SHEEP MOUNTAIN URANIUM PROJECT

FREMONT COUNTY, WYOMING, USA

UPDATED PRELIMINARY FEASIBILITY STUDY NATIONAL INSTRUMENT 43-101 TECHNICAL REPORT

PREPARED FOR:

TITAN URANIUM USA INC.

A Wholly Owned Subsidiary of:

ENERGY FUELS INC.

AUTHORED BY:

Douglas L. Beahm, P.E., P.G.

Principal Engineer

April 13, 2012

DATE AND SIGNATURE PAGE

DOUGLAS L. BEAHM

I, Douglas L. Beahm, P.E., P.G., do hereby certify that:

1. I am the author of the report titled "SHEEP MOUNTAIN URANIUM PROJECT FREMONT COUNTY, WYOMING, USA, UPDATED PRELIMINARY FEASABILITY STUDY NATIONAL INSTRUMENT 43-101 MINERAL RESERVE AND RESOURCE TECHNICAL REPORT" and dated with an effective date of March 20, 2012 (the "Technical Report").
2. I am responsible for all sections of the Technical Report.
3. I am the Principal Engineer and President of BRS, Inc., 1130 Major Avenue, Riverton, Wyoming 82501.
4. I graduated with a Bachelor of Science degree in Geological Engineering from the Colorado School of Mines in 1974.
5. I am a licensed Professional Engineer in Wyoming, Colorado, Utah, and Oregon; a licensed Professional Geologist in Wyoming; and Registered Member of the Society for Mining, Metallurgy and Exploration, Inc. ("SME")
6. I have worked as an engineer and a geologist for over 37 years. My work experience includes uranium exploration, mine production, and mine/mill decommissioning and reclamation within sandstone-hosted uranium districts in Wyoming including the Sheep Mountain area and adjacent properties.
7. I have read the definition of "qualified person" set out in National Instrument 43-101Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by reason of my education, professional registration, and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
8. I have prior working experience on the property as stated in the report. Specifically I have, as a consultant, worked on the Sheep Mountain Project continuously since the fall of 2009. This has included assistance in the planning and execution of drilling programs in 2009, 2010, and 2011 and a lead role in the project design and environmental permitting.
9. My involvement with the Sheep Mountain Project on behalf of Titan began in September, 2009. Since that time I was t the site 9 days in 2009, 23 days in 2010, and 19 days in 2011. My most recent personal inspection of the Sheep Mountain Project occurred on October 25, 2011.
10. At the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
11. I am independent of the issuer within the meaning of section 1.5 of NI 43-101.
12. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with same.

April 13th, 2012

Douglas L. Beahm, PE, PG
Principal Engineer, BRS Inc.

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SECTION 1: SUMMARY

This Technical Report was prepared for Titan Uranium USA Inc. (Titan), a wholly owned indirect subsidiary of Energy Fuels Inc. (EFR), in compliance with National Instrument 43-101, *Standards of Disclosure for Mineral Projects* (NI- 43-101) and in accordance with Canadian Institute Mining (CIM) *Best Practice Guidelines for the Estimation of Mineral Resources and Mineral Reserves* (CIM standards).

Note that EFR is in the process of changing the name of Titan Uranium USA Inc. to Energy Fuels Wyoming Inc. As such any reference to Titan in this report or the associated drawings, figures, tables, and conclusions also applies to the entity Energy Fuels Wyoming Inc.

This report references and updates the "*SHEEP MOUNTAIN URANIUM PROJECT, Fremont County, Wyoming, USA, 43-101 MINERAL RESERVE AND RESOURCE REPORT"*, dated April 8, 2010, the "*SHEEP MOUNTAIN MINES, Fremont County, Wyoming, USA, PRE-FEASIBILITY STUDY*, dated April 8, 2010, BRS Inc., and the "*SHEEP MOUNTAIN URANIUM PROJECT, Fremont County, Wyoming, USA, 43-101 MINERALRESOURCE REPORT UPDATE"*, dated March 1, 2011. These reports were prepared by BRS Inc., of Riverton, Wyoming, on behalf of Titan.

The following is a brief list of terms and abbreviations used in this report:

Cy	cubic yard
eU_3O_8	radiometric equivalent U_3O_8
Ft	foot or feet
ft^2	square foot
THK	Thickness
Grade	weight percent
GT	grade thickness product
Lb	pound or pounds
Ton	short ton (2,000 lbs.)
Tpd	tons per day

Project Overview

The Sheep Mountain Project includes the Congo Pit, a proposed open pit development, and the re-opening of the existing Sheep Underground mine. Although alternatives were considered, the recommended uranium recovery method includes the processing of mined materials via an on-site heap leach facility.

Permitting and licensing of the project is well advanced. A Plan of Operations was submitted to the Bureau of Land Management (BLM) in June 2011, and the BLM is currently preparing an Environmental Impact Statement (EIS) for the project. There is an existing mine permit for the Sheep Mountain Project held by Titan USA, Mine Permit 381C, which is in good standing with the State of Wyoming, Department of Environmental Quality, Land Quality Division (WDEQ/LQD). Revisions to the Mine Permit and a Source Material License application are being developed and will be submitted to the WDEQ/LQD and the U.S. Nuclear Regulatory Commission (NRC), respectively.

Mining will be completed by both underground and open pit methods. Mined product from the underground and open pit mine operations will be commingled at the stockpile site located near the underground portal and in close proximity to the pit. At the stockpile the mine product will be sized if needed, blended, and then conveyed via a covered overland conveyor system to the heap leach pad where it will be stacked on a double lined pad for leaching. The primary lixiviant will be sulfuric acid. Concentrated leach solution will be collected by gravity in a double lined collection pond and then

transferred to the mineral processing facility for extraction and drying. The final product produced will be a uranium oxide, commonly referred to as yellowcake.

The project consists of two distinct and independent mining areas, the Congo Open Pit and the Sheep Underground, with common processing on mine material via a heap leach recovery facility. The currently planned mine life of the open pit is 15 years with an additional 5 years allotted for mine closure and reclamation . The currently planned mine life of the underground in 11 years. The heap leach facility is designed to accommodate the mined material from both open pit and underground mine operations over an operating life compatible with the open pit operations.

Three production alternatives were considered for detailed financial evaluation reflecting variations in overall project scheduling as follows;

- Alternative 1: Open pit and underground mine development with concurrent start of mining.
- Alternative 2: Open pit and underground mine development with concurrent end of mining.
- Alternative 3: Open pit mine development only.

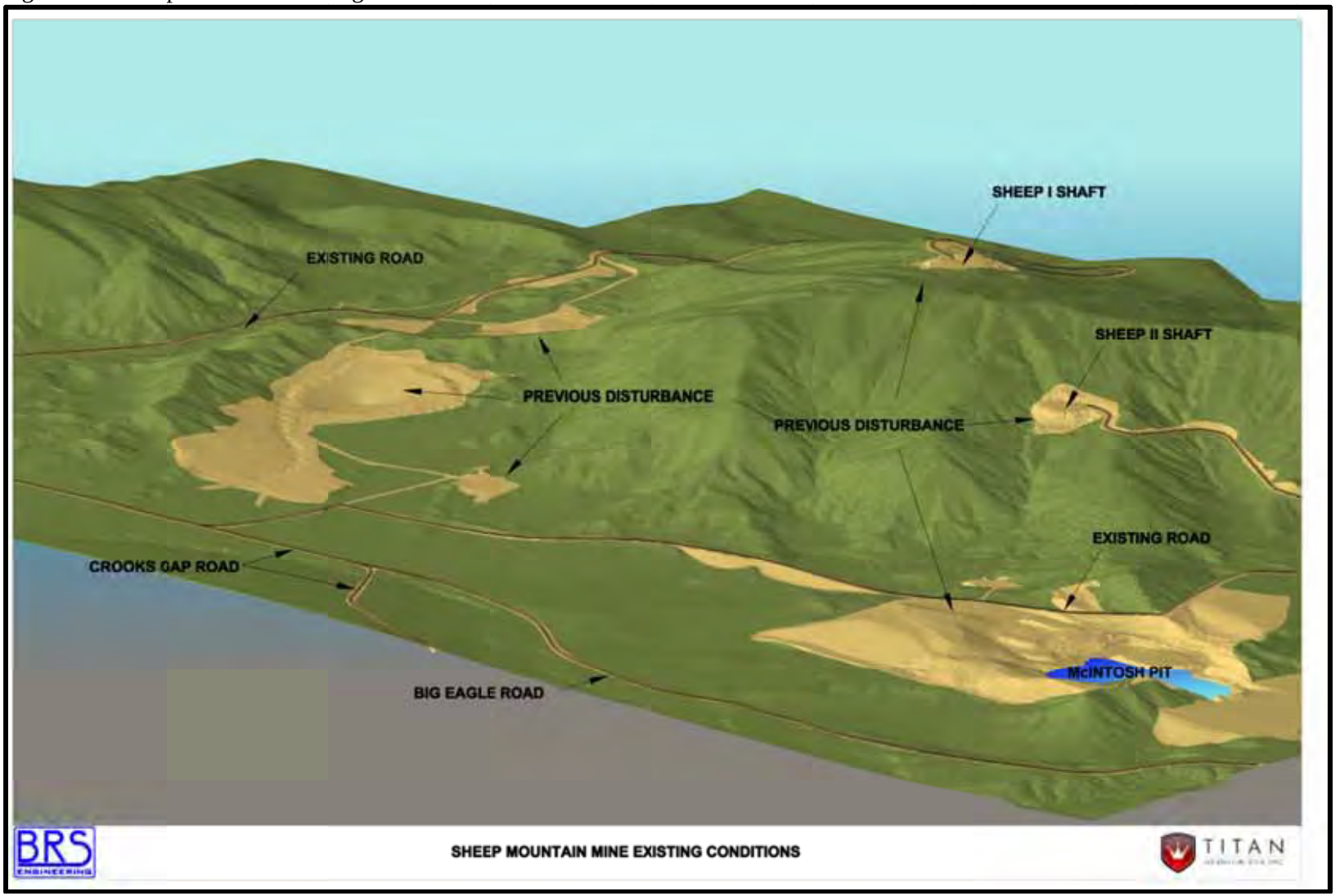
Based on the economic analysis presented in Section 22, each of the mine development alternatives are economically viable. Alternative 1 provides the highest internal rate of return (IRR), the highest net present value (NPV), and the highest average and annual uranium production level. However, Alternative 1 also requires the highest level of initial capital. Alternative 3 has the lowest overall capital requirement but has the lowest average annual and total uranium production and the lowest IRR and the NPV. Alternative 2, or some variation thereof which delays the start of the underground operations with respect to the open pit mine and heap leach facility, is the preferred alternative in that, it has the same lower initial capital requirement as Alternative 3 and the higher average annual and total uranium production as Alternative 1. In addition, Alternative 2 has the practical advantage of staggering some of the initial startup challenges and demands, for example, personnel recruitment and training.

Depending on the development alternative, production varies from a low of 180,000 tons processed with 366,000 pounds of uranium produced per year during the start of operations of the open pit and heap leach, to a high of 660,000 tons per year processed with approximately 1,500,000 pounds of uranium produced per year at peak production with both the open pit and underground mines in operation. On average the open pit produces 264,000 tons per year containing 608,000 pounds of uranium. Similarly the underground produces an average of 318,000 tons per year containing 841,000 pounds of uranium. Average production from the heap leach and processing facility is estimated to be 1,224,000 pounds of uranium per year.

The subsequent figures are 3D renderings of the project depicting:

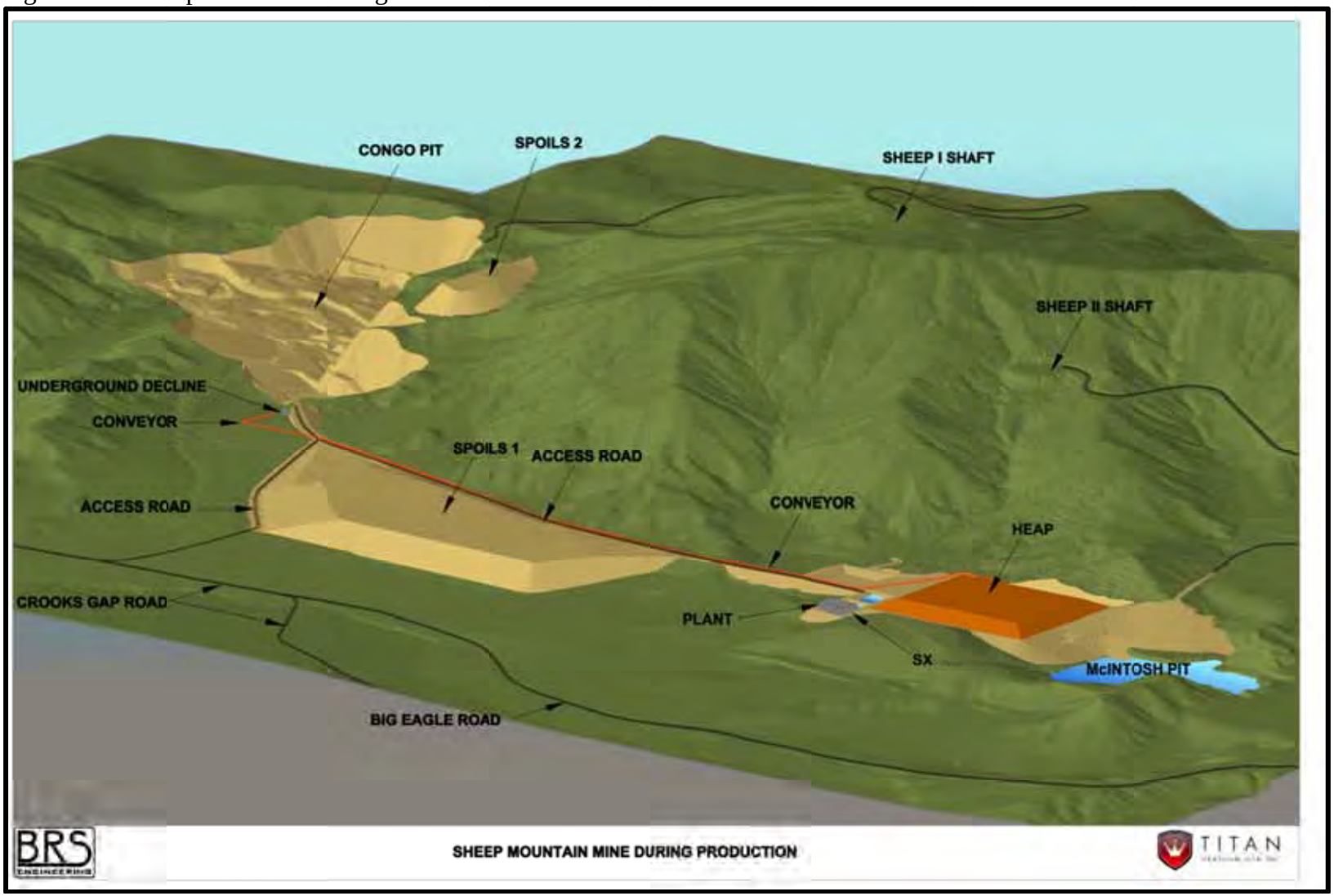
- Figure 1.1 – Sheep Mountain Existing Conditions. The site is a brownfield site with areas of existing mine disturbances some of which have been reclaimed as depicted in the figure. Efforts were made in the mine planning process to reduce areas of new disturbance and return previously disturbed lands to their pre-mining land use.
- Figure 1.2 – Sheep Mountain During Production. This figure depicts the site at the peak of mine and mineral processing operations.
- Figure 1.3 – Sheep Mountain Mine Reclamation. This figure depicts the site following cessation of mine and mineral processing operations and completion of site reclamation which returns the lands to pre-mining land use.

Figure 1.1 - Sheep Mountain Existing Conditions



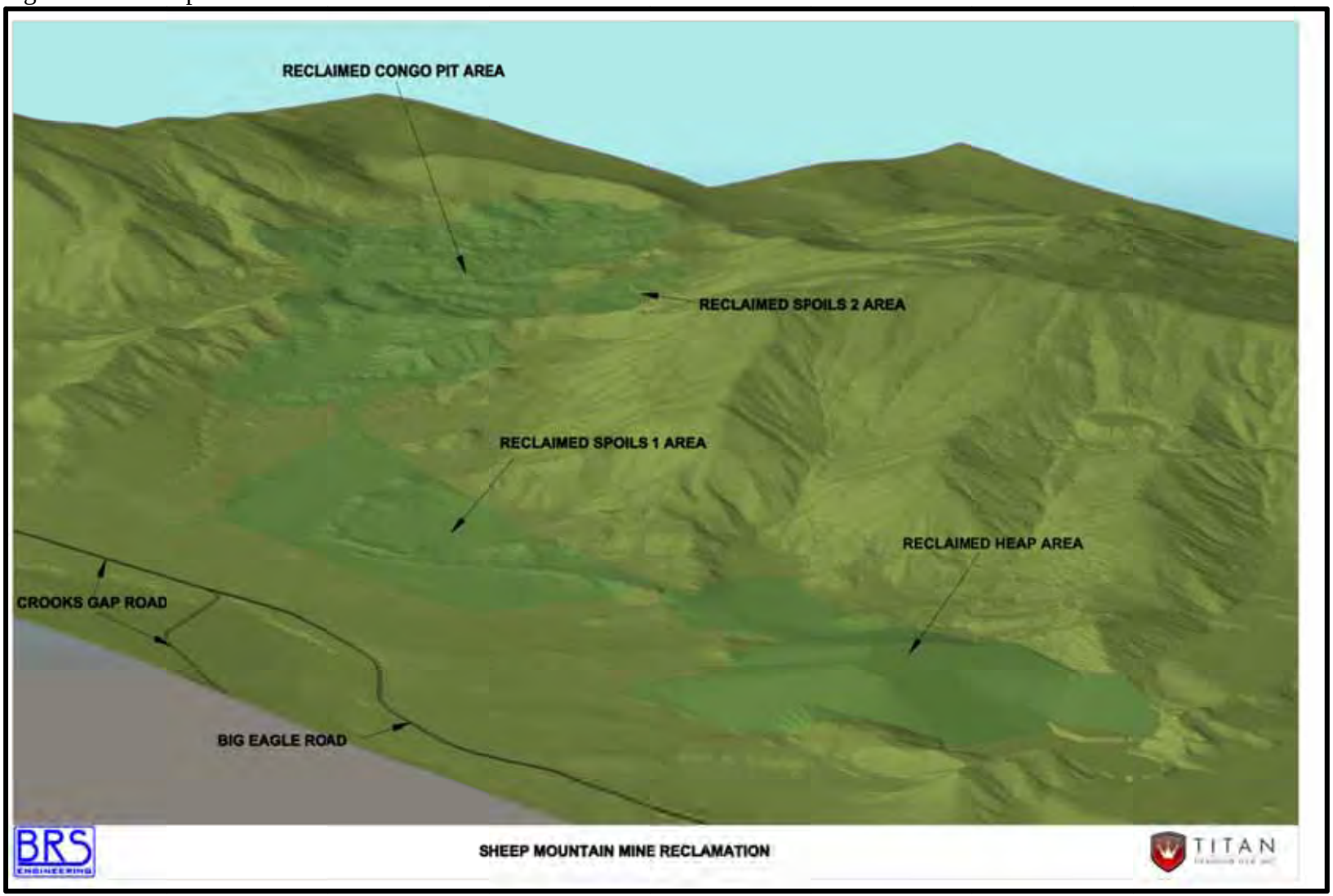
3D RENDERING – NOT TO SCALE

Figure 1.2 – Sheep Mountain During Production



3D RENDERING – NOT TO SCALE

Figure 1.3 – Sheep Mountain Mine Reclamation



3D RENDERING – NOT TO SCALE

Project Description and Ownership

The Sheep Mountain Project is located in portions of Sections 8, 9, 15, 16, 17, 20, 21, 22, 27, 28, 29, 30, 31, 32, and 33, Township 28 North, Range 92 West at approximate Latitude 42º 24' North and Longitude 107º 49' West, within the Wyoming Basin physiographic province in the Great Divide Basin at the northern edge of the Great Divide Basin. The project is approximately 8 miles south of Jeffrey City, Wyoming (Refer to Figure 4.1 – Location Map).

The Sheep Mountain Project is comprised of 179 unpatented mining claims comprising approximately 3,205 acres and approximately 640 acres of State of Wyoming lease (i.e., ML 0-15536 located in Section 16, Township 28 North, Range 92 West). There are approximately 630 acres of private lease lands in Section 20, 29, 31, 32, and 33. Refer to Figure 4.2, Claim Map. The combined land holdings comprise some 4,475 acres. Mineral and surface rights and ownership is fully discussed in Section 4. A mineral title opinion was completed for the project on behalf of Titan and is the basis of the information summarized herein (Harris & Thompson, 2011).

Titan Uranium Inc. acquired a 50% interest in the property when it acquired Uranium Power Corp (UPC) by a Plan of Arrangement in July 2009. The ownership was subsequently transferred to Titan Uranium Inc.'s wholly-owned subsidiary, Titan Uranium USA (referred herein to as Titan). The remaining 50% interest was purchased from Uranium One Inc. (U1) on October 1, 2009. Subsequently, Energy Fuels Inc. and Titan Uranium Inc. announced that a Certificate of Arrangement giving effect to the Plan of Arrangement between Energy Fuels was issued on February 29, 2012, making, Titan a wholly-owned subsidiary of Energy Fuels.

Development Status

A preliminary feasibility study for the project has been completed which includes the preliminary design and sequencing of the open pit and underground mine operations and the heap leach mineral processing facility. Designs and sequencing are inclusive of pre-production, production, and decommissioning and reclamation.

Capital and operating costs estimates (CAPEX and OPEX) have been completed and are in current (2012) US dollars.

Telephone, electric and natural gas service has been established to the proposed plant site. In addition, electric service and a waterline have been extended via a Right of Way (ROW) issued by the BLM in 2011 to the Sheep I and II shafts. Water rights held by Titan are adequate for planned operations. Publicly maintained access roads exist to within one mile of the project. Private access roads from past operations are established throughout the project area.

Regulatory Status

The Sheep Mountain Project includes the proposed Congo Open Pit, the re-opening of the existing Sheep Underground Mine and the Heap Leach processing of the mined product to produce yellowcake. Permitting and licensing of the project is well advanced including:

- Baseline environmental studies are being completed for the requisite time frames required and/or recommended by state and federal regulatory guidance.

- There is an existing mine permit for the Sheep Mountain Project, Mine Permit 381C, which is in good standing with the State of Wyoming, Department of Environmental Quality, Land Quality Division (WDEQ/LQD).
- A draft permit revision including a revision of the existing reclamation bond has been submitted to the WDEQ/LQD and a courtesy review was conducted by the agency.
- A Plan of Operations (POO) has been prepared and submitted to the BLM in conjunction with the mine permit revisions. Public scoping and preparation of an EIS is underway.
- A draft NRC Source Material License application has been prepared including the Environmental Report (ER) and Technical Report (TR).
- A pre-application audit with the NRC has been completed and technical comments received.

Geology and Mineralization

Within the Sheep Mountain Project area, uranium mineralization is contained in the lower to middle Eocene Battle Spring Formation. The Battle Spring Formation, consisting of upper and lower members (designated the "A" for the lower and "B" for the upper), is a fluvial deposit. Mineralization is hosted by the Battle Spring Formation and has been described extensively since the 1960s and has been termed a 'Wyoming Roll Front System'. These deposits are often organic-rich, fine grained lenses in tabular, or "roll front", configurations. The uranium mineralization occurs primarily in the lower member of the Battle Spring Formation (Stephens, 1974).

Exploration and Drilling Status

While mineralization was originally discovered by aerial and ground radiometric surveys completed in the early 1950's, exploration since that time has been dominantly by drilling. Drill data from approximately 4,000 drill holes were utilized in this study. While the majority of the drilling is of a historic nature, Titan has the original geophysical and lithologic logs for most of the historic drill holes. This data was reviewed and validated. In addition, 159 new drill holes have been completed on the project since 2005 to confirm and extend known mineralization and to delineate areas for mine planning.

Mineral resource and reserve estimates for the Sheep Mountain Project are based on radiometric data. As discussed in this report, available data indicates that variations in radiometric equilibrium are local in their effect, which impacts the mining grade control program but does not appreciably affect the overall mineral resources or reserves.

Mineral Resources and Reserves

The Mineral Resources and Reserves estimates presented herein have been completed in accordance with CIM Standards and NI 43-101.

Based on the drill density, the apparent continuity of the mineralization along trends, geologic correlation and modeling of the deposit, a review of historic mining with respect to current resource projections, and verification drilling, the Mineral Resource estimate herein meets CIM criteria as an Indicated Mineral Resource. A summary of total mineral resource is provided in the following table. Detailed information relative to mineral resources is provided in Section 14 of this report.

Table 1.1 - Indicated Mineral Resource*

Sheep Underground	**GT Cutoff****	**>0.30**
	Pounds eU3O8	13,245,000
	Tons	5,640,000
	Avg Grade % eU3O8	0.117
Congo Pit Area	**GT Cutoff****	**>0.10**
	Pounds eU3O8	15,040,000
	Tons	6,176,000
	Avg Grade % e U3O8	0.122
Sun-Mc	**GT Cutoff****	**>0.10**
	Pounds e U3O8	2,000,000
	Tons	1,080,000
	Avg Grade % e U3O8	0.093
Total Indicated Mineral Resource	**GT Cutoff**	**As Above**
	Pounds e U3O8	**30,285,000**
	Tons	**12,895,000**
	Avg Grade % e U3O8	**0.117**

*numbers rounded

**GT cutoff: Open Pit GT 0.10 (2 feet of 0.05 %eU_3O_8); Underground GT 0.30 (2 feet of 0.05 %eU_3O_8)

The following Mineral Reserves are fully included in the total Mineral Resources. The Probable Mineral Reserve for the Sheep Mountain Project, including both open pit and underground projected mining areas, is that portion of the indicated mineral resource that is included in current mine designs and is considered economic under current cost and market conditions. The Mineral Reserve estimates presented herein have been completed in accordance with CIM Standards and NI 43-101. A summary of the total Mineral Reserve estimate is provided in Table 1.2 which follows. Detailed information relative to Probable Mineral Reserves is provided in Section 15 of this report.

Table 1.2 - Probable Mineral Reserves

Area	GT Minimum**	Pounds eU_3O_8	Tons	Average Grade $\%eU_3O_8$
Open Pit	0.10	9,117,000*	3,955,000*	0.115
Underground	0.45	9,248,000*	3,498,000*	0.132
Total		**18,365,000***	**7,453,000***	**0.123**

*numbers rounded

**GT cutoff: Open Pit GT 0.10 (2 feet of 0.05 %eU_3O_8); Underground GT 0.30 (2 feet of 0.075 %eU_3O_8)

Capital and Operating Costs

The preferred alternative for the development of the Sheep Mountain Project is an open pit and underground conventional mine operation with on-site mineral processing featuring an acid heap leach and solvent extraction recovery facility. The preferred alternative begins the operation with the open pit and heap leach facility and brings the underground mine into production some 5 years later such that the forecasted end of mining for both the open pit and underground coincide.

Estimated (OPEX) is summarized in Table 1.3, as follows:

Table 1.3 - OPEX – Preferred Alternative

(current US dollars x 1,000)

	Life of Mine OPEX	Cost Per Ton Mined	Cost Per Lb Mined	Cost Per Lb Recovered
Total Surface Mine (3,955,000 tons, 9,117,000 lbs)	$ 110,403	$ 27.91	$ 12.11	$ 13.26
Total Underground Mine (3,498,000 tons, 9,248,000 lbs)	$ 202,145	$ 57.79	$ 21.86	$ 23.65
Blended Mining Costs* (7,435,000 tons, 18,365,000 lbs)	$ 312,548	$ 41.93	$ 17.02	$ 18.52
Total Reclamation and Closure	$ 11,840	$ 1.59	$ 0.64	$ 0.70
Total Heap Leach	$ 107,229	$ 14.39	$ 5.84	$ 6.35
Reclamation Bond Mine and Heap	$ 7,140	$ 0.96	$ 0.39	$ 0.42
Total Taxes and Royalties	$ 106,639	$ 14.31	$ 5.81	$ 6.32
TOTAL DIRECT COSTS	**$ 545,396**	**$ 73.18**	**$ 29.70**	**$ 32.31**

*Blended mine costs represent the weighted average of open pit and underground mines. Surface and underground mine costs are shown for information but are not additive to the total cost.

Estimated CAPEX is summarized in Table 1.4, as follows:

Table 1.4 – CAPEX - Capital Expenditures (Alternative 2)

(current US dollars x 1,000)

	Contingency	Initial Capital	Years 2-20	Life of Mine
Permitting (NRC, BLM, and WDEQ)		$ 4,328		$ 4,328
Pre-Development Mine Design		$ 1,200		$ 1,200
OP Mine Equipment	15%	$ 14,301		$ 14,301
UG Mine Equipment	15-30%		$ 61,601	$ 61,601
Office, Shop, Dry, and support	15%	$ 3,166		$ 3,166
Mineral Processing	25%	$ 37,803		$ 37,803
TOTAL CAPITAL EXPENDITURES		**$ 60,798**	**$ 61,601**	**$ 122,399**
COST PER POUND RECOVERED				**$7.01**

Economic Analysis

The financial evaluation for the preferred alternative represents constant US dollars (2012) and an average sales price of US $65.00 per pound of uranium oxide. All costs are forward looking and do not include any previous project expenditures or sunk costs. Operating costs include all direct taxes and royalties but do not include US Federal Income Tax. Table 1.5 provides the Internal Rate of Return (IRR) for the alternatives evaluated and the calculated Net Present Value (NPV) at a range of discount rates.

Table 1.5 – Economic Analysis

(current US dollars x 1,000)

Alternative 1 - Open Pit and Underground Common Start of Mining		
IRR		**42%**
NPV 5%	**$**	**248,926**
NPV 7%	**$**	**200,606**
NPV 10%	**$**	**145,763**
NPV 15%	**$**	**86,103**
Preferred Alternative 2 - Open Pit and Underground Common End of Mining		
IRR		**35%**
NPV 5%	**$**	**224,378**
NPV 7%	**$**	**173,548**
NPV 10%	**$**	**118,490**
NPV 15%	**$**	**62,733**
Alternative 3 - Open Pit Only		
IRR		**33%**
NPV 5%	**$**	**121,818**
NPV 7%	**$**	**96,062**
NPV 10%	**$**	**67,253**
NPV 15%	**$**	**36,668**

Conclusions

Each of the mine development alternatives are economically viable based on the cost and price estimates as discussed in this report. The preferred alternative for the development of the Sheep Mountain Project is an open pit and underground conventional mine operation with on-site mineral processing featuring an acid heap leach and solvent extraction recovery facility, Alternatives 1 and 2. The preferred schedule, Alternative 2, begins the operation with the open pit and heap leach facility and brings the underground mine into operation up 5 years later such that the forecasted end of mining for both the open pit and underground coincide. This approach defers a substantial amount of initial capital and allows for a gradual startup of site activities while maximizing resource recovery. Having the end of mining coincide for both operations optimizes the fixed costs of personnel and facilities.

The technical risks related to the project are low as the mining and recovery methods are proven. The mining methods recommended have been employed successfully at the project in the past. Successful uranium recovery from the mineralized material at Sheep Mountain and similar areas such as the Gas Hills has been demonstrated via both conventional milling and heap leach recovery.

Risks related to permitting and licensing the project are low as the project is a brown-field development located in a state which tends to favor mining and industrial development. The project has been well received locally and will also provide substantial revenues to both Fremont County and the State of Wyoming in addition to providing long term employment for the region. The project development is timed well with respect to the market and substantial increases in financial return may be realized in what is being forecast as a rising market.

The author is not aware of any other specific risks or uncertainties that might significantly affect the mineral resource and reserve estimates or the consequent economic analysis.

Estimation of costs and uranium price for the purposes of the economic analysis over the life of mine is by its nature forward-looking and subject to various risks and uncertainties. No forward-looking statement can be guaranteed and actual future results may vary materially.

Recommendations

The following recommendations related to potential improvement and/or advancement of the project. The first recommendation relates to completing the licensing and permitting process. It is the author's opinion that without the conditions of the permits and licenses known a development decision cannot be made. The second recommendation is to investigate alternative mining techniques which if successful will reduce operating costs and improve the safety of the operations. The final recommendations relate to areas which have the potential to increase mineral resource and/or reserves in accordance with NI 43-101.

1. Through 2014, Titan has estimated cost related to permitting the mine and mineral processing operations with the State of Wyoming, US BLM , and US NRC to be in excess of 4.3 million dollars. The author concurs with this estimate. This is the single most important item in moving the project forward.

2. It is the author's opinion that there is significant promise in the development of alternative underground mining methods. Current CAPEX and OPEX are based on traditional drill and blast methods which are highly labor and capital intensive. The general areas for significant improvement of the underground operations would include:
   - Hydraulic Mining – Based on limited testwork in the existing Sheep decline, the host formation appears amenable to this method and further testing is recommended. This could improve costs and safety of operations and would be applicable at least to the development decline and development drifts which are not in mineralized material. With proper control of solutions it may also be applicable for work in mineralized zones.
   - Mechanical Upgrading – Some testing has been completed using both the ablation methodology which in being developed in Casper, Wyoming and attrition scrubbing which is a proven commercial technique. Both methods have promise as they could operate underground and return 80% or more of the total mined volume as backfill in the mine while shipping a concentrated product to the surface for mineral processing.
   - The budgetary estimate to investigate both alternatives is $500,000.

3. Although the current project has significant mineral resources and reserves, there are two areas with potentially significant resources which have not been fully evaluated.
   - A mineral resource estimate has been completed for the Sun Mc area but no mine design efforts have been made to date. The budgetary estimate for preliminary mine design is $100,000.
   - The Bev claims have known historic mineral resources and confirmatory drilling completed in 2011 verified the mineralization. However, a mineral resource estimate in accordance with NI 43-101, for this area, has not been completed and is not included in the current mineral resource estimate. The budgetary estimate for mineral resource estimation is $50,000. Once the mineral resource estimate has been completed, preliminary mine planning should be completed. The budgetary estimate for preliminary mine design is $100,000.

SECTION 2: INTRODUCTION

This Technical Report was prepared for Titan Uranium USA Inc. (Titan), a wholly owned indirect subsidiary of Energy Fuels Inc. (EFR), in compliance with National Instrument 43-101, *Standards of Disclosure for Mineral Projects* (NI- 43-101) and in accordance with Canadian Institute Mining (CIM) *Best Practice Guidelines for the Estimation of Mineral Resources and Mineral Reserves* (CIM standards).

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Principal technical documents, files, and reports used in the preparation of this report are provided in Section 27.

The following is a brief list of terms and abbreviations used in this report:

Cy	cubic yard
eU_3O_8	radiometric equivalent U_3O_8
Ft	foot or feet
ft^2	square foot
THK	Thickness
Grade	weight percent
GT	grade thickness product
Lb	pound or pounds
Ton	short ton (2,000 lbs.)
Tpd	tons per day

The lead author of this report, Mr. Beahm, is both a Professional Geologist and a Professional Engineer licensed in Wyoming, and a Registered Member of the US Society of Mining Engineers (SME). He is independent of EFR, using the test set out in Section 1.5 of National Instrument 43-101. Mr. Beahm is experienced with uranium exploration, development, and mining including past employment with the Homestake Mining Company, Union Carbide Mining and Metals Division, and AGIP Mining USA. As a consultant and principal engineer of BRS, Inc., Mr. Beahm has provided geological and engineering services relative to the development of mining and reclamation plans for uranium projects in Wyoming, Utah, Colorado, Arizona, and Oregon, as well as numerous mineral resource and economic feasibility evaluations. This experience spans a period of thirty-eight years dating back to 1974. Mr. Beahm has direct work experience within the Crooks Gap/Green Mountain District and the adjoining Gas Hills District.

BRS was retained to provide professional engineering, geological, and environmental permitting services for the Sheep Mountain Project by Titan began in September, 2009. The lead author of this report, Mr. Beahm was at the site 9 days in 2009, 23 days in 2010, and 19 days in 2011. BRS, under Mr. Beahm's direction, assisted in the planning and execution of the Titan drilling programs in 2009, 2010, and 2011 and was directly involved in supervision of drilling, logging and recordation of samples, selection of mineralized material samples for testing, and delivery of mineralized material samples for analysis. BRS has also played a leading role in the project design and permitting. Mr. Beahm's most recent visit to the site was October 25, 2011 at which time he conducted a site tour with representatives of the USNRC, USBLM, Wyoming DEQ, and members of the public as part of the pre-application audit of the draft Source Materials License prepared for the project.

SECTION 3: RELIANCE ON OTHER EXPERTS

The author has relied on the accuracy of the historical and new data as itemized in Section 4 and the various project reports as referenced in Section 23 of this report. To the extent practical such data and reports have been independently verified. The author considers the data utilized in this report to be accurate and reliable for the purposes of completing a mineral resource and reserve estimate for the property

The location of the unpatented mining lode claims and the state mineral leases, shown on Figure 4.2, which form the basis of the mineral holdings, was in part provided by Titan and was relied upon as defining the mineral holdings of Titan in the development of this report. To the extent practical such information has been independently verified.

Principal technical documents, files, and reports used in the preparation of this report are provided in Section 27.

SECTION 4: PROPERTY DESCRIPTION AND LOCATION

The Sheep Mountain Project is located in portions of Sections 8, 9, 15, 16, 17, 20, 21, 22, 27, 28, 29, 30, 31, 32, and 33, Township 28 North, Range 92 West at approximate Latitude 42º 24' North and Longitude 107º 49' West, within the Wyoming Basin physiographic province in the Great Divide Basin at the northern edge of the Great Divide Basin. The project is approximately 8 miles south of Jeffrey City, Wyoming. (Refer to Figure 4.1 – Location Map).

Figure 4.1 - Location Map

(RPA, 2006)

Description of Mineral Holdings

Figure 4.2, represents the approximate location of unpatented mining lode claims and state leases held by Titan. In addition, copies of location certificates and filings for unpatented mining lode were provided by Titan. Said data and mapping was reviewed and found to be complete. The Sheep Mountain Project is comprised of 179 unpatented mining claims comprising approximately 3,205 acres and approximately 640 acres of State of Wyoming lease (ML 0-15536 located in Section 16, Township 28 North, Range 92 West). There are approximately 630 acres of private lease lands in Section 20, 29, 31, 32, and 33 (refer to Figure 4.2, Claim Map). The combination of the land holdings comprises some 4,475 acres and gives Titan the mineral rights to the resources as defined in the Congo Pit and Sheep Underground mine areas.

A mineral title opinion was completed for the project on behalf of Titan and is the basis of the information summarized herein (Harris & Thompson, 2011)

To maintain these mineral rights, Titan must comply with the state lease provisions including annual payments with respect to the State of Wyoming leases; private leases; BLM and Fremont County, as well as Wyoming filing and/or annual payment requirements to maintain the validity of the unpatented mining lode claims as follows:

- Mining claims do not expire but are subject to annual filing requirements and payment of a fee of $140.00 per claim or an aggregate annual cost of $25,060.00 for the 179 unpatented mining claims currently held. Note that $23,800.00 was paid in 2012 for 170 mining claims, however, 9 new claims have been located since that time bringing the total to 179 mining claims.
- ML 0-15536 will expire on 1/1/2014 but is renewable in 10 year increments. Annual Payments to maintain ML 0-15536 are:
    - Paid on 10/31/2011:
    - $2,560.00 – 2011 Annual Rental ($4.00/acre)
    - $2,560.00 – 2012 Annual Rental ($4.00/acre)
    - $320 – Penalty for late payment of 2011 rental
    - Per 10/31/2011 Letter from Titan Uranium USA Inc. to Wyoming State Lands and Investments for Annual Payment – Lease No. 0-15536, 640 acres.
    - Per 11/8/2011 email from Dianna Wolvin at Wyoming State Lands and Investments, confirming receipt.
- Private lease will expire11/20/2015 (and for as long as minerals are being produced). Per Ratification of Mining Lease between Ellen Fox, as heir of William McIntosh, deceased, and Jennifer Jammerman McIntosh (as lessors) and US Energy, as the successor to Western Nuclear Inc. (as lessee) dated April 17, 2007, in addition to separate ratification letter by Jennifer Jammerman McIntosh dated April 24, 2007 (taken together, the "Private Lease"). Titan Uranium USA Inc./Energy Fuels Wyoming Inc. are successors in interest to US Energy.
    - Properties covered by Private Lease:
        - Township 28 North, Range 92 West, 6th PM:
        - Section 20: S½SW¼
        - Section 29: NW¼, SW¼SW¼
        - Section 30: SE¼NE¼, E½SE¼
        - Section 31: E½NE¼
        - Section 32: E½NE¼
        - Section 33: S½NW¼
    - Payments $10,000 per year as annual delay rentals. Per examination of original private lease dated 11/20/1975 between McIntosh Cattle Company and Western Nuclear Inc. ("Original Private Lease")

Royalties

The project is subject to an overall sliding scale royalty of 1 to 4% due to Western Nuclear, based on the Nuclear Exchange Corporation ("NUEXCO") Exchange Value. This royalty is currently at its maximum rate of 4%. Figure 4.3, shows the current mining claims with shading indicating the location of various royalty owners. A summary of additional royalties follow (Harris & Thompson, 2012).

- Private Lease:
  - To McIntosh (to Ellen Fox and Jennifer McIntosh, as heirs):
  - 7.5% of the mined value of uranium ores in raw, crude form (which equals 50% of the average sales price of uranium concentrate made during the previous month).
  - Per the Private Lease
- Surface Owners Agreement:
  - To William and Jennifer McIntosh:
  - 1% of the proceeds received from the sale of all uranium mined, shipped and sold from claims under the surface owned by the grantors.
  - Per the "Surface Owners Agreement" dated 1/27/1970 between Bessie McIntosh, Phyllis DeWalt, William McIntosh, and John McIntosh (grantors) and Western Nuclear Inc. (grantee), amended on 4/14/1981 by "Amendment of Surface Owner's Agreement" between William and Jennifer McIntosh (as successors to grantors above) and Western Nuclear Inc. and ratified by "Ratification of Surface Owner's Agreement" on 4/16/2007 by Ellen Fox (as heir of William McIntosh) and US Energy (as successor to Western Nuclear) (taken together, the "Surface Use Agreement").
- ML 0-15536:
  - 5% of the quantity or gross realization value of the U3O8, based on the total arms-length consideration received for uranium products sold for shipping point.
  - Per State Lease and per 2005 Title Opinion
- Ellen Fox Land Purchased in 2/12/2012:
  - 4% production royalty for any uranium from the property, based on the price for which the products are sold.
  - Per Overriding Royalty Deed between Titan Uranium USA Inc. and Ellen Fox, dated 2/22/2012.

Surface Rights

Titan Uranium USA Inc. (now Energy Fuels Wyoming Inc.) holds the surface rights to the following lands through that certain Surface Owner's Agreement dated January 27, 1970 by and between Bessie McIntosh, Phyllis DeWalt, William McIntosh, and John McIntosh (as Grantors) and Western Nuclear Inc. (as Grantee). The Surface Owner's Agreement was amended on April 14, 1981 by an Amendment of Surface Owner's Agreement between William and Jennifer McIntosh (as successors to Grantors above) and Western Nuclear Inc. The Surface Owner's Agreement was ratified by a "Ratification of Surface Owner's Agreement" on April 16, 2007 by Ellen Fox (as heir of William McIntosh) and US Energy (as successor to Western Nuclear) (ref. examination of the described documents):

Township 28 North, Range 92 West of the 6th P.M.:

Section 20:	S½SW¼
Section 29:	W½, S½SE¼, S½N½SE¼
Section 32:	N½NW¼, SE¼NW¼, NE¼
Section 33:	NW¼NW¼, S½NW¼, N½SW¼

Claims:

McThomas 1	Paula 1	Snoball 1	Trey 5
McThomas 8	Paula 2	Snoball 2	Trey 6
McThomas 9	Paula 3	Snoball 3	Trey 8
McThomas 10	Paula 4	Snoball 5	
McThomas 11	Paula 5	Snoball 6	
Susan James 1	Paula 6	Snoball 7	
Christie 1	Paula 9	Snoball 8	
Sun 1	Paula 11	Snoball 12	
Sun 2	Paula 12	Snoball 13	
Zeb 11			

Titan Uranium USA Inc. (Energy Fuels Wyoming Inc.) specifically leases the minerals (and exclusive right to enter on the lands to develop the minerals) to following lands from Ellen Fox and Jennifer Jammerman McIntosh, under that certain Mining Lease dated November 20, 1970 by and between McIntosh Cattle Company (as Lessor) and Western Nuclear Inc. (as Lessee). This lease was ratified on April 16, 2007 by Ellen Fox and Jennifer Jammerman McIntosh (as successors in interest to McIntosh Cattle Company) and US energy (as successor in interest to Western Nuclear, Inc.) (ref. examination of the described documents):

Township 28 North, Range 92 West of the 6th P.M.:

Section 20: S½SW¼
Section 29: W½, S½SE¼, S½N½SE¼
Section 32: N½NW¼, SE¼NW¼, NE¼
Section 33: NW¼NW¼, S½NW¼, N½SW¼

Titan Uranium USA Inc. (Energy Fuels Wyoming Inc.) also owns the following described lands acquired under a transaction with Ellen Fox on February 22, 2012(ref. examination of the described documents):

Township 28 North, Range 92 West, 6th P.M.:

Section 28: SW¼SW¼
Section 29: SE¼, E½SW¼, NW¼SW¼

Surface Rights to ML 0-15536:

Under the terms of the State Lease, the lessee is given the exclusive right and privilege to prospect, mine, extract, and remove any deposits, together with the right to construct and maintain all works, buildings, plants, waterways, roads, communication lines, power lines, tipples, hoists, or other structures and appurtenances necessary for the full enjoyment thereof. A detailed description of the allowable workings is included in the state Lease, including both underground and surface extraction. (ref. examination of the State Lease)

No other surface rights are need for the planned operations. No risk factors are known affecting access or mineral title.

Chain of Title

Titan Uranium Inc. acquired a 50% interest in the property when it acquired Uranium Power Corp (UPC) by a Plan of Arrangement in July 2009. The ownership was subsequently transferred to Titan Uranium Inc.'s wholly-owned subsidiary, Titan Uranium USA (referred herein to as Titan). The remaining 50% interest was purchased from Uranium One Inc. (U1) on October 1, 2009, with the following terms:

1. An initial cash payment of US$750,000 for U1's 50% interest in Sheep Mountain;
2. A payment of US$2,000,000 if the month-end spot uranium price reported by Ux Consulting Company exceeds US$65.00 per pound within three years of the closing date, payable within six months;
3. A further payment of US$4,000,000 if the month-end spot uranium price reported by Ux Consulting Company exceeds US$85.00 per pound within three years of the closing date, payable within twelve months;

Payment of US$1,000,000 under Item 2, above, was made in 2011. An additional payment to U1 of US$1,000,000 is due on July 31, 2012. Titan is negotiating with U1 to defer this payment until after the Project begins production which is anticipated as the 2nd quarter, 2015. The additional payment, under Item 3 above, will not become due unless the spot price of uranium reaches US$85.00 per pound by the end of September, 2012. This was considered unlikely by the author given current market projections and was not included as a cost in the current preliminary feasibility study.

Subsequently, Energy Fuels Inc. and Titan Uranium Inc. announced that a Certificate of Arrangement giving effect to the Plan of Arrangement between Energy Fuels was issued on February 29, 2012, making, Titan a wholly-owned subsidiary of Energy Fuels. Under the Arrangement, Energy Fuels issued an aggregate of 89,063,997 common shares in exchange for all of the 130,976,467 issued and outstanding common shares of Titan, on the basis of 0.68 of an Energy Fuels common share for each whole Titan common share. In addition, up to 14,926,881 common shares of Energy Fuels are reserved for issuance upon exercise of warrants previously issued by Titan.

Permits Required

A Plan of Operation ("PO") was submitted and has been accepted as complete by the U.S. Bureau of Land Management ("BLM"), and preparation of an Environmental Impact Statement ("EIS") is underway with completion anticipated for mid-2013. The Company plans to submit a revision of its existing Mine Permit 381C to the Wyoming Department of Environmental Quality ("WDEQ") in mid-2012, a draft of which is currently under review by WDEQ. The permit revision will address improvements to the mine plan, including the proposed uranium recovery facility.

Development of an application to the NRC for a combined Source Material and By-product Material License to construct and operate the uranium recovery facility is at an advanced stage of development. This license will allow the Company to process the uranium ore and produce yellowcake at the Sheep Mountain Project site. The Company plans to submit the license application in mid-2012. The subsequent review and approval process for this license by NRC is anticipated to take approximately 24 months.

Description of all Environmental Liabilities to Which the Property is Subject:

Titan Uranium USA Inc. (Energy Fuels Wyoming Inc.) is subject to liabilities for mine and exploration reclamation at the Sheep Mountain Project. The Company maintains four (4) bonds with the State of Wyoming in the total amount of $1,967,240.00 US as security for these liabilities. The company files annual reports with the State of Wyoming, and the amount of the bonds may be adjusted annually to endure sufficient surety is in place to cover the full cost of reclamation.

Taxes

Uranium mining in Wyoming is subject to both a gross products (county) and mineral severance tax (state). At the federal level: aggregate corporate profit from mining ventures is taxable at corporate income tax rates, i.e. individual mining projects are not assessed federal income tax but rather the corporate entity is assessed as a whole. For mineral properties: depletion tax credits are available on a cost or percentage basis whichever is greater. The percentage depletion tax credit for uranium is 22%, among the highest for mineral commodities, IRS Pub. 535.

MCINTOSH CHARLES T

STATE OF WYOMING

FEUCHUK, ELLEN M

BLM

KIRK, FLORENCE (DECD)

AYTOR, LONNIE J

BLM

Jeffrey City

± 7.2 Miles

GREEN MOUNTAIN 46 RANCH INC

State of Wyoming

Mining Lease

0-15536

CLAYTOR, LONNIE J

STATE OF WYOMING

FREMONT COUNTY SOLID WASTE

BLM

A-4 AMENDMENT BOUNDARY

A-2 AMENDMENT BOUNDARY

381C PERMIT BOUNDARY

STATE OF WYOMING

BLM

T 28 N

MCINTOSH, CHA

CLAYTOR LIVESTOCK RANCH CO

STATE OF WYOMING

GREEN MOUNTAIN 46 RANCH INC

MCINTOSH, CHARLES T

McIntosh Cattle

Private Lease

11/20/75

381C PERMIT BOUNDARY

BLM

BLM

BLM

To Wamsutter

McIntosh Cattle

Private Lease

11/20/75

A-1 AMENDMENT BOUNDARY

FEUCHUK, ELLEN M

K, ELLEN M

BLM

JACOBS, SHIRLEE LOUISE (1/2 INT)

&

KARNEGES, FREDNA FISH (1/2 INT)

BLM

LEGEND

ROADS

SECTION LINE

PRIVATE PROPERTY

PERMIT BOUNDARY

MINING CLAIMS

STATE LEASE

PRIVATE LEASE

PURCHASE AREA

2,000' 0 1,000' 2,000'

1 inch = 2,000'

BRS ENGINEERING

SHEEP MOUNTAIN MINE OWNERSHIP MAP

SCALE: 1"=2000' DATE: 12/12/12

DRAWN BY: GG, RHCP

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

REVISION DATE: 03/09/12

CAD FILENAME: 43 101\Figures and CAD\Fig2.2- CLAIMS.dwg

DWG. NUMBER: FIGURE 4.2

TITAN URANIUM USA INC

BRS ENGINEERING

SHEEP MOUNTAIN MINE ROYALTY MAP

SCALE: 1"=2000' | DATE: 12/12/12

DRAWN BY: GG, RHCP

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

REVISION DATE: 03/12/12

CAD FILENAME: 43 101 Figures and CAD\Fig 4.3- ROYALTY.dwg

DWG. NUMBER: FIGURE 4.3

TITAN URANIUM USA INC

SECTION 5: ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

The Sheep Mountain Project is located at approximate Latitude 42º 24' North and Longitude 107º 49' West, within the Wyoming Basin physiographic province in the Great Divide Basin at the northern edge of the Great Divide Basin. The project is approximately 8 miles south of Jeffrey City, Wyoming the nearest population center. The nearest commercial airport is located in Riverton, Wyoming approximately 56 miles from Jeffrey City on a paved, two-lane, state highway. The project is accessible via 2-wheel drive on existing county and two-track roads, as follows: Proceed south from Jeffrey City on the Crooks Gap/Wamsutter Road, County Road 23, towards Crooks Gap, approximately 7.2 miles; then proceed easterly on titan's private road approximately 1 mile to the site.

Physiography and Climate

Historic climate records were available through a National Weather Service cooperative station until 2005. The Sheep Mountain Project falls within the intermountain semi-desert weather province. The following is a summary of the climatic conditions.

Table 5.1 -JEFFREY CITY, WYOMING (484925) - Monthly Climate Summary

Period of Record : 4/10/1964 to 12/31/2005

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	31.1	34.0	43.5	54.7	64.5	75.1	84.9	82.8	71.8	59.4	40.1	31.1	56.1
Average Min. Temperature (F)	9.1	10.3	18.5	26.4	34.8	42.5	49.2	48.1	38.2	28.7	16.6	9.5	27.7
Average Total Precipitation (in.)	0.36	0.42	0.79	1.28	2.04	1.07	0.89	0.64	0.78	0.83	0.62	0.40	10.12
Average Total Snow Fall (in.)	5.1	6.6	8.3	9.7	4.0	0.3	0.0	0.0	1.1	5.4	9.7	6.2	56.5
Average Snow Depth (in.)	2	2	1	0	0	0	0	0	0	0	1	2	1

Titan has established an on-site remote weather station and has recorded temperature, precipitation (rain and snow), barometric pressure, and wind speed since August, 2010.

Topography consists of rounded hills with moderate to steep slopes. Elevations range from 6,600 ft. up to 8,000 ft. above sea level. The ground is sparsely vegetated with sage and grasses with occasional small to medium sized pine trees at the higher elevations.

Past mining and mineral processing operations at the site and within the general area were conducted on a year-round basis. Current planning includes year-round operations.

Infrastructure

Telephone, electric and natural gas service adequate for planned mine and mineral processing operations has been established to the proposed plant site. In addition, electric service and a waterline have been extended via a Right of Way (ROW) issued by the BLM in 2011 to both the Sheep 1 and 2 shafts. Adequate water rights are held by Titan for planned mining and mineral processing operations but need to be updated with the Wyoming State Engineer with respect to type of industrial use, points of diversion, and points of use. Further discussion of infrastructure is provided in Section 18.

All planned mining, mineral processing, and related activities are located within the existing Mine Permit 381C which is held by Titan.These lands are adequate for all planned mining operations including the disposal of mine wastes. The heap leach facility, including the double lined pad, has adequate capacity to process the Mineral Reserves as described in this report. The mineral processing waste or tailings will be decommissioned and reclaimed in place. As for the operational phases of the project, the mineral processing facility has been designed to accommodate the volume of waste and/or tailings generated by the operation over the planned mine life.

Personnel requirements for the planned operation are addressed in Section 21 of this report. The majority of the personnel can be recruited locally with some skilled and staff positions recruited regionally.

SECTION 6: HISTORY

Uranium was first discovered in the Crooks Gap district, which includes the Sheep Mountain area, in 1953 (Bendix, 1982). While the original discoveries were aided by aerial and ground radiometric surveys exploration activities were primarily related to drilling and exploratory trenching. Three companies dominated the district by the mid-1950s: Western Nuclear Corporation (WNC), Phelps Dodge (PD) and Continental Uranium Corporation (CU). WNC built the Split Rock Mill at Jeffrey City in 1957 and initiated production from the Paydirt pit in 1961, Golden Goose 1 in 1966 and Golden Goose 2 in 1970. PD was the principal shareholder and operator of the Green Mountain Uranium Corporation's Ravine Mine which began production in 1956. CU developed the Seismic Pit in 1956, the Seismic Mine in 1957, the Reserve Mine in 1961 and the Congo Decline in 1968. In 1967 CU acquired the PD properties and in 1972 WNC acquired all of CU's Crooks Gap holdings. During the mid-1970s PD acquired an interest in WNC which began work on Sheep Mountain I in 1974, the McIntosh Pit in 1975, and Sheep Mountain II in 1976. WNC ceased production from the area in 1982. WNC production from the Sheep Mountain I is reported to be 312,701 tons at 0.107% U_3O_8.

Subsequent to closure of the Sheep Mountain I by WNC, during April to September, 1987, Pathfinder Mines Corp. (PMC) mined a reported 12,959 tons, containing 39,898 pounds of uranium at an average grade of 0.154 U_3O_8 from Sheep Mountain I, (PMC, 1987). U.S. Energy-Crested Corp (USECC) acquired the properties from WNC in 1988 and during May to October, 1988 USECC mined 23,000 tons from Sheep Mountain I, recovering 100,000 lbs of uranium for a mill head grade of 0.216% U_3O_8 (WGM, 1999). The material was treated at PMC's Shirley Basin mill, 130 miles east of the mine. The Sheep underground mine was allowed to flood in 2000 (USECC, 2000).

In December 2004, Uranium Power Corp (UPC) (then known as Bell Coast Capital) entered into a Purchase and Sales Agreement with USECC to acquire a 50% interest in the Sheep Mountain property. The acquisition was completed in late 2007 with aggregate payments to USECC of $7.05 million and the issuance of 4 million common shares to USECC. USECC sold all of its uranium assets, including its 50% interest in Sheep Mountain, to Uranium One Ventures (USA) Inc. (U1) in April 2007.

Titan Uranium Inc (Titan) acquired UPC's 50% interest in the property when it acquired UPC by a Plan of Arrangement in July 2009. The ownership was subsequently transferred to Titan's wholly-owned subsidiary, Titan Uranium USA. Subsequently on February 29, 2012, Energy Fuels Inc. acquired Titan Uranium Inc. through a Plan of Arrangement and Titan is now a wholly-owned subsidiary of Energy Fuels.

Historic reports by Pathfinder Mines, Western Nuclear, and others show that properties within the current Sheep Mountain project boundary were operated as underground and open pit mines at various times in the 1970's and 1980's. There were 5,063,813 tons of ore mined and milled, yielding 17,385,116 pounds of uranium at an average grade of 0.17% U_3O_8. Mining was suspended in 1988 and the mine has been in care and maintenance since that time (USECC, 1990).

SECTION 7: GEOLOGICAL SETTING AND MINERALIZATION

Geologic Setting

Surface geology and regional geologic cross sections are shown on Figure 7.1 from Stephens, 1955. Within the project area surficial geologic exposures include:

- Quaternary alluvial and colluvial deposits mapped as:
  - Qal - Quaternary Alluvium
  - Qf –Quaternary Floodplain (colluvium)
- Tertiary Battle Spring Formation (Eocene):
  - Tb Member B (Upper)
  - Tb Member A (Lower)
- Tf - Tertiary Fort Union (Paleocene)
- Kc – Cretaceous Cody Shale

The Battle Spring is Eocene in age. Prior to deposition of the Battle Spring Formation and subsequent younger Tertiary formations- including the White River and Split Rock Formations- underlying Paleocene, Cretaceous, and older formations were deformed during the Laramide Orogeny. During the Laramide Orogeny, faults, including the Emigrant Thrust Fault at the northern end of the project area, were active and displaced sediments by over 20,000 feet (Rackely, 1975). Coincident with this mountain building event Paleocene and older formations were folded in a series of en echelon anticlines and synclines, generally trending from southeast to northwest.

The Battle Spring Formation was deposited unconformably on an erosional landscape influenced by these pre-depositional features. Initial stream channels transporting clastic sediments from the Granite Mountains formed in the synclinal valleys. With continued erosion of the Granite Mountains and deposition of sediments into the surrounding basins, the pre-tertiary surface was buried successively by the Battle Spring, White River, and Split Rock formations. The formations once blanketed the entire area. Subsequently, the Granite Mountains collapsed forming a series of normal faults including the Kirk Normal Fault at the northern end of the project.

Within the project area the Battle Spring Formation only limited faulting has been observed and, where present, displacement is minor. The largest reported displacement from the historic mining is four feet. The Battle Spring is folded with a series of southeast plunging anticline/syncline features. Folding is reported to be more extensive in the lower Battle Spring or A Member than in the upper or B Member. The nature of the folding and faulting in the Battle Spring suggests that it was either contemporaneous with deposition of the sediments or occurred shortly after deposition. Post-Miocene erosion has exhumed portions of the Granite Mountains regionally and has exposed the Battle Spring Formation at the project.

The geologic setting of the project is important in that it controlled uranium mineralization by focusing the movement of the ground waters which emplaced the uranium into the stream channels which had developed on the pre-tertiary landscape. In a similar manner, the geologic setting influences the present ground water system. Ground water flow is from the north-northeast to the south-southwest. Ground

water flow in the Battle Spring at the site is isolated in the subsurface from the local surface drainages, Crooks Creek to the west, and Sheep Creek to the east. In addition, the recharge area for the ground water system is limited which will in turn limit dewatering requirements.

As shown on Figure 7.1, the Battle Spring Formation and associated mineralization at Sheep Mountain is bounded to the east by the western flank of the Sheep Mountain Syncline and to the west by the Spring Creek Anticline. To the north the system is cutoff by erosion. To the south the Battle Spring is continues into the northern portions of the Great Divide Basin. In cross section (Figure 7.1), the Battle Spring Formation within the project area is underlain and bounded on three sides by the Fort Union and/or Cody Shale in areas where the Fort Union was removed by erosion prior to deposition of the Battle Spring.

Mineralization occurs throughout the lower A Member of the Battle Spring Formation and is locally up to 1,500 feet thick. The upper B Member is present only in portions of the project and may be up to 500 feet thick. The A Member of the Battle Spring is folded as shown on Figure 7.1. The folding is considered to have focused mineralization in the troughs of the synclines (Stephens, 1974).

Although arkosic sandstone is the preferred host, uranium has been extracted from all lithologies. Grade and thickness are extremely variable depending on whether the samples are taken from the nose or the tails of a roll front. Typically the deposits range from 50 feet to 200 feet along strike, 5 feet to 8 feet in height, and 20 feet to 100 feet in width. Deposits in the Sheep Mountain area occur in stacked horizons from 7,127 feet elevation down to 6,050 feet elevation (Stephens, 1964).

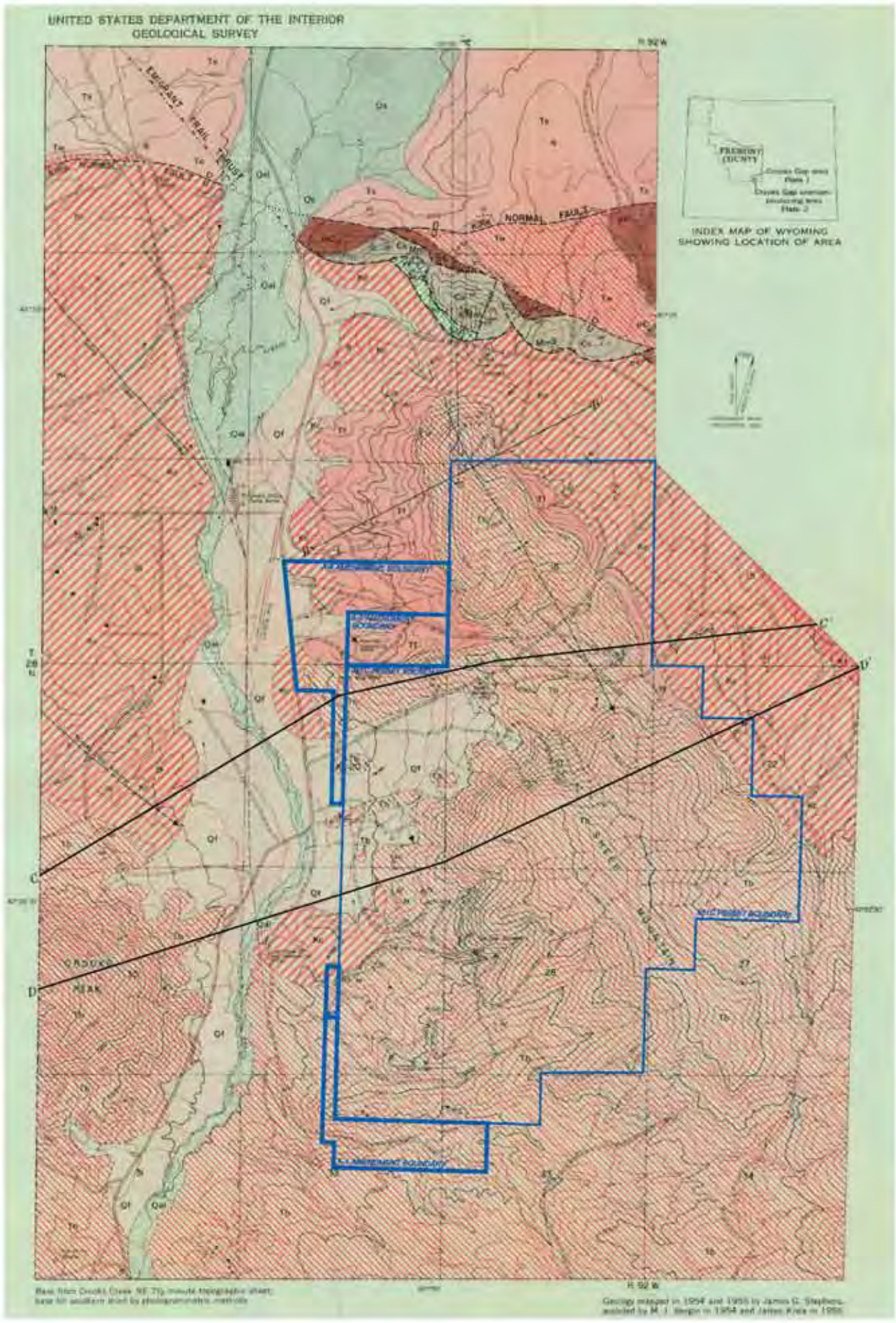
Mineral resource and reserve estimates for the Sheep Mountain Project are based on radiometric data. As discussed in Section 14 of this report, available data indicates that variations in radiometric equlibrium are local in their affect which impacts the mining grade control program, but does not appreciably affect the overall mineral resources or reserves.

Mineralization is known to exist at numerous locations throughout the project. Mineral resource and reserve estimates in this report are limited to:

1. the Congo open pit area for which mine designs have been completed
2. the Sheep underground area for which mine design have been completed, and
3. the Sun Mc area for which mine plans have yet to be defined.

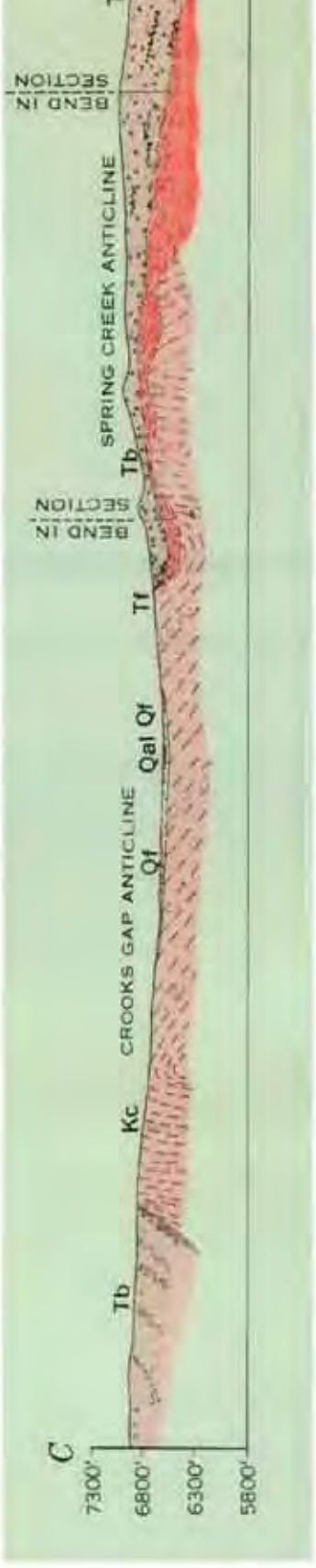
Additional areas of known historic mineral resources are discussed but are not included in the mineral resource and reserve estimates, however, mineral resource estimates in accordance with NI 43-101 hav e not be completed in these areas.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Base from Crooks Creek NE 7½ minute topographic sheet; base for aerotriangulation by photogrammetric methods

Geology mapped in 1954 and 1955 by James G. Stephens, assisted by M. J. Bergin in 1954 and James Krala in 1955



EXPLANATION

Holocene and Recent	Qal Alluvium	Qf Alluvial-fan deposits	Qs Windblown sand
Miocene	Ts Split Rock Formation		QUATERNARY
Oligocene	To White River Formation		TERTIARY
Eocene	Tb Battle Spring Formation		
Paleocene	Tf Fort Union Formation		
Upper Cretaceous	Kc Cody Shale		CRETACEOUS
	Kf Frontier Formation		
	Kcw Chugwater and Dinwoody Formations		TRIASSIC
	Mm Madison Limestone		MISSISSIPPIAN
	Cs Sedimentary rocks		CAMBRIAN
	pC Granite		PRECAMBRIAN

CARBONIFEROUS

LEGEND

- ORIGINAL PERMIT BOUNDARY
- PERMIT BOUNDARY AMENDMENT
- CROSS-SECTION

BRS ENGINEERING	**REGIONAL GEOLOGY**	**SHEEP MOUNTAIN MINES MINE PERMIT 381C**	REVISION DATE: 06/15/11
	SCALE: 1"=1500' DATE: 10/4/10		CAD FILENAME: \\BRSINCSERV\Uranium Brsincserv\Titan\Land Proje
	DRAWN BY: LAS		DWG. NUMBER: FIGURE 7.1

TITAN URANIUM USA INC

SECTION 8: DEPOSIT TYPES

Most of the minralization in the Crooks Gap district occurs in roll-front deposits (Bendix, 1982). Roll fronts have an erratic linear distribution but are usually concordant with the bedding. Deposits have been discovered from the surface down to a depth of 1,500 ft (Stephens, 1964). The two major uranium minerals are uranophane and autunite. Exploration drilling indicates that the deeper roll-type deposits are concentrated in synclinal troughs in the lower Battle Spring Formation. Three possible sources for uranium have been suggested: post-Eocene tuffaceous sediments, leached Battle Spring arkoses, and Precambrian granites (Granite Mountains).

Structural controls of uranium occurrences along roll fronts include carbonaceous siltstone beds that provide a local reducing environment for precipitation of uranium-bearing minerals, and abrupt changes in permeability along faults, where impermeable gouge is in contact with permeable sandstones (Stephens, 1964). Uranium has also been localized along the edges of stream channels and at contacts with carbonaceous shales (Bendix, 1982).

Further documentation of the type of mineralization can be found in the literature as with this historic photo of a uranium roll front in the Golden Goose Mine (Bailey, 1969).

Figure 8.1 – Uranium Roll Front in Golden Goose Mine

The author concurs with the forgoing summary as to the deposit type, based upon his site work and interpretation of drill data, as well as, site observations of exposures of alteration and mineralization in the McIntosh open pit and the Sheep decline. The following photo shows alteration in the rib of the Little Sheep decline with remnant uranium mineralization concentrated around a clast of carbonaceous clay near the center of the photo. This exposure is typical of the geochemical alteration which occurs within the altered zone in advance of roll fronts.

Figure 8.2 – Little Sheep Decline 2011

SECTION 9: EXPLORATION

To the author's knowledge, no relevant exploration work other than drilling, as described in Section 10: Drilling, of this report has been conducted on the property in recent years. The Project is located within a brownfield site which has experienced past mine production and extensive exploration and development drilling. The initial discovery was based on aerial and ground radiometric surveys in the 1953 (Stephens, 1964), but since that time exploratory work on the site has been primarily drilling.

During the National Uranium Resource Evaluation (NURE) program conducted by the US DOE in the late 1970's and early 1908's, the project area and vicinity were evaluated. This evaluation included aerial gamma, magnetic, and gravimetric surveys; soil and surface water geochemical surveys and sampling; and geologic studies and classification of environments favorable for uranium mineralization (Bendix, 1982). No specific data analysis of the aerial surveys was completed and the report, however, it is stated in the report that anomalous radioactivity was observed related to the Battle Spring Formation at the Crooks Gap mining district (Bendix, 1982), herein referred to as Sheep Mountain.

SECTION 10: DRILLING

Data available for the preparation of this report included historic data developed by previous owners of the property and data from UPC's 2005 and Titan's 2009, 2010, and 2011 drilling programs, as follows:

Congo Open Pit:

- seventeen (17) drill holes in 2005 (UPC),
- five (5) drill holes in 2009 (Titan),
- sixty-two (62) drill holes in 2010 (Titan), and
- seventy-three (73) drill holes in 2011 (Titan).

Sheep Underground:

- Two (2) drill holes 2005 (UPC)

Refer to Figure 10.1 – Congo Drill Hole Map, Figure 10.2 – Sheep Underground Drill Hole Map, and Figure 10.3 – Sun Mc Drill Hole Map, for the locations of drill holes attributed to the Congo Pit and Sheep Underground and Sun mac areas, respectively.

Based upon the review and interpretation of historic drill logs and the review of confirmatory drilling completed in 2005 and 2009, 2010 and 2011 Titan drilling, the data used for the current mineral resource and reserve estimate is considered reliable.

Historic Drilling – Prior to 1988

Drilling in the mineral resource areas investigated as part of this report includes approximately 4,000 drill holes, most of which were open-hole rotary drilling, reliant upon down-hole geophysical logging to determine equivalent uranium grade (%eU_3O_8). However, some core drilling for chemical analyses was also completed. The historic data available for this mineral resource evaluation is based upon drill and mine plan maps originally developed by Western Nuclear Corporation (WNC). The drill maps show hole locations at the surface and downhole drift, the thickness and radiometric grade of uranium measured in weight percent eU_3O_8, elevation to the bottom of mineralized intercept, collar elevation, and elevation of the bottom of the hole. Also available were half foot and composite intercept data in paper printouts from Western Nuclear's 1979 and 1980 preliminary feasibility study and geostatistical resource modeling. Original drill logs, both lithology and geophysical were available for the great majority of the drill holes and are currently located at BRS' office in Riverton, Wyoming. The author has training and experience in the interpretation of geophysical logging data for uranium and reviewed and/or interpreted the available original geophysical logs, as appropriate.

Recent Drilling – 2005 through 2011

In 2005, Uranium Power Corporation (UPC), now wholly owned by Titan, completed a drilling program consisting of 19 drill holes totaling 12,072 feet. Coring was attempted in one hole but recoveries were poor. Two of the 19 holes completed by UPC were located in Section 28 with the purpose of confirming mineralization within the Sheep Underground mine area. The remaining seventeen drill holes were completed in the planned Congo Pit area to test both shallow mineralization within the Congo Pit and to explore a deeper mineralized horizon, the 58 sand, which was shown in two historic drill holes. (RPA, 2006). RPA was present during the 2005 drilling program and concluded in their report of October 10, 2005 that drilling has confirmed the presence of mineralization with the shallow horizons in the Congo Pit area and has identified and extended roll front mineralization in the 58 sand along strike. Further, RPA concluded that drilling in the Sheep Mountain area (referred to herein as the Sheep underground) has validated the presence of mineralization at depth.

Following the acquisition of UPC by Titan, and in consideration of both the recommendations included in RPA's 2006 report and identified data needs for the continued development of the project, five holes were drilled in the Congo Pit in 2009 for a total of 1,700 feet. The five drill holes were planned and completed to serve multiple purposes including;

- Additional verification of mineralization in the Congo Pit area;
- Determination of radiometric equilibrium conditions utilizing a direct comparison of the Uranium Spectrum Analysis Tool (USAT) and conventional gamma logging;
- Collection of bulk samples of mineralized material for metallurgical testing; and
- Collection of bulk samples for characterization of overburden materials as required by State of Wyoming Department of Environmental Quality (WDEQ) regulations.

The goals of the 2009 drilling program were met. The drill holes were completed by rotary air drilling to depths exceeding 300 feet using a top drive rotary drilling rig. Drill cuttings were collected continuously during the drilling process, in two foot increments near anticipated mineralized horizons and in five foot increments for overburden sampling. Over 500 pounds of mineralized material for metallurgical testing was collected in addition to the collection of representative samples for overburden analysis and characterization in accordance with WDEQ guidelines. *In situ* mineral grades for 2009 drilling were determined by geophysical logging including both conventional gamma logging and the state-of-the art Uranium Spectrum Analysis Tool (USAT) (BRS, 2010). Each drill hole was first logged using a conventional logging tool which provided a suite of gamma ray, SP (Spontaneous Potential), resistivity, and deviation. The best mineralized zones were chosen for USAT logging. Both geophysical logging tools were provided commercially by Century Wireline Services (Century).

The 2010 and 2011 drilling programs were primarily designed to delineate the Congo Pit. The drilling was exclusively vertical rotary in 2010. In 2011 the drilling included vertical rotary and reverse circulation drilling. The drill holes generally ranged from 200 to slightly over 400 feet in depth although some designed to test deeper horizons were drill to slightly more than 600 feet. Geophysical logging was completed for all drill holes and was provided commercially by Century. Century delivered both hard copy geophysical logs and electronic files including LAS files. Estimations of equivalent uranium grades in weight percent were reported in half foot intervals.

In 2010 an additional 62 exploratory drill holes and 5 monitor wells were completed in the Congo Pit Area with the intention of defining the pit limits. All of the holes drilled encountered mineralization extending the pit limits, however, drilling extended mineralization and did not completely define the pit limits. Of the 62 drill holes completed in 2010 within the Congo Pit Area:

- 1 holes was lost
- 7 holes were barren
- 54 holes exceeded a 0.1 GT at a minimum grade of 0.03 % eU_3O_8 including;
- 51 exceeding a 0.25 GT
- 37 exceeding a 0.50 GT; and
- 25 exceeding a 1.0 GT

In 2011 an additional 73 exploratory drill holes and 5 monitor wells were completed in the Congo Pit Area to define the pit limits and confirm mineralization and the absence of underground mining in select areas. These objectives were met and the pit limits and mineral reserves were expanded as detailed in this report. Of the 73 drill holes completed in 2011 within the Congo Pit Area:

- 17 holes were barren
- 51 holes exceeded a 0.1 GT at a minimum grade of 0.03 % eU_3O_8 including;
- 35 exceeding a 0.25 GT
- 20 exceeding a 0.50 GT; and
- 9 exceeding a 1.0 GT

Congo Open Pit

The Congo data set is composed of a total of 2,780 drill holes of which 107 are barren and the remaining 2,673 drill holes contain mineralization. Within the 2,673 mineralized drill holes, 12,070 individual intercepts were present. A portion of the historic data consisted of ½ foot data from the Century Geophysical Compulog^{tm} system. For this data a minimum cutoff thickness and grade of 2 ft of 0.03% eU3O8 was applied resulting in 2,673 composite intercepts. The remaining 2,284 intercepts did not have ½ foot data but consisted of composite intercepts interpreted using the half amplitude convention for geophysical log interpretation. Log interpretation and intercepts from the historic database were spot checked especially with regard to higher grade mineralized intercepts. Correlation of the mineralized sand units was available from historic reports. This historic naming convention for the sand units was maintained. The following table summarizes the mineralized intercepts in the Congo database by sand unit. A summary of mineralization reflected in the drill holes follows.

Table 10.1 - Congo Drill Data

	Trace	**>0.10 GT**
# of Intercepts	12,070	9,455
Avg. Thickness (ft)	3.7	4.1

Table 10.2 - Congo Drill Hole Statistics

Zone	**# of Composite Intercepts**	**Avg. Depth to Bottom of Mineralization**
41A	203	266
41	245	298
45	436	279
48	371	255
52	461	268
54/56	316	243
59	359	196
63	587	170
66	452	202
67	365	209
72	324	232
75	224	195
79	126	204
83	103	204
86	38	253
89	14	176
94	8	207
Total	**4,632**	**189**

Mineralization Thickness and Grade

Congo mineralized thickness ranges from 1 foot to over 19 feet. Average thickness varies with GT cutoff as follows. Grade varies from the minimum grade cutoff of 0.1 % eU_3O_8 to a maximum reported grade of 1.87 % eU_3O_8.

Table 10.3 - Congo Mineralization Thickness and Grade

Congo Pit	Mineralized >0.1 GT
Average Grade %eU_3O_8	0.148
Average Thickness	4.1

Sheep Underground

The Sheep Underground data set is composed of a total of 485 drill holes based on data from 483 historic drill holes and 2 confirmatory drill holes completed in 2005. Of those 485 drill holes only 33 were barren and 452 of the drill holes contained mineralization of at least 0.5 ft of 0.05% eU_3O_8. Within the 452 mineralized drill holes, 3,223 individual intercepts were present. Using the cutoff thickness and grade of 2 ft of 0.05% eU_3O_8, 552 composites diluted to a minimum thickness of 6 ft were created from the 3,223 individual intercepts. These 552 composited intercepts were then correlated into one of the 17 different mineralized zones based on geologic interpretations. If the composite could not be correlated within a zone it was designated as isolated and its influence in subsequent mineral resource estimation limited. Data summaries follow in Tables 10.4 and 10.5.

Table 10.4 - Sheep Drill Data

	Trace >0.02 GT	**>0.3 GT**	**>0.6 GT**	**>0.9 GT**
# of Intercepts	3,223	708	315	165
Avg. Thickness (ft)	2.1	4.4	5.9	7.1

Table 10.5 - Sheep Drill Hole Statistics

Zone	**# of Composite Intercepts**	**Avg. Depth to Bottom of Mineralizaiton**
1	6	758
2U	4	1,040
2L	13	878
3	23	838
4	47	1,010
5	38	1,039
6	35	1,016
7	38	997
8	47	1,038
9	47	957
10	38	1,151
11	38	1,173
12	27	1,214
13	31	1,313
14	28	1,349
15	16	1,354
16	8	1,252
Isolated	68	1,123
Total	**552**	**1,089**

Sheep Underground mineralized thickness ranges from 0.5 foot to over 26.5 feet. Grade varies from the minimum grade cutoff of 0.05% eU_3O_8 to a maximum reported grade of 2.19% eU_3O_8. Average thickness varies with GT cutoff as follows.

Width and Trend Length

Estimated trend width and length were based on the geologic model and actual mine workings as follows. The Sheep typical trend width is approximately 100 ft. The mine maps available for the Sheep area show development drifts, ready for extraction, with widths greater than 100 ft. In the limited areas where full extraction occurred, mined out rooms were 50 to 100 feet or in some cases wider. The Sheep trend length varies from a few hundred feet to a maximum length of about 5,500 feet based on correlation of geophysical logs.

Additional Resource Areas

Sun Mc Area

Figure 10.3 shows the historic drilling for the Sun Mc Areas. Available historic drill hole data for this area included 704 drill holes. The majority of the original geophysical logs were reviewed and verified, especially any high grade areas. No additional drilling has been completed in this area since 1988. As with the Congo and Sheep areas drilling consisted primarily of vertical rotary drilling with downhole geophysical logging for the determination of mineralization thickness and equivalent uranium grade. A summary of mineralization reflected in the drill holes follows. No confirmation drilling has been completed, however, the Sun Mc Area correlates with the Sheep Underground and the data available for both areas is similar in nature. The author thus concludes that the data for the Sun Mc Area is reliable for the purpose of estimating mineral resources although there is not currently a mining plan addressing Sun Mc.

Data summaries follow in Tables 10.6 and 10.7.

Table 10.6 - Sun Mc Drill Data

	Trace	>0.10 GT	>0.25 GT	>0.50 GT	>1.0 GT
# of Intercepts	1880	1608	887	430	133
Avg. Thickness (ft)	3.8	4.2	5.7	7.6	10.4

Of the 704 drill holes, 181 are barren holes and 523 drill holes contain mineralization. Within the 521 mineralized drill holes, 1880 individual intercepts were present. A portion of the historic data consisted of ½ foot data from the Century Geophysical Compulog^{tm} system. For this data a minimum cutoff thickness and grade of 2 ft of 0.03% eU_3O_8 was applied. For drill holes without ½ foot data the original geophysical logs were interpreted using the half amplitude method. The historic database was spot checked especially with regard to higher grade mineralized intercepts using the half amplitude geophysical log interpretation method. Correlation of the mineralized sand units was available from historic reports. This historic naming convention for the sand units was maintained. The following table summarizes the mineralized intercepts in the Sun Mc database by sand unit.

Table 10.7 - Sun Mc Drill Hole Statistics

Zone	# of Composite intercepts	Avg. Depth to Bottom of Mineralization
DA	8	71
DB	49	108
DC	122	136
DD	149	141
DE	145	129
DF	184	129
DG	244	166
DHDI	223	210
DJDK	127	298
DLDM	69	373
DNDO	30	449
DPDQ	3	564
Total	**1353**	**231**

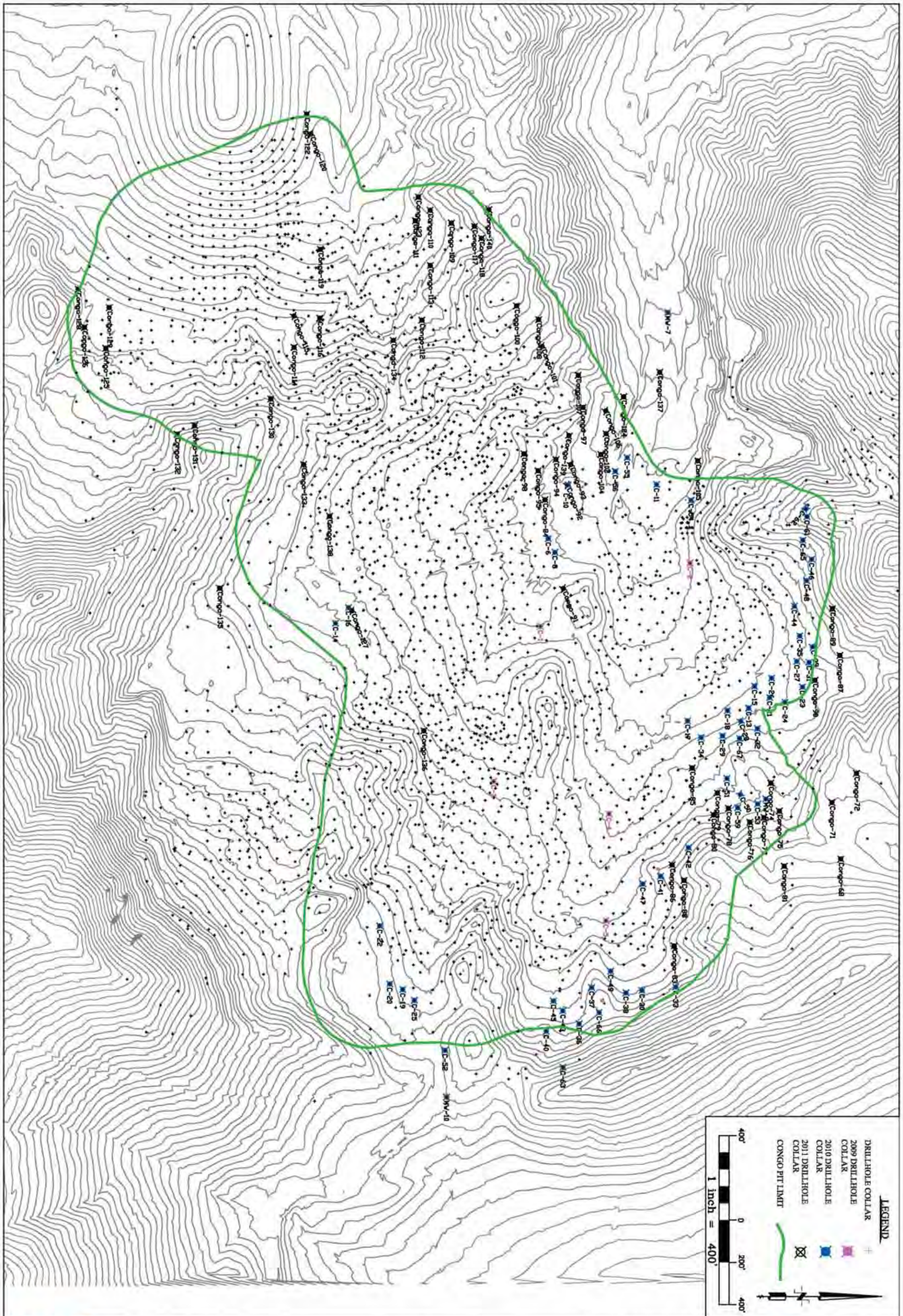
Other Areas of Mineralization

Additional areas within the project area have known historic mineralization. These include the Ravine, Golden Goose I, Golden Goose II, and McIntosh South Pit areas which were explored and/or developed by WNC and are included within the current Wyoming Mine Permit 381C. In addition, in the northern portions of the Project the Bev claims were once controlled and explored by Kerr McGee Corp (Refer to Figure 4.2, Claim Map). The Bev claims fall outside the current mine permit. Titan completed three drill holes on the Bev claims in 2011 under a Notice of Intent (NOI) for drilling. A summary of results follow.

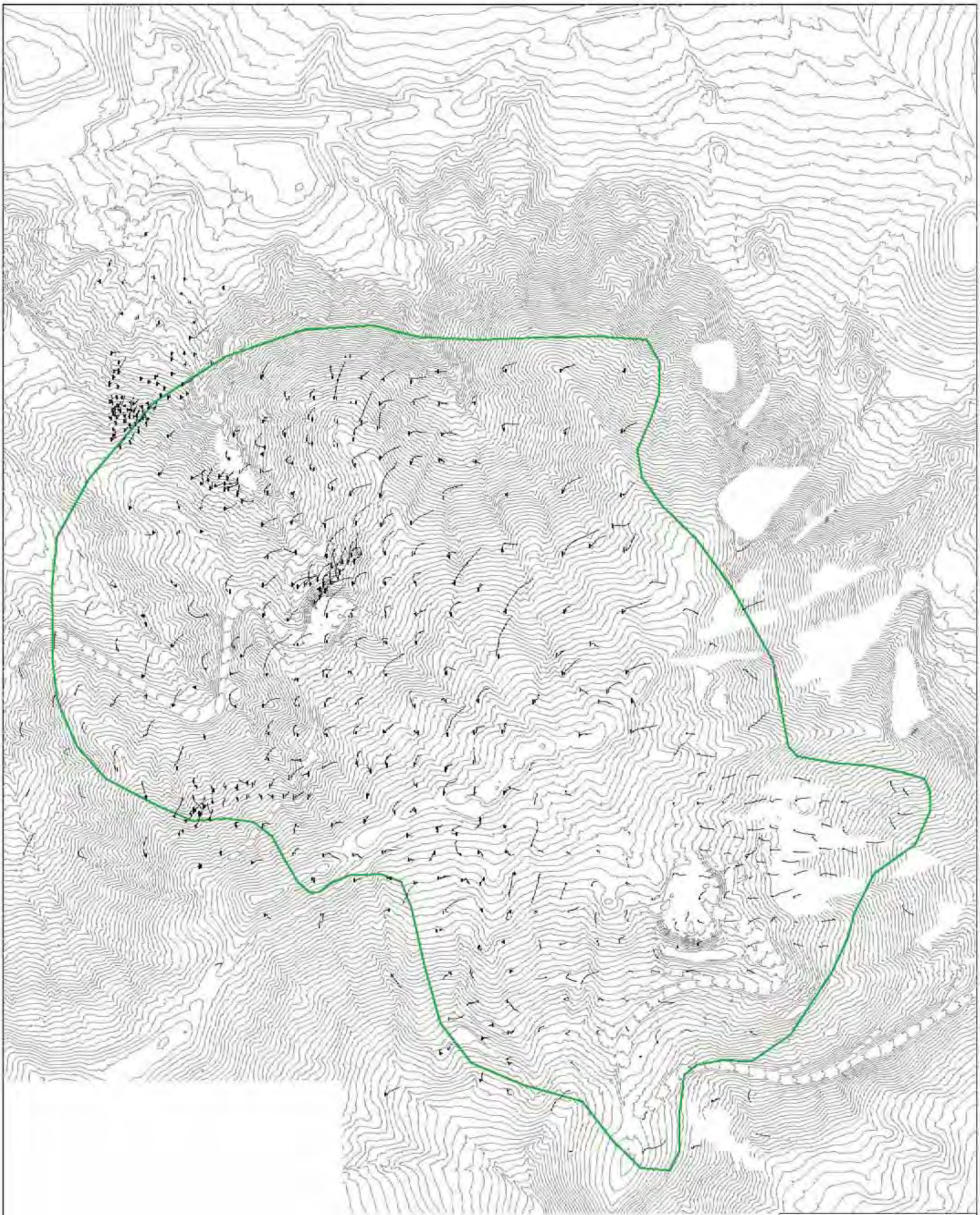
Table 10.8 – 2011 Drilling Bev Claims

Hole Id	Thickness Feet	Grade $\%eU_3O_8$
SC-1		
14-20'	6.0	trace
31-44'	13.0	0.057
SC-3		
255.5-259'	3.5	0.055
267-271.5	4.0	0.08
274-282'	8.0	0.101
284.5-285.5'	1.0	0.041
SC-5		
78-81'	3.0	trace
407-409'	2.0	trace
495-497	2.0	trace

No data and/or historical estimates from these areas other than the Congo Open Pit, the Sheep Underground, and the Sun M cares have been included in either the mineral resource or mineral reserve calculations and summaries within this report.

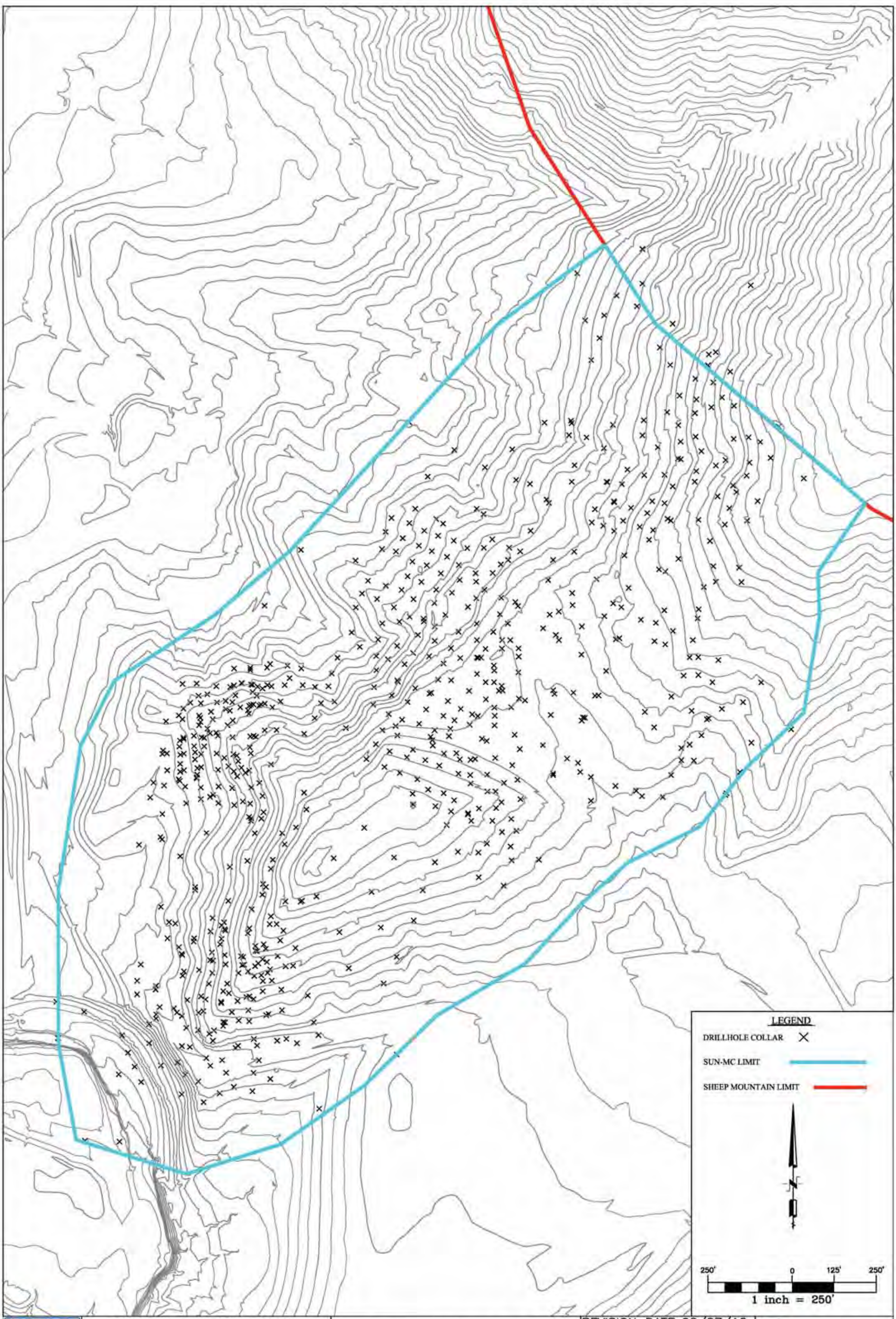


BRS ENGINEERING	Congo Drill Hole Map	SHEEP MOUNTAIN MINES FREMONT COUNTY, WYOMING	REVISION DATE: 03/09/12	TITAN URANIUM USA INC
	SCALE: 1"=400' DATE:		CAD FILENAME: \\BRSNCSERV\Uranium Endeavor\Titan\Land Projects 2005\Combined Congo\	
	DRAWN BY: RHCP, RJB 2/24/11		DWG. NUMBER: FIGURE 10.1	



BRS ENGINEERING	SHEEP UNDERGROUND DRILLHOLE MAP		SHEEP MOUNTAIN MINES FREMONT COUNTY, WYOMING	REVISION DATE: 03/20/12
	SCALE: 1"=900'	DATE:		CAD FILENAME:
	DRAWN BY: RSR	03/20/12		DWG. NUMBER: FIGURE 10.2

TITAN URANIUM USA INC



BRS ENGINEERING	**SUN-MC DRILL HOLE MAP**	**SHEEP MOUNTAIN MINES FREMONT COUNTY, WYOMING**	REVISION DATE: 02/27/12
	SCALE: 1"=250' DATE:		CAD FILENAME: \\BRSINCSERV\Uranium Brsincserv\Titan\Land Proje
	DRAWN BY: RHCP 2/24/12		DWG. NUMBER: FIGURE 10.3

TITAN URANIUM USA INC

SECTION 11: SAMPLE PREPARATION, ANALYSES, AND SECURITY

The majority of the sample data available for the evaluation of resources for the Sheep Mountain Project is the historic geophysical log data. Titan has the complete hard copy data set which was passed through the chain of property title from Western Nuclear Corporation (WNC); through US Energy Crested Corporation (USECC); through the joint venture between UPC and U1; to Titan through its acquisition of UPC and acquisition of U1's share of the property; and ultimately to EFR, though its acquisition of Titan.

For the Congo Pit, Sheep Underground, and Sun Mc areas, the majority of the hard copy logs were reviewed both for data verification and for geologic interpretation. The majority of the Sheep Underground logs were also available as scanned images. In addition, the data includes an extensive collection of detailed mine and drill maps, both surface and underground. The underground maps show the extent of mining by date and include rib and longhole data. All pertinent maps with respect to mine design, extent of mining, drill maps, and mapping related to the mine permit have been scanned and rectified digitally. This data is stored at BRS' Riverton, Wyoming office

Mineral resource and reserve estimates for the Sheep Mountain Project are based on radiometric data. As discussed in Sections 14 and 24 of this report, available data indicates that variations in radiometric equlibrium are local in their effect which impacts the mining grade control program but does not appreciably affect the overall mineral resources or reserves.

Confirmatory drilling in accordance with NI 43-101 began in 2005. The author did not observe this drilling but has reviewed the geologic and geophysical log data and finds the data to have been collected in accordance with current industry practice and to be reliable. This data confirms historical drilling results and is current and applicable to this Preliminary Feasibility Study.

With respect to the 2009 drilling program completed by Titan, drilling and sampling was observed by and/or completed by Titan and BRS personnel, including the author and employees under his direct supervision. Drill samples were collected not for verification of radiometric assay but for overburden testing per WDEQ regulations and for metallurgical testing. Drill samples for overburden testing were split with a standard rifling splitter with half of the sample sent to Energy Laboratories Inc. of Casper, Wyoming, an independent certified commercial analytical laboratory, for testing in accordance with WDEQ guidelines and the remainder was sealed in plastic bags and is currently stored in an on-site warehouse facility. Drill samples for metallurgical testing were stored and sealed in new 5 gallon plastic buckets. Samples within the mineralized zones as determined by gamma and USAT logging were delivered to Lyntek's facility in Denver, Colorado for further assay and testing by BRS personnel. A chain of custody was established. Representative sample splits were prepared for chemical assay and were delivered to Energy Laboratories Inc. of Casper, Wyoming, an independent certified commercial analytical laboratory, for assay utilizing standard protocol and adhering to a chain of custody. These assays were used in the selection of samples for metallurgical testing. In addition to the samples from the Congo Pit drilling, mineralized stockpiles from mine material at the Sheep I shaft was sampled, assayed, and utilized for metallurgical testing. Seven samples of the Sheep I stockpile were collected ranging in grade from 0.022 to 0.067 %U_3O_8 and averaging 0.045 % U_3O_8. Bottle roll leach tests have been

completed for composite samples selected to represent mineralization at both the Congo Pit and Sheep Underground. The remaining samples, with the exception of reserves sample splits, were utilized in the column leach testing for heap leach amenability. Assays of blind duplicates of select samples and check assays, at Hazen Research, a separate and independent commercial laboratory were completed. The results of the assays compared favorably. The assay data was generally not used to verify the radiometric data as this had already been done using the USAT data. A general comparison of assay data to USAT data was completed and the results were comparable. Radiometric equilibrium determinations are discussed in Section 24.

No samples were collected during the 2010 drilling program. Drill cuttings were logged in the field. All holes were logged by a commercial geophysical logging company. Geophysical log data was provided in both hard copy and electronic format with the down-hole count data converted to ½ foot equivalent $\%U_3O_8$ grades.

In 2011 both rotary and reverse circulation drilling was completed. Bulk samples from the reverse circulation drilling have been retained in sealed containers stored at the site for further metallurgical testing but no chemical assays have been completed as of the effective date of this report.

The reader should note that it is common industry practice for the exploration and evaluation of uranium mineralization in the US to rely upon downhole geophysical log data for the determination of the thickness and grade of mineralization. The sampling and assay methods described herein were for the purposes of developing bulk composite samples for metallurgical testing and environmental testing.

Downhole geophysical log data was converted to equivalent uranium assays in half foot increments for geophysical logs with digital data. Geophysical logs with only analog data were interpreted using standard methods set out originally by the Atomic Energy Commission (AEC). The primary method employed for this project is referred to as the half amplitude method. In the case of the half amplitude method the sample thickness is determined by the log signature and while interpreted to the nearest half foot the thickness of the sample varies. The author was trained in this methodology through a short course conducted by Century Geophysical Corporation of Tulsa, Oklahoma and has extensive experience in the interpretation of geophysical logs.

In the author's opinion, the sample preparation, security and analytical procedures are reliable and adequate.

SECTION 12: DATA VERIFICATION

Congo

Historic drill data for each drill hole consisting of radiometric data was posted on drill maps including collar elevation, elevation to the bottom of the mineralized intercept, thickness of mineralization, grade of mineralization, and elevation of the bottom of the hole. Half foot and composite intercept data in paper printouts were available from Western Nuclear's 1979 and 1980 Preliminary Feasibility Study geostatistical model. Data entry was checked and confirmed including a review of the original drill geophysical and lithologic logs. Drill hole locations were digitized from the drill maps to create a coordinate listing and then plotted. The resultant drill maps were then checked and confirmed by overlaying with the original maps.

Titan drilled 5 exploration holes for a total of 1,700 feet in 2009. The purpose of this program was to take samples for overburden classification and also to take bulk mineralized samples for heap leach testing. Overburden samples were gathered every five feet down hole until water was added for lifting cuttings. The depth where the holes either started making water or water was added was approximately 330-360 feet. Sampling stopped at that point in each hole if it was drilled deep enough to encounter that zone. Bulk samples were gathered every 2 feet through known mineralized zones. The drill locations were picked by "twinning" historic drill holes.

The following table provides a comparison of the 2009 drilling to adjacent or twinned historic drill holes

Table 12.1 - Comparison of 2009 Drilling to Historic Drilling

Drill Hole	Twinned hole	Offset Distance	Results
Congo 1	S16-96	3'	Good correlation, marginally higher radiometric grades encountered
Congo 2	S16-291	3'	Good correlation, slightly lower radiometric grades in some zones with higher in others
Congo 3	GG1-36	24'	Radiometric zones correlated
	GG1-37	35'	Radiometric zones correlated
Congo 4	S16-253	24'	Acceptable correlation, slightly lower radiometric grades in some zones with higher in others
Congo 5	S16-146	21'	Good correlation, marginally higher radiometric grades encountered
	S16-147	28'	Acceptable correlation, slightly lower radiometric grades in some zones with higher in others

Drilling completed by Titan within the Congo Pit area in 2010 and 2011 helped to confirm and extend the mineralization as projected in the Congo Pit Area. The author reviewed the drill logs and observed the drilling on numerous occasions. The 2010 and 2011 drill data was compared to historic drilling by collating the geophysical logs and comparing the GT of the 2010 and 2011 drilling to historic drilling by individual sands.

Sheep Underground

Historic drill data for each drill hole consisting of radiometric data was posted on drill maps including collar elevation, elevation to the bottom of the mineralized intercept, thickness of mineralization, grade of mineralization, and elevation of the bottom of the hole. Data entry was checked and confirmed including a review of the original drill geophysical and lithologic logs. Drill hole locations were digitized from the drill maps to create a coordinate listing and then plotted. The resultant drill maps were then checked and confirmed by overlaying the original maps.

Once the database had been developed and data entry confirmed, each mineralized intercept within an individual drill hole was evaluated on a hole by hole basis and combined into the corresponding zone to represent a probable mining thickness appropriate for underground mining methods (minimum 6 feet). This process eliminated some thin and/or isolated mineralized intercepts. The resultant data was then utilized to develop the Grade Thickness (GT) map, GT and T Contours. The GT map was then compared to mine plans available from previous studies to verify the data and geologic interpretation.

Uranium Power Corporation (UPC), now wholly owned by Titan, completed a confirmatory drilling program in 2005 consisting of 19 drill holes totaling 12,072 feet. Two of the 19 holes completed by UPC were located in Section 28 with the purpose of confirming mineralization within the Sheep underground mine area. Previous report concluded that the confirmatory drilling did verify historic drilling. The author reviewed the drilling and found that the data did reasonably correlate with respect to the geologic sand units and the general thickness and tenor of mineralization.

Density

A unit weight of 16 cubic feet per ton or 2.439 tonnes/$m^3$was assumed for all mineral resource and reserve calculations. This assumption was based on data from feasibility studies prepared by previous operators on the mining and production history of the mines within the Sheep Mountain Project but was not independently confirmed. Some previous estimates used a density of 15 cubic feet per ton. The use of 16 cubic feet per ton is recommended by the author as a conservative value.

In summary, the data utilized in this report is considered accurate and reliable for the purposes of this report.

SECTION 13: MINERAL PROCESSING AND METALLURGICAL TESTING

Historic Mineral Processing

Western Nuclear Corp. (WNC) processed feed from Sheep Mountain over a 30 year period from the early 1950's through the mid 1980's at their Split Rock Mill which was located north of Jeffrey City along the haulage road to the Gas Hills. WNC also processed Gas Hills ores at its mill and operated a commercial heap leach in the Gas Hills, as did Union Carbide Corp. (UCC). Historical and published data indicates an acid consumption of 50 pounds per ton H_2SO_4 and a loss for heap leaching of 0.008 % U_3O_8 (Woolery, 1978). The current test results are consistent with or better than historic heap leach experience with respect to recovery and acid consumption.

Pre-Feasibility Metallurgical Studies

In late-2009 drill cuttings were obtained from the Congo Pit during mineral resource validation drilling consisting of several wide spaced holes and from existing mineralized stockpiles left by U. S. Energy and Crested Corporation (USECC) near the Sheep I Shaft. Bottle roll leach tests were conducted using both acid and alkaline lixiviants. Acid leaching was preferred based on recovery and cost of lixiviant. In addition, the alkaline leach tests showed some swelling of clay minerals which could impede flow in the heap. Acid consumption was less than 20lbs/ton with losses of 0.009 %U_3O_8 or less.

For the initial preliminary feasibility study (BRS, 2010) a constant residue, including soluble uranium losses, of 0.010% U_3O_8 and a sulfuric acid consumption of 50 pounds per ton of mineralized material was used. This assumption was conservative with respect to the recent test work but representative of historic heap leaching experience with similar mineralized material. The soluble uranium loss in the rinsed heap residue and the impurity bleed to the evaporation pond will likely be on the order of 2 percent, suggesting a heap extraction of about 91.8 percent. This initial metallurgical work was followed up with large scale column leach studies.

Column Leach Studies

Titan commissioned three uranium recovery laboratory scale column leach studies to support the Sheep Mountain Project in mid-2010. Ore tested in the studies was derived from existing stockpiles left in the 1980's and "fresh" ore collected during current exploration drilling operations. The leach chemistry was selected based on industry experience and supported by the previous bottle roll tests to determine acid and oxidant consumption. A sulfuric acid, sodium chlorate lixiviate, was used in the column tests. The tests were conducted at the Inter-Mountain Laboratories, Inc.'s facility located in Sheridan, WY under the supervision of R.A. Garling of R & D Enterprises, Inc. Technical advice and support was provided by Lyntek, Inc., Doug Beahm of BRS, Inc., and Mr. Terry McNulty.

The first two columns were loaded with ore stockpile material which, due to 20 plus years of exposure, were believed to be fully oxidized. Two nearly identical columns were prepared containing 76 kg-dry of 0.075% U_3O_8 ore. Columns were 6" diameter by 14' tall and contained a 12' ore charge. Initial acid/oxidant tests indicated that 1.4 lb/st H_2SO_4 with a sodium chlorate addition of 3 lb/ton was sufficient to leach over 90% of the uranium present in a 24 hour period. Titan's consultants recommended maintaining a 10 g/L H_2SO_4 concentration above ore requirements. Given the low acid requirements, the

feed lixiviate selected was ~10 g/L H_2SO_4 with $NaHClO_3$ added at a rate of 3 lb/s. Feed flow to the columns was 0.005 gpm/ft2. The columns were operated in down-flow mode to approximate typical heap leach conditions. During the 22 day leach period followed by a month+ rinse and drain phase, ~99.9% of available uranium was leached leaving tails of 0.0001% U_3O_8.

Subsequently, a third column study was conducted from November 12 through December 20, 2010. A single column was loaded with 80.5 kg of 0.104% U_3O_8 ore derived from recent drilling programs on the Sheep property. The intent of the third test was to demonstrate the efficiency of the leach chemistry on unoxidized ore at a uranium grade approximately equivalent to the anticipated life of mine grade. Using the same lixiviate as columns 1 and 2 above, 97.5% of the available resource was extracted leaving tails of 0.0029% U_3O_8. Unlike the first test, in which over 95% of available uranium was extracted in the first pore volume (PV), the fresh ore represented a more traditional leach curve and requiredapproximately2 PV to accomplish similar recoveries. Acid consumption rates on column 3 increased from the ~1.7 lb/st noted on C 1&2 to approximately 4 lb/st. No addition of sodium chlorate beyond the initial charge was required on any column to maintain the desired goal of +450 mv Oxidation Reduction Potential (ORP).

In addition to the demonstration of uranium leach efficiency, the tests were designed to provide information pertinent to process plant design, heap configuration, and to support an NRC license application. Information detailing ore slump, pooling, and flow rates through the columns was collected. Data relating to future health physics (radiological and chemical) issues likely to be encountered in licensing activities were provided. The following table presents the test results for the three columns.

Table 13.1 – Summary of Column Leach Results

Column #	**1**	**2**	**3**
Specific Gravity (tested)	1.50 g/cm^3	1.36 g/cm^3	1.46 g/cm^3
Ore % Moisture	8.5 %	8.5 %	4.3 %
Sulfuric Acid Consumed	1.68 lb/st	1.62 lb/st	3.90 lb/st
Lixiviate [H_2SO_4]	10 g/L	10 g/L	10 g/L
Sodium Chlorate Addition Rate	3 lb/st	3 lb/st	3 lb/st
Ore Grade Assayed % U_3O_8	0.077%	0.077%	0.1039%
Tails Grade Assayed % U_3O_8	0.0001%	0.0001%	0.0029%
Tails % Moisture	13.7 %	14.7 %	17.0 %
Ore Grade % U_3O_8	0.0763%	0.0729%	0.1128%
% Uranium Recovery	99.87%	99.86%	97.47%

(RDE, 2011)

Key points with respect to project economics and operational efficiencies:

- The low acid consumption observed in the column leach studies, if experienced on a production scale would significantly reduce operating costs on a per pound basis. The 2010 pre-feasibility study, completed prior to the column leach testing, made a conservative assumption, as discussed previously, of 50 pounds per ton consumption of sulfuric acid. Available data from all current leach tests shows a lower consumption of acid, less than 15 pounds per ton. For the current 2012 preliminary feasibility study and cost estimation a conservative consumption of 30 pounds of sulfuric acid per ton, was used (Lyntek, 2012).
- The high recovery observed in the column leach studies, if experienced on a production scale, would significantly reduce operating costs on a per pound basis. Although available data shows higher recovery, a conservative recovery of 91.7%, based on the average grade and a constant residue, including soluble uranium losses, of 0.010% U_3O_8, was used in the current preliminary feasibility study (McNulty, 2012).
- The relatively short leach cycles (2-3 pore volumes) and relatively high and consistent flow rates of lixiviant through the columns, if experienced on a production scale, will be favorable with respect to operating costs and efficiencies.
- The behavior of the material and geotechnical properties observed during the column leach testing indicate that the material can be placed directly on the leach pads without the use of a gravel drain layer resulting in lower capital costs.

The material tested in the column leach studies was of limited volume. The samples were collected spatially within the mineral deposit to develop a representative composite of the material anticipated to be produced during mining. Current column leach studies do not show any deleterious elements that could have a significant effect on the extraction process (RDE, 2011). Additional leach testing with additional samples could produce varying results, either more positive or negative. Conservative assumptions based on current test results, as itemized above, were incorporated in the cost estimates and financial evaluations with respect to acid consumption and uranium recovery.

Mineral processing and Heap Leach operations are discussed in SECTION 17: RECOVERY METHODS.

SECTION 14: MINERAL RESOURCE ESTIMATES

The mineral resource estimation geological interpretation methods methodology described herein have been employed by the author while working at similar operating uranium mines in the Gas Hills. The mining methods and factors recommended have been employed successfully at the project in the past. Successful uranium recovery from the mineralized material at Sheep Mountain and similar areas such as the Gas Hills has been demonstrated via both conventional milling and heap leach recovery. The project is a brown-field development located in a state which tends to favor mining and industrial development. The project has been well received locally and will also provide substantial revenues to both Fremont County and the State of Wyoming in addition to providing long term employment for the region. The author is not aware of any factors including environmental, permitting, taxation, socio-economic, marketing, political, or other factors which would materially affect the mineral resource estimate, herein.

The estimate of mineral resources for the Sheep Underground and the Sun Mc area are unchanged from the previous reports (BRS, 2011). With respect to the open pit area: mineral resources for the Congo, North Gap and South Congo areas were combined into a single comprehensive mineral resource model. Additional areas of mineralization, based on historical data, are known within the project area but have not been included in the mineral resource estimate at this time.

Mineral Resource Summary

The mineral resource estimates presented herein have been completed in accordance with CIM Standards and NI 43-101. Based on the drill density, the apparent continuity of the mineralization along trends, geologic correlation and modeling of the deposit, a review of historic mining with respect to current resource projections, and verification drilling, the Mineral Resource estimate herein meets CIM criteria as an Indicated Mineral Resource. A summary of total mineral resource is provided in Table 14.1. A discussion of individual resource areas follows.

Table 14.1 - Total Indicated Mineral Resources

Sheep Underground	**GT Cutoff****	**>0.30**
	Pounds eU_3O_8	13,245,000
	Tons	5,640,000
	Avg Grade % e U_3O_8	0.117
Congo Pit Area	**GT Cutoff****	**>0.10**
	Pounds eU_3O_8	15,040,000
	Tons	6,176,000
	Avg Grade % e U_3O_8	0.122
Sun-Mc	**GT Cutoff****	**>0.10**
	Pounds e U_3O_8	2,000,000
	Tons	1,080,000
	Avg Grade % e U_3O_8	0.093
Total Indicated Mineral Resource	**GT Cutoff****	**As Above**
	Pounds e U_3O_8	30,285,000
	Tons	12,895,000
	Avg Grade % e U_3O_8	0.117

*numbers rounded

**GT cutoff: Open Pit GT 0.10 (2 feet of 0.05 %eU_3O_8); Underground GT 0.30 (2 feet of 0.05 %eU_3O_8)

Congo Open Pit Mine

Table 14.2 - Congo Total Indicated Mineral Resources

GT Cut-off**	**>0.10**
Lbs e U_3O_8	**15,040,000***
Tons	**6,176,000***
Average Grade % e U_3O_8	**0.122**

*numbers rounded

**GT cutoff: Open Pit GT 0.10 (2 feet of 0.05 %eU_3O_8)

This estimate includes deletion of the portions of the mineral resource model which falls within the historic mine limits which equated to approximately 25% of the initial resource estimate. Historic mining limits were imported into the resource model by individual sand horizons in three dimensions. The extent of mining was taken to be the actual mapped underground mine limit or the GT boundary representing the historical mining cutoff (8 feet @ 0.095 or a GT of 0.76), whichever was greatest. Although in many cases the mine maps showed remnant pillars, none of these areas were included in the mineral resource estimate. Thus, the estimate of current mineral resources is conservative with respect to the exclusion of areas affected by historic mining. Estimated mineral resources for potential open pit areas were diluted to a minimum mining thickness of two feet.

Sheep Underground Mine

The estimate of mineral resource for the Sheep Underground in unchanged from previous reports (BRS, 2011).

Table 14.3 - Sheep Underground Total Indicated Mineral Resource

GT Cut-off**	**>0.30**
lbs e U_3O_8	**13,245,000***
Tons	**5,640,000***
Average Grade % e U_3O_8	**0.117**
Average Thickness	**6.7**

*numbers rounded

**GT cutoff: Open Pit GT 0.30 (6 feet of 0.05 %eU_3O_8)

This mineral resource accounts for the deletion of mined areas within our resource model estimated from surface drilling. The total reported mined tonnage from the Sheep I underground mine was 275,000 tons containing 522,500 pounds of U_3O_8 and an average grade of 0.095 % U_3O_8. However, the portions of the current mineral resource estimates which were within the defined previously mined area was only an estimated 62,618 tons of material containing 160,666 pounds of U_3O_8 and an average grade of 0.128 % U_3O_8.

From review of the Sheep I and II as-built mine plans, it was apparent that little or no ore was mined at Sheep II and that only development work was completed. Further, it was apparent at the Sheep I mine that many of the mined areas were located by underground delineation drilling rather than by surface drilling.

Sun Mc Area

The estimate of mineral resources for the Sun Mc area in unchanged from the previous Technical Report (BRS, 2011). This estimate includes deletion of the portions of the mineral resource model which falls within the historic mine limits which equated to approximately 10% of the initial resource estimate.

Table 14.4 - Sun Mc Total Indicated Mineral Resources

GT Cut-off**	**>0.10**
lbs e U_3O_8	**2,000,000***
Tons	**1,080,000***
Average Grade % e U_3O_8	**0.093**
Average Thickness	**5.1**

*numbers rounded

**GT cutoff: Open Pit GT 0.10 (2 feet of 0.05 %eU_3O_8)

Resource Estimation Methods

Geologic Model

Geologic interpretation of the mineralized host sands was used, along with the intercepts that met the minimum cutoff grade and thickness, to develop a geologic model in which to estimate the mineral resources at the Sheep Mountain Project. The three-dimensional locations along the drill hole drift of all mineralized intercepts were plotted in AutoCAD ™. Each intercept was evaluated based on its geophysical log expression and location relative to adjacent intercepts. Whenever possible, geophysical logs were used to correlate and project intercepts between drill holes. Intercepts that met the minimum grade cutoff but were isolated above or below the host sand horizons; where data sets were incomplete; which did not fully penetrate the host sand were excluded from the mineralized envelope. The mineralized envelope was created by using the top and bottom of each intercept that was within the geologic host sands. The intercepts that were used to make this envelope were then used in the resource estimate GT method.

Drill spacing within the Project is not uniform due in part to the steep and irregular surface terrain and in part to the somewhat random drift or deviation of the drill holes from vertical. Drill spacing in the Congo (open pit areas) range from roughly 50 foot centers to greater than 100 foot centers. Drill spacing at

Sheep Underground area varies from roughly 200 foot centers to over 400 foot centers. Drilling depths at Congo are typically less than 400 feet in the northern portions of the area to generally over 600 feet to the south. Drilling depths at Sheep exceed 1,000 feet but are typically less than 1,500 feet. Drilling depths at Sun Mc are variable depending on terrain but are typically less than 1,000 feet.

In development of the initial geologic envelope, both surface drill data and data from underground mine maps was reviewed. For the Sheep Underground and other underground mines, such as the Seismic and Reserve mines adjacent and partially within the limits of the planned Congo Pit, the underground development and cross cut drifts were typically on 100 foot centers. Mining within the development drifts and cross cuts was completed by random room and pillar methods, extracting the mineralized material meeting the mine cutoff applicable at the time and leaving the lower grade material as pillars. In most cases entire 100x100 foot or larger blocks were mined and/or, in the case of the Sheep Underground, delineated by face sampling and longhole drilling but not yet mined.

The current geologic and resource model is a 3D model based on geologic interpretation of 18 mineralized zones in the Congo area and 17 mineralized zones in the Sheep area. Mineralized zones from Sheep were projectable down dip to the Sun Mc Area. The estimate of mineral resources and/or mineral reserves for the Sheep Underground Sun Mc area in unchanged from the previous Technical Report (BRS, 2011). For this report the North Gap, South Congo, and Congo mineralized zones as reported by BRS, 2011 were combined into a single unified mineral resource model.

Based on the former, once the data were separated by zone an initial area of influence of 50 feet (maximum 25 foot radius or 50 foot diameter) was applied to each drill hole by zone at its drifted location to establish an initial geologic limit to the projection of mineralization. Refinement of the geologic limit and projection of mineralization along trend was then based on specific correlation and interpretation of geophysical logs on a hole by hole basis. This interpretation was completed BRS staff and personally reviewed by the author of this technical report.

GT Contour Method

The mineral resource estimate was completed using the GT (Grade x Thickness) Contour Method on individual mineralized zones as defined in a full 3D geological model of the deposit. The Contour Method, also known as the Grade x Thickness (GT) method, is a well-established approach for estimating uranium resources and has been in use since the 1950's in the US. The technique is most useful in estimating tonnage and average grade of relatively planar bodies where lateral extent of the mineralized body is much greater than its thickness, as was observed in drilling of the Congo and Sheep deposits.

For tabular and roll front style deposits the GT method provides a clear illustration of the distribution of the thickness and average grade of uranium mineralization. The GT method is particularly applicable to the Congo and Sheep deposits as it can be effective in reducing the undue influence of high-grade or thick intersections as well as the effects of widely spaced, irregularly spaced, or clustered drill holes, all of which occur to some degree in the Congo and Sheep deposits. This method also makes it possible for the geologist to fit the contour pattern to the geologic interpretation of the deposit.

The GT contour method is used as common practice for Mineral Reserve and Mineral Resource estimates for similar sandstone-hosted uranium projects ("Estimation of Mineral Resources and Mineral Reserves", adopted by CIM November 23, 2003, p 51.). It is the opinion of the author that the GT contour method, when properly constrained by geologic interpretation, provides an accurate estimation of contained pounds of uranium.

The current drill hole database consists of:

- Congo Open Pit Area
    - 2,780 drill holes in total; 2,673 mineralized, 107 barren
    - Includes recent drilling
        - 2009 – 5 drill holes (Titan)
        - 2010 – 62 drill holes (Titan)
        - 2011 – 73 drill holes (Titan)
- Sheep Underground Area
    - 485 drill holes
    - Includes 2 holes completed in 2005 (UPC)
- Sun Mc Area
    - 704 drill holes

The uranium quantities and grades are reported as equivalent U_3O_8 (eU_3O_8), as measured by downhole gamma logging. The industry standard protocol for reporting uranium in sandstone hosted deposits in the US has been validated for the Sheep Mountain Project by test drilling at the deposit, as well as by correlation with previous mining activities.

Radiometric Equilibrium

In the fall of 2009, five rotary percussion holes were drilled on the property to study disequilibrium. Downhole logging of the drill holes was completed using standard gamma technology as well as a Uranium Spectral Analysis Tool (USAT), both supplied by Century Wireline of Tulsa OK. The USAT tool gives a direct measurement of uranium content and therefore allows determination of the equilibrium state of the uranium mineralization intersected in the hole. A total of 34 intervals were measured, showing an overall moderate positive disequilibrium (thus the true chemical grade of the mineralization is slightly higher than the equivalent grade determined by the gamma tool). The results of the resource estimates were not adjusted to account for this positive disequilibrium. Equilibrium data does show some local distribution of uranium values within mineralized zones. The ore control program recommended for this project, as described in Section 16 of this report, will account for such variations.

Congo Pit

Refer to Appendix A1 – Congo Open Pit, for GT contour maps which show the mineral resource areas and the areas of historic mining for each individual sand.

The 2011 mineral resource estimate grouped sands for the North Gap and South Congo areas in to the five major sand units and calculated the amount of resource removed by historic mining based on a deduction from past production records, BRS, 2011. For the current report (BRS, 2012) the North Gap, South Congo, and Congo mineralized zones were combined into a single unified mineral resource model and deletions of resources related to past mining were determined from underground mine maps.

The current mineral resource model includes 18 separate sand units for all areas and includes deletion of the portions of the mineral resource model which falls within the historic mine limits determined from mine maps which equated to approximately 25% of the initial resource estimate. Historic mining limits were imported into the resource model by individual sand horizons in three dimensions. The extent of mining was taken to be the actual mapped underground mine limit or the GT boundary representing the

historical mining cutoff (8 feet @ 0.095 or a GT of 0.76), whichever was greatest. Although in many cases the mine maps showed remnant pillars, none of these areas were included in the mineral reserve estimate. Thus, the estimate of current mineral resources is conservative with respect to the exclusion of areas affected by historic mining. The difference between the 2011 mineral resource estimate and the current mineral resource estimate is a reduction of less than 1 % with respect to total pounds.

The Congo sum GT, diluted to a minimum 2 foot mining thickness from the mineralized envelope for each drill hole, was plotted in AutoCAD. If the thickness exceeded 2 feet, no dilution was added. The diluted thickness of mineralization for each drill hole was also plotted. Resource estimates include deletion of the portions of the mineral resource model which fall within the historic mine limits as previously discussed.

Sheep Underground

Refer to Appendix A2 – Sheep Underground, for GT contour maps which show, for each individual sand, the mineral resource areas and the areas of historic mining.

The GT, diluted to a minimum 6 foot mining thickness from the mineralized envelope for each drill hole and each horizon, was plotted in AutoCAD TM. If the thickness exceeded 6 feet no dilution was added. The diluted thickness of mineralization for each drill hole was also plotted. Mineral resource estimates account for the deletion of mined areas within the resource model estimated from surface drilling. The total reported mined tonnage from the Sheep I underground mine was 275,000 tons containing 522,500 pounds of U_3O_8 and an average grade of 0.095 % U_3O_8. However, the portions of the current mineral resource estimates which were within the defined previously mined area was only an estimated 62,618 tons of material containing 160,666 pounds of eU_3O_8 and an average grade of 0.128 % eU_3O_8. From review of the Sheep I and II as-built mine plans, it was apparent that little or no material was mined at Sheep II and that only development work was completed. Further, it was apparent at the Sheep I mine that many of the mined areas were located by underground delineation drilling rather than by surface drilling. The mine history clearly shows that underground development drilling and sampling expanded the resource as compared to that which could be projected from the surface drilling alone.

For mine planning purposes, a three dimensional block model was created from the Sheep GT, geologic, and mineralized envelope models. The modeling utilized an automated routine that assigned the thickness of mineralization, GT, and mineralized elevation reflected by their respective contours, to the centroids of a uniform 25 foot by 25 foot grid. From the thickness and GT contours, average grade, mineralized and waste tonnages, and contained pounds was calculated and assigned to each block. Each 25'x25' block was then evaluated based on its grade and thickness for mine planning and scheduling.

Sun Mc Area

Refer to Appendix A3 – Sun Mc Area, for GT contour maps which show, for each individual sand, the mineral resource areas.

The Sun Mc sum GT, diluted to a minimum 2 foot mining thickness from the mineralized envelope for each drill hole, was plotted in AutoCAD ™. If the thickness exceeded 2 feet no dilution was added. The diluted thickness of mineralization for each drill hole was also plotted. Resource estimates include a reduction of estimated mineral resource based on reported past production which equated to approximately 10% of the initial resource estimate. The estimate of mineral resources in the Sun Mc area in unchanged from the previous Technical Report, BRS, 2011.

SECTION 15: MINERAL RESERVE ESTIMATES

Probable Mineral Reserves

The estimate of mineral reserve for the Sheep Underground is unchanged from the previous reports (BRS, 2010 and 2011). With respect to the open pit mineral reserves, mineral resources for the Congo, North Gap, and South Congo areas were combined into a single comprehensive mineral resource model. Open pit mine designs and sequencing was completed for all areas, and the resultant mineral reserve estimate reflects the current open pit mine designs and economic evaluations.

The following Mineral Reserves are fully included in the total Mineral Resources reported in Section 14. The total Probable Mineral Reserve for the Sheep Mountain Project including both open pit and underground projected mining areas is tabulated below. This mineral reserve estimate has been completed in accordance with CIM Standards.

Table 15.1 - Sheep Mountain Project Probable Mineral Reserve Summary

	GT minimum**	**Pounds eU_3O_8**	**Tons**	**Average Grade $\%eU_3O_8$**
Open Pit	0.10	9,117,000*	3,955,000*	0.115
Underground	0.45	9,248,000*	3,498,000*	0.132
Total		**18,365,000***	**7,453,000***	**0.123**

*numbers rounded

**GT cutoff: Open Pit GT 0.10 (2 feet of 0.05 $\%eU_3O_8$); Underground GT 0.30 (2 feet of 0.075 $\%eU_3O_8$)

Congo Pit Conversion of Resources to Reserves

The following Probable Mineral Reserves are fully included in the total Indicated Mineral Resources for the Congo Pit and are not additive to that total. The Probable Mineral Reserve is that portion of the Indicated Mineral Resource that is economic under current cost and pricing conditions.

This estimate includes deletion of the portions of the mineral resource model which falls within the historic mine limits. Historic mining limits were imported into the resource model by individual sand horizons in three dimensions. The extent of mining was taken to be the actual mapped underground mine limit or the GT boundary representing the historical mining cutoff (7 feet @ 0.10 or a GT of 0.7), whichever was greatest. Although in many cases the mine maps showed remnant pillars, none of these areas were included in the mineral reserve estimate. Both the estimated mineral resources and mineral reserves were diluted to a minimum mining thickness of two feet. The reported Probable Mineral Reserve is that portion of the reported Indicated Mineral Resource that is within the current open pit design.

The cutoff grade of 0.05% eU_3O_8 at a minimum mining height of 2 foot equates to a 0.10 GT cutoff. The following table summarizes the portion of the Congo Pit that is economically mineable and meets the open pit cutoff criteria.

Table 15.2 - Congo Total Probable Mineral Reserves 0.10 GT Cutoff

GT minimum	Pounds eU_3O_8	Tons	Average Grade $\%eU_3O_8$
0.10	9,117,000*	3,955,000*	0.115

*numbers rounded

Sheep Underground Conversion of Resources to Reserves

The following Probable Mineral Reserves are fully included in the total Indicated Mineral Resources for the Sheep Underground. The Probable Mineral Reserve is that portion of the Indicated Mineral Resource that is economic under current cost and pricing conditions.

This estimate includes deletion of the portions of the mineral resource model which falls within the historic mine limits. Both the estimated mineral resources and mineral reserves were diluted to a minimum mining thickness of six feet. The reported Probable Mineral Reserve is that portion of the reported Indicated Mineral Resource that is within the current underground mine design.

The cutoff grade of 0.05 $\%eU_3O_8$ at a minimum mining height of 6 foot equals a 0.30 GT cutoff. The following table summarizes the portion of the Sheep I and II Underground Mine that is economically mineable and meets the cutoff criteria.

Table 15.3 - Sheep Underground Total Probable Mineral Reserves 0.45 GT Cutoff

GT minimum	Pounds % eU_3O_8	Tons	Average Grade $\%eU_3O_8$
0.45	9,248,000*	3,498,000*	0.132

*numbers rounded

Determination of Mine Cutoff Grade

As the operating cost per ton varies substantially between the open pit and underground it is appropriate to have separate grade cutoff criteria for the two operations. The following table provides a calculation of breakeven cutoff grades for both the open pit and underground mines based on current cost forecasts and a sales price of $65 per pound. The costs per ton reflect operating costs only and do not include capital write off. The calculation of breakeven cutoff grade allows for a constant tail or loss in the mineral processing of 0.01 $\%U_3O_8$. Note that staff and support costs are included in the open pit mining costs. Incremental underground mining costs are solely related to underground mining and mineral processing costs.

Table 15.4 - Minimum Cutoff Grade

	Operating Cost $/Ton	Breakeven Grade % U_3O_8 @ $65/lb Price
Open Pit Mine and Mineral Processing	$23.87	0.024 % U_3O_8
Underground Mine and Mineral Processing	$ 52.24	0.046 % U_3O_8

From this evaluation, and other factors such as minimum mining thickness, the mine design cutoffs were set above the minimum breakeven cutoff grades at;

- Open Pit
  - Minimum 2 foot thickness
  - Minimum grade .05 %U_3O_8
  - Minimum GT 0.10
- Underground
  - Minimum 6 foot thickness
  - Minimum grade .075 %U_3O_8
  - Minimum GT 0.45

Based on these parameters, the average grade mined from a combined open pit and underground operation is estimated at 0.123 e%U_3O_8. As mining proceeds, mineralized material encountered below the mine GT cutoff, which has to be excavated as part of the mine plan and would otherwise be disposed of as mine waste, could be salvaged at grades as low as the calculated breakeven grades of 0.024 %U_3O_8 and 0.046 %U_3O_8 for the open pit and underground mines, respectively. Without an increase in sales price or a decrease in operating costs, material salvaged at lesser grade would not be profitable. The mineral reserve as stated herein does not include the potential mineralized material, which may be salvaged, which meets the breakeven grade cutoff but is less than the design GT cutoff.

Mining and Mineral Processing Recovery Parameters and Sensitivity

Mineral reserves are that portion of the Indicated Mineral Resource, Section 14, which are economically recoverable under current cost and pricing conditions. The mineral resource model, the GT contour estimation methodology, and the geologic interpretations, as described in Section 14, also apply to the mineral reserve estimate. The key parameters in the conversion of mineral resource to mineral reserves include mine dilution and recovery.

As previously discussed in Section 14 and 15, mineral resource and mineral reserve estimates account for mine dilution. Mine dilution is a function of the mineralized thickness and the mining method and selectivity. With respect to both the Congo Pit and Sheep Underground, selective mining methods and appropriate mining equipment were selected to minimize mine dilution. Mine dilution was assessed by diluting mineralized thicknesses to minimum mining thicknesses, 2 feet for open pit mining and 6 feet for underground mining. Thus, the dilution factor varies with the thickness of mineralization. The sensitivity of estimated costs with respect to mine dilution is further addressed in Section 22. A change of 10% in

mine dilution is estimated to affect the IRR by 6%. Mine recovery was assessed by the inclusion of only those mineralized zones with adequate thickness, grade, and continuity to be mined. Thin and/or low grade mineralized zones were excluded from the mineral reserve through the application of dilution to minimum thickness and the subsequent application of GT cutoff. Isolated and/or discontinuous mineralization was not excluded from the mineral reserve estimate through the mine planning process. For the Congo Pit an estimated 60% of the mineral resource was converted to a mineral reserve. For the Sheep Underground an estimated 70% of the mineral resource was converted to a mineral reserve. As with mine dilution sensitivity to mine recovery was also assessed. The effect of mine recovery is similar to that of mine dilution in that a change of 10% in mine recovery is estimated to affect the IRR by 6%.

Mineral processing recovery is discussed in Section 17. Due to the nature of the mineralization whereby the uranium minerals occurs as interstitial material between the sand grains, mineral processing commonly results in a rather uniform residual uranium value which remains in the solid material. This loss or "tail" is consistent irrespective of the initial grade. This has been confirmed by column leach testing which showed a constant tail of less than 0.02 $\%U_3O_8$ (RDE, 2011). In addition, there are uranium losses related to the recovery of the uranium values from the leach solutions. These "liquid' losses are typically 0.02 $\%U_3O_8$ (Woolery, 1978). Thus, based on testing to date an overall loss of 0.04 $\%U_3O_8$ is indicated. However, to provide conservatism in the estimate and to account for potential variations in the mineralized material with respect to the materials tested and overall loss of 0.10 $\%U_3O_8$ was applied. Based on the estimated mine life grade of 0.123 $\%eU_3O_8$ this results in an overall mineral processing recovery factor of approximately 92%.

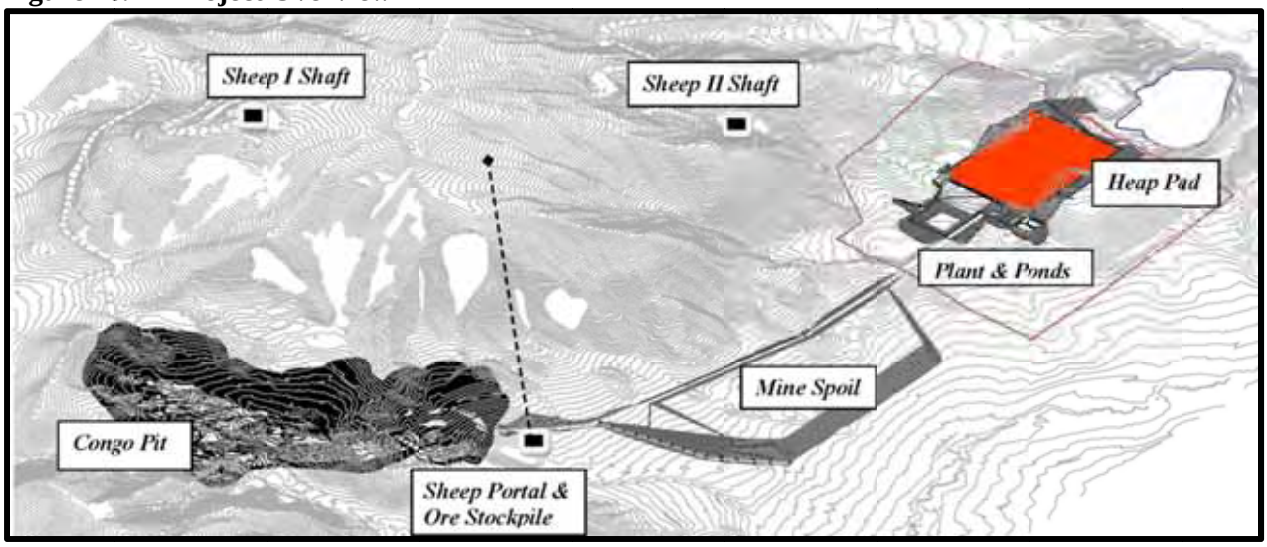
The mining mineral processing methods and factors recommended have been employed successfully at the similar projects in the past. Successful uranium recovery from the mineralized material at Sheep Mountain and similar areas such as the Gas Hills has been demonstrated via both conventional milling and heap leach recovery. The project is a brown-field development located in a state which tends to favor mining and industrial development. The project has been well received locally and will also provide substantial revenues to both Fremont County and the State of Wyoming in addition to providing long term employment for the region. The author is not aware of any factors including environmental, permitting, taxation, socio-economic, marketing, political, or other factors which would materially affect the mineral resource estimate, herein.

SECTION 16: MINING METHODS

The Sheep Mountain Project includes the Congo Pit, a proposed open pit development, and the re-opening of the existing Sheep Underground mine. Although alternatives were considered, the recommended uranium recovery method includes the processing of mined materials via an on-site heap leach facility as discussed in Section 17 of this report.

Figure 16.1 depicts the overall project. Mining will be completed by both underground and open pit methods as subsequently described. Mined product from the underground and open pit mine operations will be commingled at the stockpile site located near the underground portal and in close proximity to the pit. At the stockpile the mined product will be sized, if needed, blended, and then conveyed via a covered overland conveyor system to the heap leach pad where it will be stacked on a double lined pad for leaching. The primary lixiviant will be sulfuric acid. Concentrated leach solution will be collected by gravity in a double lined collection pond and then transferred to the mineral processing facility for extraction and drying. The final product produced will be a uranium oxide commonly referred to as yellowcake.

Figure 16.1 – Project Overview



Mine Productivity and Scheduling

The project consists of two distinct and independent mining areas, the Congo Open Pit and the Sheep Underground, with common processing on mine material via a heap leach recovery facility. The currently planned mine life of the open pit is 15 years with an additional 5 years allotted for mine closure and reclamation . The currently planned mine life of the underground in 11 years. The heap leach facility is designed to accommodate the mined material from both open pit and underground mine operations over an operating life compatible with the open pit operations. Refer to the production profile Section 21.

Three production alternatives were considered for detailed financial evaluation reflecting variations in overall project scheduling as follows;

- Alternative 1: Open pit and underground mine development with concurrent start of mining.
- Alternative 2: Open pit and underground mine development with concurrent end of mining.
- Alternative 3: Open pit mine development only.

Alternative 1 provides the highest internal rate of return (IRR), the highest net present value (NPV), and the highest average and annual uranium production level. However, Alternative 1 also requires the highest level of initial capital. Alternative 3 has the lowest overall capital requirement but has the lowest average annual and total uranium production and the lowest IRR and the NPV. Alternative 2, or some variation thereof which delays the start of the underground operations with respect to the open pit mine and heap leach facility, is the preferred alternative in that, it has the same lower initial capital requirement as Alternative 3 and the higher average annual and total uranium production as Alternative 1. In addition, Alternative 2 has the practical advantage of staggering some of the initial startup challenges and demands, for example, personnel recruitment and training.

Depending on the development alternative, production varies from a low of 180,000 tons processed with 366,000 pounds of uranium produced per year during the start of operations of the open pit and heap leach, to a high of 660,000 tons per year processed with approximately 1,500,000 pounds of uranium produced per year at peak production with both the open pit and underground mines in operation. On average the open pit produces 264,000 tons per year containing 608,000 pounds of uranium. Similarly the underground produces an average of 318,000 tons per year containing 841,000 pounds of uranium. Average annual production from the heap leach and processing facility is estimated to be 1,224,000 pounds of uranium.

Congo Open Pit

The current mine design for the Congo Pit includes typical highwall heights in the range of 100 to 400 feet, and reaches a maximum depth of 600 feet in localized areas in the southeast pit corner. The open pit design employs similar design parameters and mining equipment configurations to those used successfully in past Wyoming conventional mine operations. Highwall design is based upon the performance of past projects in the Sheep Mountain and Gas Hills districts, and includes an average highwall slope of 0.7:1, which reflects the average of a 10-foot bench width and 50-foot wall at a 0.5:1 slope.

As depicted in Figure 16.2., the open pit highwalls at the McIntosh pit, built to a similar design some 40 years ago, remain remarkably stable.

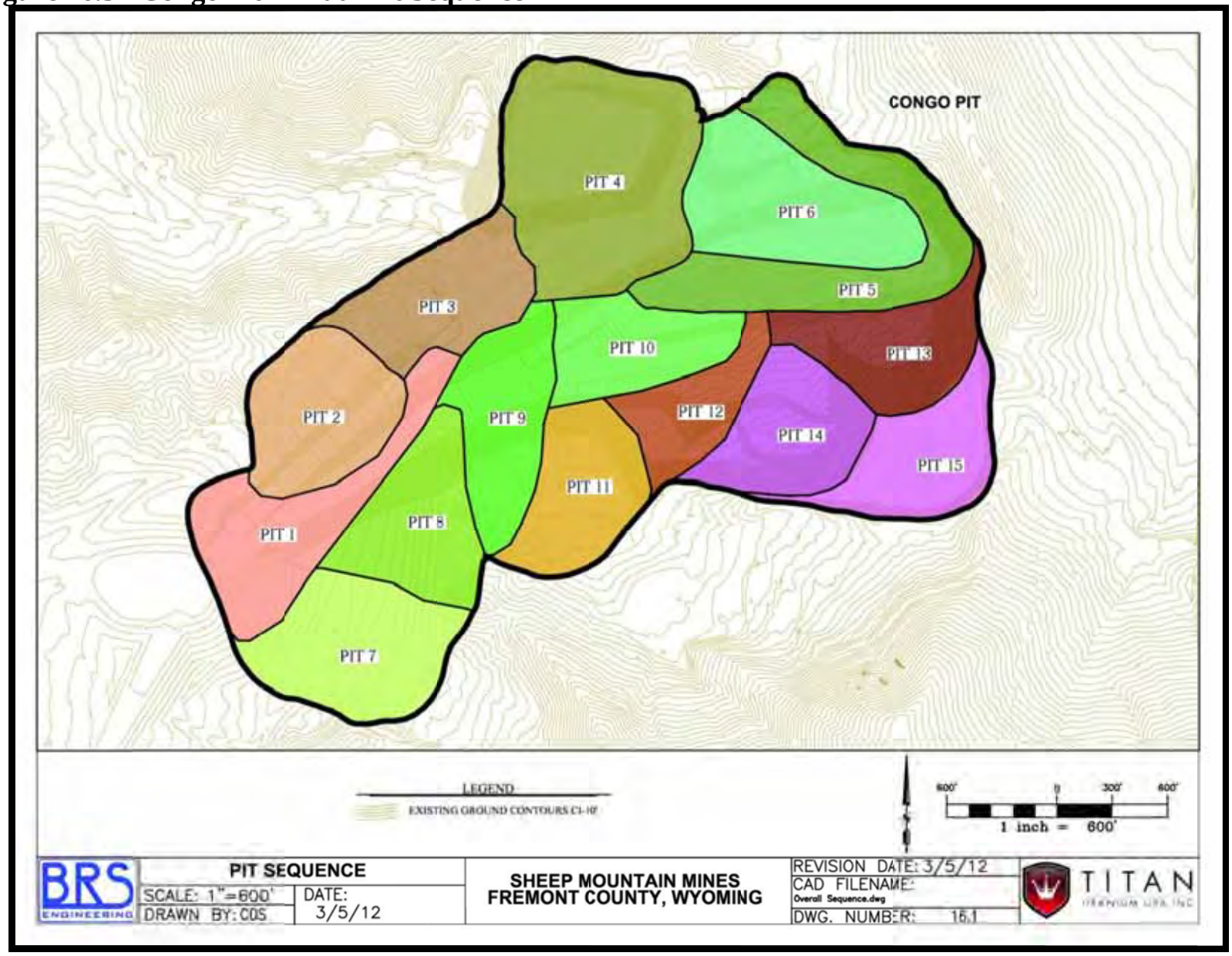
Figure 16.2 – Existing McIntosh Pit

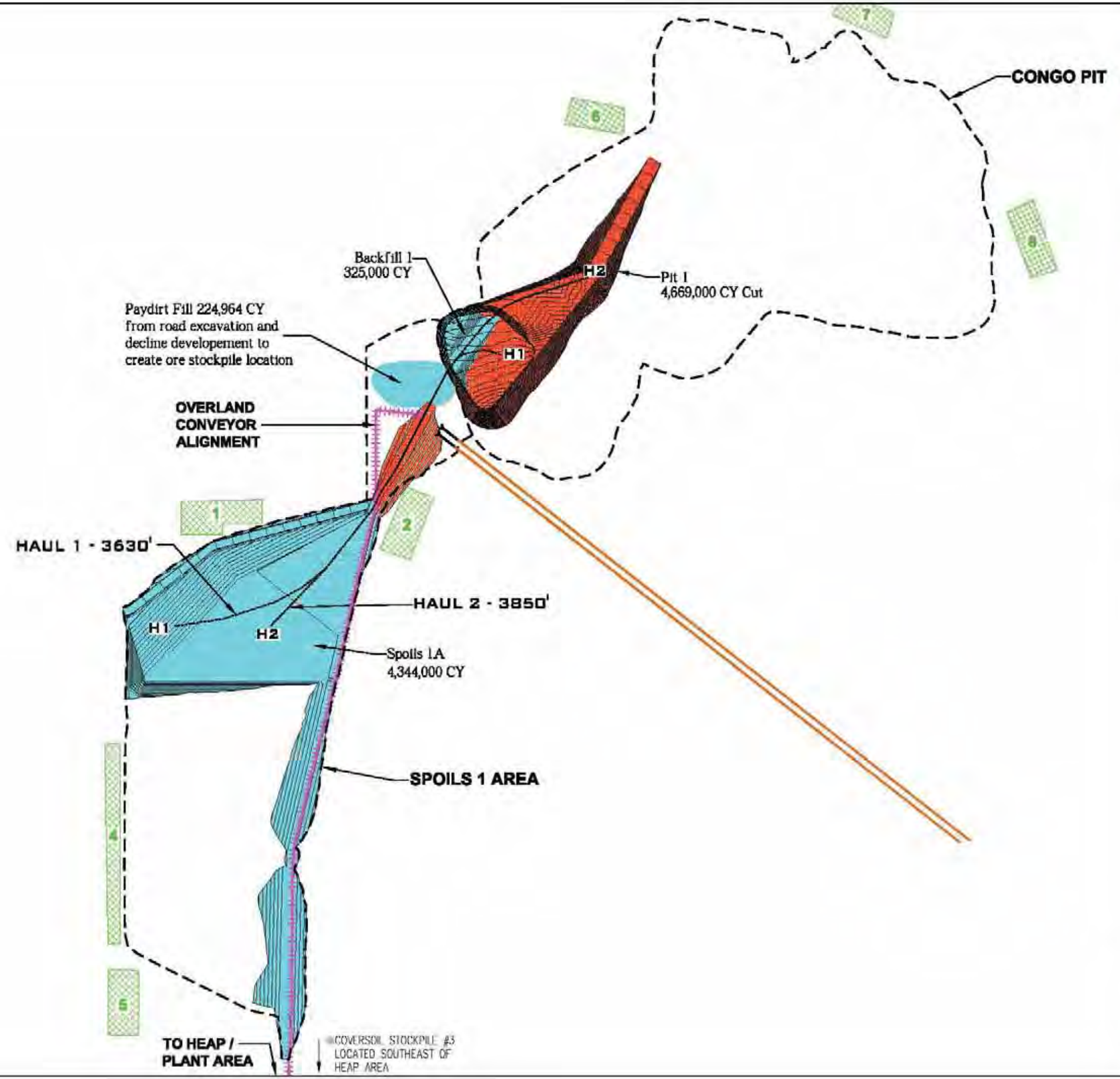
Figure 16.3 displays the general mine sequence and annual limits of mining. Due to the nature and extent of mineralization, the Congo Pit is essentially a single open pit that will be developed sequentially to accommodate the desired mine production and allow for internal backfilling. This sequential schedule and internal backfilling reduces the amount of double-handling of mine waste material required to backfill and reclaim the mined pit during the life of the mine.

The host formation is exposed at the surface and dips between 9 and 16 degrees to the southeast. The initial pit construction will create access from the open pit mine area to the mine waste and stockpile areas. Subsequent pit extensions will utilize this access. Shallow mineralized areas exist along the north and northwest portions of the pit. As a result, the overall mine sequence begins in the areas where the mineralized zones have the least amount of cover and proceeds essentially along formational dip. The first 6 pits are constructed in a panel along the up dip portion of the deposit and are the shallowest. During this time, the out of pit mine spoils areas will be developed. Subsequent pits will be completed in successive panels proceeding down and along dip, i.e. pits 7 through 10; 11 through 13; and finally pits 14 and 15, which reach the greatest depths. Beginning with pit 7, the great majority of the mine waste will be sequentially backfilled in previous pits.

Detailed Open Pit Mine Sequence drawings follow as Figures 16.4 through 16.18 representing the open pit mining sequence for pits 1 through 15, respectively.

Figure 16.3 - Congo Pit Annual Pit Sequence





LEGEND

- EXISTING GROUND CONTOURS CI-10'
- DESIGN CONTOURS CI-10'
- MINE EXCAVATION AREA
- MINE SPOILS AREA
- PROJECT BOUNDARY
- PROPOSED DECLINE ALIGNMENT
- PROPOSED UNDERGROUND MINE PORTAL
- CONVEYOR ALIGNMENT
- 1 PROPOSED COVERSOIL STOCKPILE
- HAUL ROUTE

NOTE:
CUT VOLUMES SHOWN ARE INCLUSIVE OF ALL CLASSES OF EXCAVATION INCLUDING OVERBURDEN, MINERALIZED MATERIAL, AND INTERBURDEN.

BACKFILL VOLUMES SHOWN ASSUME SWELL OF WASTE EXCAVATED FROM PITS IS EQUIVALENT TO VOLUME OF MINERALIZED MATERIAL MOVED.

800' 0 400' 800'
1 inch = 800'

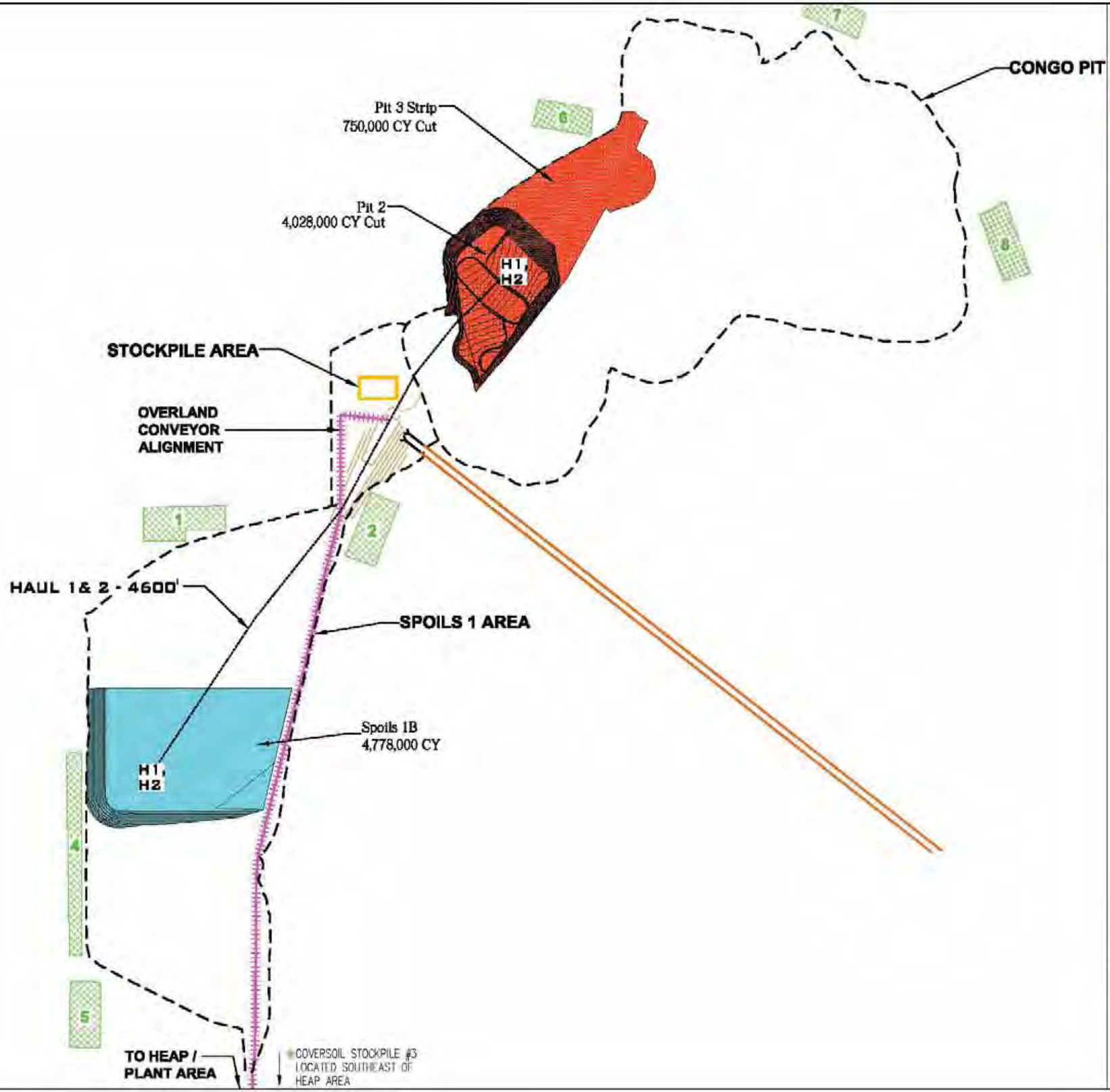
TITAN URANIUM USA INC

REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.4

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 1
SCALE: 1"=800'
DATE: 3/16/11
DRAWN BY: CDS

BRS ENGINEERING



LEGEND

- EXISTING GROUND CONTOURS CI-10'
- DESIGN CONTOURS CI-10'
- MINE EXCAVATION AREA
- MINE SPOILS AREA
- PROJECT BOUNDARY
- PROPOSED DECLINE ALIGNMENT
- PROPOSED UNDERGROUND MINE PORTAL
- CONVEYOR ALIGNMENT
- 1 PROPOSED COVERSOIL STOCKPILE
- HAUL ROUTE

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500' 0 400' 800'
1 inch = 800'

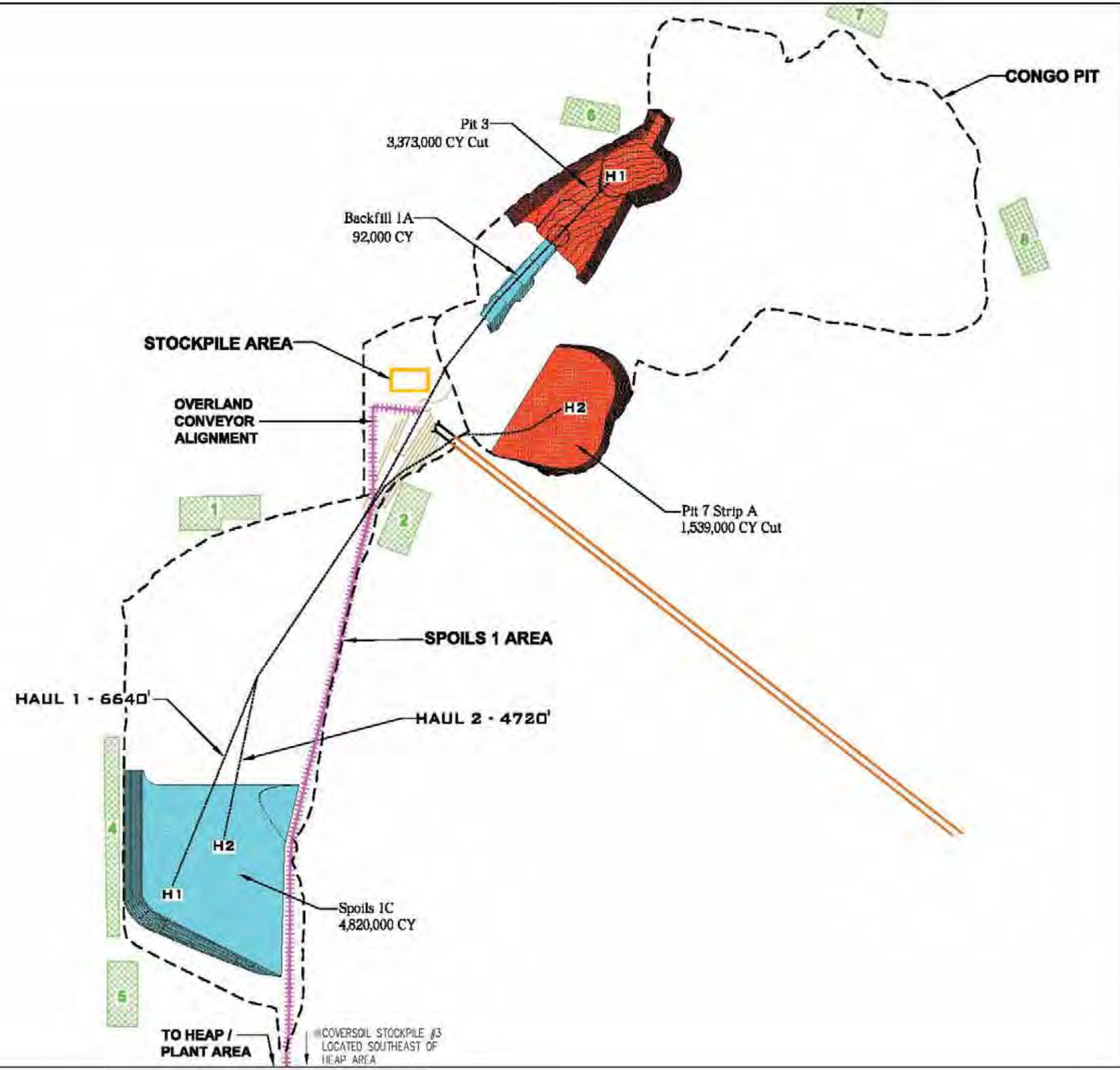
TITAN URANIUM USA INC

REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.5

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 2
SCALE: 1"=800'
DRAWN BY: CDS
DATE: 3/16/11

BRS ENGINEERING



LEGEND

- EXISTING GROUND CONTOURS CI-10'
- DESIGN CONTOURS CI-10'
- MINE EXCAVATION AREA
- MINE SPOILS AREA
- PROJECT BOUNDARY
- PROPOSED DECLINE ALIGNMENT
- PROPOSED UNDERGROUND MINE PORTAL
- CONVEYOR ALIGNMENT
- PROPOSED COVERSOIL STOCKPILE
- HAUL ROUTE

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800' 0 400' 800'
1 inch = 800'

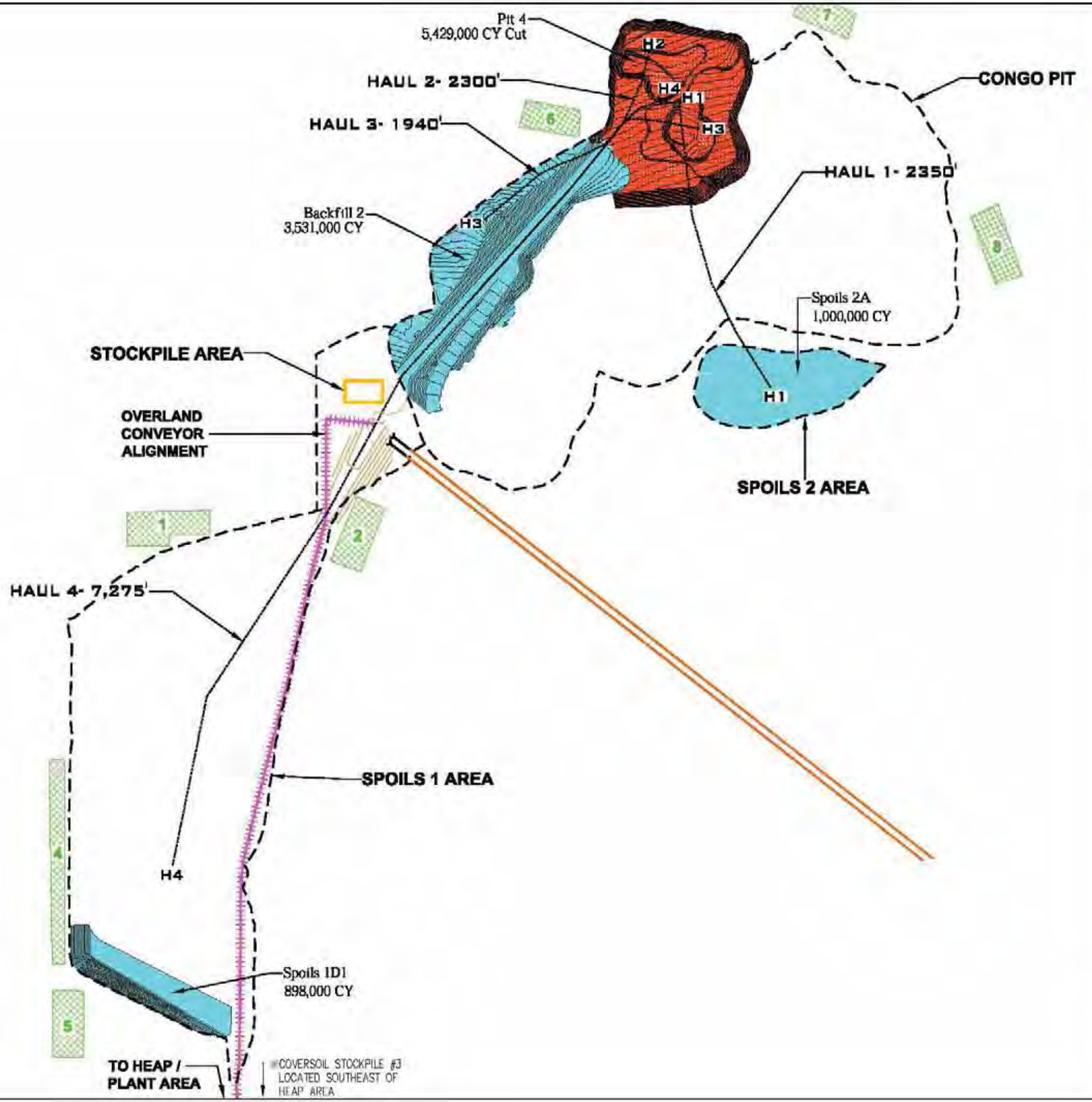
TITAN URANIUM USA INC

REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.6

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 3
SCALE: 1"=800'
DRAWN BY: CDS
DATE: 3/16/11

BRS ENGINEERING



LEGEND

- EXISTING GROUND CONTOURS CI-10'
- DESIGN CONTOURS CI-10'
- MINE EXCAVATION AREA
- MINE SPOILS AREA
- PROJECT BOUNDARY
- PROPOSED DECLINE ALIGNMENT
- PROPOSED UNDERGROUND MINE PORTAL
- CONVEYOR ALIGNMENT
- PROPOSED COVERSOIL STOCKPILE
- HAUL ROUTE

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500' 0 400' 800'
1 inch = 800'

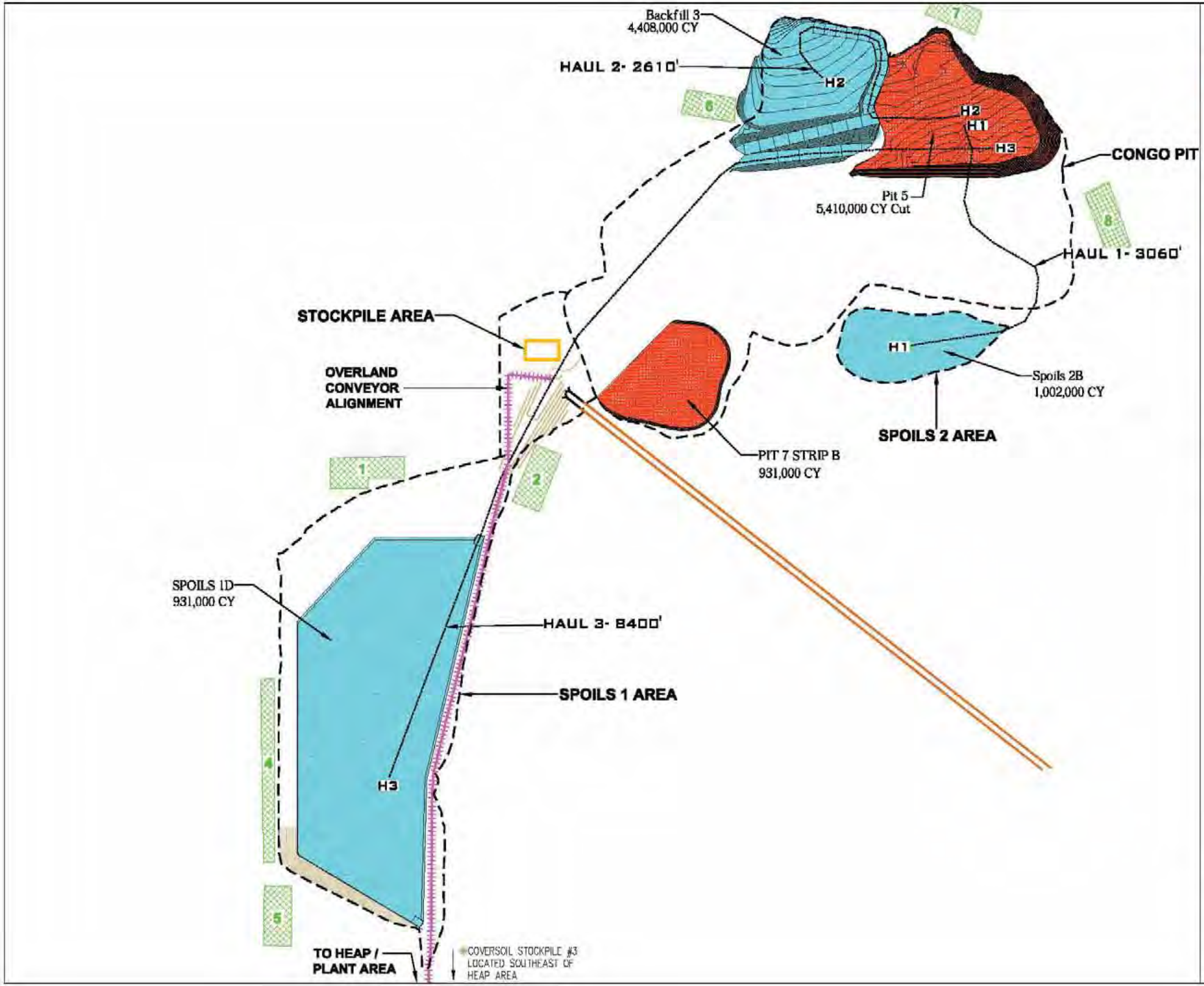
TITAN URANIUM USA INC

REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.7

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 4
SCALE: 1"=800'
DRAWN BY: CDS
DATE: 3/16/11

BRS ENGINEERING



LEGEND

- EXISTING GROUND CONTOURS CI-10'
- DESIGN CONTOURS CI-10'
- MINE EXCAVATION AREA
- MINE SPOILS AREA
- PROJECT BOUNDARY
- PROPOSED DECLINE ALIGNMENT
- PROPOSED UNDERGROUND MINE PORTAL
- CONVEYOR ALIGNMENT
- 1 PROPOSED COVERSOIL STOCKPILE
- HAUL ROUTE

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500' 0 400' 800'
1 inch = 800'

TITAN URANIUM USA INC

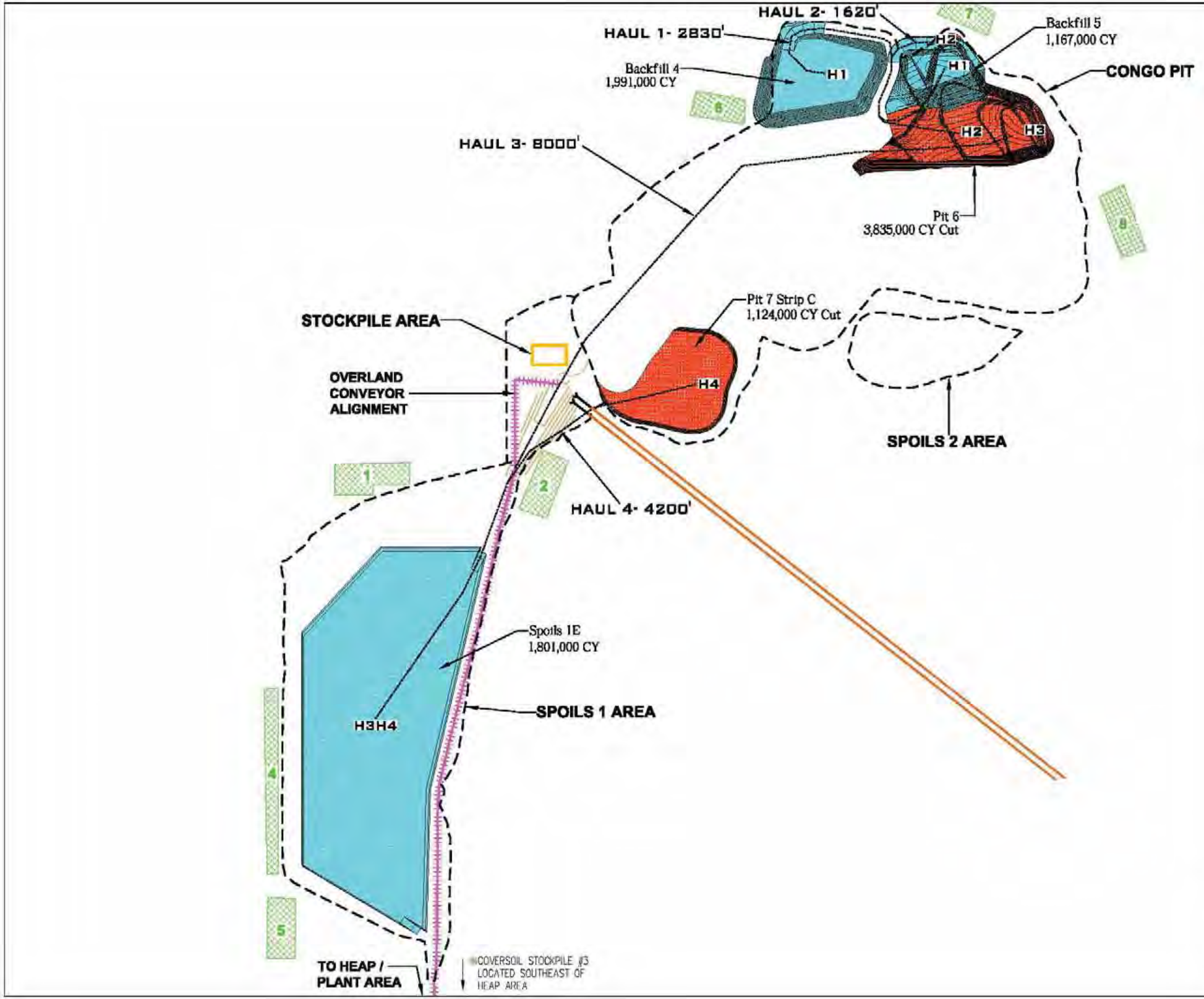
REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.8

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 5

SCALE: 1"=800'
DRAWN BY: CDS
DATE: 3/16/11

BRS ENGINEERING



LEGEND

- EXISTING GROUND CONTOURS CI-10'
- DESIGN CONTOURS CI-10'
- MINE EXCAVATION AREA
- MINE SPOILS AREA
- PROJECT BOUNDARY
- PROPOSED DECLINE ALIGNMENT
- PROPOSED UNDERGROUND MINE PORTAL
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- PROPOSED COVERSOIL STOCKPILE
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500' 0 400' 800'
1 inch = 800'

TITAN URANIUM USA INC

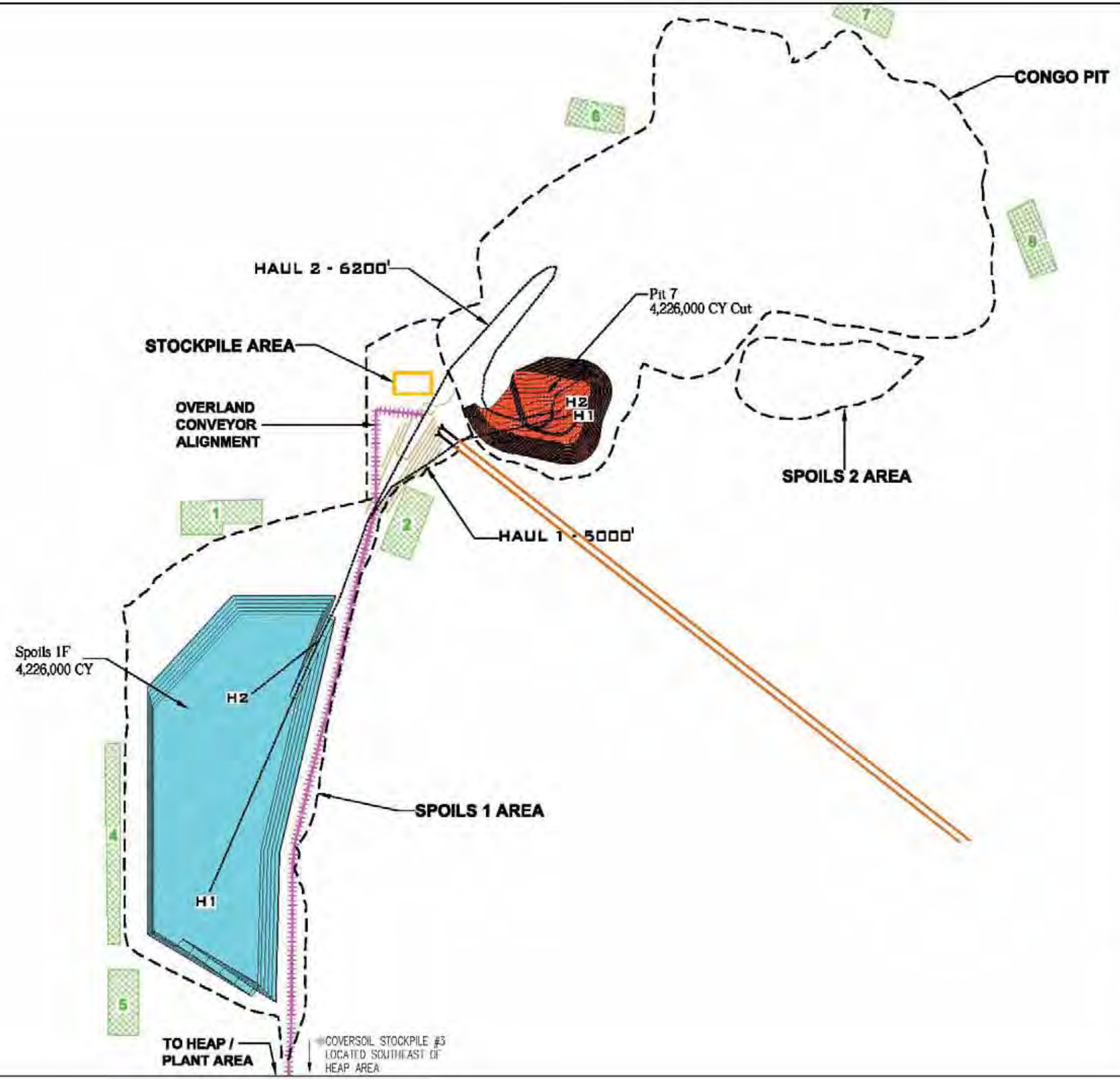
REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.9

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 6

SCALE: 1"=800'
DRAWN BY: CDS
DATE: 3/16/11

BRS ENGINEERING



LEGEND

- EXISTING GROUND CONTOURS CI-10'
- DESIGN CONTOURS CI-10'
- MINE EXCAVATION AREA
- MINE SPOILS AREA
- PROJECT BOUNDARY
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- PROPOSED UNDERGROUND MINE PORTAL
- CONVEYOR ALIGNMENT
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- HAUL ROUTE

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500' 0 400' 800'
1 inch = 800'

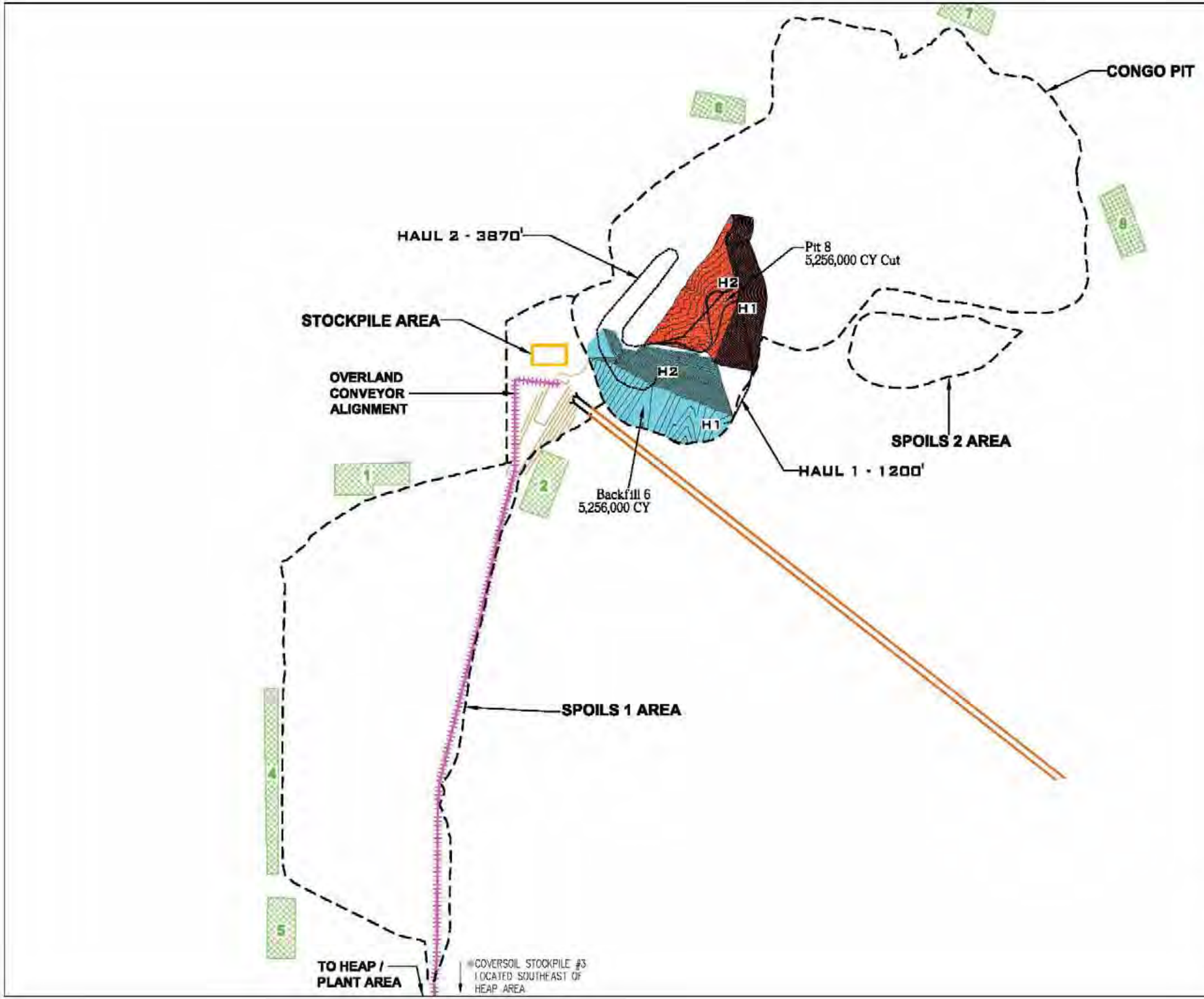
TITAN URANIUM USA INC

REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.10

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 7
SCALE: 1"=800'
DRAWN BY: CDS
DATE: 3/16/11

BRS ENGINEERING



LEGEND

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500' 0 400' 800'
1 inch = 800'

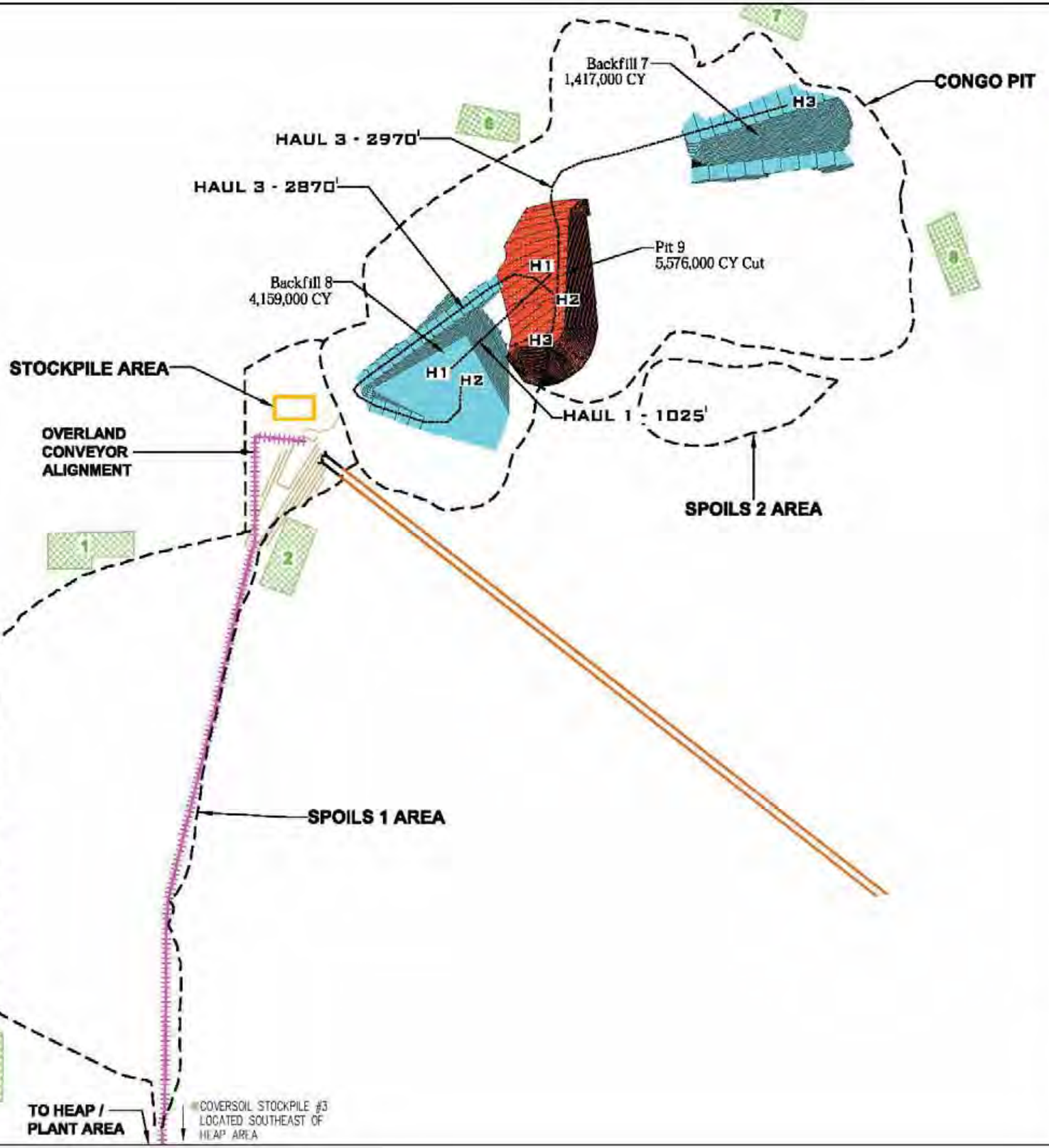
TITAN URANIUM USA INC

REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.11

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 8
SCALE: 1"=800'
DRAWN BY: CDS
DATE: 3/16/11

BRS ENGINEERING



LEGEND

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500' 0 400' 800'
1 inch = 800'

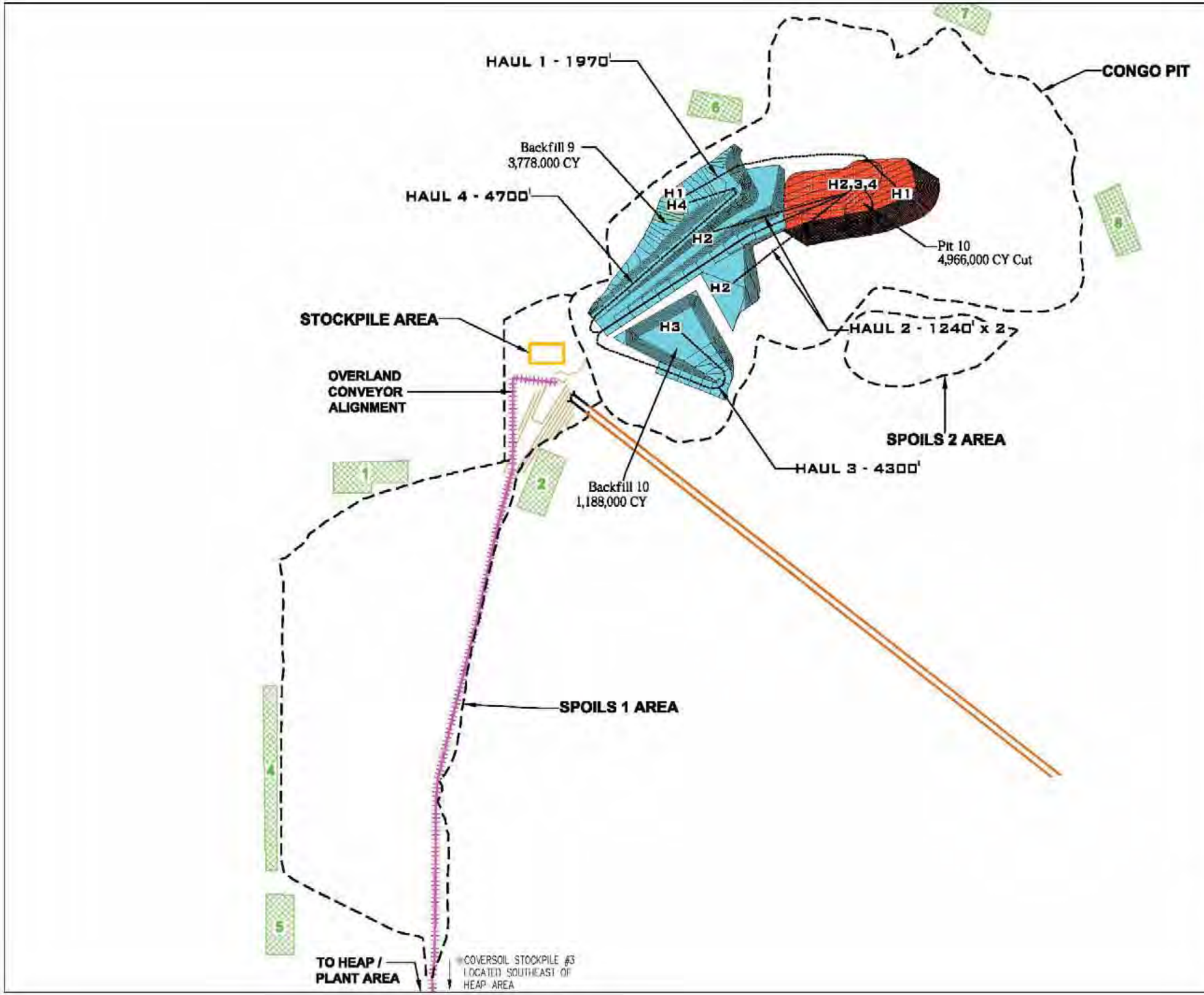
TITAN URANIUM USA INC

REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.12

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 9
SCALE: 1"=800'
DRAWN BY: CDS
DATE: 3/16/11

BRS ENGINEERING



LEGEND

- EXISTING GROUND CONTOURS CI-10'
- DESIGN CONTOURS CI-10'
- MINE EXCAVATION AREA
- MINE SPOILS AREA
- PROJECT BOUNDARY
- PROPOSED DECLINE ALIGNMENT
- PROPOSED UNDERGROUND MINE PORTAL
- CONVEYOR ALIGNMENT
- PROPOSED COVERSOIL STOCKPILE
- HAUL ROUTE

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800' 0 400' 800'
1 inch = 800'

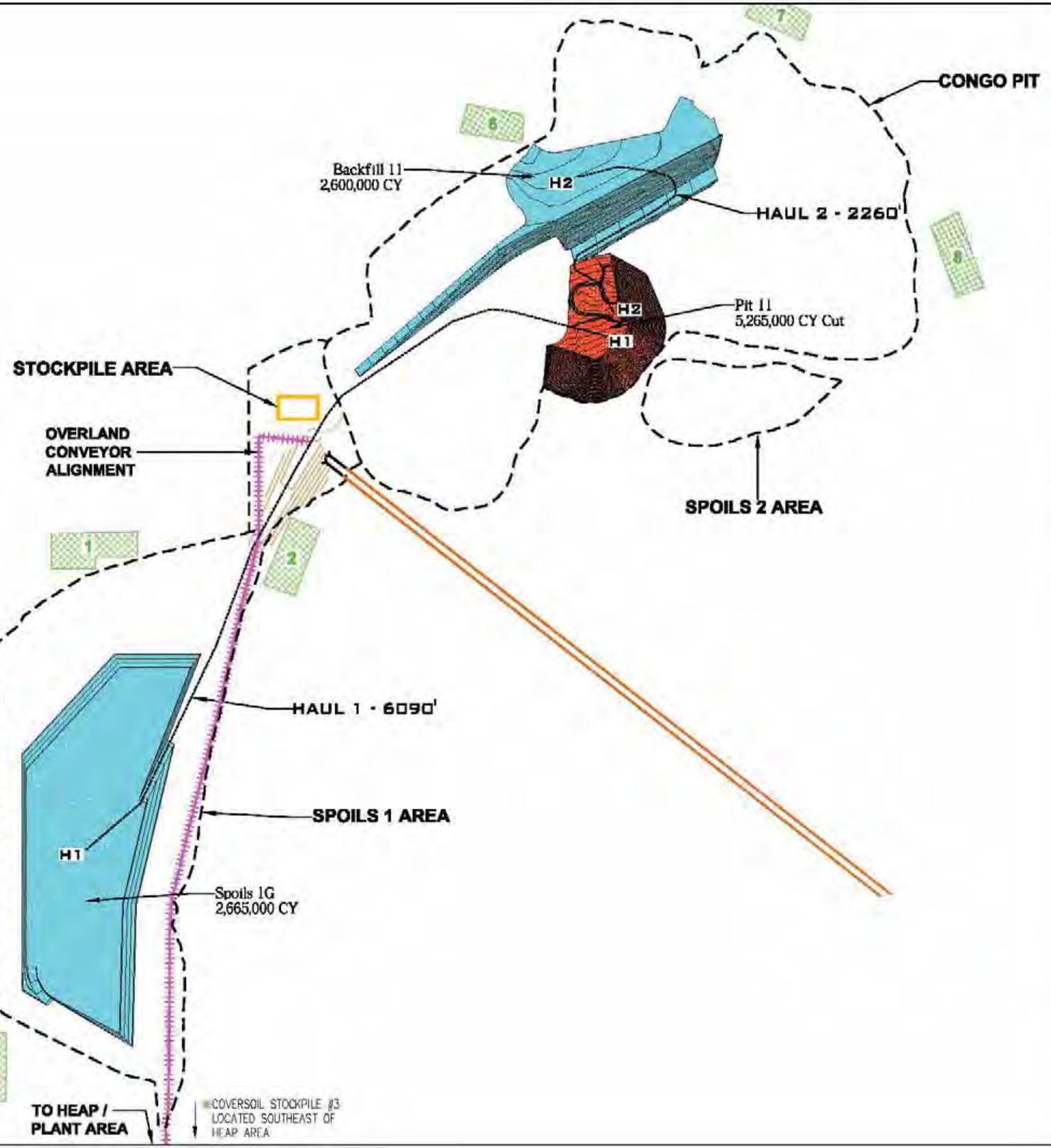
TITAN URANIUM USA INC

REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.13

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 10
SCALE: 1"=800'
DRAWN BY: CDS
DATE: 3/16/11

BRS ENGINEERING



LEGEND

- EXISTING GROUND CONTOURS CI-10'
- DESIGN CONTOURS CI-10'
- MINE EXCAVATION AREA
- MINE SPOILS AREA
- PROJECT BOUNDARY
- PROPOSED DECLINE ALIGNMENT
- PROPOSED UNDERGROUND MINE PORTAL
- CONVEYOR ALIGNMENT
- 1 PROPOSED COVERSOIL STOCKPILE
- HAUL ROUTE

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500' 0 400' 800'
1 inch = 800'

TITAN URANIUM USA INC

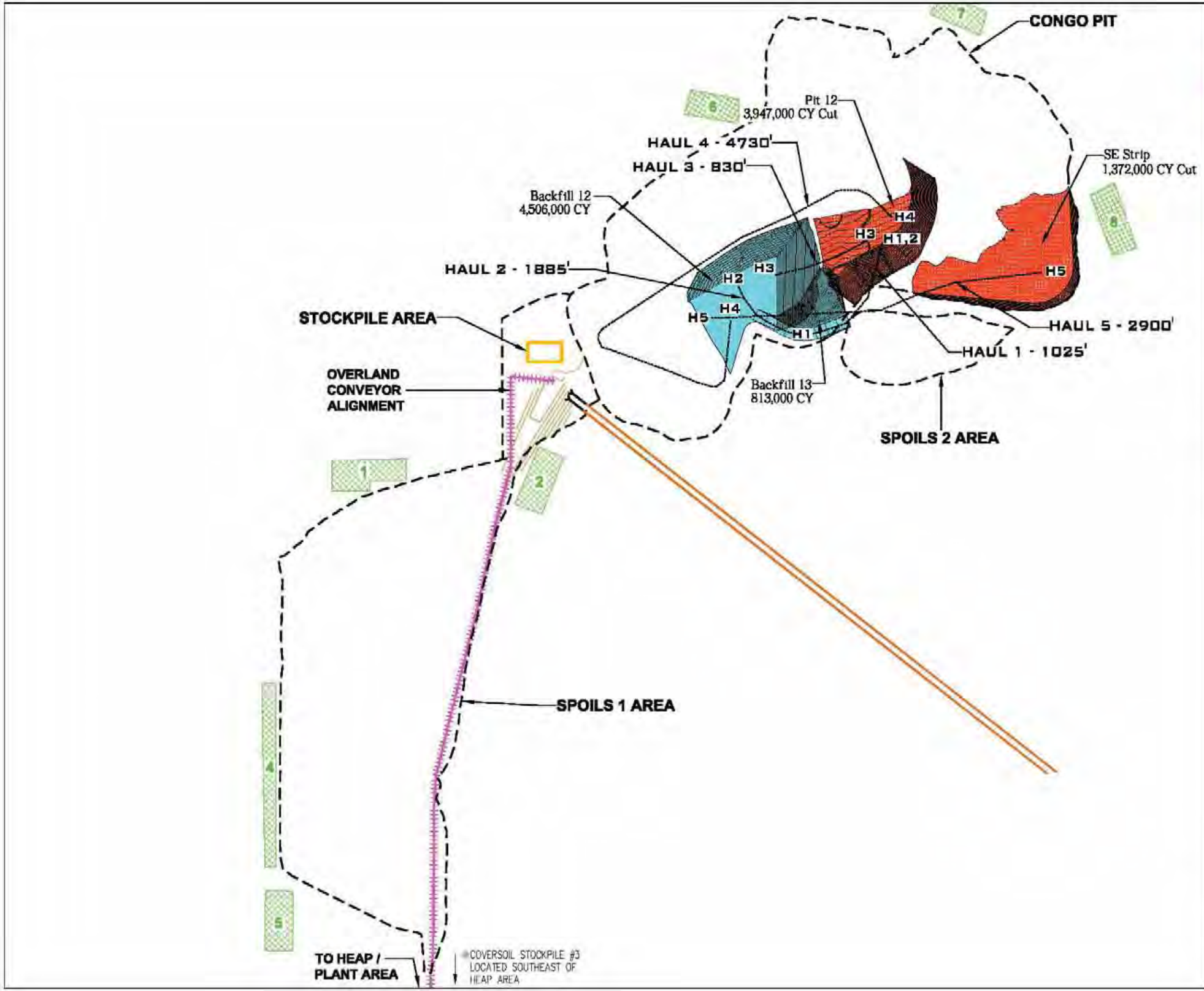
REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.14

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 11

SCALE: 1"=800'
DRAWN BY: CDS
DATE: 3/16/11

BRS ENGINEERING



LEGEND

- EXISTING GROUND CONTOURS CI-10'
- DESIGN CONTOURS CI-10'
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- MINE SPOILS AREA
- PROJECT BOUNDARY
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- HAUL ROUTE

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500' 0 400' 800'
1 inch = 800'

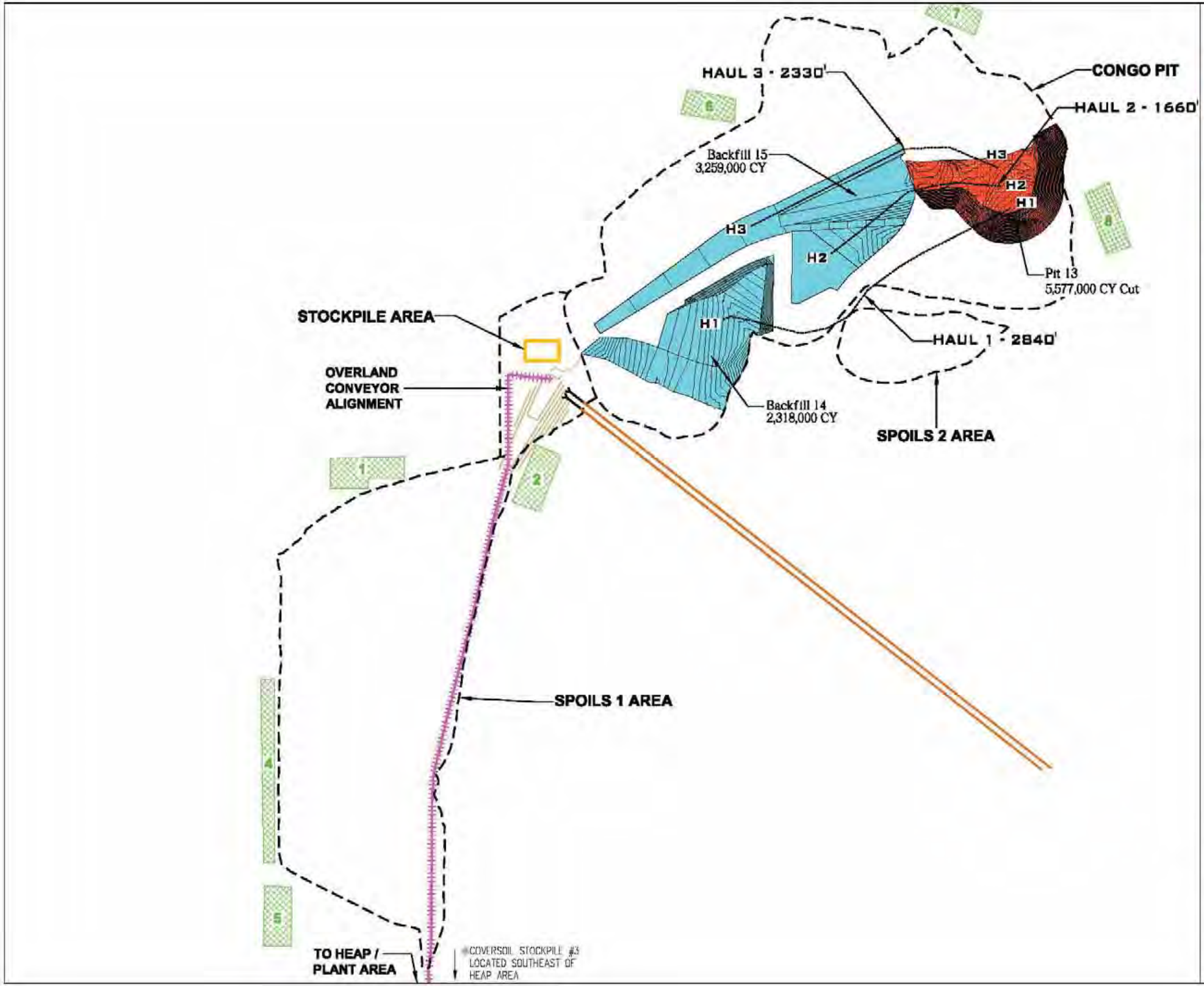
TITAN URANIUM USA INC

REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.15

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 12
SCALE: 1"=800'
DRAWN BY: CDS
DATE: 3/16/11

BRS ENGINEERING



LEGEND

- EXISTING GROUND CONTOURS CI-10'
- DESIGN CONTOURS CI-10'
- MINE EXCAVATION AREA
- MINE SPOILS AREA
- PROJECT BOUNDARY
- PROPOSED DECLINE ALIGNMENT
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- CONVEYOR ALIGNMENT
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500' 0 400' 800'
1 inch = 800'

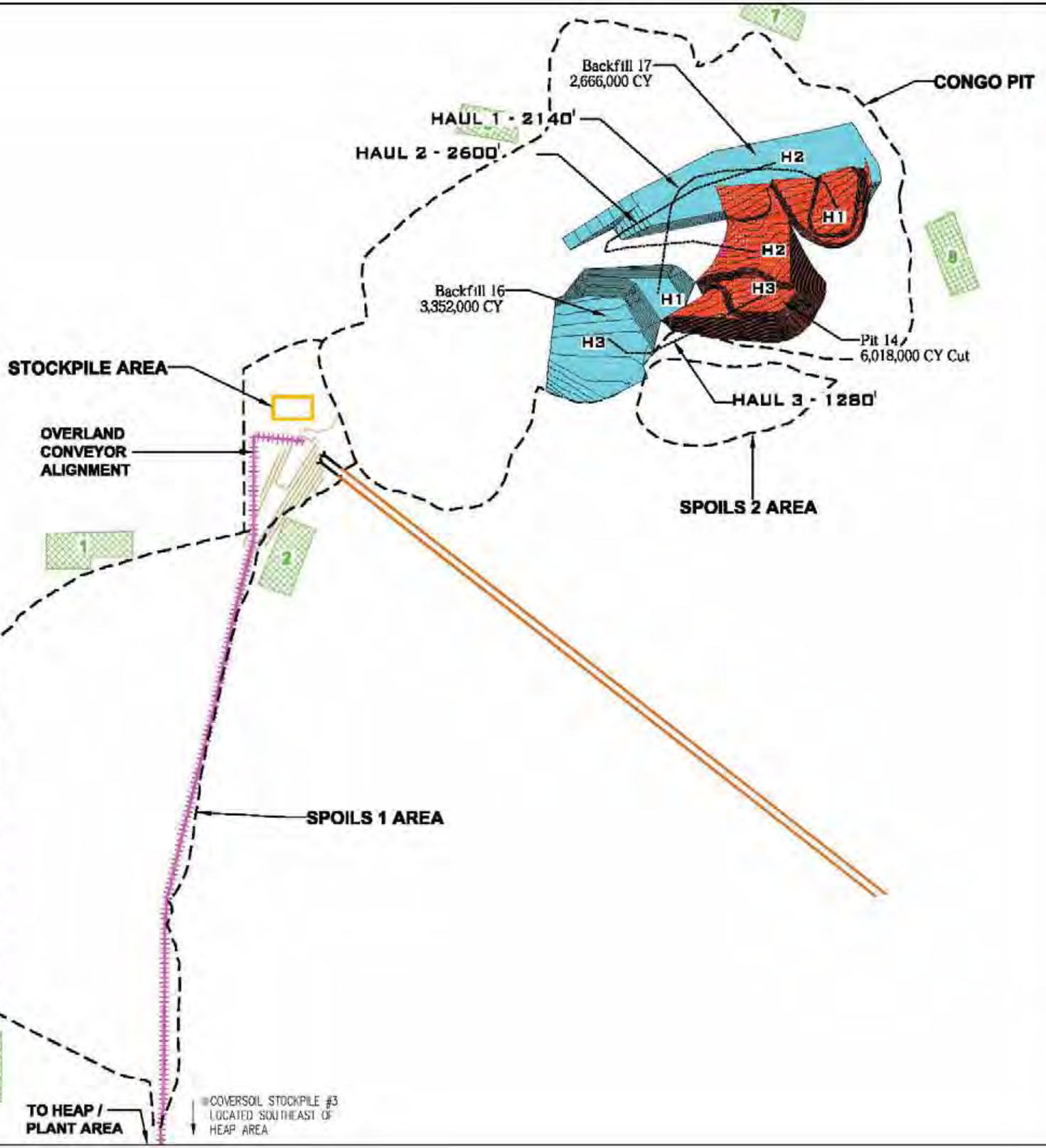
TITAN URANIUM USA INC

REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.16

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 13
SCALE: 1"=800'
DRAWN BY: CDS
DATE: 3/16/11

BRS ENGINEERING



LEGEND

- EXISTING GROUND CONTOURS CI-10'
- DESIGN CONTOURS CI-10'
- MINE EXCAVATION AREA
- MINE SPOILS AREA
- PROJECT BOUNDARY
- PROPOSED DECLINE ALIGNMENT
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500' 0 400' 800'
1 inch = 800'

TITAN URANIUM USA INC

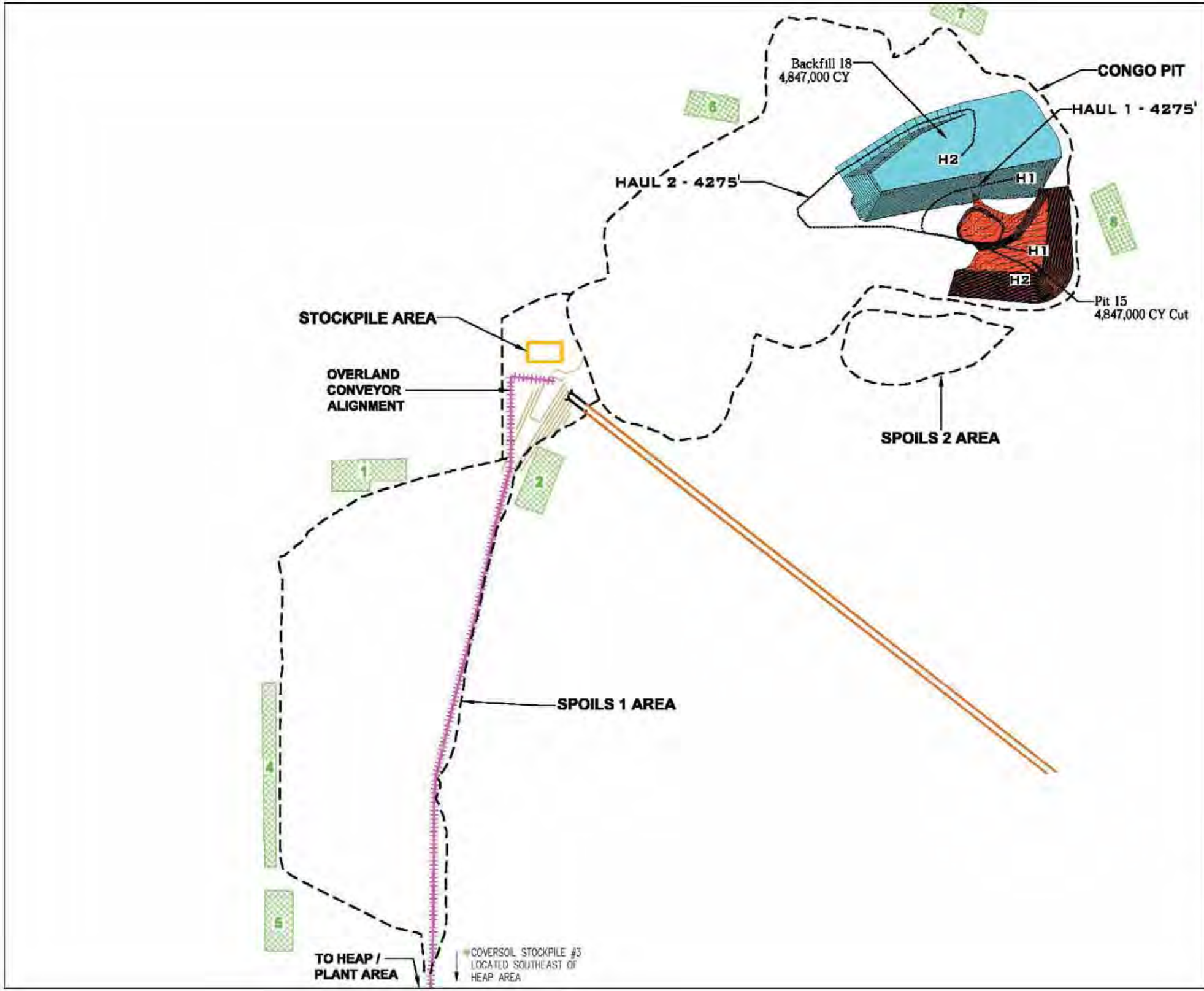
REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.17

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 14

SCALE: 1"=800'
DRAWN BY: CDS
DATE: 3/16/11

BRS ENGINEERING



LEGEND

- EXISTING GROUND CONTOURS CI-10'
- DESIGN CONTOURS CI-10'
- MINE EXCAVATION AREA
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- PROJECT BOUNDARY
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500' 0 400' 800'
1 inch = 800'

TITAN URANIUM USA INC

REVISION DATE: 3/16/11
CAD FILENAME: 2012 SEQUENCE
DWG. NUMBER: 16.18

SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

PIT 15
SCALE: 1"=800'
DRAWN BY: CDS
DATE: 3/16/11

BRS ENGINEERING

Existing underground mines will be encountered during open pit operations. Ground control for the underground mine areas that will be uncovered during the pit excavation will be conducted by the use of a crew including a medium sized excavator, a medium sized dozer, and oversight by a field engineer with access to the digital 3D modeling of the underground mines as completed from the historic underground mine mapping. The basic procedure for this process will be to locate shallow underground zones in the pit floor based upon the mine mapping, over-excavate and collapse the mine voids, and backfill the area prior to placing other mining equipment in the area. Assistance in location of the voids may be provided by in-pit drilling equipment and/or shallow seismic testing.

Based upon site relief in the Congo area, surface water inflow can be kept out of the pit by ditching around the highwall crest and day-lighting the runoff to offsite drainages. In addition to controlling surface water runoff, the ditching will serve as a safety berm to prevent access to the highwall. All offsite drainage will meet the requirements of the WYPDES permit, including appropriate sediment control measures. Excess groundwater inflow in the pit will be used as a part of the daily operation of the pit for dust control on haul roads or consumed at the processing facility. Current data indicates that ground water flow will average less than 150 gpm and will not be encountered until pit 6.

Equipment cycle times have been estimated for both stripping and mining using the specific haulage profiles shown on the open pit sequence maps, Figures 16.4 through 16.18. Based on these estimates, both the stripping and mining can be accomplished in a single 10-hour daily shift, 5 days per week. The proposed primary stripping fleet consists of three 637 CAT twin engine scrapers paired with three 631 CAT single engine scrapers in a push-pull configuration. Both stripping and mining equipment will be supported by dozers and motor graders. The nominal capacity of this configuration is capable of excavation and placement of over 5 million cubic yards of material on an annual basis. Mining will be completed in a selective manner with a 2 cubic-yard bucket on a medium-size excavator loading two 35 ton articulated mine haul trucks. The mining crew is projected to have excess annual capacity and will thus be responsible for handling the majority of the internal mine waste. Table 16.1 summarizes the open pit mining fleet.

In-pit grade control will be a critical aspect of the project. This type of sandstone hosted uranium deposit may exhibit local variability in grade and thickness, and potentially variable radiometric equilibrium conditions. To address these conditions, minimize mine dilution, and maximize mine extraction: a tiered systematic grade control program is essential. The following describes the grade control program.

Tier 1, Radiometric Scanning: Field personnel equipped with calibrated hand-held gamma meters will be assigned to both the stripping and mining crews.

Tier 2, In-Pit Assay: A portable sample trailer equipped with an portable x-ray fluorescence (XRF) assay instrument, and appropriate sample preparation equipment will be located in the pit. Mine trucks will be sampled with an auger system; the samples prepped and assayed; and trucks will then be directed to deliver the material to the stockpile or mine waste area depending on the results of the assay.

Tier 3, Quality Control: As each mine truck is sampled and tested, the field assay sample rejects will be collected and separated by grade ranges. The daily pit samples will be blended and split to provide representative samples which will in turn be assayed at the plant laboratory. The plant lab will assay both solid and liquid samples and will be subject to an outside and/or third party quality control system.

Table 16.1 Open Pit Mining Equipment List

Major Equipment	Number	Capacity/ Load Factor
330 LX Linkbelt Excavator	2	2 cy
16M CAT Motor Grader	1	
140 CAT Motor Grader	1	
D-8 CAT Track Dozer	1	
D-9 CAT Track Dozer	1	
CS64 CAT Vibratory Compactor	1	
A30D Volvo Articulated Truck	2	32 tons/load
980 CAT Wheel Loader	1	6 cy
637 CAT Twin Engine Scraper	3	29 cy/load
631G Scraper	3	
623 CAT Self Loading Scraper	1	18 cy/load
Water truck 3000 gallons	1	3000 gal
Water truck 8000 gallons	1	8000 gal
Mine Support vehicles		
Fuel/lube truck	1	
Mechanical service truck	1	
Rubber tire backhoe Cat 414e with forklift attachment	1	
Pickup trucks, 4WD, ¾-ton	8	

Sheep Underground

The Sheep Underground mine has operated as a conventional underground mine on three separate occasions. No reports of adverse ground conditions, flooding, cave-ins or any other unusual mining conditions are known to the author. The historic mining method was a modified room and pillar method using conventional techniques. Jacklegs were used to drill out the rounds and underground track haulage was used to transport the ore to Shaft No. 1.

The mining method proposed going forward is also a conventional method using a modified room and pillar method, but utilizing modern mining equipment such as jumbo drills and 7 cubic-yard scooptrams for haulage. A new double entry decline will be constructed starting at the Paydirt Pit and ending below the deposit. Haulage from the mine will be accomplished via a 36 inch conveyor within one of the double declines. The existing shafts will be used for ventilation purposes only, with exhaust fans mounted at both locations. If the existing borehole ventilation shafts can be rehabilitated, they will be used as intake shafts. The deposit is comprised of 16 mineralized zones with a total thickness of approximately 350 feet. The deposit will be mined primarily from bottom to top.

Sheep Underground mining method summary:

- Development drifts will utilize dual openings. 10 by 15 foot openings will be used for haulage, and 8 by 10 foot openings will be used for transportation and ventilation.
- Mining panels will utilize multiple entries depending on the width of the zone. Entries will be approximately 12 feet wide, minimum of 6 feet high and averaging 7 feet high.
- Crosscuts will be placed on 100 foot centers.
- Mining will be completed by advance and retreat methods.
- Advance mining is accomplished by driving approximately 12 by 7 feet drifts within zones meeting cutoff grade. Multiple drifts will be driven parallel to one another with crosscuts on 100 foot centers. The parallel drifts will be 27 feet apart on centerline.
- This will leave a pillar with a dimension of approximately 15 feet wide and 90 feet long. On retreat mining, these pillars are removed if they meet cutoff grade.
- Ventilation will be provided by two 500 HP exhaust fans at Sheep No. 1 Shaft and Sheep No. 2 Shaft assisted by multiple portable face fans. Ventilation requirements for this mine are approximately 220,000 cubic feet of air per minute. Fresh air must be directed across each of the working faces and through the drifts designed for personnel transport.
- Mine ventilation which meets standards for removal of diesel emissions will also provide adequate ventilation for radon gas given the anticipated mining grades.
- Blasting of the rock, both for development and mining, will be done by drilling 8 to 12 foot blast holes using jumbo drilling rigs and filling the blast holes with ANFO (Ammonium Nitrate and Fuel Oil).
- Haulage from the working faces to the haulage conveyor or to the loading chutes will utilize 7 cubic yard scooptrams which load, haul and dump mined product.
- Mined product will be hauled through development drifts directly to the decline or to two loading chutes to transport the mined product to the decline. The decline will be equipped with a 36 inch conveyor which will take the mined product and waste, when necessary, to the surface. Haulage drifts will be kept as level as practicable, not exceeding ten percent grades.
- The roof and sidewalls in the drifts, both mining and development, will be supported with rock bolts and wire mesh. A rock bolting machine which can drill holes both vertically and horizontally will place the rock bolts on approximately four foot centers as the drifts advance.

There will be overlap of bolting and wire mesh between each round to ensure proper ground control coverage.

- Boreholes to construct loading chutes or to aid in ventilation will be drilled using raised boring methods.
- Waste rock, whenever possible, will be placed in mined out workings to minimize haulage of hauling the mined waste to the surface. When it is not possible, the waste will be taken to the surface where it will be stockpiled for final reclamation.
- Ground Support will, in addition to bolting and meshing, include:
  - In areas that do not have mineralized zones directly above them temporary support will be placed such as timbers or concrete cylinders, and the pillars will be removed allowing the roof to ultimately fail.
  - In areas with ore pods directly overhead, the adjoining rooms will be backfilled using a cemented backfill. The backfill will be a combination of waste rock mixed with three and one half percent cement and three and one half percent fly ash. This backfill will exceed the strength of the native rock and prevent the roof from failing and diluting the ore pods above them.

The planned location of the new decline in relation to the existing workings is shown on Figure 16.19. This figure is also an index map for the annual underground mine sequence maps which follow. Figures 16.20 through 16.31 show the annual development and mining sequence for through eleven years of planned mining. Table 16.2 summarizes the underground mine fleet.

Table 16.2 - Underground Mining Equipment List

Major Equipment	Number	Capacity/ Load Factor
Model Boomer S1L Face Drill	3	
Model Boomer 104 Face Drill	1	
Model Boomer S1D-DH Face Drill	1	
Model Boltec SL Bolter	7	
Model Boltec 235 Bolter	2	
Model ST7LP Scooptram	4	7 cy
Model ST7 Scooptram	2	7 cy
Mine Support vehicles		
Powder Buggies	2	
Bobcat Skidsteer	2	
Utility Truck - Flatbed	1	
Scissor Truck	8	
Man trips	6	
Pickup trucks, 4WD, ¾-ton	8	
Fuel/lube truck	1	
Mechanical service truck	1	
Forklift	1	

CONGO PIT

SPOILS 2 AREA

SPOILS 1 AREA

SHEEP I

SHEEP II

SHEEP
UNDERGROUND
SHEET LAYOUT

LEGEND

EXISTING GROUND CONTOURS CI-10'

PROPOSED DECLINE ALIGNMENT

PROJECT BOUNDARY AREAS

SHEEP UNDERGROUND SHEET LAYOUT

HISTORIC WORKINGS 6300 LEVEL

1,000' 0 500' 1,000'

1 inch = 1,000'

TITAN URANIUM USA INC

REVISION DATE: 3/16/11

CAD FILENAME: 2012 SEQUENCE

DWG. NUMBER: 16.19

SHEEP MOUNTAIN MINES

FREMONT COUNTY, WYOMING

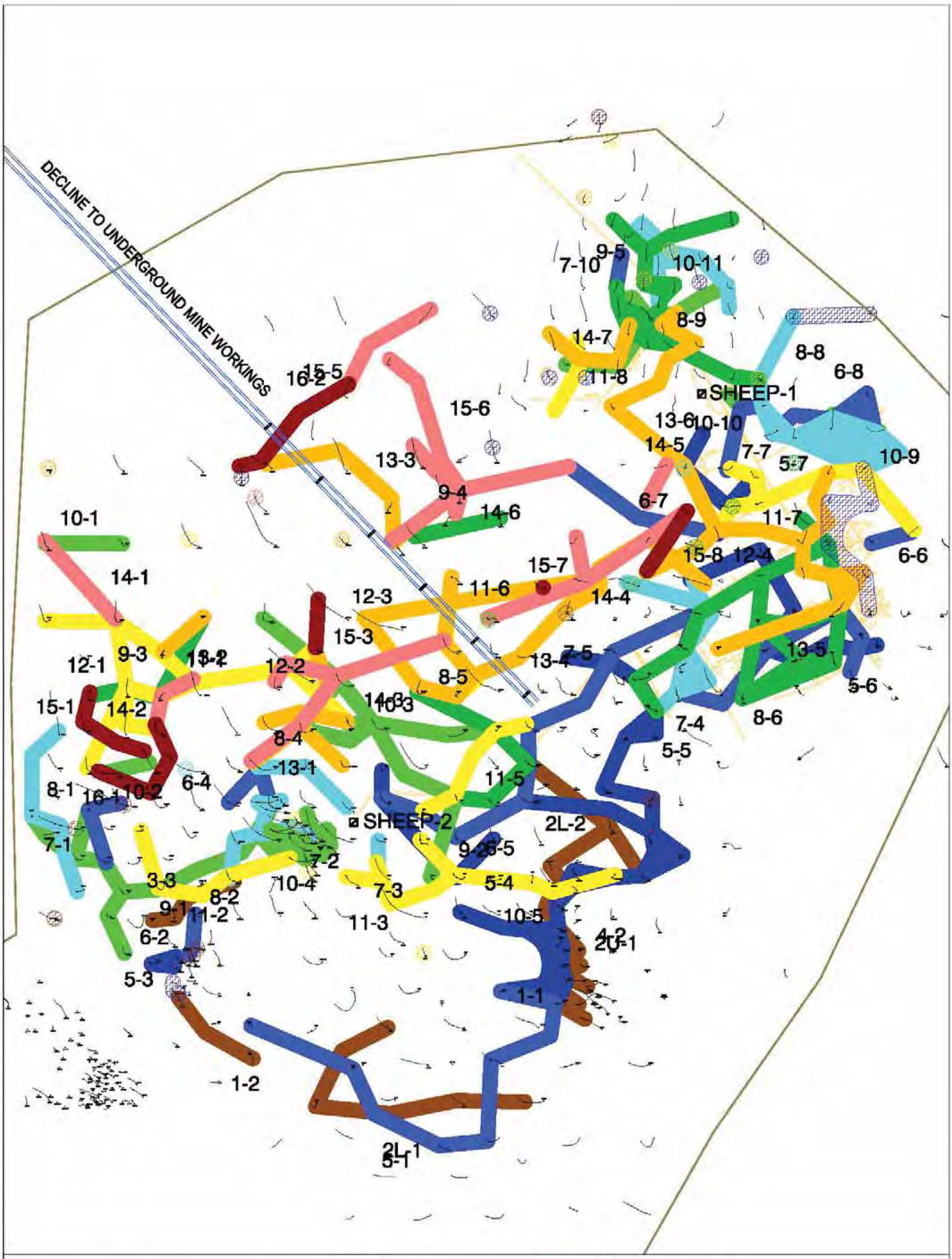
SHEEP UNDERGROUND LOCATION

SCALE: 1"=1,000'

DATE: 3/16/11

DRAWN BY: CDS

BRS ENGINEERING



BRS ENGINEERING	**SHEEP UNDERGROUND SEQUENCE**	**SHEEP MOUNTAIN MINES MINE PERMIT 381C**	REVISION DATE: 03/21/12	TITAN URANIUM USA INC
	SCALE: 1"=600' DATE: 03/21/12		CAD FILENAME: Sheep Underground Figures 2012.dwg	
	DRAWN BY: RSR		DWG. NUMBER: FIGURE 16.20	

DECLINE TO UNDERGROUND MINE WORKINGS

16-2

SHEEP-1

15-8

15-7

15-3

15-1

16-1

SHEEP-2

LEGEND

MINING AREA

MINERAL RESOURCE OUTSIDE MINING

PROJECT BOUNDARY

PROPOSED DECLINE ALIGNMENT

DEVELOPMENT

HISTORIC WORKINGS 6300 LEVEL

N

600' 0 300' 600'

1 inch = 600'

BRS ENGINEERING

SHEEP UNDERGROUND YEAR 1

SCALE: 1"=600'

DRAWN BY: RSR

DATE: 03/21/12

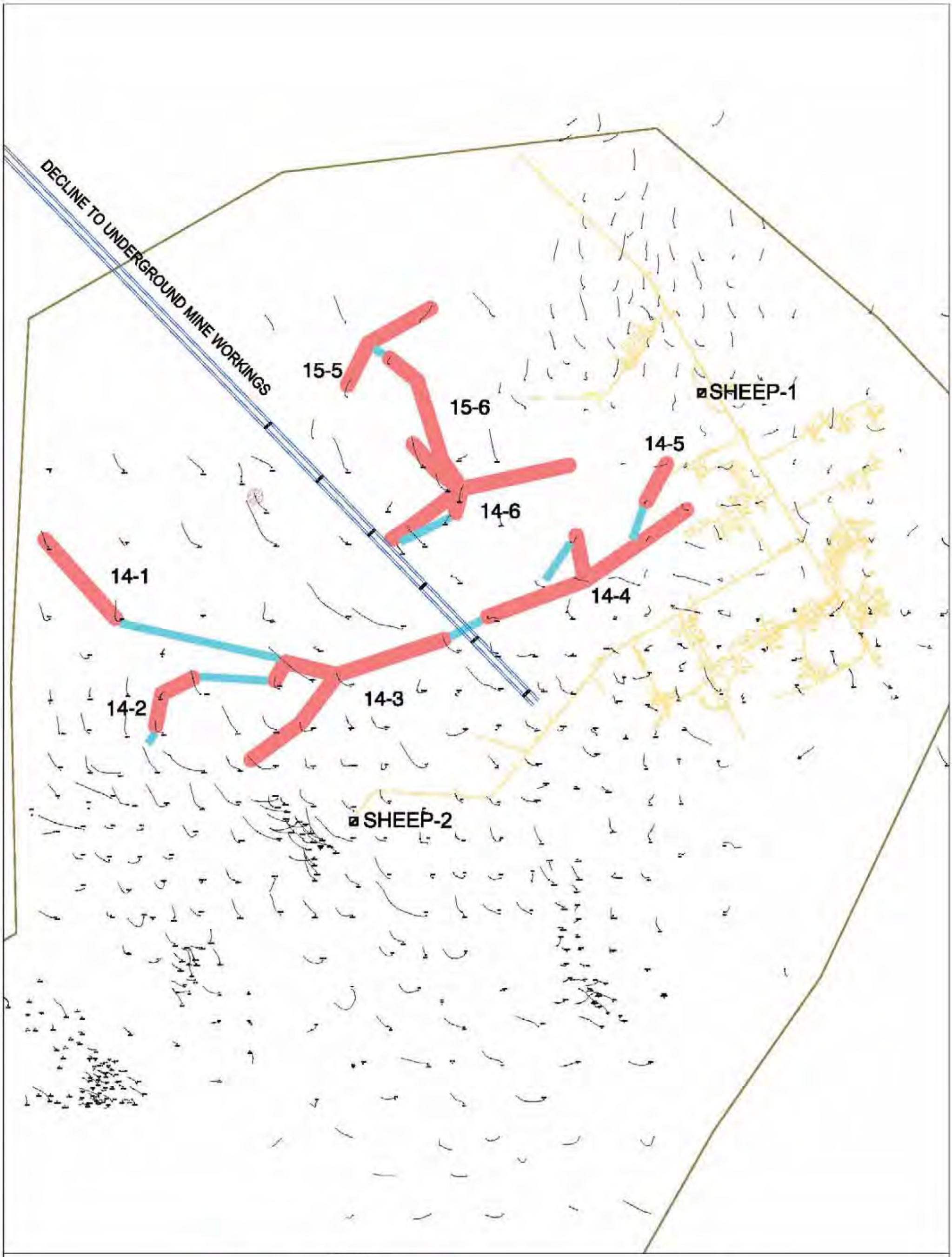
SHEEP MOUNTAIN MINES
MINE PERMIT 381C

REVISION DATE: 03/21/12

CAD FILENAME: Sheep Underground Figures 2012.dwg

DWG. NUMBER: FIGURE 16.21

TITAN URANIUM USA INC



BRS ENGINEERING	**SHEEP UNDERGROUND YEAR 2**	**SHEEP MOUNTAIN MINES MINE PERMIT 381C**	REVISION DATE: 03/21/12	TITAN URANIUM USA INC
	SCALE: 1"=600' DATE: 03/21/12		CAD FILENAME: Sheep Underground Figures 2012.dwg	
	DRAWN BY: RSR		DWG. NUMBER: FIGURE 16.22	

DECLINE TO UNDERGROUND MINE WORKINGS

14-7

SHEEP-1

13-6

13-3

12-4

12-3

13-2

12-2

13-4

13-5

13-1

SHEEP-2

LEGEND

MINING AREA

MINERAL RESOURCE OUTSIDE MINING

PROJECT BOUNDARY

PROPOSED DECLINE ALIGNMENT

DEVELOPMENT

HISTORIC WORKINGS 6300 LEVEL

N

600' 0 300' 600'

1 inch = 600'

BRS ENGINEERING

SHEEP UNDERGROUND YEAR 3

SCALE: 1"=600'

DRAWN BY: RSR

DATE: 03/21/12

SHEEP MOUNTAIN MINES
MINE PERMIT 381C

REVISION DATE: 03/21/12

CAD FILENAME: Sheep Underground Figures 2012.dwg

DWG. NUMBER: FIGURE 16.23

TITAN URANIUM USA INC

DECLINE TO UNDERGROUND MINE WORKINGS

11-8

SHEEP-1

11-7

11-6

12-1

11-1

11-5

SHEEP-2

11-2

11-3

10-5

LEGEND

MINING AREA

MINERAL RESOURCE OUTSIDE MINING

PROJECT BOUNDARY

PROPOSED DECLINE ALIGNMENT

DEVELOPMENT

HISTORIC WORKINGS 6300 LEVEL

N

600' 0 300' 600'

1 inch = 600'

BRS ENGINEERING

SHEEP UNDERGROUND YEAR 4

SCALE: 1"=600'

DRAWN BY: RSR

DATE: 03/21/12

SHEEP MOUNTAIN MINES
MINE PERMIT 381C

REVISION DATE: 03/21/12

CAD FILENAME: Sheep Underground Figures 2012.dwg

DWG. NUMBER: FIGURE 16.24

TITAN URANIUM USA INC

DECLINE TO UNDERGROUND MINE WORKINGS

10-11

SHEEP-1

10-10

10-9

10-1

10-3

10-2

SHEEP-2

9-2

10-4

9-1

LEGEND

MINING AREA

MINERAL RESOURCE OUTSIDE MINING

PROJECT BOUNDARY

PROPOSED DECLINE ALIGNMENT

DEVELOPMENT

HISTORIC WORKINGS 6300 LEVEL

N

600' 0 300' 600'

1 inch = 600'

BRS ENGINEERING

SHEEP UNDERGROUND YEAR 5

SCALE: 1"=600'

DRAWN BY: RSR

DATE: 03/21/12

SHEEP MOUNTAIN MINES
MINE PERMIT 381C

REVISION DATE: 03/21/12

CAD FILENAME: Sheep Underground Figures 2012.dwg

DWG. NUMBER: FIGURE 16.25

TITAN URANIUM USA INC

DECLINE TO UNDERGROUND MINE WORKINGS

9-5

SHEEP-1

9-4

9-3

8-5

8-6

SHEEP-2

LEGEND

MINING AREA

MINERAL RESOURCE OUTSIDE MINING

PROJECT BOUNDARY

PROPOSED DECLINE ALIGNMENT

DEVELOPMENT

HISTORIC WORKINGS 6300 LEVEL

N

600' 0 300' 600'

1 inch = 600'

BRS ENGINEERING

SHEEP UNDERGROUND YEAR 6

SCALE: 1"=600'

DRAWN BY: RSR

DATE: 03/21/12

SHEEP MOUNTAIN MINES
MINE PERMIT 381C

REVISION DATE: 03/21/12

CAD FILENAME: Sheep Underground Figures 2012.dwg

DWG. NUMBER: FIGURE 16.26

TITAN URANIUM USA INC

DECLINE TO UNDERGROUND MINE WORKINGS

8-9

8-8

SHEEP-1

7-4

8-4

8-1

SHEEP-2

7-2

7-3

8-2

LEGEND

MINING AREA

MINERAL RESOURCE OUTSIDE MINING

PROJECT BOUNDARY

PROPOSED DECLINE ALIGNMENT

DEVELOPMENT

HISTORIC WORKINGS 6300 LEVEL

N

600' 0 300' 600'

1 inch = 600'

BRS ENGINEERING

SHEEP UNDERGROUND YEAR 7

SCALE: 1"=600'

DRAWN BY: RSR

DATE: 03/21/12

SHEEP MOUNTAIN MINES
MINE PERMIT 381C

REVISION DATE: 03/21/12

CAD FILENAME: Sheep Underground Figures 2012.dwg

DWG. NUMBER: FIGURE 16.27

TITAN URANIUM USA INC

DECLINE TO UNDERGROUND MINE WORKINGS

7-10

SHEEP-1

6-8

7-7

6-7

6-6

7-5

6-4

SHEEP-2

7-1

6-5

6-2

5-1

LEGEND

MINING AREA

MINERAL RESOURCE OUTSIDE MINING

PROJECT BOUNDARY

PROPOSED DECLINE ALIGNMENT

DEVELOPMENT

HISTORIC WORKINGS 6300 LEVEL

N

600' 0 300' 600'

1 inch = 600'

BRS ENGINEERING

SHEEP UNDERGROUND YEAR 8

SCALE: 1"=600' | DATE: 03/21/12

DRAWN BY: RSR

SHEEP MOUNTAIN MINES
MINE PERMIT 381C

REVISION DATE: 03/21/12

CAD FILENAME: Sheep Underground Figures 2012.dwg

DWG. NUMBER: FIGURE 16.28

TITAN URANIUM USA INC

DECLINE TO UNDERGROUND MINE WORKINGS

SHEEP-1

5-7

5-6

5-5

SHEEP-2

5-4

4-2

5-3

LEGEND

MINING AREA

MINERAL RESOURCE OUTSIDE MINING

PROJECT BOUNDARY

PROPOSED DECLINE ALIGNMENT

DEVELOPMENT

HISTORIC WORKINGS 6300 LEVEL

600' 0 300' 600'

1 inch = 600'

BRS ENGINEERING

SHEEP UNDERGROUND YEAR 9

SCALE: 1"=600' | DATE: 03/21/12

DRAWN BY: RSR

SHEEP MOUNTAIN MINES
MINE PERMIT 381C

REVISION DATE: 03/21/12

CAD FILENAME: Sheep Underground Figures 2012.dwg

DWG. NUMBER: FIGURE 16.29

TITAN URANIUM USA INC

DECLINE TO UNDERGROUND MINE WORKINGS

SHEEP-1

3-8

4-4

SHEEP-2

4-3

3-5

3-1

4-1

LEGEND

MINING AREA

MINERAL RESOURCE OUTSIDE MINING

PROJECT BOUNDARY

PROPOSED DECLINE ALIGNMENT

DEVELOPMENT

HISTORIC WORKINGS 6300 LEVEL

N

600' 0 300' 600'

1 inch = 600'

BRS ENGINEERING

SHEEP UNDERGROUND YEAR 10

SCALE: 1"=600' DATE: 03/21/12

DRAWN BY: RSR

SHEEP MOUNTAIN MINES
MINE PERMIT 381C

REVISION DATE: 03/21/12

CAD FILENAME: Sheep Underground Figures 2012.dwg

DWG. NUMBER: FIGURE 16.30

TITAN URANIUM USA INC

DECLINE TO UNDERGROUND MINE WORKINGS

SHEEP-1

SHEEP-2

2L-2

3-3

2U-1

1-1

1-2

2L-1

LEGEND

MINING AREA

MINERAL RESOURCE OUTSIDE MINING

PROJECT BOUNDARY

PROPOSED DECLINE ALIGNMENT

DEVELOPMENT

HISTORIC WORKINGS 6300 LEVEL

N

600' 0 300' 600'

1 inch = 600'

BRS ENGINEERING	**SHEEP UNDERGROUND YEAR 11** SCALE: 1"=600' DATE: 03/21/12 DRAWN BY: RSR	**SHEEP MOUNTAIN MINES MINE PERMIT 381C**	REVISION DATE: 03/21/12 CAD FILENAME: Sheep Underground Figures 2012.dwg DWG. NUMBER: FIGURE 16.31	TITAN URANIUM USA INC

SECTION 17: RECOVERY METHODS

The planned uranium recovery method at the Sheep Mountain Project is conventional heap leaching which includes: the mobilization of uranium values into solution from the mined material stacked on the heap pad via acid leaching, delivery of uranium rich solutions to a recovery plant (mill), and concentration of the uranium to a saleable product via solvent extraction, and precipitation systems that will be capable of producing up to 2 million lbs U_3O_8 annually. Annual uranium production as shown on Table 21.1 – Production Profile – Preferred Alternative, varies from as low as 366,000 pounds during start up to over 1.5 million pounds annually.

Uranium recovery at Sheep Mountain will include the following processes:

- stacking of mined material on the heap leach pad;
- application of leach solution;
- collection of pregnant leach solution (PLS);
- filtering of sand and fines from PLS;
- solvent extraction to concentrate and purify the extracted uranium;
- precipitation of uranium oxide, “yellowcake”;
- washing, drying, packaging, storage and loading of yellowcake product;
- management of process solid and liquid waste and bleed streams; and,
- in-place reclamation of all “byproduct material”, within the meaning of Section11e.(2) of the *Atomic Energy Act* of 1954, as ameneded hereinafter refered to as (11e.(2)), in a double lined disposal cell, which will include the existing lined heap leach pad and the Raffinate and Collection Ponds.

The uranium recovery or “milling” process equipment will be housed in two buildings within the proposed mill boundary. All solvent extraction processing and equipment will be located within the SX Plant to isolate potential fire hazards associated with the organic solutions. Yellowcake processing, including precipitation, washing, drying, packaging, storage, and loading will be located within the Process Plant. Reagent storage and distribution systems will be located within or next to the process buildings.

Processing (‘milling’) begins as run-of-mine product is stacked on the double lined heap leach pad using covered belt conveyors and a covered radial arm stacking (RAS) belt conveyor as depicted on Figure 17.1 – Typical Heap Leach Schematic. The stacked mined material is leveled with low ground pressure equipment forming a “lift”. A protective layer of gravel is place on top of the lift to mitigate fugitive dust and transport of radioparticulates from the heap. A drip irrigation system using conventional plastic piping is then installed on top of the completed lift, and the heap is ready for the application of leach solutions.

Figure 17.1 - Typical Heap Leach Schematic

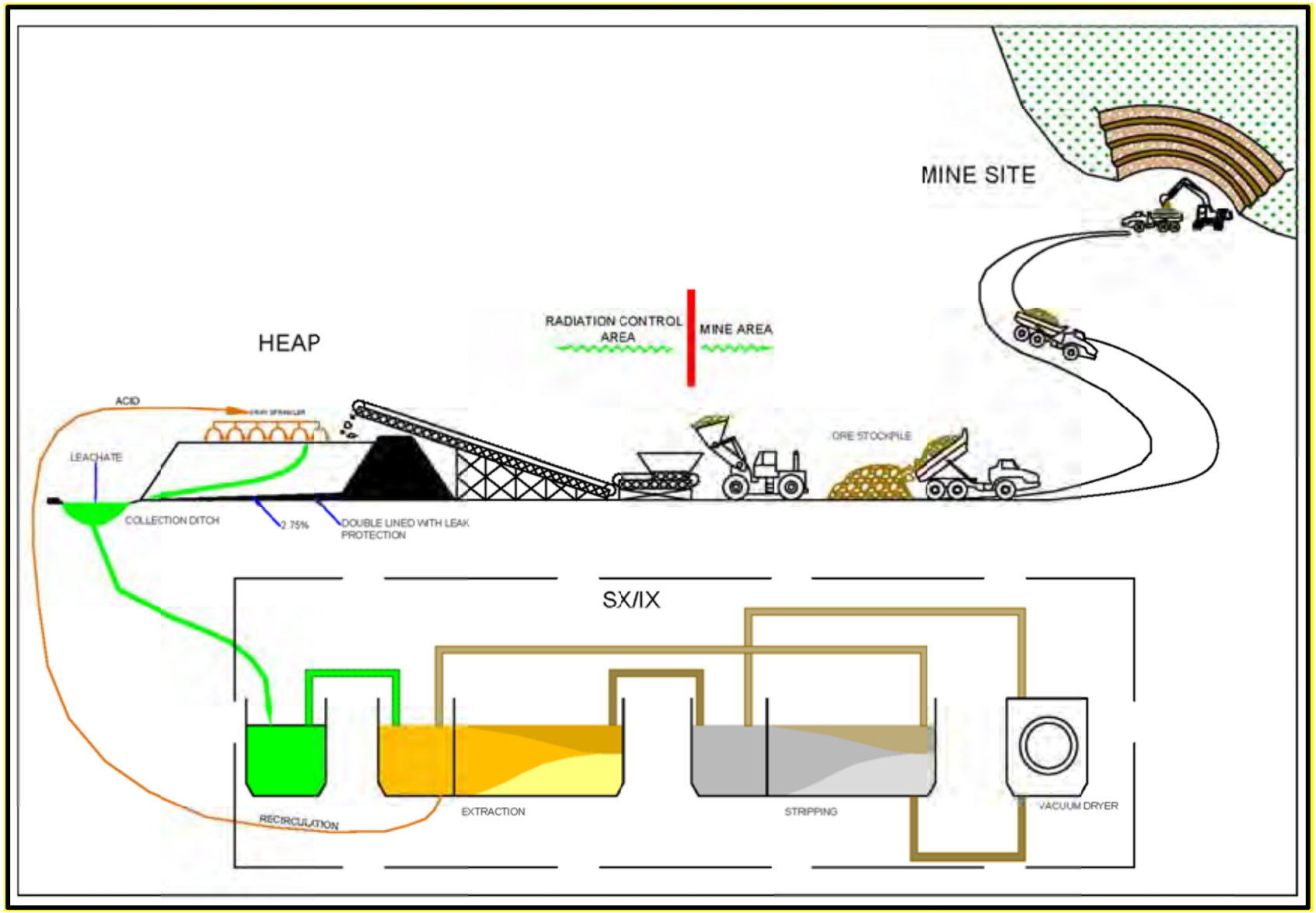
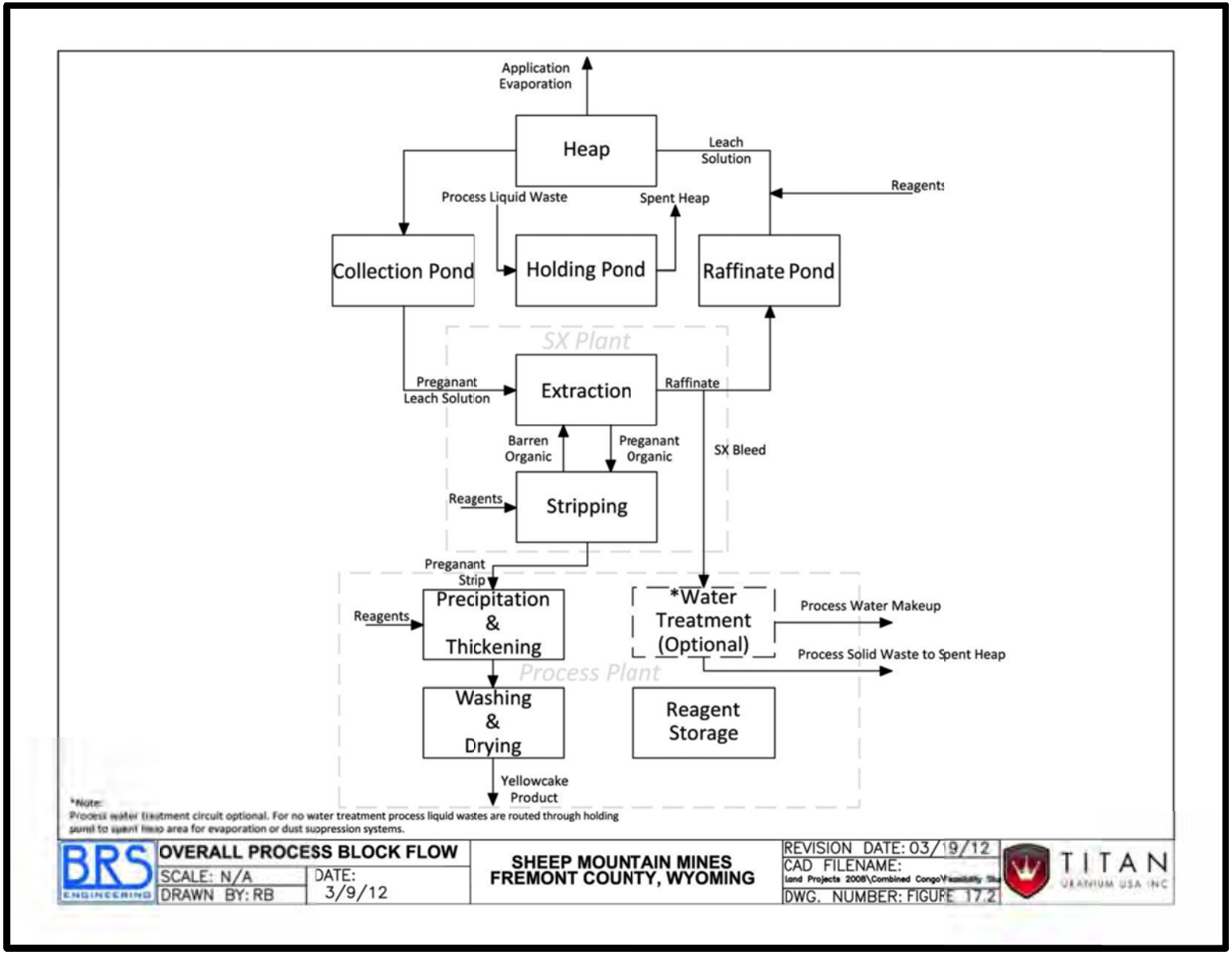


Figure 17.2 – Overall Process Block Flow Diagram, depicts the general flow of solutions and uranium within the heap and recovery plant. The process begins with the pumping of the leach solution from the Raffinate Pond to the top of the heap where it is applied using drip emitters. The leach solution consists of water; an oxidizing agent, such as sodium chlorate, to convert the uranium to a soluble valence; and a complexing agent, sulfuric acid, to complex and solubilize the uranium. The result of the heap leaching process is a pregnant leach solution (PLS) containing a mixture of uranyl trisulfate (UTS) and uranyl disulfate (UDS). PLS percolates through the stacked mined material via gravity drainage and is intercepted by the heap leach pad liner system and gathered into collection pipes, which drains by gravity into the collection pond. The PLS is then pumped from the collection pond into the solvent extraction (SX) Plant where the PLS is filtered to remove suspended particulates, and the uranium is recovered using organic phase ionic exchange solutions. The resulting, uranium-depleted solution called barren leach solution or "raffinate," flows by gravity from the SX Plant to the raffinate pond. This raffinate solution is refortified with additional acid and oxidant and additional make-up water and is then pumped back to the heap in a continuous cycle. From the SX Plant, uranium-rich strip solution is sent to the Process Plant for precipitation of a yellow, solid uranium oxide known as 'yellowcake.' The precipitated yellowcake is then washed, dried, and packaged into sealed 55 gallon drums for shipment. Yellowcake is shipped via truck to an enrichment facility in regular shipments approximately once every two weeks.

Figure 17.2 - Overall Process Block Flow Diagram



To prevent buildup of undesirable ionic species in the circulating leach solution a bleed stream representing a small, specified portion of the total leach solution flow is removed from the circuit. The bleed stream is sent to the holding pond for storage and disposal. The bleed stream and other liquid wastes are disposed by evaporation in the holding pond or on spent portions of the heap leach pad.

The application, collection, stripping, and re-application of the leach solution is a continuous process. The mined material remains under leach throughout primary leaching, resting of the mined material between leach solution applications, secondary leaching, potential rinsing, and draindown. Only after the mined material is drained does it become a waste product under current regulatory definitions.

Site Layout and Construction

The general site layout and construction requirements for the heap leach and processing facility are shown on Figure 17.3. The construction costs related to the heap leach and processing facility are included in the capital cost estimate.

The heap leach pad area is approximately 40 acres which is subdivided into four cells which can be loaded with up to four lifts of approximately 25 feet in height or a total of 100 feet. The stacking rate for individual lifts will depend on the variable mine production rates. Table 21.1 – Production Profile – Preferred Alternative shows the planned heap loading sequence which is graphically depicted on Figures 17.4 through 17.8 which show the operation of the heap by lift and year of operation.

Column leach testing; which simulates flow rates and uranium recovery from the heap and geotechnical testing of the leached material and its reactions, physical and chemical, with the liner; shows that it is possible to operate the heap leach up to four lifts or a final height of 100 feet. Production sequencing and cost estimation at his time have made the conservative assumption that active leaching should be limited to two lifts, rather than four, or 50 feet in height. To utilize the full capacity of the heap pad, leached material would be relocated within the pad area to allow successive leaching in no more than two vertical lifts. A description of this sequential process follows:

- Figure 17.4 – McIntosh Heap – Lift 1 Sequence, shows the completion of the first 25 foot lift in approximately 7 years based on the production profile for the preferred alternative.
- Lift 1 would be followed in succession by Lift 2, as depicted on Figure 17.5. Lift 2 would be completed early during year 11.
- Beginning late in year 10 the relocation of spent leach material from cell 1 would be relocated and placed on top of leached material in cell 3 as depicted in Figure 17.6. This would allow reuse of cell 1 to complete year 11 leaching.
- The relocation of spent leach material would continue such that cell 2 would be available for reuse in year 12.
- As depicted on Figure 17.7, leaching for year 13 and a portion of year 14 would be accomplished as a second lift over cells 1 and 2.
- As depicted on Figure 17.8, late in year 14 the spent material from year 13 would be relocated and placed on top of waste from previous years over cells 3 and 4.
- The relocation of spent leach material would continue in year 14 to accommodate the leaching of the final planned mine materials in years 15 and 16.

- During the relocation process of the leach material the material will be graded to its final configuration prior to capping , cover, and reclamation.
- The final spent heap configuration is shown on Figure 17.9, prior to placement of cap and cover.
- Once the spent heap is capped and covered. Final grading to nominal 6:1 reclamation slopes will then be completed to achieve long term stability requirements and the site will be covered with a combination of rock and/or vegetative cover. Refer to Figure 17.10.

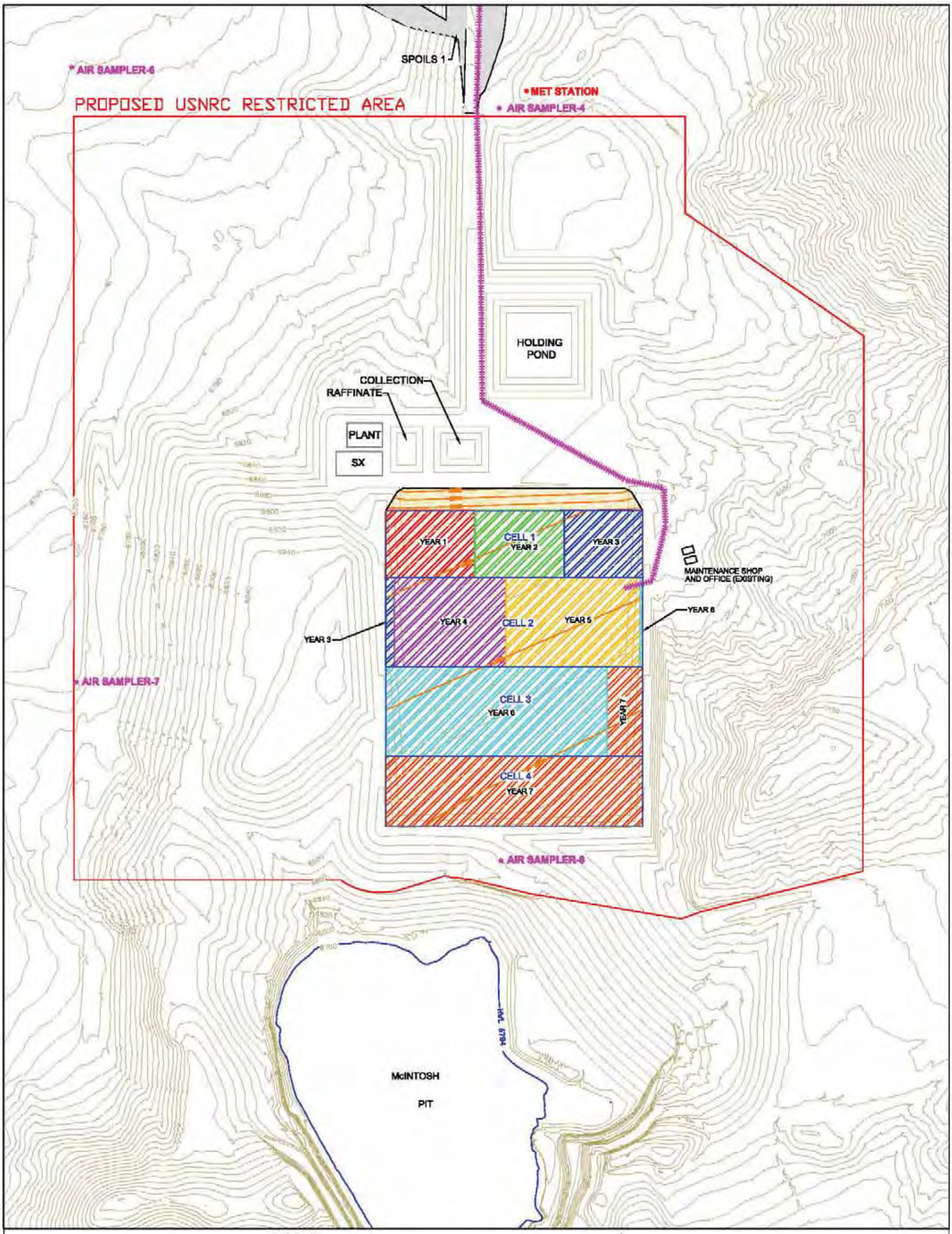
Reclamation and decommissioning of the Sheep Mountain Project uranium recovery facility generally will consist of decommissioning the process plant, the SX Plant, ancillary facilities, and the holding pond, and placing the associated 11e.(2) byproduct material within the on-site disposal cell. The lined portions of the collection pond, raffinate pond, and heap leach pad will become the disposal cell for long-term isolation and stabilization of all liquid and solid 11e.(2) byproduct material associated with the planned operations. The proposed NRC License Area and other areas potentially affected by licensed operations will be assessed and remediated to meet appropriate release criteria, and the disposal cell will be capped with an NRC approved cover to ensure compliance with the requirements of 10 CFR 40.

After the heap leach pad area has been completely filled and leaching, potential rinsing and potential treatment and subsequent drainage have been completed, spent heap materials, now tailings, will be graded to their final configuration. Any 11e.(2) byproduct material, including material from the plant decommissioning, liner from the Holding Pond, and any other 11e.(2) byproduct materials requiring disposal will be appropriately sized and placed within the lined disposal cell prior to completing the reclamation cover. The final cover will consist of a clay based radon barrier, a gravel/cobble capillary break, biointrusion and freeze/thaw protection layer, and a rip rap erosion protection layer. This final reclamation cover is designed to be a zero water balance cover using vegetation as a planned component of the cover water balance.

Costs for decommissioning and reclamation of the heap and mineral processing facilities are incorporated into the operating costs estimate, Section 21.

Detailed estimated of capital and operating requirements and costs have been completed (Lyntek, 2012). The following is a summary of the operating requirements energy, water, and consumable materials required for the mineral processing facility. Process water and electrical power are currently available on site and are adequate to serve the planned operations.

- Electrical Power – Operation of the mineral processing plant, heap leach, conveyor system, and all related appurtenances is estimated to consume 598 kilo watts per hour (kW/hr) or approximately 5 million kW per year.
- Water demand – at full capacity the mineral processing facility will have an average flow rate of 360 gallons per minute (gpm) . However, the majority of the flow is recalculated resulting in an estimate net water demand of 135 gpm. Process water will be provided from mine dewatering.
- The largest single consumable material with respect to mineral processing is sulfuric acid. Consumption of sulfuric acid is estimated at 30 pounds per ton. At the peak production of 660,000 tons per year this equates to approximately 10,000 tons of sulfuric acid per year. Sulfuric acid is available from an acid plant located in Riverton, Wyoming approximately 60 road miles from the site.



LEGEND

- PROPOSED CONVEYOR ALIGNMENT
- EXISTING GROUND CONTOURS CI-10'
- HEAP LEACH PAD CONTOURS CI-10'
- ANNUAL HEAP SEQUENCE
- AIR MONITOR
- MET STATION

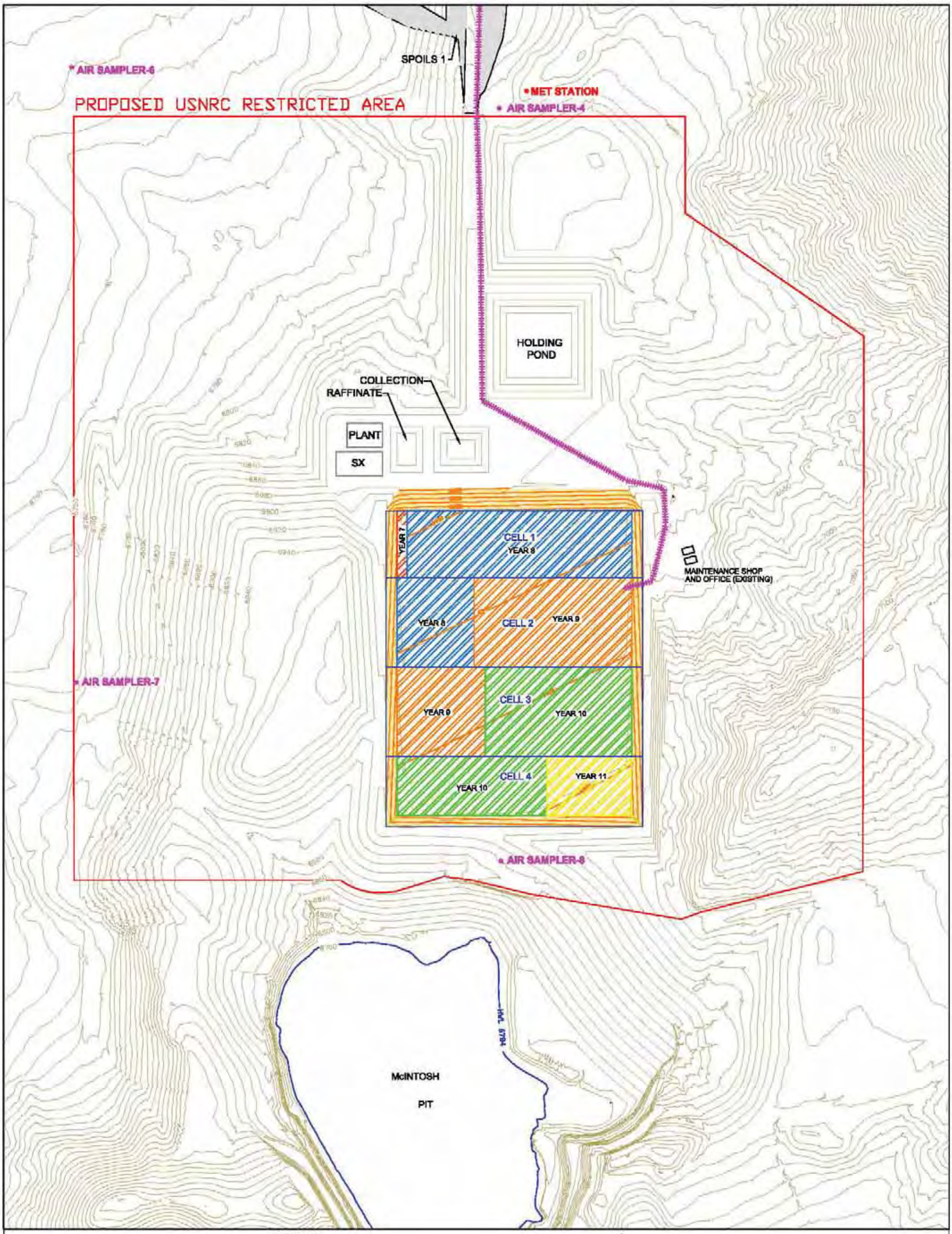
T. 28 N. , R. 92 W.

400' 0 200' 400'

1 inch = 400'

BRS ENGINEERING	**McINTOSH HEAP - LIFT 1 SEQUENCE**	**SHEEP MOUNTAIN MINES MINE PERMIT 381C**	REVISION DATE: 03/16/12
SCALE: 1"=400'	DATE: 03/16/12		CAD FILENAME: DOZER/LP2006/McINTOSH HEAP 2011/HEAP10 ALT 2
DRAWN BY: HJH,CDS,RSR			DWG. NUMBER: FIGURE 17.4

TITAN URANIUM USA INC



LEGEND

- PROPOSED CONVEYOR ALIGNMENT
- EXISTING GROUND CONTOURS CI-10'
- HEAP LEACH PAD CONTOURS CI-10'
- ANNUAL HEAP SEQUENCE
- AIR MONITOR
- MET STATION

T. 28 N., R. 92 W.

400' 0 200' 400'

1 inch = 400'

BRS ENGINEERING	**McINTOSH HEAP - LIFT 2 SEQUENCE**	**SHEEP MOUNTAIN MINES MINE PERMIT 381C**	REVISION DATE: 03/16/12
SCALE: 1"=400'	DATE: 03/16/12		CAD FILENAME: DOZER/LP2006/McINTOSH HEAP 2011/HEAP10 ALT 2
DRAWN BY: HJH,CDS,RSR			DWG. NUMBER: FIGURE 17.5

TITAN URANIUM USA INC

AIR SAMPLER-6

SPOILS 1

PROPOSED USNRC RESTRICTED AREA

MET STATION

AIR SAMPLER-4

HOLDING POND

COLLECTION

RAFFINATE

PLANT

SX

CELL 1
YEAR 11

CELL 2
YEAR 12

MAINTENANCE SHOP AND OFFICE (EXISTING)

RELOCATE CELL 1
475,000 TONS

AIR SAMPLER-7

YEAR 7 & 8 WASTE

CELL 3

YEAR 8 & 9 WASTE

RELOCATE CELL 2
832,000 TONS

CELL 4
YEAR 8 WASTE

AIR SAMPLER-8

McINTOSH

PIT

LEGEND

PROPOSED CONVEYOR ALIGNMENT

EXISTING GROUND CONTOURS CI-10'

HEAP LEACH PAD CONTOURS CI-10'

ANNUAL HEAP SEQUENCE

AIR MONITOR

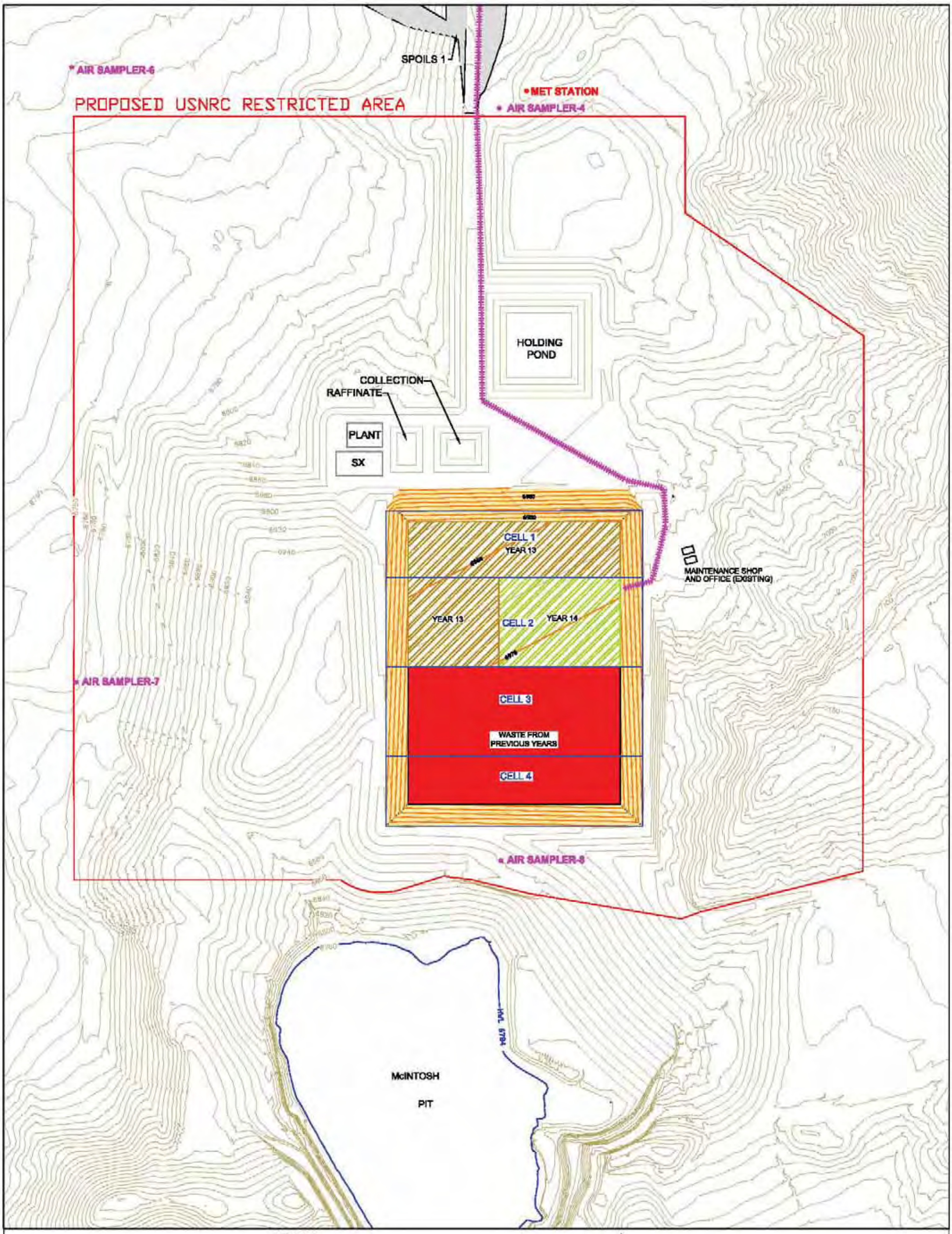
MET STATION

T. 28 N., R. 92 W.

400' 0 200' 400'

1 inch = 400'

BRS ENGINEERING	McINTOSH HEAP - LIFT 2A SEQUENCE	SHEEP MOUNTAIN MINES MINE PERMIT 381C	REVISION DATE: 03/16/12	TITAN URANIUM USA INC
	SCALE: 1"=400' DATE:		CAD FILENAME: DOZER/LP2006/McINTOSH HEAP 2011/HEAP10 ALT 2	
	DRAWN BY: HJH,CDS,RSR 03/16/12		DWG. NUMBER: FIGURE 17.6	



LEGEND

- PROPOSED CONVEYOR ALIGNMENT
- EXISTING GROUND CONTOURS CI-10'
- HEAP LEACH PAD CONTOURS CI-10'
- ANNUAL HEAP SEQUENCE
- AIR MONITOR
- MET STATION

T. 28 N. , R. 92 W.

400' 0 200' 400'

1 inch = 400'

BRS ENGINEERING	McINTOSH HEAP - LIFT 3 SEQUENCE	SHEEP MOUNTAIN MINES MINE PERMIT 381C	REVISION DATE: 03/16/12	TITAN URANIUM USA INC
	SCALE: 1"=400' DATE: 03/16/12		CAD FILENAME: DOZER/LP2006/McINTOSH HEAP 2011/HEAP10 ALT 2	
	DRAWN BY: HJH,CDS,RSR		DWG. NUMBER: FIGURE 17.7	

AIR SAMPLER-6

SPOILS 1

PROPOSED USNRC RESTRICTED AREA

MET STATION

AIR SAMPLER-4

HOLDING POND

COLLECTION

RAFFINATE

PLANT

SX

CELL 1
YEAR 14

CELL 2
YEAR 15

YEAR 16

CELL 3
WASTE FROM PREVIOUS YEARS

CELL 4

MAINTENANCE SHOP AND OFFICE (EXISTING)

AIR SAMPLER-7

AIR SAMPLER-8

McINTOSH

PIT

LEGEND

PROPOSED CONVEYOR ALIGNMENT

EXISTING GROUND CONTOURS CI-10'

HEAP LEACH PAD CONTOURS CI-10'

ANNUAL HEAP SEQUENCE

AIR MONITOR

MET STATION

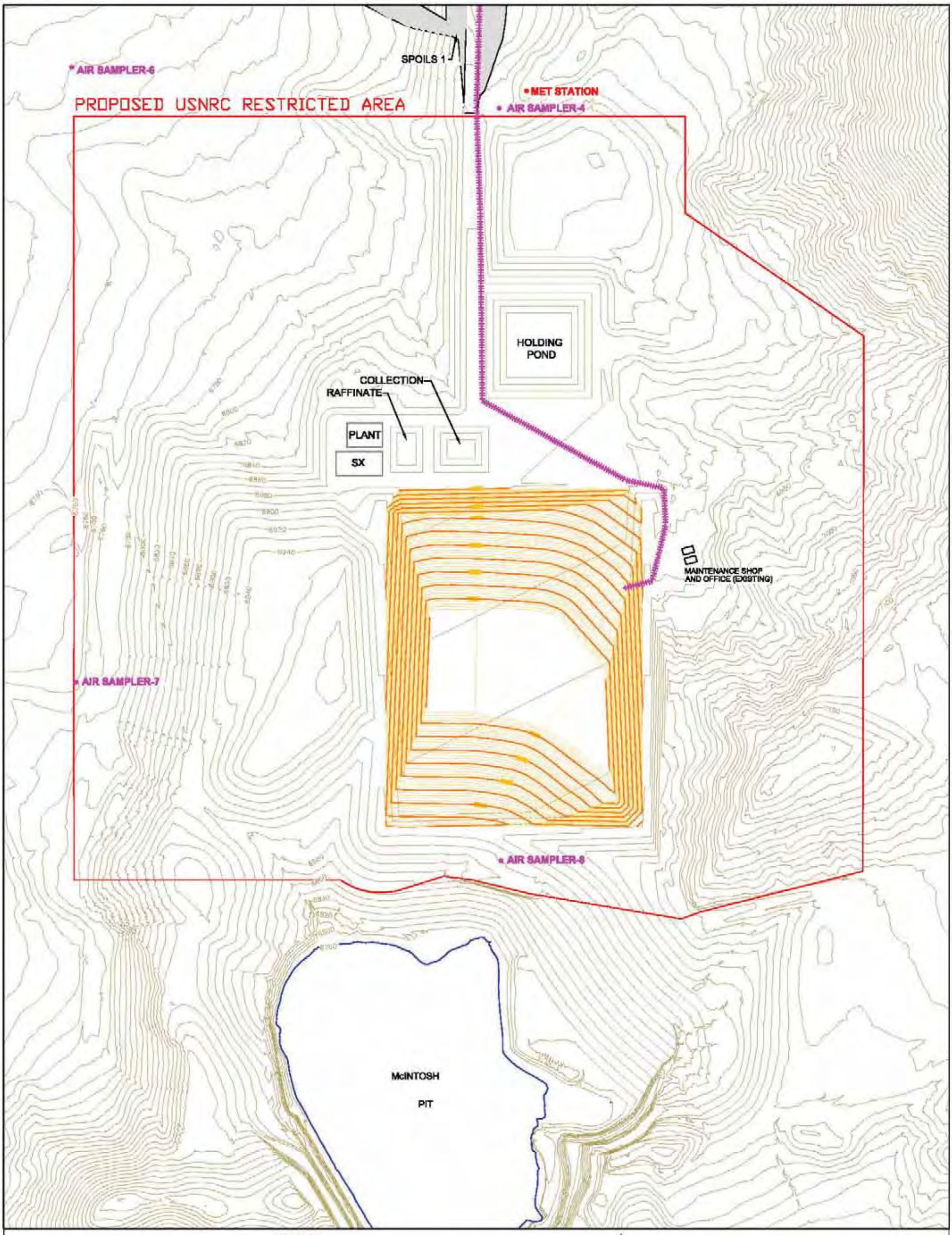
T. 28 N. , R. 92 W.

400' 0 200' 400'

1 inch = 400'

BRS ENGINEERING	McINTOSH HEAP - LIFT 4 SEQUENCE	SHEEP MOUNTAIN MINES MINE PERMIT 381C	REVISION DATE: 03/16/12
	SCALE: 1"=400' DATE: 03/16/12		CAD FILENAME: DOZER/LP2006/McINTOSH HEAP 2011/HEAP10 ALT 2
	DRAWN BY: HJH,CDS,RSR		DWG. NUMBER: FIGURE 17.8

TITAN URANIUM USA INC



LEGEND

- PROPOSED CONVEYOR ALIGNMENT
- EXISTING GROUND CONTOURS CI-10'
- HEAP LEACH PAD CONTOURS CI-10'
- AIR MONITOR
- MET STATION

T. 28 N., R. 92 W.

400' 0 200' 400'

1 inch = 400'

BRS ENGINEERING	**RECONFIGURED HEAP**	**SHEEP MOUNTAIN MINES MINE PERMIT 381C**	REVISION DATE: 03/16/12
	SCALE: 1"=400' DATE: 03/16/12		CAD FILENAME: DOZER/LP2006/McINTOSH HEAP 2011/HEAP10 ALT 2
	DRAWN BY: HJH,CDS,RSR		DWG. NUMBER: FIGURE 17.9

TITAN URANIUM USA INC

* AIR SAMPLER-6

PROPOSED USNRC RESTRICTED AREA

• MET STATION

* AIR SAMPLER-4

SURFACE WATER IMPOUNDMENTS TO BE REMOVED AND FLOW THROUGH DRAINAGE RE-ESTABLISHED

ALL PLANT FACILITIES AND PONDS TO BE REMOVED AND DISPOSED OF ON THE HEAP LINER

HEAP AREA RECLAMATION SLOPES TO BE STABILIZED PER USNRC GUIDLINES

* AIR SAMPLER-7

* AIR SAMPLER-8

NOTE: RECLAMATION SURFACE ASSUMES McINTOSH PIT IS BACKFILLED TO 6804' ELEVATION, 20' ABOVE CURRENT HWL.

HWL 6784

LEGEND

PROPOSED CONVEYOR ALIGNMENT

EXISTING GROUND CONTOURS CI-10'

HEAP LEACH RECLAMATION CONTOURS CI-10'

AIR MONITOR

MET STATION

T. 28 N., R. 92 W.

400' 0 200' 400'

1 inch = 400'

BRS ENGINEERING	McINTOSH HEAP - RECLAMATION COVER	SHEEP MOUNTAIN MINES MINE PERMIT 381C	REVISION DATE: 03/16/12	TITAN URANIUM USA INC
	SCALE: 1"=400' DATE: 03/16/12		CAD FILENAME: DOZER/LP2008/MCINTOSH HEAP 2011/HEAP10	
	DRAWN BY: HJH,CDS		DWG. NUMBER: FIGURE 17.10	

SECTION 18: PROJECT INFRASTRUCTURE

All necessary utilities and general infrastructure for the planned project are either currently available on site or can readily be established. Existing infrastructure is depicted on Figure 18.1.

All planned mining, mineral processing, and related activities are located within the existing Mine Permit 381C which is held by Titan. These lands are adequate for all planned mining operations including the disposal of mine mineral processing wastes and/or tailings.

Rights of Way (ROW)

Right of Way applications for an overhead power line and mine dewatering pipe line utility corridor from the heap facility area (located on private land) to the Sheep I and Sheep II shafts have been approved, and the right of ways have been granted under BLM Grants WYW168211 and WYW168212. The main water supply pipeline for the plant will be located on private lands from either the McIntosh Pit or Sheep underground to the plant site.

Power and Utilities

Telephone, electric and natural gas service are available at the site and were upgraded in 2011 to provide the required service for the planned project.

Process Water

With respect to mine and mineral processing operations, the mineral processing facility will operate at an average flow rate of 360 gpm. However, the majority of the flow is recirculated resulting in an estimate net water demand of 135 gpm. The largest consumptive use of water on the project will be for dust control for the open pit, hauls roads, stockpile areas, and the conveyor system. This use is estimated to average 150 gpm over a 9 month period or 100 gpm on an annual basis. Thus, the total water use is estimated at 235 gpm. Dewatering at the Sheep Underground mine produces approximately 200 gpm, based on past production records. In addition, dewatering of the Congo Open pit requires an estimated 150 gpm beginning in year 7 and extending to the end of mining. Thus, approximately 350 gpm of water will be produced by the mines, which is adequate for the planned operations.

Site Access

Primary access to the site is provided via an existing county road. This road is designated as an industrial access corridor by the BLM in their current Resource Management Plan (RMP). The county road provides access to within one mile of the site from which there is an existing private gravel road to the site.

Mine Support Facilities

Mine support facilities will consist of an office, mine shop and warehouse, and a dry facility. In consideration of the remoteness of the site and the potential for hazardous winter driving conditions, emergency stores of non-perishable food and water will be kept on-site along with portable cots should it be necessary for personnel to remain on-site during such conditions.

Public Safety and Facility Maintenance

Access to the site will be controlled by fencing where appropriate at the Mine Permit 381C boundary and internally at the Radiation Control boundary. Initial public access to the mine and heap leach facility will be controlled through a single entrance with a guard shack manned during operating hours and gated at all other times. The mine facility will be regulated by MSHA and the State Mine Inspectors Office. Any persons wishing to enter the facility will be required to complete safety training as required by regulations and be equipped with appropriate Personal Protective Equipment (PPE) depending on which areas they wish to enter.

The heap leach processing facility is internal to the mine permit and will be enclosed by additional fencing. As with the main entrance to the project, the entrance to the radiation control area will be protected by a guard shack manned during operating hours and gated at all other times. In addition to confirming safety training, all visitors accessing the radiation control area will be subject to radiometric scanning prior to entering the area and prior to leaving the area. All visitors and personnel will have to pass the scan out procedure prior to leaving the facility.

Fire and emergency services are available from Fremont County and Jeffery City. The site is registered with emergency services and emergency contact numbers are posted at the mine office.

FREMONT COUNTY SOLID WASTE

BLM

S17

S16

STATE OF WYOMING

BLM

S15

BLM

STATE OF WYOMING

GREEN MOUNTAIN 46 RANCH INC

ACCESS ROAD TO SHEEP I WILL BE MAINTAINED THROUGH THE CONGO PIT DURING MINING OPERATIONS

CONGO PIT

BLM

STATE OF WYOMING

PAYDIRT

SPOILS 2

PROPOSED PRIMARY ACCESS ROAD

EXISTING OVERHEAD POWER TO SHEEP CREEK OIL FIELD WILL BE MOVED AS REQUIRED FOR CONSTRUCTION

S20

BLM

S21

BLM

S22

BLM

GREEN MOUNTAI

RANCH INC

CROOKS GAP ROAD

WYW 29419

NOTE:
ABANDONED UTILITIES EXIST IN THE CONGO AREA AND UP TO SHEEP I SHAFT. ABBANDONED UTILITIES WILL BE DECOMMISSIONED AND REMOVED AS ENCOUNTERED DURING CONSTRUCTION OR RECLAMATION.

SHEEP I

SPOILS 1

MCINTOSH, CHARLES T

FEUCHUK, ELLEN M

SHEEP II

BLM

S29

S28

BLM

S27

BLM

FEUCHUK, ELLEN M

HEAP PAD

HEAP / PLANT AREA

McINTOSH

PIT

BLM

FEUCHUK, ELLEN M

S33

BLM

S34

BLM

S32

BLM

FEUCHUK, ELLEN M

LEGEND

- SECTION LINE
- PERMIT BOUNDARY
- EXISTING GAS LINE
- EXISTING PHONE LINE
- LAND OWNERSHIP BOUNDARY
- EXISTING OVERHEAD POWER LINE
- EXISTING ROAD
- EXISTING ROAD TO BE REMOVED / RECLAIMED
- PROPOSED ROAD
- PROPOSED OVERHEAD POWER LINE
- PROPOSED DEWATERING ALIGNMENT

T. 28 N. , R. 92 W.

1,500' 0 750' 1,500'

1 inch = 1,500'

BRS ENGINEERING

EXISTING INFRASTRUCTURE MAP

SCALE: 1"=1500'

DRAWN BY: CDS

DATE: 2/29/11

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

REVISION DATE: 10/4/11

CAD FILENAME: LP2008/PERMITING/SITE ACCESS AND UTILITIES

DWG. NUMBER: FIGURE 18.1

TITAN URANIUM USA INC

SECTION 19: MARKET STUDIES AND CONTRACTS

A long term uranium delivery price of $65 per pound US is recommended as the base case for financial evaluations, based on the following. Monthly long term industry average uranium prices based on the month-end prices published by Ux Consulting, LLC, and Trade Tech, LLC, are posted by Cameco Corporation. The three year average given for long term uranium supply contract is $64.40 per pound. See (http://www.cameco.com/investors/uranium_prices_and_spot_price/)

Recently published information also forecasts rising uranium prices forecast uranium prices of between $65 and $75/lb over the next couple of years (Talbot, 2012).

Table 19.1 – Long Term Uranium Price

	2008	2009	2010	2011	
Jan	$95.00	$69.50	$61.00	$71.50	
Feb	$95.00	$69.50	$60.00	$71.50	
Mar	$95.00	$69.50	$59.00	$70.00	
Apr	$90.00	$67.00	$59.00	$69.00	
May	$87.50	$65.00	$59.00	$68.00	
Jun	$82.50	$65.00	$59.00	$68.00	
Jul	$80.00	$65.00	$60.00	$68.00	
Aug	$80.00	$64.50	$60.00	$64.50	
Sep	$75.00	$64.50	$61.00	$63.50	
Oct	$70.00	$64.50	$62.00	$63.00	
Nov	$70.00	$61.00	$65.00	$62.50	
Dec	$70.00	$61.00	$66.00	$62.00	
	Average	$65.50	$60.92	$66.79	$64.40 (‘09-‘11)

The author has reviewed the 3-year long-term uranium pricing and is of the view that inclusion of a uranium price of $65.00 per pound US is reasonable for inclusion in the economic analysis of this report. To the author’s knowledge no contracts for the sale or delivery of uranium produced from this project exist.

SECTION 20: ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

Uranium mining at Sheep Mountain occurred from the mid-1950s through 1982, with only short periods of intermittent mining occurring since 1982. Both random room-and-pillar underground and open-pit surface mining methods were employed. In 1973, the State of Wyoming passed the Environmental Quality Act, which required mining operations to reclaim the land after conclusion of mining activity. A substantial amount of reclamation has since been performed at the property by mining companies and by the Wyoming Department of Environmental Quality's Abandoned Mine Land Division (WDEQ/AML). WDEQ/AML is responsible for reclaiming mining activities that predate the implementation of the 1973 Act. Because of the intensive mining that has occurred over the years, most of the property has experienced surface disturbance and mining related impacts.

The Sheep Mountain Project is situated on a mixture of private fee land with federal mineral rights, federal land and minerals administered by the Bureau of Land Management (BLM), and State Trust lands with state-owned minerals administered by the State of Wyoming, Department of Environmental Quality, Land Quality Division (WDEQ/LQD). The Sheep Mountain Project is permitted under an existing Mine Permit (381C), which is held by Titan and administered by the WDEQ/LQD. The original mine permit for the project was issued by the WDEQ Land Quality Division (WDEQ/LQD) in 1975 to Western Nuclear, Inc. The permit has been amended 5 times and remains active and in good standing. Initial environmental baseline studies for this Mine Permit were completed in the 1970s and early 1980s. Because of this mixture of land and mineral ownership and because the proposed mineral processing facility is licensed by the U.S. Nuclear Regulatory Commission (NRC), a number of state and federal agencies are involved in the permitting and licensing of this project. The WDEQ/LQD is the lead agency for the State, though other State agency approvals are necessary. The primary federal agencies involved include the BLM, NRC and U.S. Environmental Protection Agency (EPA). In addition, County approvals for construction are also required.

BLM and Wyoming have established a Memorandum of Understanding (MOU) that allows WDEQ/LQD to issue the Mine Permit for both State and BLM lands while the BLM administers the National Environmental Policy Act (NEPA) for activities and impacts to the federal lands based on a Plan of Operations (POO) prepared by the permitee. The BLM also comments on the mining, milling and reclamation activities proposed in the Mine Permit.

The planned mining operations are generally compatible with the existing Mine Permit. The only significant change in the Mine Permit will be the addition of an on-site mineral processing facility. This proposed mineral processing facility will consist of a heap leach operation and uranium processing facility that will produce a final product of yellow cake for shipment. The mineral processing facility will require a combined NRC Source Materials and Byproduct Materials License, which requires the submittal of an Environmental Report (ER), to support NRC's compliance with NEPA, and a Technical Report (TR). Once the ER and TR are accepted by the NRC, NRC will develop an Environmental Impact Statement (EIS) for the project. Formerly, a Source Materials License was held within the project limits for the Green Mountain Ion Exchange Facility (GMIX). This former license was terminated in the 1990s and the environmental obligations and liabilities associated with that license have been mitigated.

This section provides a summary of the environmental studies conducted at the site, the proposed operating plans, state and federal permitting requirements for the project, potential social or community relations requirements, and the proposed mine closure and reclamation plans. Although the permitting

requirements for this project are substantial, the risk is relatively low as the project has strong local support and there are no identified environmental issues that would materially affect project permitting.

No potential social or community related requirements, negotiations, and/or agreements are known to exist with local communities and/or agencies other than those discussed herein.

Environmental Studies

Initial environmental baseline studies for this Mine Permit were completed in the 1970s and early 1980s. Titan has conducted additional baseline studies from 2010 through the present time. Baseline studies include land use characterization, culture resource surveys, meteorology and air monitoring, geology, hydrology, soils, vegetation, wildlife, and radiology. These studies, which are summarized below, are being performed to the level of detail and quality typically required by state and federal agencies.

Land Use

The Sheep Mountain Project is situated in steep terrain, ranging in elevation from 6,600 feet to 8,000 feet. Wildlife density and diversity is limited due to the sparse vegetation and lack of tree overstory over most of the property. The project is remote with only one residence located within 1.5 miles of the project boundary. Land use within the Mine Permit boundary is limited to the permitted mining and exploration activities, livestock grazing under BLM grazing leases and seasonal hunting. Livestock grazing and hunting access will be restricted within the Mine Permit boundary during the proposed project lifecycle. However, the area removed from hunting and grazing represents a minute fraction of the available hunting and grazing area within the region and is not anticipated to have a significant impact on either land use. No land use impacts outside the Mine Permit Boundary are anticipated.

Cultural Resource Surveys

Cultural resource surveys were conducted on the land within the mine permit boundary. The scope for each of these studies was developed in consultation with BLM archeologists. No enrolled or eligible National Register of Historic Places (NRHP) cultural properties were found within the permit boundary. The closest NRHP eligible sites to the project are the Crooks Gap Stage Station and the Rawlins-to-Fort Washakie Road located outside the Mine Permit area. BLM has determined that visual setting is not a contributing factor to these NRHP sites. Therefore, the project is not expected to materially impact either of these NRHP sites.

Meteorology and Air Monitoring

The Sheep Mountain Project falls within the intermountain semi-desert weather province. Titan installed a 10-meter-tall meteorological station directly down-wind of the proposed mineral processing facility in August of 2010 and has operated this station continuously since that time in accordance with EPA and NRC guidance.

Titan has also installed nine air monitoring stations around the project area. These monitoring stations include high volume air samplers that collect radio-particulates, Track Etch cups that detect radon, and

Threshold Limit Dosimeters (TLD) that record direct gamma radiation. The meteorological and air quality data will be used to support NRC licensing of the proposed mineral processing facility and air quality permitting with the State of Wyoming.

Geology

The project sits within a southeast plunging synclinal fold with the Battle Springs Formation comprising the uppermost geologic unit. It is underlain sequentially by the Fort Union Formation and Cody Shale, which extend several thousand feet below the site. The mineral reserves and resources are hosted by the Battle Springs Formation. The geologic conditions have been sufficiently characterized to support the proposed permitting activities.

Hydrology

Surface water within the Mine Permit area is comprised of ephemeral drainages that flow only in response to snow melt and seasonal, high-intensity rainfall events. These ephemeral drainages drain to the west from Sheep Mountain into Crooks Creek, a locally perennial creek that flows south to north and is located approximately ½ mile west of the mine permit boundary. In addition, non-flowing surface water is present on the site in the un-reclaimed McIntosh Pit, and seasonally in permitted storm water retention structures. Both flowing and non-flowing surface water quality and quantity have been characterized through more than a year of regular sampling and flow gauging. Surface water sampling of the McIntosh Pit has been performed annually for more than a decade and the pit lake has exhibited relatively stable water quality.

Groundwater within the Mine Permit boundary exists within the synclinal fold of the Battle Spring Formation and Fort Union Formation and is bounded by the Cody Shale, which acts as a local aquiclude to vertical groundwater migration. Groundwater in the uppermost aquifer, hosted predominantly by the Battle Spring Formation, has been well characterized over more than 20 years spanning active mining and a long post-mining period. New monitoring wells have been installed in the areas proposed for mining and mineral processing. Collected groundwater quality data is representative of a full cycle of active mining and mine reclamation. The site's groundwater quality is considered Class III (Livestock/wildlife); no substantial changes to groundwater quality are anticipated from subsequent cycles of mining and reclamation.

Soils and Vegetation

Detailed soil and vegetation surveys were performed in 2010-2011 to update the 1980 data presented in the original Mine Permit. No Threatened and Endangered (T&E) plant species were encountered on the study area during the1980 field investigations or in the 2010-2011 surveys. One BLM-sensitive plant species, Pinus flexilus (Limber Pine) is present within the affected area as well as the control area. Any mitigation measures associated with this species are expected to be minimal. Two wetlands were located and mapped during the 2010-2011 surveys within the project area. However, they are located in the southeast corner of the project area near an unnamed pond where no surface disturbance is proposed. These wetlands are isolated and are likely non-jurisdictional.

Wildlife

Wildlife surveys were performed in 2010 and 2011 to update the earlier studies presented in the existing Mine Permit. These studies include raptor surveys, Sage Grouse surveys, small and large mammal surveys, and fish surveys in local ponds. The proposed disturbances are outside the Sage Grouse Core Area designated by the State of Wyoming as well as crucial winter range for large game species. No T&E wildlife species were observed or are expected to occur within the permit area and no BLM sensitive species that warrant special attention were identified in site surveys. In summary, no wildlife management issues or conflicts have been identified that would preclude the proposed mining and milling activities.

Radiology

Radiological surveys of the project area, as required by NRC Regulatory Guide 4.14, have been performed at the project site. This includes gamma radiation surveys, soil radium-226 concentration mapping, ambient gamma dose rate and radon monitoring, air radio-particulate monitoring, radon flux measurements, as well as soil and sediment, groundwater, surface water, vegetation, and animal tissue sampling (cattle and fish) for radionuclides. The radiological survey results reflect the elevated baseline conditions present at the site due to natural mineralization and previous mining disturbances. The radiological surveys have been conducted in accordance with the precision, accuracy and quality assurance guidelines recommended by the NRC.

Operating Plans

The operating plans for the Congo Open Pit, Sheep Underground, and the heap leach and processing plant are described in detail in other sections of this report. Monitoring and reporting of air, ground water, surface water, reclamation and other mitigation measures will continue throughout the life of the project.

Health and safety at the mines will be primarily regulated through the Federal Mine Safety and Health Administration or MSHA. Sheep Mountain previously had a MSHA Mine Number designation which can be restored with submission of a current health and safety plan.

Permitting Requirements

Permitting and licensing of the proposed mining and milling activities will involve county, state and federal agencies. Summaries of these permits and licenses follow.

Fremont County

Construction permits for buildings and septic systems will be required by Fremont County. These permits applications will be developed and submitted once most substantive technical questions have been has been resolved with state and federal agencies. The County permits are not anticipated to present technical or time critical issues in the development of this project.

Wyoming Land Quality Division

An update to the existing Mine Permit (381C) is being developed and will be submitted to the WDEQ/LQD in mid-2012. Titan has had productive meetings with WDEQ in which WDEQ staff have been briefed on the proposed updates to the Mine Permit. It is anticipated that approval of this update to the Mine Permit will be ready in advance of the BLM completing its NEPA process. Under the MOU with BLM, WDEQ will formally approve the Mine Permit update after formal concurrence by BLM.

Wyoming Abandoned Mine Land Division

The WDEQ/AMLD program does not administer any licenses or permits directly related to the Sheep Mountain Project mining or milling activities. However, the AMLD program has established a budget for reclamation of the McIntosh Pit in the most recent Wyoming State legislature session for program implementation in 2013. The reclamation of the McIntosh Pit, located directly south of the proposed mineral processing facility, provides for backfill of the pit lake. This will benefit the project, as it will facilitate future closure of the proposed mineral processing facility. Backfilling of the McIntosh Pit is also expected to modify the local groundwater hydrologic regime; however, monitoring wells are in place to quantify any changes that may take place. Accordingly, the AMLD activities are not anticipated to have a significant effect on the proposed Sheep Mountain Project mining and milling activities.

Wyoming Air Quality Division

The Wyoming Air Quality Division (WAQD) administers the provisions of the Clean Air Act as delegated to the state by EPA Region VIII. Titan has initiated discussions with the WAQD and EPA regarding application of an air permit for the Sheep Mountain Project. The substance of these discussions indicates the Sheep Mountain Project will likely be considered a minor source under the State Air Quality Regulations. The existing baseline air quality and meteorological data discussed in Section 20.1.3 will be used in conjunction with calculated air emissions to develop the air permit application. Development of this application has been initiated and WAQD approval is anticipated in advance of the NRC approval of the combined Source and Byproduct Materials License.

Wyoming Water Quality Division

Discharges to surface water, if needed as part of the mine dewatering and mine water management program, are permitted by the State of Wyoming under authority delegated by EPA Region VIII for the National Pollution Discharge Elimination System (NPDES) program. Currently, water produced from mine dewatering is expected to be 100-percent consumed for mineral processing and dust suppression. A WPDES permits application may be developed at a later date should the dewatering of the deeper underground levels produce more water than can be consumed by the mining and processing operations.

Wyoming State Engineers Office

The Wyoming State Engineers Office (SEO) is responsible for permitting of wells and impoundments, and issuance and modification to water rights. An application to relocate the point of withdrawal for

Titan's existing water rights will be developed and submitted to the Wyoming SEO for mine dewatering. In addition, future monitoring wells and impoundments will be permitted with the SEO once the NRC combined Source and Byproduct Materials License application has passed completeness review and most substantive technical questions have been has been resolved. Approvals of the SEO permits are not anticipated to be time-critical approvals.

U.S. Bureau of Land Management

The BLM is currently preparing an EIS based on the POO submitted by Titan on June 16, 2011, as amended. BLM has deemed the POO "complete", has held public scoping meetings, and is developing a Draft EIS for public comment. Titan continues to work closely with the BLM and anticipates that the BLM's review process under the National Environmental Policy Act (NEPA) will be concluded in advance of NRC's license approval, discussed below. BLM elected to develop its own EIS, separate from the NRC's EIS and NEPA process.

U.S. Nuclear Regulatory Commission

Titan has held quarterly meetings with NRC to keep them apprised of the license application development since 2010. The NRC performed a three-day pre-application audit of Titan's draft ER and TR in October 2011 and has provided comments to Titan. Titan is in the process of incorporating NRC's comments and suggestions and completing these two documents, which will support NRC's development of their EIS and approval of the license application. The NRC license is the critical path approval requiring the longest time frame. Typical approval times for similar applications have averaged between 2 and 2.5 years. Titan anticipates submittal of this application in third quarter, 2012.

U.S. Environmental Protection Agency

The EPA oversees compliance with 40 CFR Part 61 Subparts b (underground mine venting of radon) and subpart w (radon emissions from tailings). Prior to initiation of underground mine operations, Titan will submit construction plans to the EPA in which underground mine ventilation radon emissions will be modeled to demonstrate compliance with the requirements of Part 61, Subpart b. During underground operations, routine monitoring and annual modeling will be performed to verify regulatory compliance. The existing site air quality and meteorological data will be used to support these modeling efforts.

The project design currently includes control measures to minimize radon flux from the heap leach facility. Titan is anticipating that the EPA will issue draft changes to the Part 61 subpart w regulations in April 2012 that may include new regulations pertaining specifically to minimizing radon emissions from uranium heap leach operations. Titan will review these proposed rules when they become available and, if necessary, modify its heap leach facility plans to comply with the proposed regulations.

Social and Community Relations

The surrounding communities have a long history of working with and for the region's mining and mineral resource industry; and, their support for this project has been strong. No substantive negative comments were identified during the four BLM public scoping meetings held in 2011 and Titan has a good working relationship with many of the local land owners and ranchers. Much of the project's local support is economically driven, as the project is expected to create more than 200 jobs over the approximately 20-year project life cycle and generate over $58 million dollars in local and state taxes and royalties. There are no Native-American groups or reservations on or adjacent to the project area. The nearest Native-American reservation, the Wind River Reservation, is located near Riverton, Wyoming approximately 60 miles from the site.

Closure and Reclamation Plans

The land encompassing the project area is currently used for livestock grazing, wildlife habitat, and recreation (primarily hunting). The reclamation plan will return the areas disturbed by the project to the same pre-mining uses, except for the approximately 100-acre, byproduct-material disposal cell that will be transferred to the US Department of Energy (DOE) for long-term stewardship. Reclamation bonds will be in place prior to startup for both the mining and processing areas of the project in accordance with state and federal requirements. The estimated costs amount of the reclamation bond for both the mine and mineral processing area is estimated at US$17 million. By current regulations the WDEQ requires the bond be posted based on reclamation of lands disturbed in the first year and then updated annualy as part of the annual reporting process. The NRC for the mineral processing area requires a bond for the full estimated closure and reclamation costs. The actual estimated mine closure and reclamation cost is US$32.5 million projected to be spent in years 15 to 20 of the operation.

Congo Pit and Sheep Underground

Mine overburden and waste rock from the Congo Pit will be used to backfill the pit in a phased manner over the life of the open pit. Initially, the waste will be removed from the pit and stockpiled in areas adjacent to the pit limits. As the pit deepens to the south, concurrent backfilling will be performed with waste placed in the mined out portions of the pit. Backfilling will be performed in a selective manner so that the more mineralized and radioactive material is covered with less mineralized subsoils and topsoil. The proposed plan is to backfill the pit to approximate original contours, returning the ground surface to essentially the pre-mining topographic contours. Selective backfilling will remove and isolate much of the naturally occurring radioactive materials left in the mine area from historical activities. The reclaimed Paydirt Pit will also be partially backfilled to create a flow-through drainage system, as opposed to the current closed drainage.

Underground operations will result in some additional waste rock being added to the open-pit overburden piles, construction of vent shafts and declines, and the installation of additional mine buildings. At the conclusion of underground operations, the mine openings will be sealed, mine buildings demolished, and waste piles used as backfill or reclaimed. The proposed reclamation plan for the open-pit and underground mining portion of the Sheep Mountain Project will provide for greater land restoration than is currently required under the existing Mine Permit.

Heap Leach and Processing Plant

Solid and liquid wastes from the processing of uranium ores will be managed on site. Upon closure, liquid wastes will either be a) stabilized and placed in the spent heap leach pad or b) evaporated on the heap leach pad surface prior to closure. Process buildings and equipment that cannot be released from the site, will be decommissioned, sized and placed in the spent heap according to NRC guidance. The heap leach pad and associated ponds will then be encapsulated within an engineered cover that is designed to minimize radon emissions and water infiltration. The disposal cell will then be monitored until the site meets DOE's requirements for long-term stewardship. As one of the major environmental permits, the Wyoming Permit to Mine, is already in place and there has previously been a facility at this site licensed by the NRC, there is limited risk with regard to permitting of the operations.

SECTION 21: CAPITAL AND OPERATING COSTS

Project cost estimates are based on a conventional open pit and underground mine operation with on-site processing via a heap leach facility. All costs are estimated in Constant 2012 US Dollars. Operating (OPEX) and Capital (CAPEX) costs reflect a full and complete operating cost going forward including all pre-production costs, permitting costs, mine and mineral processing costs through the production of yellowcake, and compete reclamation and closure costs for of the mine and mill. CAPEX does not include sunk costs or acquisition costs.

Mining and mineral recovery methods and annual schedules are described in Sections 17 and 18, respectively. The project consists of two distinct and independent mining areas, the Congo Open Pit and the Sheep Underground, with common processing on mine material via a heap leach recovery facility. The currently planned mine life of the open pit is 15 years with an additional 5 years allotted for mine closure and reclamation . The currently planned mine life of the underground in 11 years. The heap leach facility is designed to accommodate the mined material from both open pit and underground mine operations over an operating life compatible with the open pit operations.

Three production alternatives were considered for detailed financial evaluation reflecting variations in overall project scheduling as follows;

- Alternative 1: Open pit and underground mine development with concurrent start of mining.
- Alternative 2: Open pit and underground mine development with concurrent end of mining.
- Alternative 3: Open pit mine development only.

Based on the economic analysis presented in Section 22, each of the mine development alternatives are economically viable. Alternative 1 provides the highest internal rate of return (IRR), the highest net present value (NPV), and the highest average and annual uranium production level. However, Alternative 1 also requires the highest level of initial capital. Alternative 3 has the lowest overall capital requirement but has the lowest average annual and total uranium production and the lowest IRR and the NPV. Alternative 2, or some variation thereof which delays the start of the underground operations with respect to the open pit mine and heap leach facility, is the preferred alternative in that, it has the same lower initial capital requirement as Alternative 3 and the higher average annual and total uranium production as Alternative 1. In addition, Alternative 2 has the practical advantage of staggering some of the initial startup challenges and demands, for example, personnel recruitment and training.

In all cases the estimates are based on proven approaches and technologies and conservative assumptions were employed. A summary of key assumptions follows.

- CAPEX Estimates
    - Open Pit Equipment; 15% contingency added to current vendor quotations for all major equipment.
    - Underground Equipment; 15-30% added depending on nature of current quotations.
    - Mineral Processing and Heap Leach Facility; 25% contingency added to all items.
- OPEX Estimates
    - Open Pit; all new equipment, 85 % availability, 90 % utilization, and an overall 8% contingency applied to all costs.
    - Underground mine; 90 % utilization and an overall 8% contingency applied to all costs.
    - Mineral Processing and Heap Leach Facility; 8% contingency added to all items.

- Heap recovery assumed a 0.01 $\%U_3O_8$ loss (McNulty, 2012).
    - Current column leach tests showed solid losses of 0.002 $\%U_3O_8$ or less.
    - The 0.01 $\%U_3O_8$ loss used in this study reflects a conservative 0.008 $\%U_3O_8$ solid loss and a liquid loss of 0.002 $\%U_3O_8$. For the life of mine grade, average 91.7% recovery.
    - A loss of 0.01 $\%U_3O_8$ was achieved in the earliest developmental heap leach facilities in the Gas Hills (Woolery, 1978). Higher recoveries were achieved in subsequent heaps.
- Heap acid consumption was based on 30 lbs of sulfuric acid per ton of mineralized material (Lyntek, 2012).
    - Current metallurgical testing shows an acid consumption of less than 15 pounds of sulfuric acid per ton of mineralized material.
- Open Pit Mine reclamation costs account for backfill to original contours.
    - Wyoming regulations do not require complete backfill but return to "equal or better use". Regulations can be met with less complete backfill; however, the total backfill plan is conservative and can be readily permitted.

Production Profile

Table 21.1 provides the planned production profile for the preferred alternative. Production varies from a low of 180,000 tons processed with 366,000 pounds of uranium produced per year during the start of operations of the open pit and heap leach, to a high of 660,000 tons per year processed with approximately 1,500,000 pounds of uranium produced per year at peak production with both the open pit and underground mines in operation. On average the open pit produces 264,000 tons per year containing 608,000 pounds of uranium. Similarly the underground produces an average of 318,000 tons per year containing 841,000 pounds of uranium. Average production from the heap leach and processing facility is estimated to be 1,224,000 pounds of uranium per year.

Table 21.1 - Production Profile – Preferred Alternative

Congo Pit	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10	Yr11	Yr12	Yr13	Yr14	Y15	Yr16	**Total**
Tons	280	149	131	301	326	325	293	368	207	348	203	239	344	292	149		3,955
Pounds	603	341	694	665	567	660	506	909	539	647	399	523	677	753	637		9,118
Grade e % U_3O_8	0.108	0.114	0.265	0.110	0.087	0.102	0.086	0.123	0.130	0.093	0.099	0.109	0.098	0.129	0.213		0.115
CY Interburden	165	88	77	178	192	192	173	217	122	205	120	141	203	172	88		2,334
CY Waste	4,331	4,601	4,713	5,069	6,010	4,642	3,980	4,820	5,330	4,546	5,020	5,037	5,169	5,666	4,667		73,601
Sheep UG																	
Tons					100	223	431	386	367	351	386	315	299	416	224		3,498
Pounds					300	600	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	348		9,248
Grade e% U_3O_8					0.151	0.134	0.116	0.130	0.136	0.142	0.130	0.159	0.167	0.120	0.077		0.132
Waste Tons				200	90	162	144	189	208	224	189	260	276	159	75		2,176
Heap Leach																	
Total Tons	280	149	131	301	425	548	724	754	574	699	588	554	643	709	374		7,453
Total Pounds	603	341	694	665	867	1,260	1,506	1,909	1,539	1,647	1,399	1,523	1,677	1,753	984		18,365
Grade e% U_3O_8	0.108	0.114	0.265	0.110	0.102	0.115	0.104	0.127	0.134	0.118	0.119	0.137	0.130	0.124	0.132		0.123
Tons Processed	180	180	180	300	360	600	660	660	660	660	660	600	600	600	480	73	7,453
Pounds	388	402	763	700	739	1,359	1,378	1,636	1,736	1,579	1,572	1,623	1,568	1,492	1,241	189	18,365
Feed Grade	0.108	0.112	0.212	0.117	0.103	0.113	0.104	0.124	0.132	0.120	0.119	0.135	0.131	0.124	0.129	0.129	0.123
Recovery	0.907	0.911	0.953	0.914	0.903	0.912	0.904	0.919	0.924	0.916	0.916	0.926	0.923	0.920	0.923	0.923	0.919
Lbs U_3O_8	352	366	727	640	667	1,239	1246	1,504	1,604	1,447	1,440	1,503	1,448	1,372	1,145	175	16,875

(All tons and pound x 1,000)

CAPITAL COSTS

Capital cost summaries follow for the three alternative development schedules. Capital costs estimates are for forward costs only and do not include any sunk or acquisition costs. In addition, while the capital cost estimates include initial warehouse and materials inventories, working capital is not included.

- Alternative 1: Open pit and underground mine development with concurrent start of mining.
- Alternative 2: Open pit and underground mine development with concurrent end of mining.
- Alternative 3: Open pit mine development only.

Table 21.2 - Capital Cost Summary Alternative 1; Open Pit and Underground Concurrent Start

(All costs current US dollars x 1,000)

Capital Expenditures:	Contingency	Initial Capital	Years 2-20	Life of Mine
Permitting (NRC, BLM, and WDEQ)		$ 4,328		$ 4,328
Pre-Development Mine Design		$ 1,200		$ 1,200
OP Mine Equipment	15%	$ 14,301		$ 14,301
UG Mine Equipment	15-30%	$ 48,601	$ 13,000	$ 61,601
Office, Shop, Dry, and support	15%	$ 3,166		$ 3,166
Mineral Processing	25%	$ 37,803		$ 37,803
TOTAL CAPITAL EXPENDITURES		**$ 109,399**	**$ 13,000**	**$ 122,399**
COST PER POUND RECOVERED				**$7.01**

Table 21.3 - Capital Cost Summary Alternative 2; Open Pit and Underground Concurrent End of Mining

Capital cost for Alternative 2, open pit and underground with a concurrent end of mining are the same as for Alternative 1, except the underground mine capital investment is delayed for 4 to 5 years.

(All costs current US dollars x 1,000)

Capital Expenditures:	Contingency	Initial Capital	Years 2-20	Life of Mine
Permitting (NRC, BLM, and WDEQ)		$ 4,328		$ 4,328
Pre-Development Mine Design		$ 1,200		$ 1,200
OP Mine Equipment	15%	$ 14,301		$ 14,301
UG Mine Equipment	15-30%		$ 61,601	$ 61,601
Office, Shop, Dry, and support	15%	$ 3,166		$ 3,166
Mineral Processing	25%	$ 37,803		$ 37,803
TOTAL CAPITAL EXPENDITURES		**$ 60,798**	**$ 61,601**	**$ 122,399**
COST PER POUND RECOVERED				**$7.01**

Table 21.4 - Capital Cost Summary Alternative 3; Open Pit Only

Capital costs for Alternative 3, open pit only, are greatly reduced in comparison to alternatives 1 and 2 as follows. The initial and life of mine capital estimates for Alternative 3 are unchanged as major equipment and replacement and repair is included in the OPEX for the surface mine equipment and mineral processing facility.

(All costs current US dollars x 1,000)

Capital Expenditures:	Contingency	Initial Capital	Years 2-20	Life of Mine
Permitting (NRC, BLM, and WDEQ)		$ 4,328		$ 4,328
Pre-Development Mine Design		$ 1,200		$ 1,200
OP Mine Equipment	15%	$ 14,301		$ 14,301
Office, Shop, Dry, and support	15%	$ 3,166		
Mineral Processing	25%	$ 37,803		$ 3,166
				$ 37,803
TOTAL CAPITAL EXPENDITURES		**$ 60,798**		**$ 60,798**
COST PER POUND RECOVERED				**$7.03**

OPERATING COSTS

Operating cost estimates are based on a conventional open pit and underground mine operation with on-site processing via a heap leach facility. Operating (OPEX) costs reflect a full and complete operation including all mine and mineral processing costs through the production of yellowcake and through final reclamation. In all cases the estimates are based on proven approaches and technologies. Refer to Tables 21.5 and 21.6 for open pit with underground and for open pit only, respectively.

Operating cost estimates were based on vendor quotations, published mine costing data, and contractor quotations. Such estimates were generally provided for budgetary purposes and where considered valid at the time the quotations were provided. In all cases, appropriate suppliers, manufacturers, tax authorities, smelters, and transportation companies should be consulted before substantial investments or commitments are made.

Three alternatives were considered for the development of the Sheep Mountain Uranium Project. Alternatives 1 and 2 which include both open pit and underground mining have the same OPEX, $73.18 per ton mined and $32.31 per pound recovered. The difference in these options is the timing of required capital investment.

Alternative 3, the open pit only case has lower operating costs of $65.90 per ton and $30.16 per pound recovered. Actual mining costs, open pit versus underground, are substantially lower $27.91 per ton mined open pit versus $57.79 per ton for underground. Overall OPEX on a per pound basis is similar between the options because fixed costs including reclamation are spread over more recovered pounds with the open pit and underground combined operations as compared to the open pit only operation.

Open pit mining operating costs account for:

- All earth moving costs related to excavation and placement including:
    - Primary stripping
    - Mining
    - Interburden
    - Preparation of heap base
- Surface support equipment
- Overall mine supervision including health and safety
- Surface mine and heap leach reclamation costs

Underground mine operating costs account for:

- All costs related to underground mine excavation
- Conveyance of mined material to the surface for loading on the heap
- Underground mine supervision, support and miner training
- Underground development between mining levels and areas
- Ventilation
- Dewatering
- Mine safety and ground control

Mineral processing operating costs account for:

- All costs related to the operation of the heap leach
    - Overland conveyor transport from the mine
    - Heap stacking and loading
    - Heap leaching and liquid handling
    - Power and water use and handling
- All costs related to processing of uranium bearing liquids from the heap leach
    - Solvent extraction
    - Ammonia stripping and precipitation
    - Yellowcake drying and packaging
    - Power use
- Mineral processing supervision and support
    - Radiation Safety and compliance
    - On site laboratory facilities
    - General supervision

Reclamation and Closure Costs

Reclamation and closure costs have been incorporated primarily into the open pit mine operating costs as the open pit and heap leach reclamation represent the largest cost components for reclamation. A specific allowance for decommissioning of buildings, facilities, and equipment was not included as these costs will be substantially offset by the salvage value for the same and/or the facilities and equipment can continue in use for the mining and processing of additional mineral resource either within reasonable proximity to the Sheep Mountain Project. The NRC licensing will include provisions to process mineralized material and/or intermediate product from like facilities and/or mines.

The current cost model is based on complete backfill of the open pit including sub-grade disposal of the heap leach material and appurtenances including liners, piping, and other materials deemed to be regulated material with respect to the NRC license.

Bonding costs are included as a line item based on an annual rate of 2 % and an estimated bond for the mine and processing facility of 17 million dollars US.

Additional Costs

Additional costs include a gross products tax payable to Fremont County; mineral severance tax payable to the State of Wyoming; and various claim and state lease royalties.

Wyoming Severance Tax is currently assed at a rate of 4% of the gross value after applying an industry factor which for uranium is currently 0.42 which thereby reduces the effect severance tax rate.

Wyoming state lease royalties apply only to the Congo Pit area located on State section 16. The royalty under the current lease is 5% of gross value.

Individual mining claim royalties vary slightly but do not exceed 4% of gross value.

Note that all state and local sales taxes are included in the CAPEX estimate. Use taxes, such a taxes on supplies and consumables, are included in the OPEX estimate.

Tables 21.5 and 21.6 which follow summarize OPEX for the mine development alternatives.

Table 21.5 – OPEX Alternative 1 &2, Open Pit and Underground Mining

(All costs current US dollars x 1,000)

OPEX - OPEN PIT AND UNDERGROUND MINING	Alternatives 1 & 2 Open Pit and UG	Cost Per Ton Mined	Cost Per Lb Mined	Cost Per Lb Recovered
Surface Mine				
Strip	$ 55,518	$ 14.04	$ 6.09	$ 6.67
Mining	$ 15,672	$ 3.96	$ 1.72	$ 1.88
Support	$ 15,002	$ 3.79	$ 1.65	$ 1.80
Staff	$ 24,211	$ 6.12	$ 2.66	$ 2.91
Total Surface Mine (3,955,000 tons, 9,117,000 lbs)	**$ 110,403**	**$ 27.91**	**$ 12.11**	**$ 13.26**
Underground Mine				
Production	$ 116,088	$ 33.19	$ 12.55	$ 13.58
Development	$ 30,048	$ 8.59	$ 3.25	$ 3.52
Support	$ 28,062	$ 8.02	$ 3.03	$ 3.28
Staff	$ 12,974	$ 3.71	$ 1.40	$ 1.52
Contingency	$ 14,973	$ 4.28	$ 1.63	$ 1.75
Total Underground Mine (3,498,000 tons, 9,248,000 lbs)	**$ 202,145**	**$ 57.79**	**$ 21.86**	**$ 23.65**
Blended Mining Costs* (7,435,000 tons, 18,365,000 lbs)	**$ 312,548**	**$ 41.93**	**$ 17.02**	**$ 18.52**
Reclamation and Closure				
NRC Annual Inspection Fees	$ 840	$ 0.11	$ 0.05	$ 0.05
Final Grading and Revegetation	$ 2,000	$ 0.27	$ 0.11	$ 0.12
Plant Decommissioning and Reclamation	$ 9,000	$ 1.21	$ 0.49	$ 0.53
Total Reclamation and Closure	**$ 11,840**	**$ 1.59**	**$ 0.64**	**$ 0.70**
Heap Leach				
Variable costs per ton	$ 61,323	$ 8.23	$ 3.34	$ 3.63
Fixed Costs per year	$ 42,906	$ 5.76	$ 2.34	$ 2.54
Relocate Spent Material	$ 3,000	$ 0.40	$ 0.16	$ 0.18
Total Heap Leach	**$ 107,229**	**$ 14.39**	**$ 5.84**	**$ 6.35**
Reclamation Bond Mine and Heap	**$ 7,140**	**$ 0.96**	**$ 0.39**	**$ 0.42**
Taxes & Royalties				
Gross Products tax per/lb	$ 37,038	$ 4.97	$ 2.02	$ 2.19
Severance Tax per/lb	$ 19,078	$ 2.56	$ 1.04	$ 1.13
State lease (pit)	$ 27,838	$ 3.73	$ 1.52	$ 1.65
Claim royalties (UG)	$ 22,685	$ 3.04	$ 1.24	$ 1.34
Total Taxes and Royalties	**$ 106,639**	**$ 14.31**	**$ 5.81**	**$ 6.32**
TOTAL DIRECT COSTS	**$ 545,396**	**$ 73.18**	**$ 29.70**	**$ 32.31**

*Blended mine costs represents the weighted average of open pit and underground mines. Open pit and underground mine costs, itemized separately above, are not additive but are included in the blended mine costs.

Table 21.6 – OPEX Alternative 3, Open Pit Mining Only

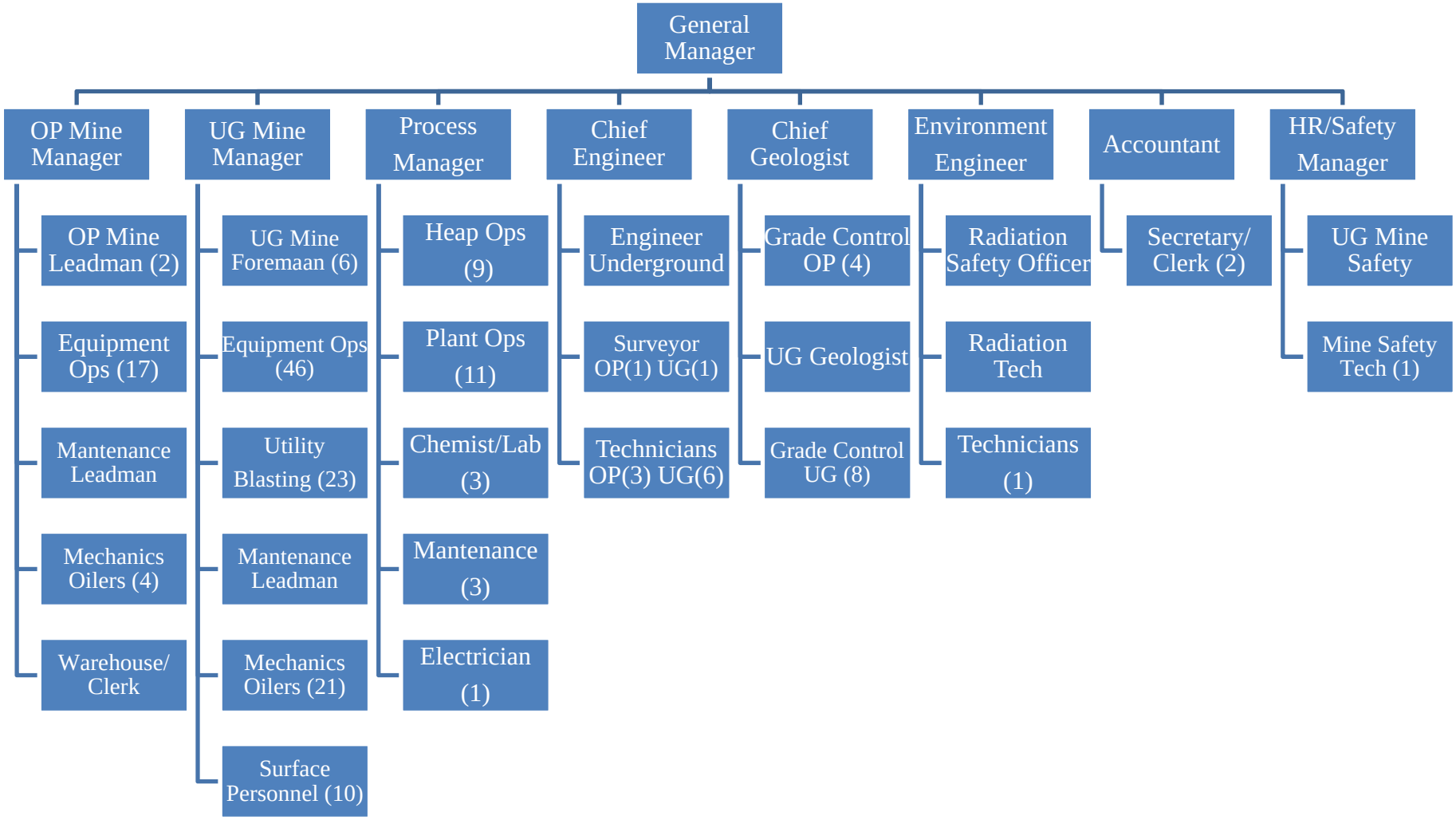
(All costs current US dollars x 1,000)

OPEX - OPEN PIT MINING ONLY	Alternative 3 Open Pit Only	Cost Per Ton Mined	Cost Per Lb Mined	Cost Per Lb Recovered
Surface Mine				
Strip	$ 55,518	$ 14.04	$ 6.09	$ 6.67
Mining	$ 15,672	$ 3.96	$ 1.72	$ 1.88
Support	$ 15,002	$ 3.79	$ 1.65	$ 1.80
Staff	$ 24,211	$ 6.12	$ 2.66	$ 2.91
Total Surface Mine	**$ 110,403**	**$ 27.91**	**$ 12.11**	**$ 13.26**
Reclamation and Closure				
NRC Annual Inspection Fees	$ 840	$ 0.21	$ 0.09	$ 0.10
Final Grading and Revegetation	$ 2,000	$ 0.51	$ 0.22	$ 0.24
Plant Decommissioning and Reclamation	$ 9,000	$ 12.28	$ 0.99	$ 1.08
Total Reclamation and Closure	**$ 11,840**	**$ 2.99**	**$ 1.30**	**$ 1.42**
Heap Leach				
Variable costs per ton	$ 32,544	$ 8.23	$ 3.57	$ 3.91
Fixed Costs per year	$ 42,906	$ 10.85	$ 4.71	$ 5.15
Total Heap Leach	**$ 75,450**	**$ 19.07**	**$ 8.28**	**$ 9.06**
Reclamation Bond Mine and Heap	**$ 7,140**	**$ 1.81**	**$ 0.78**	**$ 0.86**
Taxes & Royalties				
Gross Products tax per/lb	$ 18,323	$ 4.63	$ 2.01	$ 2.20
Severance Tax per/lb	$ 9,438	$ 2.39	$ 1.04	$ 1.13
State lease (pit)	$ 28,090	$ 7.10	$ 3.08	$ 3.37
Claim royalties (UG)	$ 0	$ 0	$ 0	$ 0
Total Taxes and Royalties	**$ 55,852**	**$ 14.12**	**$ 6.13**	**$ 6.71**
TOTAL DIRECT COSTS	**$ 260,685**	**$ 65.90**	**$ 28.59**	**$ 31.31**

Personnel

At full production the Sheep Mountain Project will require approximately 200 employees. Roughly 80 employees will be required for operation of the open pit, heap leach, and mineral processing plant with the remainder required for the underground mine. Personnel for the open pit mine operation can be readily recruited locally as can the majority of the personnel needed for the heap leach and mineral processing plant. Some skilled positions and staff positions will need to be recruited regionally. Recruitment of underground mine personnel may pose a greater challenge. As a result cost allowances for recruiting and training of underground miners were included in the cost estimate. Figure 21.1 illustrates general project organization chart.

Figure 21.1 - Project Organization Chart



(200 Total Personnel)

SECTION 22: ECONOMIC ANALYSIS

Financial evaluations for the three development alternatives represent constant US dollars, 2012 and an average sales price of $65.00 per pound of uranium oxide. As previously stated all costs are forward looking and do not include any previous project expenditures or sunk costs. Operating costs include all direct taxes and royalties, as discussed in Section 21, but do not include US Federal Income Tax. Net Present Value (NPV) is calculated at a range of discount rates as shown. Tables 22.1 through 22.3 summarizes the estimated internal rate of return (IRR) and net present value (NPV) for the three alternatives discussed in Section 21. Subsequent sensitivity analysis is provided for Alternative 2 but is applicable, in principal, to all of the alternatives. Detailed Cash Flow analysis is provided for each alternative at the end of this section. Refer to Tables 22.8 through 22.10.

Table 22.1

Alternative 1 - Open Pit and Underground Common Start		
IRR		**42%**
NPV 5%	**$**	**248,926**
NPV 7%	**$**	**200,606**
NPV 10%	**$**	**145,763**
NPV 15%	**$**	**86,103**
NPV 20%	**$**	**50,595**

Table 22.2

PREFERRED ALTERNATIVE **Alternative 2 - Open Pit and Underground** Common End		
IRR		**35%**
NPV 5%	**$**	**224,378**
NPV 7%	**$**	**173,548**
NPV 10%	**$**	**118,490**
NPV 15%	**$**	**62,733**
NPV 20%	**$**	**32,425**

Table 22.3

Alternative 3 - Open Pit Only		
IRR		**33%**
NPV 5%	**$**	**121,818**
NPV 7%	**$**	**96,062**
NPV 10%	**$**	**67,253**
NPV 15%	**$**	**36,668**
NPV 20%	**$**	**19,065**

Sensitivity to Price

The Sheep Mountain Project, like all similar projects, is quite sensitive to uranium price as shown in the subsequent tabulations. A summary of sensitivity of the projected IRR and NPV with respect to key parameters other than price also follows. The project is roughly twice as sensitive to variances in mine recovery and/or dilution as it is to variance in OPEX or CAPEX.

Table 22.4

Alternative 1 - Open Pit and Underground			
Common Start			
	Selling Price (USD/pound)		
Discount Rate	**$60**	**$65***	**$70**
NPV 5% (Million $)	**$ 202**	**$ 249**	**$ 296**
NPV 7% (Million $)	**$ 161**	**$ 201**	**$ 240**
NPV 10% (Million $)	**$ 115**	**$ 146**	**$ 176**
IRR	**36%**	**42%**	**48%**

Table 22.5

PREFERRED ALTERNATIVE			
Alternative 2 - Open Pit and Underground			
	Selling Price (USD/pound)		
Discount Rate	**$60**	**$65***	**$70**
NPV 5% (Million $)	**$ 182**	**$ 224**	**$ 267**
NPV 7% (Million $)	**$ 139**	**$ 174**	**$ 208**
NPV 10% (Million $)	**$ 93**	**$ 118**	**$ 144**
IRR	**31%**	**35%**	**40%**

Table 22.6

Alternative 3 - Open Pit Only			
	Selling Price (USD/pound)		
Discount Rate	**$60**	**$65***	**$70**
NPV 5% (Million $)	**$ 100**	**$ 122**	**$ 144**
NPV 7% (Million $)	**$ 78**	**$ 96**	**$ 114**
NPV 10% (Million $)	**$ 53**	**$ 67**	**$ 81**
IRR	**29%**	**33%**	**37%**

*Base Case selling price

Sensitivity to Other Factors

Sensitivity of the projected IRR and NPV with respect to key parameters other than price, previously shown, is summarized in the following table. It is considered possible that a higher heap recovery may be realized based on current metallurgical test work and historical production experience. An improvement in uranium loss of 0.004 U_3O_8 loss would result in a 3% improvement in IRR and an improvement in NPV @ 10% discount of 12 million $. The sensitivity analysis shows that the project is not highly sensitive to minor changes in OPEX and/or CAPEX. As contingencies were added to both of these items and as costs were based primarily upon recent contractor and vendor quotes it is considered unlikely that a variance in CAPEX and/or OPEX in excess of 10% will occur. With respect to Mine Recovery and/or Mine Dilution, the sensitivity is similar to that of uranium price in that much of the same costs are incurred, and any variance in mine recovery or dilution affects gross revenues either positively or negatively. The project is roughly twice as sensitive to variances in mine recovery and/or dilution as it is to variance in OPEX or CAPEX. Mine recovery and dilution are highly dependent upon grade control and mining selectivity. The mine plan, equipment selection, and personnel allocations included in the cost estimate, for both the open pit and underground, provide for selective mining and tight grade control in recognition of this factor.

Table 22.7 - Sensitivity Summary

Parameter	Change from Base Case	Change in IRR	Change in NPV at 10% discount
Mine Recovery	10 %	6 %	$36 million
Grade	10 %	6 %	$36 million
Heap recovery	0.004 U_3O_8 loss	3%	$12 million
CAPEX	10 %	3%	$ 7 million
OPEX	10 %	3%	$17 million

Payback Period

The payback period for capital investment will vary based on the development alternative; however, in all cases the project shows positive cumulative cash flow by year 4. Refer to the cash flow summaries that follow.

Table 22.8

CASH FLOW SUMMARY - OPEN PIT AND UNDERGROUND COMBINED WITH CONCURRENT START OF MINING

	Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	TOTAL
Congo Pit																							
Tons of resource mined	3,955	0	280	149	131	301	326	325	293	368	207	348	203	239	344	292	149						3,955
Pounds Contained	9,118		603	341	694	665	567	660	506	909	539	647	399	523	677	753	637						9,118
Mined Grade % eU3O8	0.115		0.108	0.114	0.265	0.110	0.087	0.102	0.086	0.123	0.130	0.093	0.099	0.109	0.098	0.129	0.213						0.115
Interburden	2,334		165	88	77	178	192	192	173	217	122	205	120	141	203	172	88						2,334
Cubic Yards stripped	73,601		4,331	4,601	4,713	5,069	6,010	4,642	3,980	4,820	5,330	4,546	5,020	5,037	5,169	5,666	4,667						73,601
Reclamation CY	28,000																	6,500	5,500	5,000	5,000	6,000	28,000
Sheep UG																							
Tons of Resource	3,498		100	223	431	386	367	351	386	315	299	416	224										3,498
Pounds Contained	9,248		300	600	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	348										9,248
Mined Grade % U3O8	0.132		0.151%	0.134%	0.116%	0.130%	0.136%	0.142%	0.130%	0.159%	0.167%	0.120%	0.077%										
Development Tons		200	90	162	144	189	208	224	189	260	276	159	75										2,176
Total Tons Ore Mined	7,453	0	380	372	562	687	693	676	679	683	506	764	427	239	344	292	149						7,453
Pounds Contained	18,365		903	941	1,694	1,665	1,567	1,660	1,506	1,909	1,539	1,647	747	523	677	753	637						18,365
Mined Grade % eU3O8	0.123		0.108	0.114	0.265	0.110	0.102	0.115	0.104	0.127	0.134	0.118	0.119	0.137	0.130	0.124	0.132						0.123
Tons Ore Processed	7,453		360	360	600	660	660	660	660	660	660	660	480	240	240	240	240	73					7,453
Pounds Contained	18,365		856	908	1,792	1,596	1,495	1,612	1,478	1,802	1,970	1,390	862	521	474	578	790	241					18,365
Plant feed, % eU3O8	0.123		0.119	0.126	0.149	0.121	0.113	0.122	0.112	0.137	0.149	0.105	0.090	0.108	0.099	0.120	0.165	0.165					0.123
Recovery U3O8 Calculated from 0.01% U3O8 Loss	0.919	0	0.916	0.921	0.933	0.917	0.912	0.918	0.911	0.927	0.933	0.905	0.889	0.908	0.899	0.917	0.939	0.939					0.919
Pounds U3O8 recovered	16,875		784	836	1,672	1,464	1,363	1,480	1,346	1,670	1,838	1,258	766	473	426	530	742	227					16,875
U3O8 price/pound	65		65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	
GROSS REVENUES			$ 50,985	$ 54,313	$ 108,698	$ 95,148	$ 88,623	$ 96,184	$ 87,493	$ 108,553	$ 119,471	$ 81,754	$ 49,764	$ 30,723	$ 27,683	$ 34,470	$ 48,262	$ 14,730	$ -	$ -	$ -	$ -	$ 1,096,855
Direct Costs:																							
Surface Mine	Contingencies																						
Strip	OPEX 8%; Availability; 85%; Utilization 90%	0	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	3,481	3,481	3,481	3,481	3,481	55,518
Mining	OPEX 8%; Availability; 85%; Utilization 90%	0	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	0	0	0	0	0	15,672
Support	OPEX 8%; Availability; 85%; Utilization 90%	0	884	884	884	884	884	884	884	884	884	884	884	884	884	884	884	347	347	347	347	347	15,002
Staff	OPEX 8%	928	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	441	441	441	441	441	24,211
Total Surface Mine		**$ 928**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 4,269**	**$ 4,269**	**$ 4,269**	**$ 4,269**	**$ 4,269**	**110,403**
Underground Mine																							
Production		0	3,303	7,409	14,302	12,804	12,181	11,649	12,797	10,448	9,926	13,822	7,448										116,088
Development		1,625	809	1,814	3,502	3,135	2,982	2,852	3,133	2,558	2,430	3,384	1,824										30,048
Support		395	787	1,766	3,408	3,051	2,903	2,776	3,050	2,490	2,366	3,294	1,775										28,062
Staff		183	364	816	1,576	1,411	1,342	1,284	1,410	1,151	1,094	1,523	821										12,974
Subtotal		$ 2,204	$ 5,263	$ 11,805	$ 22,788	$ 20,401	$ 19,408	$ 18,561	$ 20,390	$ 16,647	$ 15,815	$ 22,023	$ 11,867	$ -	$ -	$ -	$ -						187,171
Contingency %	OPEX 8%	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08						
Total Underground Mine		**$ 2,380**	**$ 5,684**	**$ 12,749**	**$ 24,611**	**$ 22,033**	**$ 20,960**	**$ 20,046**	**$ 22,021**	**$ 17,978**	**$ 17,081**	**$ 23,785**	**$ 12,816**	**$ -**	**$ -**	**$ -**	**$ -**						**202,145**
Reclamation and Closure																							
NRC Annual Inspection Fees		40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	840
Final Grading and Revegetation																						2,000	2,000
Plant Decommissioning and Reclamation																					4,500	4,500	9,000
Total Reclamation and Closure		**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 4,540**	**$ 6,540**	**11,840**
Heap Leach	Contingencies																						
Variable costs per ton	OPEX 8%	0	2,962	2,962	4,937	5,430	5,430	5,430	5,430	5,430	5,430	5,430	3,949	1,975	1,975	1,975	1,975	603	0				61,323
Fixed Costs per year	OPEX 8%	0	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	0				42,906
		0	0	0	0	0	0	1,500	1,500	0	0	0	0	0	0	0	0	0	0				3,000
Total Heap Leach		**$ -**	**$ 5,644**	**$ 5,644**	**$ 7,618**	**$ 8,112**	**$ 8,112**	**$ 9,612**	**$ 9,612**	**$ 8,112**	**$ 8,112**	**$ 8,112**	**$ 6,631**	**$ 4,656**	**$ 4,656**	**$ 4,656**	**$ 4,656**	**$ 3,284**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 107,229**
Reclamation Bond Mine and Heap	$ 17,000,000	bond, 2% fee	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**7,140**
Taxes & Royalties																							
Gross Products tax per/lb	by price	per pound	$ 2.12	$ -	$ 1,663	$ 1,771	$ 3,545	$ 3,103	$ 2,890	$ 3,137	$ 2,854	$ 3,540	$ 3,897	$ 2,666	$ 1,623	$ 1,002	$ 903	$ 1,124	$ 1,574	$ 480	$ -	$ -	$ -	$ -	$ 35,774
Severance Tax per/lb	by price	per pound	$ 1.09	$ -	$ 857	$ 912	$ 1,826	$ 1,598	$ 1,489	$ 1,616	$ 1,470	$ 1,824	$ 2,007	$ 1,373	$ 836	$ 516	$ 465	$ 579	$ 811	$ 247	$ -	$ -	$ -	$ -	$ 18,427
State lease (pit)	rec. lbs. x price	5% state	$ 3.25		$ 1,702	$ 984	$ 2,226	$ 1,900	$ 1,603	$ 1,911	$ 1,469	$ 2,584	$ 2,093	$ 1,606	$ 1,330	$ 1,536	$ 1,384	$ 1,724	$ 2,413					$ 26,466
Claim royalties (UG)	rec. lbs. x price	4%claims	$ 2.60		$ 678	$ 1,385	$ 2,567	$ 2,286	$ 2,263	$ 2,318	$ 2,324	$ 2,275	$ 3,104	$ 1,985	$ 926	$ -	$ -	$ -	$ -					$ 22,113
Total Taxes and Royalties		**$ -**	**$ 4,899**	**$ 5,053**	**$ 10,164**	**$ 8,888**	**$ 8,245**	**$ 8,983**	**$ 8,117**	**$ 10,223**	**$ 11,101**	**$ 7,631**	**$ 4,716**	**$ 3,054**	**$ 2,752**	**$ 3,427**	**$ 4,798**	**$ 728**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 102,779**
TOTAL DIRECT COSTS		**$ 3,688**	**$ 22,482**	**$ 29,702**	**$ 48,649**	**$ 45,288**	**$ 43,573**	**$ 44,896**	**$ 46,005**	**$ 42,569**	**$ 42,549**	**$ 45,784**	**$ 30,418**	**$ 13,966**	**$ 13,664**	**$ 14,339**	**$ 15,710**	**$ 8,661**	**$ 4,649**	**$ 4,649**	**$ 9,149**	**$ 11,149**	**$ 541,536**
Cash Flow		**$ (3,688)**	**$ 28,502**	**$ 24,611**	**$ 60,049**	**$ 49,860**	**$ 45,051**	**$ 51,289**	**$ 41,488**	**$ 65,985**	**$ 76,922**	**$ 35,970**	**$ 19,345**	**$ 16,757**	**$ 14,019**	**$ 20,132**	**$ 32,553**	**$ 6,069**	**$ (4,649)**	**$ (4,649)**	**$ (9,149)**	**$ (11,149)**	**$ 555,319**
Capital Expenditures:	Contingencies Included																						
Permitting (NRC, BLM, and WDEQ)		1,919	1,226	1,183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ 4,328
Pre-Development Mine Design		0	0	800	400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ 1,200
OP Mine Equipment	15%	0	0	0	14,301	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ 14,301
UG Mine Equipment	see details 15-30%	0	0	12,150	24,301	12,150	0	1,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0	0	0	0	0	0	0	$ 61,601
Office, Shop, Dry, and support		0	0	0	3,166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ 3,166
Mineral Processing/Heap	25%	0	0	18,902	18,902	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ 37,803
TOTAL CAPITAL EXPENDITURES		**$ 1,919**	**$ 1,226**	**$ 33,035**	**$ 61,069**	**$ 12,150**	**$ -**	**$ 1,000**	**$ 2,000**	**$ 2,000**	**$ 2,000**	**$ 2,000**	**$ 2,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 122,399**
NET CASH FLOW PRE TAX		**$ (1,919)**	**$ (1,226)**	**$ (36,722)**	**$ (32,567)**	**$ 12,461**	**$ 60,049**	**$ 48,860**	**$ 43,051**	**$ 49,289**	**$ 39,488**	**$ 63,985**	**$ 74,922**	**$ 33,970**	**$ 19,345**	**$ 16,757**	**$ 14,019**	**$ 20,132**	**$ 32,553**	**$ 6,069**	**$ (4,649)**	**$ (4,649)**	**$ (9,149)**	**$ (11,149)**	**$ 432,919**
CUMULATIVE NET CASH FLOW:		$ (1,919)	$ (3,145)	$ (39,867)	$ (72,434)	$ (59,973)	$ 76	$ 48,935	$ 91,986	$ 141,275	$ 180,763	$ 244,747	$ 319,669	$ 353,639	$ 372,985	$ 389,742	$ 403,761	$ 423,892	$ 456,445	$ 462,514	$ 457,865	$ 453,217	$ 444,068	$ 432,919	

Table 22.9

CASH FLOW SUMMARY - OPEN PIT AND UNDERGROUND COMBINED WITH CONCURRENT END OF MINING

	Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	TOTAL
Congo Pit																							
Tons of resource mined	3,955	0	280	149	131	301	326	325	293	368	207	348	203	239	344	292	149						3,955
Pounds Contained	9,118		603	341	694	665	567	660	506	909	539	647	399	523	677	753	637						9,118
Mined Grade % eU3O8	0.115		0.108	0.114	0.265	0.110	0.087	0.102	0.086	0.123	0.130	0.093	0.099	0.109	0.098	0.129	0.213						0.115
Interburden	2,334		165	88	77	178	192	192	173	217	122	205	120	141	203	172	88						2,334
Cubic Yards stripped	73,601		4,331	4,601	4,713	5,069	6,010	4,642	3,980	4,820	5,330	4,546	5,020	5,037	5,169	5,666	4,667						73,601
Reclamation CY	28,000																	6,500	5,500	5,000	5,000	6,000	28,000
Sheep UG																							
Tons of Resource	3,498						100	223	431	386	367	351	386	315	299	416	224						3,498
Pounds Contained	9,248						300	600	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	348						9,248
Mined Grade % eU3O8	0.132						0.151%	0.134%	0.116%	0.130%	0.136%	0.142%	0.130%	0.159%	0.167%	0.120%	0.077%						0.132
Development Tons	2,176					200	90	162	144	189	208	224	189	260	276	159	75						2,176
Total Tons Ore Mined	7,453	0	280	149	131	301	425	548	724	754	574	699	588	554	643	709	374						7,453
Pounds Contained	18,365		603	341	694	665	867	1,260	1,506	1,909	1,539	1,647	1,399	1,523	1,677	1,753	984						18,365
Mined Grade %e U3O8	0.123		0.108	0.114	0.265	0.110	0.102	0.115	0.104	0.127	0.134	0.118	0.119	0.137	0.130	0.124	0.132						0.123
Tons Ore Processed	7,453		180	180	180	300	360	600	660	660	660	660	660	600	600	600	480	73					7,453
Pounds Contained	18,365		388	402	763	700	739	1,359	1,378	1,636	1,736	1,579	1,572	1,623	1,568	1,492	1,241	189					18,365
Plant feed, %e U3O8	0.123		0.108	0.112	0.212	0.117	0.103	0.113	0.104	0.124	0.132	0.120	0.119	0.135	0.131	0.124	0.129	0.129					0.123
Recovery U3O8 Calculated from 0.01% U3O8 Loss	0.919	0	0.907	0.911	0.953	0.914	0.903	0.912	0.904	0.919	0.924	0.916	0.916	0.926	0.923	0.920	0.923	0.923					0.919
Pounds U3O8 recovered	16,875		352	366	727	640	667	1,239	1,246	1,504	1,604	1,447	1,440	1,503	1,448	1,372	1,145	175					16,875
U3O8 price/pound $	65		65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	
GROSS REVENUES		$	$ 22,850	$ 23,807	$ 47,241	$ 41,600	$ 43,328	$ 80,532	$ 81,005	$ 97,789	$ 104,261	$ 94,073	$ 93,618	$ 97,675	$ 94,118	$ 89,153	$ 74,444	$ 11,360	$ -	$ -	$ -	$ -	$ 1,096,855
Direct Costs:																							
Surface Mine	Contingencies																						
Strip	OPEX 8%; Availability; 85%; Utilization 90%	0	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	3,481	3,481	3,481	3,481	3,481	55,518
Mining	OPEX 8%; Availability; 85%; Utilization 90%	0	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	0	0	0	0	0	15,672
Support	OPEX 8%; Availability; 85%; Utilization 90%	0	884	884	884	884	884	884	884	884	884	884	884	884	884	884	884	347	347	347	347	347	15,002
Staff	OPEX 8%	928	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	441	441	441	441	441	24,211
Total Surface Mine		**$ 928**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 4,269**	**$ 4,269**	**$ 4,269**	**$ 4,269**	**$ 4,269**	**110,403**
Underground Mine																							
Production						0	3,303	7,409	14,302	12,804	12,181	11,649	12,797	10,448	9,926	13,822	7,448						116,088
Development						1,625	809	1,814	3,502	3,135	2,982	2,852	3,133	2,558	2,430	3,384	1,824						30,048
Support						395	787	1,766	3,408	3,051	2,903	2,776	3,050	2,490	2,366	3,294	1,775						28,062
Staff						183	364	816	1,576	1,411	1,342	1,284	1,410	1,151	1,094	1,523	821						12,974
Subtotal		$ -	$ -	$ -	$ -	$ 2,204	$ 5,263	$ 11,805	$ 22,788	$ 20,401	$ 19,408	$ 18,561	$ 20,390	$ 16,647	$ 15,815	$ 22,023	$ 11,867						187,171
Contingency %	OPEX 8%	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08						
Total Underground Mine		**$ -**	**$ -**	**$ -**	**$ -**	**$ 2,380**	**$ 5,684**	**$ 12,749**	**$ 24,611**	**$ 22,033**	**$ 20,960**	**$ 20,046**	**$ 22,021**	**$ 17,978**	**$ 17,081**	**$ 23,785**	**$ 12,816**						**202,145**
Reclamation and Closure																							
NRC Annual Inspection Fees		40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	840
Final Grading and Revegetation																						2,000	2,000
Plant Decommissioning and Reclamation																					4,500	4,500	9,000
Total Reclamation and Closure		**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 4,540**	**$ 6,540**	**11,840**
Heap Leach	Contingencies																						
Variable costs per ton	OPEX 8%	0	1,481	1,481	1,481	2,468	2,962	4,937	5,430	5,430	5,430	5,430	5,430	4,937	4,937	4,937	3,949	603	0				61,323
Fixed Costs per year	OPEX 8%	0	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	0				42,906
												1,500	1,500										3,000
Total Heap Leach		**$ -**	**$ 4,163**	**$ 4,163**	**$ 4,163**	**$ 5,150**	**$ 5,644**	**$ 7,618**	**$ 8,112**	**$ 8,112**	**$ 8,112**	**$ 9,612**	**$ 9,612**	**$ 7,618**	**$ 7,618**	**$ 7,618**	**$ 6,631**	**$ 3,284**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 107,229**
Reclamation Bond Mine and Heap	$ 17,000,000 bond, 2% fee	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 7,140**
Taxes & Royalties																							
Gross Products tax per/lb	by price per pound $ 2.12	$ -	$ 745	$ 776	$ 1,541	$ 1,357	$ 1,413	$ 2,627	$ 2,642	$ 3,189	$ 3,401	$ 3,068	$ 3,053	$ 3,186	$ 3,070	$ 2,908	$ 2,428	$ 371	$ -	$ -	$ -	$ -	$ 35,774
Severance Tax per/lb	by price per pound $ 1.09	$ -	$ 384	$ 400	$ 794	$ 699	$ 728	$ 1,353	$ 1,361	$ 1,643	$ 1,752	$ 1,580	$ 1,573	$ 1,641	$ 1,581	$ 1,498	$ 1,251	$ 191	$ -	$ -	$ -	$ -	$ 18,427
State lease (pit)	rec. lbs. x price 5% state $ 3.25		$ 1,142	$ 1,190	$ 2,362	$ 2,080	$ 1,416	$ 2,108	$ 1,360	$ 2,328	$ 1,827	$ 1,848	$ 1,336	$ 1,676	$ 1,899	$ 1,914	$ 2,408						$ 26,896
Claim royalties (UG)	rec. lbs. x price 4%claims $ 2.60		$ -	$ -	$ -	$ -	$ 600	$ 1,534	$ 2,152	$ 2,049	$ 2,709	$ 2,285	$ 2,676	$ 2,566	$ 2,245	$ 2,035	$ 1,052						$ 21,903
Total Taxes and Royalties		**$ -**	**$ 2,272**	**$ 2,367**	**$ 4,696**	**$ 4,136**	**$ 4,157**	**$ 7,623**	**$ 7,515**	**$ 9,209**	**$ 9,688**	**$ 8,781**	**$ 8,638**	**$ 9,069**	**$ 8,795**	**$ 8,355**	**$ 7,138**	**$ 561**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 103,000**
TOTAL DIRECT COSTS		**$ 1,308**	**$ 12,690**	**$ 12,785**	**$ 15,114**	**$ 17,921**	**$ 21,741**	**$ 34,246**	**$ 46,494**	**$ 45,610**	**$ 45,016**	**$ 44,694**	**$ 46,526**	**$ 40,921**	**$ 39,750**	**$ 46,013**	**$ 32,841**	**$ 8,494**	**$ 4,649**	**$ 4,649**	**$ 9,149**	**$ 11,149**	**$ 541,757**
Cash Flow		**$ (1,308)**	**$ 10,160**	**$ 11,022**	**$ 32,126**	**$ 23,679**	**$ 21,588**	**$ 46,287**	**$ 34,512**	**$ 52,179**	**$ 59,246**	**$ 49,379**	**$ 47,091**	**$ 56,754**	**$ 54,368**	**$ 43,140**	**$ 41,603**	**$ 2,866**	**$ (4,649)**	**$ (4,649)**	**$ (9,149)**	**$ (11,149)**	**$ 555,098**
Capital Expenditures:	Contingencies Included																						
Permitting (NRC, BLM, and WDEQ)		1,919	1,226	1,183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ 4,328
Pre-Development Mine Design		0	0	800	400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ 1,200
OP Mine Equipment	15%	0	0	0	14,301	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ 14,301
UG Mine Equipment	see details 15-30%	0	0	0	0	0	0	12,150	24,301	12,150	0	1,000	2,000	2,000	2,000	2,000	2,000	0	0	0	0	0	$ 61,601
Office, Shop, Dry, and support		0	0	0	3,166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ 3,166
Mineral Processing/Heap	25%	0	0	18,902	18,902	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ 37,803
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL CAPITAL EXPENDITURES		**$ 1,919**	**$ 1,226**	**$ 20,885**	**$ 36,769**	**$ -**	**$ -**	**$ 12,150**	**$ 24,301**	**$ 12,150**	**$ -**	**$ 1,000**	**$ 2,000**	**$ 2,000**	**$ 2,000**	**$ 2,000**	**$ 2,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 122,399**
NET CASH FLOW PRE TAX		**$ (1,919)**	**$ (1,226)**	**$ (22,192)**	**$ (26,608)**	**$ 11,022**	**$ 32,126**	**$ 11,529**	**$ (2,713)**	**$ 34,136**	**$ 34,512**	**$ 51,179**	**$ 57,246**	**$ 47,379**	**$ 45,091**	**$ 54,754**	**$ 52,368**	**$ 41,140**	**$ 41,603**	**$ 2,866**	**$ (4,649)**	**$ (4,649)**	**$ (9,149)**	**$ (11,149)**	**$ 432,698**
CUMULATIVE NET CASH FLOW:		$ (1,919)	$ (3,145)	$ (25,337)	$ (51,946)	$ (40,924)	$ (8,797)	$ 2,731	$ 19	$ 34,155	$ 68,667	$ 119,846	$ 177,092	$ 224,470	$ 269,562	$ 324,316	$ 376,684	$ 417,824	$ 459,427	$ 462,293	$ 457,645	$ 452,996	$ 443,847	$ 432,698	

Table 22.10

CASH FLOW SUMMARY - OPEN PIT MINING ONLY

	Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	TOTAL
Congo Pit																							
Tons of resource mined	3,955	0	280	149	131	301	326	325	293	368	207	348	203	239	344	292	149						3,955
Pounds Contained	9,118		603	341	694	665	567	660	506	909	539	647	399	523	677	753	637						9,118
Mined Grade % eU3O8	0.115		0.108	0.114	0.265	0.110	0.087	0.102	0.086	0.123	0.130	0.093	0.099	0.109	0.098	0.129	0.213						0.115
Interburden	2,334		165	88	77	178	192	192	173	217	122	205	120	141	203	172	88						2,334
Cubic Yards stripped	73,601		4,331	4,601	4,713	5,069	6,010	4,642	3,980	4,820	5,330	4,546	5,020	5,037	5,169	5,666	4,667						73,601
Reclamation CY	28,000																	6,500	5,500	5,000	5,000	6,000	28,000
Total Tons Ore Mined	3,955	0	280	149	131	301	326	325	293	368	207	348	203	239	344	292	149						3,955
Pounds Contained	9,118		603	341	694	665	567	660	506	909	539	647	399	523	677	753	637						9,118
Mined Grade % eU3O8	0.115		0.108	0.114	0.265	0.110	0.087	0.102	0.086	0.123	0.130	0.093	0.099	0.109	0.098	0.129	0.213						0.115
Tons Ore Processed	3,955		180	180	180	300	330	300	330	300	300	300	240	240	240	240	240	55					3,955
Pounds Contained	9,118		388	402	763	700	586	606	582	737	770	545	469	526	471	582	805	186					9,118
Plant feed, % eU3O8	0.115		0.108	0.112	0.212	0.117	0.089	0.101	0.088	0.123	0.128	0.091	0.098	0.110	0.098	0.121	0.168	0.168					0.115
Recovery U3O8 Calculated from 0.01% U3O8 Loss	0.913		0.907	0.911	0.953	0.914	0.887	0.901	0.887	0.919	0.922	0.890	0.898	0.909	0.898	0.918	0.940	0.940					0.913
Pounds U3O8 recovered	8,327		352	366	727	640	520	546	516	677	710	485	421	478	423	534	757	175					8,327
U3O8 price/pound	65		65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	
GROSS REVENUES			$ 22,850	$ 23,807	$ 47,241	$ 41,600	$ 33,797	$ 35,458	$ 33,510	$ 44,011	$ 46,121	$ 31,547	$ 27,351	$ 31,077	$ 27,511	$ 34,741	$ 49,225	$ 11,381	$ -	$ -	$ -	$ -	$	$ 541,227
Direct Costs:																							
Surface Mine	Contingencies																						
Strip	OPEX 8%; Availability; 85%; Utilization 90%	0	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	3,481	3,481	3,481	3,481	3,481	55,518
Mining	OPEX 8%; Availability; 85%; Utilization 90%	0	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	0	0	0	0	0	15,672
Support	OPEX 8%; Availability; 85%; Utilization 90%	0	884	884	884	884	884	884	884	884	884	884	884	884	884	884	884	347	347	347	347	347	15,002
Staff	OPEX 8%	928	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	441	441	441	441	441	24,211
Total Surface Mine		**$ 928**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 5,875**	**$ 4,269**	**$ 4,269**	**$ 4,269**	**$ 4,269**	**$ 4,269**	**110,403**
Reclamation and Closure																							
NRC Annual Inspection Fees		40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	840
Final Grading and Revegetation																					0	2,000	2,000
Plant Decommissioning and Reclamation																					4,500	4,500	9,000
Total Reclamation and Closure		**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 40**	**$ 4,540**	**$ 6,540**	**11,840**
Heap Leach	Contingencies																						
Variable costs per ton	OPEX 8%	0	1,481	1,481	1,481	2,468	2,715	2,468	2,715	2,468	2,468	2,468	1,975	1,975	1,975	1,975	1,975	457	0				32,544
Fixed Costs per year	OPEX 8%	0	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	0				42,906
Total Heap Leach		**$ -**	**$ 4,163**	**$ 4,163**	**$ 4,163**	**$ 5,150**	**$ 5,397**	**$ 5,150**	**$ 5,397**	**$ 5,150**	**$ 5,150**	**$ 5,150**	**$ 4,656**	**$ 4,656**	**$ 4,656**	**$ 4,656**	**$ 4,656**	**$ 3,138**	**$ -**	**$ -**	**$ -**	**$ -**	**75,451**
Reclamation Bond Mine and Heap	$ 17,000,000	bond, 2% fee		**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**$ 340**	**7,140**
Taxes & Royalties																							
Gross Products tax per/lb	by price	per pound	$ 2.12	$ -	$ 745	$ 776	$ 1,541	$ 1,357	$ 1,102	$ 1,156	$ 1,093	$ 1,435	$ 1,504	$ 1,029	$ 892	$ 1,014	$ 897	$ 1,133	$ 1,605	$ 371	$ -	$ -	$ -	$ -	$ 17,652
Severance Tax per/lb	by price	per pound	$ 1.09	$ -	$ 384	$ 400	$ 794	$ 699	$ 568	$ 596	$ 563	$ 739	$ 775	$ 530	$ 459	$ 522	$ 462	$ 584	$ 827	$ 191	$ -	$ -	$ -	$ -	$ 9,093
State lease (pit)	rec. lbs. x price	5% state	$ 3.25	$ -	$ 1,142	$ 1,190	$ 2,362	$ 2,080	$ 1,690	$ 1,773	$ 1,675	$ 2,201	$ 2,306	$ 1,577	$ 1,368	$ 1,554	$ 1,376	$ 1,737	$ 2,461	$ 569	$ -	$ -	$ -	$ -	$ 27,061
Claim royalties (UG)	rec. lbs. x price	4%claims	$ 2.60																				
Total Taxes and Royalties				**$ -**	**$ 2,272**	**$ 2,367**	**$ 4,696**	**$ 4,136**	**$ 3,360**	**$ 3,525**	**$ 3,331**	**$ 4,375**	**$ 4,585**	**$ 3,136**	**$ 2,719**	**$ 3,090**	**$ 2,735**	**$ 3,454**	**$ 4,894**	**$ 1,131**	**$ -**	**$ -**	**$ -**	**$ -**	**53,806**
TOTAL DIRECT COSTS				**$ 1,308**	**$ 12,690**	**$ 12,785**	**$ 15,114**	**$ 15,541**	**$ 15,012**	**$ 14,930**	**$ 14,984**	**$ 15,781**	**$ 15,991**	**$ 14,542**	**$ 13,631**	**$ 14,001**	**$ 13,647**	**$ 14,365**	**$ 15,805**	**$ 8,918**	**$ 4,649**	**$ 4,649**	**$ 9,149**	**$ 11,149**	**$ 258,640**
Cash Flow				**$ (1,308)**	**$ 10,160**	**$ 11,022**	**$ 32,126**	**$ 26,059**	**$ 18,785**	**$ 20,528**	**$ 18,526**	**$ 28,231**	**$ 30,131**	**$ 17,005**	**$ 13,720**	**$ 17,076**	**$ 13,864**	**$ 20,375**	**$ 33,420**	**$ 2,462**	**$ (4,649)**	**$ (4,649)**	**$ (9,149)**	**$ (11,149)**	**$ 282,588**
Capital Expenditures:	Contingencies Included																						
Permitting (NRC, BLM, and WDEQ)			1,919	1,226	1,183	0																	$ 4,328
Pre-Development Mine Design			0	0	800	400																	$ 1,200
OP Mine Equipment		15%	0	0	0	14,301																	$ 14,301
Office, Shop, Dry, and support			0	0	0	3,166																	$ 3,166
Mineral Processing/Heap		25%	0	0	18,902	18,902																	$ 37,803
TOTAL CAPITAL EXPENDITURES			**$ 1,919**	**$ 1,226**	**$ 20,885**	**$ 36,769**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 60,798**
NET CASH FLOW PRE TAX			**$ (1,919)**	**$ (1,226)**	**$ (22,192)**	**$ (26,608)**	**$ 11,022**	**$ 32,126**	**$ 26,059**	**$ 18,785**	**$ 20,528**	**$ 18,526**	**$ 28,231**	**$ 30,131**	**$ 17,005**	**$ 13,720**	**$ 17,076**	**$ 13,864**	**$ 20,375**	**$ 33,420**	**$ 2,462**	**$ (4,649)**	**$ (4,649)**	**$ (9,149)**	**$ (11,149)**	**$ 221,790**
CUMULATIVE NET CASH FLOW:			$ (1,919)	$ (3,145)	$ (25,337)	$ (51,946)	$ (40,924)	$ (8,797)	$ 17,262	$ 36,047	$ 56,574	$ 75,100	$ 103,331	$ 133,462	$ 150,467	$ 164,187	$ 181,263	$ 195,127	$ 215,502	$ 248,922	$ 251,384	$ 246,736	$ 242,087	$ 232,938	$ 221,790	

SECTION 23: ADJACENT PROPERTIES

The Sheep Mountain Project is within the Crooks Gap/Green Mountain Uranium District. Past production occurred at both Sheep Mountain by WNC and others and at Green Mountain by Pathfinder Mines at their Big Eagle Mine. Rio Tinto Ltd. through its wholly owned subsidiary, Kennecott Corp, USA, (Rio Tinto) currently controls the majority of the known mineral resources in the Green Mountain area and the Big Eagle mine which is currently closed.

Sheep Mountain is one of four major uranium districts in central Wyoming which surround the Granite Mountains where uranium mineralization occurs in Eocene, non-marine, arkosic sandstones (Bendix, 1982). The other districts are the Gas Hills, Shirley Basin, and Great Divide Basin. The mineralization at Gas Hills, Shirley Basin, and Great Divide Basin is similar in nature to that at Sheep Mountain with respect to geologic history, age, source of sediments, source of uranium and genesis of mineralization.

Sheep Mountain is approximately 25 air miles SSW of the Gas Hills Uranium District. By 1977 the Gas Hills historically had produced 90 million pounds of uranium and once supported three uranium mills (Bendix, 1982). Uranium production continued in the Gas Hills dominantly by Pathfinder Mines Corporation and Union Carbide Corporation into the mid 1980's (personal knowledge of the Author working in the Gas Hills during that time).

Shirley Basin through 1977 had produced 31 million pounds of uranium and supported two uranium mills, operated by Pathfinder Mines Corporation and Petrotomics Incorporated (Bendix, 1982). As with the Gas Hills these operations continued into the 1980's.

The Great Divide Basin has not had substantial uranium production. Boberg (1979) states, that this geologic province is estimated to contain at least 270 million pounds of uranium resources and is the least exploited Wyoming basin known to contain uranium. The reader is cautioned that this published historical estimate of mineral resources is not CIM compliant.

Sheep Mountain is approximately 25 air miles north of the Sweetwater Uranium mill. The Sweetwater mill is controlled by Rio Tinto. The mill has not been decommissioned and has a US NRC Source Materials License but has not operated since the early 1980's.

SECTION 24: OTHER RELEVANT DATA AND INFORMATION

Radiometric Equilibrium

Radiometric equilibrium studies completed in 2006 on behalf of UPC evaluated data including some 223 samples for which there was gamma equivalent closed can analyses and chemical assays and concluded *"Although the data exhibit high variability, there does not appear to be a significant bias and Scott Wilson RPA is of the opinion that the eU_3O_8 values are appropriate for use in the resource estimate."* (RPA, 2006).

This data was reviewed by the author, however, the samples had not been preserved so no confirmatory analysis could be completed. At the author's recommendation, during the 2009 drilling program, a state-of-the-art geophysical logging tool, known as a uranium spectral analysis tool (USAT) was employed to further examine radiometric equilibrium conditions (BRS, 2010). This technique was used since past drill programs had reported difficulty in sample recovery from coring and this method would ensure a direct comparison of gamma equivalent values and direct uranium measurements via the USAT tool from downhole logging.

Table 24.1 provides a direct comparison of the equivalent gamma and direct USAT measurement of in situ uranium values for the five drill holes completed in the Congo Pit in 2009. For the 2009 drilling program downhole logging of the drill holes was completed using standard gamma technology as well as a USAT, operated by Century Wireline Services of Tulsa OK. The USAT method measures the gamma intensity of Pa234, the short lived ($t_{½}$ = 6.7 hr) second daughter product of U238. U238 reaches secular equilibrium with Pa234 within approximately 4 months thus USAT gives a nearly direct measurement of uranium content and therefore allows determination of the equilibrium state of the uranium mineralization intersected in the hole. Note that the measurements reflected various mineralized zones vary in depth from 24.5 to 464 feet from the surface. Table 24.1 displays the depth in feet of the top and bottom of the mineralized zone (from and to), the thickness of the mineralized zone (THK) in feet, the grade of equivalent uranium in weight percent and GT determined by downhole gamma, and the grade of uranium in weight percent and GT determined by downhole USAT logging.

The disequilibrium factor (DEF) was calculated for each mineralized intercept and summarized for each drill hole. A DEF factor of 1 indicates that radiometric equilibrium exists. DEF factors less than 1 indicate a depletion of uranium with respect to gamma equivalent measurements and a DEF factor greater than 1 indicates an enrichment of uranium values with respect to gamma equivalent values. The DEF from 45 mineralized intercepts from the 2009 drilling ranged from a low factor of 0.73 to a high factor of 2.07 with an average value of 1.05. Although this data indicates the potential for radiometric enrichment, a conservative DEF of 1 was used in the resource calculations.

Table 24.1 - Comparison of Radiometric Equilibrium based on Gamma and USAT Logging

Drill Hole	From	To	Thk	% eU_3O_8 (gamma)	GT Gamma	% U_3O_8 (USAT)	GT USAT	DEF
Congo 1	24.5	26.5	2	0.063	0.126	0.054	0.108	0.857
	58	60	2	0.05	0.1	0.061	0.122	1.220
	68	71	3	0.087	0.261	0.078	0.234	0.897
	71	77	6	0.031	0.186	4ft @ .096	0.384	2.065
	79.5	81	1.5	0.046	0.069	0.059	0.0885	1.283
	115	119	4	0.049		Not run		
sum/average					0.742		0.9365	1.262
Congo 2	56.5	58.5	2	0.271	0.542	0.264	0.528	0.974
	74.5	76.5	2	0.183	0.366	4' @ .137	0.548	1.497
	95	98	3	0.06	0.18	0.048	0.144	0.800
	118.5	120.5	2	0.103		Not run		
	213	216	3	0.09	0.27	0.066	0.198	0.733
	219.5	222.5	3	0.183	0.549	0.169	0.507	0.923
	236	239	3	0.114	0.342	0.111	0.333	0.974
	464	466.5	2.5	0.035	0.0875	0.035	0.0875	1.000
sum/average					2.3365		2.3455	1.004
Congo 3	52	65	13	0.073	0.949	0.071	0.923	0.973
	79	81	2	0.028		Not run		
	90	94.5	4.5	0.097	0.4365	3' @ .115	0.345	0.790
	96	101	5	0.107	0.535	0.117	0.585	1.093
	117.5	121.5	4	0.08	0.32	6' @ .05	0.3	0.938
	124	126.5	2.5	0.027	0.0675	0.031	0.0775	1.148
	154	156.5	2.5	0.134	0.335	0.131	0.3275	0.978
	172.5	178	5.5	0.044	0.242	0.04	0.22	0.909
sum/average					2.885		2.778	0.963
Congo 4	49	52.5	3.5	0.028	0.098	0.023	0.0805	0.821
	88	89.5	1.5	0.023		Not run		
	91	94	3	0.05		Not run		
	100	101.5	1.5	0.029		Not run		
	104.5	109	4.5	0.134	0.603	0.149	0.6705	1.112
	113	114.5	1.5	0.028		Not run		
	132.5	136	3.5	0.072	0.252	0.073	0.2555	1.014
	166.5	169.5	3	0.088	0.264	0.099	0.297	1.125
	207.5	214	6.5	0.061	0.3965	0.054	0.351	0.885
sum/average					1.6135		1.6545	1.025
Congo 5	131.5	133.5	2	0.054	0.108	0.041	0.082	0.759
	143	146	3	0.025		Not run		
	153	158.5	5	0.076	0.38	0.07	0.35	0.921
	160	167	7	0.151	1.057	0.162	1.134	1.073
	172.5	179	6.5	0.07	0.455	0.066	0.429	0.943
	199.5	206.5	7	0.047	0.329	0.041	0.287	0.872
	219	222.5	3.5	0.027		Not run		
	267.5	272	4.5	0.051	0.2295	0.043	0.1935	0.843
	293.5	297	3.5	0.062	0.217	0.071	0.2485	1.145
	303.5	305.5	2	0.075	0.15	.5'@ .062	0.31	2.067
	311	316.5	5.5	0.056	0.308	0.076	0.418	1.357
	325	335	10	0.126	1.26	7.5'@.143	1.0725	0.851
sum/average					4.4935		4.5245	1.007

Ground Water Conditions

The Crooks Gap area regional hydrology, as determined by the Platte River Basin Water Plan, includes two separate formations or groups of formations that qualify as potentially productive for groundwater. The Quaternary aquifer system has both an alluvial and non-alluvial division. This is considered to be a discontinuous but major aquifer in the State of Wyoming. It is undetermined at this time whether this surface aquifer exists in the project area.

The second aquifer in the Crooks Gap area is the Tertiary Aquifer System. The System in the Crooks Gap region is comprised of the Fort Union and Battle Spring Formations. The Platte River Basin Water Plan describes the aquifer as comprised of complex inter-tonguing fluvial and lacustrine sediments. This is also classified as a major aquifer for the State of Wyoming.

Mining will occur in the Battle Spring Formation. Historic data indicates that sustained dewatering of the Sheep Underground mines required approximately 200 gpm, but that the cone of depression is limited in area and will not impact surface water sources in the area. In addition, dewatering of the Congo Open pit requires an estimated 150 gpm beginning in year 7 and extending to the end of mining. Thus, approximately 350 gpm of water will be produced by the mines.

With respect to mine and mineral processing operations, the mineral processing facility will operate at an average flow rate of 360 gpm. However, the majority of the flow is recirculated resulting in an estimate net water demand of 135 gpm. The largest consumptive use of water on the project will be for dust control for the open pit, hauls roads, stockpile areas, and the conveyor system. This use is estimated to average 150 gpm over a 9 month period or 100 gpm on an annual basis. Thus, the total water use is estimated at 235 gpm. This is significant in that the water produced by the mine operations is adequate for the consumptive needs of the project and that no additional water sources will be required.

SECTION 25: INTERPRETATION AND CONCLUSIONS

The preferred alternative for the development of the Sheep Mountain Project is an open pit and underground conventional mine operation with on-site mineral processing featuring an acid heap leach and solvent extraction recovery facility. The preferred alternative begins the operation with the open pit and heap leach facility and brings the underground mine into operation 4-5 years later such that the forecasted end of mining for both the open pit and underground coincide. This approach defers a substantial amount of initial capital, minimizes risk, and allows for a gradual startup of site activities while maximizing resource recovery. Having the end of mining coincide for both operations optimizes the fixed costs of personnel and facilities.

The Sheep Mountain Project if implemented would be profitable under current economic conditions. Under the base case (preferred alternative and US $65 per pound selling price) the project is estimated to generate an IRR of 35% before taxes and has an NPV of over 118 million dollars US at a 10% discount rate.

The technical risks related to the project are low as the mining and recovery methods are proven. The mining methods recommended have been employed successfully at the project in the past. Successful uranium recovery from the mineralized material at Sheep Mountain and similar project such as the Gas Hills has been demonstrated via both conventional milling and heap leach recovery.

Risks related to permitting and licensing the project are also low as the project is a brown-field development located in a state which tends to favor mining and industrial development. The project will also provide substantial revenues to both Fremont County and the State of Wyoming in addition to providing long term employment for the region and has been well received locally. The project development is timed well with respect to the market, and substantial increases in financial return may be realized in what is being forecast as a rising market.

The author is not aware of any other specific risks or uncertainties that might significantly affect the mineral resource and reserve estimates or the consequent economic analysis. Estimation of costs and uranium price for the purposes of the economic analysis over the life of mine is by its nature forward-looking and subject to various risks and uncertainties. No forward-looking statement can be guaranteed and actual future results may vary materially.

SECTION 26: RECOMMENDATIONS

The following recommendations related to potential improvement and/or advancement of the project. The first recommendation relates to completing the licensing and permitting process. It is the author's opinion that without the conditions of the permits and licenses known a development decision cannot be made. The second recommendation is to investigate alternative mining techniques which if successful will reduce operating costs and improve the safety of the operations. The final recommendations relate to areas in which the is the potential to increase mineral resource and/or reserves in accordance with NI 43-101.

4. Through 2014, Titan has estimated cost related to permitting the mine and mineral processing operations with the State of Wyoming, US BLM , and US NRC to be in excess of 4.3 million dollars. The author concurs with this estimate. This is the single most important item in moving the project forward.

5. It is the author's opinion that there is significant promise in the development of alternative underground mining methods. Current CAPEX and OPEX are based on traditional drill and blast methods which are highly labor and capital intensive. The general areas for significant improvement of the underground operations would include:

- Hydraulic Mining – Based on limited test work in the existing Sheep decline, the host formation appears amenable to this method and further testing is recommended. This could improve costs and safety of operations and would be applicable at least to the development decline and development drifts which are not in mineralized material. With proper control of solutions it may also be applicable for work in mineralized zones.
- Mechanical Upgrading – Some testing has been completed using both the ablation methodology which in being developed in Casper, Wyoming and attrition scrubbing which is a proven commercial technique. Both methods have promise as they could operate underground and return 80% or more of the total mined volume as backfill in the mine while shipping a concentrated product to the surface for mineral processing.
- The budgetary estimate to investigate both alternatives is $500,000.

6. Although the current project has significant mineral resources and reserves, there are two areas with potentially significant resources which have not been fully evaluated.

- A mineral resource estimate has been completed for the Sun Mc area but no mine design efforts have been made to date. The budgetary estimate for preliminary mine design is $100,000.
- The Bev claims have known historic mineral resources and confirmatory drilling completed in 2011 verified the mineralization. However, a mineral resource estimate in accordance with NI 43-101, for this area, has not been completed and is not included in the current mineral resource estimate. The budgetary estimate for mineral resource estimation is $50,000. Once the mineral resource estimate has been completed, preliminary mine planning should be completed. The budgetary estimate for preliminary mine design is $100,000.

SECTION 27: REFERENCES

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McNulty, T. P., Discussion of Uranium Recovery, February, 2012.

APPENDIX A

GT CONTOUR MAPS

S8

S9

S10

Jeffrey City

± 7.2 Miles

S17

S16

S15

A-4 AMENDMENT BOUNDARY

Congo Pit

± 1 mile

PERMIT BOUNDARY

REFER TO APPENDIX A1
CONGO GT BANDING BY SAND

S20

S21

S22

REFER TO APPENDIX A2
SHEEP UNDERGROUND GT BANDING
BY ZONE

PERMIT BOUNDARY

S29

S28

S27

REFER TO APPENDIX A3
SUN-MC GT BANDING
BY ZONE

S32

S33

LEGEND

- EXTENT OF SHEEP UNDERGROUND MINERALIZATION
- DESIGN PIT CREST
- SUN-MC MINERALIZATION
- SECTION LINE
- SHAFT
- PERMIT BOUNDARY

1,500' 0 750' 1,500'

1 inch = 1,500'
T28N R92W

BRS ENGINEERING

GT INDEX MAP

SCALE: 1"=1500' | DATE: 2/24/12

DRAWN BY: RJB

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

REVISION DATE: 03/16/12

CAD FILENAME:
Titan\Land Projects 2008\2012 Prefeasability Figure

DWG. NUMBER:FIGURE 4.1

TITAN URANIUM USA INC

APPENDIX A1

GT CONTOUR MAPS

CONGO OPEN PIT

BRS ENGINEERING	CONGO SAND 94 GT	SHEEP MOUNTAIN MINES PRE-FEASIBILITY STUDY FREMONT COUNTY, WYOMING	REVISION DATE: 02/24/12	TITAN URANIUM USA INC
	SCALE: 1"=400'		CAD FILENAME: 43 101 Figures and CAD\Congo GT\94.dwg	
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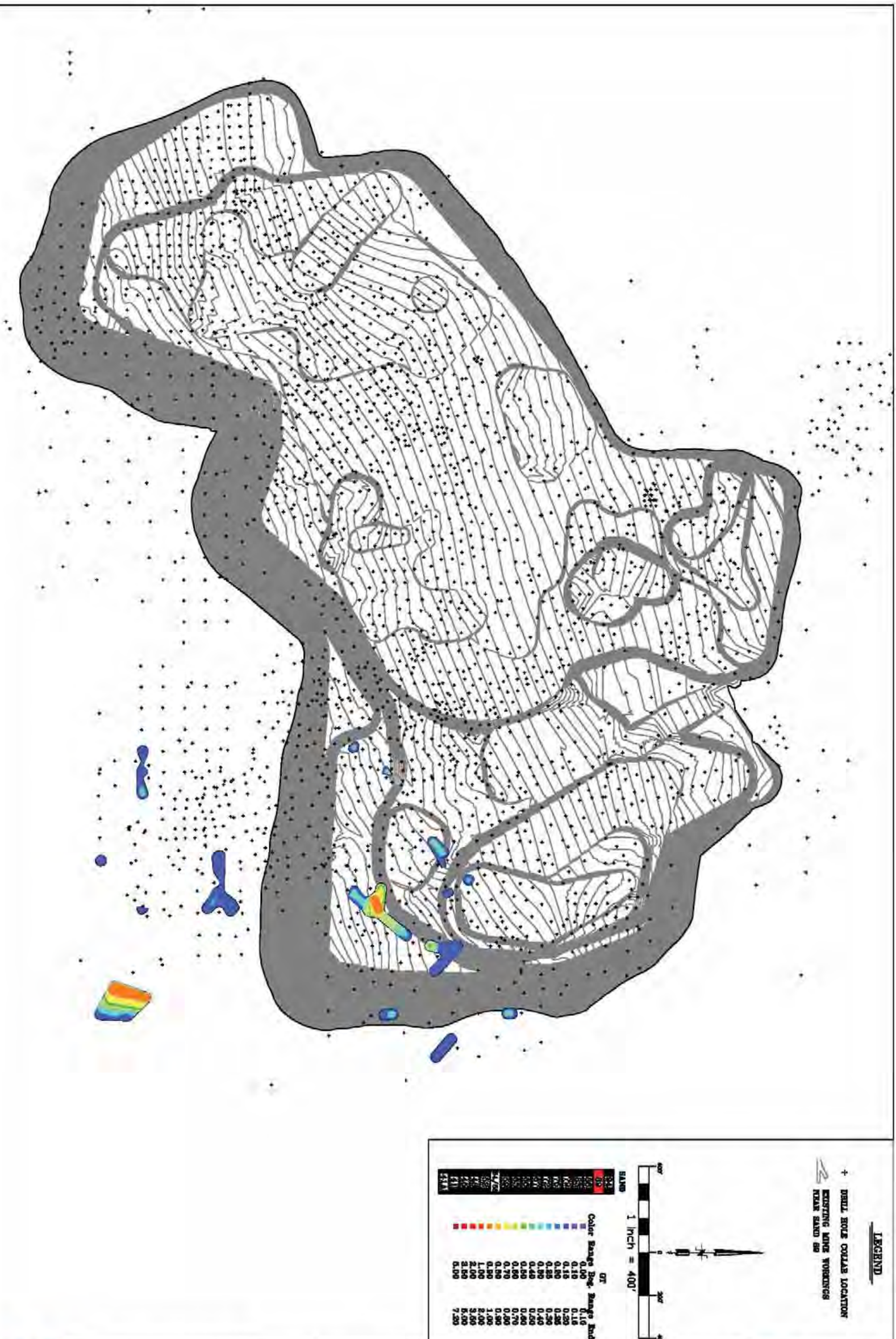

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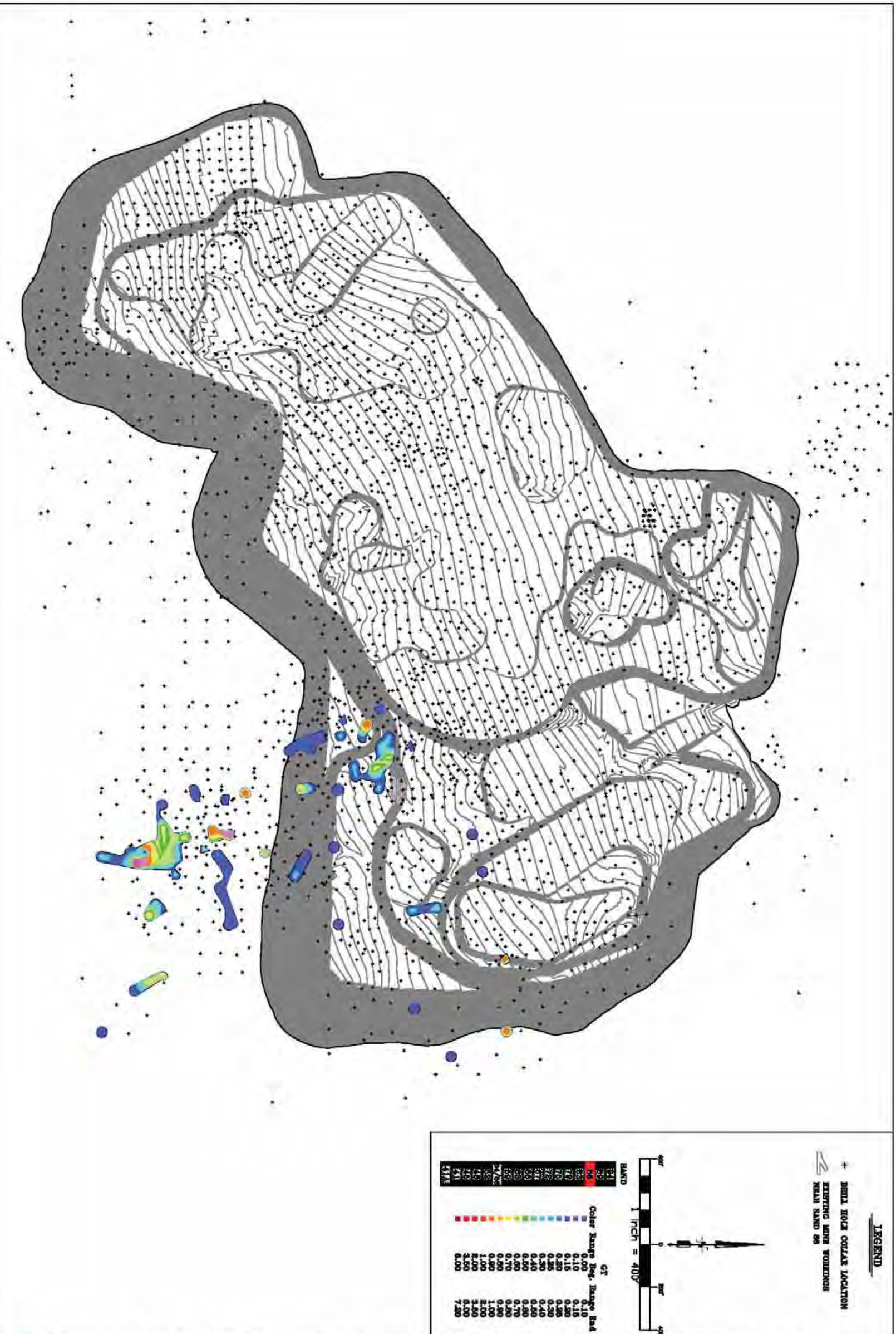

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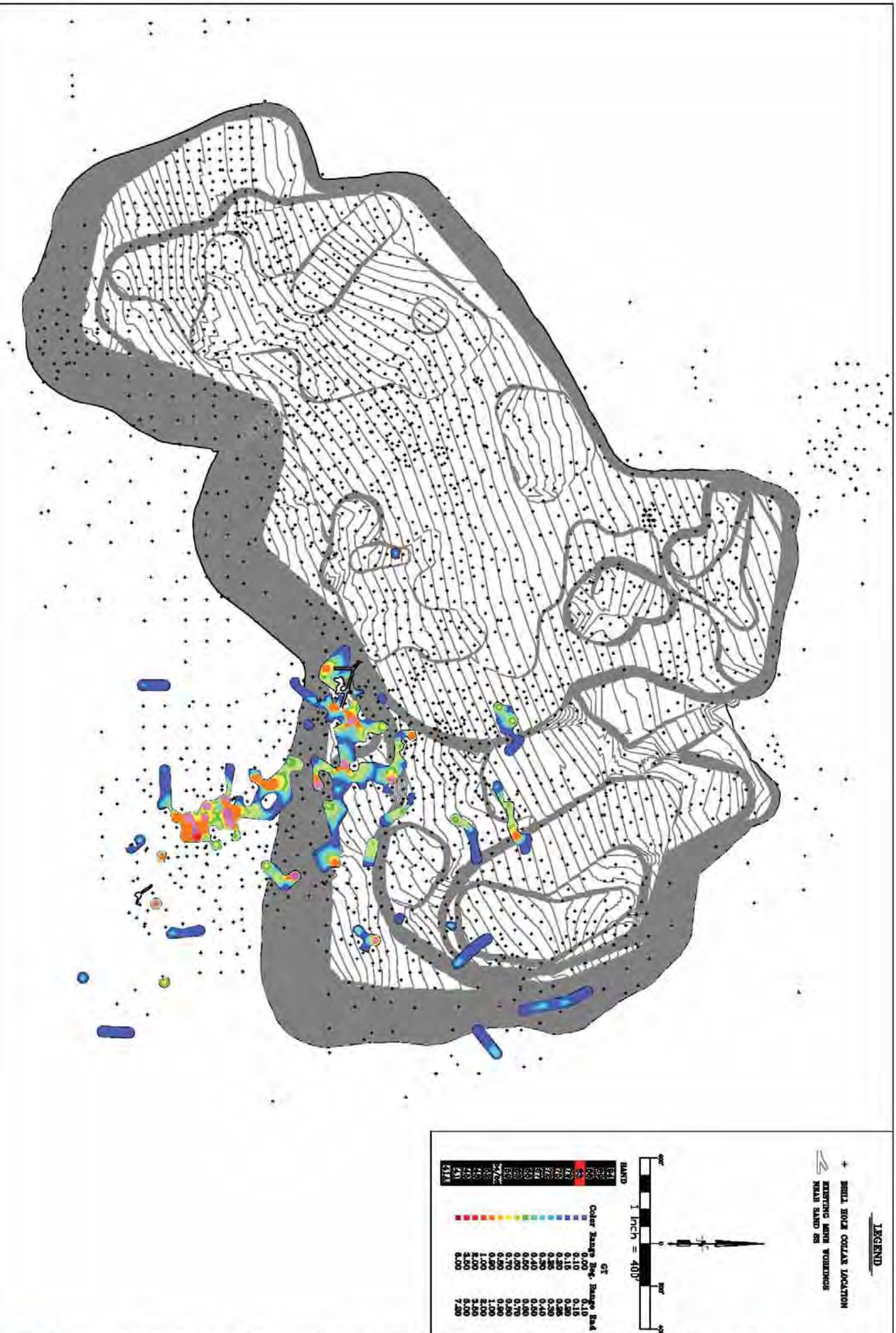

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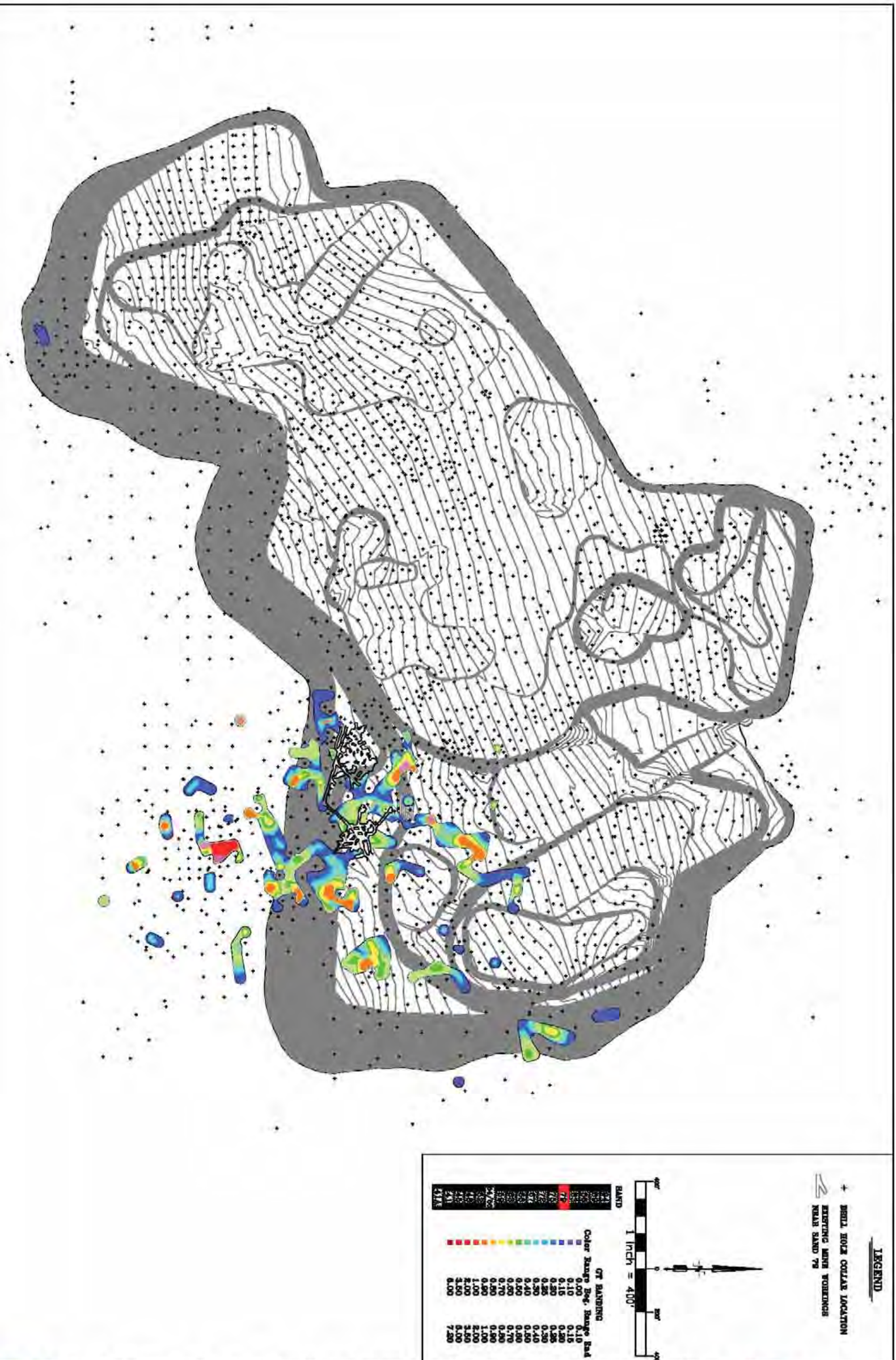

BRS ENGINEERING	**CONGO SAND 79 GT BANDING**	**SHEEP MOUNTAIN MINES PRE-FEASIBILITY STUDY FREMONT COUNTY, WYOMING**	REVISION DATE: 02/24/12	TITAN URANIUM USA INC
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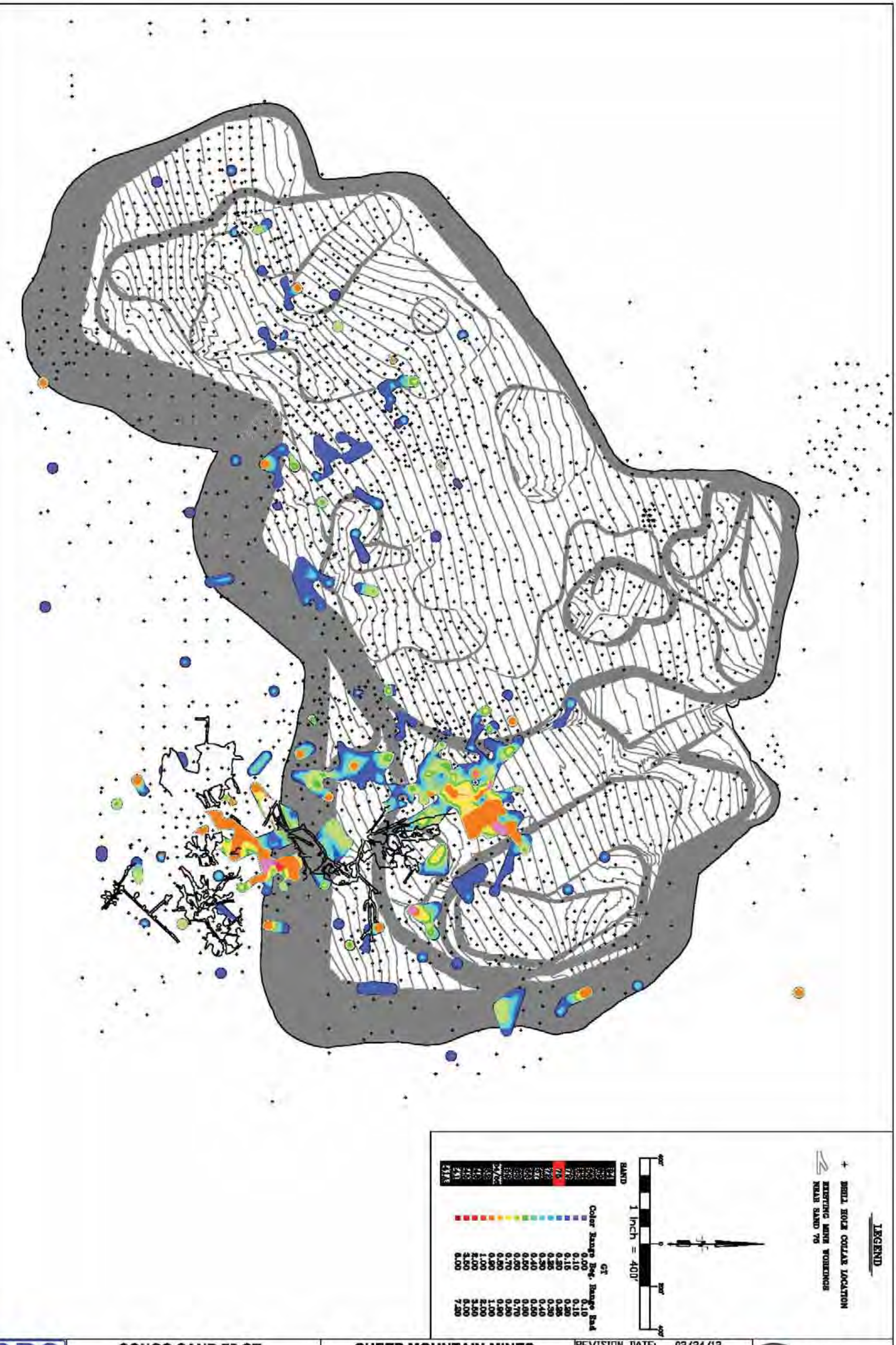

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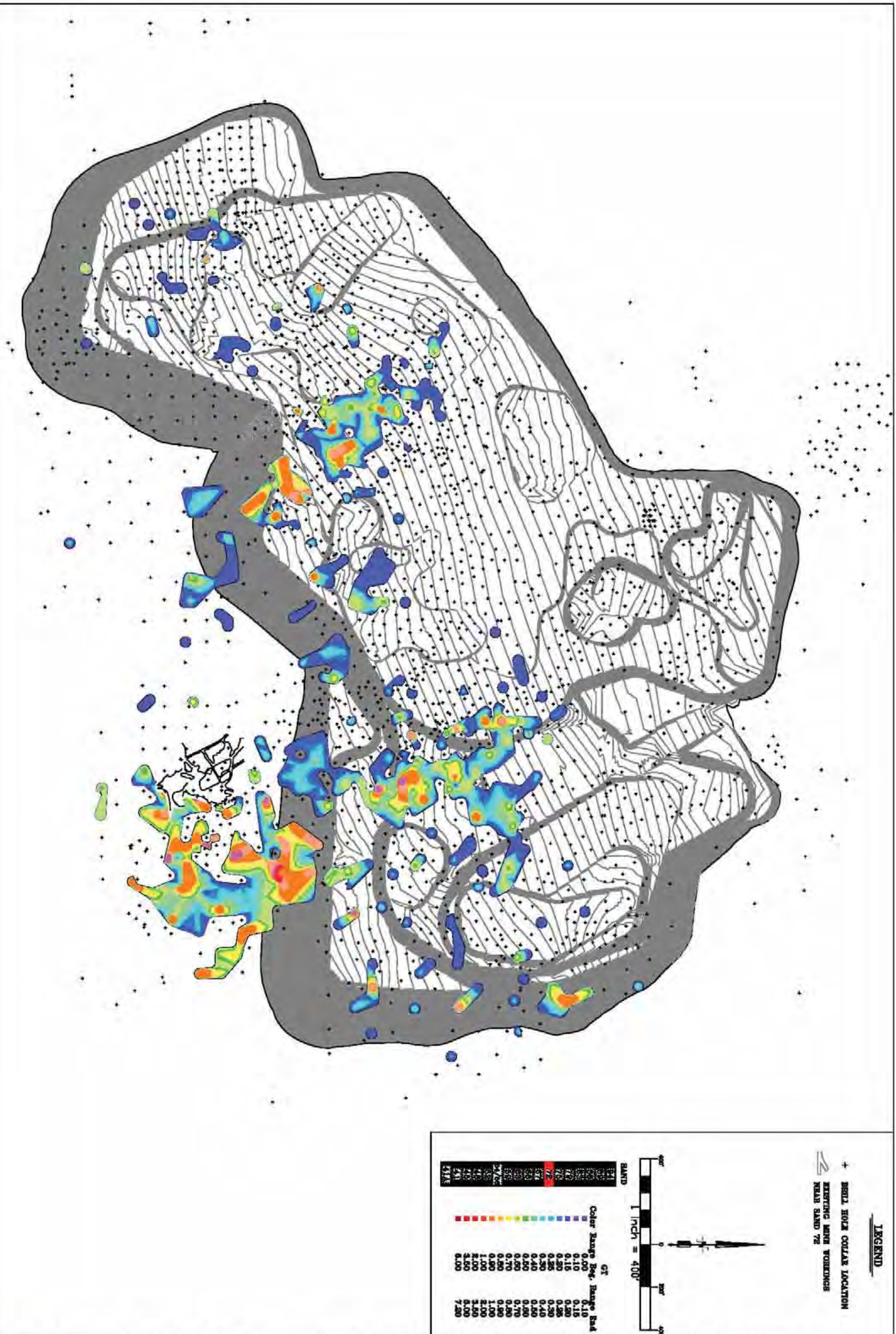
TITAN URANIUM USA INC



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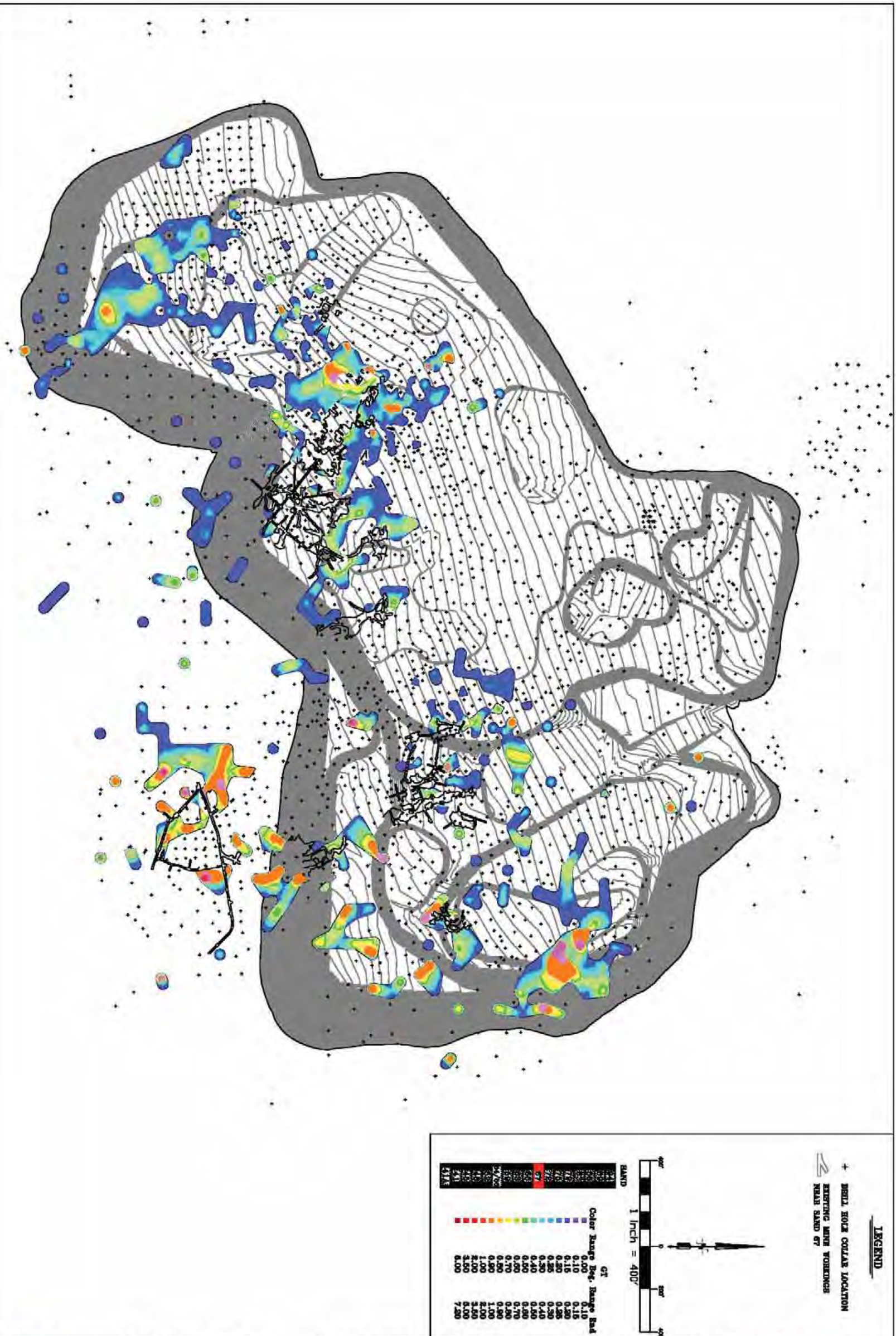

BRS ENGINEERING	CONGO SAND 67 GT	SHEEP MOUNTAIN MINES PRE-FEASIBILITY STUDY FREMONT COUNTY, WYOMING	REVISION DATE: 03/16/12	TITAN URANIUM USA INC
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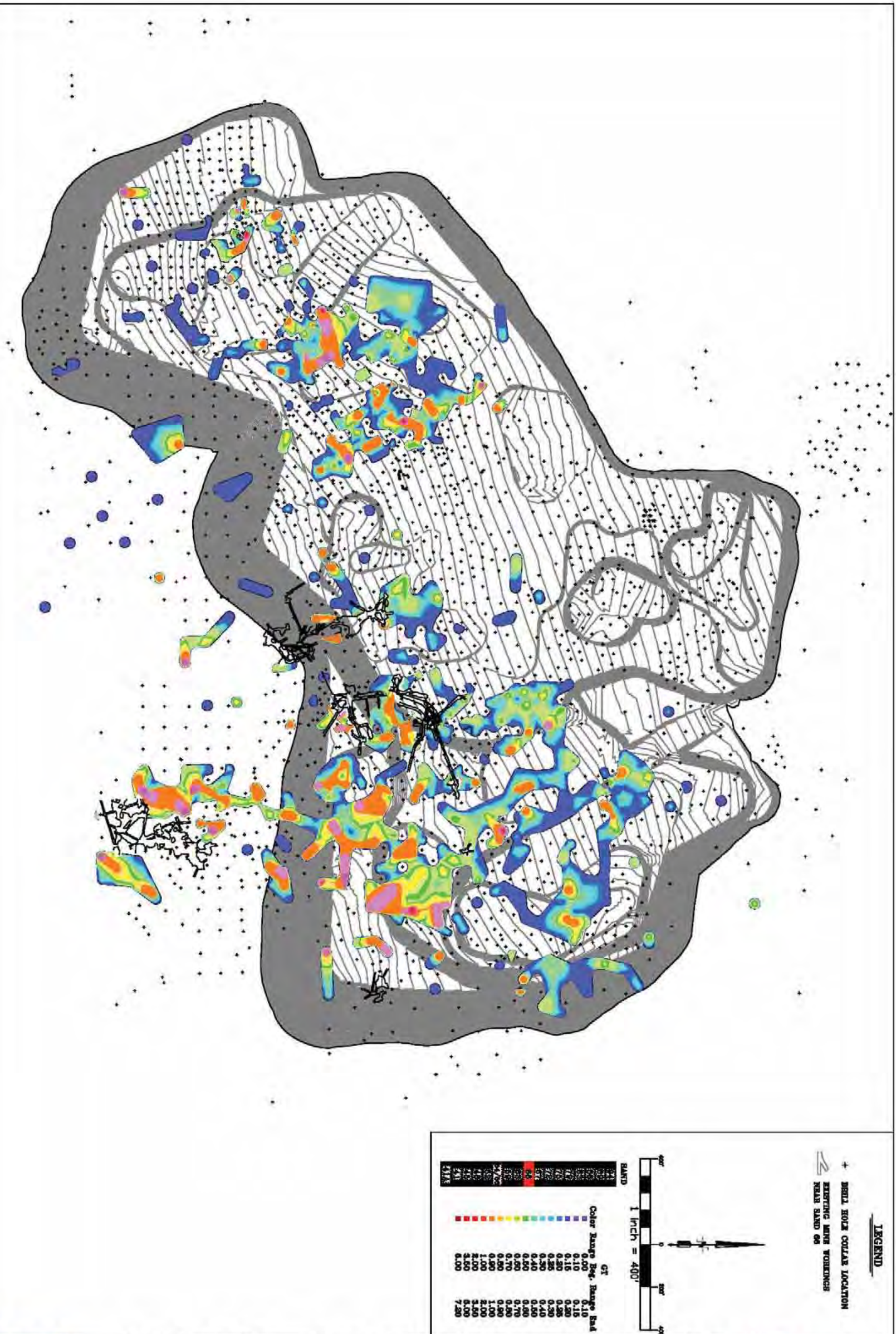

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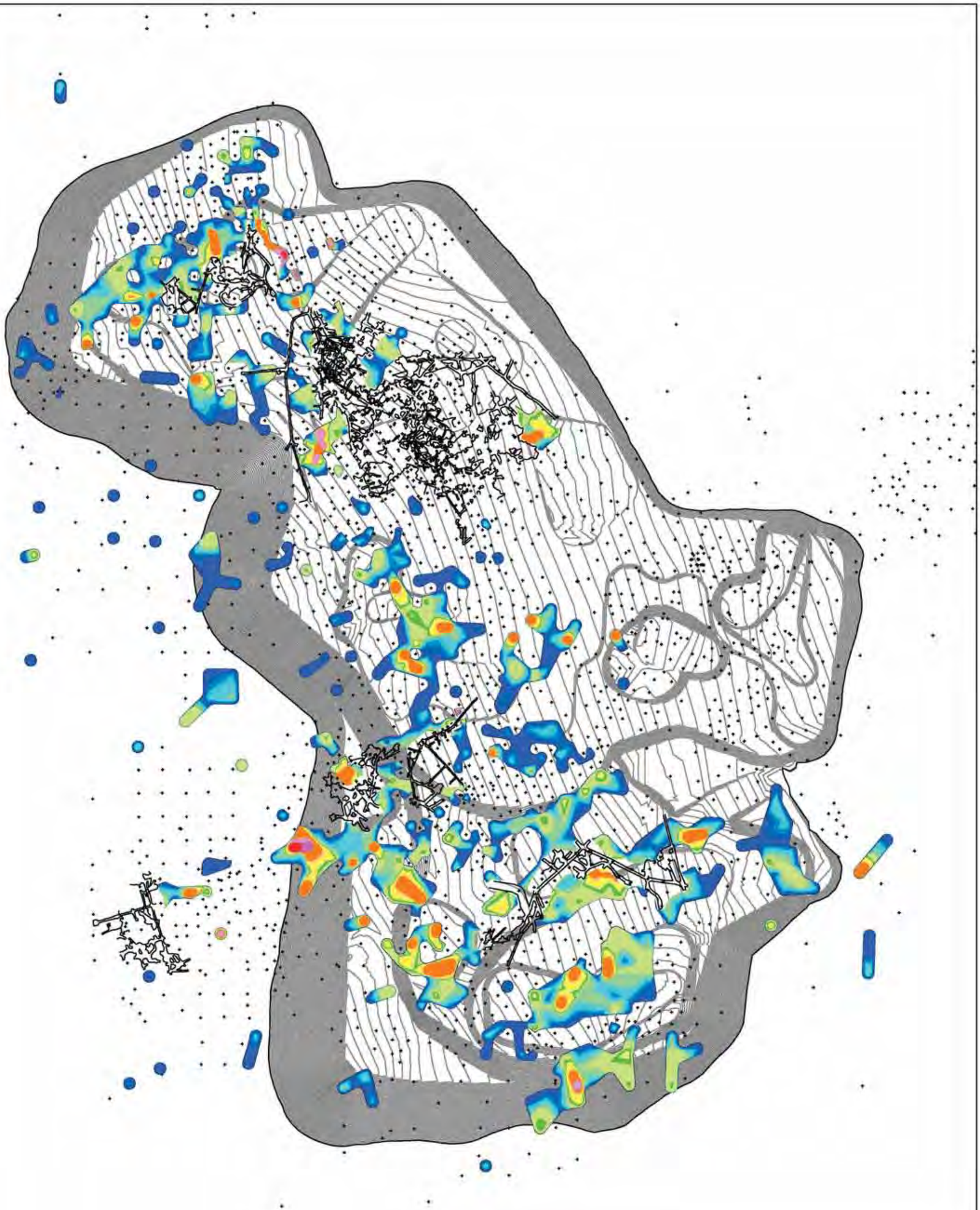

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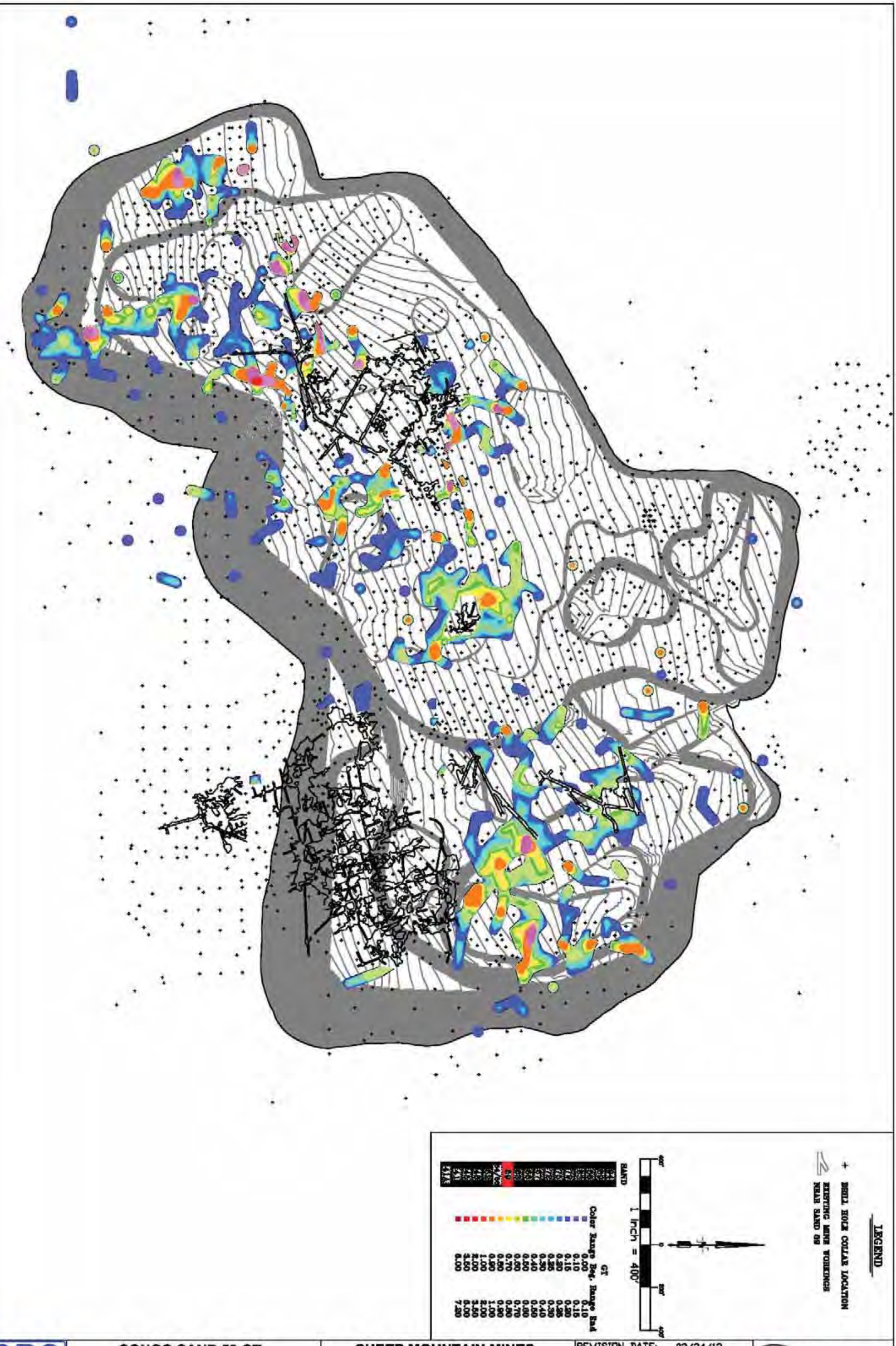

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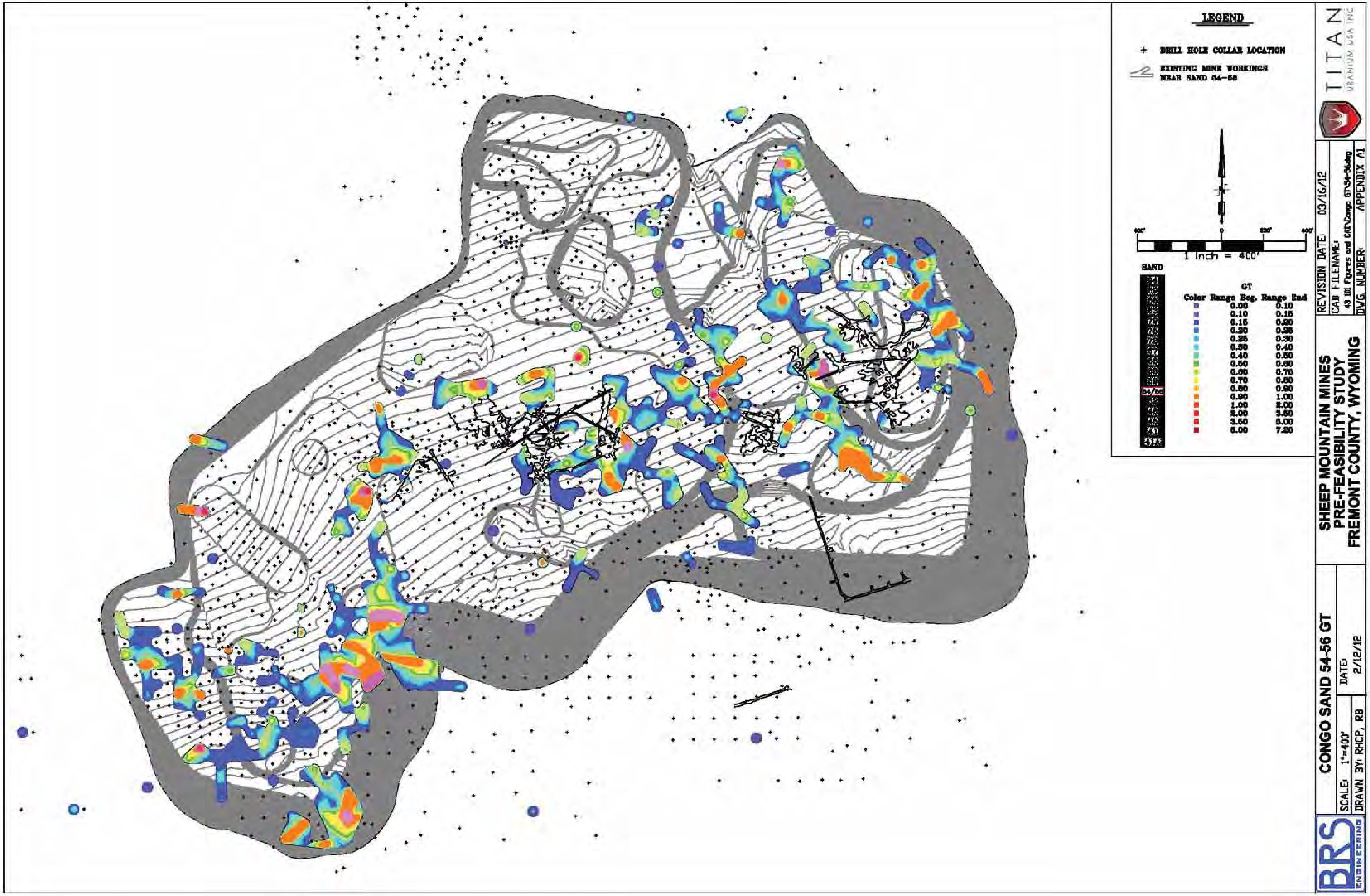
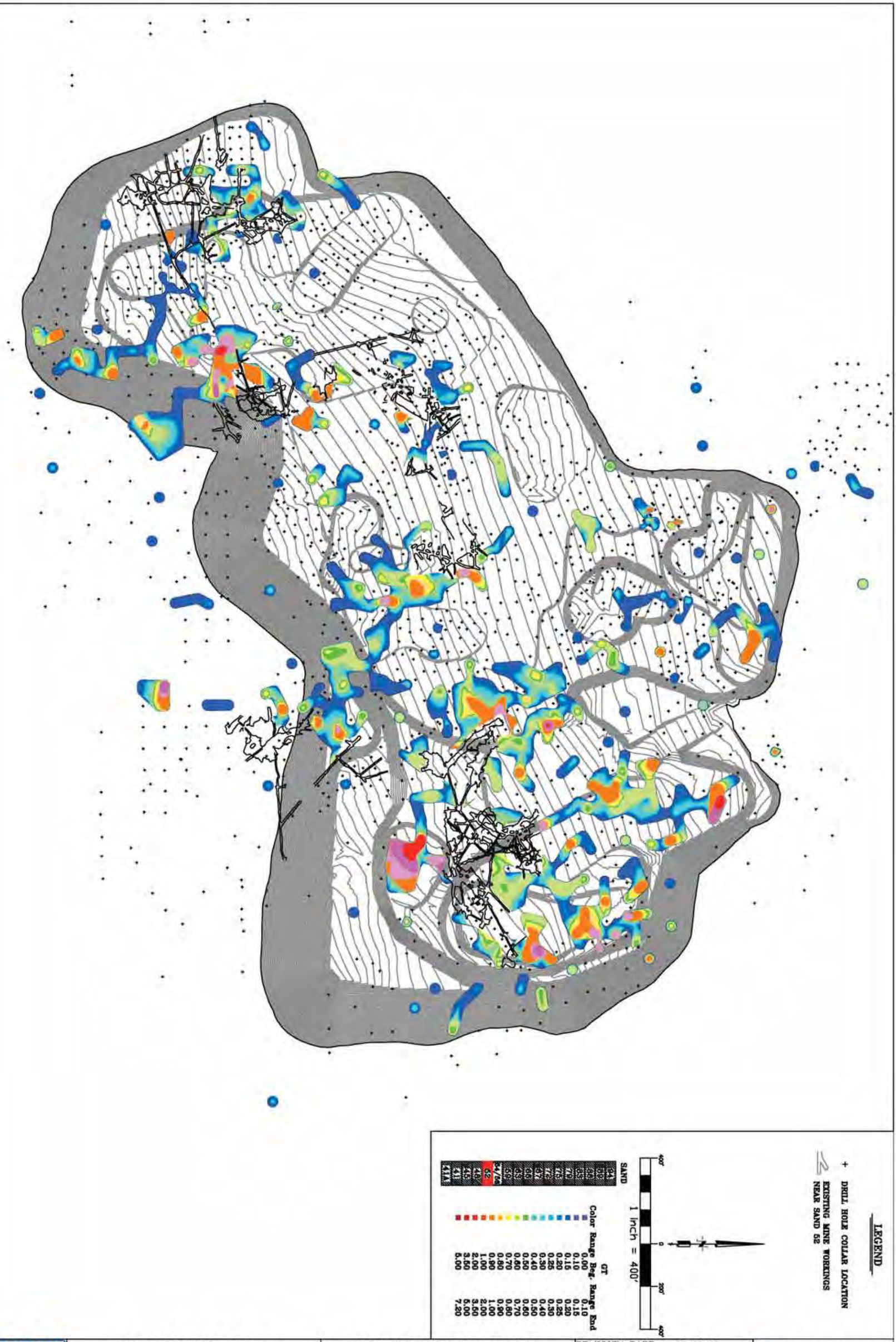


LEGEND
DRILL HOLE COLLAR LOCATION
EXISTING MINE WORKINGS NEAR SAND 54-56
1 inch = 400'
SAND
GT
Color Range Beg. Range End
0.00 0.10
0.10 0.15
0.15 0.20
0.20 0.25
0.25 0.30
0.30 0.40
0.40 0.50
0.50 0.60
0.60 0.70
0.70 0.80
0.80 0.90
0.90 1.00
1.00 2.00
2.00 3.50
3.50 5.00
5.00 7.20
TITAN
URANIUM USA INC
REVISION DATE: 03/16/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A1
SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING
CONGO SAND 54-56 GT
SCALE: 1"=400'
DATE: 2/12/12
DRAWN BY: RHCP, RB
BRS ENGINEERING



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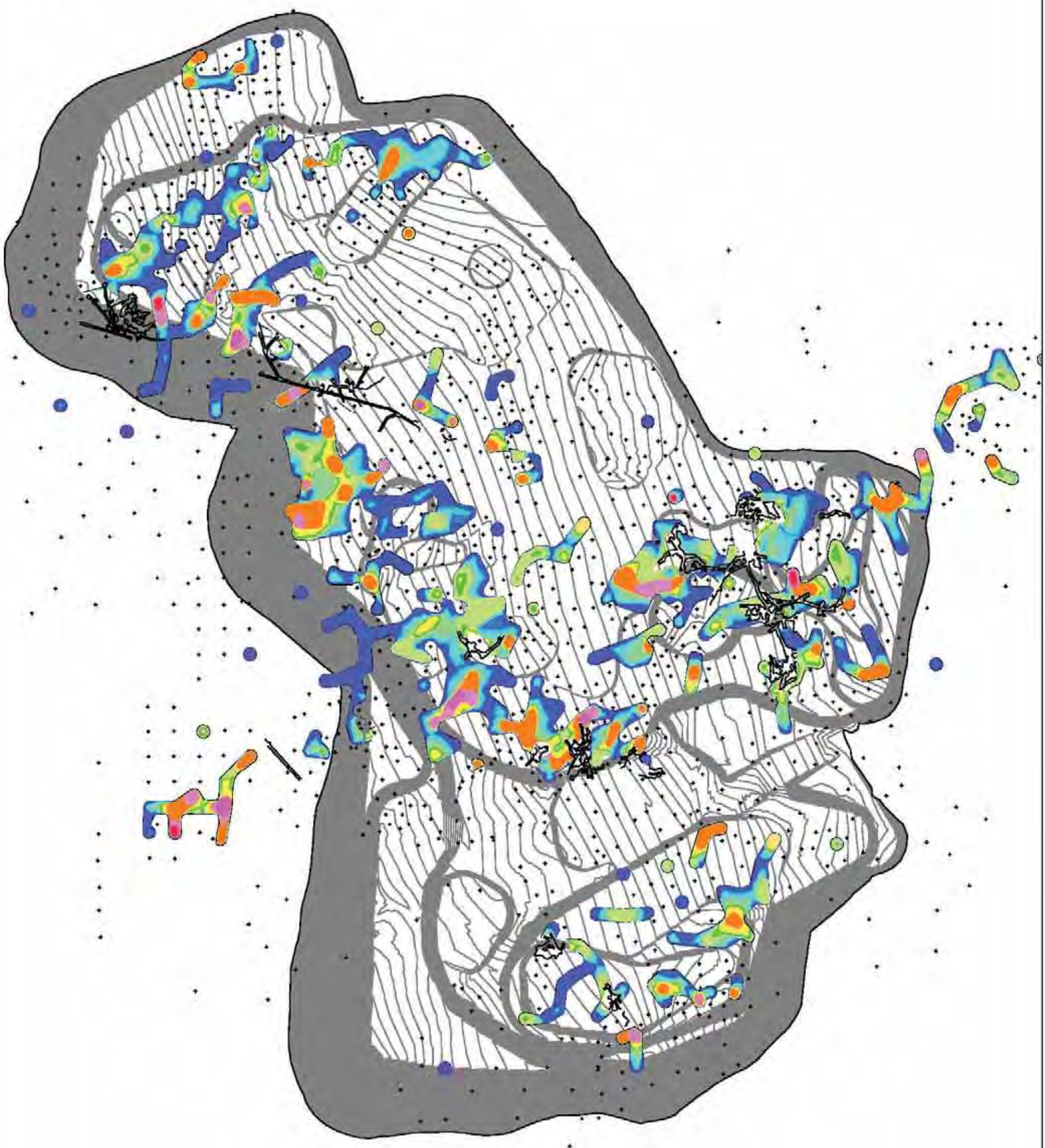

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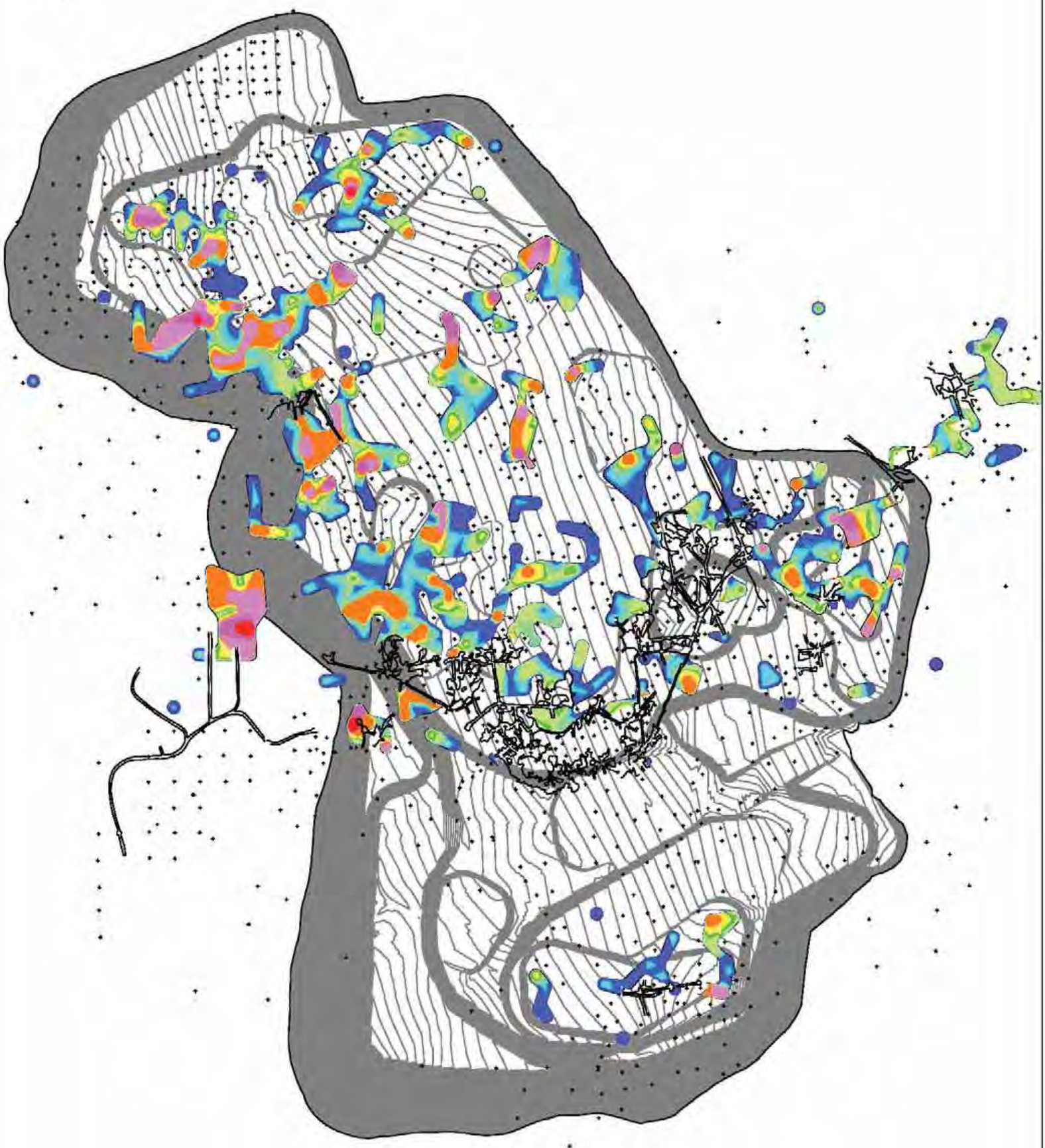
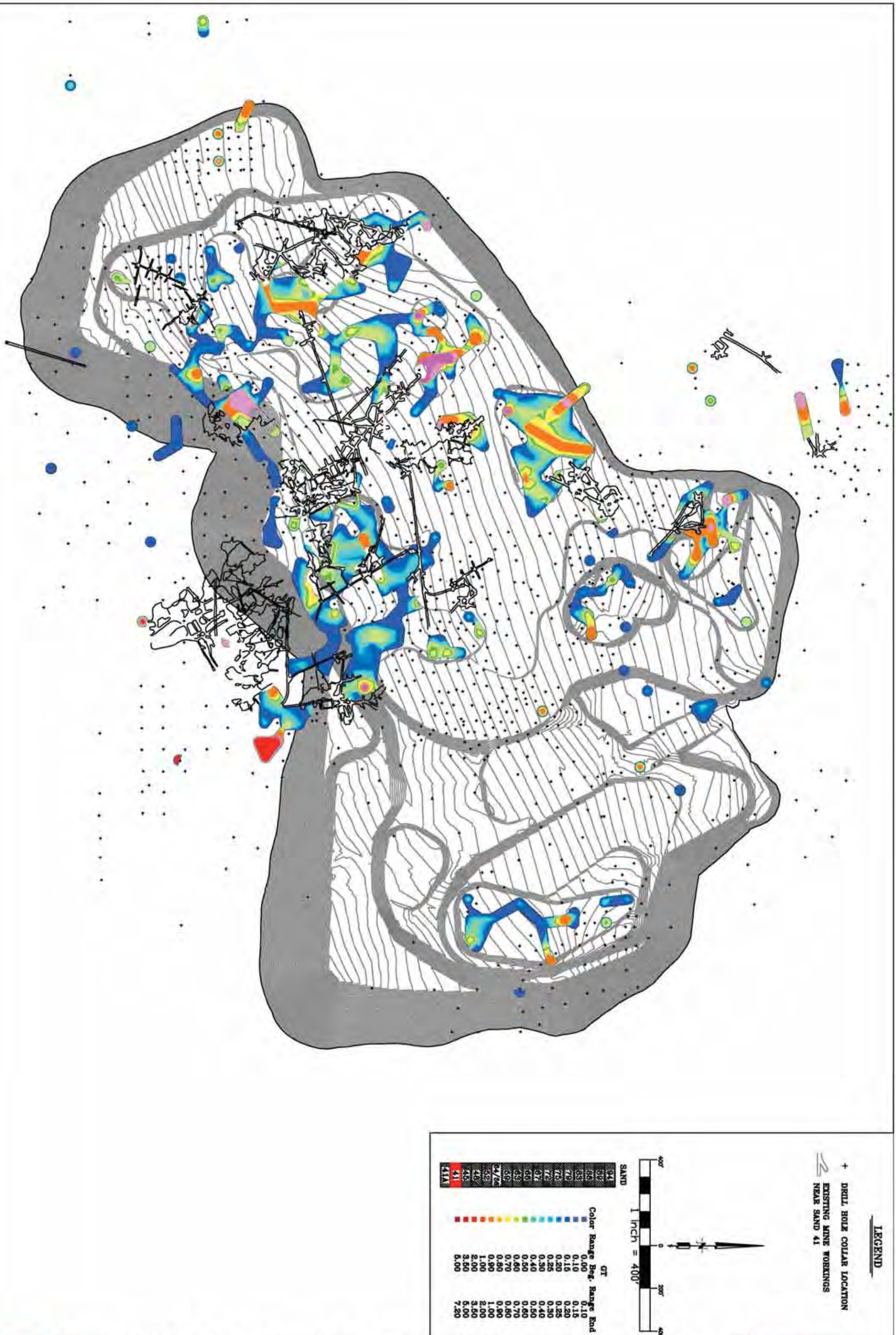
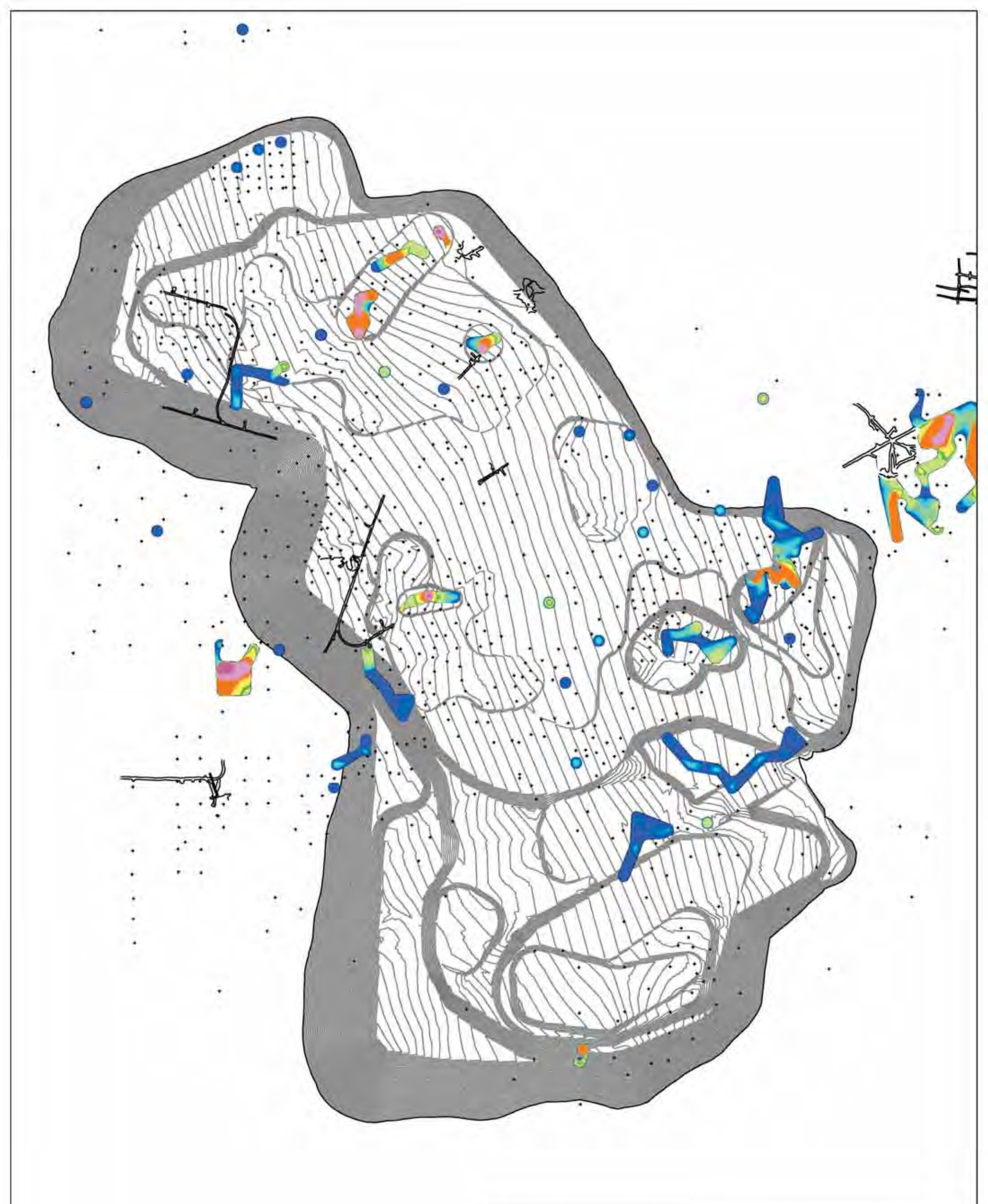
	DATE: 2/12/12			



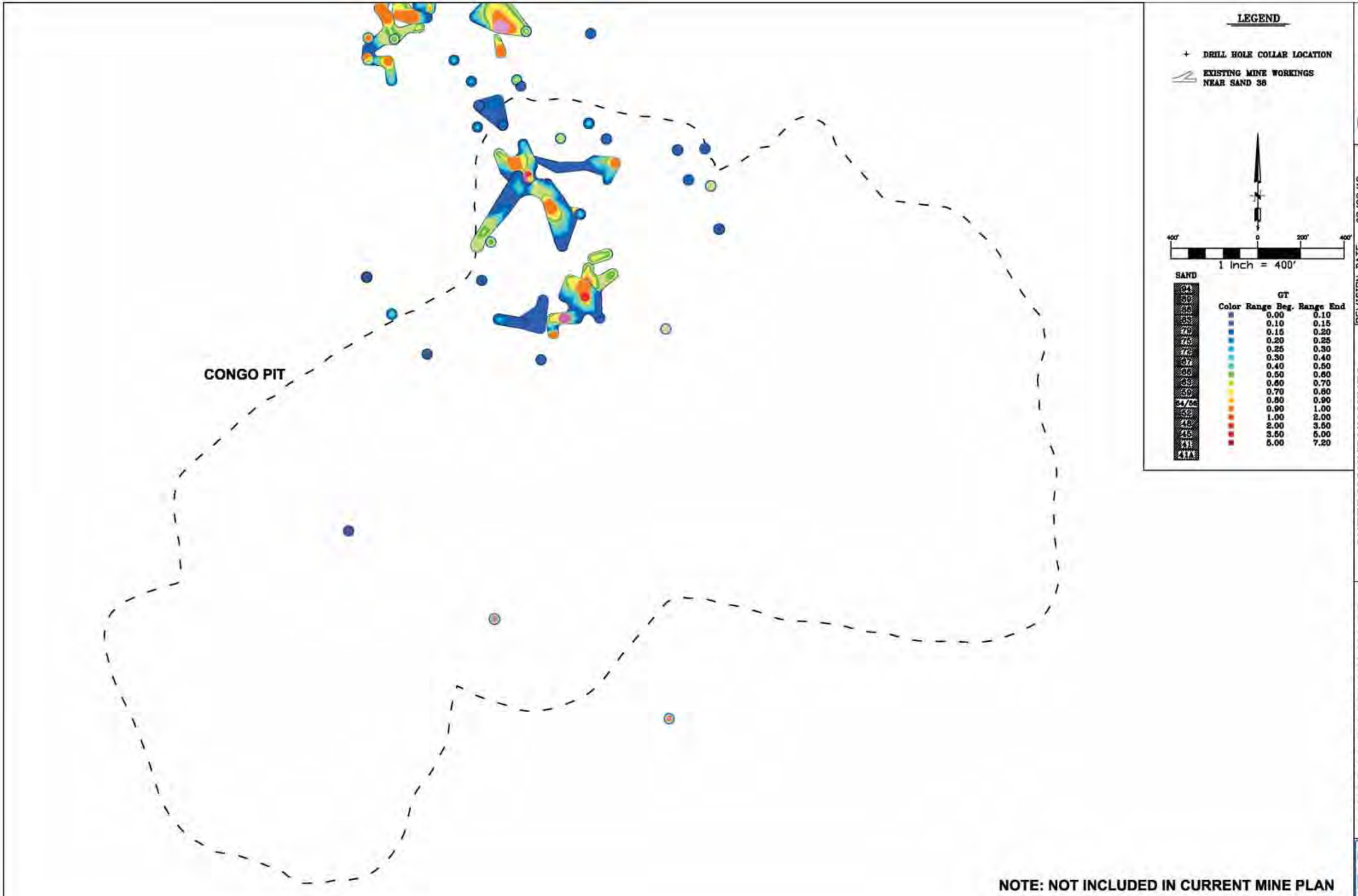
BRS ENGINEERING	CONGO SAND 45 GT	SHEEP MOUNTAIN MINES PRE-FEASIBILITY STUDY FREMONT COUNTY, WYOMING	REVISION DATE: 03/16/12	TITAN URANIUM USA INC
	SCALE: 1"=400'		CAD FILENAME: 43 101 Figures and CAD\Congo GT\45.dwg	
	DRAWN BY: RHCP, RB	DATE: 2/12/12	DWG. NUMBER: APPENDIX A1	



BRS ENGINEERING	**CONGO SAND 41 GT**	**SHEEP MOUNTAIN MINES PRE-FEASIBILITY STUDY FREMONT COUNTY, WYOMING**	REVISION DATE: 03/22/12	TITAN URANIUM USA INC
	SCALE: 1"=400'		CAD FILENAME: 43 101 Figures and CAD\Congo GT\41.dwg	
	DRAWN BY: RHCP, RB		DWG. NUMBER: APPENDIX A1	
	DATE: 2/12/12			



BRS ENGINEERING	CONGO SAND 41A GT	SHEEP MOUNTAIN MINES PRE-FEASIBILITY STUDY FREMONT COUNTY, WYOMING	REVISION DATE: 03/16/12	TITAN URANIUM USA INC
	SCALE: 1"=400'		CAD FILENAME: 43 101 Figures and CAD\Congo GT\41Adwg	
	DRAWN BY: RHCP, RB	DATE: 2/12/12	DWG. NUMBER: APPENDIX A1	



TITAN URANIUM USA INC

REVISION DATE: 03/22/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A1

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

CONGO SANDS BELOW 41A GT

SCALE: 1"=400'
DATE: 2/12/12
DRAWN BY: RHCP, RB

BRS ENGINEERING

APPENDIX A2

GT CONTOUR MAPS

SHEEP UNDERGROUND

DECLINE TO UNDERGROUND MINE WORKINGS

SHEEP I SHAFT

SHEEP II SHAFT

S 21
S 28

S 22
S 27

0.38
SD2-22

0.32
Z3-15

0.60
Z3-9

0.40
PD12-5

0.33
SJ4-14

0.34
SJ4-5

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE
  DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'

1 inch = 700'
T28N R92W

ZONE

1
20
21
3
4
5
6
7
8
9
10
11
12
13
14
15
16

GT BANDING

Color	Range Beg.	Range End
	0.30	0.60
	0.60	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

TITAN URANIUM USA INC

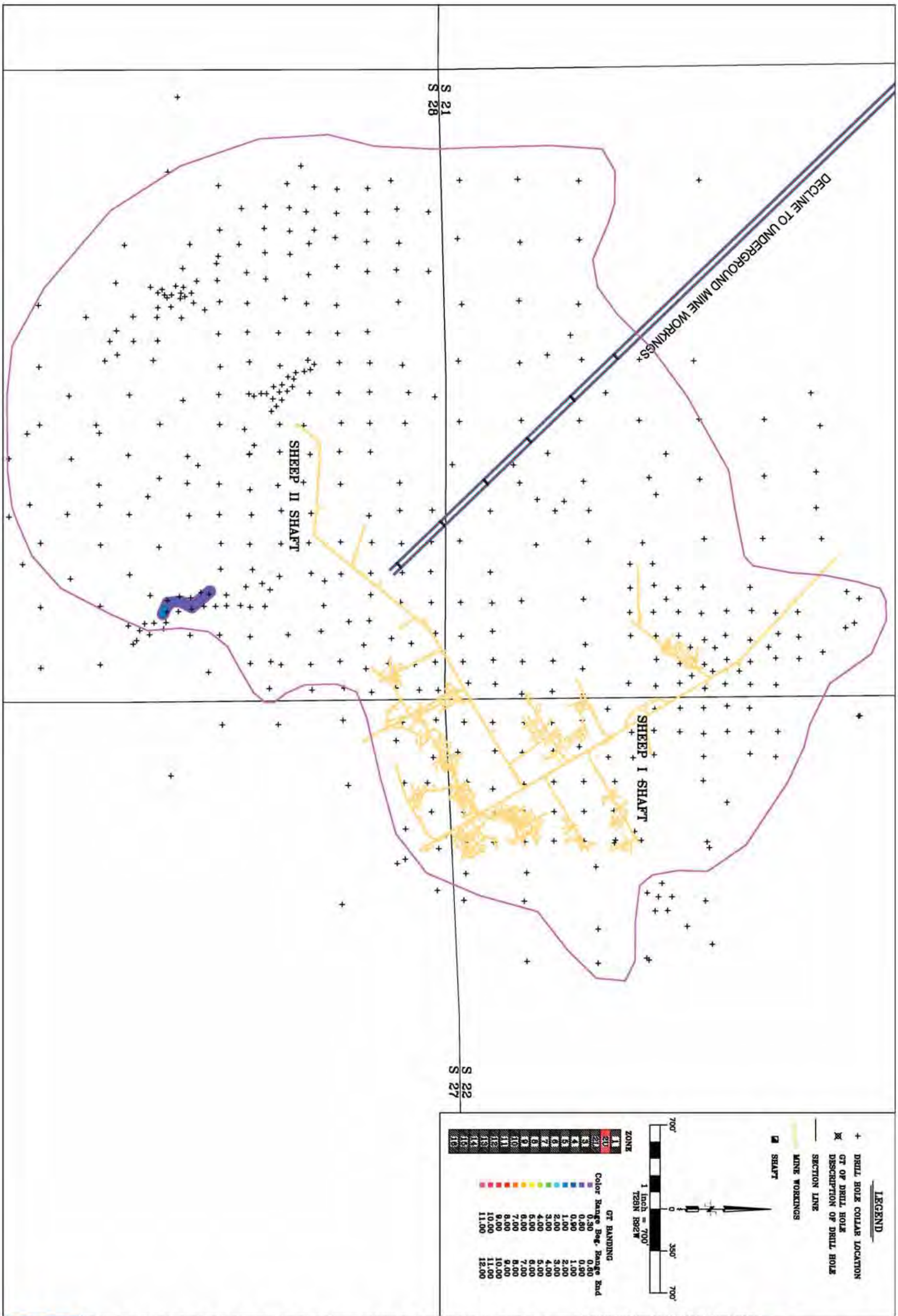
REVISION DATE:03/19/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 1

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING



BRS ENGINEERING	**SHEEP UNDERGROUND ZONE 2U**	**SHEEP MOUNTAIN MINES PRE-FEASIBILITY STUDY FREMONT COUNTY, WYOMING**	REVISION DATE:03/21/12	TITAN URANIUM USA INC
	SCALE: 1"=700' DATE:		CAD FILENAME:	
	DRAWN BY: CS 2/12/12		DWG. NUMBER: APPENDIX A2	

SHEEP I SHAFT

SHEEP II SHAFT

S 21
S 28

S 22
S 27

0.62
PD12-28

0.48
PD12-25

0.31
PD12-16

0.36
K7-4

0.52
PD12-11

0.34
SJ4-9

0.58
SJ4-4

0.61
Z5-5

0.55
Z6-4

0.94
Z4-6

0.61
SJ4-19

0.31
SD1-10

0.32
SD17-20

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'

1 inch = 700'
T28N R92W

ZONE
1L
2L
2L
3L
4
5L
6
7
8
9
10
11
12
13
14
15
16

GT BANDING		
Color	Range Beg.	Range End
	0.30	0.60
	0.60	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

TITAN URANIUM USA INC

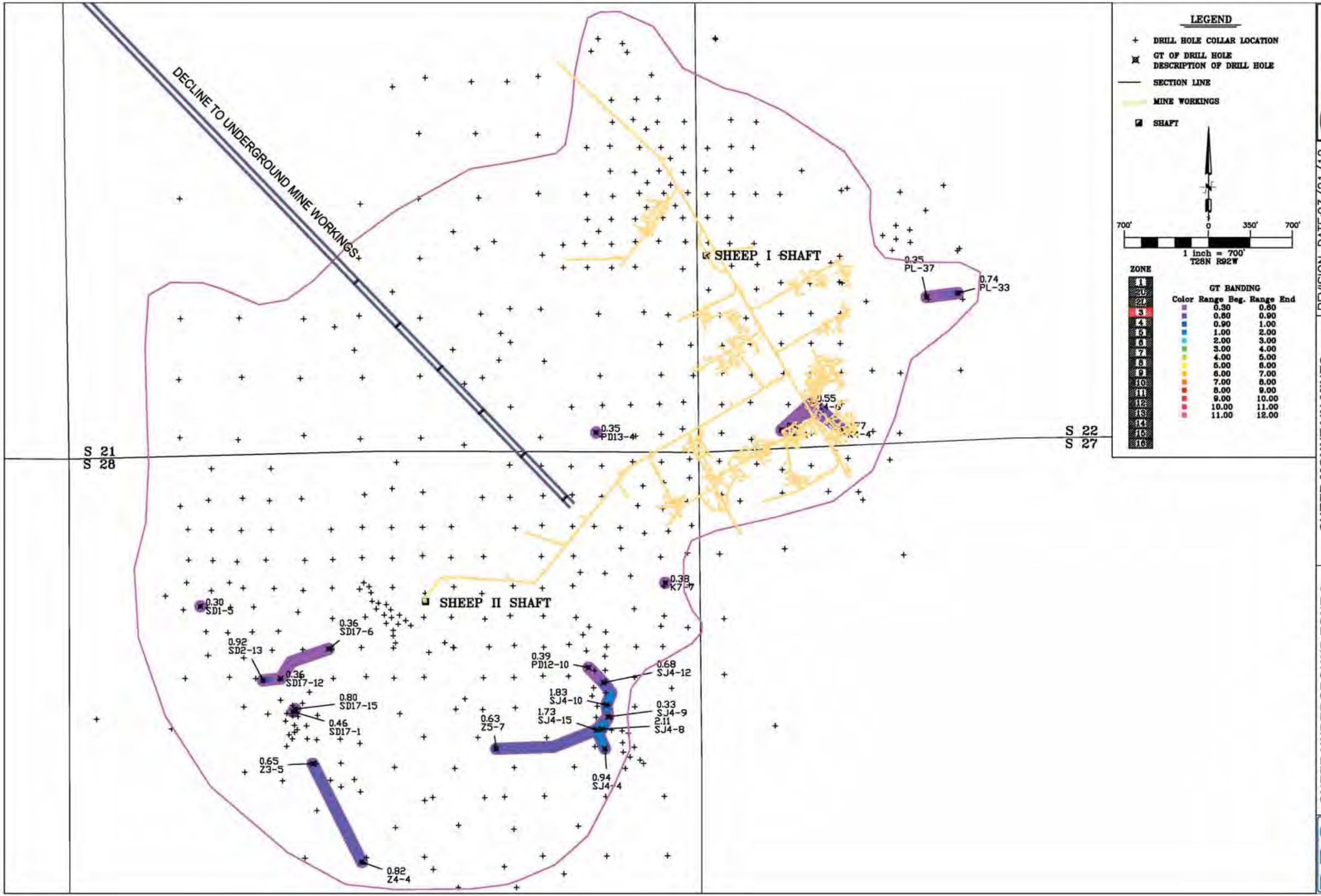
REVISION DATE:03/21/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 2L

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING



TITAN URANIUM USA INC

REVISION DATE:03/21/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 3

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING

DECLINE TO UNDERGROUND MINE WORKINGS

SHEEP I SHAFT

SHEEP II SHAFT

S 21
S 28

S 22
S 27

0.50 K2-8
0.76 K2-10
0.61 K4-6
0.30 K4-4
0.36 K3-2A
0.48
0.79 K3-7
0.40 K4-5
0.42 K2-13
1.78 K7-2
0.60 Z1-7
0.37 SD1-2
0.33 PD12-24
0.63 Z1-2
0.98 Z2-10
1.63 Z2-3
0.74 PD12-13
1.93 K7-3
0.71 K7-8
0.44 K7-4
0.54 Z2-13
2.55 PD12-10
0.80 PD12-31
1.44 PD12-12
0.51 SD17-17
0.48 SD17-19
0.34 PD12-11
0.94 PD12-4
0.60 PD12-5
0.38 PD12-1
0.89 SJ4-15
0.44 Z4-5
0.46 S3-79
0.43 Z6-2A
0.98 SJ4-14
0.51 Z4-1
0.36 Z6-4
0.88 Z4-4
0.61 Z6-3
0.34

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'

1 inch = 700'
T28N R92W

ZONE

ZONE
1
2U
2L
3
4
5
6
7
8
9
10
11
12
13
14
15
16

GT BANDING

Color Range	Beg. Range	End
	0.30	0.60
	0.60	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

TITAN URANIUM USA INC

REVISION DATE:03/21/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 4

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING

DECLINE TO UNDERGROUND MINE WORKINGS

SHEEP I SHAFT

SHEEP II SHAFT

S 21
S 28

S 22
S 27

0.46 PL-39
0.44 PL-44
0.38 K6-5
0.37 SD20-4
0.72 SD15-5
0.81 PB1-8
0.54 PB1-4
0.58 PB1-5
0.93 K3-
1.87 K2-10
1.38 K4-18
0.32 PD13-12
0.50 K2-3
1.83 PD13-2
2.40 K4-12
4.05 K2-15
1.30 Z1-7
1.36 Z1-5
0.40 K7-7
0.38 PD12-23
1.70 K7-3
0.50 Z2-3
0.70 Z1-2
0.81 Z2-5
0.72 SD17-17
0.72 SD2-8
1.90 SD17-16
0.61 Z3-1
0.55 Z3-6
2.77 Z4-1
0.61 Z6-2A
1.11 SJ4-14
2.02 Z6-1
2.74
3.08

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'

1 inch = 700'
T28N R92W

ZONE
1
2U
2L
3
4
5
6
7
8
9
10
11
12
13
14
15
16

GT BANDING

Color Range	Beg. Range	End
	0.30	0.60
	0.60	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

TITAN URANIUM USA INC

REVISION DATE:03/21/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 5

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING

DECLINE TO UNDERGROUND MINE WORKINGS

SHEEP I SHAFT

SHEEP II SHAFT

0.43 H6-2

0.38 PB1-3

0.95 PL-45

0.77 PL-59

0.37 K5-3

1.63 K4-3

0.72 PD13-10

0.38 K4-14

1.23 K4-16

0.32 K2-1

2.68 PD13-8

3.28 PD12-28

0.55 PD12-24

1.49 SD18-3

0.50 SD18-10

0.35 SD17-5

0.40 Z1-5

0.96 Z1-8

0.64 Z2-10

0.31 SD17-4

8.68 SD17-1

0.42 SD17-20

0.60 SD17-15

0.32 Z3-14

1.26 Z3-15

0.62 Z3-1

1.38 Z5-3

S 21
S 28

S 22
S 27

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE
  DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'

1 inch = 700'
T28N R92W

ZONE

ZONE
1
2U
2L
3
4
5
6
7
8
9
10
11
12
13
14
15
16

GT BANDING

Color Range	Beg. Range	End
	0.30	0.60
	0.60	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

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URANIUM USA INC

REVISION DATE:03/21/12
CAD FILENAME:
43 101 Figures and GWSims GWSim 6.dwg
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 6

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING

DECLINE TO UNDERGROUND MINE WORKINGS

S 21
S 28

S 22
S 27

SHEEP I SHAFT

SHEEP II SHAFT

0.32 H7-16
0.44 H7-11
0.36 H4-1
0.80 H6-3
0.36 PL-52
0.58 H7-21
2.16 H6-15
0.35 PL-54
0.53 PB1-2
1.36 K1-6
1.18 K1-7
2.45 K4-10
2.00 K4-4
1.45 PD13-9
0.30 K2-10
1.04 K2-12
1.11 K3-3
0.91 K2-1
2.36 K2-1
0.69 SD2-1
0.64 SD2-5
0.40 SD2-22
0.50 SD18-24
1.90 SD18-10
0.42 SD18-25
2.03 SD18-18
4.29 SD18-27
0.52 SD18-17
0.45 SD18-4
0.90 SD18-28
11.66 SD18-11
4.60 SD18-30
1.30 Z1-9
3.90 Z1-4

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'

1 inch = 700'
T28N R92W

ZONE

ZONE
1
2
2T
3
4
5
6
7
8
9
10
11
12
13
14
15
16

GT BANDING

Color Range	Beg. Range	End
	0.30	0.80
	0.80	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

TITAN URANIUM USA INC

REVISION DATE:03/21/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 7

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING

DECLINE TO UNDERGROUND MINE WORKINGS

SHEEP I SHAFT

SHEEP II SHAFT

S 21
S 28

S 22
S 27

0.55 NH2-5
0.65 NH2-2
0.47 H7-17
0.79 H7-18
2.35 H7-29
0.47 H7-31
0.62 H7-22
0.32 H7-8
0.35 PL-39
0.37 PL-53
0.65 PL-58
0.37 PL-54
0.43 PL-56
1.54 PL-59
0.36 K1-1
0.46 PB1-8
0.83 PL-57
0.38 K1-5
0.55 K1-4
0.62 K3-4
0.38 K4-8
0.38 K3-8
4.61 K4-6
0.79 K2-7
3.04 K4-11
0.40 K2-3
0.38 K2-13
0.68 K3-9
1.05 K4-12
0.66 K4-7
0.59 SD21-3
0.54 SD22-8
0.33 SD4-4
0.30 SD16-1
0.80 SD18-9
1.13 SD18-3
0.30 SD18-12
1.34 Z2-4
0.72 PD12-28
0.45 Z2-9
0.60 SD1-2
0.30 SD1-5
1.04 SD17-10
0.48 SD18-4
0.53 SD1-8
0.32 SD17-6

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'

1 inch = 700'
T28N R92W

ZONE	GT BANDING Color	Range Beg.	Range End
1		0.30	0.60
2		0.60	0.90
2F		0.90	1.00
3		1.00	2.00
4		2.00	3.00
5		3.00	4.00
6		4.00	5.00
7		5.00	6.00
8		6.00	7.00
9		7.00	8.00
10		8.00	9.00
11		9.00	10.00
12		10.00	11.00
13		11.00	12.00
14			
15			
16			

TITAN URANIUM USA INC

REVISION DATE:03/21/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 8

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING

DECLINE TO UNDERGROUND MINE WORKINGS

SHEEP I SHAFT

SHEEP II SHAFT

S 21
S 28

S 22
S 27

2.39 NH2-4
1.17 NH2-2
0.87 NH2-16
0.86 H7-10
0.70 H7-11
0.43 H7-2
1.62 H7-12
2.21 H7-4
2.12 H7-1
0.81 H7-1C
0.44 H7-32
1.46 H7-7
1.28 H6-3
1.94 PL-53
2.08 H7-5
0.54 K1-2
0.38 SD20-1
1.29 K2-9
0.58 SD16-2
0.49 SD3-3
5.99 SD3-10
3.55 SD3-7
1.43 SD19-11
0.86 SD21-4
0.30 SD18-27
2.21 SD18-20
0.65 SD2-1
0.37 SD1-2
0.40 SD18-10
1.68 SD18-19
0.44 SD18-31
0.64 Z2-4
0.80 SD18-4
0.46 SD1-4
0.66 SD2-5
1.34 SD18-5
0.59 SD1-7
1.38 SD2-18
0.66 SD18-21
1.88 SD18-11
0.32 SD18-22
0.80 Z1-11
1.04 SD2-17
0.45 SD2-9
0.68 SD2-16

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'

1 inch = 700'
T28N R92W

ZONE

ZONE
1
2U
2L
3
4
5
6
7
8
9
10
11
12
13
14
15
16

GT BANDING

Color	Range Beg.	Range End
	0.30	0.60
	0.60	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

TITAN URANIUM USA INC

REVISION DATE:03/21/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 9

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING

DECLINE TO UNDERGROUND MINE WORKINGS

0.68 H7-30
0.36 H7-22
0.65 H7-4
1.00 H7-3
0.83 H7-1
0.33 H6-2C
0.86 H6-7
0.46 H6-17
1.48 PL-58
SHEEP I SHAFT
0.54 PL-59
0.40 H6-15
2.39 K1-4
0.49 PB1-5
0.74 SD4-2
1.22 SD3-1
0.55 PD13-9
0.74 SD22-1
0.46 SD19-4
0.88 SD19-9
5.07 SD19-6
1.34 SD21-4
0.33 SD22-5
0.75 SD22-8
1.14 SD2-14
2.53 SD2-21
0.32 SD18-5
0.66 SD18-28
0.50 SD18-21
0.30 SD18-11
1.79 SD18-33
0.36 SD18-32
SHEEP II SHAFT
0.62 Z1-2
0.70 Z2-12
2.71 PD12-31
0.55 Z1-4
9.22 Z1-3
0.31 Z2-5
0.91 Z2-6

S 21
S 28
S 22
S 27

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'
1 inch = 700'
T28N R92W

ZONE	GT BANDING Color	Range Beg.	Range End
1		0.30	0.60
2U		0.60	0.90
2L		0.90	1.00
3		1.00	2.00
4		2.00	3.00
5		3.00	4.00
6		4.00	5.00
7		5.00	6.00
8		6.00	7.00
9		7.00	8.00
10		8.00	9.00
11		9.00	10.00
12		10.00	11.00
13		11.00	12.00
14			
15			
16			

TITAN URANIUM USA INC

REVISION DATE:03/21/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 10

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING

DECLINE TO UNDERGROUND MINE WORKINGS

SHEEP I SHAFT

SHEEP II SHAFT

0.38 H7-17
0.64 H7-26
1.15 H6-10
1.18 PL-53
1.16 PB1-2
0.42 PB1-4
2.24 PB1-5
2.86 K1-4
1.64 K1-3
0.35 K3-3
1.36 PB1-13
0.35 K3-1
0.38 SD22-3
0.75 SD4-1
0.72 SD3-2
0.40 SD3-9
4.44 SD19-7
3.29 SD19-1
1.69 SD3-3
0.98 SD16-4
0.46 SD19-11
0.36 SD3-7
0.88 SD2-20
0.34 SD22-4
0.90 SD22-2
0.53 SD22-7
0.30 PD13-8
1.50 SD22-8
0.36 SD18-29
0.65 Z1-8
0.43 Z2-4
1.52 SD2-4
1.12 Z1-10
0.77 SM-1027
0.72 Z1-3
1.36 SD2-17
0.88 SD17-6
0.36 SD18-23

S 21
S 28

S 22
S 27

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'

1 inch = 700'
T28N R92W

ZONE
1
2U
2L
3
4
5
6
7
8
9
10
11
12
13
14
15
16

GT BANDING

Color Range	Beg. Range	End
	0.30	0.60
	0.60	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

TITAN URANIUM USA INC.

REVISION DATE:03/21/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 11

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING

DECLINE TO UNDERGROUND MINE WORKINGS

SHEEP I SHAFT

SHEEP II SHAFT

0.70 NH3-5

0.40 SD13-7

0.43 SD16-3

1.90 H6-12

1.57 PB1-8

3.97 K3-1

0.46 K2-14

0.61 K2-9

2.99 K1-3

0.40 K4-2

0.35 K4-9

0.84 K4-6

1.23 SD21-1

0.44 PD13-11

0.62 PD13-6

0.62 SD3-2

0.53 SD3-3

0.31 SD3-4

0.30 SD3-6

0.49 SD19-11

1.33 SD19-10

0.48 SD21-3

0.79 SD22-7

1.65 SD22-8

1.20 SD17-6

2.36 SD18-7

2.21 Z1-13

S 21
S 28

S 22
S 27

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE
  DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'

1 inch = 700'
T28N R92W

ZONE

11
20
21
3
4
5
6
7
8
9
10
11
12
13
14
15
16

GT BANDING

Color	Range Beg.	Range End
	0.80	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

TITAN URANIUM USA INC

REVISION DATE:03/21/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 12

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING

DECLINE TO UNDERGROUND MINE WORKINGS

0.60 NH2-7

0.88 H7-2

0.51 H7-3

1.27 H6-2

+2.88+ H7-1C

0.34 H7-27

SHEEP I SHAFT

0.47 H6-12

0.30 SD13-7

0.40 SD20-2

0.32 SD18-3

0.49 SD20-9

0.37 SD21-2

0.32 SD21-5

1.18 K2-8

0.39 K4-6

1.16 K4-10

0.48 SD22-3

0.46 SD16-2

0.92 SD22-4

1.22 K2-10

1.50 K4-11

0.91+ PD13-4

S 21
S 28

S 22
S 27

1.30 SD19-7

0.51 SD3-9

0.57 PD13-7

0.38 K3-10

0.33 SD19-6

0.34 SD22-2

0.55 SD22-7

0.35 SD18-3

1.18 SD18-2

SHEEP II SHAFT

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE
  DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'

1 inch = 700'
T28N R92W

ZONE

ZONE
11
20
21
3
4
5
6
7
8
9
10
11
12
13
14
15
16

GT BANDING

Color	Range Beg.	Range End
	0.30	0.60
	0.60	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

TITAN URANIUM USA INC

REVISION DATE:03/21/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 13

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING

DECLINE TO UNDERGROUND MINE WORKINGS

1.20
H7-32

0.73
H4-3

0.32
H7-25

0.80
H6-7

SHEEP I SHAFT

0.80
SD20-3

0.34
PB1-7

0.80
PB1-3

0.40
SD20-7

0.32
SD20-5

1.52
PB1-11

0.61
SD19-3

0.65
PD13-3

0.49
SD4-2

0.82
K2-8

2.37
SD21-5

0.51
SD22-1

1.04
PD13-11

0.81
SD3-2

0.55
SD19-1

S 21
S 28

S 22
S 27

1.05
SD19-8

0.38
SD16-4

1.04
SD19-9

1.04
SD3-7

0.83
SD3-4

1.01
SD19-6

1.13
SD18-3

SHEEP II SHAFT

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE
  DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'

1 inch = 700'
T28N R92W

ZONE
11
20
21
3
4
5
6
7
8
9
10
11
12
13
14
15
16

GT BANDING

Color	Range Beg.	Range End
	0.80	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

TITAN URANIUM USA INC

REVISION DATE:03/21/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 14

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING

DECLINE TO UNDERGROUND MINE WORKINGS

0.70
H4-3

0.77
H5-6

0.38
H5-1

0.47
H5-2

SHEEP I SHAFT

0.60
SD15-4

0.36
SD20-5

0.36
SD20-8

1.40
PB1-12

0.75
K2-14

0.40
SD19-5

0.91
PD13-6

4.07
SD19-7

S 21
S 28

S 22
S 27

0.88
SD3-10

2.00
SD3-5

0.74
SD3-4

0.36
SD2-21

SHEEP II SHAFT

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'

1 inch = 700'
T28N R92W

ZONE
1
2
2T
3
4
5
6
7
8
9
10
11
12
13
14
15
16

GT BANDING

Color Range	Beg. Range	End
	0.80	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

TITAN URANIUM USA INC

REVISION DATE:03/21/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 15

SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

BRS ENGINEERING

DECLINE TO UNDERGROUND MINE WORKINGS

0.94
NH3-2

0.76
H5-2

0.36
SD15-3

0.72
SD15-5

SHEEP I SHAFT

S 21
S 28

S 22
S 27

0.43
SD3-4

0.72
SD2-14

0.62
SD16-1

0.83
SD2-15

SHEEP II SHAFT

LEGEND

- DRILL HOLE COLLAR LOCATION
- GT OF DRILL HOLE
  DESCRIPTION OF DRILL HOLE
- SECTION LINE
- MINE WORKINGS
- SHAFT

700' 0 350' 700'

1 inch = 700'
T28N R92W

ZONE

11
20
21
3
4
5
6
7
8
9
10
11
12
13
14
15
16

GT BANDING

Color	Range Beg.	Range End
	0.30	0.60
	0.60	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

TITAN
URANIUM USA INC

REVISION DATE:03/21/12
CAD FILENAME:
DWG. NUMBER: APPENDIX A2

SHEEP MOUNTAIN MINES
PRE-FEASIBILITY STUDY
FREMONT COUNTY, WYOMING

SHEEP UNDERGROUND ZONE 16

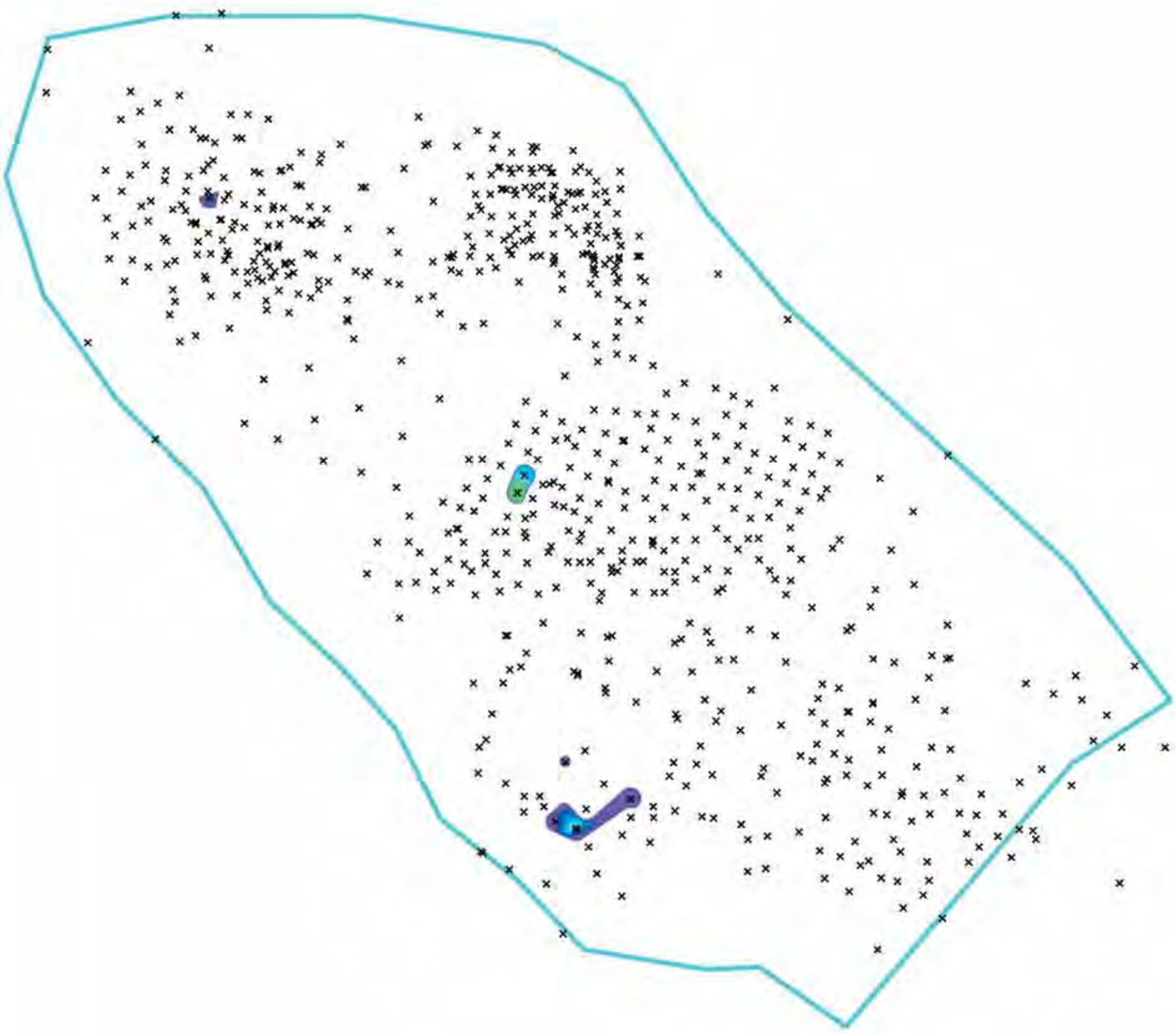
SCALE: 1"=700' | DATE: 2/12/12
DRAWN BY: CS

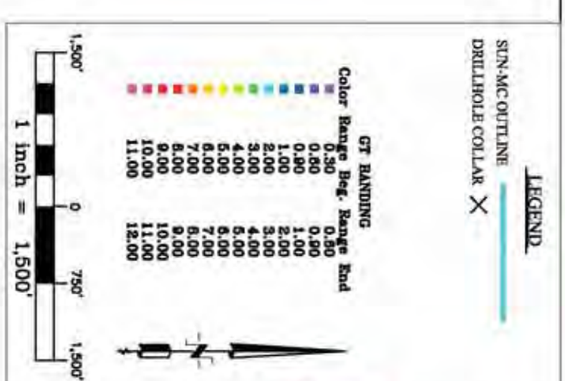
BRS ENGINEERING

APPENDIX A3

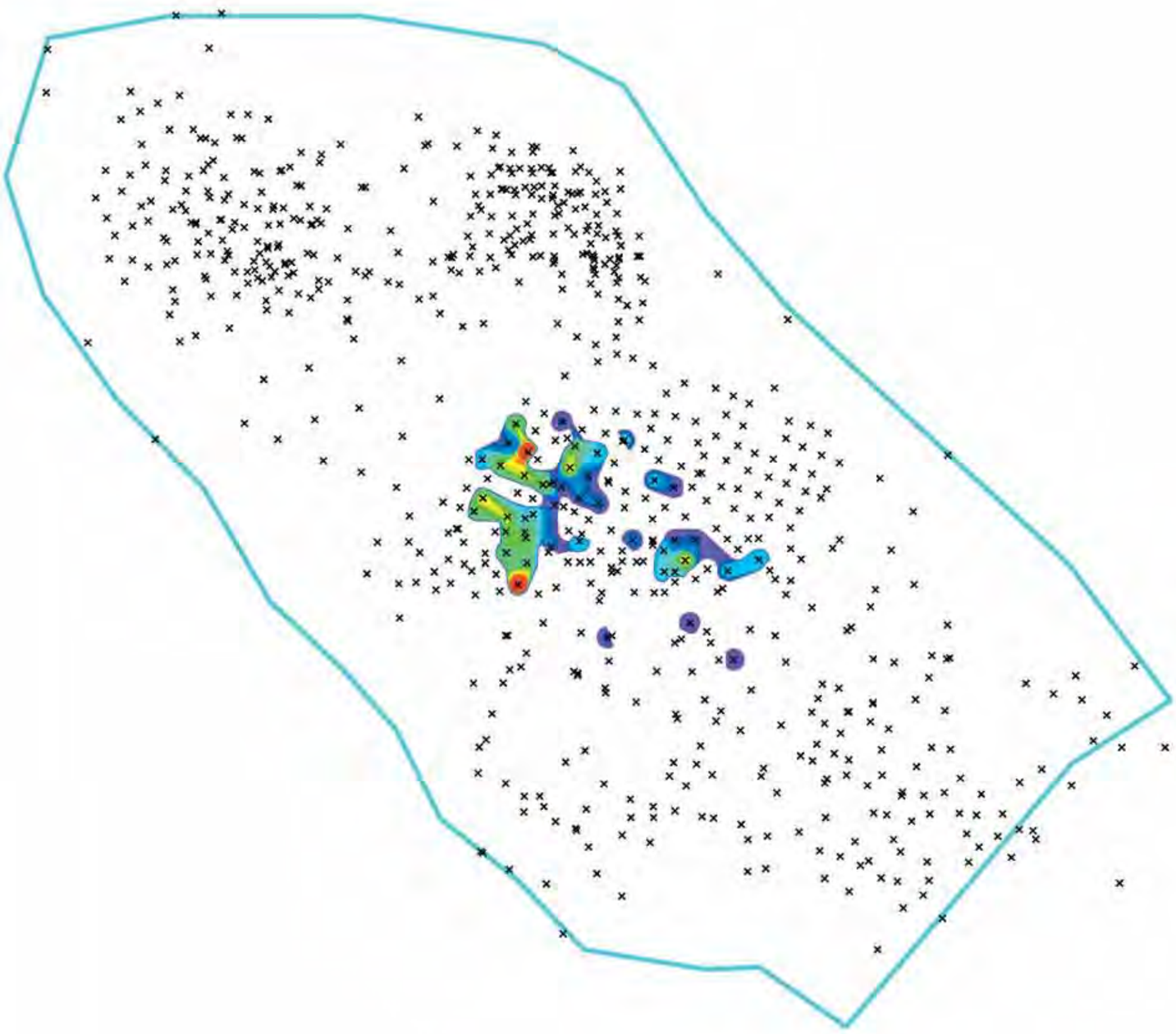
GT CONTOUR MAPS

SUN MC AREA





BRS ENGINEERING	**SUN-MC GT MAP: DA SAND**	**SHEEP MOUNTAIN MINES FREMONT COUNTY, WYOMING**	REVISION DATE: 03/16/12	TITAN URANIUM USA INC
	SCALE: 1"=300' DATE:		CAD FILENAME: \Sun-Mc GT\Sun-Mc Ore Estimation.dwg	
	DRAWN BY: RSR, RHCP 02/27/2012		DWG. NUMBER:	



LEGEND

SUN-MC OUTLINE

DRILLHOLE COLLAR X

GT BANDING

Color	Range Beg.	Range End
	0.30	0.60
	0.60	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

1 inch = 300'

0

300'

BRS ENGINEERING

SUN-MC GT MAP: DB SAND

SCALE: 1"=300' | DATE: 02/27/2012

DRAWN BY: RSR, RHCP

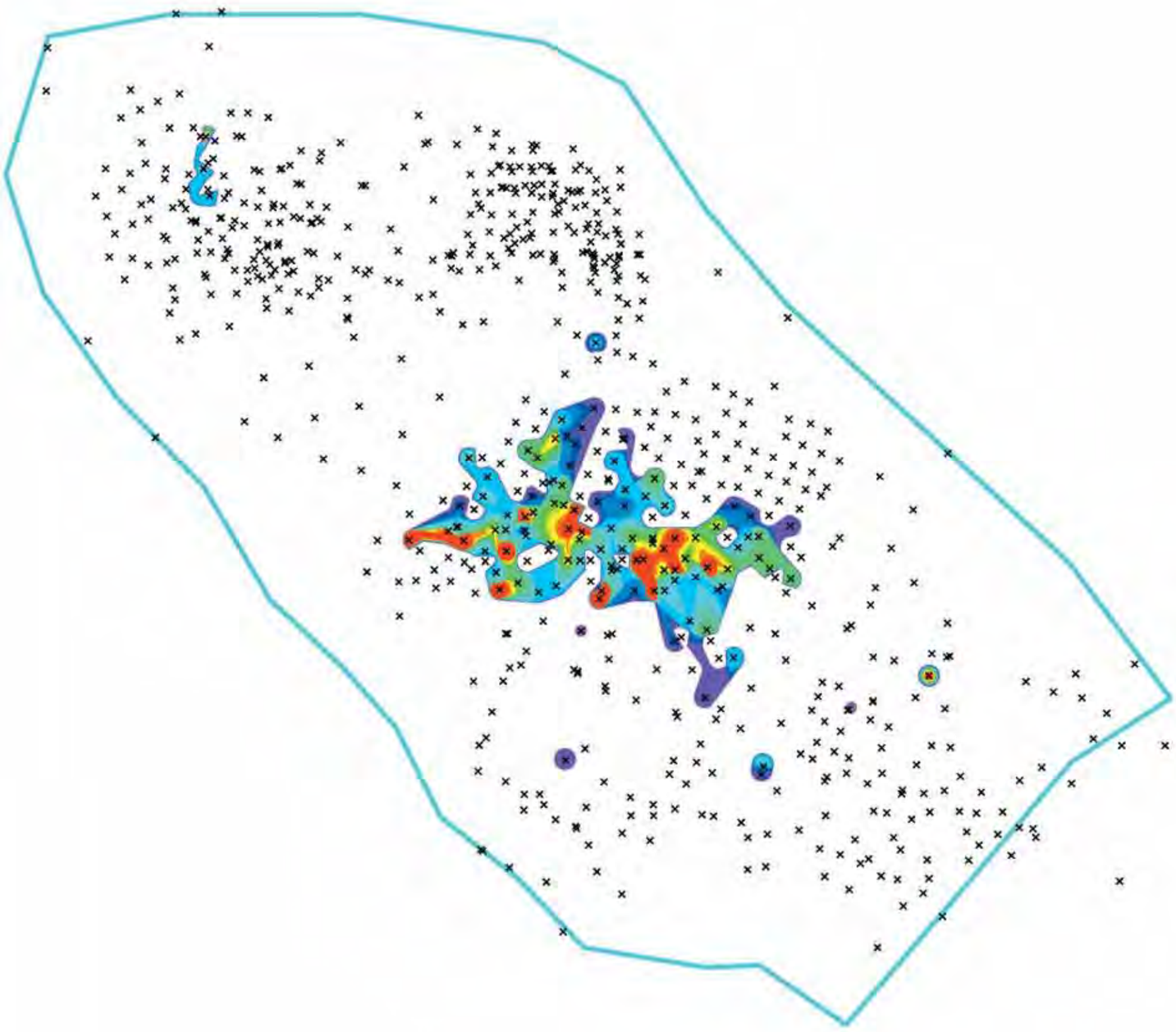
SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

REVISION DATE: 03/16/12

CAD FILENAME: \Sun-Mc GT\Sun-Mc Ore Estimation.dwg

DWG. NUMBER: APPENDIX A3

TITAN URANIUM USA INC



LEGEND

SUN-MC OUTLINE

DRILLHOLE COLLAR X

GT BANDING

Color Range Beg.	Range End
0.30	0.80
0.80	0.90
0.90	1.00
1.00	2.00
2.00	3.00
3.00	4.00
4.00	5.00
5.00	6.00
6.00	7.00
7.00	8.00
8.00	9.00
9.00	10.00
10.00	11.00
11.00	12.00

1 inch = 300'

300' 0 150' 300'

BRS ENGINEERING

SUN-MC GT MAP: DC SAND

SCALE: 1"=300' DATE:

DRAWN BY: RSR, RHCP 02/27/2012

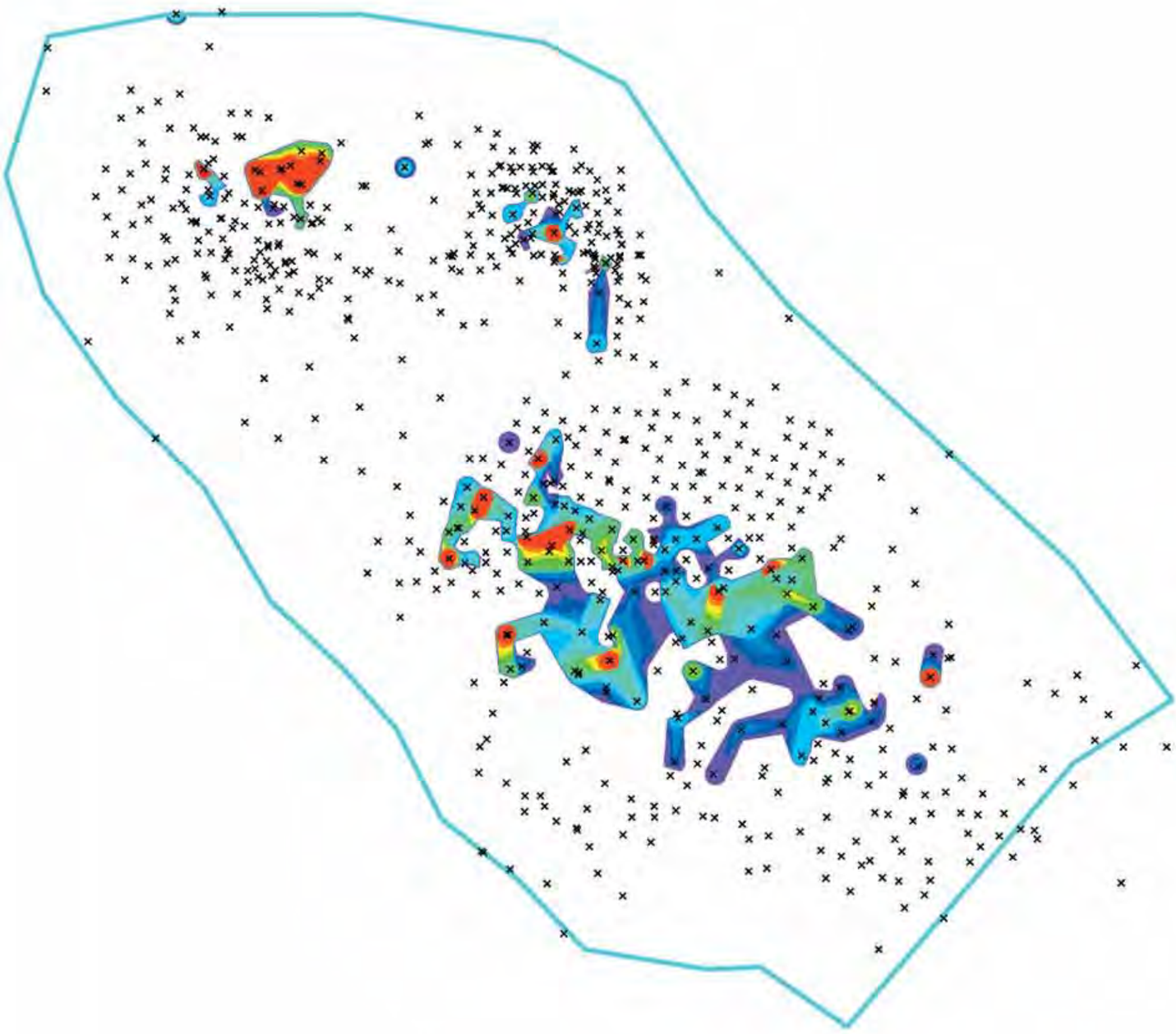
SHEEP MOUNTAIN MINES
FREMONT COUNTY, WYOMING

REVISION DATE: 03/22/12

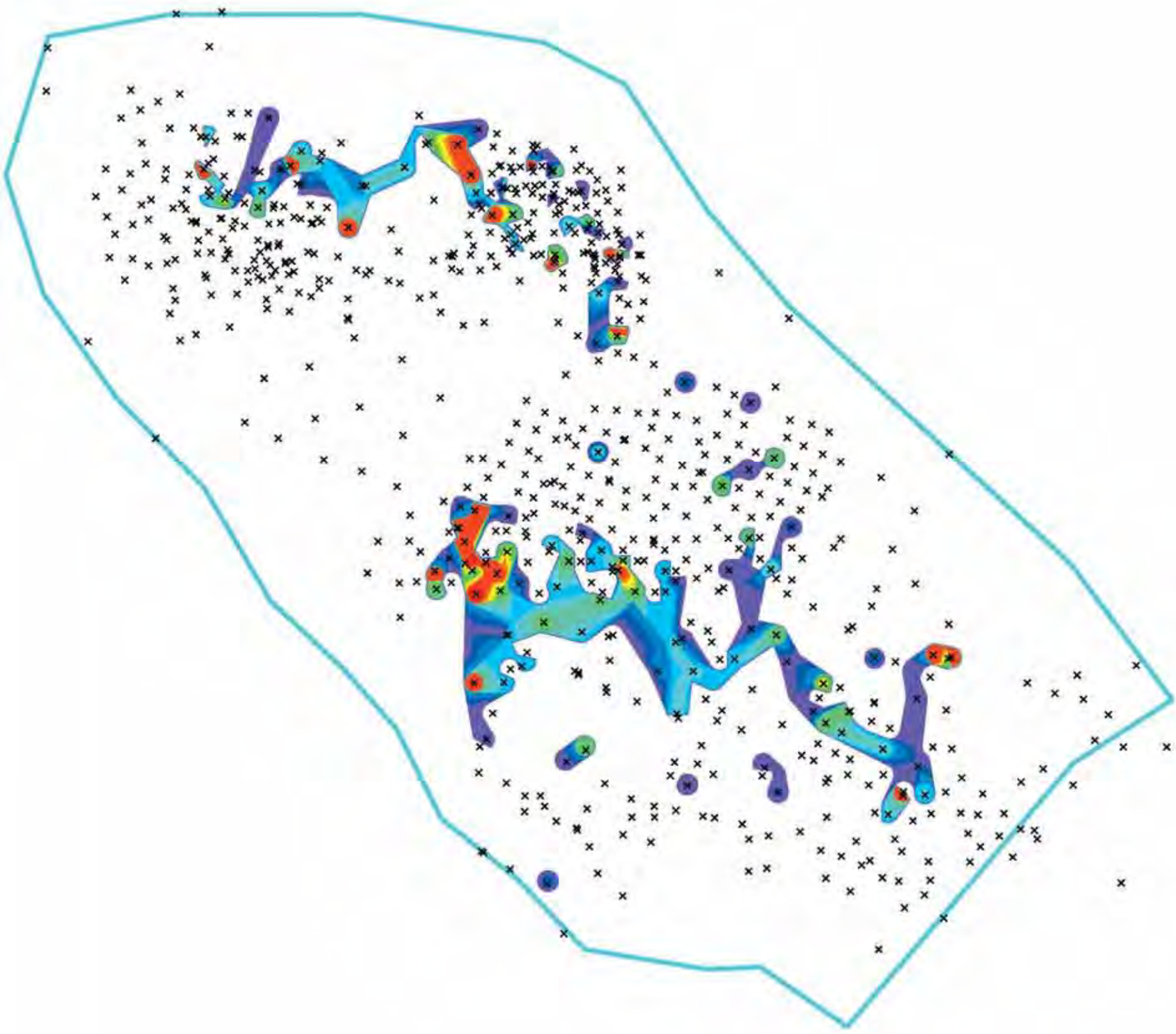
CAD FILENAME: \Sun-Mc GT\Sun-Mc Ore Estimation.dwg

DWG. NUMBER: APPENDIX A3

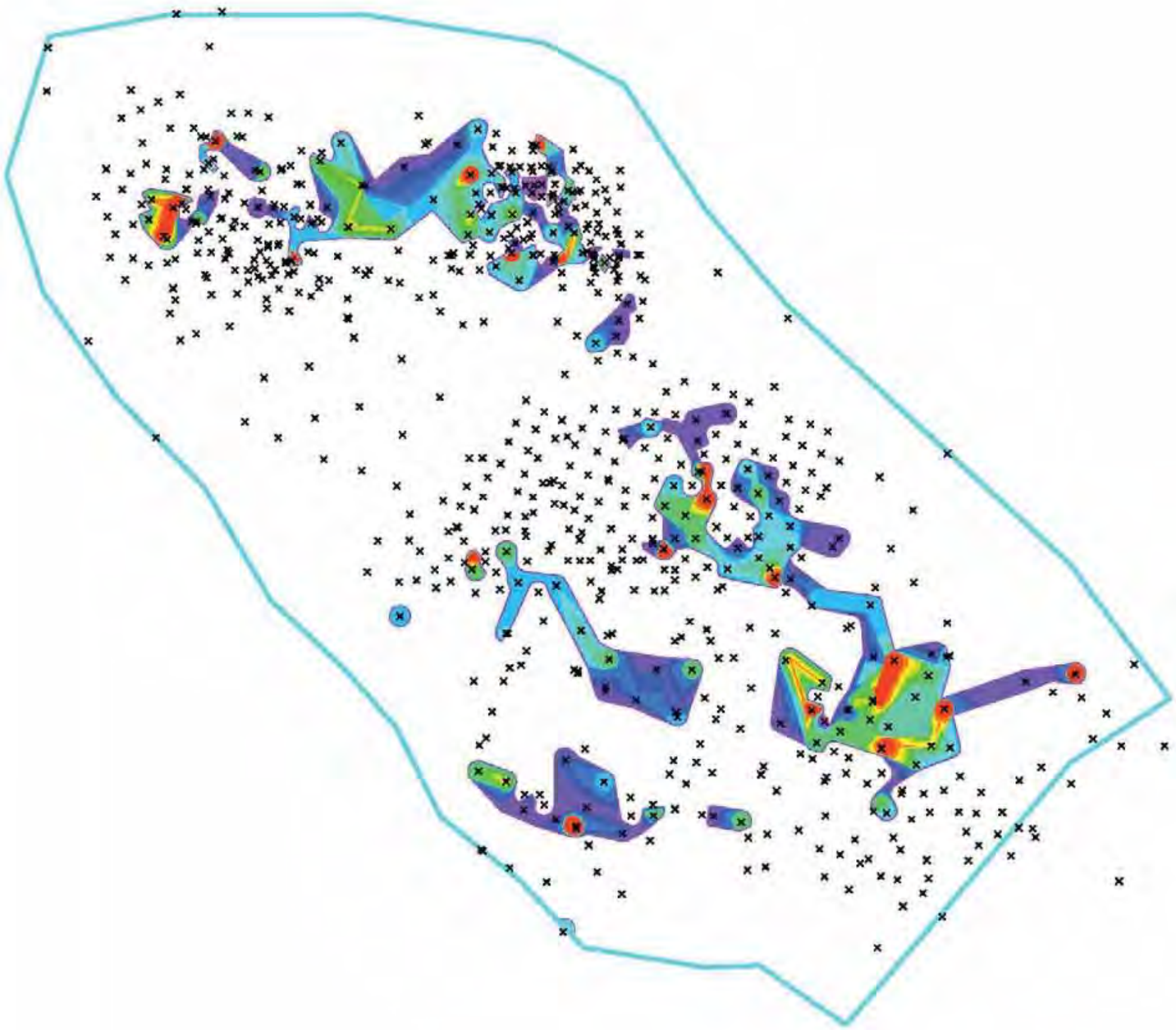
TITAN URANIUM USA INC



BRS ENGINEERING	**SUN-MC GT MAP: DD SAND**	**SHEEP MOUNTAIN MINES FREMONT COUNTY, WYOMING**	REVISION DATE: 03/22/12	TITAN URANIUM USA INC
	SCALE: 1"=300' DATE:		CAD FILENAME: \Sun-Mc GT\Sun-Mc Ore Estimation.dwg	
	DRAWN BY: RSR, RHCP 02/27/2012		DWG. NUMBER: APPENDIX A3	



BRS ENGINEERING	**SUN-MC GT MAP: DE SAND**	**SHEEP MOUNTAIN MINES FREMONT COUNTY, WYOMING**	REVISION DATE: 03/22/12	TITAN URANIUM USA INC
	SCALE: 1"=300' DATE:		CAD FILENAME: \Sun-Mc GT\Sun-Mc Ore Estimation.dwg	
	DRAWN BY: RSR, RHCP 02/27/2012		DWG. NUMBER: APPENDIX A3	



LEGEND

SUN-MC OUTLINE

DRILLHOLE COLLAR ×

GT RANGING

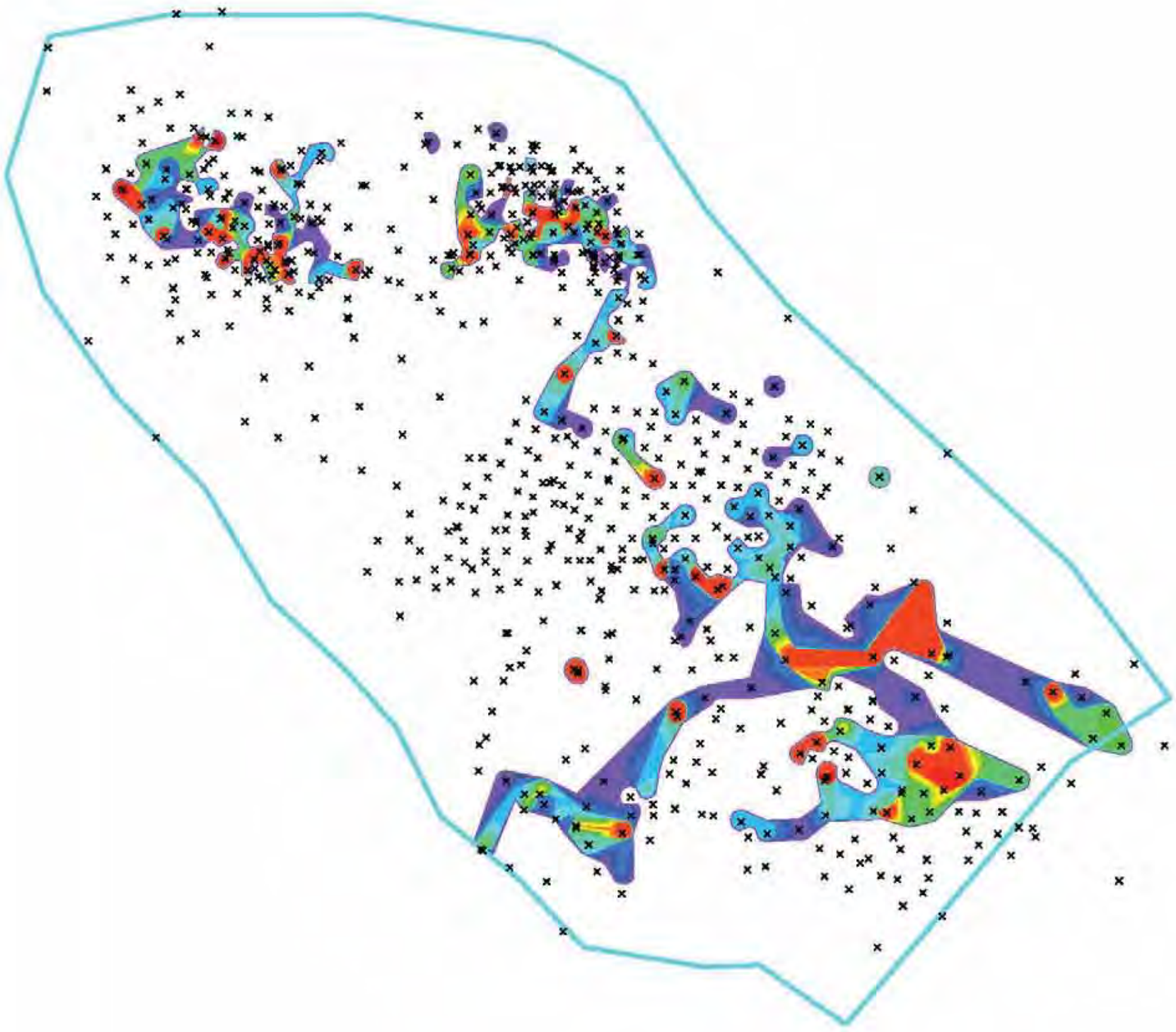
Color Range	Beg. Range	End
	0.30	0.60
	0.60	0.90
	0.90	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

300' 0 150' 300'

1 inch = 300'

BRS ENGINEERING	**SUN-MC GT MAP: DF SAND**	**SHEEP MOUNTAIN MINES FREMONT COUNTY, WYOMING**	REVISION DATE: 03/22/12
	SCALE: 1"=300' DATE:		CAD FILENAME: \Sun-Mc GT\Sun-Mc Ore Estimation.dwg
	DRAWN BY: RSR, RHCP 02/27/2012		DWG. NUMBER: APPENDIX A3

TITAN URANIUM USA INC



LEGEND

SUN-MC OUTLINE

DRILLHOLE COLLAR ×

GT BANDING

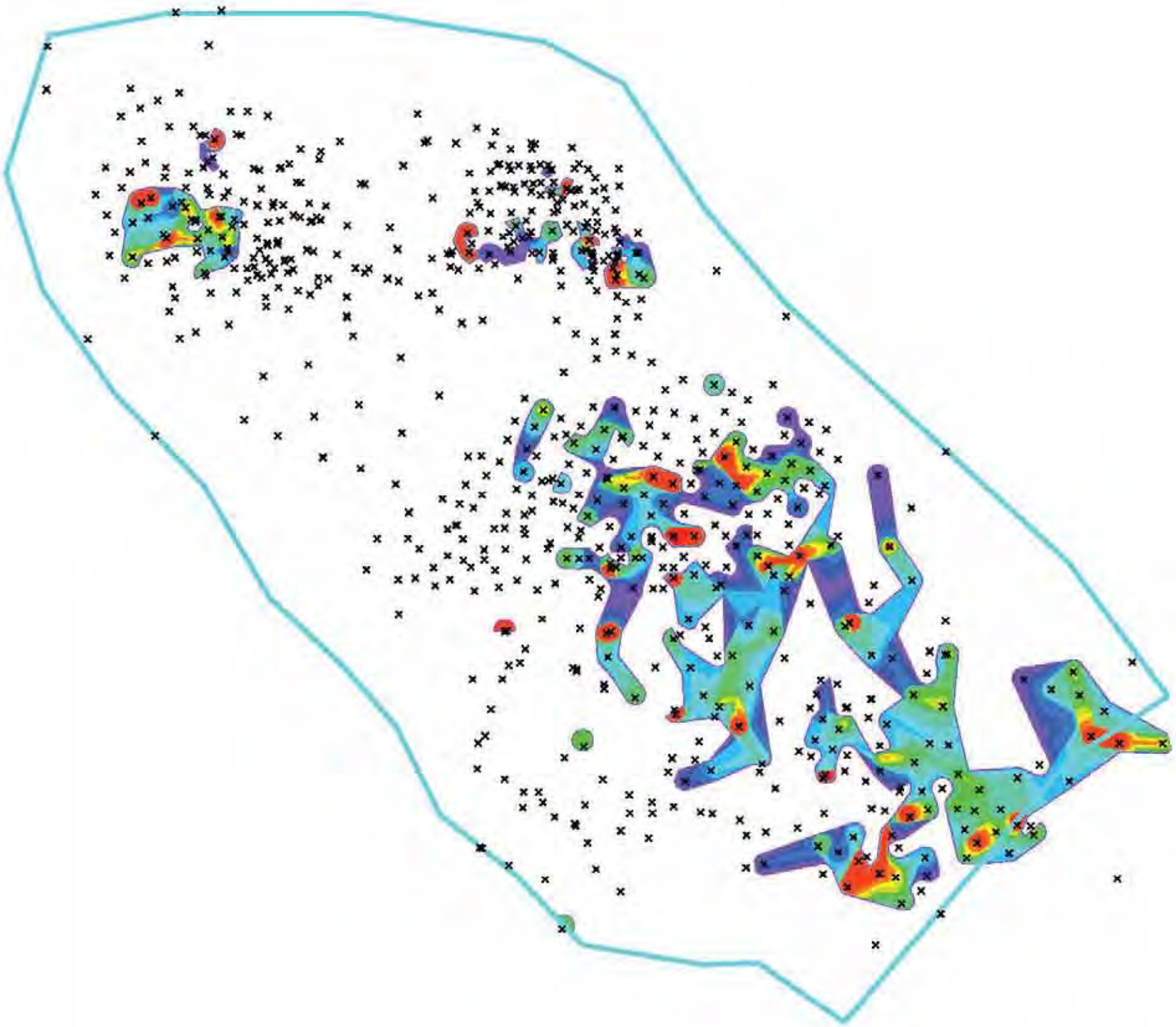
Color Range	Beg. Range	End
	0.00	0.50
	0.00	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	18.00

1 inch = 300'

300' 0 150' 300'

BRS ENGINEERING	SUN-MC GT MAP: DG SAND	SHEEP MOUNTAIN MINES FREMONT COUNTY, WYOMING	REVISION DATE: 03/22/12
	SCALE: 1"=300' DATE:		CAD FILENAME: \Sun-Mc GT\Sun-Mc Ore Estimation.dwg
	DRAWN BY: RSR, RHCP 02/27/2012		DWG. NUMBER: APPENDIX A3

TITAN URANIUM USA INC



LEGEND

SUN-MC OUTLINE

DRILLHOLE COLLAR X

GT RANGING

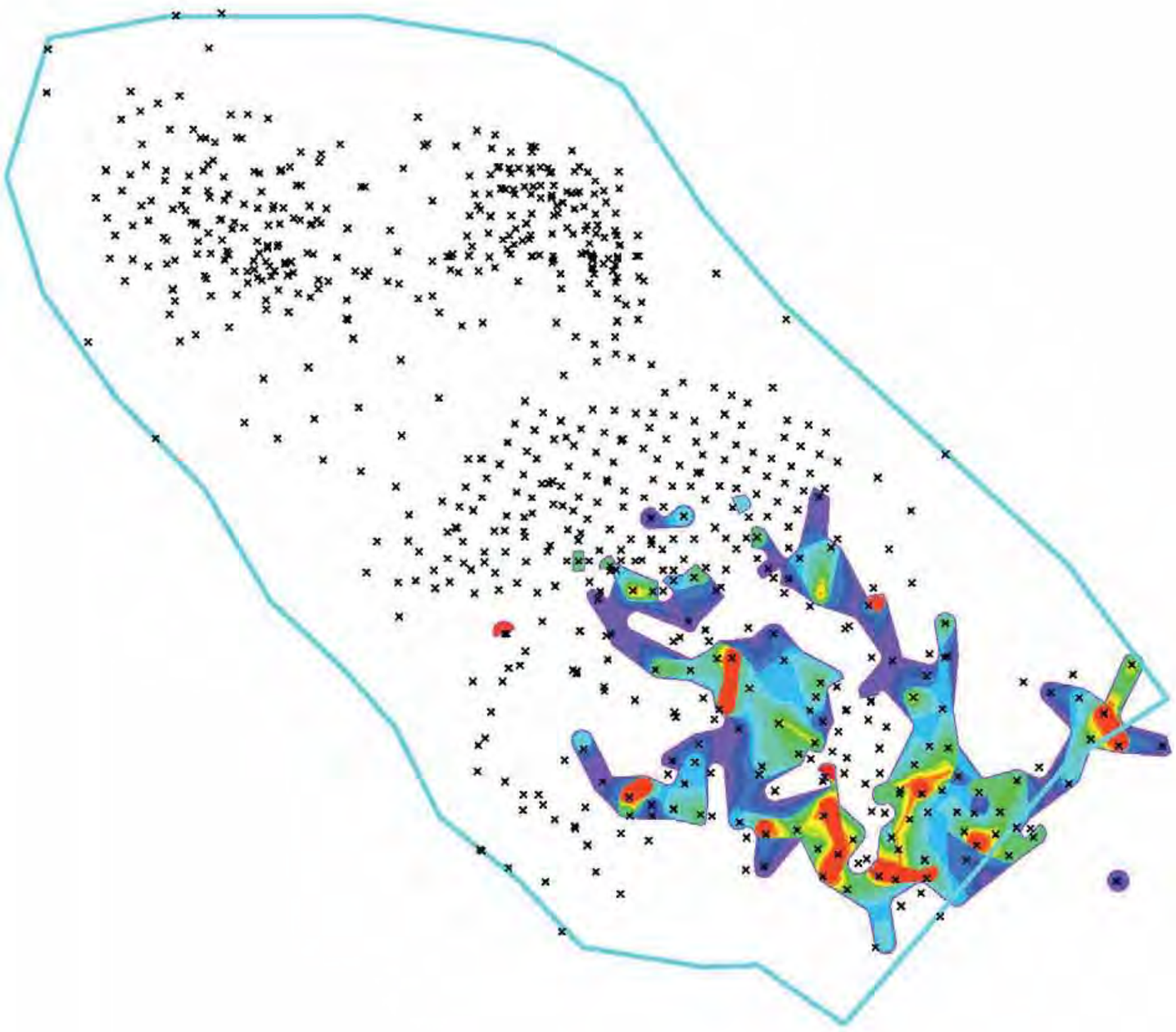
Color Range	Beg. Range	End
	0.00	0.50
	0.50	1.00
	1.00	2.00
	2.00	3.00
	3.00	4.00
	4.00	5.00
	5.00	6.00
	6.00	7.00
	7.00	8.00
	8.00	9.00
	9.00	10.00
	10.00	11.00
	11.00	12.00

1 inch = 300'

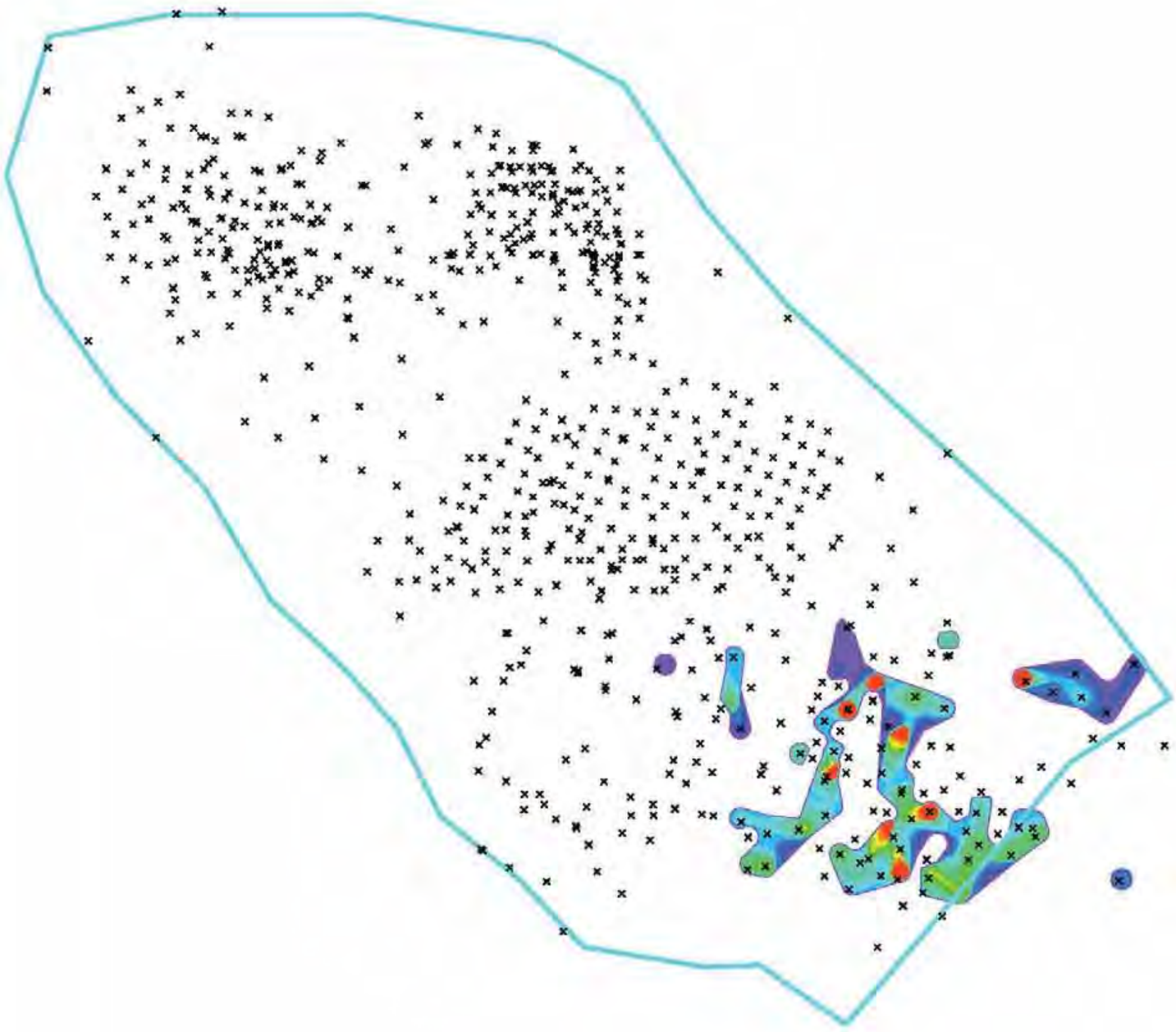
300' 0 150' 300'

BRS ENGINEERING	SUN-MC GT MAP: DHDI SAND	SHEEP MOUNTAIN MINES FREMONT COUNTY, WYOMING	REVISION DATE: 03/22/12
	SCALE: 1"=300' DATE:		CAD FILENAME: \Sun-Mc GT\Sun-Mc Ore Estimation.dwg
	DRAWN BY: RSR, RHCP 02/27/2012		DWG. NUMBER: APPENDIX A3

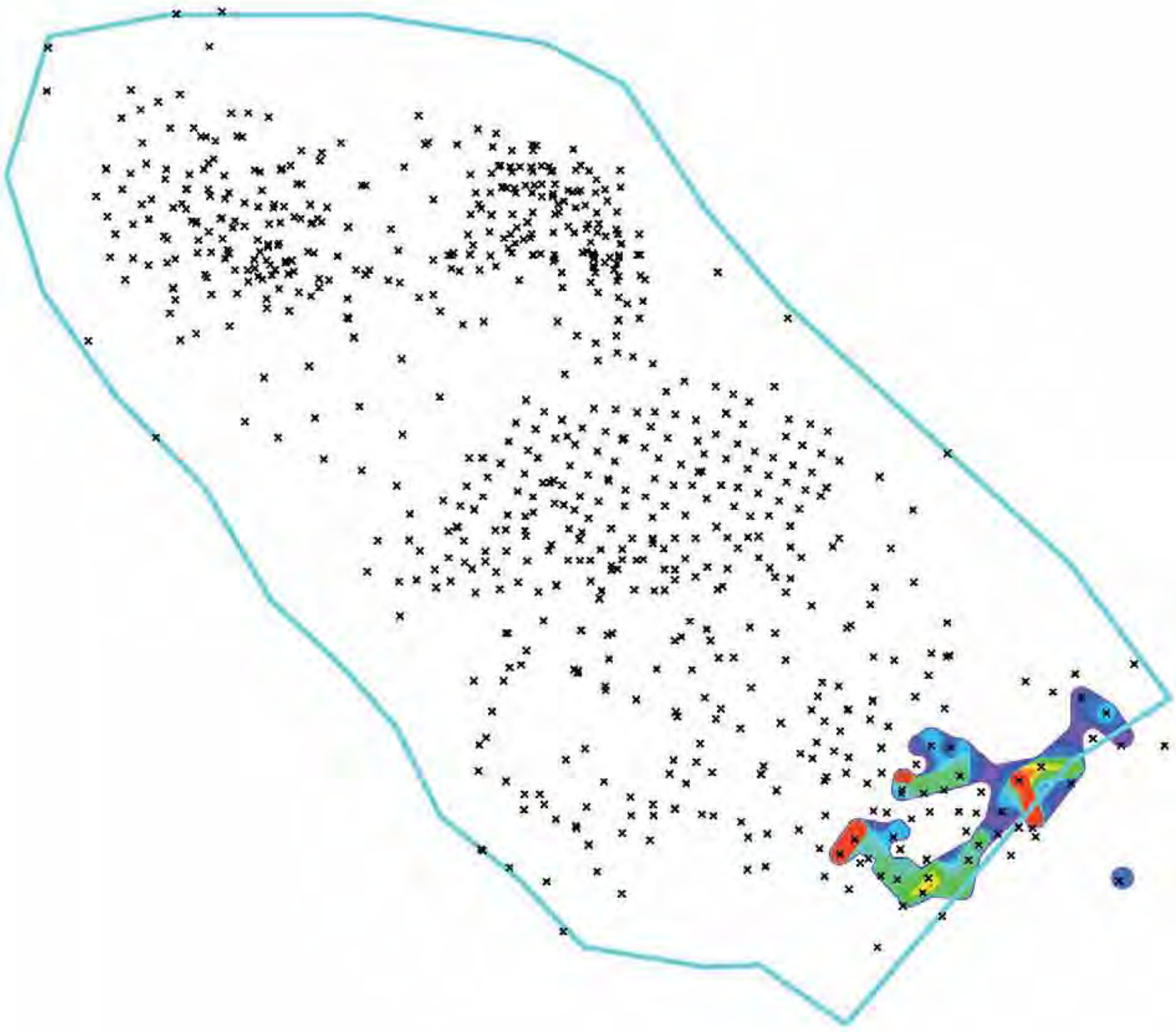
TITAN URANIUM USA INC



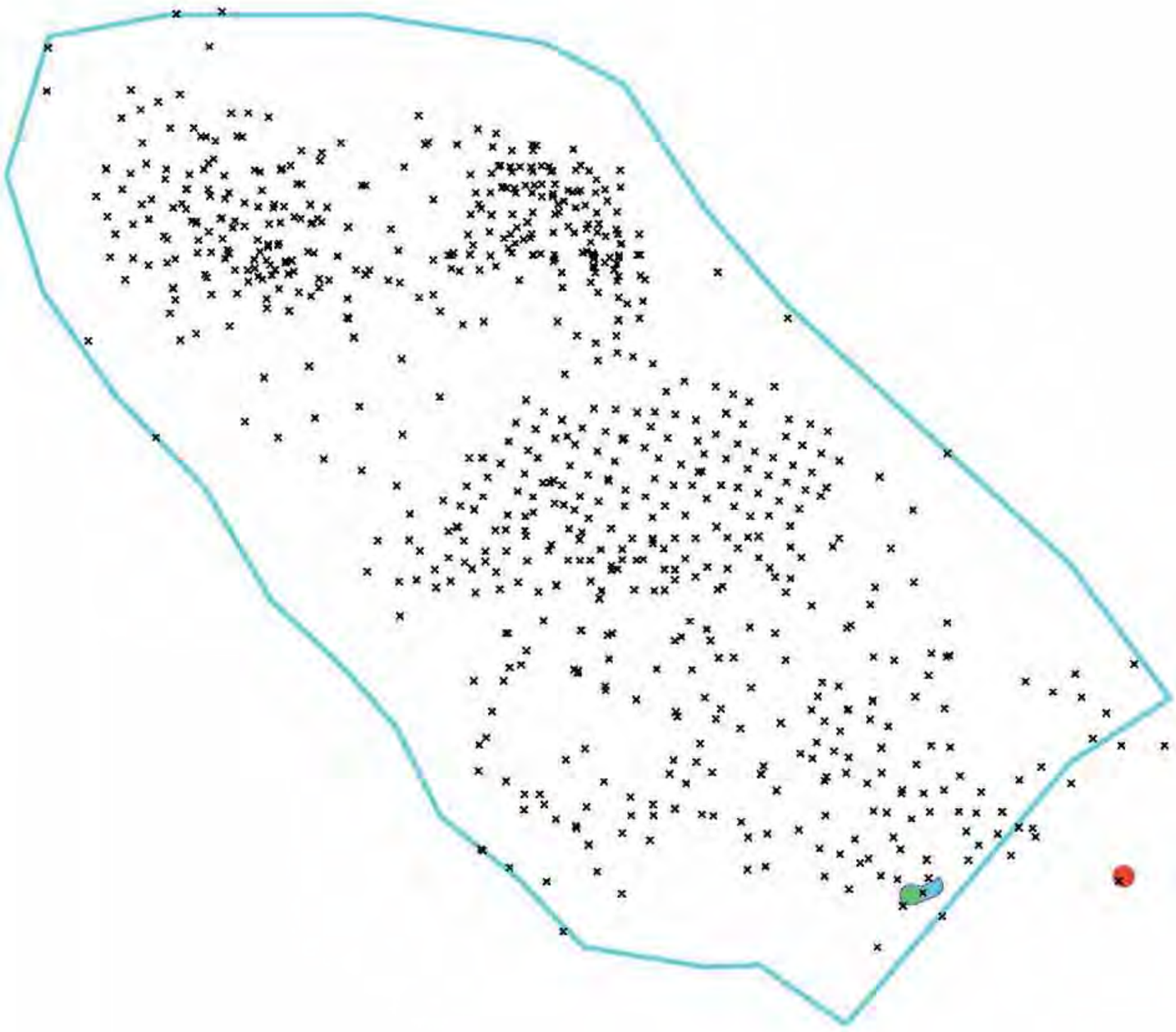
BRS ENGINEERING	**SUN-MC GT MAP: DJDK SAND**	**SHEEP MOUNTAIN MINES FREMONT COUNTY, WYOMING**	REVISION DATE: 03/22/12	TITAN URANIUM USA INC
	SCALE: 1"=300' DATE:		CAD FILENAME: \Sun-Mc GT\Sun-Mc Ore Estimation.dwg	
	DRAWN BY: RSR, RHCP 02/27/2012		DWG. NUMBER: APPENDIX A3	



BRS ENGINEERING	**SUN-MC GT MAP: DLDM SAND**	**SHEEP MOUNTAIN MINES FREMONT COUNTY, WYOMING**	REVISION DATE: 03/22/12	TITAN URANIUM USA INC
	SCALE: 1"=300' DATE:		CAD FILENAME: \Sun-Mc GT\Sun-Mc Ore Estimation.dwg	
	DRAWN BY: RSR, RHCP 02/27/2012		DWG. NUMBER: APPENDIX A3	



BRS ENGINEERING	**SUN-MC GT MAP: DNDO SAND**	**SHEEP MOUNTAIN MINES FREMONT COUNTY, WYOMING**	REVISION DATE: 03/22/12	TITAN URANIUM USA INC
	SCALE: 1"=300' DATE:		CAD FILENAME: \Sun-Mc GT\Sun-Mc Ore Estimation.dwg	
	DRAWN BY: RSR, RHCP 02/27/2012		DWG. NUMBER: APPENDIX A3	



BRS ENGINEERING	**SUN-MC GT MAP: DPDQ SAND**	**SHEEP MOUNTAIN MINES FREMONT COUNTY, WYOMING**	REVISION DATE: 03/22/12	TITAN URANIUM USA INC
	SCALE: 1"=300' DATE:		CAD FILENAME: \Sun-Mc GT\Sun-Mc Ore Estimation.dwg	
	DRAWN BY: RSR, RHCP 02/27/2012		DWG. NUMBER: APPENDIX A3	