

Botswana Projects



Canada-Africa Business Conference
26th March 2019



1. Xaudum Iron Project

“The Tip of the Iceberg”

2. BK16 Diamond Project “Botswana’s Next Diamond Mine?”



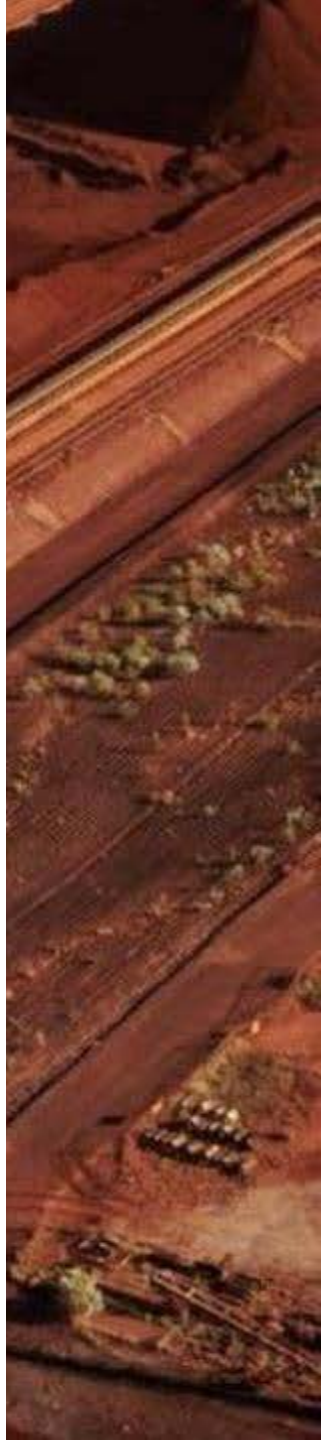
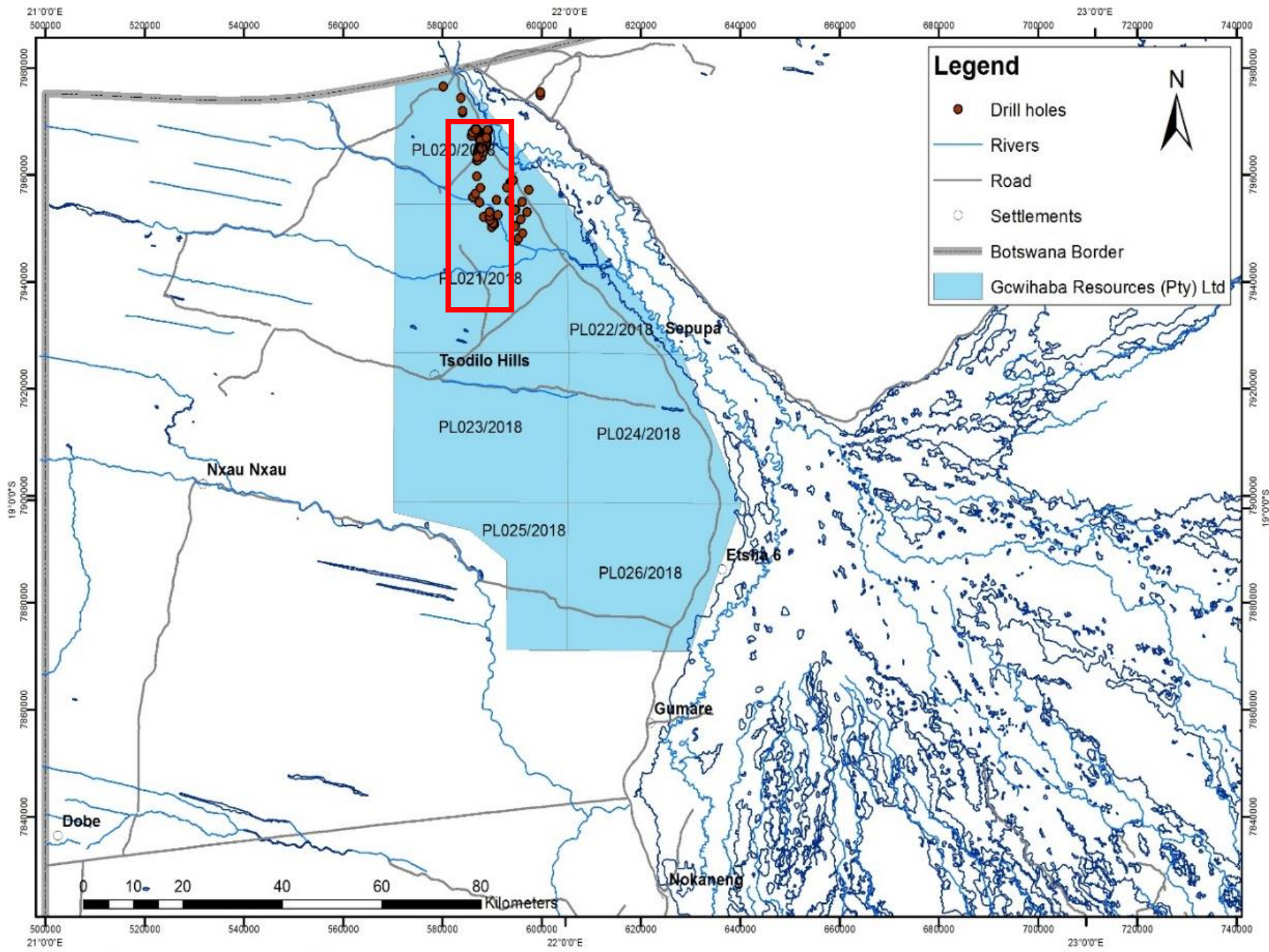
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This presentation contains forward-looking statements. All statements, other than statements of historical fact, that address activities, events or developments that the Company believes, expects or anticipates will or may occur in the future (including, without limitation, statements relating to the development of the Company's projects) are forward-looking statements. These forward-looking statements reflect the current expectations or beliefs of the Company based on information currently available to the Company. Forward-looking statements are subject to a number of risks and uncertainties that may cause the actual results of the Company to differ materially from those discussed in the forward-looking statements, and even if such actual results are realized or substantially realized, there can be no assurance that they will have the expected consequences to, or effects on the Company. Factors that could cause actual results or events to differ materially from current expectations include, among other things, changes in equity markets, political developments in Botswana and surrounding countries, changes to regulations affecting the Company's activities, uncertainties relating to the availability and costs of financing needed in the future, the uncertainties involved in interpreting exploration results and the other risks involved in the mineral exploration business. Any forward-looking statement speaks only as of the date on which it is made and, except as may be required by applicable securities laws, the Company disclaims any intent or obligation to update any forward-looking statement, whether as a result of new information, future events or results or otherwise. Although the Company believes that the assumptions inherent in the forward-looking statements are reasonable, forward-looking statements are not guarantees of future performance and accordingly undue reliance should not be put on such statements due to the inherent uncertainty therein.

Xaudum Iron Project – Northwest Botswana

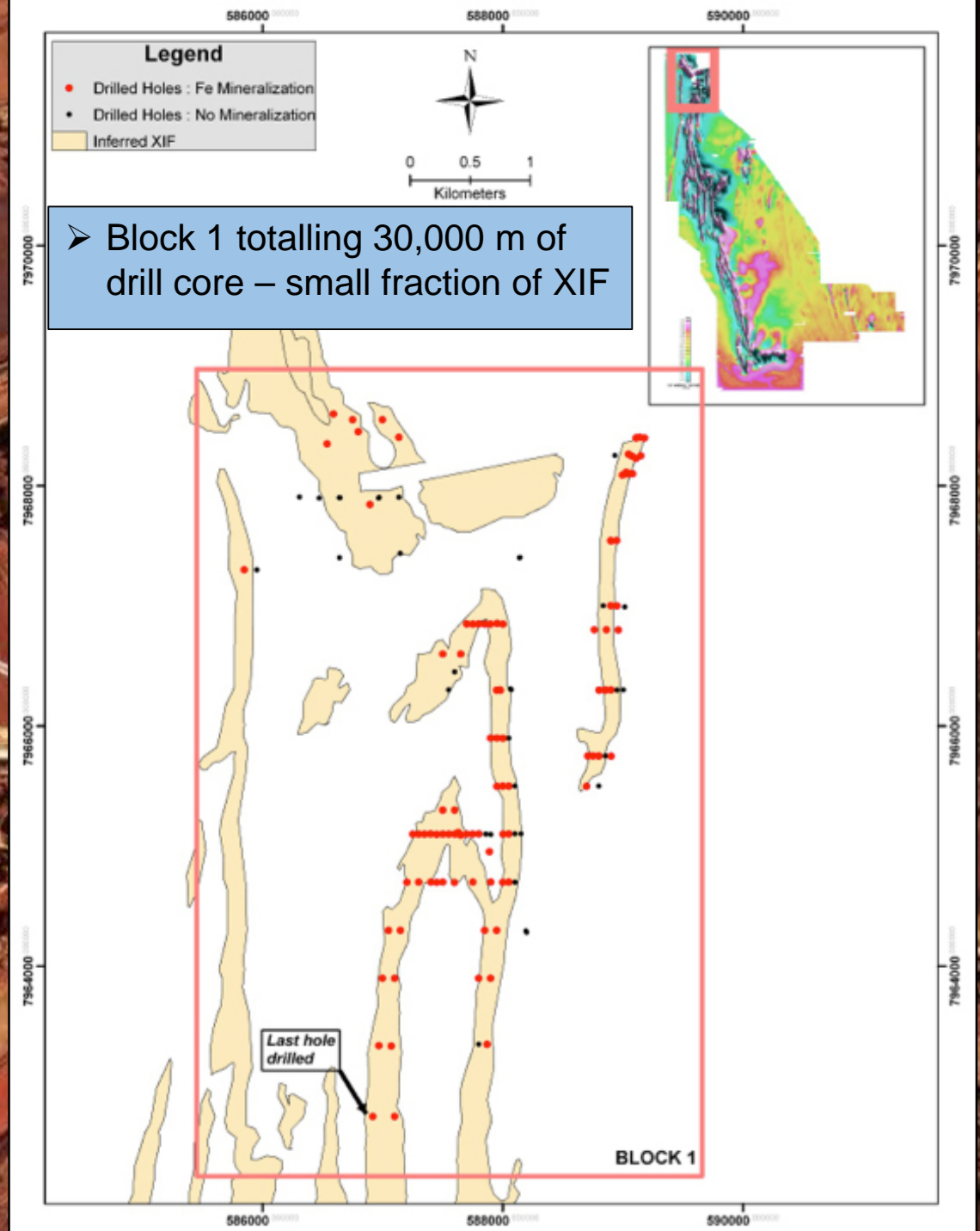
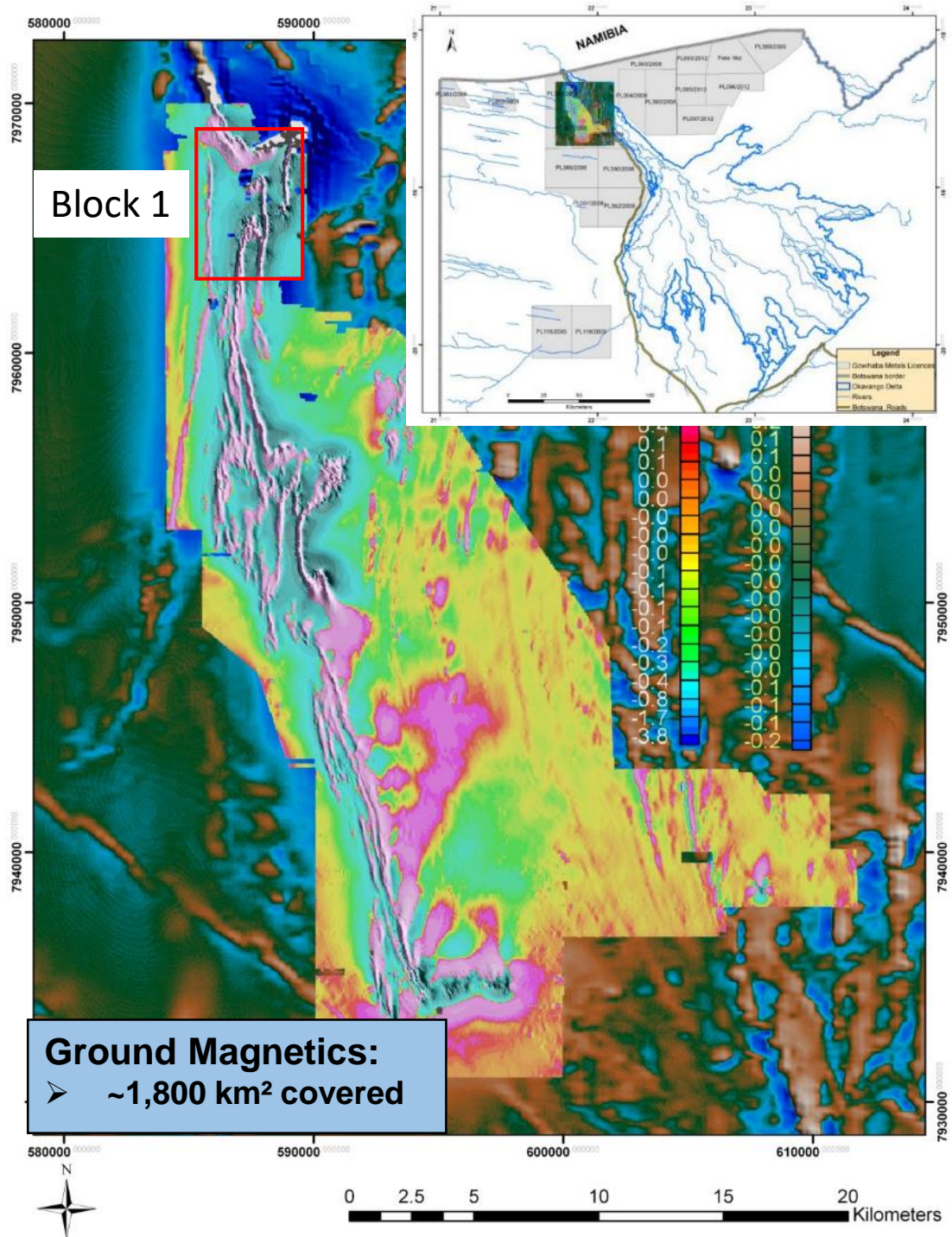




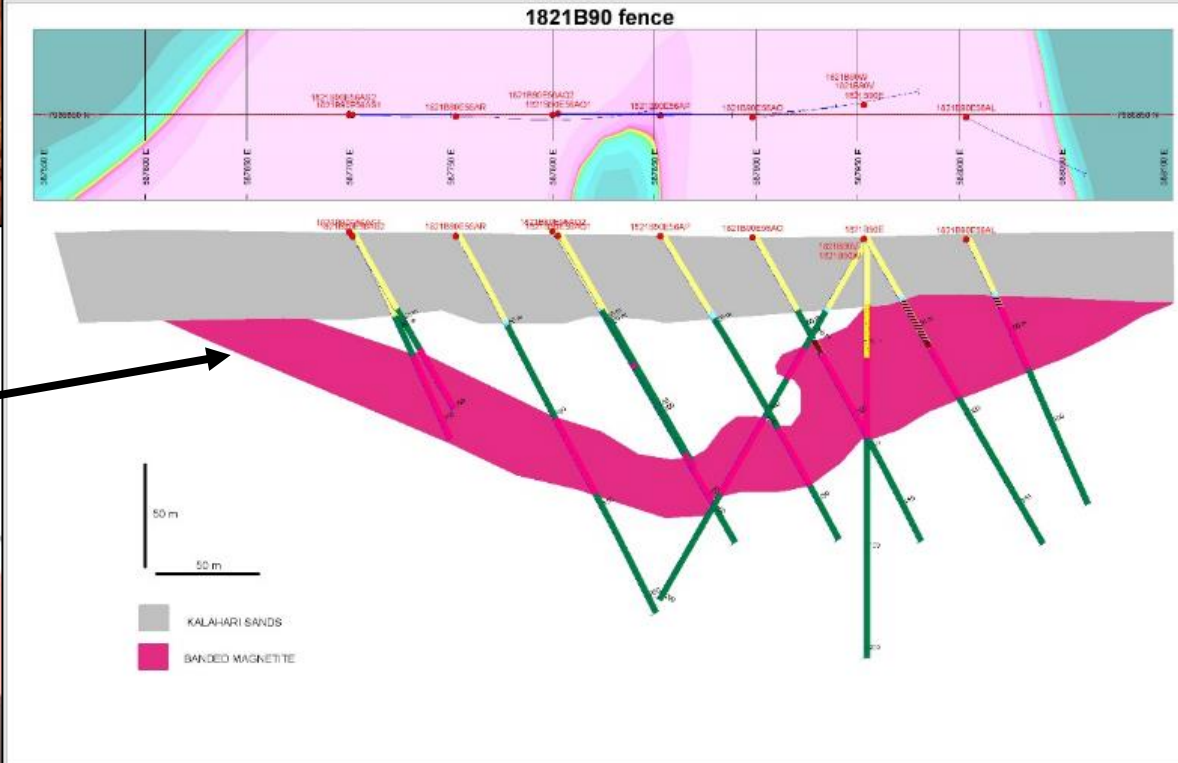
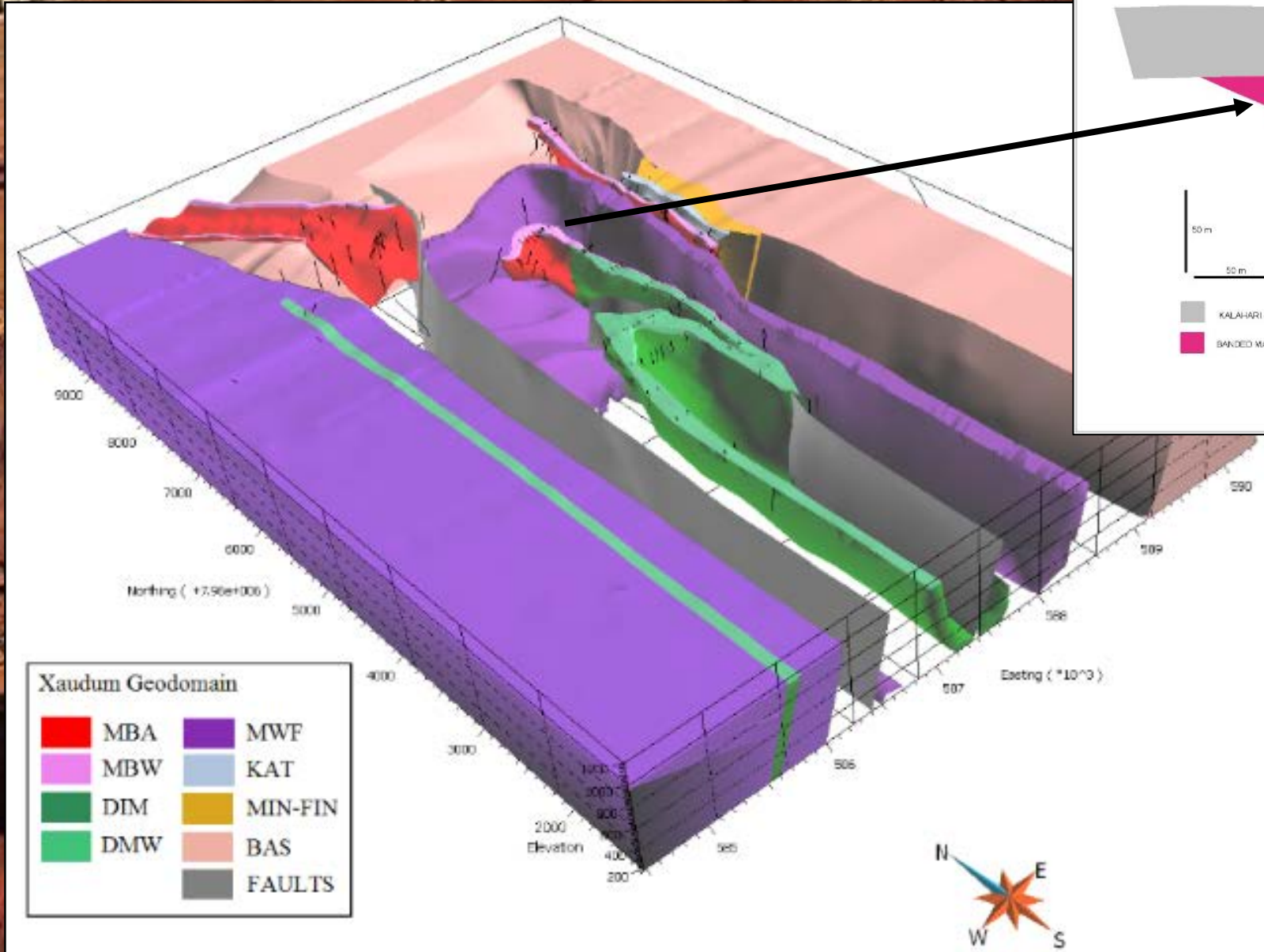


What you see on top is not the same as underneath.....

...so the project is driven by geophysics and drilling.



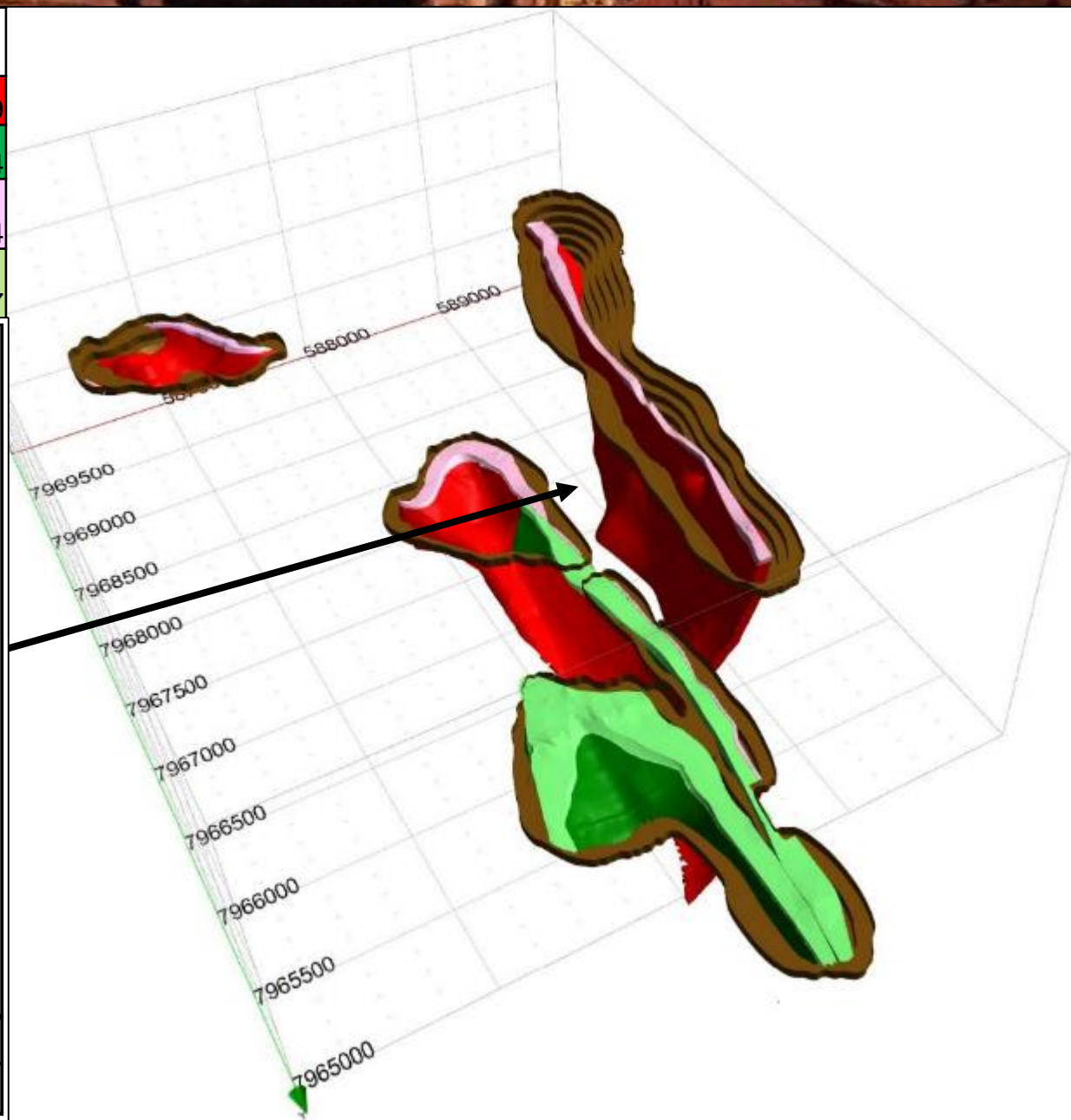
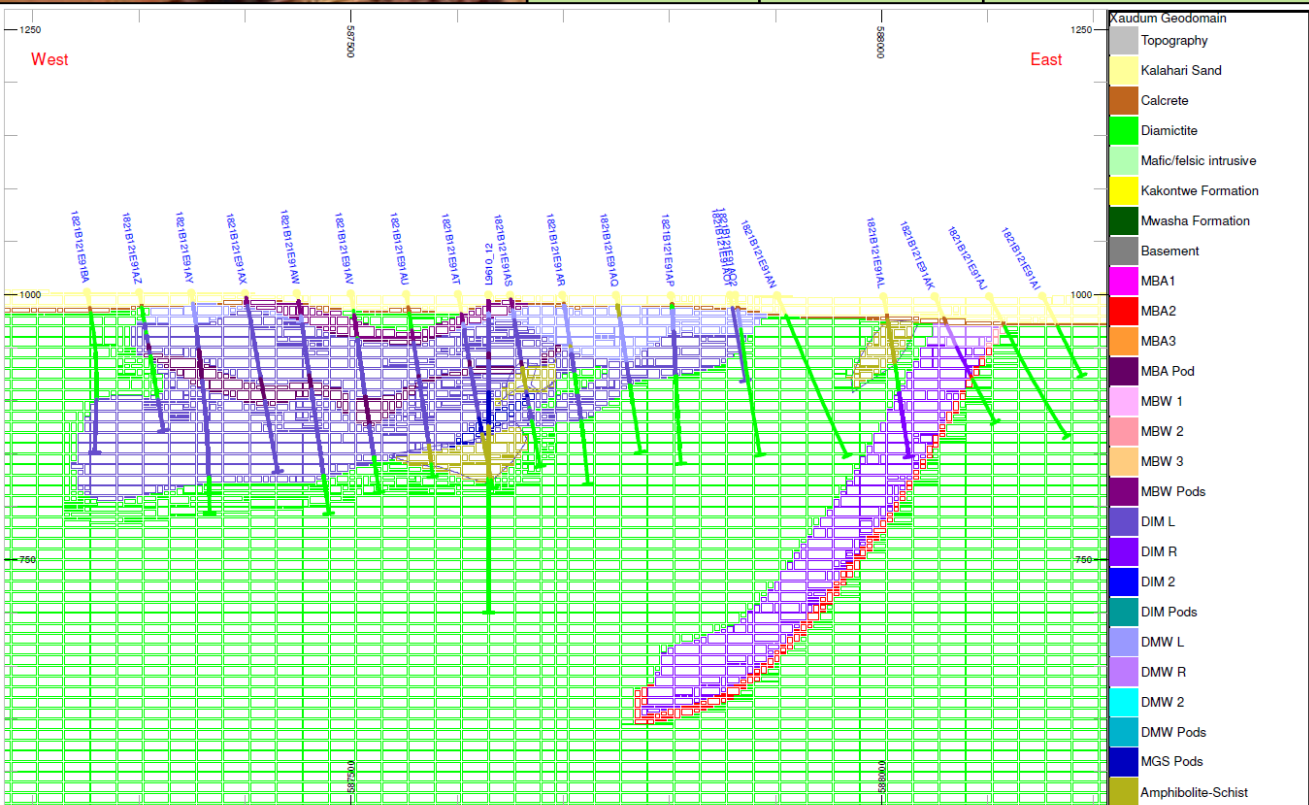
Deposit Modelling



- East – West drilling across main strike of mineralization
- Fold hinges best for large areas of mineralization
- *GOCAD* 3D modeling software

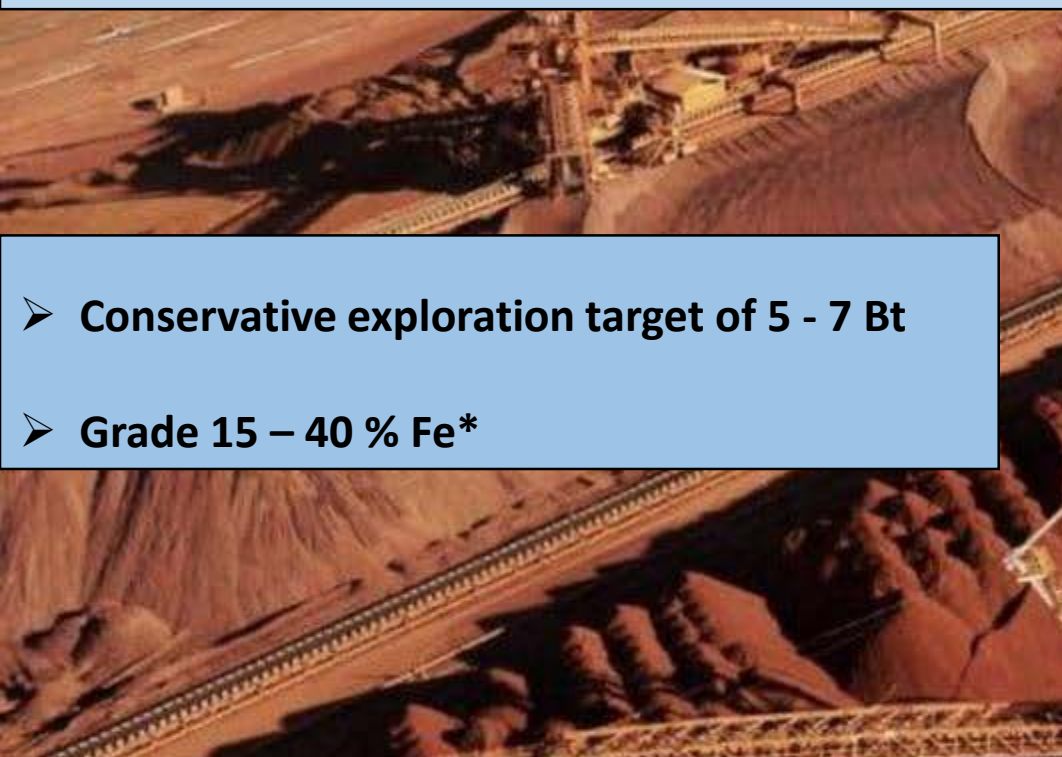
Grade Estimation and Pit Optimization by SRK

	In-Situ Fe %	Concentrate Fe %
High Grade	35.6	67.9
Low Grade	20.9	66.4
High Grade Weathered	34.3	66.4
Low Grade Weathered	20.5	67.7



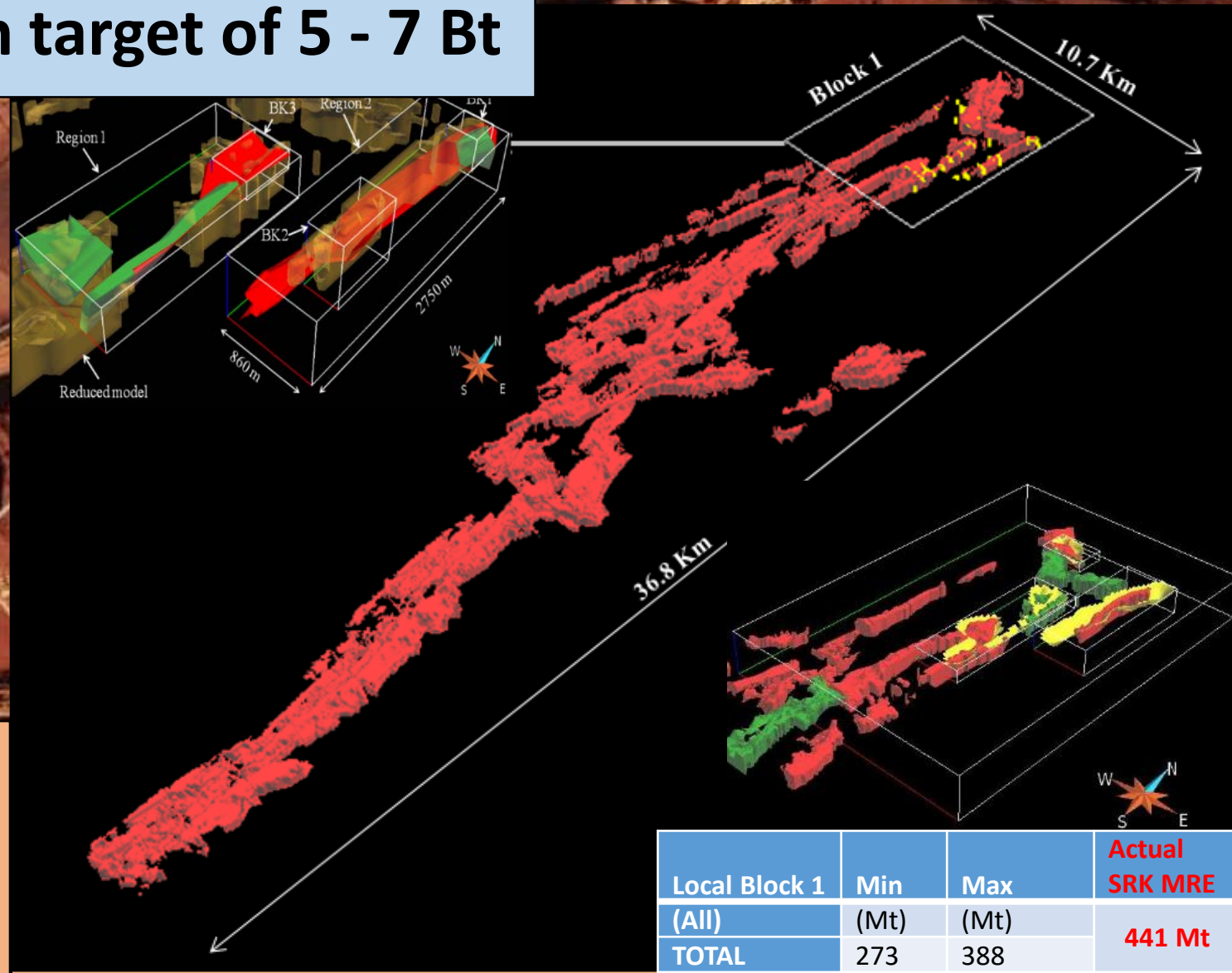
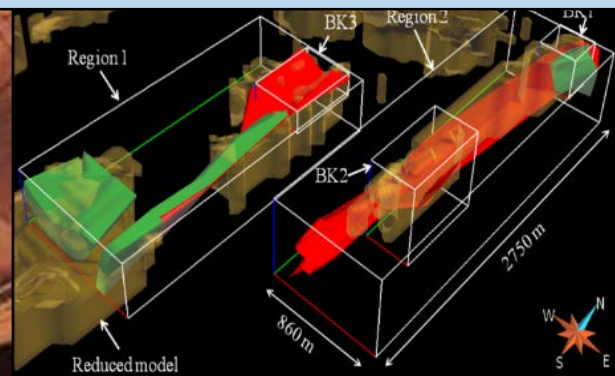
“The Rest of the Iceberg”

XIF - Conservative exploration target of 5 - 7 Bt



- Conservative exploration target of 5 - 7 Bt
- Grade 15 – 40 % Fe*

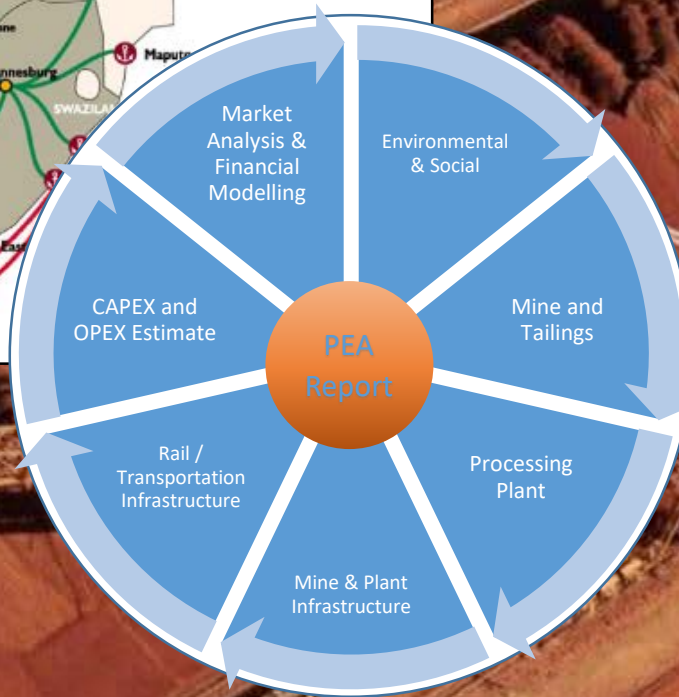
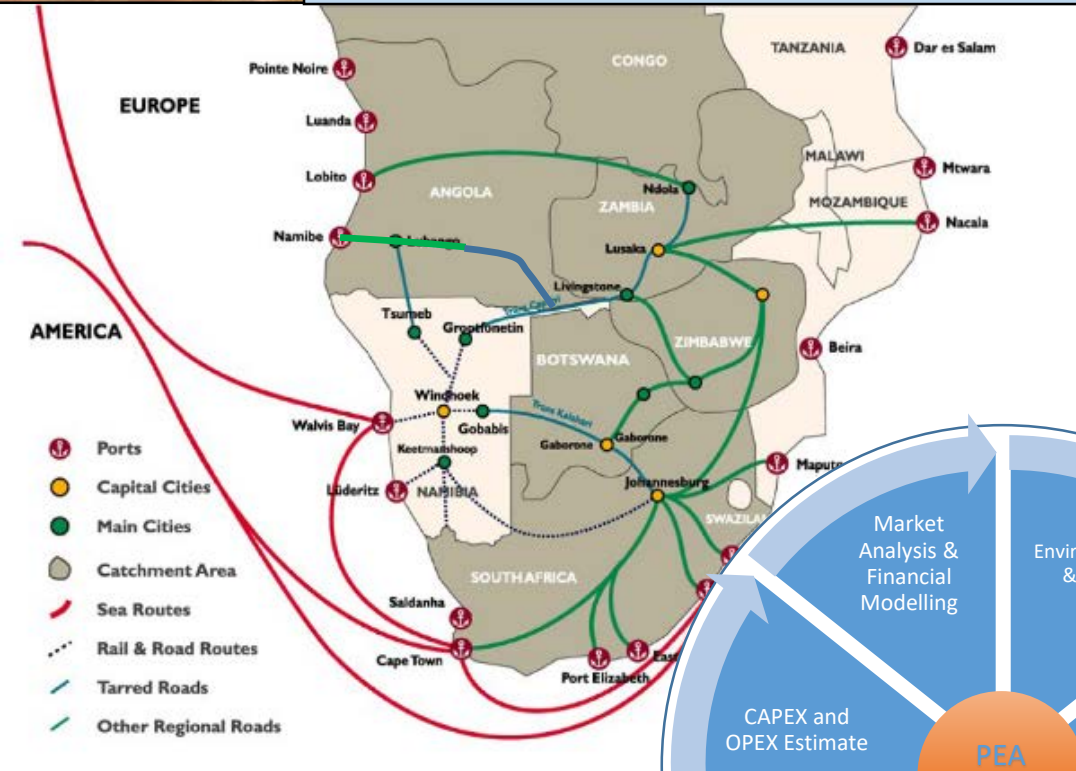
**It is important to note that the tonnages and grade quoted in this exploration target is conceptual in nature, there has been insufficient exploration to define a mineral resource and that it is uncertain if further exploration will result in the target being delineated as a mineral resource as defined by NI 43-101.*



Local Block 1	Min	Max	Actual SRK MRE
(All)	(Mt)	(Mt)	441 Mt
TOTAL	273	388	

Red area = Ground magnetic inversion model
 Current drill holes in yellow.

The Next Stage – Preliminary Economic Assessment



- Environmental Study
- Economic Viability of the project giving the best Option and Approach
- Trade-off studies for achieving the project objectives
- Process Design Criteria (PDC)
- Process description
- Principle equipment definition
- Principle Opex calculations for the plant
- Block Flow Diagrams (BFD's) for the various beneficiation options.
- Preliminary capital and operating cost estimate for the identified options.
- Assessment of the positive impact to the Botswana economy given its drive to diversify its economy away from Diamond based revenue.
- PEA will review:
 - Infrastructure
 - Mine, plant, beneficiation
 - Transport road and rail
 - Water supply
 - Electrical power availability
 - Housing, and communications
 - Human Capacity building local employment and skill development generated
 - Technology and methodology improvements (green tech)

Infrastructure Project

Iron Project Summary – Potential Tier 1 Mining Project

- Tier 1 project
- Potential mine life of over 100 years
- Development of Ngamiland (NW Botswana) one of Botswana poorest regions
- Potential for employment of thousands of Botswana
- Could generate huge revenues for the population and taxes for the Government to move away from reliance on Diamond revenue



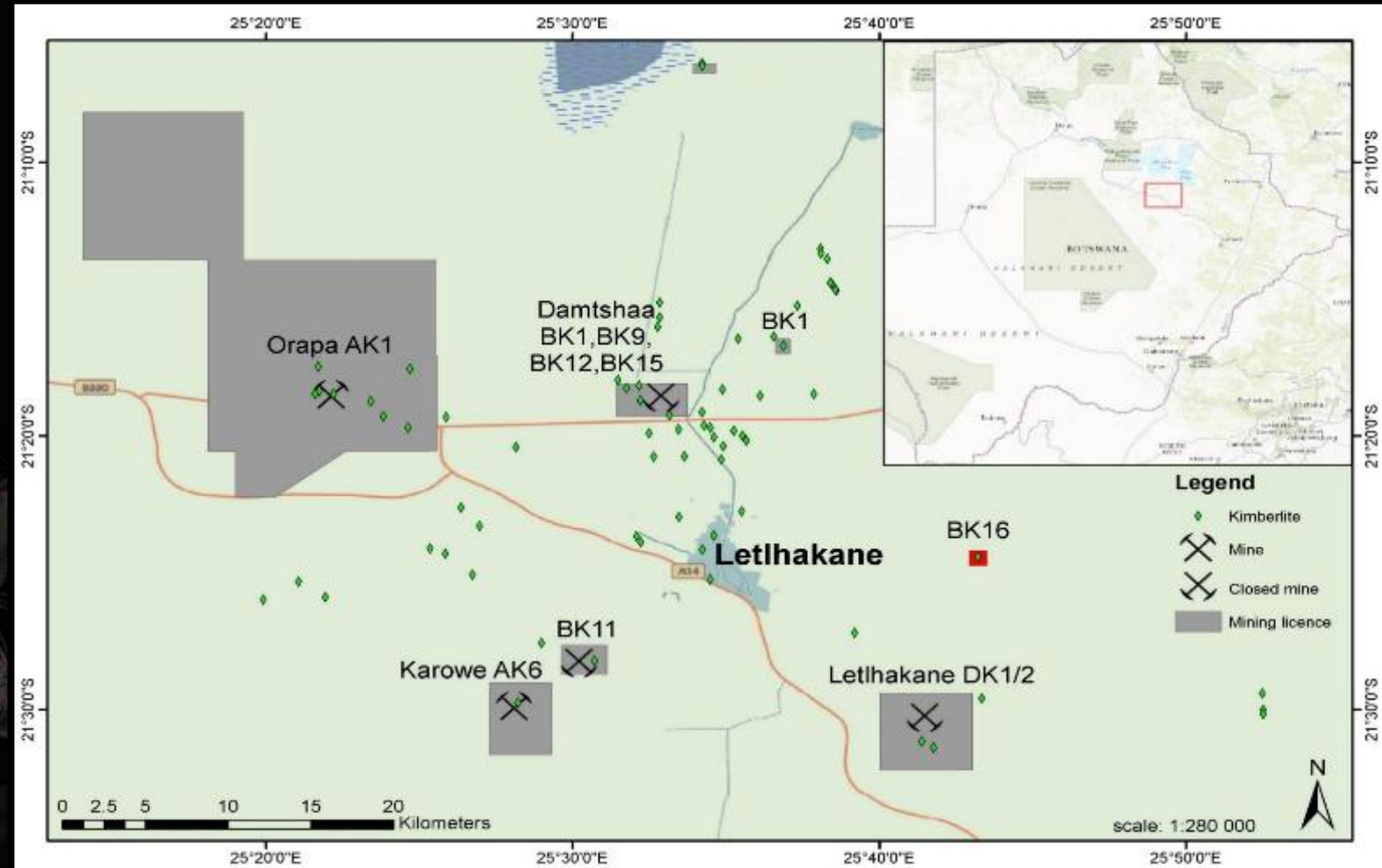
BK16

Botswana's Next Diamond Mine?

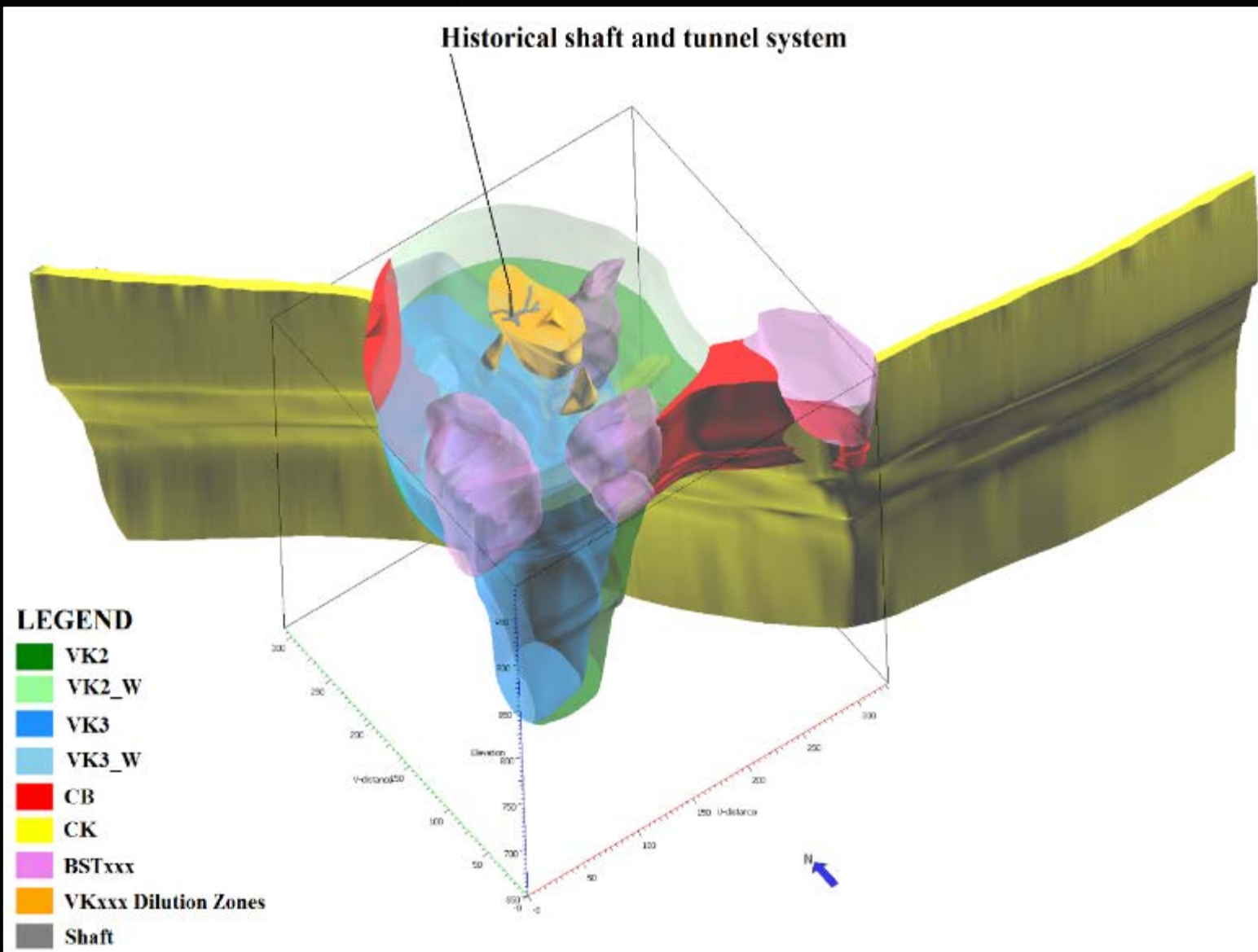


BK16 Revisited: Diamond Country

- Granted PL369/2014
- 1km square license over the BK16
 - Initial grant October 2014 to end September 2017
 - Renewed for three years (Oct 2017 to Sep 2019)
- Located in Orapa Kimberlite Field (OKF)
- BK16 is one of 85 known kimberlites
- OKF Mines include
 - Orapa Debswana
 - AK01, AK02, and AK07
 - ~12,000,000 carats mined annually
 - Tier 1 diamond mine
 - Karowe Mine, Lucara Diamonds Corporation
 - AK06
 - ~250,000 carat mined annually
 - Letlhakane mine closed in 2017
 - New treatment plant
 - Treating mine tailings dumps
 - Will keep the mine operational till 2043



BK16 Revisited: Geological Model



- GoCad 3D Geological Model
- Modelling Incorporates
 - Tsodilo drill holes
 - 3,665m 2015 ore body delineation drilling
 - 3,668.75m 2017 pilot hole core drilling
 - 3,120m large diameter drilling LDD
 - Total m = 10,453.75m
 - Historical holes (3,695.25m)
 - 622.25m core drilling
 - 815m 12.25 inch RC drilling
 - 2,258m 6.5 inch RAB drilling
 - Magnetic and Gravity data
 - Historical Shaft and tunnel location
- Includes:
 - All Kimberlite Phases modelled separately
 - All internal Dilutions
 - Large mega xenoliths
- Exploration Target Tonnages
 - 18.2 to 20.1 Million Tonnes
 - To a depth of 450m



Phase 1: Diamond Valuation

- **Diamonds sorted in Maun shipped To Gaborone**
 - Brinks Security Services
 - I Hennig
 - Diamond Technology Park (DTP)
 - Verified by Department of Mines rep
 - Acid Cleaned “boiled” at Lucara facilities
- **Valuation and breakage studies**
 - Mr. Ray Ferraris of QTS Kristal Dinamika
 - Weight of each stone confirmed
 - Sieved Diamond Trading Company (“DTC”) mass carater/grainer system for +1 DTC sieve class (~>1mm)
 - Each stone valued separately
 - Price point, \$ per carat, and total \$ value for each stone
 - Assessed for breakage and Impact damage
 - Classified by Mr. Ferraris and Dr. Paddy Lawless

“While this is statistically a very small sample; the presence of such high color clean high-yielding shapes bodes well for the future” Ray Ferraris



S021: 1.535 carat; \$755 per carat; J color; Octahedron



S101: 1.410 carat; \$748 per carat; J color; rounded Dodecahedron



“This production is very similar to the Karreevlei diamond production in South Africa in that it is dominated by white high quality dodecahedrons diamonds of ” Ray Ferraris

**S024: 1.38 carat; \$705 per carat;
F color; Dodecahedron**



**S066: 0.965 carat; \$565 per carat;
J color; Dodecahedron**



**S021: 0.705 carat; \$465 per carat;
F+ color; Dodecahedron**



**S164: 0.745 carat; \$405 per carat;
J color; Dodecahedron**



**S008: 0.815 carat; \$375 per carat;
G+ color; Irregular Dodec**



**S229: 0.730 carat; \$350 per carat;
F+ color; Irregular Dodec**



**S229: 1.935 carat; \$350 per carat;
DE color; Irregular Dodec**



**S142+S143: 0.920 carat; \$245 per
carat; yellow color; Dodecahedron**



Phase 1: LDD Diamond Valuation

Number of LDD Diamonds	Carats	\$ per carat
502	77.940	176.80

➤ Mr. Ferraris said of BK16 Diamonds

- *“Very attractive mostly white goods”*
 - *“many clean stones”*
 - *“mainly Dodecahedral population”*
 - *“a few small octahedrons”*
 - *“no cubes”*
 - *“a few triangular maccles in the small sizes”*
- *“Smaller population of lower quality Clivage and Rejection”*
 - *“compared to other Botswana Kimberlites”*
- *“No boart at all”*
- *“A few yellow diamonds”*
- *“Very low brown diamonds of all shades, especially the darker browns”*
- *“A few small to moderate size Type IIa which are mostly white stones”*
- *“Low levels of Fluorescence seen” – “low impact on diamond price”*
- *“Out of 248 stones”*
 - *“Only 4 with Medium fluorescence (1.6%)”*
 - *“Only 3 with Strong fluorescence (1.2%)”*

“This is quite unusual to have such a low amount of Medium and Strong fluorescence compared to most productions world-wide.”

Ray Ferraris

“The BK16 is unlike most of the Botswana Kimberlitic goods due to a small population of lower quality Clivage and Rejection goods, minimum darker browns as well as no Boart qualities” Ray Ferraris



Phase 1: Type II Diamond Analysis

Hole ID	Sample	Material Type	Carats	Type IIa	Color	Yehuda Type II Reading
LDD_020V	S055	VK3	0.550	Type IIa - D color	D	Type IIa Mixed
LDD_020V	S055	VK3	0.410	Type IIa - D color	D	Type IIa Mixed
LDD_022V	S110	VK3	0.215	Type IIa Brown	D	Type IIa Brown
LDD_022V	S111_R	VK3	0.250	Type IIa Light Brown	D	Type IIa Brown
LDD_026V	S009	VK3	0.090	Type IIa - D color	D	Type IIa Mixed
LDD_019V	S137	VK3	0.085	Type IIa - D color	D	Type IIa White
LDD_020V	S050	VK3	0.065	Type IIa - D color	D	Type IIa White
LDD_019V	S144	VK3	0.040	Type IIa - D color	D	Type IIa White
Historical	2000 Packet 3	NA	0.350	Type IIa - irregular very white	D	Type IIa White
Historical	1999 Packet 3	NA	0.160	Type IIa - irregular clean very white	E	Type IIa Mixed
Historical	2000 Packet 2	NA	0.040	Type IIa - small flat broken chip	D	Type IIa White
Historical	1999 Packet 1	NA	0.035	Type IIa - fragment	F+	Type IIa White
Historical	1999 Packet 2	NA	0.035	Type 11a chipped - Impact	DE	Type IIa White

- **Type II diamonds**
 - rare diamonds
 - no measurable nitrogen
 - generally devoid of impurities
 - tend to have low fluorescence
- **3.8 % of Diamonds tested were identified as high quality type IIa diamonds**
 - Predominantly D color
 - Tested on the Yehuda Colorimeter
- **Fluorescence**
 - 2.8% Medium to Strong
 - Unusually Low
 - Low impact on price



“The fact that Type IIa diamonds are also present and the lack of weaker Rejection and Boart goods makes a big statement” Ray Ferraris

Phase 1: Size Frequency Distribution Modelling



- Conducted by Mr. Stephen Coward (Interlaced)
- Size frequency gives indications of a coarse diamond distribution
- Due to small size of samples, and coarse SFD, coarse stones not yet recovered
- Potential Size frequency and \$/ct has been modelled:
 - Using a combination of simulation and extrapolation
 - Comparison to similar deposits- Karowe's AK6 deposit
- Models of grade, size and value suggests:
 - This deposit has potential to host a coarse size distribution
 - This deposit has potential to have high value stones
 - If both can be demonstrated through next phase of sampling BK16 could become a valuable asset
- Additional work is ongoing to define the parameters of the sampling required to demonstrate economic viability.

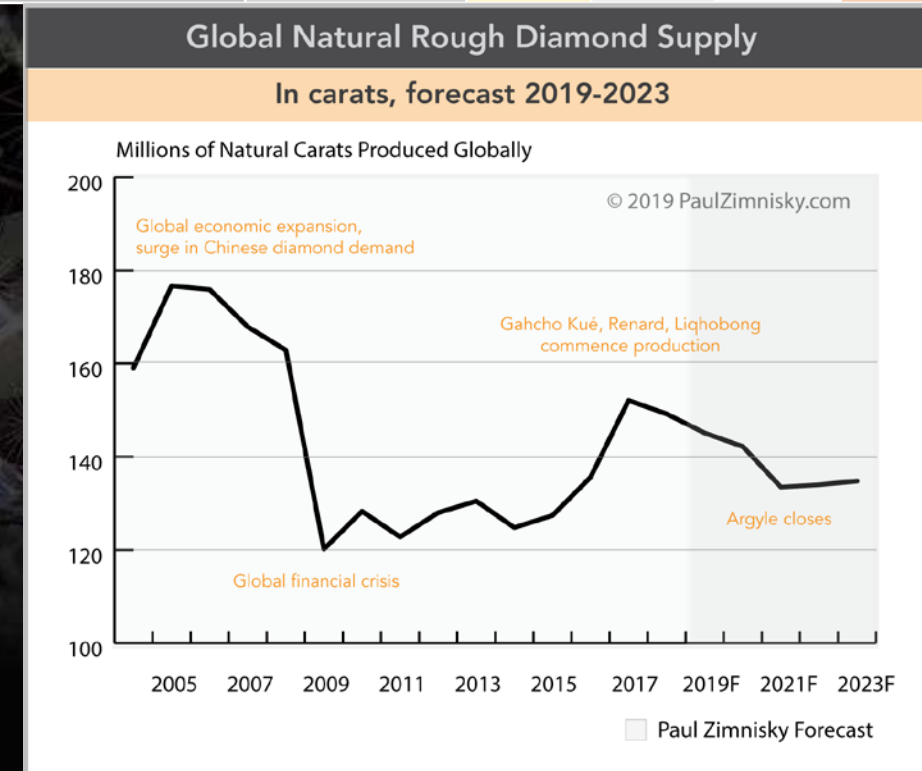
Variable	Unit of Measure	BK16 Sample	Current BK16 SFD Study			
			Min	P20	P80	Max
Grade	Cpht	3.8	4	5	7	8
Diamond Value	US\$/carat	177	281	290	600	792
Kimberlite Value	US\$/tonne	6.6	11	15	38	67



Conclusions: BK16 is well placed to enter market

- **BK16 has a course size distribution**
 - Set to produce large high quality diamonds
 - Botswana is a low risk jurisdiction
- **BK16 already shows striking similarities to AK6 (Lucara)**
- **Other mines that are similar to BK16's current results are:**
 - **Kloffiefontein (Petra Diamonds)**
 - Grade = 3 to 8 cpht, and value = 500 to 525 \$/carat
 - **Kareevlei (Blue Rock Diamonds)**
 - Grade = 3 to 4.5 cpht, and Value = 300 to 380 \$/carat
 - **Mothae (Lucapa)**
 - Grade = 2.7 to 3 cpht, and Value = 1,000 to 1,200 \$/carat

Variable	Unit of Measure	Current BK16 SFD Study			
		Min	P20	P80	Max
Grade	Cpht	4	5	7	8
Diamond Value	US\$/carat	281	290	600	792
Kimberlite Value	US\$/tonne	11	15	38	67



BK16 next phase

➤ BK16 is the most prospective of the kimberlites currently being evaluated in the Orapa Kimberlite Field

➤ Next stage of Evaluation:

➤ Step 1 Larger Sample:

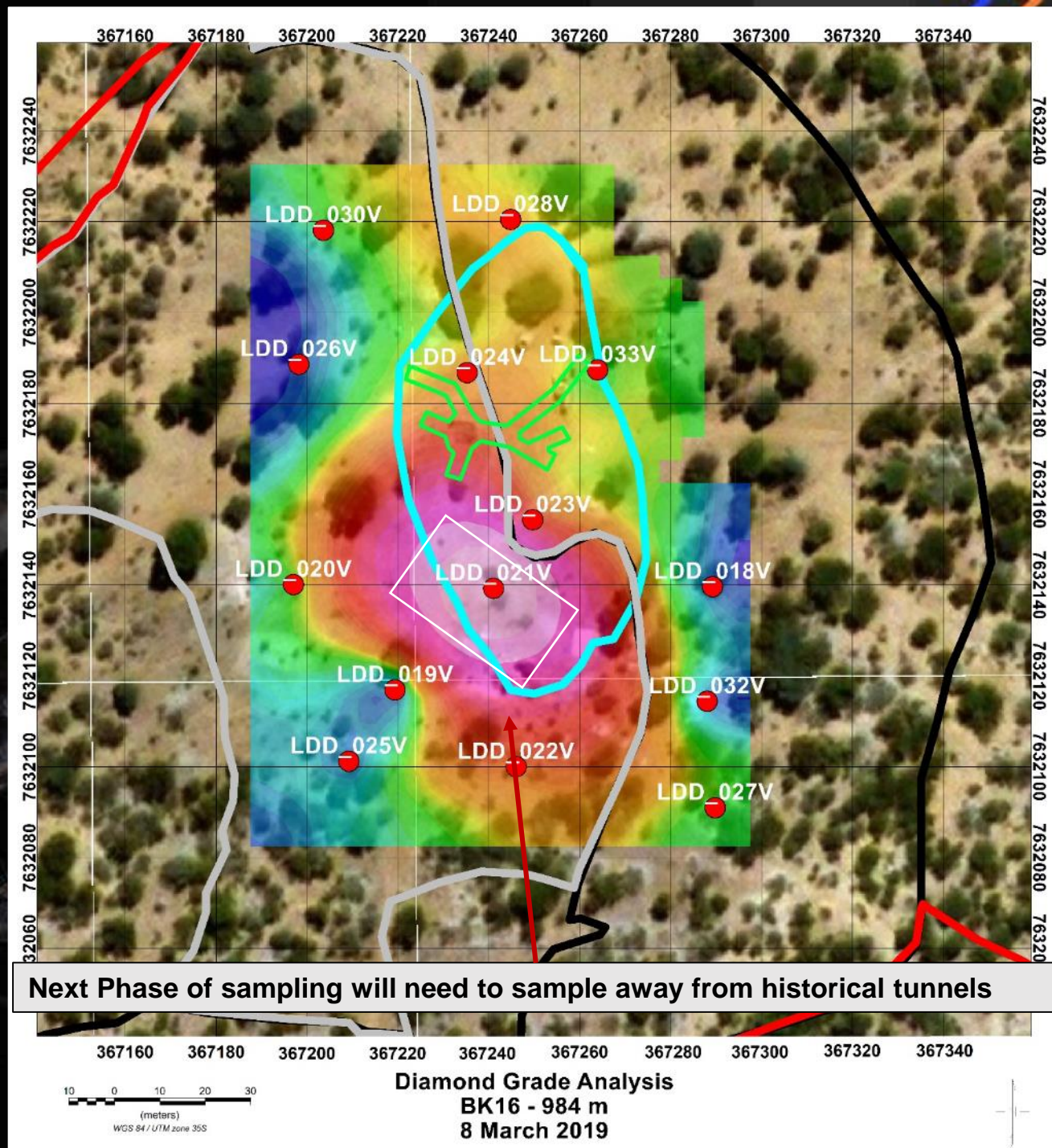
- Need to take a larger sample
- ~20,000 tonne bulk sample
- Probably as a new Surface dug sample (Box Cut)

➤ Will Give:

- Better indication of real grade
- Confirm presence of high quality large diamonds
- Increase certainty in Value of diamonds
- Better constrain inputs for economic model

➤ Step 2 Feasibility Study

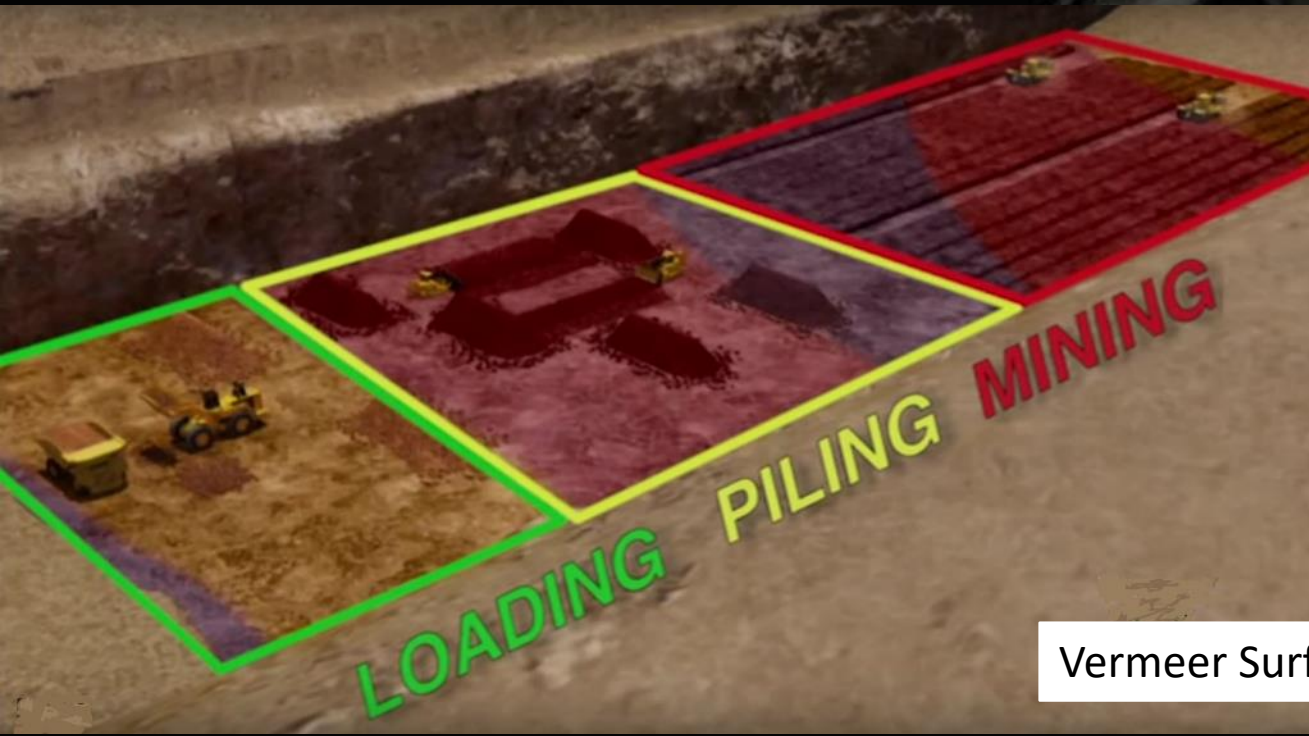
- Full engineering studies
- To define all mining parameters



Bulk Sample – “Box-Cut”

- Simple trench style box cut is envisaged to collect ~20,000 tonnes of kimberlite for a bulk sample
- Exploring conventional cutting methods
- Plus exploring surface mining with Vermeer

Box-Cut Design



Vermeer Surface Mining

Thank you



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