies the National Atomic Energy Commission (Comisión Nacional de Energía Atómica, or CNEA) as the regulating body.

Regulation AR 10.1.1 on Radiological Security (Norma Básica de Seguridad Radiológica), establishes that mining installations require a license from ARN in order to initiate construction, commissioning, and operations phases of a project. This regulation also establishes maximum exposure of ionizing radiation for workers.

In addition to the federal and provincial Argentine regulations, good practice includes adherence to the US Environmental Protection Agency (“EPA”) Code of Federal Regulations (“CFR”) 192 “Health and Environmental Protection Standards for Uranium and Uranium Mill Tailings”. The CFR 192 establishes permitted radiation levels associated with uranium mining.

20.1.2 Mine Permit Requirements

Table 20-1 summarizes the permits required for the operational phase of the project.

Table 20-1 Permit Requirements

Permit	Permit Translated Name
Declaración Jurada Ambiental (DJA) Aprobada - Resolución de Aprobación.	Approved Resolution of an Environmental Affidavit
Audiencia Pública	Completion of Public Consultation
Seguro Ambiental	Environmental Guarantee
Planos Aprobados en Colegio de Ingenieros de Rio Negro	Approval of Plans from the Rio Negro College of Engineers
Planos sellados Conforme a Obra en Colegio de Ingenieros de Rio Negro	Sealed/stamped plans that conform with the Rio Negro College of Engineers
Planos Aprobados (Apto para Construcción) de la Comisión Municipal	Plans approved for construction by the Municipal Commission
Certificado de Bomberos de Rio Negro de sistemas contra incendio	Certification of fire fighting systems from the Rio Negro fire brigade
Concesión de uso de agua	Water Use Concession
Vuelco de efluentes	Effluent Discharge
Generador de Residuos peligrosos	Hazardous Waste Producer
Generador de Residuos domiciliarios	Household Waste Producer
Generador de Residuos patogénicos	Pathogenic Waste Producer
Certificado de Inscripción en Registro nacional de Precursores Químicos	Certificate of Registration in the National Registry of Chemical Precursors
Combustibles. Inscripción en el Registro de Bocas de expendio para Consumo propio	Registration as fuel supplier
Combustibles. Inscripción en el Registro de Empresas del Programa Nacional de Control de Pérdidas de Tanques Aéreos de Almacenamiento de Hidrocarburos y sus derivados	Registration in the Registry of Companies of the National Program for the Control of Losses of Aerial Tanks for the Storage of Hydrocarbons and their Derivatives
Convenios Vialidad Nacional / Provincial	National / Provincial Highway agreements
Permiso de Rescate del Patrimonio Arqueológico y Paleontológico	Rescue of Archaeological or Paleontological artefacts
Habilitación radiofrecuencia	Radio communications license

20.1.3 Exploration Permit Status

The local subsidiary of Blue Sky Uranium, Minera Cielo Azul S.A., has the following mining concession titles, as discussed in Section 4:

- MD Ivana VIII-A: Expediente SM Nº 38.002-M-2013; Expediente SAyDS Nº 44.073/SAyDS/2014.
- MD Ivana VIII-B: Expediente SM Nº 38.003-M-2013; Expediente SAyDS Nº 44.071/SAyDS/2014.
- MD Ivana VIII-D: Expediente SM Nº 40.005-M-2015; Expediente SAyDS Nº 6.468/SAyDS/2016.
- MD Ivana VIII-F: Expediente SM Nº 41.048-M-2016; Expediente SAyDS Nº 85.133/SAyDS/2017.
- MD Ivana IX-A: Expediente SM Nº 41.038-M-2016; Expediente SAyDS Nº 6.479/SAyDS/2016.

Minera Cielo Azul S.A. has completed the Environmental Affidavit (DJA) for the Exploration Stage, and all required biannual updates are in good standing, which has resulted in obtaining from the Secretaría de Ambiente y Desarrollo Sustentable (Secretariat of Environment and Sustainable Development) the following Environmental Resolutions (Resoluciones Ambientales, or RA) approving exploration activities:

- MD Ivana VIII-A: RA Nº 1.686/SAyDS/2018 (24/11/2018).
- MD Ivana VIII-B: RA Nº 1.651/SAyDS/2018 (23/11/2018).
- MD Ivana VIII-D: RA Nº 1.688/SAyDS/2018 (22/11/2018).
- MD Ivana VIII-F: RA Nº 344/SAyDS/2017 (18/04/2017).
- MD Ivana IX-A: RA Nº 1.650/SAyDS/2018 (23/11/2018).

20.2 Environmental Studies

The environmental studies carried out to date correspond to those established by legislation to complete the Environmental Affidavits for the Prospecting and Exploration Stages. Supporting studies have included hydrological and hydrogeological investigations, paleontology, and socio-economic analysis. Additional studies will be required to support the Environmental Impact Assessment to authorize an operational phase of the project.

20.2.1 Hydrology

The study area is located within the Central Endorheic Basins. Specifically, it is located in the area of two endorheic sub-basins, whose surface / sub-surface drainage network reports to the Indio Muerto and Tres Picos lakes. Both sub-basins are part of a regional-scale water system (21,825 km^2), called the "Laguna de Indio Muerto basin" (Figure 20-2), which includes three other sub-basins identified as the Meseta Oriental and Camico / Trapalcó drainages, and one additional unnamed basin.

Part of the Ivana prospect is located in the sub-basin of Laguna Tres Picos, which covers an approximate area of 8,074 km^2. This receives drainage from tributaries to the north, through rainfall runoff, and the water system linked to the Nahuel Niyeu drainage, which receives additional runoff. Ephemeral streams also provide input to the drainage, including the Aos, Yaminué and Treneta / Salado streams, whose headwaters are sourced from wetlands in distant lava plateaus about 100 km south.

The Laguna Indio Muerto sub-basin, with a smaller surface area (where most of the monitoring wells are located), receives contributions from ephemeral tributaries.

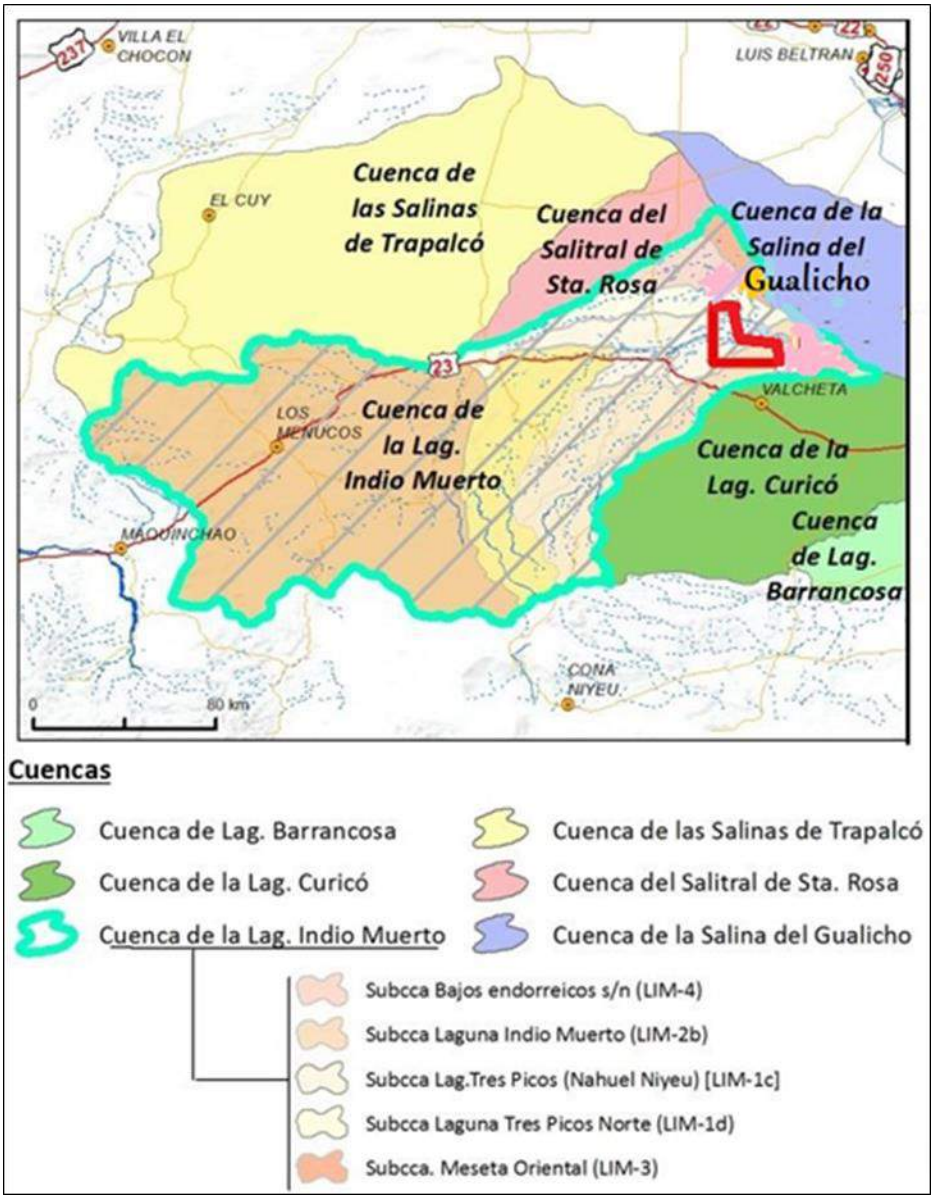

Figure 20-1. Location of the Ivana Project within the Laguna Indio Muerto Watershed

20.2.2 Hydrogeology

The study area is within the Cretaceous-Tertiary Continental and Tertiary Marine Sediments Hydrogeological Units. The groundwater level has been encountered approx. 5 to 10 m below ground surface, contained in the bedrock, with dominant flow pathways running southwest to northeast. Recharge is received from the area of the Somuncurá Plateau southwest of the Project.

20.2.3 Water Quality

Salinity of groundwater is very high, at >5000 mg/L. In situ measurements indicate conductivity varies from brackish to salt water, from 7 mS/cm to 43 mS/cm, with pH from slightly acidic (pH 6) to alkaline (pH 8.3).

Water quality samples were obtained over seven campaigns between 2011 and 2016. The dates and points selected in each sampling effort, correspond to the parcels of land where exploratory activities were planned

and/or to the information related to the successive updates of the Environmental Impact Statements for the mining properties of Minera Cielo Azul S.A. in the area.

The water samples were sent to laboratories where physicochemical, metals and hydrocarbon analyses were performed. The sampling procedure complies with the international protocol "Standard Methods for the Examination of Wastewater" (American Public Health Association, 2017).

Baseline conditions of several parameters in groundwater are elevated, including total dissolved solids ("TDS"), uranium, vanadium, aluminum, zinc, boron and arsenic. As a result, the groundwater is not potable, and has limited suitability for stock watering or irrigation. The area with the highest content of natural uranium is located in the mining properties MD Ivana VIII-A and MD Ivana VIII-B and would be a consequence of the natural remobilization in a mineralized environment.

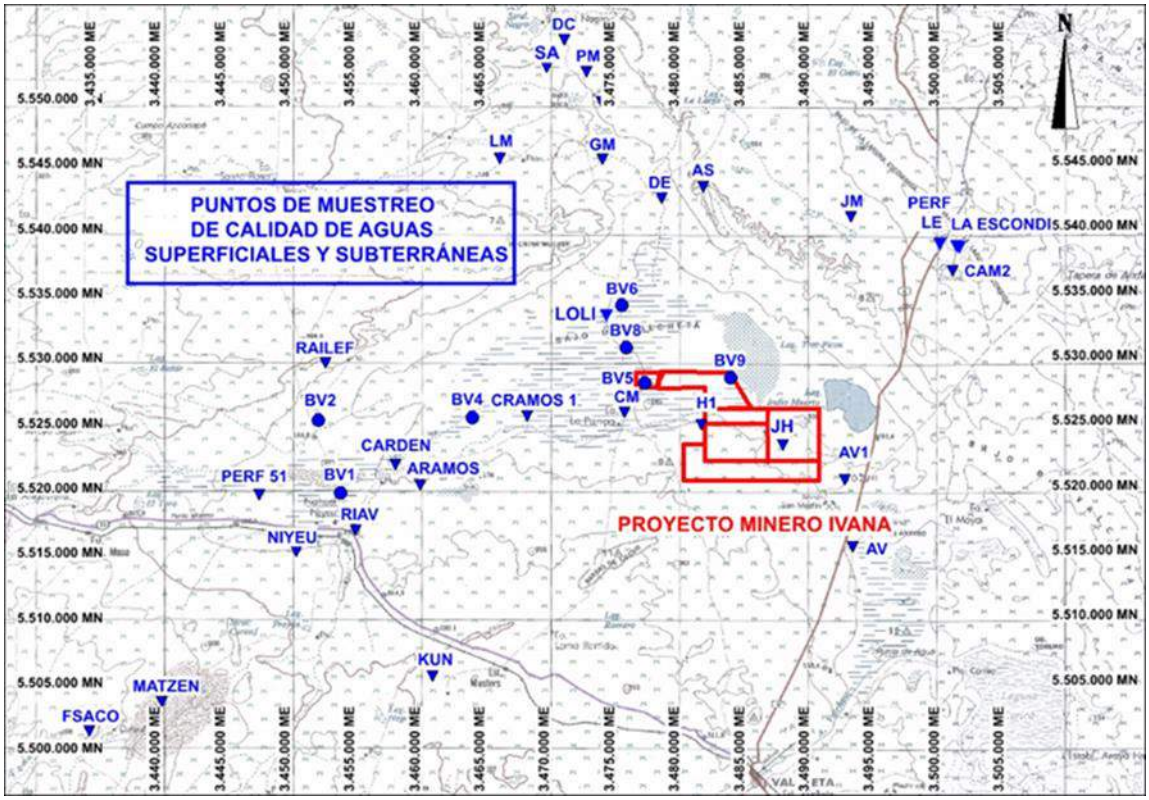

Figure 20-2: Surface and Groundwater Monitoring Locations

20.2.4 Paleontology

A study of paleontological resources was conducted in support of the exploration permitting activities. Taking into account the paleontological potential of the sedimentary deposits of the study area and the type of exploration work with the possible eventual purpose of mining, the entire area of the proposed Ivana operation was qualified as "negligible paleontological risk" and of "paleontological impact NULL / LOW".

20.3 Social and Community Impact

The Amarillo Grande Project, including the Ivana uranium vanadium deposit, is located in the central rural area of the Department of Valcheta, Province of Río Negro, in the area known as Bajo de Valcheta. The Project is situated in the Linea Sur Region.

From the early stages of the Project, the social groups of importance in the area of influence were identified, and their opinions regarding the exploration and potential future mining activity and the social and environmental aspects were considered, in a framework of participation and respect.

The town of Valcheta is the closest administrative center and location of government services and a hospital. The dominant economic activity of the area is represented by small and medium agricultural producers/ranchers; however, the region suffers from drought and desertification, and is sparsely populated.

Since 2011, Minera Cielo Azul S.A. has continuously communicated with the surrounding residents and communities to ensure the scope, impacts and overall goals of the exploration work was understood. The process of information exchange and consultation between Minera Cielo Azul S.A. and the local stakeholders has been updated over time, and more recent communication included general aspects of the potential mining phase of the project.

The hiring of local people to perform tasks in the prospecting and exploration stages has made a positive impression. The local employees of Minera Cielo Azul S.A. are considered by the community as reliable informal inspectors and enhance the locals' confidence in the Project. There is recognition that, should the Project go to the operations phase, mining could be a source of work for them and other young people in the area, avoiding migration to remote urban centers in search of employment opportunities.

However, some residents have expressed concern about possible contamination of the area (water, air, soil, flora, etc.) or potential road deterioration, that could result from future mining activities. Other concerns include consideration of fire safety in the dry area, conservation and protection of water resources, and barriers to trenches and pits to avoid loss of livestock. The Company is continuing to engage with all local stakeholders to address these concerns, and others that may develop in the future, as the project advances.

The company has undertaken to complete agreements with local stakeholders. These include traffic management, a local hire policy, a local procurement policy, and enhanced Occupational Health and Safety Training. The latter is particularly important for a uranium deposit. Radiation dose measurements indicated that all employees registered below the International Standard limit of 5 mSv/a.

Transparent communications with the relevant communities are ongoing.

20.4 Waste and Tailings Disposal

The management strategy for all waste products (Waste Rock, LFCPP Reject, tailings, etc.) is described in Section 18.

20.5 Water Management

The site wide water management strategy and water balance are described in Section 18.

20.6 Mine Closure

20.6.1 Mine Closure Requirements

Mine closure planning will be guided by the provincial and national legislation of Argentina; international standards and guidelines; the commitments acquired in the DJA, its updates and the associated Environmental Impact Statements; and the corporate policies and standards of Minera Cielo Azul S.A.

In Argentina, there are no specific regulations applicable to the financial bonding for closure of mine operations. However, the National legal framework that is applicable is given by Law No. 24,585, which establishes that: "the Environmental Management Plan must include actions related to the cessation and abandonment of exploitation, and post-closure monitoring of operations".

The province of Río Negro establishes through Decree No. 1224/2002 that the Environmental Management Plan must include the measures and actions to mitigate the environmental impact, rehabilitation, and restoration for the closure stage of the deposit.

Additionally, Argentina Standard AR 10.1.1 (ARN) establishes the dose of exposure to ionizing radiation for nuclear waste, which must be considered in the closure phase.

20.6.2 Mine Closure Plan

The closure plan will be designed to ensure long term stability of both physical and chemical properties of the site, and return the site to its pre-mining state in order to blend with the surrounding environment. Specific closure items will include:

- Reagents and supplies will be removed and will be returned to suppliers, sold to other operations, disposed of in approved waste facilities, or transported to a certified company for disposal.
- All buildings and foundations will be demolished and covered to approximate as closely as possible the pre-mining landscape topography.
- Where excavations or construction of berms and walls were required, these will also be regraded to approximate pre-construction land contours. If soil contamination is detected around any facility, remediation alternatives will be evaluated and applied.
- The remaining mine areas will be filled with the sterile material including remains of the Leach Feed Concentrate Preparation Plant (LFCPP) Reject Stockpile, subject to government authorization.
- Remaining tails will be covered using material from the LFCPP Reject Stockpile, the Waste Rock Storage Area, and the Surface Soil Stockpiles.
- All exposed erodible surfaces will be revegetated.

Active closure is expected to take one year, with a further five years of monitoring for a total 6-year closure period.

20.6.3 Closure Cost

A detailed closure cost will be developed to support the Mine EIA submission, supported with feasibility level design. Based on the foregoing, a preliminary estimate of approximately $22.6M has been developed and incorporated into the project costing as illustrated in Table 20-2. Costs are provided in 2019 US Dollars ($USD).

Table 20-2: Preliminary Closure Cost Estimate

Item	Unit	Quantity	Unit Cost ($USD)	Total ($M)
Equipment, building and structure dismantling, removal and demolition	LS	1	$1,100,000	$1.1M
Removal of Ditches	m	17,500	$5.0	$0.1M
Waste Rock Backfill to Mine Area from Stockpile	m^3	1,890,000	$3.5	$6.6M
LFCPP Backfill to Mine Area from Stockpiles	m^3	2,310,000	$3.5	$8.1M
Soil Cover for backfilled Mine Areas and Waste Rock Storage Area	m^3	340,000	$5.0	$1.7M
Waste Rock Cover for backfilled Mine Areas	m^3	300,000	$5.5	$1.6M
Revegetation of reclaimed surfaces and footprints	Ha	230	$2,500	$0.6M
Subtotal Direct Costs				**$19.8M**
Construction Mobilization/Demobilization	%	-	4%	$0.8M
EPCM	%	-	10%	$2.0M
Subtotal Indirect Costs				**$2.8M**
Total Closure Costs ($M)				**$22.6M**

21 Capital and Operating Costs

21.1 Capital Costs

The capital cost estimate addresses the engineering, procurement, construction and start-up of the Ivana operation, which consists of a surface mine, a leach feed concentrate preparation plant, a leach process plant, a tailings management facility and ancillary support facilities.

The capital cost estimate was developed to a level commensurate with that of a Preliminary Economic Assessment in order to evaluate the Ivana operation overall viability. After inclusion of the contingency, the capital cost estimate is considered to have an accuracy of ±30%, Q1 of 2019.

The total estimated cost to design, procure, construct and commission the facilities described in this report is $128.1 million. Table 21-1 summarizes the project development capital cost. The capital cost includes a contingency allowance of $28.3 million.

Sustaining capital represents capital expenses for additional costs and equipment purchases that will be necessary during the operating life of the project. Sustaining capital is not included in the normal operating cost. Sustaining capital is estimated to be $35.5 million, including a contingency allowance of $7.2 million.

No provision has been included in the capital cost to offset future cost escalation.

Table 21-1: Project Capital Cost Summary

	Development ($M)	Sustaining ($M)	Total ($M)
Mine Development	$ 16.5	$ 9.4	$ 25.9
LFCPP, Process Plant	$ 47.2	$ 9.7	$ 56.9
Waste and Water Management	$ 4.6	$ 8.1	$ 12.7
Infrastructure	$ 3.2	$ 1.1	$ 4.3
Indirect, EPCM, Owner costs	$ 28.3		$ 28.3
Contingency (30%)	$ 28.3	$ 7.2	$ 35.5
Total	**$ 128.1**	**$ 35.5**	**$ 163.5**

21.1.1 Mine Capital Cost

The mine capital cost has been subdivided into four areas; (i) pre-stripping (ii) mining equipment, (iii) other mine development and (iv) freight and spares.

The mine capital cost estimate is mainly developed from first principles, determining quantities and equipment operating hours and applying unit pricing. Unit pricing information is derived from in-house databases.

All costs are in Q4-2018 US dollars.

Table 21-2 summarizes the initial mine capital costs incurred in the two years of development.

Table 21-2: Mining Capital Cost Summary

	Year -2 ($k)	Year -1 ($k)	Develop ($k)	Sustaining Y1+ ($k)	Total ($k)
21.1.1.1 - Mine Pre-stripping		$ 2,487	**$ 2,487**		$ 2,487
21.1.1.2 - Mine Equipment	$ 11,221	$ 655	**$ 11,876**	$ 7,585	$ 19,461
21.1.1.3 - Other Mine Capital		$ 1,300	**$ 1,300**	$ 1,240	$ 2,540
21.1.1.4 - Freight (Mine)	$ 785	$ 46	**$ 831**	$ 531	$ 1,362
Total Mine Capital	$ 12,006	$ 4,488	**$ 16,494**	$ 9,356	$ 25,850

Costs do not include contingency

21.1.1.1 Pre-stripping

The study assumes that pre-stripping will be undertaken in Year -1 by the owner-operated fleet (see Table 21-3). Waste will be stripped from the mine to expose mill feed prior to the commencement of commercial production. The mined waste will also be used to build the starter TMF as well as on-site roads and laydown pads as needed.

Table 21-3: Pre-Stripping Cost

		Year -1
Waste Mined	t	1,966,700
Mill Feed mined	t	33,300
Total Mined	Mt	2,000,000
Cost	$M	$ 2,486,732
Unit cost	$/t	$1.24

21.1.1.2 Mining Equipment

The procurement of mining equipment assumes that all equipment will be newly purchased by the owner. Equipment pricing used in the study is from in-house databases; no vendor quotations were solicited for the PEA.

Most of the equipment is procured in Year -2 and delivered to site to be available for pre-stripping works in Year -1. Table 21-4 list the equipment fleet and life-of-mine equipment capital cost.

Additional sustaining costs will be incurred as the mine expands, or haul lengths increase, thereby requiring additional equipment. In addition, some equipment replacements will also occur over time.

Table 21-4: Mining Equipment Capital Cost

Equipment	Year -2	Year -1	Sub-total ($k)	Sustaining Y1+ ($k)	LOM Total
Excavator, 5 cu.m	$1,100		$1,100	$1,100	$2,200
Wheel Loader 5 cu.m		$455	$455	$455	$910
Haul Truck ADT 30 t class	$1,920		$1,920	$3,360	$5,280
Personnel Van	$200		$200		$200
Crane, Grove 40T	$450		$450		$450
Dozer (D275A)	$1,640		$1,640	$1,640	$3,280
Mechanic & Welding Truck	$394		$394		$394
Excavator, 5 cu.m	$550		$550		$550
Fuel & Lube Truck	$870		$870		$870
Grader 12H-class 12' blade	$1,400		$1,400		$1,400
Flat Deck w Hiab	$150		$150		$150
Light Plant	$150		$150	$150	$300
Pickup Truck	$200	$200	$400	$800	$1,200
Mine Water Pumps					
Forklift	$75		$75		$75
Wheel Loader 5 cu.m	$455		$455		$455
Tractor	$80		$80	$80	$160
Water Truck (HM400)	$1,587		$1,587		$1,587
Initial Equipment Capital	**$11,221**	**$655**	**$11,876**	**$7,585**	**$19,461**

21.1.1.3 Mine Development Costs

The details for the mine development activities are shown in Table 21-5. This includes the construction of on-site haul roads, purchase of office supplies, stockpile preparation, and water management.

Table 21-5: Mine Development Capital Cost

	Year -2 ($k)	Year -1 ($k)	Sub-total ($k)	Sustaining Y1+ ($k)	Total ($k)
Haul Road to Plant Site		$ 150	$ 150		$ 150
Haul Road to Waste Dump		$ 150	$ 150		$ 150
Haul Road to Tailings Cells		$ 150	$ 150		$ 150
Haul Road (Other)		$ 150	$ 150		$ 150
Crushed Aggregate Capping		$ 100	$ 100		$ 100
Mine Area Pumping Equipment		$ 100	$ 100		$ 100
Mine Area Water Pipelines		$ 100	$ 100	$ 140	$ 240
Office Equip and Software		$ 200	$ 200		$ 200
Radio Communications + GPS		$ 100	$ 100		$ 100
Survey Equipment & Software		$ 100	$ 100		$ 100
Sustaining Miscellaneous				$ 1,100	$ 1,100
TOTAL		**$ 1,300**	**$ 1,300**	**$ 1,240**	**$ 2,540**

21.1.1.4 Freights and Spares

Freight and spares cost are based on a factor of 7% of the equipment purchase costs.

Table 21-6: Freights and Spares

	Year -2 ($k)	Year -1 ($k)	Total ($k)	Sustaining ($k)	LOM Total ($k)
Freight and Spares	$ 785	$ 46	**$ 831**	$ 531	$ 1,362

21.2 Process Plant Capital Cost

The estimated capital costs for the processing plant are showing in Table 21-7, including plant equipment costs based on new purchases.

Indirect and owner's capital costs are summarized in Table 21-8.

Table 21-7: Processing Plant Capital Cost

	Pre-development ($'000)	Sustaining ($'000)
Leach Feed Concentrate Prep Plant and Pipeline	1,900	
Alkaline Leaching & Membrane Plant	3,888	
U/V Separation	1,238	
U/V Precipitation	900	
Calcining and Packaging	2,250	
Reagent Receiving and Storage	1,980	
Water Distribution	825	
Utilities	713	
Total Delivered Equipment Cost	**13,694**	
Labour	24,254	
Mobile Equipment	6,750	
Building	2.500	
TOTAL DIRECT COSTS	**47,198**	**9, 700**

Note: Contingency is applied globally and not included above.

Table 21-8: Indirects and Owner's Capital Cost

	Pre-development ($'000)	Sustaining ($'000)
Construction Indirects	14,159	
EPCM	9,440	
Owner's Costs	4,720	
TOTAL	**28,319**	

Note: Contingency is applied globally and not included above.

21.3 Infrastructure Capital Cost

Infrastructure capital costs include general site development, tailings management facility, on-site and off-site infrastructure. The infrastructure capital cost has been subdivided into two areas; (i) Waste and Water Management Facilities and (ii) Site Infrastructure. These cost estimates are primarily based on database costs, recently quoted vendor costs, or previous project experience costs.

Table 21-9 summarizes the initial Waste and Water Management capital costs of $4.6 million and sustaining capital costs of $8.1 million, without contingency.

Table 21-9: Waste and Water Management Capital Cost

	Development ($M)	Sustaining ($M)	Total ($M)
TMF Earthworks	$3.1	$0	$3.1
Mechanical Pump and Pipeworks	$0.6	$0.6	$1.2
Site Wide Water Management	$0.4	$0.2	$0.5
TMF Progressive Reclamation	$0	$0.5	$0.5
Mine Backfill Costs	$0	$5.9	$5.9
Construction Mobilization/Demobilization	$0.2	$0.3	$0.4
EPCM	$0.4	$0.7	$1.1
Total	**$4.6**	**$8.1**	**$12.7**

Notes: Contingency is applied globally and not included above.

Table 21-10 summarizes the Site Infrastructure capital costs including development and sustaining capital costs, without contingency.

Table 21-10: Site Infrastructure Capital Cost

	Development ($M)	Sustaining ($M)	Total ($M)
Powerline	$ 1.2		$ 1.2
Truck Shop	$ 0.6		$ 0.6
Offices & Dry	$ 0.6		$ 0.6
Warehouse	$ 0.2		$ 0.2
Fuel Storage	$ 0.3		$ 0.3
Access Road, Security, parking	$ 0.2		$ 0.2
Sewage Treatment	$ 0.1		$ 0.1
Miscellaneous		$ 1.1	$ 1.1
Total	**$ 3.2**	**$ 1.1**	**$ 4.3**

Note: Contingency is applied globally and not included above.

21.4 Operating Costs

The project operating cost estimate includes the cost of mining, processing, waste management, and G&A services. No head office costs are included in the operating cost estimate. The life-of-mine average operating cost for the Project is summarized in Table 21-11.

Table 21-11: Project Operating Cost Summary (Average)

Area		Unit Cost (/t Feed)	Unit Cost ($/lb U3O8)*	Total LOM ($M)
Mining Cost, incl stockpile & rejects	$/t mined	$2.26	-	$ 128.0
Mining Cost, incl stockpile & rejects	$/t feed	$4.62	$7.30	$ 128.0
Processing Cost	$/t feed	$6.50	$10.27	$ 180.0
Waste & Water Management	$/t feed	$0.08	$0.13	$ 2.3
G&A	$/t feed	$1.80	$2.85	$ 49.9
Total Operating Cost	**$/t feed**	**$13.00**	**$20.55**	**$ 360.1**

* Unit cost does not include royalty, duty or vanadium credits.

21.4.1 Mining

Mine operating costs are derived from a combination of first principle calculations with an in-house equipment database for all major and supporting equipment operating parameters, and include fuel, consumables, labor ratios, and general parts costs.

Annual production tonnes, waste tonnes and, loading and hauling hours are calculated based on the capacities of the loading and hauling fleet. Fleet requirements for loading, hauling and support are derived from the loading and hauling operating hours.

Operating labor man-hours are categorized for the different labor categories such as operators, mechanics, electricians, etc. The mining cost also includes costs for all mine salaried staff, consumables, and software and fleet management systems' licensing and maintenance.

The diesel fuel price assumed is $US 1.15/litre. The electric power cost assumed is $0.08/kwh.

Stockpiling re-handling of mill feed is included in the mine operating cost.

No drill and blast costs are required due to the unconsolidated nature of the deposit.

The annual mine operating cost is summarized in Table 21-12. Unit mining costs by years are shown in Table 21-13 and averages $2.26/tonne mined over the life of the project.

Table 21-12: Annual Mine Operating Cost

		Total LOM	-1	1	2	3	4	5	6	7	8	9	10	11	12	13
Direct Mining Costs (by Activity)			**Capitalized**													
Drilling	$ ('000)															
Blasting	$ ('000)															
Loading	$ ('000)	$ 14,007	319	989	1,123	1,121	1,109	1,167	1,128	1,067	1,105	1,056	1,070	1,073	1,073	926
Hauling	$ ('000)	$ 45,002	804	2,801	3,238	3,380	3,365	3,569	3,551	3,634	3,643	3,846	3,911	4,060	3,421	2,585
Services/Roads/Dumps	$ ('000)	$ 45,464	855	3,498	3,508	3,504	3,506	3,499	3,501	3,502	3,501	3,497	3,494	3,503	3,509	3,443
General, Superv & Tech	$ ('000)	$ 17,406	390	1,339	1,339	1,339	1,339	1,339	1,339	1,339	1,339	1,339	1,339	1,339	1,339	1,339
Allowance	$ ('000)	$ 6,094	118	431	460	467	466	479	476	477	479	487	491	499	467	415
Total Operating Cost	$ ('000)	$ 127,973	2,487	9,058	9,669	9,811	9,784	10,052	9,995	10,018	10,067	10,225	10,305	10,473	9,809	8,707
Direct Mining Costs (by Cost Element)																
Operating Labour	$ ('000)	$ 15,441	204	1,077	1,153	1,177	1,177	1,201	1,201	1,225	1,225	1,250	1,250	1,274	1,177	1,053
Maintenance Labour	$ ('000)	$ 7,564	144	558	586	586	586	586	586	586	586	586	586	614	586	530
Supervision & Technical	$ ('000)	$ 15,846	330	1,219	1,219	1,219	1,219	1,219	1,219	1,219	1,219	1,219	1,219	1,219	1,219	1,219
Non-Energy Consum & Parts	$ ('000)	$ 46,755	999	3,158	3,476	3,557	3,543	3,706	3,674	3,683	3,714	3,812	3,865	3,944	3,580	3,042
Fuel	$ ('000)	$ 31,470	455	2,240	2,398	2,429	2,418	2,486	2,463	2,453	2,467	2,496	2,519	2,548	2,404	2,148
Electric Power	$ ('000)	$ 2,084	81	160	160	160	160	160	160	160	160	160	160	160	160	160
Leases & Outside Services	$ ('000)	$ 2,720	156	215	215	215	215	215	215	215	215	215	215	215	215	140
Allowance	$ ('000)	$ 6,094	118	431	460	467	466	479	476	477	479	487	491	499	467	415
Total Operating Cost	**$ ('000)**	**$ 127,973**	**2,487**	**9,058**	**9,669**	**9,811**	**9,784**	**10,052**	**9,995**	**10,018**	**10,067**	**10,225**	**10,305**	**10,473**	**9,809**	**8,707**

Table 21-13: Unit Mine Operating Costs

		Total LOM	-1	1	2	3	4	5	6	7	8	9	10	11	12	13
Direct Mining Costs (by Activity)																
Drilling	$/t mat'l															
Blasting	$/t mat'l															
Loading	$/t mat'l	0.25	0.16	0.22	0.23	0.23	0.24	0.25	0.25	0.24	0.26	0.25	0.25	0.25	0.26	0.29
Hauling	$/t mat'l	0.79	0.40	0.64	0.67	0.70	0.72	0.78	0.79	0.83	0.85	0.89	0.91	0.94	0.83	0.80
Services/Roads/Dumps	$/t mat'l	0.80	0.43	0.79	0.73	0.73	0.75	0.76	0.78	0.80	0.81	0.81	0.81	0.81	0.86	1.07
General, Superv & Tech	$/t mat'l	0.31	0.20	0.30	0.28	0.28	0.28	0.29	0.30	0.30	0.31	0.31	0.31	0.31	0.33	0.42
Allowance	$/t mat'l	0.11	0.06	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.12	0.11	0.13
Total Operating Cost (mined mat'l)	$/t mat'l	2.26	1.24	2.06	2.01	2.04	2.08	2.19	2.22	2.28	2.34	2.38	2.40	2.44	2.39	2.71
Total Operating Cost	$/t feed	4.47		5.12	3.68	3.28	4.51	6.02	5.15	3.90	5.01	4.33	4.61	4.25	5.20	4.61
Direct Mining Costs (by Cost Element)																
Operating Labour	$/t mat'l	0.27	0.10	0.24	0.24	0.25	0.25	0.26	0.27	0.28	0.28	0.29	0.29	0.30	0.29	0.33
Maintenance Labour	$/t mat'l	0.13	0.07	0.13	0.12	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.16
Supervision & Technical	$/t mat'l	0.28	0.16	0.28	0.25	0.25	0.26	0.26	0.27	0.28	0.28	0.28	0.28	0.28	0.30	0.38
Non-Energy Consum & Parts	$/t mat'l	0.82	0.50	0.72	0.72	0.74	0.75	0.81	0.82	0.84	0.86	0.89	0.90	0.92	0.87	0.95
Fuel	$/t mat'l	0.55	0.23	0.51	0.50	0.51	0.51	0.54	0.55	0.56	0.57	0.58	0.59	0.59	0.59	0.67
Electric Power	$/t mat'l	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05
Leases & Outside Services	$/t mat'l	0.05	0.08	0.05	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04
Allowance	$/t mat'l	0.11	0.06	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.12	0.11	0.13
Total Operating Cost	**$/t mat'l**	**2.26**	**1.24**	**2.06**	**2.01**	**2.04**	**2.08**	**2.19**	**2.22**	**2.28**	**2.34**	**2.38**	**2.40**	**2.44**	**2.39**	**2.71**
Total Operating Cost	**$/t feed**	**4.47**		**5.12**	**3.68**	**3.28**	**4.51**	**6.02**	**5.15**	**3.90**	**5.01**	**4.33**	**4.61**	**4.25**	**5.20**	**4.61**

21.4.2 Processing

The process plant operating costs are summarized in Table 21-14. Manpower is estimated at 28 people, including 11 technical and supervisory, 9 operators and 8 maintenance workers. The costing for reagents and utilities are based on testwork and typical values at similar operations.

For the purposes of the economic modelling, the processing cost has been estimated at $10.56 per lb U_3O_8 in product or $6.50 per tonne of mill feed, without contingency.

Table 21-14: Ivana Process Plant Operating Costs

	Annual Cost $('000)	$/lb U_3O_8 in product	$/t mill feed
Fixed Costs	3,651	2.73	1.68
Fuel	88	0.07	0.04
Alkaline Leach	6,961	5.21	3.21
Membrane Plant	540	0.41	0.25
U/V Separation	525	0.39	0.24
U/V Precipitation, Calcining, Packaging	842	0.63	0.39
Waste and Tailings	1,496	1.12	0.69
TOTAL	**14,103**	**10.56**	**6.50**

21.4.3 General and Administrative (G&A)

The administration cost has been estimated to a PEA level and includes costs for management, accounting, training, health & safety, and environmental.

The administration manpower list is shown in Table 21-15 and peaks at 58 staff. The corresponding annual G&A cost is $3.84 million per year, as shown in Table 21-16.

Table 21-15: Administration Manpower List

	-1	1	2	3	4	5	6	7	8	9	10	11	12	13
General Manager	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Manager - Finance	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Manager - HSE	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Superintendent - Account	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Payroll Clerks	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Accounts Payable Clerks	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Accounts Rec Clerks	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IT Clerks	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Purchasers	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Safety Inspectors	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Trainers	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Environmental Tech's	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Community Liaison	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Security	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Warehousemen	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Shipping & Receiving	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Site Laborers, Janitorial	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Lab Supervisor	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lab Technicians	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Total Admin Personnel	**58**	**58**	**58**	**58**	**58**	**58**	**58**	**58**	**58**	**58**	**58**	**58**	**58**	**58**

Table 21-16: Annual G&A Cost Summary

G&A Breakdown by Activity			G&A Breakdown by Cost Element		
	Annual ('000)	**$/t mill feed**		**Annual ('000)**	**$/t mill feed**
Management Salaries	456.3	$0.21	Operating Labour		
Administration	1,383.8	$0.64	Maintenance Labour		
HSE and Gov't Relations	563.3	$0.26	Supervision & Technical	1,961.0	$0.89
Camp, Travel, Transport	395.0	$0.19	Consumables & Parts	114.7	$0.05
Site Services	855.1	$0.40	Fuel	132.6	$0.06
Port and Off Site			Electric Power	280.3	$0.13
Head Office			Leases, Services, Costs	1,165.0	$0.55
Allowance	182.7	$0.08	Allowance	182.7	$0.08
Total G&A Cost	**3,836.3**	**$1.77**	**Total G&A Cost**	**3,836.3**	**$1.77**

22 Economic Analysis

The potential economics of the Project was evaluated using a discounted cashflow analysis based on life of mine revenue and cost estimates. The cashflow analysis was based on the capital and operating costs described in Section 21.

Revenue assumptions are described in Section 22.1.1.

The financial evaluation uses as a base case a discount rate of 8% and was discounted back to the commencement of construction (Year -2).

The reader is cautioned that the PEA is preliminary in nature and is based solely on Inferred Mineral Resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability and there is no certainty that the PEA will be realized.

22.1 Summary

The economic analysis results are summarized in Table 22-1 and indicate an after-tax net present value ("NPV") of $135.2 million at an 8% discount rate, an after-tax internal rate of return ("IRR") of 29.3% and a 2.4-year payback period.

Table 22-1: Financial Results Summary

	Before Tax ($M)	After Tax ($M)
NPV0%	$ 405.32	$ 266.70
NPV5%	$ 272.14	$ 175.22
NPV8%	$ 214.63	$ 135.21
NPV10%	$ 183.01	$ 113.06
IRR	36.1%	29.3%
Payback (years)	n/a	2.4

The initial capital expenditure is $128.1 million with a total life-of-mine capital cost of $163.5 million, both including a 30% contingency. All currency values are expressed in US dollars unless otherwise noted.

The economics are based on long term metal prices of $50/lb U_3O_8 and $15/lb V_2O_5. The revenue is mainly derived from uranium with a vanadium by-product. The uranium generates 90% of the total revenue. Figure 22-1 provides a graph of the cumulative NPV8% over the life of the project.

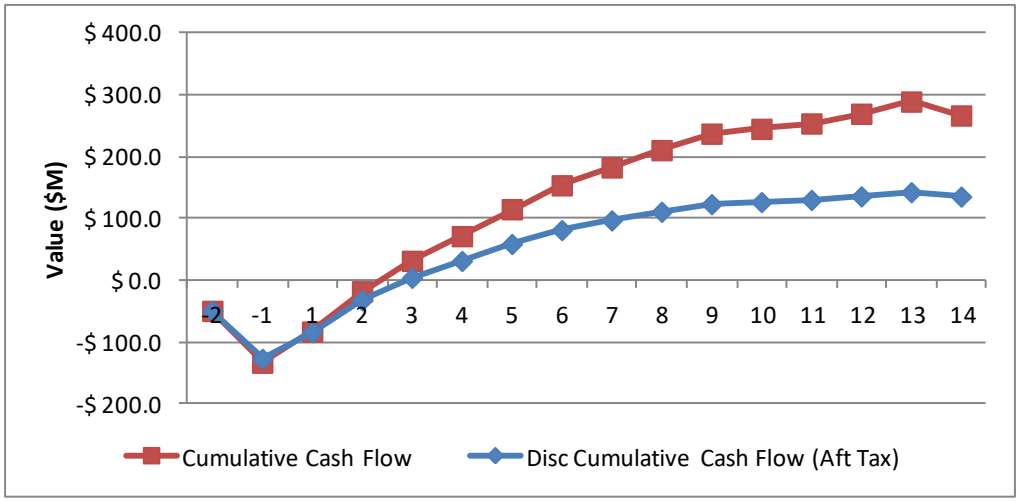

Figure 22-1: Cashflow Profile (NPV8%)

22.1.1 Metal Prices and Revenue Assumptions

The Project's base case commodity input assumptions are summarized in Table 22-2.

The uranium and vanadium pricing basis is described in more detail in Section 19. Although Blue Sky Uranium has not completed any market studies to date, a review was made of commodity pricing being used by industry peers and industry analysts. Market analysts are forecasting higher long term prices than current due to the restart of the Japanese nuclear reactor fleet, production cuts from several major producers, and new reactor construction and uranium demand growth in several emerging economies.

The annual revenue profile is shown in Figure 22-2. For the first 5 full operating years, revenues are in the range of $95 million, of which 90% is derived from uranium sales.

Table 22-2: Commodity Price Assumptions

Uranium (U_3O_8)	$50.00	$/lb
Vanadium (V_2O_5)	$15.00	$/lb

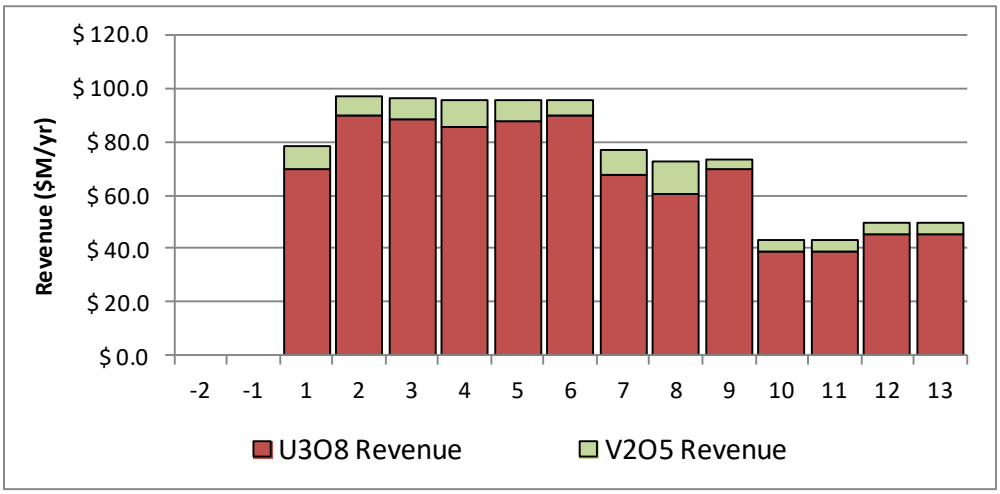

Figure 22-2: Annual Revenue

22.1.2 Metallurgical Recoveries

The Ivana operation's process recovery assumptions for both processing stages are summarized in Table 22-3.

Table 22-3: Recovery Assumptions

	LFCPP Recovery	Leaching Recovery	Net Recovery
Uranium (U_3O_8)	89.0%	95.0%	84.6%
Vanadium (V_2O_5)	89.0%	59.0%	52.5%

22.1.3 Capital Costs

Total life-of-mine capital costs are estimated at $163.5 million as outlined in the Capital and Operating Cost Section 21. Most of the initial capital costs are incurred over a two-year construction period. Initial development cost is estimated to be $128.1 million, while life-of-mine sustaining costs are approximately $35.5 million.

22.1.4 Operating Costs

The project annual operating costs are consistent from year to year since mining and processing tonnages are relatively consistent. Figure 22-3 presents the annual operating cost breakdown. Approximately 50% of the annual operating cost consists of processing charges while mining comprises 35% of the total operating cost.

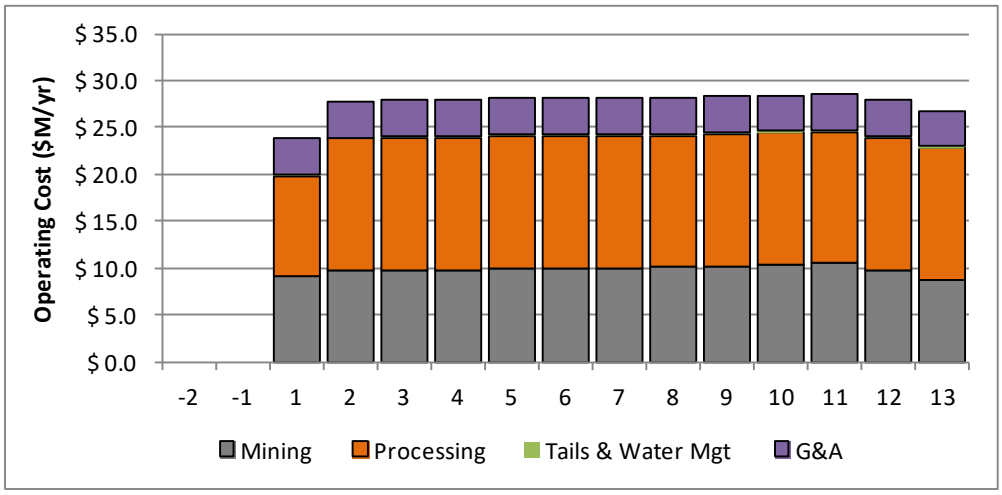

Figure 22-3: Annual Operating Costs

22.1.5 Income Taxes, Royalties, Export Duties

Mining operations in Argentina are subject to several tiers of taxes. The following is a summary of the significant taxes applicable to the Ivana Project.

22.1.5.1 Federal taxes

Income tax is levied on net taxable income from Argentine or from foreign sources obtained by Argentine residents. Corporations pay 25% to 38% on their net taxable income at the end of the tax year. Table 22-4 summarizes the basis for the tax calculation in the PEA cashflow model.

Different rates of taxation apply to monies retained in country and monies expatriated for foreign entities. It is assumed that 20% of income is retained in Argentina (25% tax rate) and 80% expatriated (38% tax rate).

Table 22-4: Income Tax Basis

			$M LOM
Revenue		US$(M)	966.2
(-) Operating Cost		US$(M)	(360.1)
(-) deduct Royalty		US$(M)	(14.7)
(-) Depletion		US$(M)	(20.0)
(-) Reclamation Allowance		US$(M)	(18.0)
(-) deduct Export duty		US$(M)	0.0
(-) Depreciation		US$(M)	(161.9)
Taxable Income		US$(M)	**391.6**
Taxable Income (allocated in country)	20.0%	US$(M)	78.3
Taxable Income (allocated to shareholders)	80.0%	US$(M)	313.3
Argentina Income Tax (in country)	25.0%	US$(M)	19.6
Argentina Income Tax (to shareholders)	38.0%	US$(M)	119.0
Tax Payable (to cashflow)		US$(M)	**138.6**

22.1.5.2 Value added tax ("VAT")

This tax is levied on the sales price of movables in Argentina, on contracts for the performance of works and services in general, and on imports of movables. VAT is generally a refundable tax and hence it has not been included in the economic analysis.

22.1.5.3 Export Duties

The applicable rate for this recently introduced temporary tax varies generally from 5 to 12 per cent. However, the Argentine government currently indicates that the export duty will expire at the end of 2020. Since the Ivana operation will not be in production prior to that time, the cashflow model assumes no export duty.

22.1.6 Royalty

A royalty of 2% has been assumed in the cashflow model.

Deductible costs for calculating the royalty do not include mining costs but will include:

a) Transportation, freight and insurance costs until delivery of the finished product.

b) Costs of crushing, milling, processing and any other treatment process enabling the sale of the final product obtained from the mine working.

c) Sales costs incurred until the final product is sold.

d) Administrative costs until delivery of the final product, less extraction costs.

22.2 Cash Flow Summary

The estimated annual life of mine ("LOM") cash flow for the Amarillo Grande Project is summarized in Table 22-5. The table provides life of mine revenue, operating cost, capital costs, and taxes.

A closure and reclamation allowance of $22.6 million is included in the cashflow model after the final year of commercial operation.

Table 22-5: Project Cash Flow Summary

		LOM
REVENUE		
Uranium	US$(M)	876.0
Vanadium	US$(M)	90.2
Total Revenue	US$(M)	966.2
OPERATING COST		
Mining Cost, incl stockpile & rejects	US$(M)	128.0
Processing Cost	US$(M)	180.0
Tailings and Water Management	US$(M)	2.3
G&A	US$(M)	49.9
Total Operating Cost	**US$(M)**	**360.1**
CAPITAL COST		
Mine	US$(M)	25.9
Process Plant	US$(M)	85.2
Waste & Water Management	US$(M)	12.7
Other Infrastructure	US$(M)	4.3
Contingency	US$(M)	35.5
Total Capital Cost	**US$(M)**	**163.5**
CASH FLOW		
Revenue	US$(M)	966.2
(-) Operating Cost	US$(M)	(360.1)
(-) Royalties	US$(M)	(14.7)
(-) Export Duties	US$(M)	0.0
(-) Income Taxes	US$(M)	(138.6)
(-) Capital Spending	US$(M)	(163.5)
(-) Closure & Reclamation	US$(M)	(22.6)
Total Cashflow (Undiscounted)	**US$(M)**	**266.7**

22.3 Economic Sensitivities

The Ivana operation sensitivity analysis was conducted to the following key variables:

- Uranium and Vanadium Prices
- Capital and Operating costs

The results of the sensitivity analysis for the key variables on the After-Tax NPV8% are shown in Figures 22-4 and 22-5. As expected the most sensitive variable is the commodity pricing. These sensitivities are indicative only, and do not include the impact of price and cost fluctuations on the cut-off grade and mineable feed tonnes.

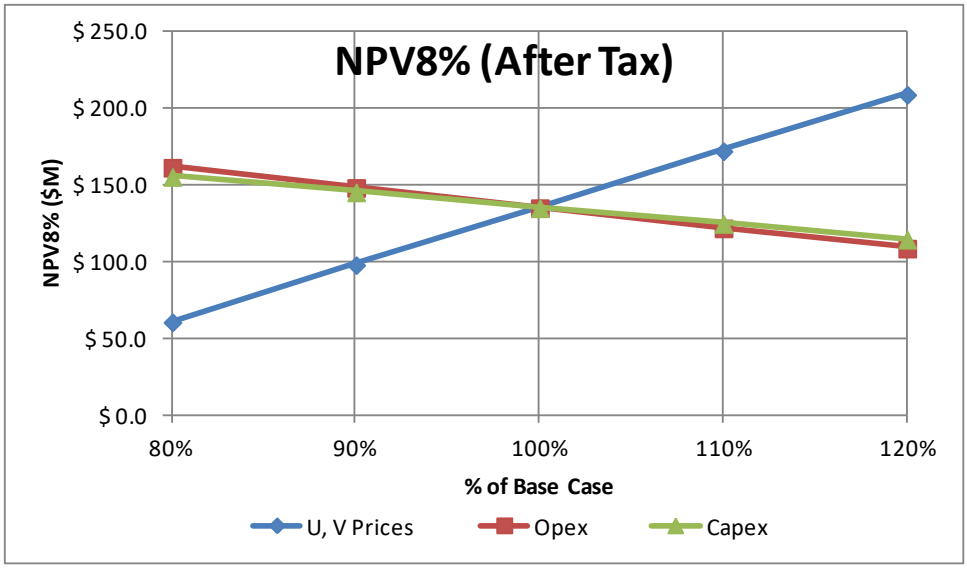

Figure 22-4: NPV8% Sensitivity

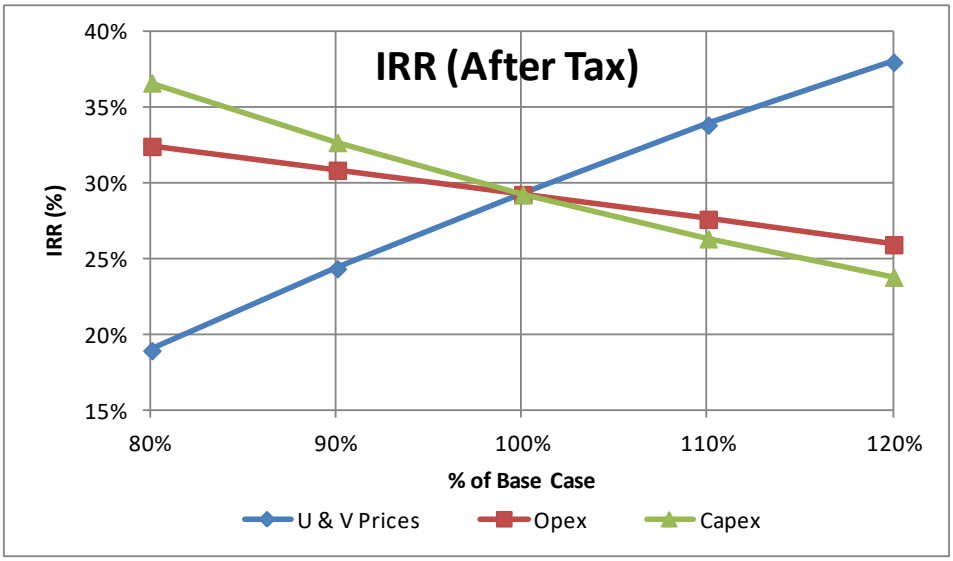

Figure 22-5: IRR Sensitivity

Table 22-6 is a summary of the economics at the 0% and 8% discount rate over a range uranium prices.

Table 22-6: Summary of Economics and Sensitivities

	Units	Uranium Price Sensitivity								
Price - U_3O_8	$/lb	30	35	40	45	**50**	55	60	65	70
Price - V_2O_5	$/lb	15	15	15	15	**15**	15	15	15	15
Pre-Tax										
NPV (0%)	$M	61.9	147.8	233.6	319.5	**405.3**	491.2	577.0	662.9	748.7
NPV (8%)	$M	9.0	60.4	111.8	163.2	**214.6**	266.0	317.5	368.9	420.3
IRR	%	9.8	18.2	24.9	30.8	**36.1**	41.2	45.9	50.4	54.8
After-Tax										
NPV (0%)	$M	42.1	100.3	155.8	211.2	**266.7**	322.2	377.6	433.1	488.5
NPV (8%)	$M	-2.1	33.4	67.8	101.5	**135.2**	168.9	202.3	235.6	269.0
IRR	%	7.5	14.5	20.0	24.8	**29.3**	33.5	37.3	40.9	44.4
Payback	years	4.7	3.8	3.0	2.7	**2.4**	2.1	1.9	1.8	1.7

22.4 Uranium Production Cost

The uranium production cost is summarized in Table 22-6. The table presents that basic uranium production cost per lb of U_3O_8, and the production cost net of vanadium by-product credits and all-in sustaining costs.

Production volumes by year are shown in Figures 22-6 and 22-7. Uranium production peaks over years 1 to 6 as higher grades are processed during that period. Vanadium credits will fluctuate over the life of the project since mill feed blending is optimizing uranium head grades and different areas within the mine will have different U:V ratios. Uranium production averages 1.35 Mlb U_3O_8 per year and totals 17.5 Mlb U_3O_8 over the life of mine. Vanadium production averages 0.5 Mlb V_2O_5 per year and totals 6.5 Mlb V_2O_5 over the life of mine.

Table 22-6: Uranium Production Cost

Production (U_3O_8)	M-lbs U_3O_8	17.52
Operating Cost+Royalty+Duty	USD (000)	$ 374,739
==> Cost per lb U3O8	$/lb	$21.39
(-) Credit for V_2O_5 revenue	USD (000)	$ 90,168.0
(=) Operating Cost+Royalty+Duty - Credit	USD (000)	$ 284,571
==> Cost per lb U_3O_8 (with V credit)	$/lb	$16.24
(+) Sustaining Costs	USD (000)	$ 35,464
(=) Operating Cost+Royalty+Duty-Credit+SC	USD (000)	$ 320,035
==> Cost per lb U_3O_8 (AISC with credit)	$/lb	$18.27

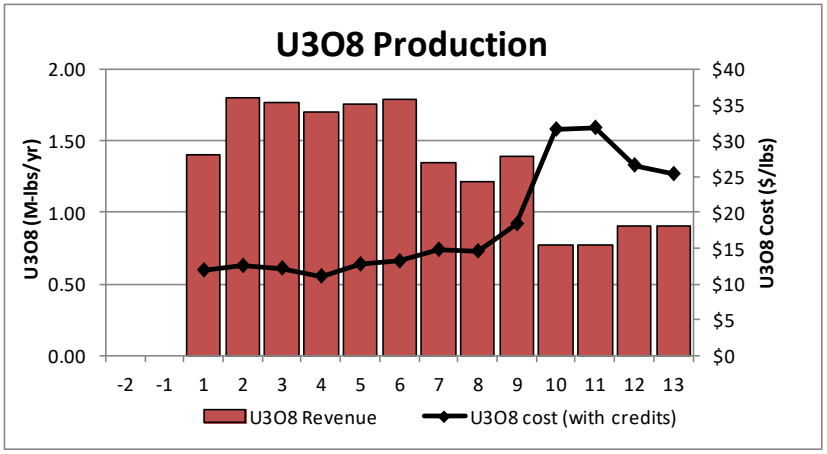

Figure 22-6: U_3O_8 Production by Year

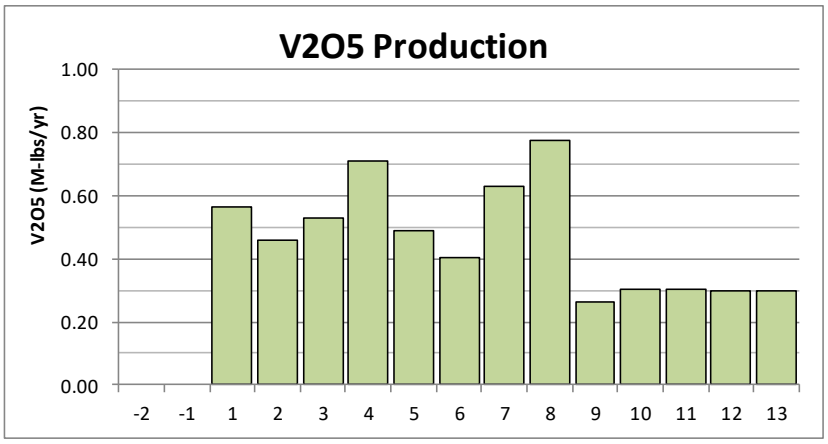

Figure 22-7: V_20_5 Production by Year

23 Adjacent Properties

Adjacent to the Ivana resource properties are five mineral properties that are not controlled by Blue Sky, (Table 23-1; Figure 23-1) although none of these adjacent properties are claimed for uranium or vanadium minerals.

Table 23-1: Adjacent Properties to Ivana Resource Properties

FILE #	MINERAL CATEGORY	NAME	OWNER	TYPE	AREA (hectares)
23.102-98	2nd (halite)	Homenaje	Alcalis de la Patagonia SA	Discovery Manifestation	1,600
36.082-11	1st (polymetallic)	Lucho 2	Claudio Lucero	Cateo	9,875
36.095-11	1st (polymetallic)	Galadriel 7	Trendix Mining	Cateo	7,170
29.157-04	1st (polymetallic)	Milla 6	Trendix Mining	Discovery Manifestation	3,500
41.018-16	1st (polymetallic)	San Martín Norte	Trendix Mining	Cateo	3,250

The Qualified Person has been unable to verify the above information and the information is not necessarily indicative of the mineralization on the property that is the subject of the technical report.

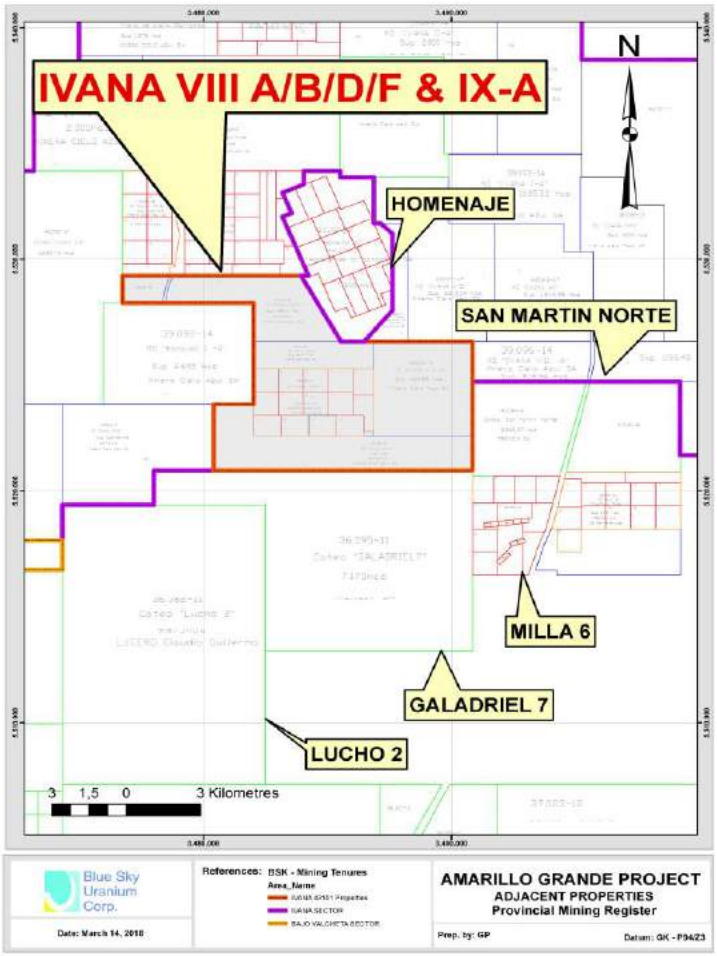

Figure 23-1: Adjacent properties near the Ivana prospect.

24 Other Relevant Data and Information

There are no other relevant data and information, of which the Qualified Persons are aware, that have not been presented in other sections of this report.

25 Interpretations and Conclusions

All exploration, metallurgy, resource estimates, and the Preliminary Economic Assessment have been completed to be compliant with Canadian National Instrument 43-101 as set forth in CIM Standards on Resources and Reserves, Definitions and Guidelines.

The PEA was initiated to provide an initial view of the potential economics of the Operation, and to provide management with guidance for the future exploration and development processes. The reader is cautioned that the PEA is preliminary in nature and is based solely on Inferred Mineral Resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability and there is no certainty that the PEA will be realized.

The authors of the technical report conclude that:

- Based on the current level of exploration, the Ivana Deposit contains an inferred mineral resource of 28 Mt at a grade of 311 ppm U (0.037 % U_3O_8) and 107 ppm V (0.019% V_2O_5).
- Possible extensions to the mineralization at Ivana may be found outside of the current drilling pattern, which has not yet defined the final limits of the mineralized horizons, or in the discovery of satellite deposits nearby.
- Upgrading of the resource categories will be required to further advance the project.
- The Ivana Deposit demonstrates attributes well suited for a potential 13 year mining operation, including near-surface mineralization, favorable uranium grades, access to infrastructure and amenability to simple processing via pre-concentration and leaching.
- The surface mine will have a depth in the range of 20 to 30 metres with a strip ratio of 1.1:1. The sand and gravels will be free digging, negating the need for explosives at site.
- Concurrent backfilling of the mine with mine waste and LFCPP Reject will enhance progressive reclamation.
- The processing method takes advantage of pre-concentration using a simple scrubbing step to remove 77% of the waste. The remaining 23% of the material will undergo a leaching process to recover both uranium and vanadium.
- The project demonstrates positive economics at a range of uranium prices, based on the current technical assumptions; however, the economics are highly leveraged to the price of uranium.
- Vanadium recovery provides a by-product credit and approximately 10% of the project revenue stream.
- Based on results of exploration work carried out over parts of the Amarillo Grande Project outside of the Ivana Deposit since 2006, the potential for discovery of additional uranium-vanadium deposits elsewhere on the Project lands is considered high.
- Nuclear power generation is expanding in Argentina and hence a local supply source of uranium will be a benefit to the country.

26 Recommendations

The Preliminary Economic Assessment of the Amarillo Grande project indicates it has potential to support a viable mining operation at the Ivana deposit. There is potential for additional resources at the Project, and, if additional resources are discovered, a future mining operation scale could be somewhat different than that portrayed in this report.

Additional exploration and drilling is required to better understand the extent of mineralization in and around the deposit and throughout the Project area, so that any future operational design takes full advantage of available resources and is of an appropriate size and configuration. Any economic evaluation studies beyond a PEA level will require converting Inferred resources to the Indicated and/or Measured classification, requiring an in-fill drill program.

Two phases of activities are envisioned to help advance the Amarillo Grande Project towards the pre-feasibility study stage, as described in Sections 26.1 and 26.2.

26.1 Phase 1. Resource Delineation

- The current drill spacing appears to be adequate to delineate Indicated resources; however, more extensive bulk density testing is needed before the resource can be moved to the Indicated category. Ideally, there would be enough bulk density measurements to interpolate density into the block model.
- Conduct additional drilling to determine the limits of mineralization at the Ivana deposit. This should include some infill drilling at Ivana to demonstrate short-range continuity of mineralization to confirm the minimum required spacing for Indicated resources in preparation for a future Prefeasibility study (PFS).
- Continue exploration to identify additional deposits, including geologic mapping and interpretation, geophysical studies and drilling at existing targets proximal to Ivana, as well as in the nearby southern sector of the Project, and progressively further out, on a target priority basis, elsewhere within the 145 km trend of the Amarillo Grande land package.

In addition to the resource expansion and delineation outlined above, baseline studies should be initiated, including ground water characterization, weather monitoring and social impact assessments.

The budget for this Phase is summarized in Table 26-1:

Table 26-1: Budget for Phase 1 Recommended Program

Item	Budget
Bulk density testing	$50,000
4,000 m RC Drilling at Ivana deposit	$1,200,000
4,500 m RC drilling & geophysics at Amarillo Grande	$1,500,000
Baseline Studies	$100,000
TOTAL	**$2,850,000**

26.2 Phase 2. Engineering Studies

The Qualified Persons also make the following additional technical study recommendations in preparation for a future advanced economic study for the Ivana deposit.

26.2.1 Mining

- Undertake geotechnical investigations to better understand the mining conditions in the mine, including optimal mine wall slope angles, digging conditions, and equipment trafficability above and below the water table.
- Undertake hydrogeological investigations to better understand the groundwater regime, including water table depth across the mine area and water inflow rates when mining below the water table.
- Complete geotechnical investigations at the waste dumps and stockpiles to support future design work.

26.2.2 Process & Metallurgical

- Confirmation of previous test results (particle size distribution, leach feed concentrate preparation, leaching) for samples from new deposits to be dealt with for the first time in the process plant design. Such new deposits would also require QEMSCAN work.
- Confirmation of previous test results using the local ground water, which is a brine, in place of the demineralized water used in metallurgical tests to date.
- Solid/liquid separation tests (either settling or filtration, as dictated by the process and the in-process material properties).
- Membrane filtration tests.
- Uranium-vanadium separation process optimization.
- U-product and V-product precipitation optimization.
- Locked cycle test of the entire process, to be run until equilibrium is reached.
- Conduct hydrogeological investigations to investigate groundwater supply options for make-up water.
- Complete geotechnical investigations at the Process Plant Site to support future design work.

26.2.3 Tailings and Water Management

- Complete geotechnical and hydrogeological investigations at the Starter TMF.
- Complete testing on embankment and separation berm construction materials to confirm material parameters.
- Complete testing on LFCPP Reject and tailings materials to estimate material parameters for seepage and stability modelling and confirm design assumptions (dry density, specific gravity, etc.).

26.2.4 Environment Design Inputs and Permitting

- Continue geochemical characterization of the LFCPP reject waste and tailings streams with respect to placement location and final closure requirements.
- Evaluate hydrometeorology for the Project area to define climate inputs for water balance, return period precipitation events, etc.
- Continue Environmental and Social studies, calibrated to support eventual EIA and permitting, including air quality, water quality, soil studies, and supporting biological investigations.

- Costs for this work would include field programs, equipment installation, monitoring, laboratory analyses, interpretation, and reporting.

26.2.5 Marketing and Economics

- Undertake marketing studies and initiate discussions with Argentine consumers of uranium and vanadium. Operation economics and incurred taxes may be improved by domestic off-take agreements.

26.2.6 Phase 2 Budget

The budget for this Phase is summarized in Table 26-2:

Table 26-2: Budget for Phase 2 Recommended Program

Item	Budget
Mining	$300,000
Processing & Metallurgical	$300,000
Tailings and Water Management	$200,000
Environment Design Inputs and Permitting	$500,000
Marketing Studies	50,000
TOTAL	**$1,350,000**

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CERTIFICATES OF QUALIFIED PERSON (Also in Lieu of Date & Signature Page)

CERTIFICATE OF QUALIFIED PERSON

KEN KUCHLING, P.ENG.

I, Ken Kuchling, P. Eng., residing at 33 University Ave., Toronto, Ontario, M5J 2S7, do hereby certify that:

1. I am a senior mining consultant with KJ Kuchling Consulting Ltd. located at #2303-33 University Ave, Toronto, Ontario Canada.
2. This certificate applies to the Technical Report titled "Preliminary Economic Assessment for the Ivana Uranium-Vanadium Deposit, Amarillo Grande Project", (The "Technical Report") with an effective date of February 27, 2019.
3. I graduated with a Bachelor degree in Mining Engineering in 1980 from McGill University and a M. Eng degree in Mining Engineering from UBC in 1984. I have worked as a mining engineer for a total of 38 years since my graduation from university. My relevant work experience for the purpose of the Technical Report is over 20 years as an independent mining consultant in commodities such as gold, copper, lead, zinc, potash, diamonds, molybdenum, tungsten, uranium, and bauxite. I have mining equipment experience working in unconsolidated deposits, also including aspects such as inpit tailings storage, geotechnical engineering, and groundwater hydrogeology in global projects, all highly relevant to the Ivana uranium-vanadium deposit. My experience also includes the development of mining cashflow models and economic modeling. I have practiced my profession continuously since 1980:

• Independent Mining Consultant, KJ Kuchling Consulting Ltd.	2000 – Present
• Senior Mining Engineer, Diavik Diamond Mines Inc.,	1997 – 2000
• Independent Mining Consultant, KJ Kuchling Consulting Ltd.,	1995 – 1997
• Senior Geotechnical Engineer, Terracon Geotechnique Ltd.,	1989 - 1995
• Chief Mine Engineer, Mosaic, Esterhazy K1 Operation.	1985 – 1989
• Mining Engineering, Syncrude Canada Ltd.	1980 – 1983

I am a member of the Professional Engineers of Ontario.

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.

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for authoring or co-authoring Sections 1, 2, 3, 15, 16, 19, 21, 22, 24, 25, 26, 27 of the Technical Report.
6. I am independent of the issuer applying the test in Section 1.5 of NI 43-101.
7. I have had no prior involvement with the Project that is the subject of this Technical Report.
8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.
9. As of the effective date of this 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.

Effective Date: February 27, 2019
Signed Date: June 28, 2019

{SIGNED AND SEALED}
[Ken Kuchling]

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Ken Kuchling, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

I, Charles R. Edwards, P.Eng., do hereby certify that:

1. I am Owner and Principal Engineer, of Chuck Edwards Extractive Metallurgy Consulting, a firm with a business address of 136 – 320 Heritage Crescent, Saskatoon, Saskatchewan, S7H 5P4.
2. I am an author of a technical report entitled "Preliminary Economic Assessment for the Ivana Uranium-Vanadium Deposit, Amarillo Grande Project", with an effective date of February 27th, 2019 (the "**Technical Report**").
3. I graduated from Queen's University with a B. Sc. (Engineering Chemistry) in 1965 and an M.Sc. (Chemical Engineering) in 1969.
4. From 1974 to present I have been actively employed as an engineer in the area of extractive metallurgy. My uranium processing experience consists of employment as Research Engineer with Eldorado Nuclear Limited, Ottawa from 1978-1980, as Chief Metallurgist at Eldor Mines' Rabbit Lake mill from 1986-1987, as Senior Metallurgical/Process Engineer with Kilborn Western Limited from 1987-1992, as Regional Director, Mineral Development Agreements, with Energy, Mines and Resources Canada from 1992-1994, as Senior Metallurgist (1994-1996), Chief Metallurgist (1996-2000), Manager, Process Engineering (2000-2002), Director, Engineering & Projects (2002-2007) and Principal Metallurgist (2007-2008) in Cameco's corporate office, as Director, Metallurgy with Amec Foster Wheeler from 2008 to 2017, as process Engineering Advisor with Saskatchewan Research Council from 2017 to 2018, and as Principal Engineer with Chuck Edwards Extractive Metallurgy Consulting from 2018 to present.
5. I am a member, in good standing, of APEGS in the Province of Saskatchewan, member #05915.
6. I have visited The Amarillo Grande Project properties during 20 to 22 April 2018, and specifically I visited the Ivana Property on 22 April 2018.
7. I am responsible for sections 13 and 17, 1.6, 21.2, 21.4.2, and 26.2.2, and co-authored sections 1.1, 1.8, 1.10, 25, and 26.2.6 of the Technical Report.
8. I have read the definition of "qualified person" set out in *National Instrument 43–101 Standards of Disclosure for Mineral Projects* ("**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 am a "qualified person" within the meaning of NI 43-101**.**
9. As an independent consulting metallurgist and process engineer. I have had prior involvement with the Ivana Property that is the subject of the Technical Report since 2018. As an independent technical advisor to Blue Sky Uranium, the nature of my prior involvement with the Ivana Property included guidance and interpretation of metallurgical test programs for the Ivana Property in 2018 and 2019. I also authored two reports on the metallurgical test program results in 2018 and one in 2019.
10. As of the date of this certificate, to the best of my knowledge, information and belief, the parts of the Technical Report that I am responsible for, contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
11. I have read NI 43-101 and the sections of the Technical Report that I am responsible for, have been prepared in compliance with that Instrument.
12. I am independent of the issuer, Blue Sky Uranium Corp., applying all of the tests in Section 1.5 of NI 43-101.

Dated this 28th day of June 2019, in Saskatoon, Saskatchewan.

"original signed by"

Charles R. Edwards
Principal Engineer
Chuck Edwards Extractive Metallurgy Consulting

CERTIFICATE OF QUALIFIED PERSON

I, Ken Embree, P.Eng., do hereby certify that:

1. This certificate applies to the Technical Report entitled “Preliminary Economic Assessment for the Ivana Uranium-Vanadium Deposit, Amarillo Grande Project” with an effective date of February 27th, 2019, (the “Technical Report”) prepared for Blue Sky Uranium Corp.
2. I am employed as President of Knight Piésold Ltd. with an office at Suite 1400 - 750 West Pender Street, Vancouver, British Columbia, V6C 2T8, Canada.
3. I am a graduate of the University of Saskatchewan with a B.Sc. in Geological Engineering (1986). I have practiced my profession continuously since 1986. My experience includes tailings and waste and water management for mine developments in Canada, the US and South America.
4. I am a Professional Engineer in good standing with the Association of Professional Engineers and Geoscientists of British Columbia in the area of geological engineering (No. 17439). I am also registered as a Professional Engineer in Ontario (No. 100040332).
5. 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.
6. I have not visited the project site.
7. I am responsible for Sections 18 and 20 with contributions to the relevant parts of Sections 1, 16, 21 and 26 of this Technical Report.
8. I am independent of the Issuer and related companies applying all of the tests in Section 1.5 of the NI 43-101.
9. I have had no prior involvement with the property that is the subject of this Technical Report.
10. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
11. I have read NI 43-101, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Effective Date: February 27th, 2019
Signing Date: June 25th, 2019

“original signed by”

Ken Embree, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

I, Dr. Jon P. Thorson, PhD, CPG#10094, do hereby certify that:

1. I am an independent consulting geologist providing geological and consulting services as a sole proprietor doing business as Jon P. Thorson Consulting Geologist. My business address is 3611 South Xenia Street, Denver, Colorado, USA; 303-514-9160; jonpthorson@gmail.com
2. This Certificate applies to the technical report titled "Preliminary Economic Assessment for the Ivana Uranium-Vanadium Deposit, Amarillo Grande Project", prepared for Blue Sky Uranium Corp., with an effective date of February 27th, 2019. I have granted permission to Blue Sky Uranium Corp. to file this report with appropriate agencies as needed.
3. I graduated with a BS degree in Geology from the Washington State University, Pullman, Washington, USA in 1966, and received a PhD in Geology from University of California Santa Barbara, Santa Barbara, California, USA in 1971.
4. I am an active member of the American Institute of Professional Geologists as a Certified Professional Geologist (CPG #10094). I am also an active member of Society of Economic Geologists (Fellow, 1991), Society for Geology Applied to Mineral Deposits (SGA), and Denver Region Exploration Geologists Society.
5. I have worked as a natural resources exploration geologist for a total of 48 years since my graduation from university, including 29 years as an independent consulting geologist specializing in mineral resources of sedimentary basins. This has included extensive work on uranium deposits in geological settings comparable to the Ivana uranium-vanadium deposit, making me highly qualified to author the sections of the report listed at point 8 below.
6. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI43-101) and certify that by reason of my education, affiliation with professional associations, and past relevant experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
7. I visited the Amarillo Grande Project and Ivana prospect, Rio Negro Province, Argentina, on January 29 and 30, 2017.
8. I am a co-author of the Technical Report and have written and approved Sections 4 - 11, and 23.
9. I am independent of Blue Sky Uranium Corp. within the meaning of section 1.5 of NI 43-101. I do not own any interest in the company, company securities, or the property, that could be affected by the recommendations in this report.
10. My involvement with Blue Sky Uranium Corp. has been a series of formal consulting assignments on the Amarillo Grande Project in January - February, 2017, December 2017 - April 2018, and between September 17, 2018 and the date of this report. I acted as a Qualified Person for and co-authored a previous technical report for the Ivana property titled *"Initial Mineral Resource Estimate for the Ivana Uranium-Vanadium Deposit, Amarillo Grande Project, Rio Negro Province, Argentina: NI43-101 Technical Report for Blue Sky Uranium Corp., Effective Date February 28, 2018".* I have continued occasional and informal consulting for Blue Sky Uranium, at the request of Guillermo Pensado, Vice President, Exploration and Development, Blue Sky Uranium.
11. I have read National Instrument 43-101 and Form 43-101F1, and the Sections of the Technical Report, for which I am responsible, have been prepared in compliance with that instrument and form.
12. As at the effective date of this Certificate, 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.

Signed this 25th day of June, 2019.

"original signed by"

Jon P. Thorson

CERTIFICATE OF QUALIFIED PERSON

I, Bruce Davis, Ph.D., FAusIMM, do hereby certify that:

1. I am an Independent Consultant of:

   BD Resource Consulting Inc.
   4253 Cheyenne Drive
   Larkspur, Colorado, USA 80118

2. This certificate applies to the NI 43-101 Technical Report, "Preliminary Economic Assessment for the Ivana Uranium-Vanadium Deposit, Amarillo Grande Project", that has an effective date of 27th February, 2019 (the "Technical Report").

3. I graduated from the University of Wyoming with a Doctor of Philosophy degree (Geostatistics) in 1978.

4. I am a Fellow of the Australasian Institute of Mining and Metallurgy, Registration Number 211185.

5. I have practiced my profession continuously for 40 years and have been involved in geostatistical studies, QA/QC studies, mineral resource and reserve estimations and feasibility studies on numerous underground, open pit and in situ leach deposits in Canada, the United States, Mexico, Central and South America, and Africa. I have estimated uranium resources in Arizona, Colorado, New Mexico, South Dakota, Texas, Utah and Wyoming in the USA and the Northwest Territories of Canada, as well as Argentina. I have reviewed and provided opinions on uranium resource models from North America, Africa, and Australia.

6. 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.

7. I have had prior involvement with the property that is the subject of this report: I acted as a Qualified Person for and co-authored a previous technical report for the Ivana property titled *"Initial Mineral Resource Estimate for the Ivana Uranium-Vanadium Deposit, Amarillo Grande Project, Rio Negro Province, Argentina: NI43-101 Technical Report for Blue Sky Uranium Corp., Effective Date February 28, 2018".*

8. I am a co-author of the Technical Report. I am responsible for Section 12 and the summary of this work in Section 1 and parts of Section 14 of the Technical Report.

9. I have not visited the Project that is the subject of this Technical Report.

10. I am independent of Blue Sky Uranium Corporation, applying all of the tests in section 1.5 of National Instrument 43-101.

11. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

12. As of the date of this certificate, 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 this 28th day of June, 2019.

(original signed by Bruce M. Davis)

_____

Bruce M. Davis, Ph.D., FAusIMM

CERTIFICATE OF QUALIFIED PERSON

Susan Lomas, P.Geo.
7629 Sechelt Inlet Rd.
Sechelt, British Columbia V0N 3A4

I, Susan Lomas, P.Geo., am the President of Lions Gate Geological Consulting Inc. (LGGC).

This certificate applies to the technical report titled "Preliminary Economic Assessment for the Ivana Uranium-Vanadium Deposit, Amarillo Grande Project", prepared for Blue Sky Uranium Corp., with an effective date of February 27th, 2019 (the "Technical Report").

I am a Professional Geoscientist of The Association of Professional Engineers and Geoscientists of British Columbia. In 1987, I graduated from Concordia University of Montreal with a Bachelor of Science degree in geology.

I have practiced my profession continuously since 1987 and have been involved in: mineral exploration for gold, nickel, copper, zinc, lead and silver in Canada, United States, Mexico, Venezuela and Ghana and in underground mine geology, ore control and resource modelling and estimation for gold, nickel, copper, zinc, lead, silver, potash, uranium and industrial mineral properties in Canada, United States, Mongolia, Mexico, Brazil, Peru, Thailand, China, Greece, Romania, Ecuador, Venezuela, Senegal, New Caledonia, Russia and Argentina.

As a result of my experience with mineral resource modelling and estimation and my qualifications, I meet the requirements of a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects (NI 43–101) for the Ivana uranium-vanadium deposit/Amarillo Grande project.

I have not visited the Amarillo Grande Project.

I am responsible for Section 14 of the Technical Report and the summary of this work in Section 1.

I am independent of Blue Sky Uranium Corporation as independence is defined by Section 1.5 of NI 43–101.

I have had prior involvement with the property that is the subject of this Technical Report: I acted as a Qualified Person for and co-authored a previous technical report for the Ivana property titled *"Initial Mineral Resource Estimate for the Ivana Uranium-Vanadium Deposit, Amarillo Grande Project, Rio Negro Province, Argentina: NI43-101 Technical Report for Blue Sky Uranium Corp., Effective Date February 28, 2018"*.

I have read NI 43–101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those section of the technical report not misleading.

(Signed and sealed) "Susan Lomas"

Susan Lomas, P.Geo.
Dated: 28 June, 2019

APPENDIX I. Ivana RC Drilling Details

Table AI-1: Summary of the RC drill hole locations and results at Ivana

All drill hole collar coordinates were surveyed in the Gauss Kruger projection. Posgar Zone 3 coordinate system (WGS84 datum). With the exception of holes AGI-0087 and -0088, all holes were drilled vertically and intervals are believed to represent true thickness.

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0001	3,483,352	5,523,854	0	-90	109	10.0	no interval				
AGI-0002	3,483,525	5,523,946	0	-90	108	13.0	1	3	**2**	**43**	**204**
AGI-0003	3,483,607	5,523,989	0	-90	107	14.0	1	2	**1**	**179**	**246**
AGI-0004	3,483,694	5,524,035	0	-90	107	20.0	1	4	**3**	**280**	**406**
AGI-0005	3,483,788	5,524,087	0	-90	106	20.0	0	6	**6**	**626**	**682**
including							1	2	**1**	**2,087**	**1892**
AGI-0006	3,483,881	5,524,136	0	-90	105	15.0	2	6	**4**	**41**	**258**
AGI-0007	3,483,960	5,524,179	0	-90	104	15.0	3	5	**2**	**32**	**226**
AGI-0008	3,484,053	5,524,230	0	-90	103	14.0	4	6	**2**	**38**	**552**
AGI-0009	3,484,145	5,524,279	0	-90	103	20.0	3	4	**1**	**38**	**505**
AGI-0010	3,484,222	5,524,320	0	-90	102	17.0	3	5	**2**	**44**	**322**
							11	12	**1**	**54**	**154**
AGI-0011	3,484,316	5,524,370	0	-90	101	17.0	8	11	**3**	**90**	**148**
AGI-0012	3,484,410	5,524,418	0	-90	101	19.0	2	4	**2**	**129**	**398**
							9	12	**3**	**55**	**168**
AGI-0013	3,484,577	5,524,510	0	-90	100	8.0	4	5	**1**	**57**	**171**
AGI-0014	3,484,577	5,524,510	0	-90	100	21.0	4	6	**2**	**42**	**206**
							9	10	**1**	**35**	**63**
							16	18	**2**	**161**	**564**
AGI-0015	3,484,751	5,524,599	0	-90	98	19.0	3	11	**8**	**79**	**147**
AGI-0016	3,484,936	5,524,693	0	-90	97	9.0	0	5	**5**	**270**	**216**
including							0	3	**3**	**419**	**272**
including							0	1	**1**	**666**	**387**
AGI-0017	3,485,117	5,524,788	0	-90	95	8.0	2	4	**2**	**89**	**116**
AGI-0018	3,484,877	5,523,988	0	-90	98	20.0	3	4	**1**	**58**	**186**
							8	9	**1**	**42**	**32**
AGI-0019	3,484,693	5,523,887	0	-90	99	21.0	3	5	**2**	**73**	**350**
							8	12	**4**	**85**	**127**
							16	17	**2**	**51**	**236**
AGI-0020	3,484,614	5,523,842	0	-90	99	19.0	3	4	**1**	**58**	**318**
							17	19	**2**	**41**	**132**
AGI-0021	3,484,522	5,523,792	0	-90	100	18.0	5	7	**2**	**271**	**354**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
including							5	6	**1**	**377**	**468**
							13	16	**3**	**43**	**87**
AGI-0022	3,484,429	5,523,738	0	-90	101	9.0	4	7	**3**	**105**	**230**
AGI-0023	3,484,356	5,523,698	0	-90	102	8.0	2	5	**3**	**40**	**390**
AGI-0024	3,484,264	5,523,644	0	-90	103	7.0	no interval				
AGI-0025	3,484,171	5,523,595	0	-90	104	10.0	3	5	**2**	**377**	**381**
including							3	4	**1**	**631**	**405**
AGI-0026	3,484,092	5,523,548	0	-90	105	9.0	2	3	**1**	**49**	**171**
AGI-0027	3,483,997	5,523,496	0	-90	107	8.0	0	3	**3**	**829**	**559**
including							0	1	**1**	**1,473**	**721**
AGI-0028	3,483,907	5,523,445	0	-90	109	5.0	no interval				
AGI-0029	3,483,829	5,523,401	0	-90	110	3.0	no interval				
AGI-0030	3,484,937	5,523,296	0	-90	105	11.0	no interval				
AGI-0031	3,484,844	5,523,249	0	-90	104	9.0	3	5	**2**	**57**	**286**
AGI-0032	3,484,761	5,523,207	0	-90	104	19.0	4	5	**1**	**32**	**209**
AGI-0033	3,484,670	5,523,161	0	-90	103	19.0	no interval				
AGI-0034	3,484,574	5,523,114	0	-90	104	20.0	no interval				
AGI-0035	3,484,496	5,523,073	0	-90	105	19.0	5	6	**1**	**44**	**237**
AGI-0036	3,484,402	5,523,023	0	-90	106	10.0	no interval				
AGI-0037	3,484,305	5,522,978	0	-90	107	7.0	no interval				
AGI-0038	3,484,226	5,522,937	0	-90	108	10.0	no interval				
AGI-0039	3,484,132	5,522,888	0	-90	109	7.0	no interval				
AGI-0040	3,484,036	5,522,842	0	-90	110	8.0	no interval				
AGI-0041	3,484,593	5,522,457	0	-90	111	11.0	no interval				
AGI-0042	3,484,688	5,522,507	0	-90	110	13.0	no interval				
AGI-0043	3,484,772	5,522,546	0	-90	109	17.0	no interval				
AGI-0044	3,484,866	5,522,592	0	-90	108	15.0	1	5	**4**	**43**	**131**
AGI-0045	3,484,964	5,522,640	0	-90	108	19.0	4	5	**5**	**75**	**106**
AGI-0046	3,485,052	5,522,680	0	-90	107	19.0	2	5	**3**	**113**	**210**
AGI-0047	3,485,142	5,522,729	0	-90	107	19.0	1	3	**2**	**66**	**245**
							15	16	**1**	**43**	**211**
AGI-0048	3,485,237	5,522,772	0	-90	104	15.5	3	5	**2**	**84**	**278**
AGI-0049	3,485,319	5,522,812	0	-90	104	15.0	1	4	**3**	**47**	**168**
AGI-0050	3,485,414	5,522,863	0	-90	103	10.0	0	1	**1**	**33**	**391**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
							5	6	**1**	**32**	**164**
AGI-0051	3,485,512	5,522,909	0	-90	102	8.0	no interval				
AGI-0052	3,485,690	5,522,996	0	-90	102	8.0	5	6	**2**	**92**	**267**
AGI-0053	3,485,046	5,524,082	0	-90	97	23.0	4	6	**3**	**54**	**58**
							10	23	**13**	**127**	**235**
including							11	17	**6**	**216**	**345**
including							12	13	**1**	**365**	**814**
AGI-0054	3,485,219	5,524,176	0	-90	99	22.0	8	10	**2**	**134**	**154**
							12	13	**1**	**31**	**113**
							17	20	**3**	**271**	**48**
including							18	19	**1**	**480**	**41**
AGI-0055	3,485,402	5,524,279	0	-90	98	18.0	4	6	**2**	**45**	**85**
							8	10	**2**	**56**	**81**
							12	18	**6**	**35**	**52**
AGI-0056	3,485,572	5,524,373	0	-90	96	16.0	4	9	**5**	**110**	**134**
							13	16	**3**	**144**	**139**
including							14	15	**1**	**302**	**150**
AGI-0057	3,485,436	5,524,061	0	-90	99	19.0	8	10	**2**	**42**	**53**
							13	16	**3**	**124**	**105**
AGI-0058	3,485,191	5,524,373	0	-90	98	20.0	8	9	**1**	**31**	**80**
							15	20	**5**	**237**	**89**
including							15	18	**3**	**356**	**69**
AGI-0059	3,485,062	5,524,532	0	-90	98	11.0	no interval				
AGI-0060	3,484,811	5,524,845	0	-90	97	17.0	1	3	**2**	**50**	**160**
							7	8	**1**	**184**	**145**
							13	14	**1**	**42**	**214**
AGI-0061	3,484,194	5,524,516	0	-90	102	4.0	no interval				
AGI-0062	3,484,443	5,524,204	0	-90	102	18.0	2	3	**1**	**41**	**200**
							7	8	**1**	**40**	**43**
AGI-0063	3,484,569	5,524,048	0	-90	103	19.0	6	8	**2**	**43**	**66**
							16	17	**1**	**39**	**84**
AGI-0064	3,484,821	5,523,735	0	-90	106	19.0	4	6	**2**	**108**	**353**
							12	14	**2**	**56**	**82**
AGI-0065	3,484,531	5,523,466	0	-90	107	17.0	no interval				
AGI-0066	3,484,465	5,523,547	0	-90	107	13.0	4	6	**2**	**74**	**283**
AGI-0067	3,484,405	5,523,620	0	-90	106	15.0	3	7	**4**	**63**	**357**
							14	15	**1**	**41**	**220**
AGI-0068	3,484,279	5,523,782	0	-90	105	14.0	1	6	**5**	**76**	**216**
AGI-0069	3,484,217	5,523,860	0	-90	105	8.0	2	3	**1**	**38**	**202**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0070	3,484,153	5,523,943	0	-90	105	5.0	1	2	**1**	**40**	**325**
AGI-0071	3,484,092	5,524,018	0	-90	104	5.0	1	2	**1**	**42**	**305**
AGI-0072	3,484,027	5,524,093	0	-90	104	12.0	1	4	**3**	**91**	**223**
AGI-0073	3,483,901	5,524,252	0	-90	104	10.0	no interval				
AGI-0074	3,483,838	5,524,328	0	-90	105	10.0	no interval				
AGI-0075	3,483,776	5,524,406	0	-90	105	5.0	no interval				
AGI-0076	3,483,605	5,524,319	0	-90	107	5.0	no interval				
AGI-0077	3,483,665	5,524,235	0	-90	106	10.0	1	2	**1**	**76**	**446**
AGI-0078	3,483,729	5,524,160	0	-90	106	9.0	1	3	**2**	**84**	**257**
AGI-0079	3,483,854	5,524,009	0	-90	106	14.0	1	5	**4**	**118**	**221**
including							1	2	**1**	**303**	**334**
AGI-0080	3,483,918	5,523,925	0	-90	107	9.0	1	4	**3**	**55**	**169**
AGI-0081	3,483,978	5,523,848	0	-90	107	9,5	2	5	**3**	**113**	**253**
AGI-0082	3,484,041	5,523,766	0	-90	107	7.0	2	3	**1**	**33**	**268**
AGI-0083	3,484,102	5,523,691	0	-90	107	6.0	no interval				
AGI-0084	3,484,231	5,523,531	0	-90	104	8.0	no interval				
AGI-0085	3,484,293	5,523,455	0	-90	104	8.0	no interval				
AGI-0086	3,484,354	5,523,374	0	-90	104	9.0	no interval				
AGI-0087	3,483,798	5,524,093	256°	-60	106	27.0	1	5	**4**	**306**	**375**
including							3	4	**1**	**525**	**610**
AGI-0088	3,483,778	5,524,081	63°	-60	106	28.0	0	6	**6**	**910**	**680**
including							0	2	**2**	**2,182**	**1285**
							8	10	**2**	**48**	**169**
							11	12	**1**	**48**	**93**
AGI-0089	3,483,933	5,523,572	0	-90	109	9.0	1	4	**3**	**78**	**242**
AGI-0090	3,484,066	5,523,416	0	-90	109	7.0	no interval				
AGI-0091	3,483,317	5,525,193	0	-90	100	11.0	no interval				
AGI-0092	3,482,893	5,525,194	0	-90	106	38.0	no interval				
AGI-0093	3,483,046	5,525,273	0	-90	102	32.0	no interval				
AGI-0094	3,483,206	5,525,365	0	-90	96	27.0	no interval				
AGI-0095	3,483,380	5,525,466	0	-90	93	11.0	no interval				
AGI-0096	3,482,902	5,525,880	0	-90	90	42.0	no interval				
AGI-0097	3,483,008	5,525,708	0	-90	92	37.0	no interval				
AGI-0098	3,483,107	5,525,536	0	-90	95	2.0	1	2	**1**	**51**	**177**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0099	3,485,743	5,524,467	0	-90	95	21.0	3	20	**17**	**238**	**101**
including							12	17	**5**	**570**	**61**
including							15	16	**1**	**814**	**68**
AGI-0100	3,486,110	5,524,670	0	-90	93	21.0	0	20	**20**	**405**	**117**
including							4	15	**11**	**691**	**130**
including							9	12	**3**	**1,861**	**38**
including							10	11	**1**	**3,136**	**29**
AGI-0101	3,486,458	5,524,866	0	-90	93	18.0	9	16	**7**	**158**	**122**
including							12	13	**1**	**429**	**79**
AGI-0102	3,486,793	5,525,051	0	-90	95	20.0	9	14	**5**	**60**	**65**
AGI-0103	3,485,293	5,524,881	0	-90	95	10.0	3	5	**2**	**38**	**245**
							7	8	**1**	**30**	**182**
AGI-0104	3,485,633	5,525,062	0	-90	95	5.0	no interval				
AGI-0105	3,485,992	5,525,251	0	-90	94	10.0	3	8	**5**	**32**	**122**
AGI-0106	3,486,343	5,525,438	0	-90	90	10.0	4	5	**1**	**44**	**75**
AGI-0107	3,486,692	5,525,622	0	-90	90	6.0	no interval				
AGI-0108	3,487,046	5,525,813	0	-90	90	7.0	no interval				
AGI-0109	3,487,416	5,526,008	0	-90	90	12.0	no interval				
AGI-0110	3,487,746	5,526,184	0	-90	92	7.0	no interval				
AGI-0111	3,487,158	5,525,255	0	-90	94	13.0	no interval				
AGI-0112	3,487,515	5,525,451	0	-90	93	10.0	no interval				
AGI-0113	3,487,866	5,525,654	0	-90	94	7.0	no interval				
AGI-0114	3,488,030	5,525,745	0	-90	94	5.0	no interval				
AGI-0115	3,487,686	5,525,549	0	-90	93	8.0	no interval				
AGI-0116	3,487,343	5,525,359	0	-90	94	13.0	no interval				
AGI-0117	3,486,988	5,525,154	0	-90	94	14.0	no interval				
AGI-0118	3,486,622	5,524,959	0	-90	93	19.0	10	17	**7**	**103**	**68**
AGI-0119	3,486,268	5,524,765	0	-90	93	18.0	3	6	**3**	**47**	**184**
							11	18	**7**	**423**	**91**
including							11	12	**1**	**877**	**114**
AGI-0120	3,485,938	5,524,580	0	-90	94	19.0	1	19	**18**	**254**	**75**
including							12	18	**6**	**571**	**53**
including							12	13	**1**	**1,410**	**34**
AGI-0121	3,487,758	5,524,549	0	-90	91	13.0	0	1	**1**	**53**	**127**
							3	5	**2**	**66**	**95**
AGI-0122	3,487,593	5,524,463	0	-90	92	18.0	7	12	**5**	**37**	**223**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0123	3,487,414	5,524,365	0	-90	91	18.0	8	13	**5**	**87**	**45**
AGI-0124	3,487,244	5,524,277	0	-90	92	18.0	2	3	**1**	**40**	**345**
							5	18	**13**	**224**	**112**
				including			8	11	**3**	**575**	**67**
				including			9	10	**1**	**942**	**48**
AGI-0125	3,487,083	5,524,184	0	-90	93	11.0	5	9	**4**	**85**	**191**
AGI-0126	3,486,896	5,524,093	0	-90	94	11.0	0	1	**1**	**116**	**195**
AGI-0127	3,486,727	5,523,998	0	-90	97	10.0	no interval				
AGI-0128	3,486,476	5,524,180	0	-90	96	9.0	no interval				
AGI-0129	3,486,355	5,524,339	0	-90	94	5.0	0	1	**1**	**36**	**154**
							4	5	**1**	**35**	**129**
AGI-0130	3,486,238	5,524,501	0	-90	93	7.0	no interval				
AGI-0131	3,485,998	5,524,827	0	-90	93	22.0	4	5	**1**	**30**	**152**
							10	22	**12**	**212**	**95**
				including			12	17	**5**	**420**	**65**
				including			13	14	**1**	**647**	**39**
AGI-0132	3,485,892	5,524,988	0	-90	93	19.0	5	6	**1**	**51**	**89**
							11	18	**7**	**70**	**61**
AGI-0133	3,486,520	5,525,102	0	-90	93	21.0	5	7	**2**	**32**	**125**
							12	18	**5**	**83**	**29**
AGI-0134	3,486,403	5,525,281	0	-90	92	13.0	no interval				
AGI-0135	3,486,755	5,524,800	0	-90	93	18.0	12	15	**3**	**54**	**78**
AGI-0136	3,486,921	5,524,674	0	-90	93	21.0	0	1	**1**	**80**	**104**
							5	6	**1**	**32**	**91**
							12	16	**4**	**91**	**60**
							18	20	**2**	**40**	**88**
AGI-0137	3,487,091	5,524,532	0	-90	94	23.0	10	23	**13**	**285**	**118**
				including			11	17	**6**	**447**	**58**
				including			14	15	**1**	**835**	**45**
AGI-0138	3,484,897	5,525,204	0	-90	91	21.0	4	5	**1**	**54**	**73**
							12	19	**7**	**255**	**171**
				including			17	18	**1**	**816**	**205**
AGI-0139	3,484,727	5,525,115	0	-90	96	17.0	0	3	**3**	**45**	**265**
							15	15	**1**	**35**	**84**
AGI-0140	3,484,558	5,525,028	0	-90	97	17.0	0	3	**3**	**46**	**161**
							7	10	**3**	**55**	**118**
							15	16	**1**	**43**	**171**
AGI-0141	3,484,391	5,524,932	0	-90	99	13.0	1	4	**3**	**30**	**173**
AGI-0142	3,484,219	5,524,846	0	-90	100	6.0	no interval				

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0143	3,484,048	5,524,756	0	-90	102	6.0	no interval				
AGI-0144	3,485,007	5,525,259	0	-90	96	10.0	5	6	**1**	**34**	**293**
AGI-0145	3,486,060	5,525,079	0	-90	93	19.0	no interval				
AGI-0146	3,485,655	5,524,624	0	-90	95	19.0	3	7	**4**	**110**	**188**
							9	10	**1**	**32**	**68**
							14	17	**3**	**107**	**27**
AGI-0147	3,485,824	5,524,727	0	-90	94	20.0	2	8	**6**	**46**	**142**
							12	19	**7**	**176**	**42**
including							13	14	**1**	**407**	**34**
AGI-0148	3,485,711	5,524,877	0	-90	94	14.0	13	14	**1**	**31**	**96**
AGI-0149	3,485,532	5,524,783	0	-90	95	16.0	0	2	**2**	**64**	**88**
AGI-0150	3,486,352	5,525,013	0	-90	93	19.0	12	15	**3**	**132**	**105**
AGI-0151	3,486,176	5,524,917	0	-90	93	16.0	10	16	**6**	**181**	**59**
AGI-0152	3,486,234	5,525,175	0	-90	94	17.0	0	1	**1**	**69**	**66**
							8	9	**1**	**31**	**52**
							11	12	**1**	**39**	**125**
							14	15	**1**	**33**	**23**
AGI-0153	3,485,367	5,524,684	0	-90	96	17.0	2	7	**5**	**56**	**182**
							9	10	**1**	**34**	**86**
							13	16	**3**	**34**	**96**
AGI-0154	3,485,479	5,524,528	0	-90	96	19.0	5	7	**2**	**81**	**218**
							13	18	**5**	**257**	**56**
including							13	16	**3**	**359**	**41**
AGI-0155	3,485,313	5,524,427	0	-90	97	19.0	5	8	**3**	**46**	**114**
							15	17	**2**	**52**	**72**
AGI-0156	3,485,032	5,524,263	0	-90	95	13.0	2	3	**1**	**193**	**266**
							6	10	**4**	**66**	**104**
AGI-0157	3,484,858	5,524,168	0	-90	97	17.0	5	7	**2**	**96**	**95**
							10	12	**2**	**44**	**134**
AGI-0158	3,484,733	5,524,322	0	-90	96	13.0	2	4	**2**	**36**	**209**
							9	10	**1**	**61**	**61**
AGI-0159	3,485,600	5,524,149	0	-90	99	6.0	no interval				
AGI-0160	3,485,777	5,524,244	0	-90	97	5.0	no interval				
AGI-0161	3,485,952	5,524,338	0	-90	96	4.0	no interval				
AGI-0162	3,486,088	5,524,529	0	-90	93	6.0	2	4	**2**	**92**	**228**
AGI-0163	3,486,262	5,524,619	0	-90	93	13.0	3	13	**10**	**103**	**271**
including							6	7	**1**	**565**	**960**
AGI-0164	3,486,528	5,524,438	0	-90	93	9.0	5	6	**1**	**46**	**84**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0165	3,486,673	5,524,390	0	-90	92	11.0	6	7	**1**	**111**	**328**
AGI-0166	3,486,882	5,524,291	0	-90	93	5.0	no interval				
AGI-0167	3,487,026	5,524,268	0	-90	92	10.0	4	8	**4**	**52**	**187**
AGI-0168	3,487,200	5,524,027	0	-90	93	12.0	4	10	**6**	**122**	**177**
AGI-0169	3,487,371	5,524,117	0	-90	91	17.0	4	17	**14**	**431**	**111**
including							9	14	**5**	**1,030**	**103**
AGI-0170	3,487,198	5,524,360	0	-90	92	18.0	1	16	**15**	**431**	**137**
including							9	14	**5**	**1,131**	**71**
AGI-0171	3,487,559	5,524,216	0	-90	90	14.0	5	12	**7**	**66**	**133**
AGI-0172	3,487,680	5,524,045	0	-90	91	8.0	no interval				
AGI-0173	3,487,502	5,523,956	0	-90	92	18.0	7	18	**11**	**182**	**111**
including							10	15	**5**	**300**	**39**
AGI-0174	3,487,334	5,523,855	0	-90	93	15.0	4	10	**6**	**132**	**168**
AGI-0175	3,487,373	5,524,455	0	-90	92	18.0	12	16	**4**	**34**	**42**
AGI-0176	3,487,258	5,524,623	0	-90	93	17.0	9	17	**8**	**61**	**44**
AGI-0177	3,487,138	5,524,784	0	-90	94	14.0	no interval				
AGI-0178	3,486,933	5,524,889	0	-90	94	14.0	11	12	**1**	**36**	**45**
AGI-0179	3,486,613	5,524,812	0	-90	93	17.0	10	17	**7**	**171**	**135**
AGI-0180	3,488,102	5,522,438	0	-90	98	22.0	15	22	**7**	**109**	**134**
AGI-0181	3,488,483	5,522,651	0	-90	96	12.0	9	10	**1**	**43**	**62**
AGI-0182	3,487,320	5,523,303	0	-90	95	15.0	4	11	**7**	**90**	**113**
AGI-0183	3,487,858	5,523,442	0	-90	93	10.0	3	6	**3**	**39**	**80**
AGI-0184	3,487,928	5,523,641	0	-90	92	9.0	no interval				
AGI-0185	3,487,747	5,523,604	0	-90	93	20.0	8	18	**10**	**238**	**81**
AGI-0186	3,487,717	5,523,523	0	-90	93	22.0	6	22	**16**	**188**	**282**
including							11	17	**6**	**400**	**490**
AGI-0187	3,487,644	5,523,756	0	-90	93	20.0	4	17	**13**	**179**	**86**
including							11	15	**4**	**440**	**56**
AGI-0188	3,484,702	5,525,609	0	-90	85	6.0	no interval				
AGI-0189	3,484,519	5,525,514	0	-90	86	5.0	no interval				
AGI-0190	3,484,346	5,525,424	0	-90	90	9.0	no interval				
AGI-0191	3,484,879	5,525,704	0	-90	83	11.0	no interval				
AGI-0192	3,485,060	5,525,795	0	-90	81	8.0	no interval				
AGI-0193	3,484,990	5,525,363	0	-90	90	8.0	no interval				

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0194	3,487,415	5,523,336	0	-90	95	18.0	10	18	**8**	**2,867**	**589**
including							13	15	**2**	**8,618**	**1369**
AGI-0195	3,487,502	5,523,388	0	-90	95	23.0	6	23	**17**	**303**	**413**
including							13	18	**5**	**777**	**980**
including							14	15	**1**	**1,981**	**295**
AGI-0196	3,487,590	5,523,439	0	-90	94	22.0	11	21	**10**	**901**	**258**
including							12	18	**6**	**1,423**	**310**
including							13	14	**1**	**2,480**	**493**
AGI-0197	3,487,681	5,523,484	0	-90	94	21.0	8	20	**12**	**185**	**188**
including							12	18	**6**	**281**	**246**
AGI-0198	3,487,852	5,523,587	0	-90	92	15.0	6	13	**7**	**52**	**393**
AGI-0199	3,487,773	5,523,308	0	-90	94	13.0	8	11	**3**	**48**	**114**
AGI-0200	3,487,597	5,523,211	0	-90	95	16.0	7	10	**3**	**61**	**154**
AGI-0201	3,487,425	5,523,112	0	-90	96	19.0	13	18	**5**	**128**	**72**
AGI-0202	3,487,251	5,523,018	0	-90	97	18.0	11	15	**4**	**481**	**507**
including							11	12	**1**	**1,002**	**1032**
AGI-0203	3,487,065	5,522,920	0	-90	97	10.0	3	4	**1**	**38**	**79**
AGI-0204	3,488,047	5,523,227	0	-90	94	7.0	no interval				
AGI-0205	3,487,871	5,523,133	0	-90	95	10.0	no interval				
AGI-0206	3,487,698	5,523,036	0	-90	96	8.0	no interval				
AGI-0207	3,487,522	5,522,939	0	-90	96	20.0	15	17	**2**	**84**	**399**
AGI-0208	3,487,345	5,522,840	0	-90	98	24.0	15	21	**6**	**376**	**338**
including							16	17	**1**	**1,143**	**220**
AGI-0209	3,487,168	5,522,748	0	-90	98	18.0	7	17	**10**	**468**	**310**
including							11	14	**3**	**1,079**	**544**
AGI-0210	3,487,880	5,522,909	0	-90	95	8.0	0	3	**3**	**55**	**135**
AGI-0211	3,487,970	5,522,958	0	-90	95	7.0	no interval				
AGI-0212	3,487,703	5,522,806	0	-90	97	14.0	5	6	**1**	**31**	**59**
AGI-0213	3,487,534	5,522,717	0	-90	98	24.0	16	23	**7**	**78**	**164**
AGI-0214	3,487,358	5,522,617	0	-90	99	15.0	5	7	**2**	**41**	**155**
AGI-0215	3,487,541	5,522,492	0	-90	99	14.0	no interval				
AGI-0216	3,487,366	5,522,396	0	-90	100	14.0	no interval				
AGI-0217	3,487,190	5,522,296	0	-90	101	10.0	no interval				
AGI-0218	3,487,717	5,522,590	0	-90	98	21.0	16	20	**4**	**52**	**409**
AGI-0219	3,488,211	5,522,521	0	-90	97	25.0	13	23	**10**	**97**	**85**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0220	3,488,034	5,522,417	0	-90	98	23.0	9	10	**1**	**44**	**95**
AGI-0221	3,487,950	5,522,376	0	-90	98	21.0	5	7	**2**	**47**	**73**
AGI-0222	3,487,775	5,522,278	0	-90	99	13.0	3	5	**2**	**36**	**88**
AGI-0223	3,487,626	5,522,169	0	-90	100	11.0	5	7	**2**	**74**	**131**
AGI-0224	3,487,423	5,522,075	0	-90	101	7.0	no interval				
AGI-0225	3,487,251	5,521,986	0	-90	103	8.0	no interval				
AGI-0226	3,487,071	5,521,870	0	-90	103	6.0	no interval				
AGI-0227	3,487,794	5,521,830	0	-90	101	21.0	5	7	**2**	**92**	**169**
AGI-0228	3,487,968	5,521,930	0	-90	100	15.0	6	8	**2**	**40**	**79**
AGI-0229	3,488,142	5,522,025	0	-90	99	16.0	no interval				
AGI-0230	3,488,319	5,522,125	0	-90	98	23.0	19	21	**2**	**87**	**320**
AGI-0231	3,488,492	5,522,220	0	-90	97	24.0	16	22	**6**	**312**	**146**
including							17	20	**3**	**473**	**179**
AGI-0232	3,488,913	5,521,886	0	-90	97	23.0	no interval				
AGI-0233	3,488,845	5,522,412	0	-90	95	7.0	no interval				
AGI-0234	3,488,670	5,522,323	0	-90	96	3.0	no interval				
AGI-0235	3,488,656	5,522,096	0	-90	97	25.0	19	21	**2**	**99**	**88**
AGI-0236	3,488,828	5,522,192	0	-90	97	15.0	no interval				
AGI-0237	3,488,475	5,521,995	0	-90	98	23.0	no interval				
AGI-0238	3,487,016	5,522,201	0	-90	101	5.0	no interval				
AGI-0239	3,487,180	5,522,519	0	-90	99	13.0	no interval				
AGI-0240	3,487,009	5,522,427	0	-90	100	5.0	1	2	**1**	**30**	**252**
AGI-0241	3,486,999	5,522,657	0	-90	99	11.0	2	3	**1**	**49**	**87**
AGI-0242	3,486,829	5,522,548	0	-90	99	6.0	2	3	**1**	**85**	**223**
AGI-0243	3,487,755	5,523,758	0	-90	93	28.0	8	21	**13**	**334**	**103**
including							13	17	**4**	**773**	**66**
including							14	15	**1**	**1,037**	**68**
AGI-0244	3,487,726	5,523,824	0	-90	93	18.0	3	16	**13**	**151**	**63**
including							10	14	**4**	**384**	**46**
AGI-0245	3,487,794	5,523,891	0	-90	92	13.0	4	10	**6**	**43**	**97**
AGI-0246	3,487,668	5,523,707	0	-90	93	27.0	3	23	**23**	**273**	**126**
including							13	19	**6**	**822**	**50**
including							14	15	**1**	**1,021**	**70**
AGI-0247	3,487,580	5,523,662	0	-90	93	23.0	5	20	**15**	**1,271**	**716**
including							9	17	**8**	**2,296**	**1210**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
including							10	11	**1**	**10,517**	**2879**
AGI-0248	3,487,443	5,523,700	0	-90	94	19.0	8	15	**7**	**164**	**210**
including							10	11	**1**	**750**	**528**
AGI-0249	3,487,532	5,523,749	0	-90	93	26.0	6	24	**18**	**615**	**112**
including							11	16	**5**	**1,838**	**47**
including							13	14	**1**	**3,216**	**62**
AGI-0250	3,487,357	5,523,648	0	-90	94	17.0	0	9	**9**	**71**	**135**
AGI-0251	3,487,461	5,523,624	0	-90	94	15.0	7	12	**5**	**85**	**94**
AGI-0252	3,487,403	5,523,566	0	-90	94	10.0	2	3	**1**	**50**	**87**
AGI-0253	3,487,318	5,523,512	0	-90	94	8.0	no interval				
AGI-0254	3,487,229	5,523,469	0	-90	95	6.0	no interval				
AGI-0255	3,487,308	5,523,735	0	-90	94	17.0	7	11	**7**	**212**	**221**
including							6	10	**4**	**341**	**221**
							14	17	**3**	**45**	**78**
AGI-0256	3,487,397	5,523,785	0	-90	94	22.0	4	22	**18**	**456**	**450**
including							8	16	**8**	**878**	**805**
including							11	12	**1**	**1,874**	**1371**
AGI-0257	3,487,457	5,523,832	0	-90	93	24.0	8	23	**15**	**990**	**432**
including							12	19	**7**	**2,045**	**656**
including							14	15	**1**	**4,504**	**859**
AGI-0258	3,487,571	5,523,882	0	-90	93	21.0	0	2	**2**	**39**	**178**
							7	19	**12**	**238**	**114**
including							11	16	**5**	**495**	**123**
AGI-0259	3,487,659	5,523,934	0	-90	92	13.0	4	11	**7**	**55**	**126**
AGI-0260	3,487,746	5,523,981	0	-90	91	5.0	no interval				
AGI-0261	3,487,610	5,524,018	0	-90	92	15.0	5	10	**5**	**44**	**179**
AGI-0262	3,487,560	5,524,107	0	-90	91	18.0	3	16	**13**	**133**	**75**
including							10	14	**4**	**295**	**65**
AGI-0263	3,487,477	5,524,057	0	-90	92	22.0	7	22	**15**	**242**	**153**
including							9	15	**6**	**525**	**208**
including							10	11	**1**	**1,497**	**616**
AGI-0264	3,487,402	5,524,015	0	-90	92	27.0	0	4	**4**	**37**	**143**
							7	21	**14**	**1,107**	**254**
including							8	18	**8**	**1,888**	**332**
including							13	14	**1**	**4,500**	**550**
AGI-0265	3,487,433	5,523,922	0	-90	93	26.0	0	2	**2**	**38**	**169**
							5	25	**20**	**590**	**246**
including							12	21	**9**	**1,181**	**164**
including							13	14	**1**	**2,295**	**209**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0266	3,487,260	5,523,824	0	-90	93	15.0	0	12	**12**	**130**	**185**
							14	15	**1**	**40**	**137**
AGI-0267	3,487,296	5,523,959	0	-90	93	17.0	0	1	**1**	**30**	**234**
							5	15	**10**	**390**	**215**
including							10	13	**3**	**1,073**	**482**
including							11	12	**1**	**2,293**	**732**
AGI-0268	3,487,215	5,523,908	0	-90	93	15.0	4	10	**6**	**115**	**195**
							12	13	**1**	**45**	**168**
AGI-0269	3,487,172	5,523,773	0	-90	94	12.0	no interval				
AGI-0270	3,487,141	5,523,638	0	-90	95	11.0	no interval				
AGI-0271	3,487,730	5,524,199	0	-90	91	16.0	7	8	**1**	**35**	**166**
AGI-0272	3,487,602	5,524,238	0	-90	90	16.0	6	13	**7**	**80**	**66**
AGI-0273	3,487,551	5,524,326	0	-90	90	19.0	7	14	**7**	**130**	**73**
AGI-0274	3,487,464	5,524,283	0	-90	91	19.0	5	15	**10**	**67**	**136**
AGI-0275	3,487,513	5,524,197	0	-90	91	19.0	1	14	**13**	**59**	**68**
AGI-0276	3,487,328	5,524,317	0	-90	91	19.0	9	19	**10**	**502**	**104**
including							12	17	**5**	**848**	**51**
AGI-0277	3,487,378	5,524,229	0	-90	92	20.0	0	1	**1**	**99**	**170**
							8	19	**11**	**102**	**64**
AGI-0278	3,487,290	5,524,181	0	-90	92	20.0	4	18	**14**	**518**	**98**
including							10	15	**5**	**1,343**	**51**
including							12	13	**1**	**3,543**	**46**
AGI-0279	3,487,336	5,524,094	0	-90	92	25.0	4	22	**18**	**2,095**	**187**
including							8	19	**11**	**3,352**	**205**
including							12	13	**1**	**12,804**	**102**
AGI-0280	3,487,425	5,524,141	0	-90	91	21.0	0	3	**3**	**31**	**187**
							8	19	**11**	**119**	**104**
AGI-0281	3,487,248	5,524,043	0	-90	93	14.0	0	1	**1**	**35**	**202**
							5	12	**7**	**110**	**147**
AGI-0282	3,487,162	5,524,007	0	-90	93	10.0	6	9	**3**	**88**	**172**
AGI-0283	3,487,201	5,524,133	0	-90	92	16.0	1	14	**13**	**238**	**232**
including							8	10	**2**	**1,166**	**646**
AGI-0284	3,487,116	5,524,085	0	-90	93	11.0	5	8	**3**	**76**	**156**
AGI-0285	3,487,154	5,524,220	0	-90	92	13.0	4	10	**6**	**127**	**216**
AGI-0286	3,487,109	5,524,302	0	-90	93	26.0	3	4	**1**	**41**	**95**
							7	24	**17**	**1,713**	**501**
including							9	12	**3**	**8,792**	**2157**
including							10	11	**1**	**20,963**	**3706**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0287	3,487,025	5,524,036	0	-90	94	8.0	0	1	**1**	**40**	**162**
AGI-0288	3,486,978	5,524,122	0	-90	93	8.0	no interval				
AGI-0289	3,486,843	5,524,160	0	-90	94	6.0	no interval				
AGI-0290	3,487,278	5,524,405	0	-90	92	21.0	10	21	**11**	**424**	**70**
including							11	17	**6**	**668**	**46**
AGI-0291	3,487,502	5,524,413	0	-90	91	20.0	5	16	**11**	**60**	**78**
AGI-0292	3,487,055	5,524,399	0	-90	93	7.0	4	6	**2**	**47**	**157**
AGI-0293	3,487,050	5,524,398	0	-90	93	25.0	4	18	**18**	**948**	**211**
including							8	17	**9**	**1,792**	**222**
including							10	11	**1**	**7,593**	**491**
AGI-0294	3,487,045	5,524,440	0	-90	93	24.0	0	2	**2**	**47**	**224**
							3	22	**19**	**345**	**228**
including							11	16	**5**	**1,092**	**211**
including							13	14	**1**	**1,841**	**71**
AGI-0295	3,487,018	5,524,485	0	-90	93	25.0	0	1	**1**	**60**	**187**
							4	8	**4**	**35**	**124**
							10	17	**7**	**1,212**	**878**
including							11	12	**1**	**3,392**	**3522**
							19	20	**1**	**32**	**96**
AGI-0296	3,486,961	5,524,576	0	-90	93	25.0	0	1	**1**	**149**	**193**
							6	7	**1**	**32**	**200**
							10	21	**11**	**499**	**160**
including							11	12	**1**	**1,556**	**361**
AGI-0297	3,486,773	5,524,695	0	-90	93	22.0	0	1	**1**	**41**	**123**
							5	6	**1**	**61**	**130**
							10	17	**7**	**361**	**73**
including							11	12	**1**	**676**	**87**
AGI-0298	3,486,549	5,524,772	0	-90	93	24.0	2	6	**4**	**50**	**170**
							10	21	**11**	**289**	**294**
including							11	12	**1**	**1,034**	**857**
AGI-0299	3,486,510	5,524,780	0	-90	93	25.0	0	1	**1**	**108**	**248**
							3	4	**1**	**48**	**102**
							11	20	**9**	**255**	**108**
including							11	15	**4**	**381**	**181**
AGI-0300	3,486,536	5,524,910	0	-90	92	20.0	5	20	**15**	**152**	**105**
including							12	13	**1**	**944**	**154**
AGI-0301	3,486,378	5,524,813	0	-90	93	21.0	11	19	**8**	**276**	**121**
including							11	14	**3**	**629**	**123**
AGI-0302	3,486,368	5,524,584	0	-90	93	16.0	7	9	**2**	**46**	**168**
							11	14	**3**	**351**	**112**
including							11	12	**1**	**907**	**129**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0303	3,486,288	5,524,541	0	-90	93	11.0	4	8	**4**	**44**	**133**
AGI-0304	3,486,335	5,524,453	0	-90	93	8.0	4	5	**1**	**34**	**95**
AGI-0305	3,487,137	5,524,470	0	-90	94	25.0	6	9	**3**	**29**	**105**
							12	23	**11**	**391**	**159**
including							14	15	**1**	**1,356**	**105**
AGI-0306	3,487,183	5,524,580	0	-90	93	22.0	1	2	**1**	**80**	**125**
							11	20	**9**	**133**	**59**
AGI-0307	3,487,231	5,524,493	0	-90	92	20.0	9	18	**9**	**186**	**60**
including							12	16	**4**	**319**	**32**
AGI-0308	3,487,318	5,524,545	0	-90	92	21.0	8	12	**4**	**57**	**41**
							14	16	**2**	**35**	**29**
AGI-0309	3,487,405	5,524,593	0	-90	93	20.0	8	18	**10**	**71**	**80**
AGI-0310	3,487,359	5,524,680	0	-90	93	18.0	9	14	**5**	**45**	**71**
AGI-0311	3,487,217	5,524,723	0	-90	94	15.0	8	9	**1**	**36**	**89**
AGI-0312	3,487,134	5,524,666	0	-90	94	20.0	12	16	**4**	**104**	**87**
AGI-0313	3,487,086	5,524,753	0	-90	94	17.0	7	14	**7**	**49**	**121**
AGI-0314	3,487,043	5,524,624	0	-90	93	21.0	6	7	**1**	**39**	**73**
							11	21	**10**	**165**	**67**
AGI-0315	3,486,997	5,524,707	0	-90	93	20.0	11	16	**5**	**87**	**33**
AGI-0316	3,486,675	5,524,874	0	-90	93	21.0	5	7	**2**	**36**	**90**
							11	18	**7**	**94**	**42**
AGI-0317	3,486,855	5,524,749	0	-90	93	14.0	4	7	**3**	**35**	**109**
							9	14	**5**	**61**	**72**
AGI-0318	3,486,764	5,524,921	0	-90	94	20.0	11	17	**6**	**58**	**31**
AGI-0319	3,486,853	5,524,964	0	-90	94	17.0	9	14	**5**	**62**	**104**
AGI-0320	3,486,939	5,525,018	0	-90	94	14.0	8	9	**1**	**51**	**93**
AGI-0321	3,486,716	5,525,001	0	-90	94	18.0	7	8	**1**	**37**	**91**
							10	16	**6**	**83**	**39**
AGI-0322	3,486,671	5,525,097	0	-90	93	7.0	no interval				
AGI-0323	3,486,618	5,525,184	0	-90	93	6.0	5	6	**1**	**32**	**173**
AGI-0324	3,486,888	5,525,101	0	-90	95	16.0	11	12	**1**	**32**	**150**
AGI-0325	3,486,751	5,525,144	0	-90	94	6.0	no interval				
AGI-0326	3,486,490	5,524,995	0	-90	94	19.0	10	17	**7**	**206**	**65**
including							12	14	**2**	**406**	**38**
AGI-0327	3,486,582	5,525,048	0	-90	94	19.0	6	15	**9**	**75**	**51**
AGI-0328	3,486,486	5,525,221	0	-90	93	6.0	no interval				

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0329	3,486,394	5,525,169	0	-90	94	6.0	5	6	**1**	**32**	**189**
AGI-0330	3,486,091	5,524,885	0	-90	93	17.0	7	8	**1**	**46**	**287**
							10	15	**5**	**262**	**62**
including							10	12	**2**	**489**	**72**
AGI-0331	3,486,141	5,524,800	0	-90	93	20.0	3	19	**16**	**88**	**111**
including							11	14	**3**	**238**	**29**
AGI-0332	3,486,229	5,524,847	0	-90	93	19.0	3	16	**13**	**319**	**115**
including							10	14	**4**	**959**	**112**
including							11	12	**1**	**1,469**	**102**
AGI-0333	3,486,318	5,524,896	0	-90	93	19.0	4	5	**1**	**34**	**346**
							11	16	**5**	**473**	**105**
including							12	13	**1**	**1,123**	**154**
AGI-0334	3,486,271	5,524,986	0	-90	93	19.0	4	5	**1**	**38**	**127**
							10	17	**7**	**261**	**61**
including							11	14	**3**	**943**	**70**
including							11	12	**1**	**1,897**	**132**
AGI-0335	3,486,126	5,525,025	0	-90	93	19.0	2	3	**1**	**48**	**62**
							6	7	**1**	**41**	**79**
							9	17	**8**	**233**	**79**
including							11	13	**2**	**641**	**79**
AGI-0336	3,486,044	5,524,974	0	-90	93	20.0	2	8	**6**	**38**	**144**
							10	16	**6**	**349**	**70**
including							10	13	**3**	**599**	**100**
AGI-0337	3,485,988	5,525,065	0	-90	93	19.0	3	8	**5**	**43**	**241**
							11	16	**5**	**74**	**35**
AGI-0338	3,485,734	5,524,917	0	-90	94	13.0	4	6	**2**	**35**	**141**
							8	9	**1**	**107**	**812**
AGI-0339	3,485,853	5,524,975	0	-90	93	19.0	6	7	**1**	**45**	**114**
							10	16	**6**	**99**	**49**
AGI-0340	3,485,957	5,524,923	0	-90	93	18.0	3	4	**1**	**58**	**148**
							7	8	**1**	**30**	**98**
							11	14	**3**	**355**	**79**
AGI-0341	3,485,915	5,524,790	0	-90	93	19.0	2	6	**4**	**58**	**105**
							8	10	**2**	**45**	**234**
							12	16	**4**	**278**	**61**
including							13	14	**1**	**599**	**36**
AGI-0342	3,485,873	5,524,860	0	-90	93	17.0	4	5	**1**	**46**	**566**
							9	10	**1**	**34**	**109**
							12	16	**4**	**128**	**50**
AGI-0343	3,485,786	5,524,829	0	-90	94	19.0	3	10	**7**	**47**	**176**
							12	16	**4**	**371**	**60**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0344	3,486,054	5,524,753	0	-90	93	20.0	2	7	**5**	**96**	**136**
							9	18	**9**	**313**	**77**
including							11	16	**5**	**500**	**33**
AGI-0345	3,486,191	5,524,715	0	-90	93	19.0	4	8	**4**	**32**	**120**
							12	17	**5**	**733**	**116**
including							12	14	**2**	**1,517**	**136**
including							13	14	**1**	**1,906**	**55**
AGI-0346	3,485,963	5,524,710	0	-90	94	21.0	2	8	**6**	**131**	**248**
							10	19	**9**	**476**	**89**
including							12	16	**4**	**994**	**71**
including							13	14	**1**	**2,047**	**73**
AGI-0347	3,485,877	5,524,660	0	-90	94	19.0	0	6	**6**	**65**	**112**
							11	18	**7**	**342**	**94**
including							12	16	**4**	**566**	**82**
AGI-0348	3,485,781	5,524,622	0	-90	95	19.0	2	17	**15**	**145**	**161**
including							13	16	**3**	**358**	**148**
AGI-0349	3,485,744	5,524,694	0	-90	95	20.0	0	1	**1**	**35**	**116**
							3	7	**4**	**89**	**125**
							12	18	**6**	**249**	**52**
including							13	16	**3**	**449**	**33**
AGI-0350	3,485,608	5,524,733	0	-90	95	20.0	5	6	**1**	**58**	**659**
							9	10	**1**	**35**	**145**
							14	18	**4**	**364**	**66**
including							14	16	**2**	**683**	**73**
AGI-0351	3,485,522	5,524,683	0	-90	96	19.0	1	5	**4**	**74**	**101**
							10	11	**1**	**49**	**79**
							14	18	**4**	**160**	**47**
AGI-0352	3,485,570	5,524,612	0	-90	96	19.0	2	3	**1**	**67**	**120**
							14	17	**3**	**200**	**44**
AGI-0353	3,485,428	5,524,651	0	-90	96	21.0	3	4	**1**	**34**	**77**
							8	12	**4**	**36**	**108**
							14	17	**3**	**284**	**101**
AGI-0354	3,485,702	5,524,780	0	-90	95	19.0	3	5	**2**	**48**	**90**
							10	19	**9**	**118**	**60**
AGI-0355	3,486,013	5,524,619	0	-90	94	18.0	2	17	**15**	**288**	**115**
including							12	15	**3**	**1,032**	**54**
including							12	13	**1**	**1,947**	**59**
AGI-0356	3,485,888	5,524,436	0	-90	95	13.0	3	11	**8**	**179**	**147**
including							6	9	**3**	**334**	**250**
AGI-0357	3,485,841	5,524,521	0	-90	95	23.0	1	20	**19**	**334**	**70**
including							12	18	**6**	**833**	**29**
including							13	14	**1**	**2,161**	**34**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0358	3,485,705	5,524,557	0	-90	95	22.0	3	10	**7**	**110**	**107**
							12	20	**8**	**167**	**61**
including							14	17	**3**	**337**	**44**
AGI-0359	3,485,800	5,524,388	0	-90	95	16.0	2	10	**8**	**190**	**198**
AGI-0360	3,485,713	5,524,341	0	-90	96	14.0	2	12	**10**	**161**	**177**
including							8	11	**3**	**304**	**333**
AGI-0361	3,485,666	5,524,422	0	-90	96	23.0	2	8	**6**	**87**	**78**
							10	21	**11**	**268**	**78**
including							14	17	**3**	**820**	**55**
including							15	16	**1**	**1,156**	**32**
AGI-0362	3,485,627	5,524,289	0	-90	97	14.0	2	10	**8**	**69**	**90**
AGI-0363	3,485,312	5,524,230	0	-90	98	21.0	8	20	**12**	**49**	**62**
AGI-0364	3,485,092	5,524,217	0	-90	99	19.0	3	4	**1**	**48**	**286**
							7	9	**2**	**97**	**138**
							12	13	**1**	**61**	**295**
AGI-0365	3,485,180	5,524,269	0	-90	99	22.0	7	11	**4**	**62**	**159**
							18	20	**2**	**132**	**85**
AGI-0366	3,485,266	5,524,316	0	-90	98	21.0	5	6	**1**	**48**	**52**
							8	12	**4**	**91**	**109**
							18	19	**1**	**65**	**100**
AGI-0367	3,485,276	5,524,093	0	-90	99	22.0	9	21	**12**	**95**	**67**
including							18	19	**1**	**538**	**84**
AGI-0368	3,485,363	5,524,141	0	-90	99	24.0	7	12	**5**	**69**	**71**
							16	21	**5**	**542**	**67**
including							18	20	**2**	**1,090**	**67**
including							18	19	**1**	**1,768**	**54**
AGI-0369	3,485,451	5,524,188	0	-90	99	18.0	3	4	**1**	**33**	**243**
							7	16	**9**	**43**	**47**
AGI-0370	3,487,062	5,523,151	0	-90	96	7.0	no interval				
AGI-0371	3,487,149	5,523,203	0	-90	96	4.0	no interval				
AGI-0372	3,487,227	5,523,248	0	-90	96	7.0	no interval				
AGI-0373	3,487,187	5,523,322	0	-90	96	5.0	no interval				
AGI-0374	3,487,103	5,523,277	0	-90	96	6.0	1	2	**1**	**53**	**211**
AGI-0375	3,487,281	5,523,372	0	-90	95	6.0	no interval				
AGI-0376	3,487,379	5,523,424	0	-90	94	13.0	3	9	**6**	**46**	**121**
AGI-0377	3,487,453	5,523,469	0	-90	94	13.0	2	9	**7**	**64**	**99**
AGI-0378	3,487,542	5,523,518	0	-90	94	20.0	2	3	**1**	**92**	**107**
							6	7	**1**	**43**	**37**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
							9	16	**7**	**1,033**	**569**
			including				11	15	**4**	**1,725**	**720**
			including				18	19	**2**	**2,914**	**759**
AGI-0379	3,487,632	5,523,565	0	-90	94	22.0	0	19	**19**	**322**	**219**
			9				9	18	**9**	**616**	**324**
AGI-0380	3,487,810	5,523,658	0	-90	93	24.0	4	5	**1**	**51**	**62**
							9	21	**12**	**482**	**85**
			including				11	18	**8**	**674**	**40**
AGI-0381	3,487,899	5,523,710	0	-90	92	13.0	8	10	**2**	**47**	**214**
AGI-0382	3,487,843	5,523,796	0	-90	92	16.0	6	13	**7**	**62**	**107**
AGI-0383	3,487,028	5,523,001	0	-90	97	7.0	no interval				
AGI-0384	3,487,117	5,523,057	0	-90	97	10.0	3	5	**2**	**37**	**87**
AGI-0385	3,487,228	5,523,100	0	-90	96	14.0	5	14	**9**	**87**	**131**
AGI-0386	3,487,287	5,523,146	0	-90	96	17.0	1	2	**1**	**33**	**95**
							4	6	**2**	**51**	**73**
							8	17	**9**	**134**	**182**
AGI-0387	3,487,377	5,523,196	0	-90	96	21.0	3	4	**1**	**33**	**79**
							9	18	**9**	**422**	**499**
			including				15	17	**2**	**1,551**	**876**
AGI-0388	3,487,464	5,523,232	0	-90	95	21.0	2	4	**2**	**44**	**75**
							6	9	**3**	**44**	**501**
							15	19	**4**	**97**	**1125**
AGI-0389	3,487,554	5,523,293	0	-90	95	20.0	6	11	**5**	**87**	**119**
							16	19	**3**	**94**	**136**
AGI-0390	3,487,646	5,523,324	0	-90	94	20.0	0	1	**1**	**38**	**191**
							8	11	**3**	**43**	**94**
							14	18	**4**	**139**	**86**
AGI-0391	3,487,736	5,523,399	0	-90	94	19.0	8	10	**2**	**49**	**112**
							16	17	**1**	**141**	**123**
AGI-0392	3,486,988	5,522,879	0	-90	97	6.0	no interval				
AGI-0393	3,487,184	5,522,952	0	-90	97	15.0	2	3	**1**	**36**	**73**
							6	13	**7**	**151**	**151**
AGI-0394	3,487,337	5,523,063	0	-90	96	22.0	4	5	**1**	**39**	**96**
							7	8	**1**	**33**	**84**
							10	12	**2**	**57**	**217**
							15	21	**6**	**196**	**163**
AGI-0395	3,487,502	5,523,156	0	-90	95	18.0	1	2	**1**	**34**	**173**
							4	6	**2**	**39**	**46**
							8	16	**8**	**78**	**152**
AGI-0396	3,487,684	5,523,244	0	-90	94	17.0	7	11	**4**	**56**	**134**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0397	3,486,949	5,522,737	0	-90	99	6.0	no interval				
AGI-0398	3,487,038	5,522,787	0	-90	98	8.0	no interval				
AGI-0399	3,487,123	5,522,827	0	-90	98	15.0	2	5	**3**	**37**	**75**
							7	12	**5**	**141**	**158**
AGI-0400	3,487,209	5,522,869	0	-90	97	17.0	3	17	**14**	**104**	**164**
including							13	14	**1**	**594**	**423**
AGI-0401	3,487,307	5,522,925	0	-90	97	24.0	2	7	**5**	**70**	**112**
							9	13	**4**	**76**	**315**
							15	22	**7**	**390**	**516**
including							16	20	**4**	**581**	**676**
AGI-0402	3,487,386	5,522,969	0	-90	97	21.0	4	5	**1**	**54**	**45**
							9	10	**1**	**50**	**146**
							12	19	**7**	**143**	**218**
AGI-0403	3,487,474	5,523,018	0	-90	96	20.0	3	5	**2**	**51**	**335**
							7	9	**2**	**48**	**345**
							12	13	**1**	**44**	**202**
							15	19	**4**	**65**	**288**
AGI-0404	3,487,584	5,523,056	0	-90	96	10.0	3	4	**1**	**48**	**87**
							6	7	**1**	**34**	**52**
AGI-0405	3,487,656	5,523,109	0	-90	95	8.0	3	4	**1**	**36**	**57**
AGI-0406	3,487,739	5,523,161	0	-90	95	15.0	2	3	**1**	**33**	**116**
AGI-0407	3,487,089	5,522,696	0	-90	98	13.0	2	3	**1**	**76**	**585**
							5	9	**4**	**54**	**132**
AGI-0408	3,487,256	5,522,790	0	-90	98	22.0	6	20	**14**	**915**	**401**
including							8	12	**4**	**2,707**	**401**
AGI-0409	3,487,435	5,522,889	0	-90	97	22.0	0	8	**8**	**48**	**166**
							12	13	**1**	**37**	**150**
							15	21	**6**	**226**	**84**
including							16	18	**2**	**483**	**49**
AGI-0410	3,487,616	5,522,984	0	-90	96	10.0	5	7	**2**	**50**	**69**
AGI-0411	3,487,141	5,522,599	0	-90	99	16.0	4	6	**2**	**73**	**94**
AGI-0412	3,487,225	5,522,650	0	-90	99	12.0	8	9	**1**	**38**	**80**
AGI-0413	3,487,309	5,522,700	0	-90	98	15.0	6	11	**5**	**134**	**276**
AGI-0414	3,487,390	5,522,752	0	-90	98	23.0	7	11	**4**	**30**	**208**
							17	22	**5**	**90**	**293**
AGI-0415	3,487,488	5,522,803	0	-90	97	23.0	8	10	**2**	**65**	**104**
							15	22	**7**	**174**	**144**
AGI-0416	3,487,567	5,522,846	0	-90	97	20.0	17	18	**1**	**35**	**162**

Hole #	East	North	Azimuth (deg)	Dip (deg)	Elevation (m)	EOH (m)	From (m)	To (m)	Interval (m)	U_3O_8 (ppm)	V_2O_5 (ppm)
AGI-0417	3,486,414	5,524,727	0	-90	93	16.0	3	9	**6**	**34**	**117**
							11	13	**2**	**48**	**130**
AGI-0418	3,486,330	5,524,674	0	-90	93	20.0	4	17	**13**	**222**	**201**
including							10	12	**2**	**1,123**	**467**
AGI-0419	3,486,152	5,524,578	0	-90	93	7.0	1	2	**1**	**59**	**46**
AGI-0420	3,485,988	5,524,476	0	-90	94	11.0	1	7	**6**	**111**	**159**
AGI-0421	3,485,537	5,524,239	0	-90	98	19.0	5	16	**11**	**65**	**104**
AGI-0422	3,485,482	5,524,325	0	-90	97	22.0	5	9	**4**	**87**	**96**
							12	20	**8**	**103**	**84**
AGI-0423	3,485,616	5,524,513	0	-90	96	20.0	3	8	**5**	**82**	**90**
							14	20	**6**	**129**	**63**
AGI-0424	3,485,528	5,524,462	0	-90	96	21.0	4	19	**15**	**142**	**150**
including							14	17	**3**	**299**	**54**
AGI-0425	3,485,442	5,524,414	0	-90	97	20.0	6	9	**3**	**210**	**183**
							16	18	**2**	**74**	**65**
AGI-0426	3,485,357	5,524,364	0	-90	98	22.0	16	20	**4**	**283**	**116**
AGI-0427	3,485,394	5,524,499	0	-90	97	21.0	5	8	**3**	**35**	**64**
							16	20	**4**	**147**	**59**