Independent Assessments of Gold, Phosphate, Potash, Uranium, and Rare-Earth Deposits
in
Australia, Vietnam, Texas and Alaska

by

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and

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Corporate Website

Abstract and Biography

An Invited Lecture Presented to the Houston Geological Society
At the Environmental and Engineering Group's Dinner Meeting

March 9, 2016
Version 1.5

Gold, Silver, Uranium, Phosphate, Potash, and Rare-Earth Deposits

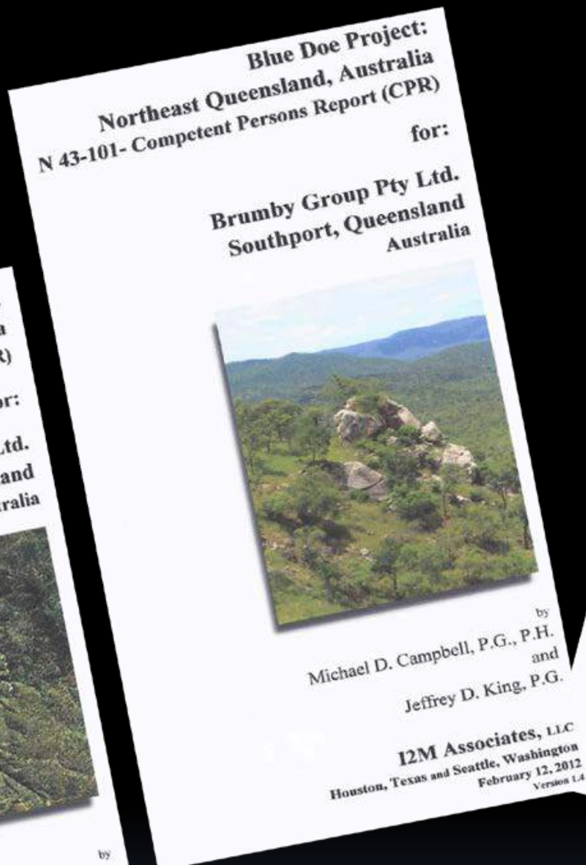
Here is what we'll cover:

- ❖ Gold, and other Commodities on Properties in Queensland, Australia
- ❖ Phosphate and Potash Properties in Queensland Australia
- ❖ Uranium Properties in South Australia and Texas
- ❖ Gold Properties in North Vietnam
- ❖ Uranium, Thorium, and Rare Earth Property in Alaska

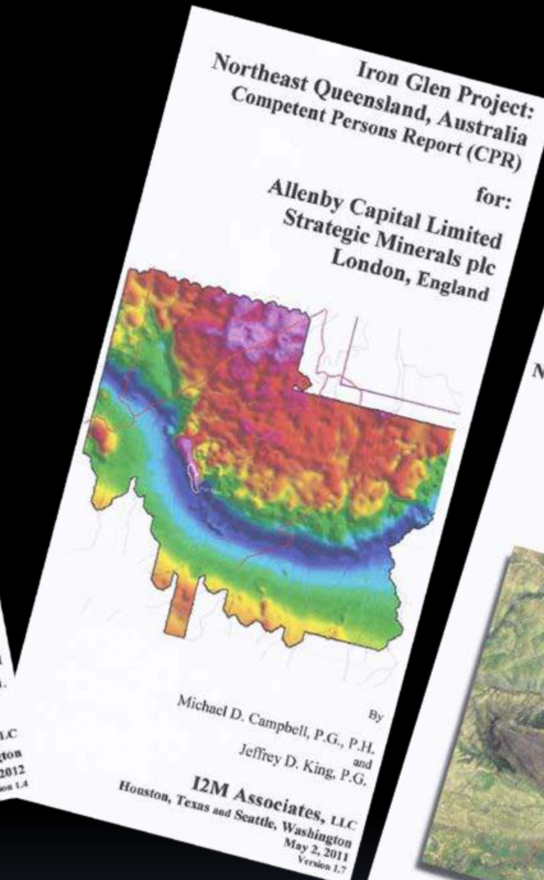
Brilliant Brumby Tenement

Meetings in Mexico City .... and Meetings in the Outback of Queensland

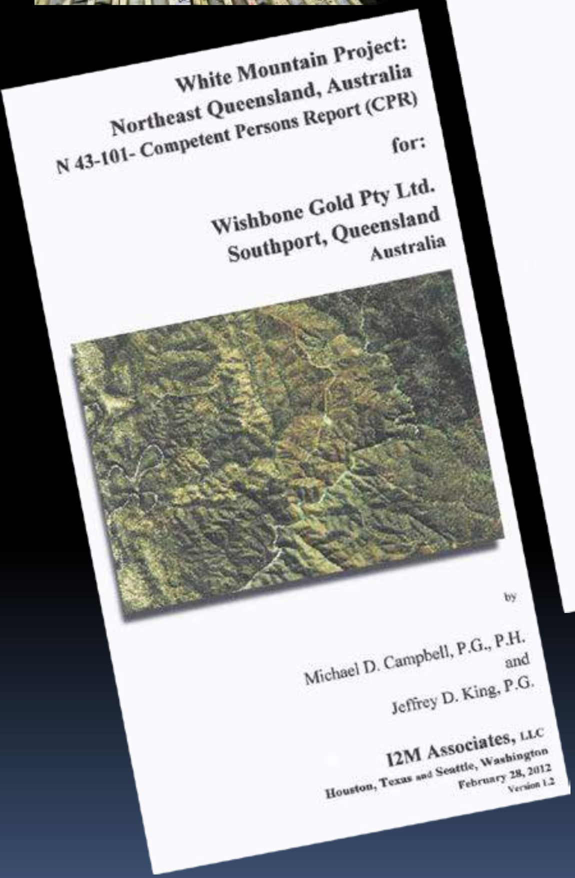
I2M Assessments



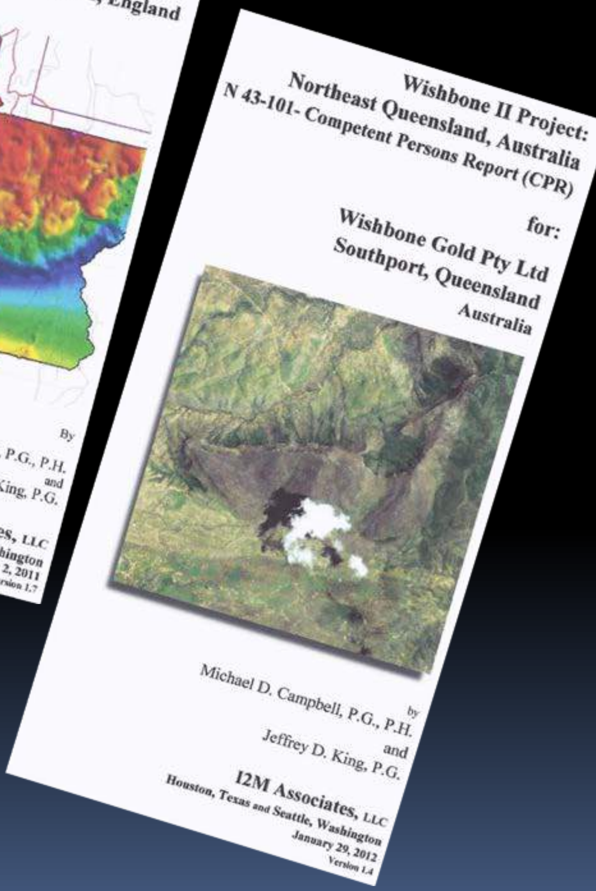
Blue Doe Project:
Northeast Queensland, Australia
N 43-101- Competent Persons Report (CPR)
for:
Brumby Group Pty Ltd.
Southport, Queensland
Australia
by
Michael D. Campbell, P.G., P.H.
and
Jeffrey D. King, P.G.
I2M Associates, LLC
Houston, Texas and Seattle, Washington
February 12, 2012
Version 1.4



Iron Glen Project:
Northeast Queensland, Australia
Competent Persons Report (CPR)
for:
Allenby Capital Limited
Strategic Minerals plc
London, England
By
Michael D. Campbell, P.G., P.H.
and
Jeffrey D. King, P.G.
I2M Associates, LLC
Houston, Texas and Seattle, Washington
May 2, 2011
Version 1.7



White Mountain Project:
Northeast Queensland, Australia
N 43-101- Competent Persons Report (CPR)
for:
Wishbone Gold Pty Ltd.
Southport, Queensland
Australia
by
Michael D. Campbell, P.G., P.H.
and
Jeffrey D. King, P.G.
I2M Associates, LLC
Houston, Texas and Seattle, Washington
February 28, 2012
Version 1.2



Wishbone II Project:
Northeast Queensland, Australia
N 43-101- Competent Persons Report (CPR)
for:
Wishbone Gold Pty Ltd
Southport, Queensland
Australia
by
Michael D. Campbell, P.G., P.H.
and
Jeffrey D. King, P.G.
I2M Associates, LLC
Houston, Texas and Seattle, Washington
January 29, 2012
Version 1.4

I2M Associates, LLC

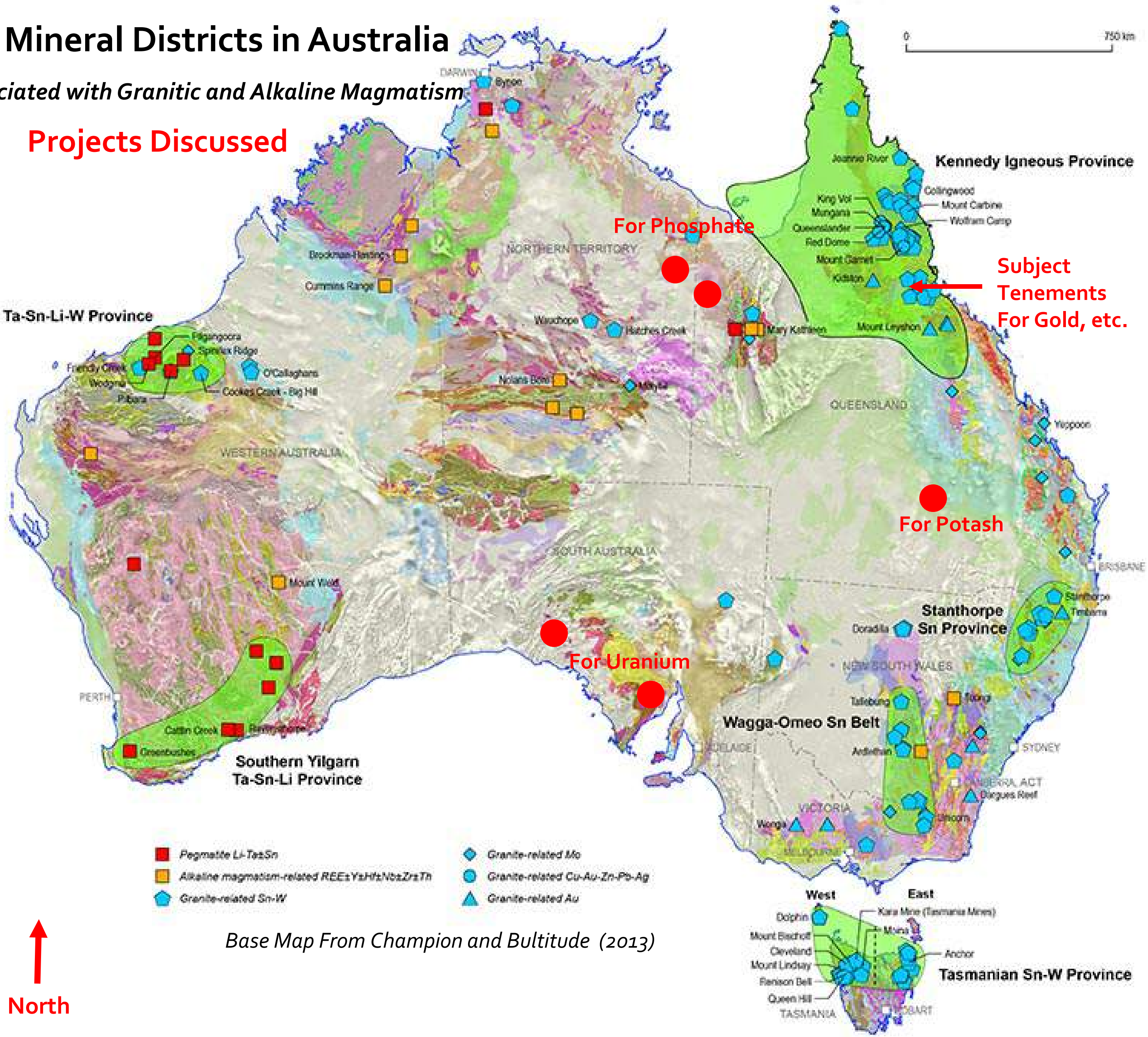
Reports

I2M

Mineral Districts in Australia

Associated with Granitic and Alkaline Magmatism

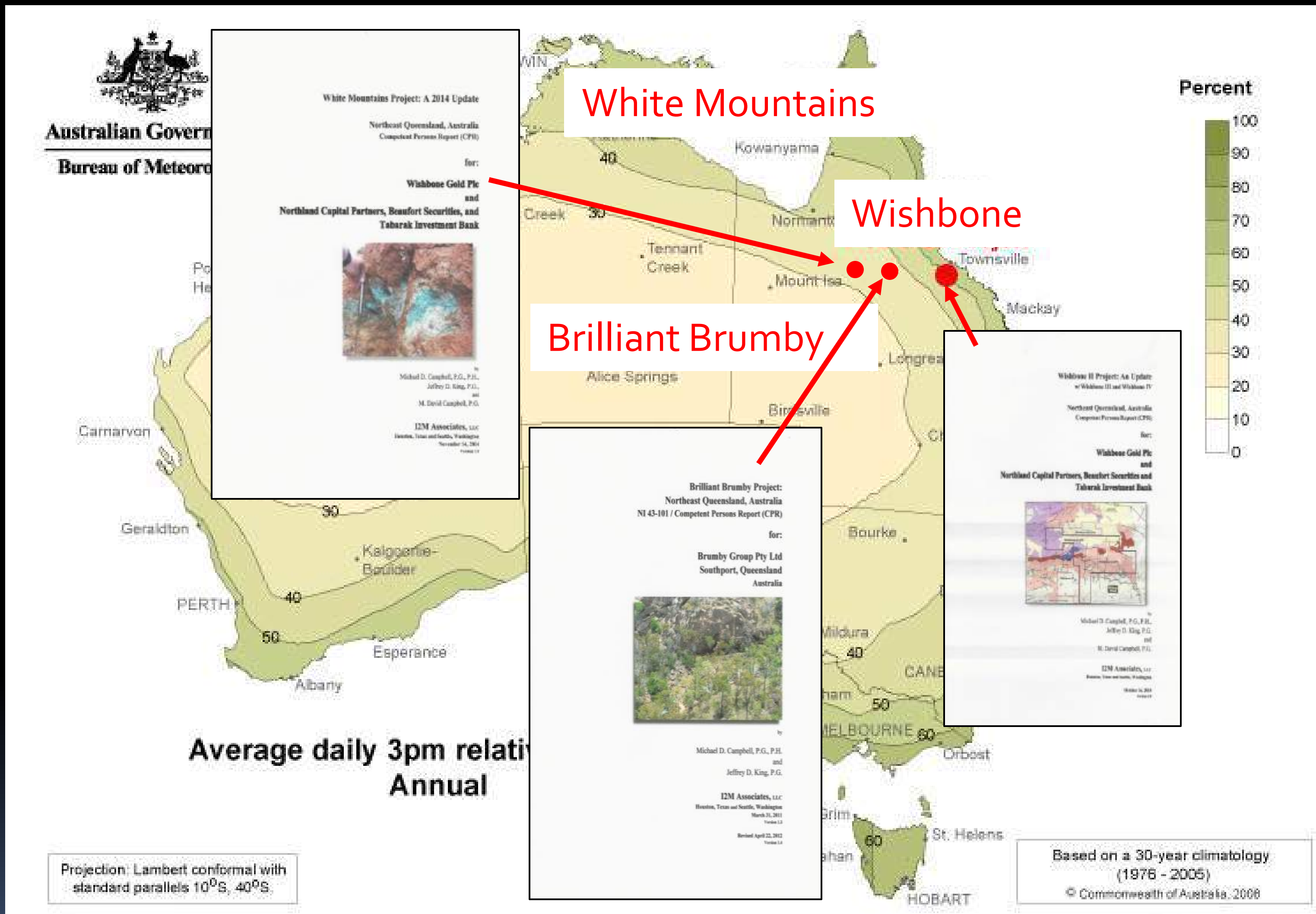
Projects Discussed



Base Map From Champion and Bultitude (2013)

North

I2M Associates, LLC



Assessments Conducted by I2M Associates, LLC

Northern Queensland

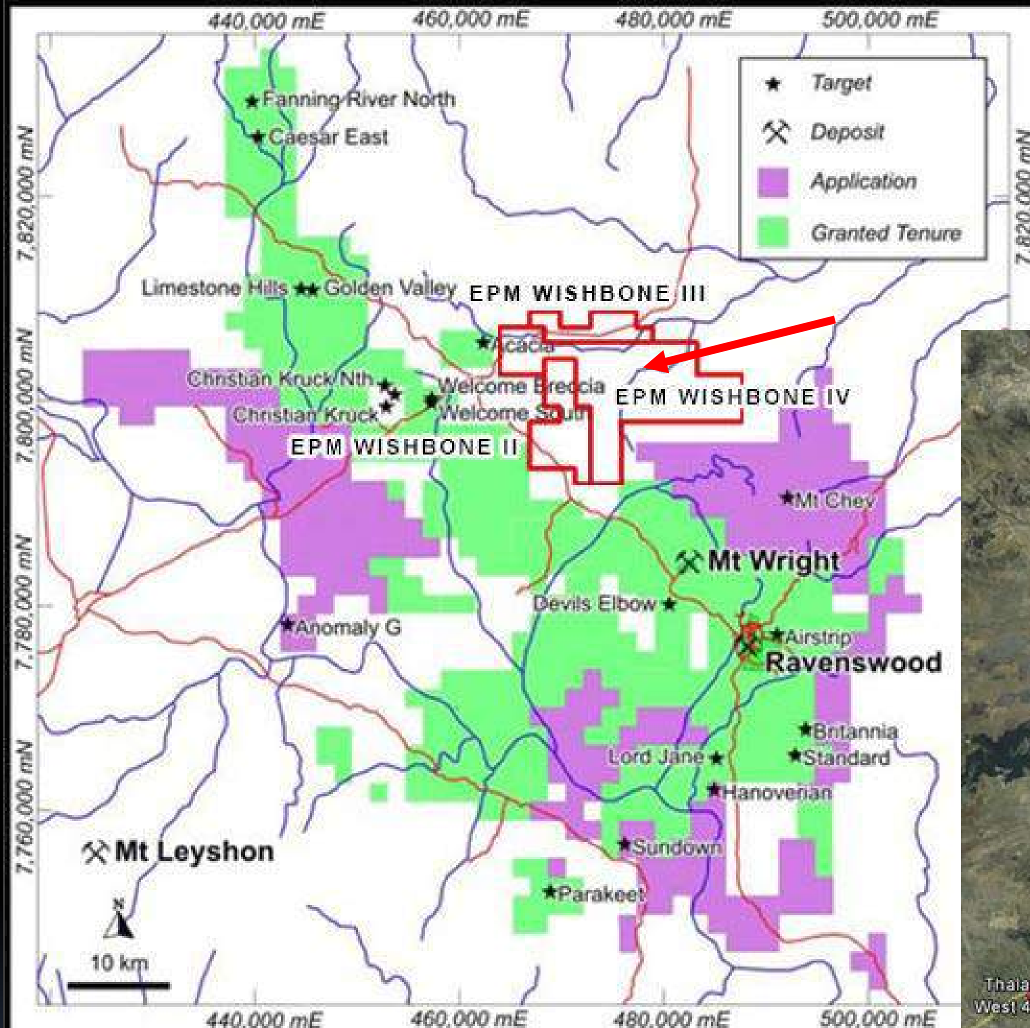
The Bluff Area

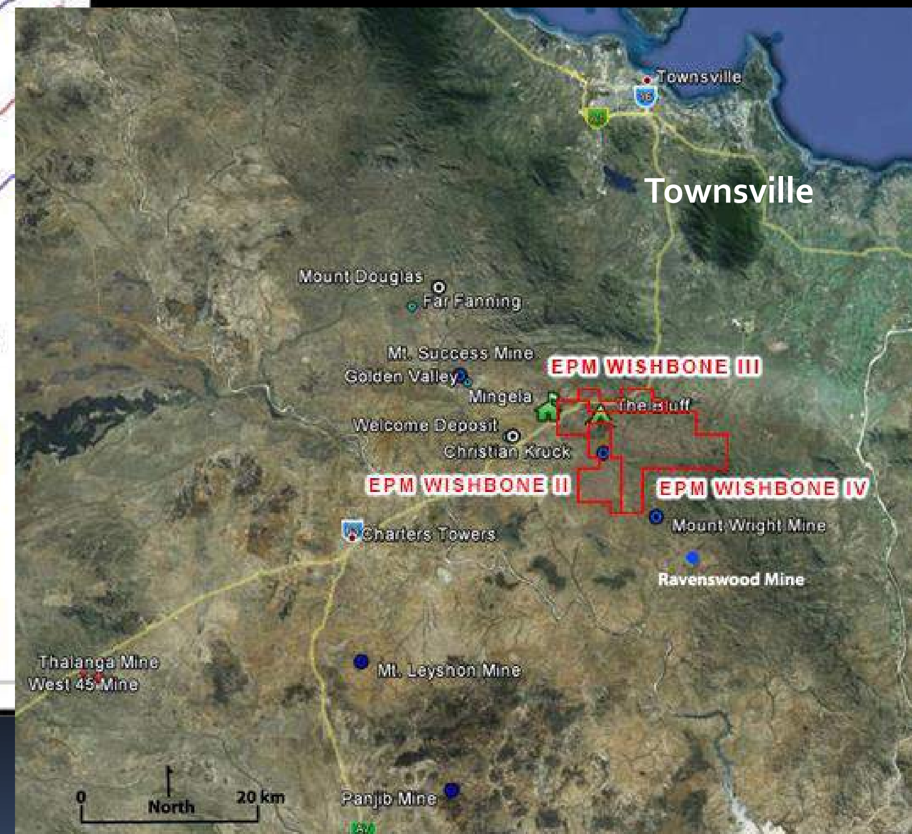
North of The Bluff Area

Satellite View of The Bluff

Northern Queensland

Ravenswood-Welcome Gold Trend

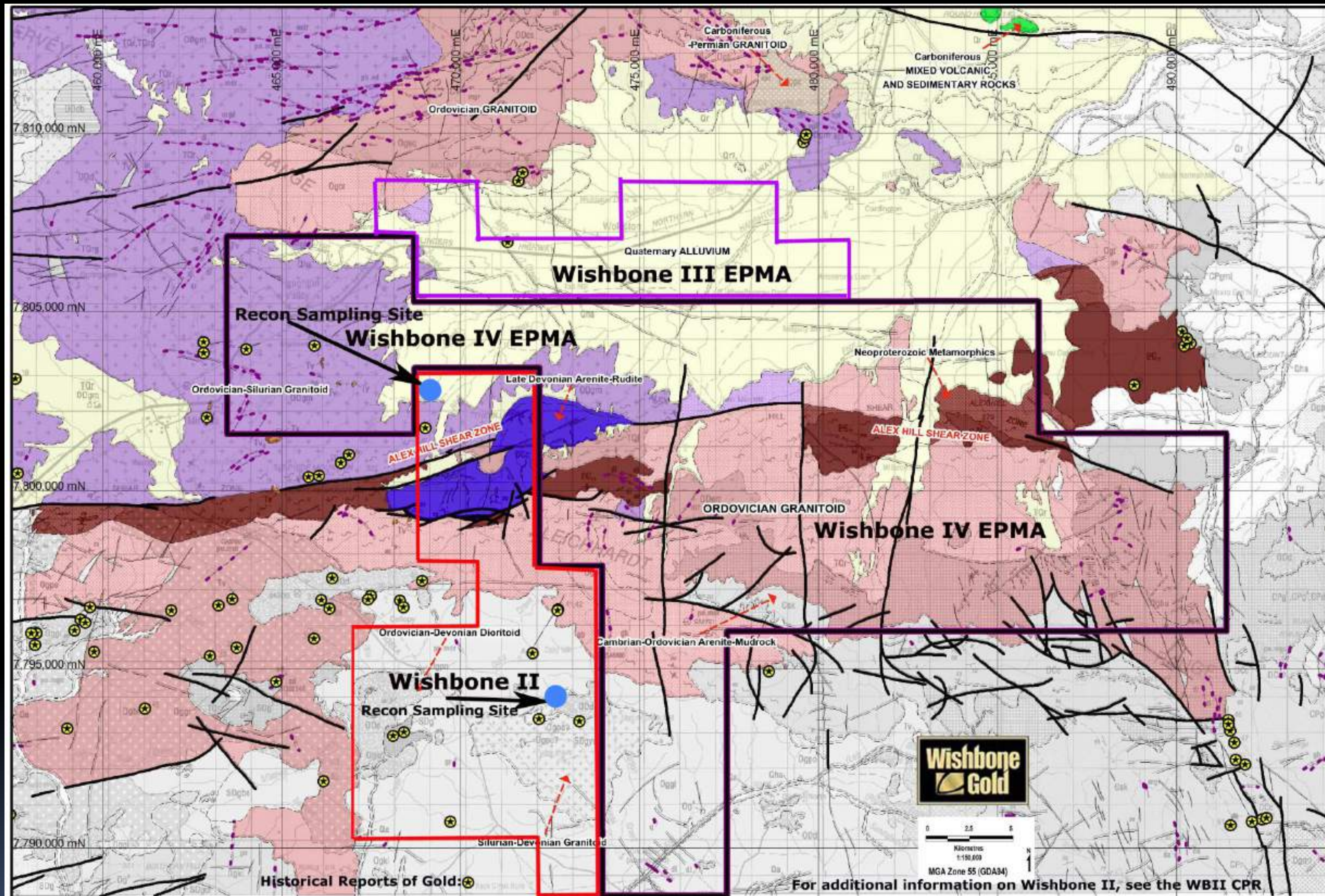




- *Mining Tenement Holdings*
- *Major Gold Mines and Known Prospects*
- *Subject Tenements* ←

❖ Resolute Mining Limited (Ravenswood & Mt. Wright Mines & Welcome Deposit) w/ Exploration via Carpentaria Gold Pty Ltd

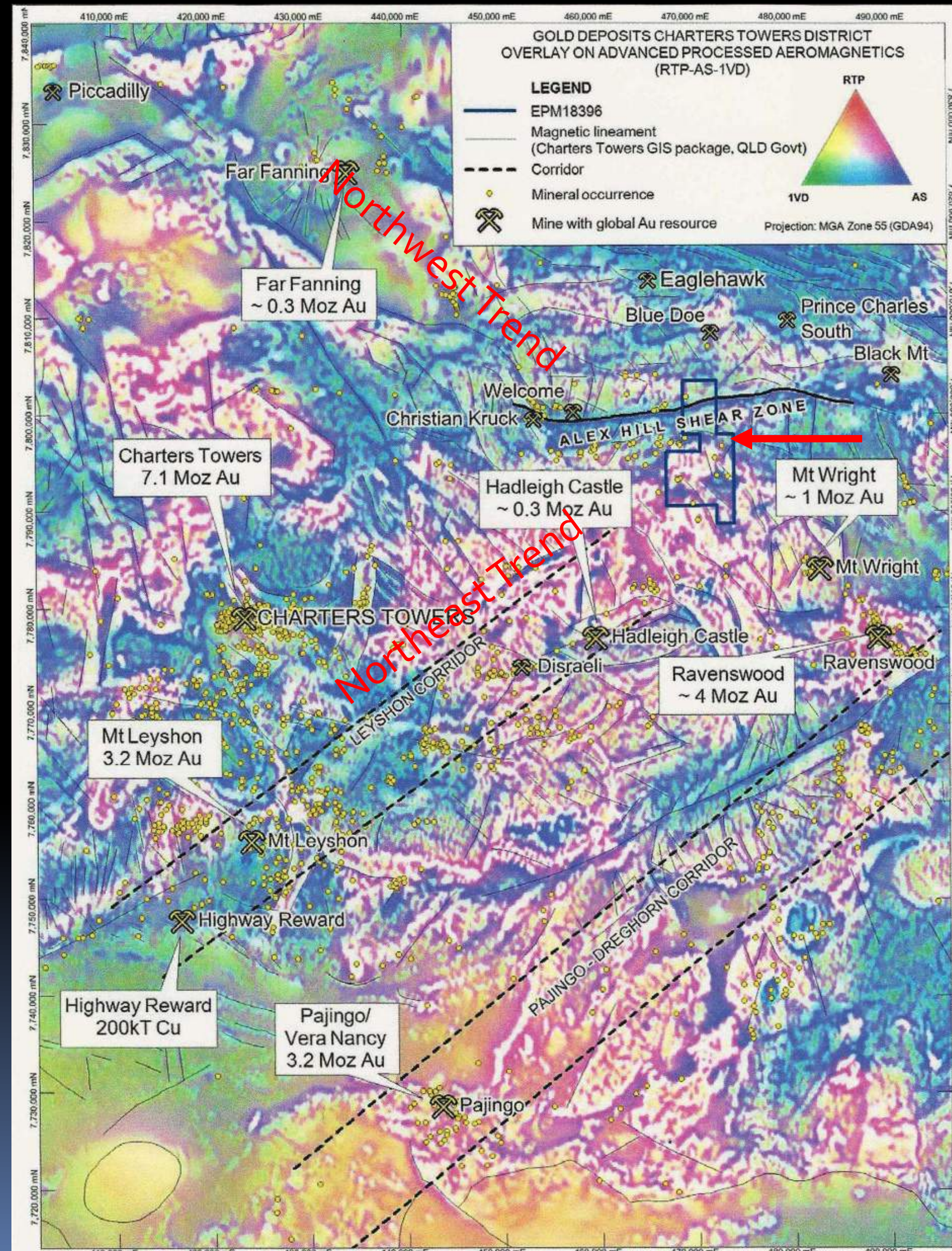
Northern Queensland

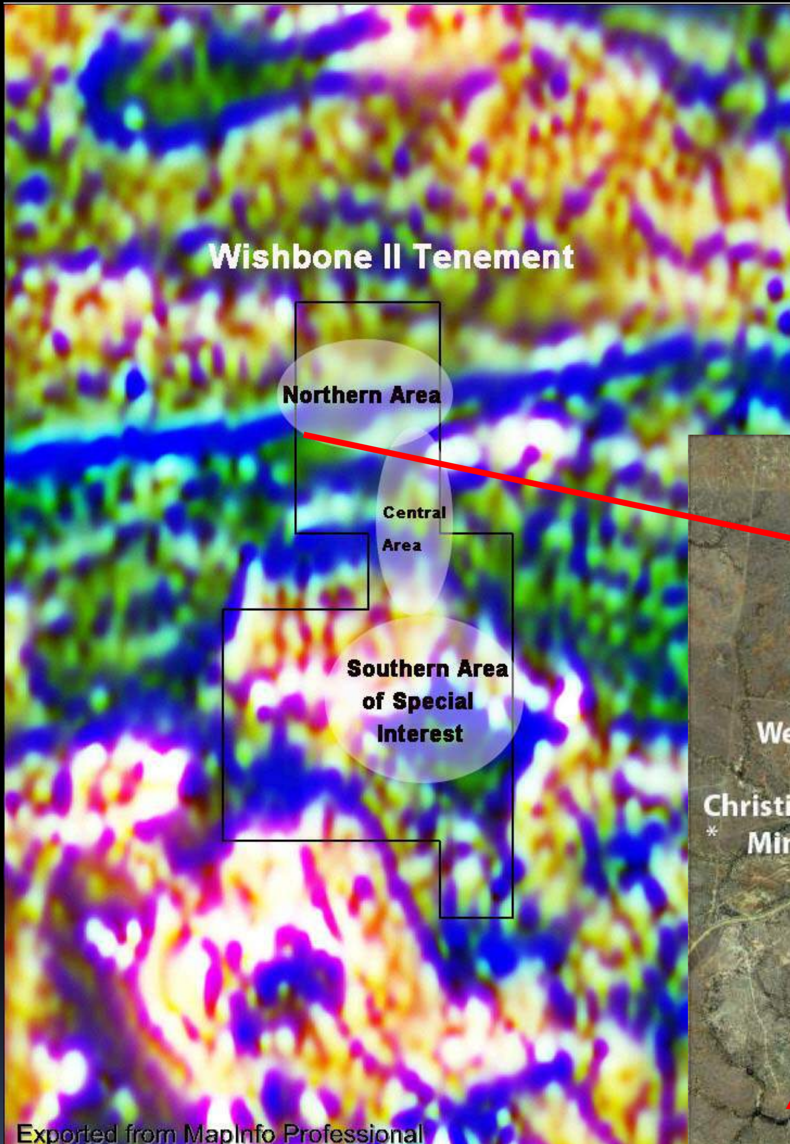


Geological Map in Area of Wishbone Tenements

Northern Queensland

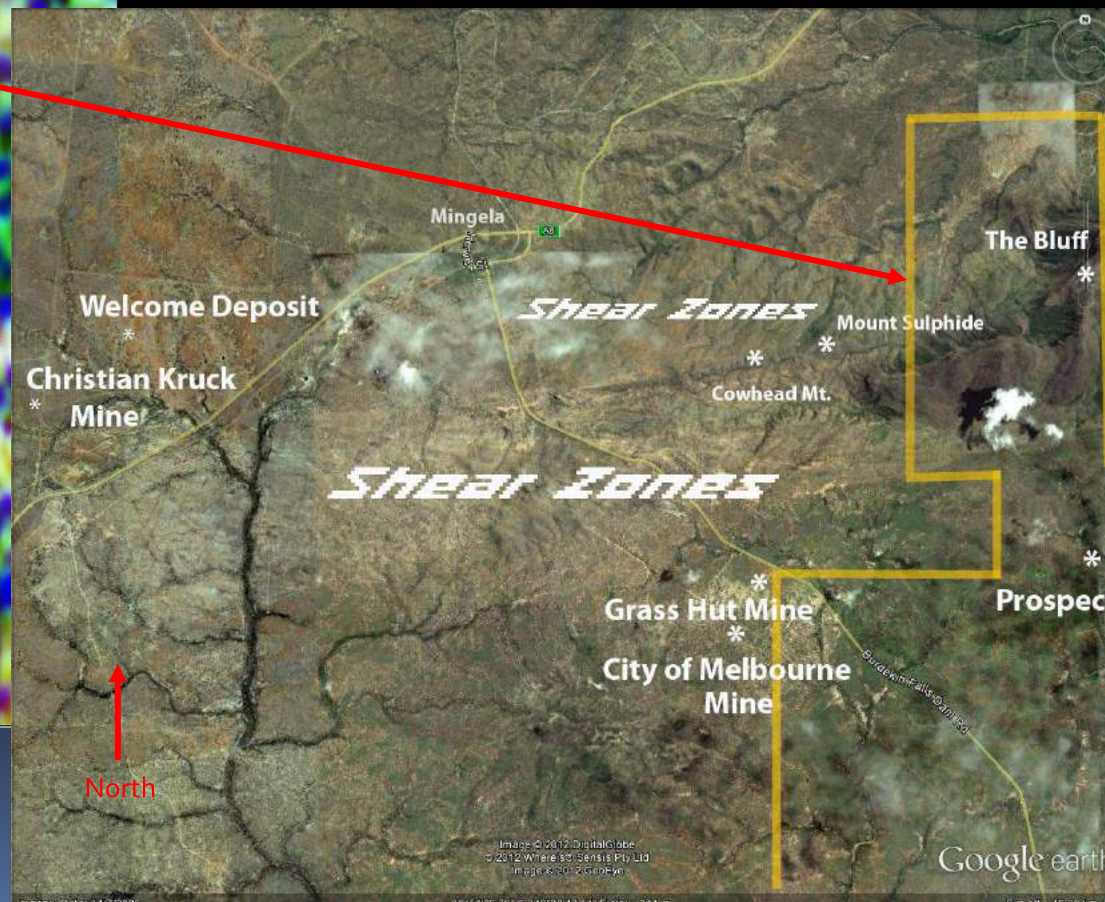
- *Processed Aeromagnetic Map*
- *Major Gold Mines*
- *Identified NE Gold Trends*
- *New NW Gold Trend*
- *Subject Tenements* ←





Northern Queensland

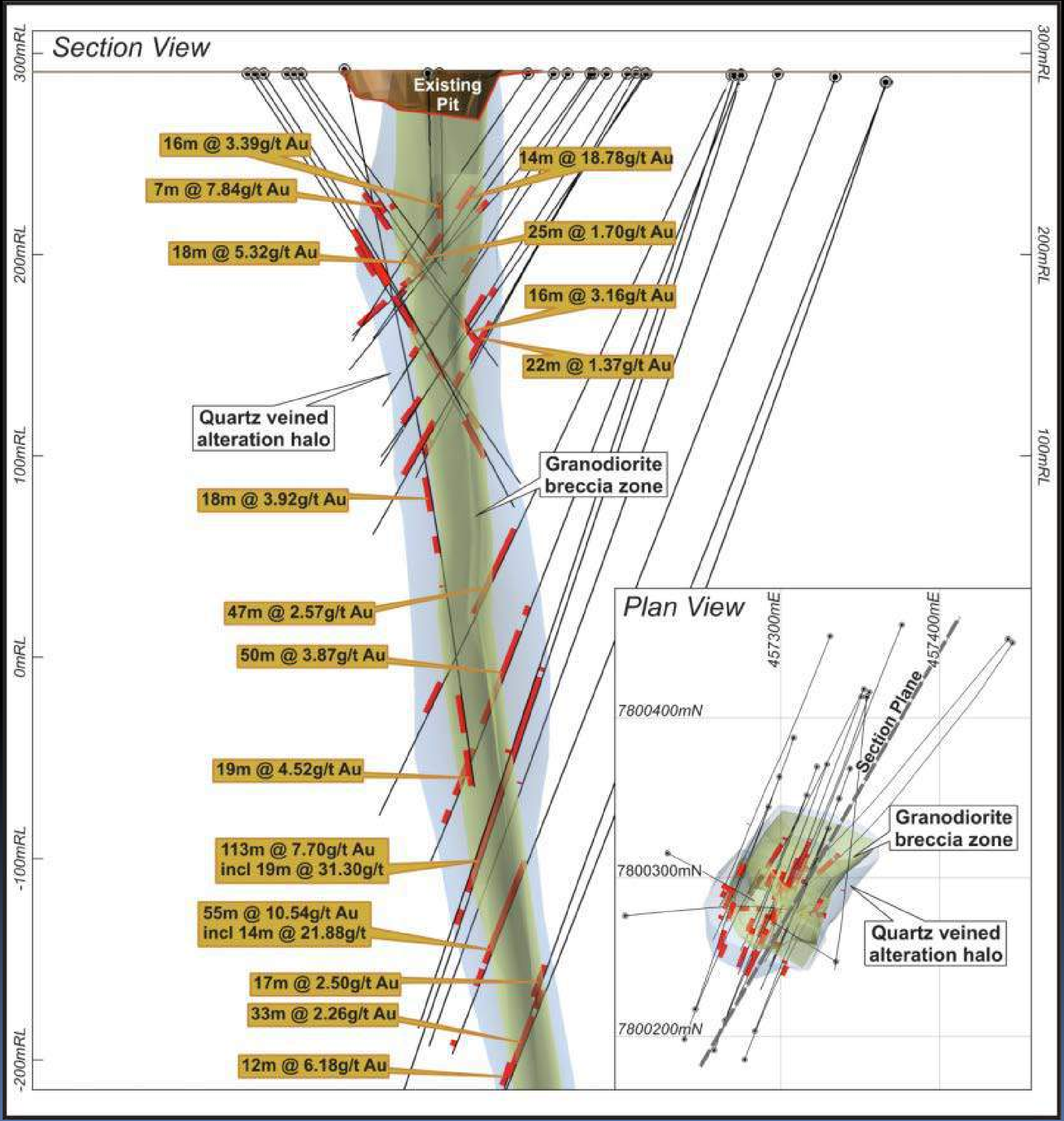
- *Advanced Geomagnetics Map*
- *Selected Areas of Interest*
- *Shear Zones*
- *Known Gold Mineralization*



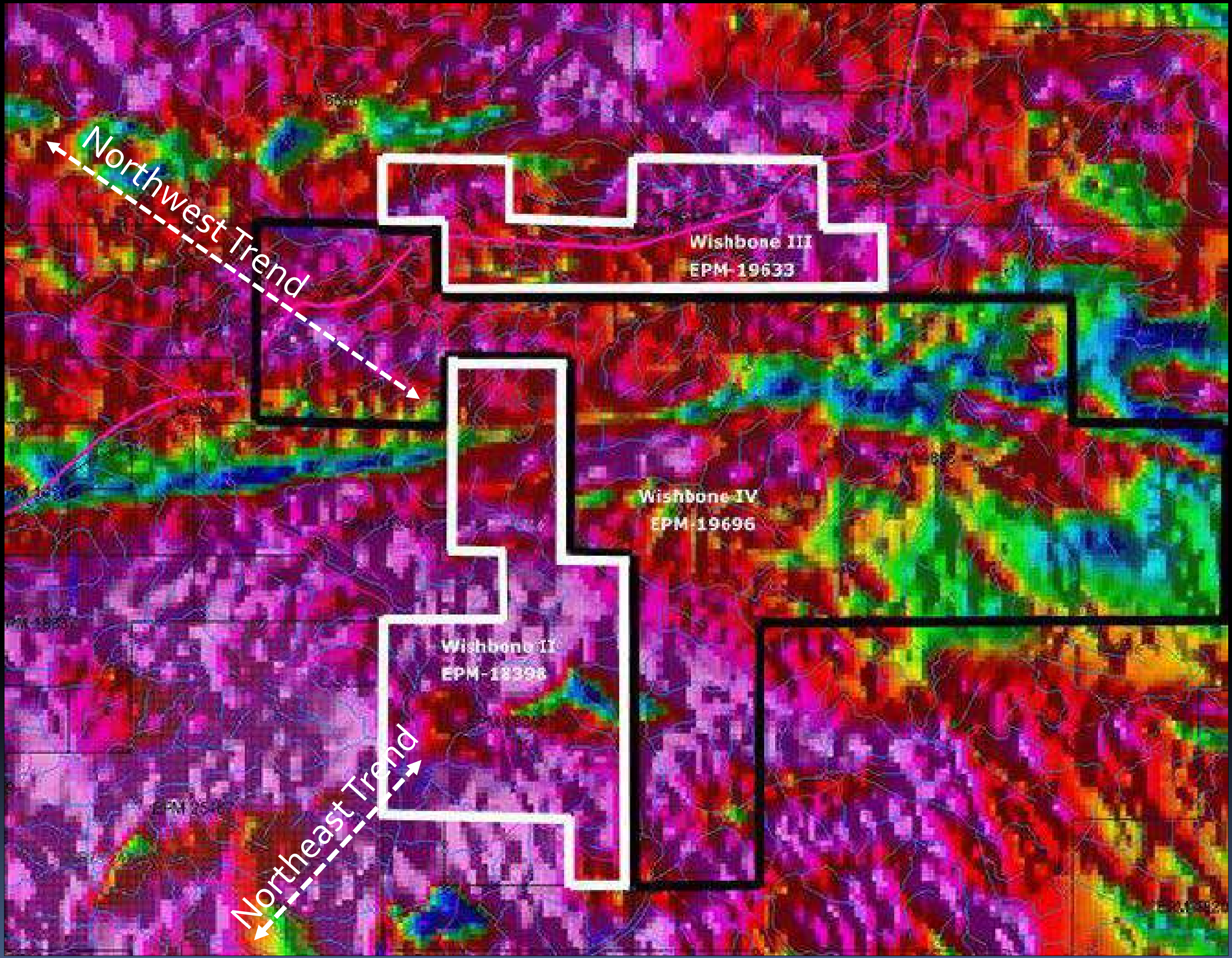
Northern Queensland

The Welcome Deposit

- *Next Mine for Resolute Mining Ltd.*
- *Underground Mine*
- *Mine Plan Similar to Mt. Wright Mine*



Northern Queensland

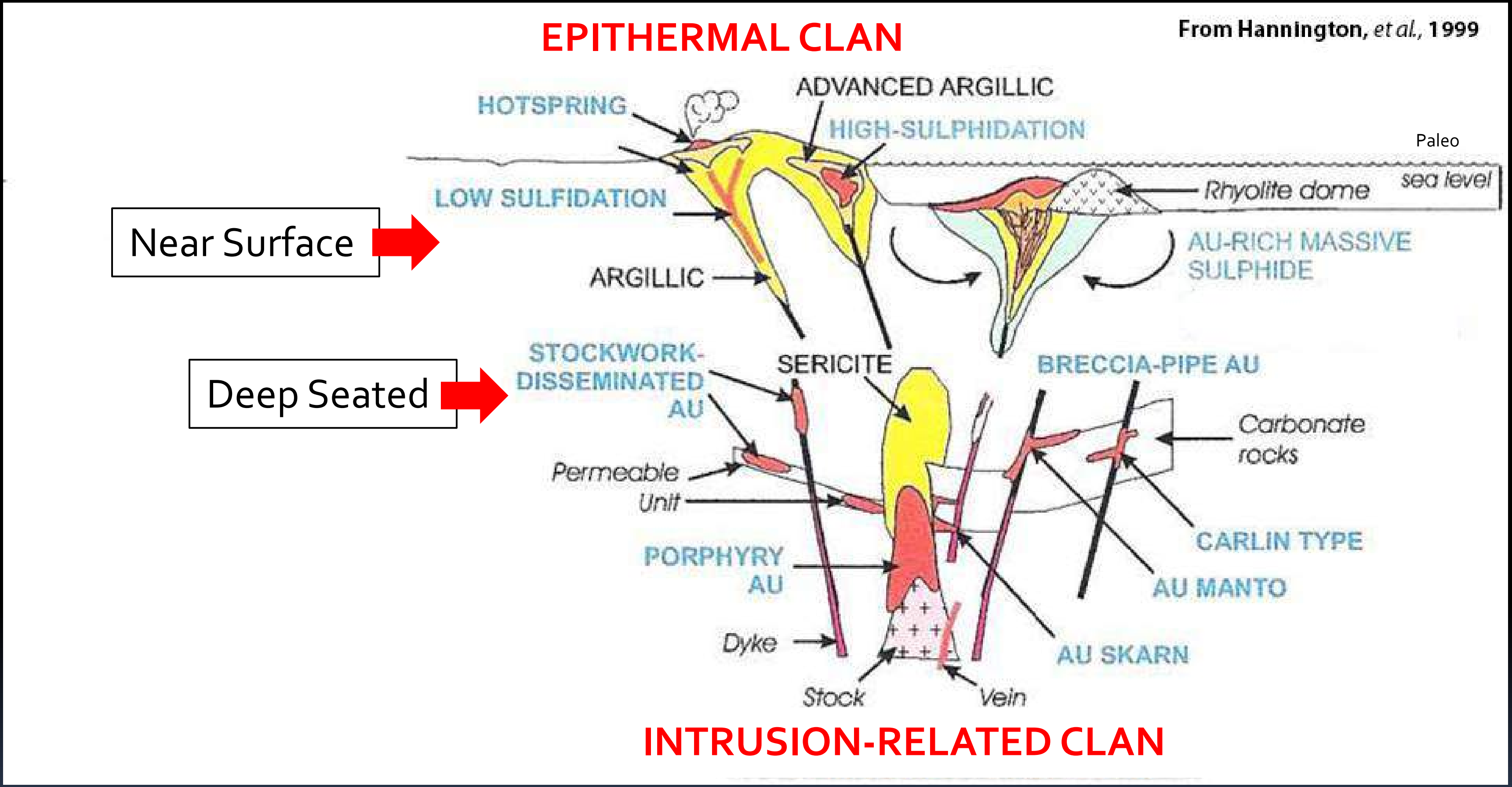


Welcome Deposit

Aerial Magnetics Map Available from the Queensland Government

Northern Queensland

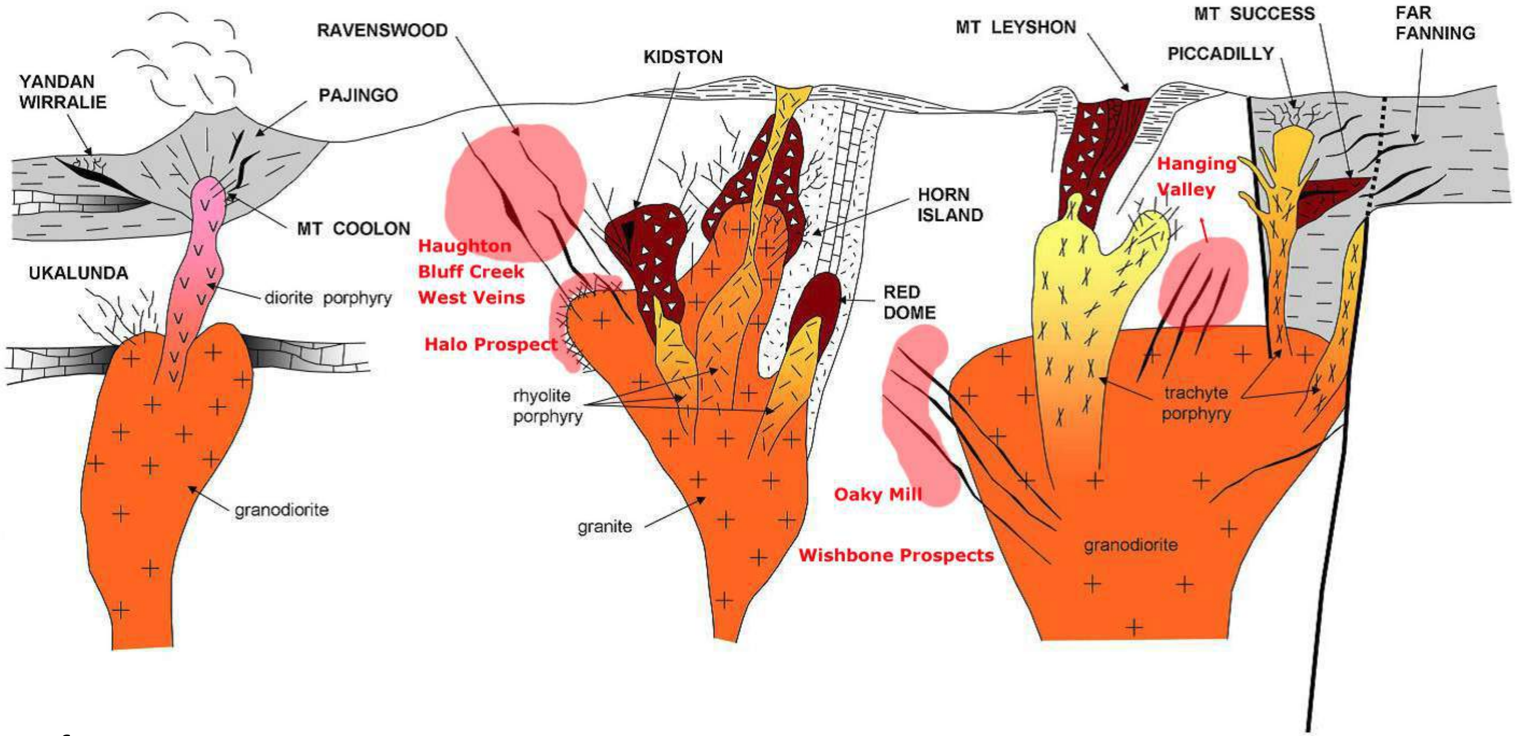
Prevailing Gold Mineralization Models in Australia



Northern Queensland

Gold Mineralization Models in Queensland

Mines and Deposits Typed



After Beams, 2012

Northern Queensland

On the Ground within the Wishbone II Tenement

The Queensland Outback
During Spring "Wet" Period

Dry Creek Outcrop of Granite

I2M
Associates, LLC

Northern Queensland

Thin Sulfide Veins in Shear Zones
(see Tables for Gold and other Metal Values)

Northern Queensland

Haughton Bluff Creek West to DAB Veins Area

Northern Area of Wishbone II

Rock-Chip Samples

SAMPLE #	COPPER %	LEAD PPM	ZINC PPM	SILVER PPM	GOLD PPM
3019102	1.1	954	38	75	7.30
3019103	1,050 ppm	846	327	62	1.23
3019105	1.5	1,675	329	3	0.05
3019106	2.6	95	282	2	0.06
3019109	2,1	739	210	1	0.34
3019112	2.3	53	210	1	0.07
3019113	3.3	1,155	276	2	0.21
3019114	2.2	455	218	1	0.02
3019115	1,725 ppm	1,960	2,690	2,690	26.3
3019116	2.8	94	40	1	0.02
3019117	4.8	736	91	1	0.23
3019119	1,210 ppm	2,000	106	24	25.20
3019127	2.6	163	91	3.2	0.03
3019131	1.9	36	41	1	0.01
3019137	1.8	141	87	1	0.01
3019138	3.2	274	137	4.1	0.03
3019141	5,490 ppm	8.9	120	13.8	0.14

I2M Associates, LLC

Northern Queensland

Oaky Creek Area

Central Area of Wishbone II

Rock-Chip Samples

SAMPLE #	COPPER PPM	LEAD PPM	MOLYBDENUM PPM	ZINC PPM	ANTIMONY PPM	SILVER PPM	GOLD PPM
3011363	1,510 ppm	5	1,830	27	1	2.7	0.01
3011367	3,930 ppm	3.2%	1	126	2	4.2	0.03
3011368	2.0%	28.3%	10	389	9	56	0.16
3011373	2770 ppm	674	239	214	3	31	0.10
3011374	1701 ppm	2.7%	10	30	3	3	0.10
3011375	4.2%	202	9	55	7	12	0.20
3011376	6.3%	54	42	142	3	11	0.48
3011385	1.3%	67	476	53	1	6	0.06
3011386	3,130	68	1,675	32	1	6	0.12
3011387	680	142	14	12	1	1	0.02
3011389	635	14	1,945	10	1	2	0.01
3011390	3,570	101	3,260	102	1	9	0.01
3014136	3.6%	2	3	351	3.6%	4	3.5

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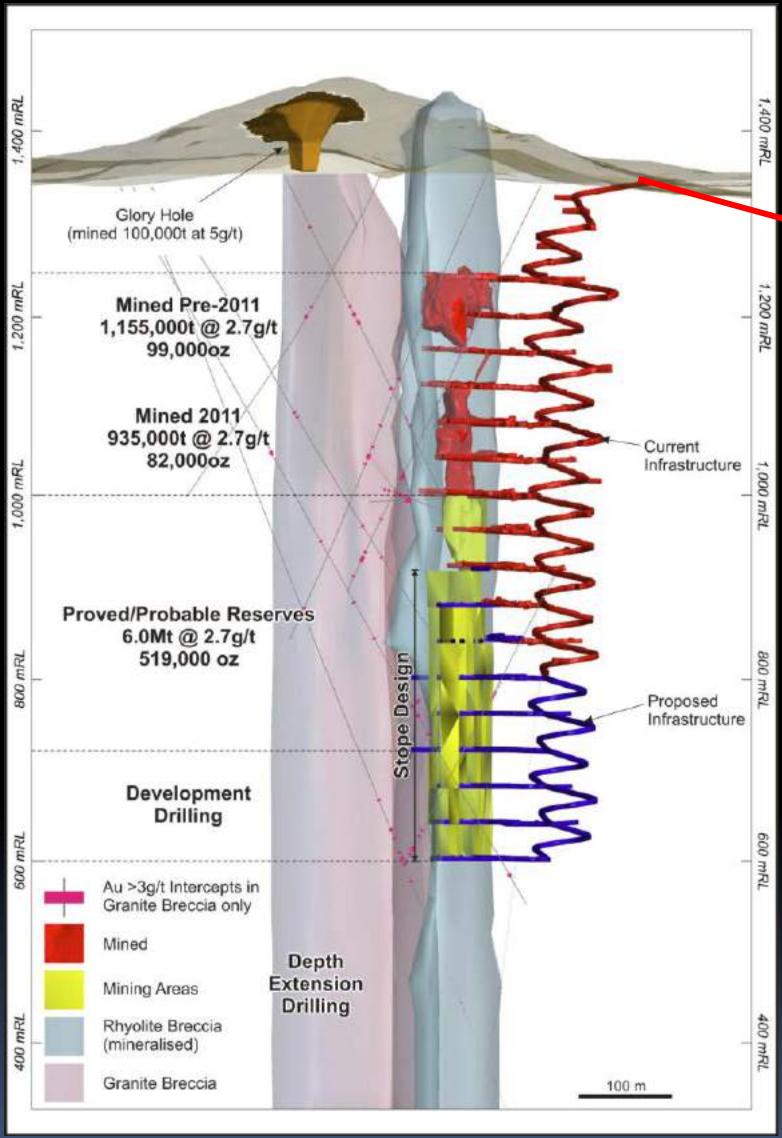
Northern Queensland

Heading for Mt . Wright to the South

Entrance to Underground Mine

Northern Queensland



Mt. Wright Mine

After Resolute Mines, Ltd.

Northern Queensland

Ravenswood Mine

After Resolute Mines, Ltd.

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Northern Queensland

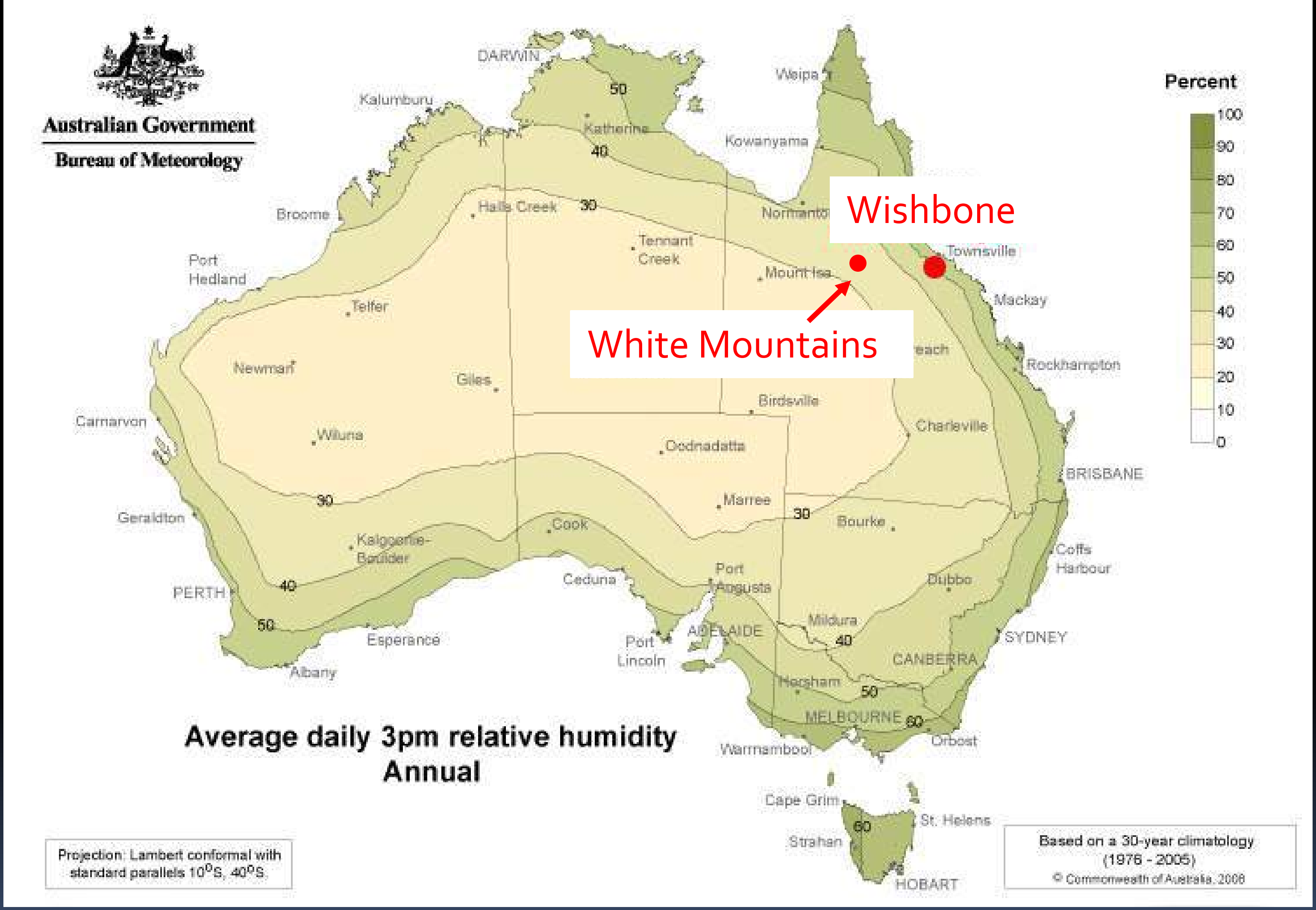
Ravenswood Mine Area

Trucking Ore from Mt. Wright Mine

Processing System

Primary and Secondary Crushers

Northern Queensland



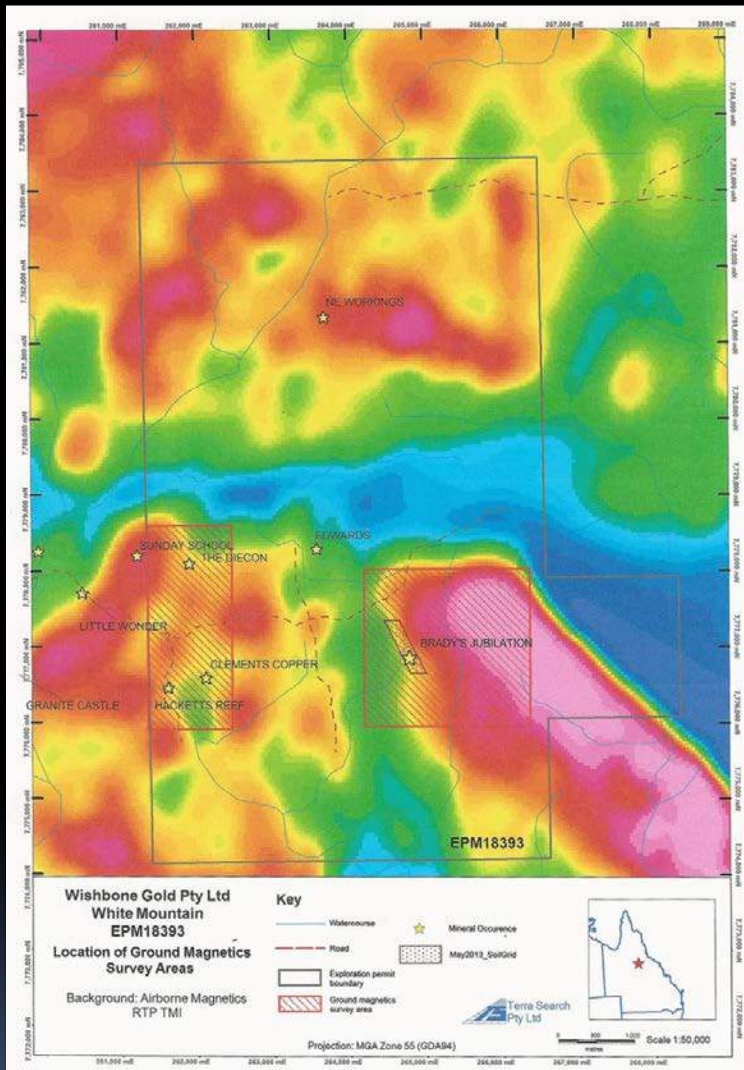
Heading toward White Mountains Area, Queensland

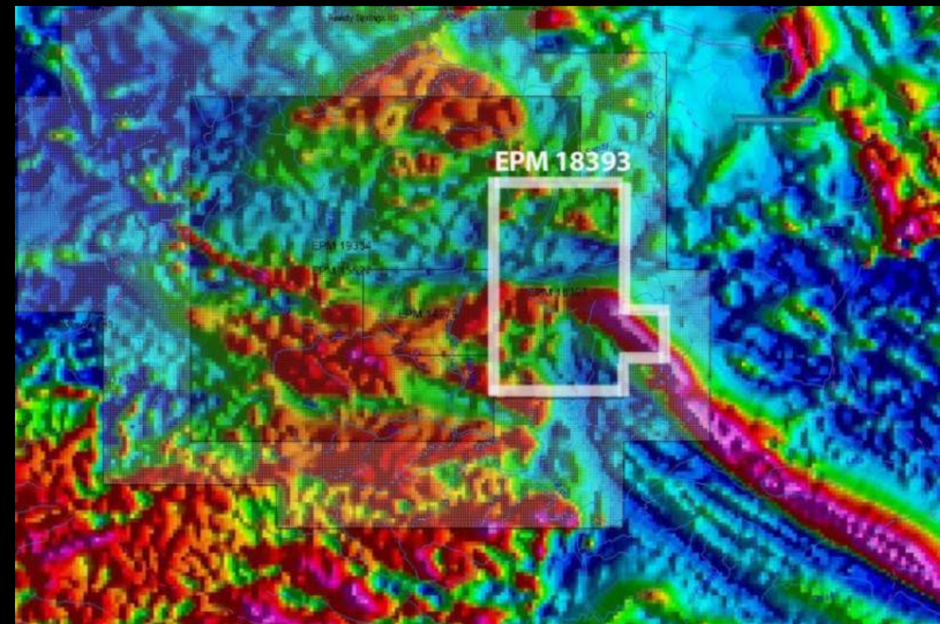
River in Flood

Volcanics

Black Swan

White Mountains Area, Queensland

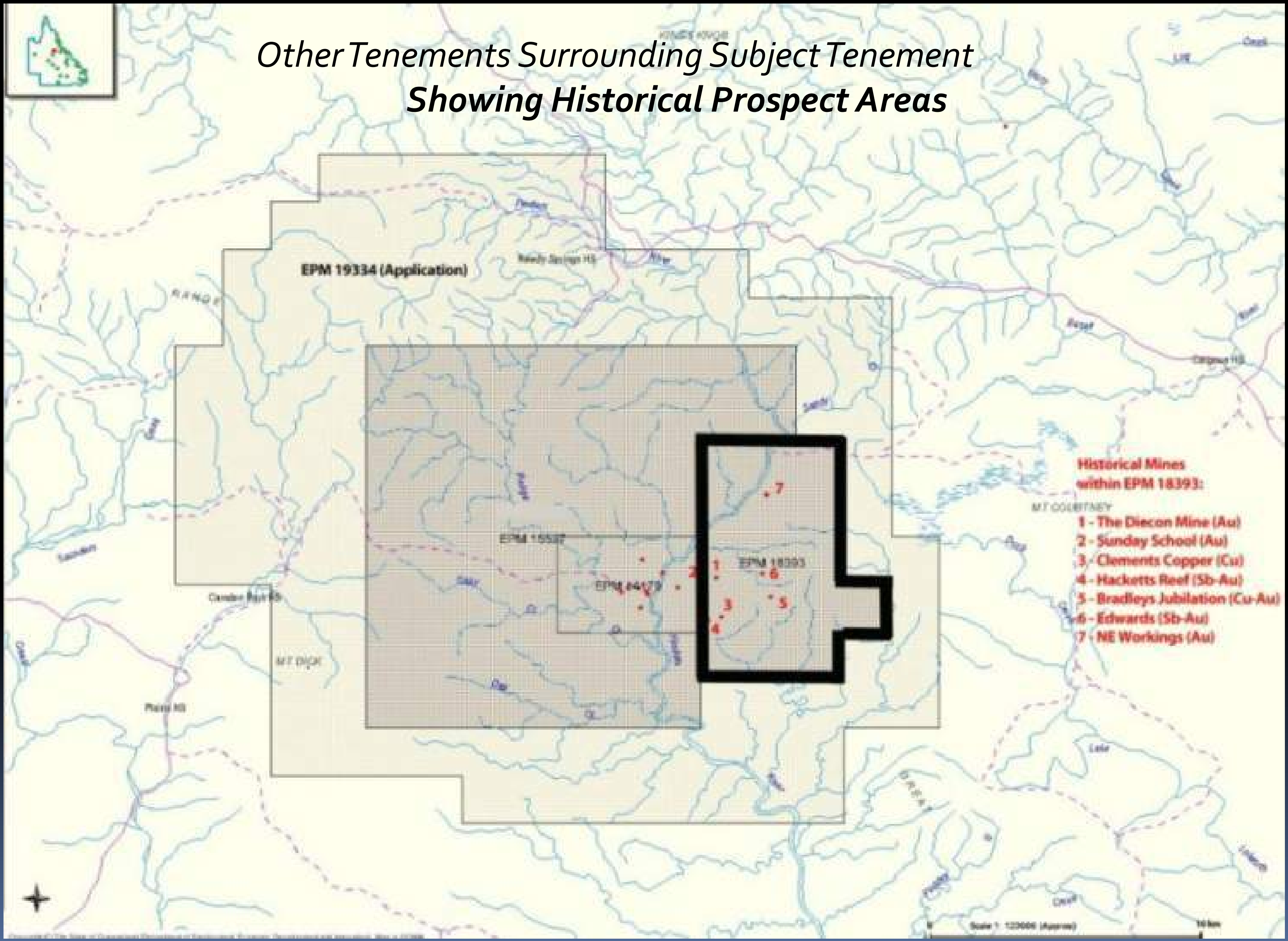




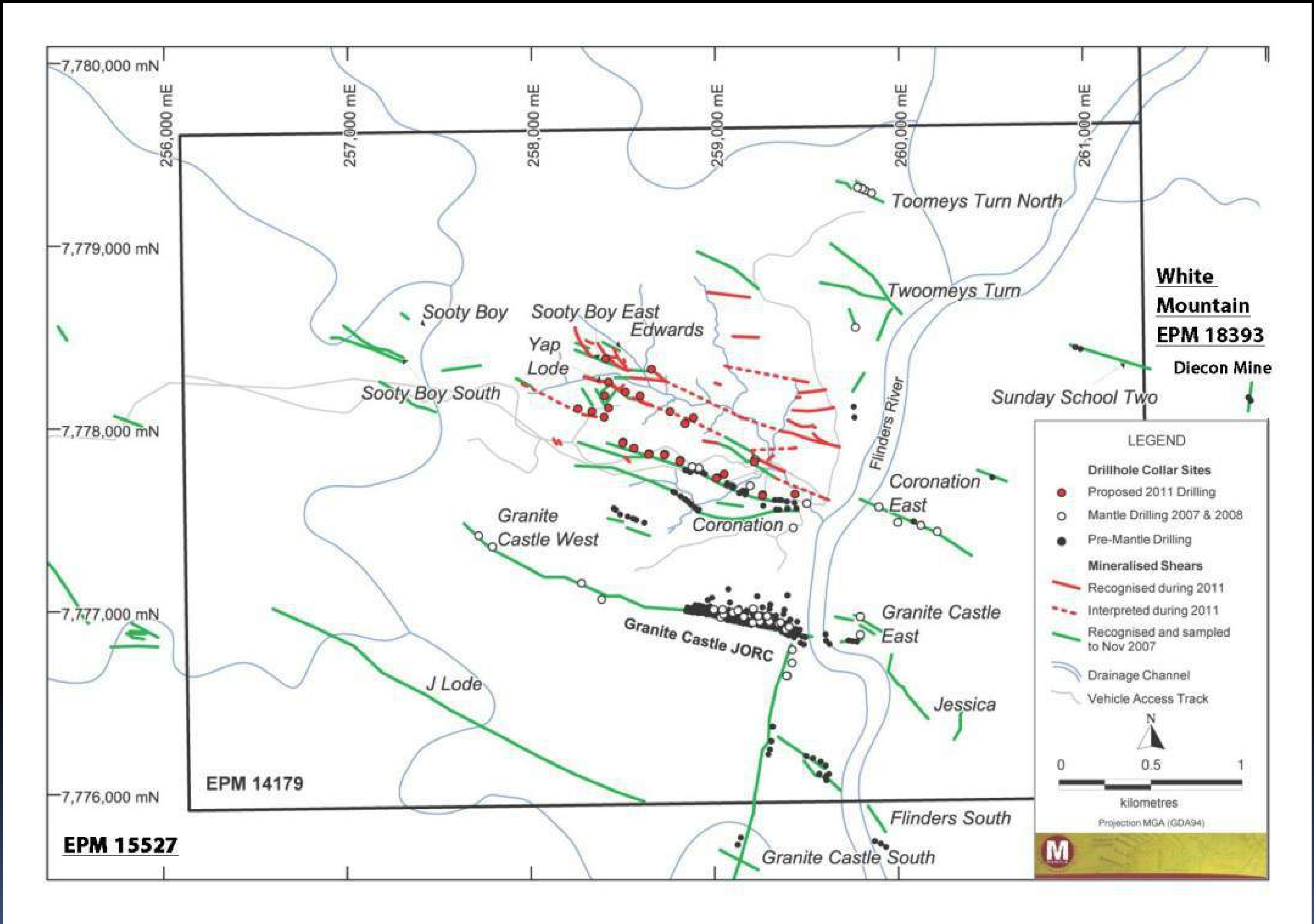
Aerial Magnetics Map of Tenement Area

Ground Magnetics Surveys Tenement Area

White Mountains Area, Queensland



White Mountains Area, Queensland



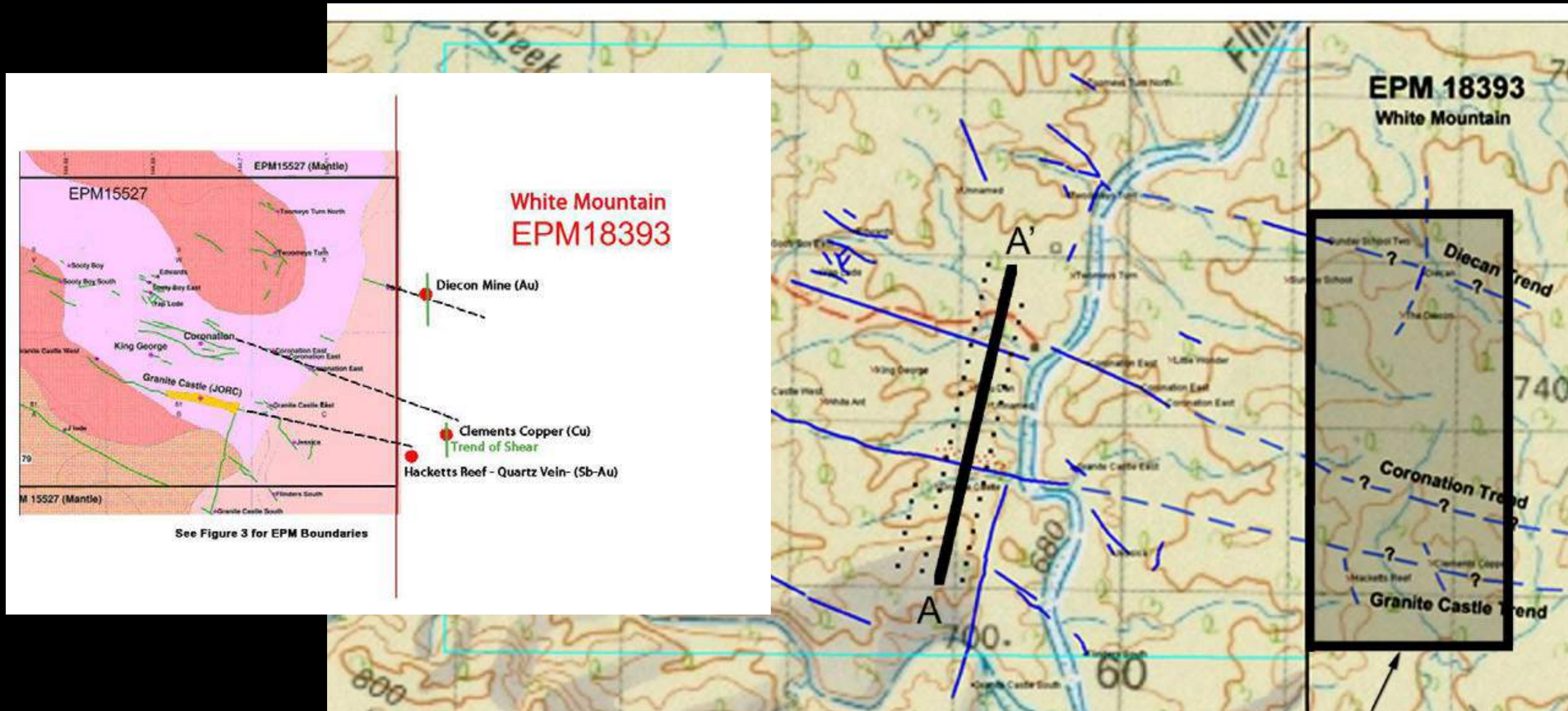
Adjacent Tenement Activities (Drilled and Resource Estimated)

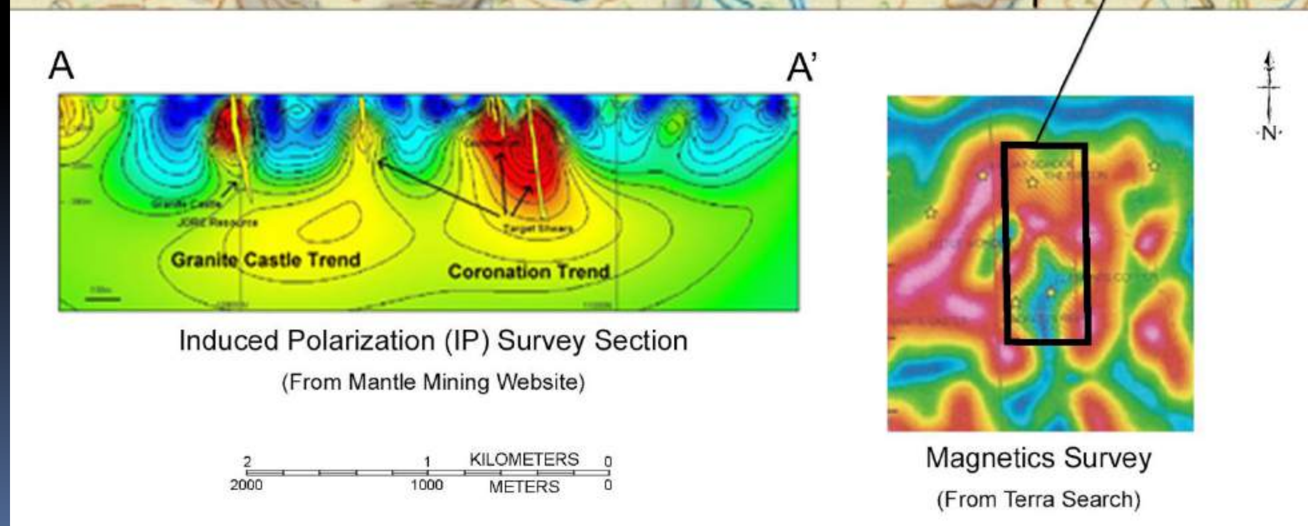
White Mountains Area, Queensland

Brolga Cranes

On the Ground and in the Creek

White Mountains Area, Queensland



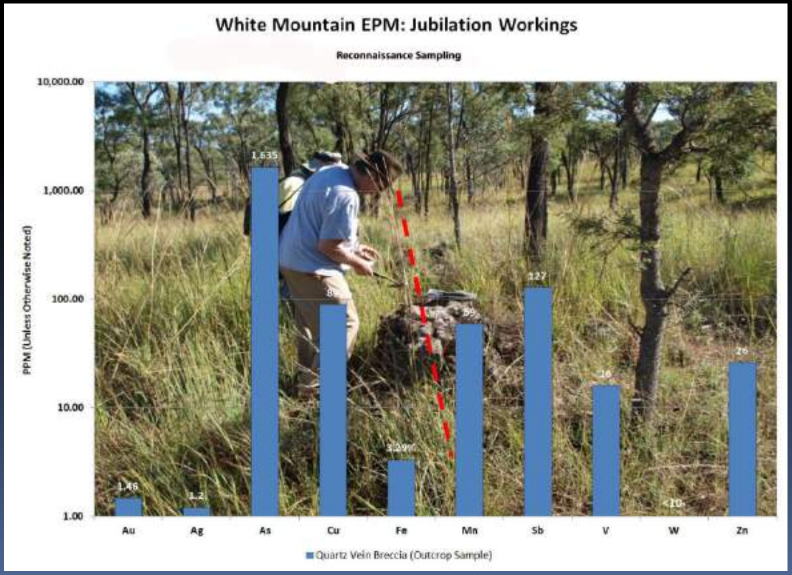


Reviewing Adjacent Ground IP and Magnetics Survey Interpretations

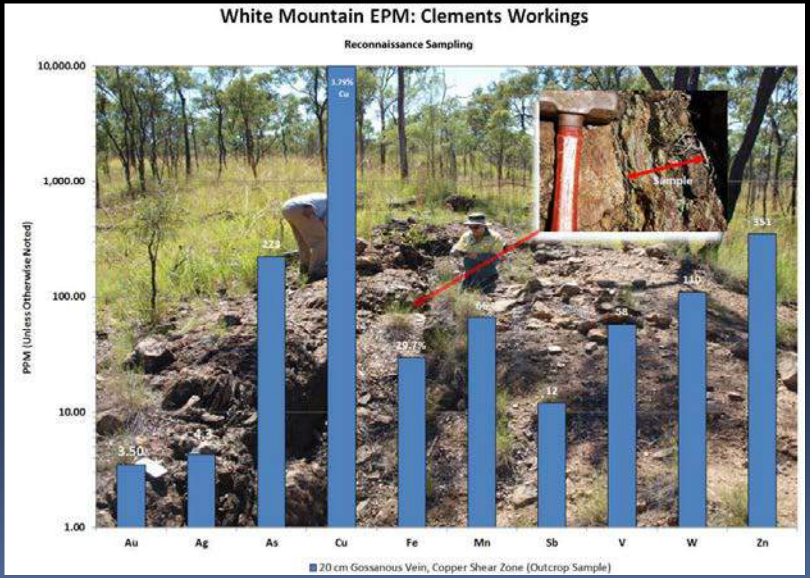
White Mountains Area, Queensland

Dike Outcrops

Historical Workings



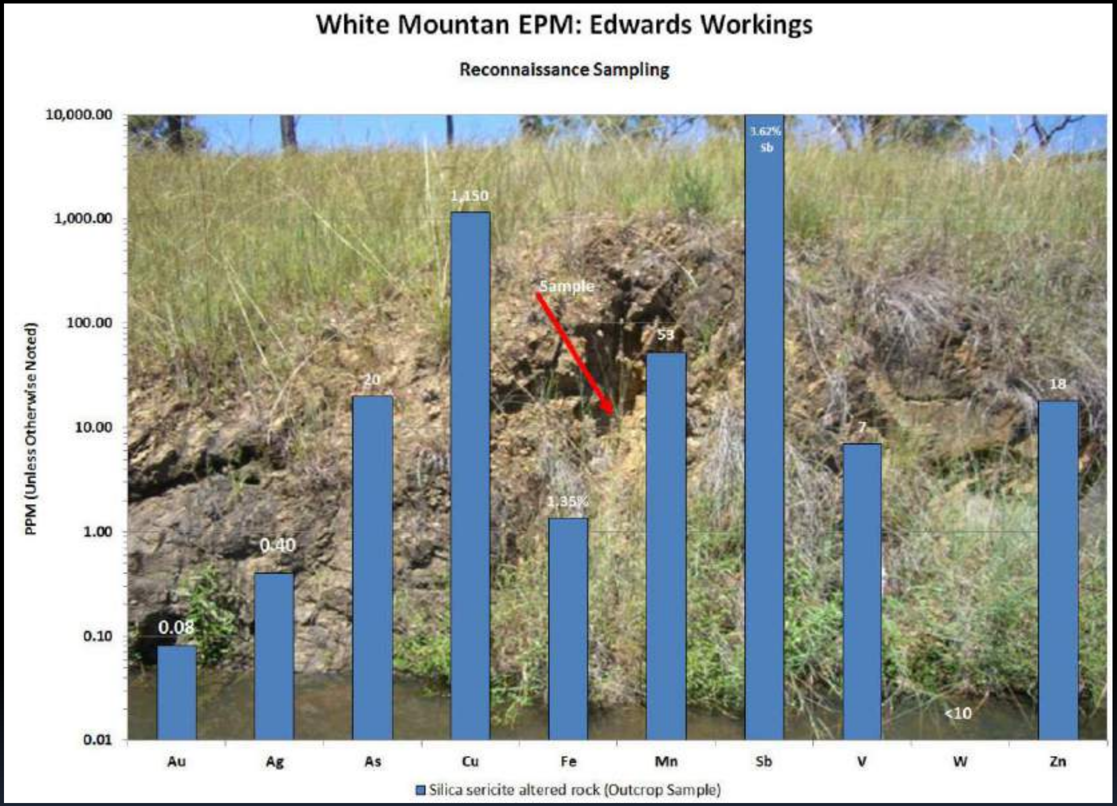
Laboratory Analyses



Laboratory Analyses

White Mountains Area, Queensland

Massive Antimony Sulfide (Stibnite)



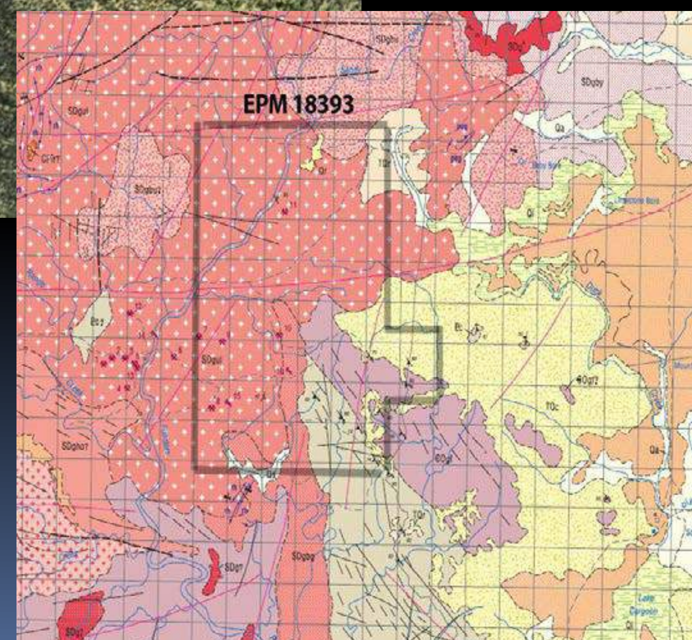
Laboratory Analyses

Anomalous in Antimony and Copper

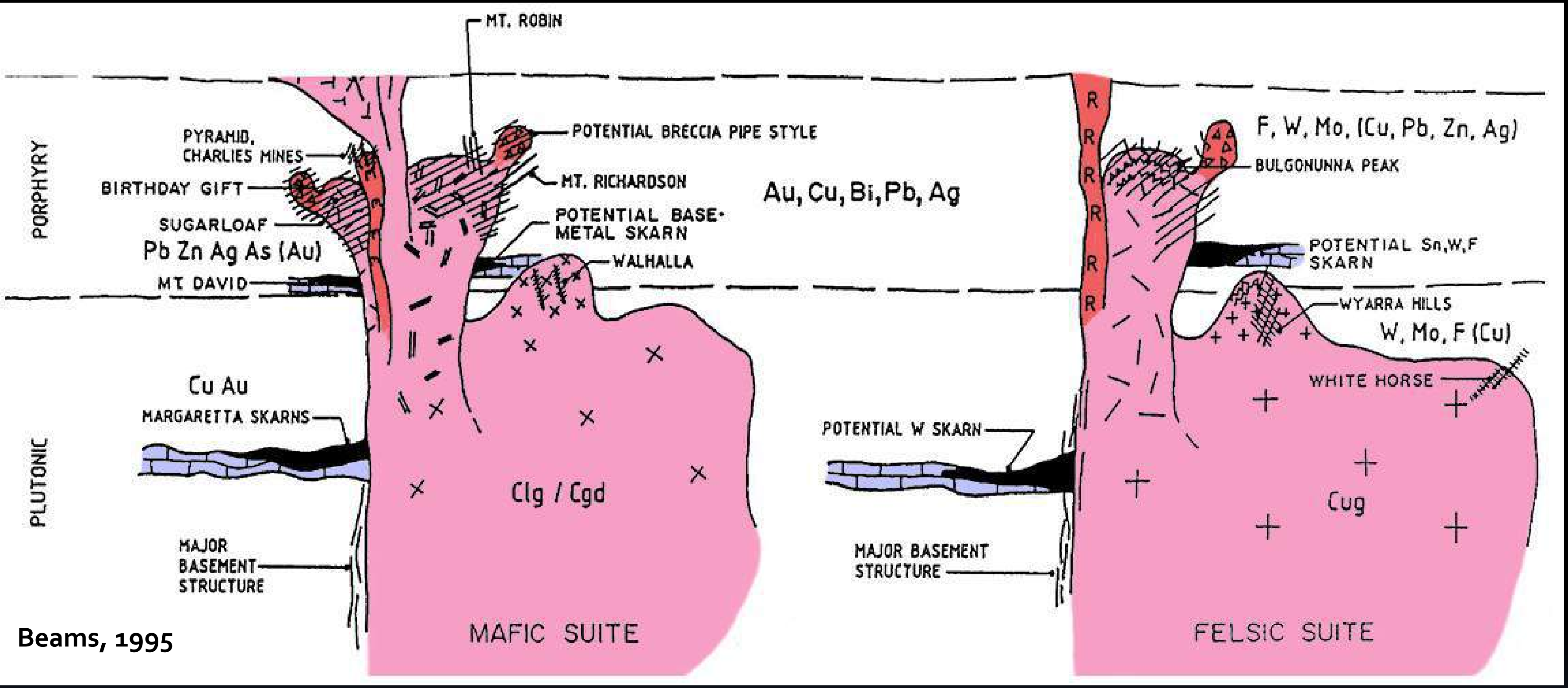
White Mountains Area, Queensland

Enhanced Google Map of Area

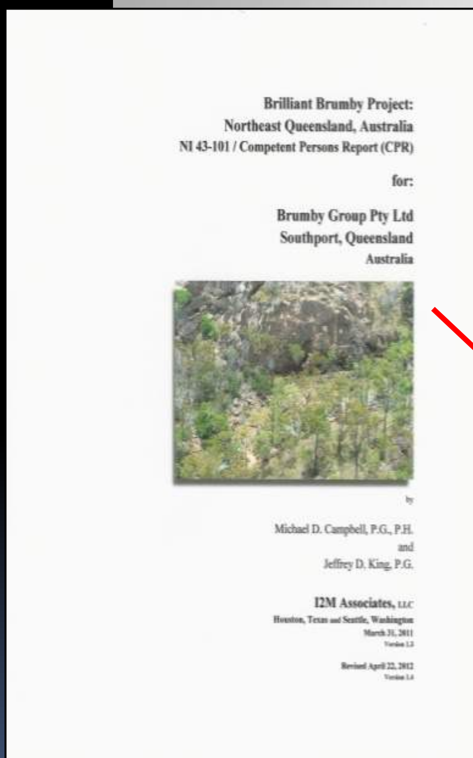
Geologic Map



White Mountains Area, Queensland



Current Models of Mineralization for Northern Queensland



Brilliant Brumby Project:
Northeast Queensland, Australia
NI 43-101 / Competent Persons Report (CPR)

for:

Brumby Group Pty Ltd
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by

Michael D. Campbell, P.G., P.H.
and
Jeffrey D. King, P.G.

I2M Associates, LLC
Houston, Texas and Seattle, Washington
March 31, 2011
Version 1.3

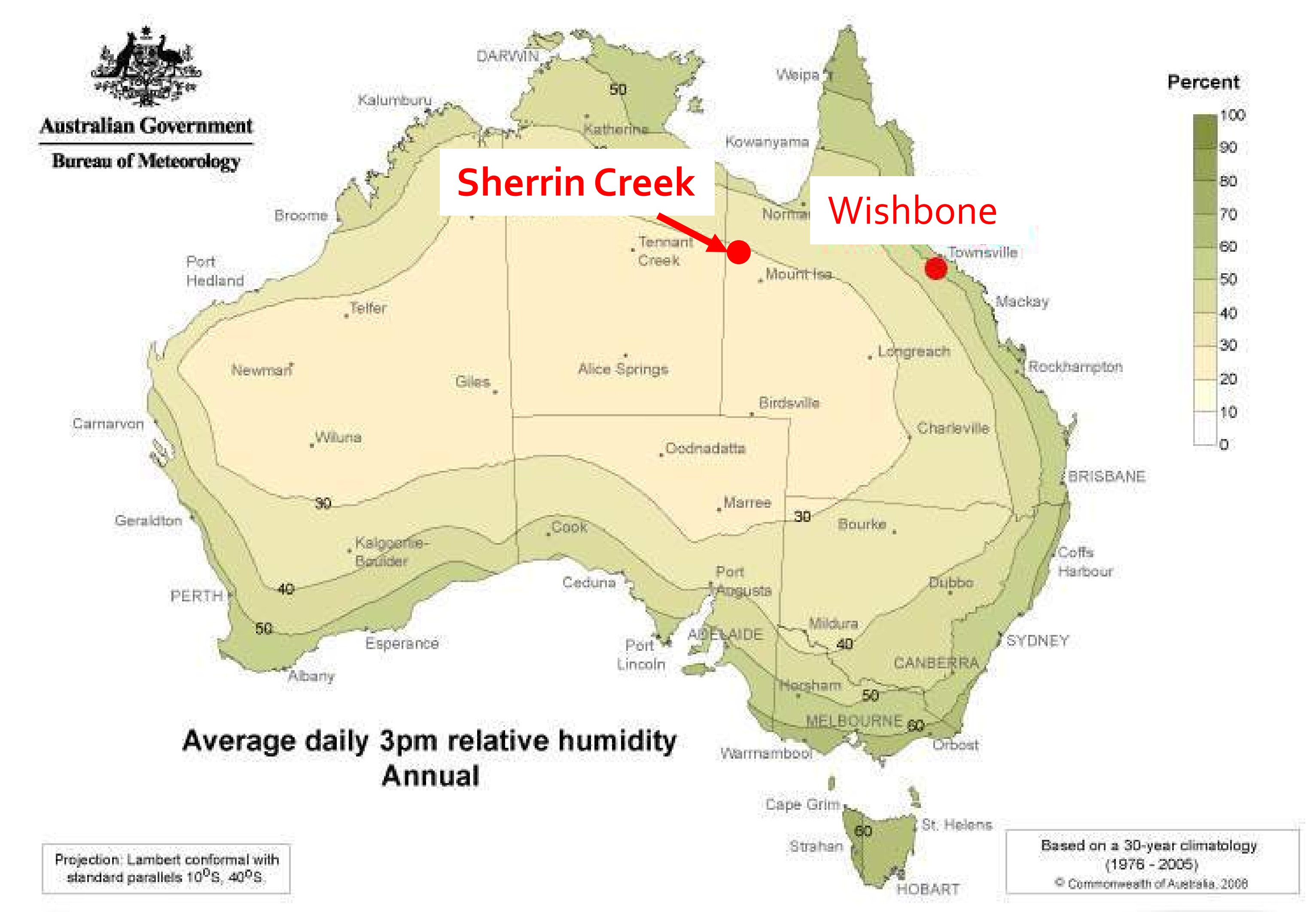
Revised April 22, 2012
Version 1.4

2012 InterGroup Mining Ltd. Presentation (more)

Note: I2M Associates is mentioned at 4 minutes 12 seconds into the above 2012 presentation.

Update 2014 InterGroup Mining Ltd. (more)

Phosphate in Queensland …. and Northern Territory



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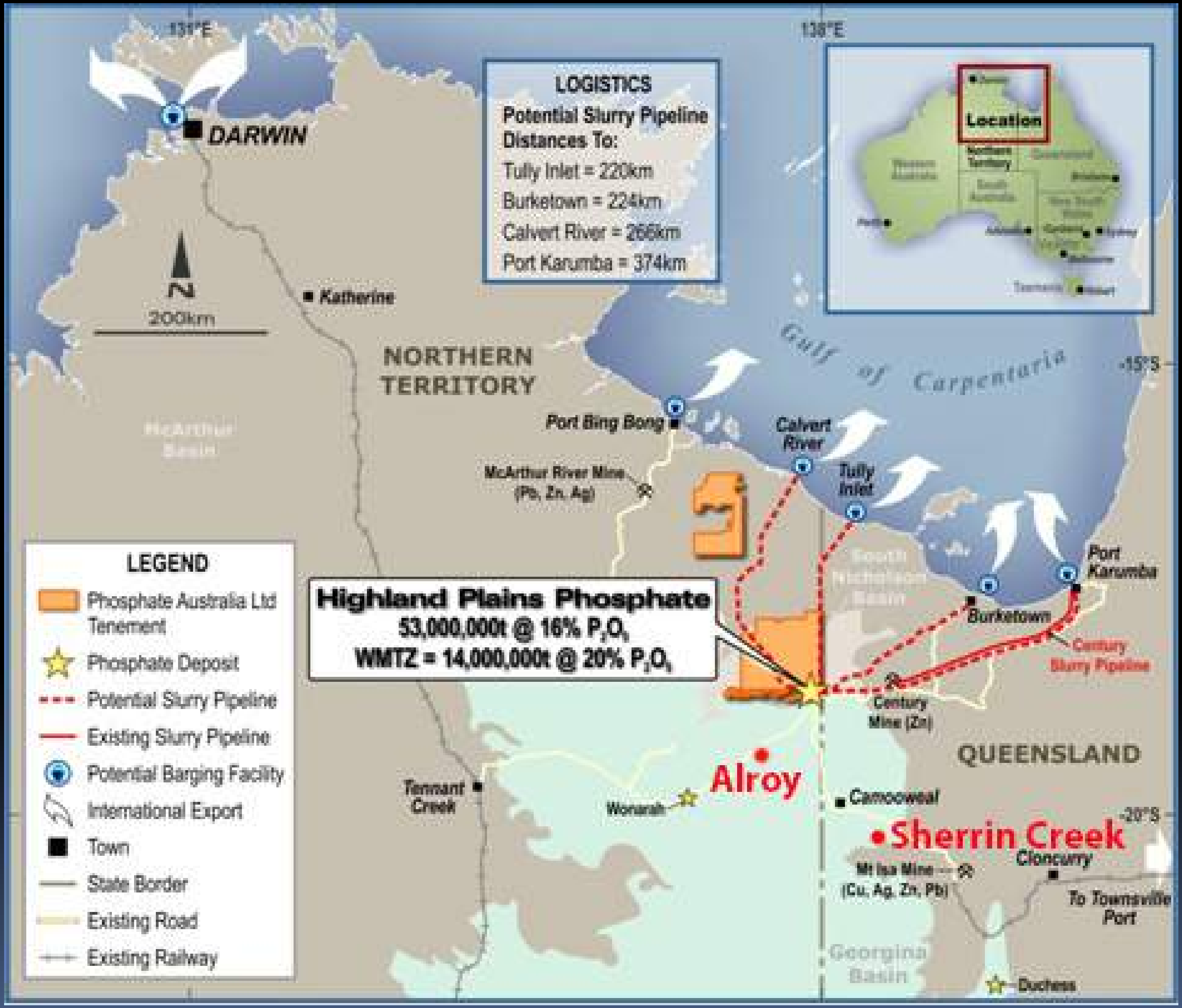
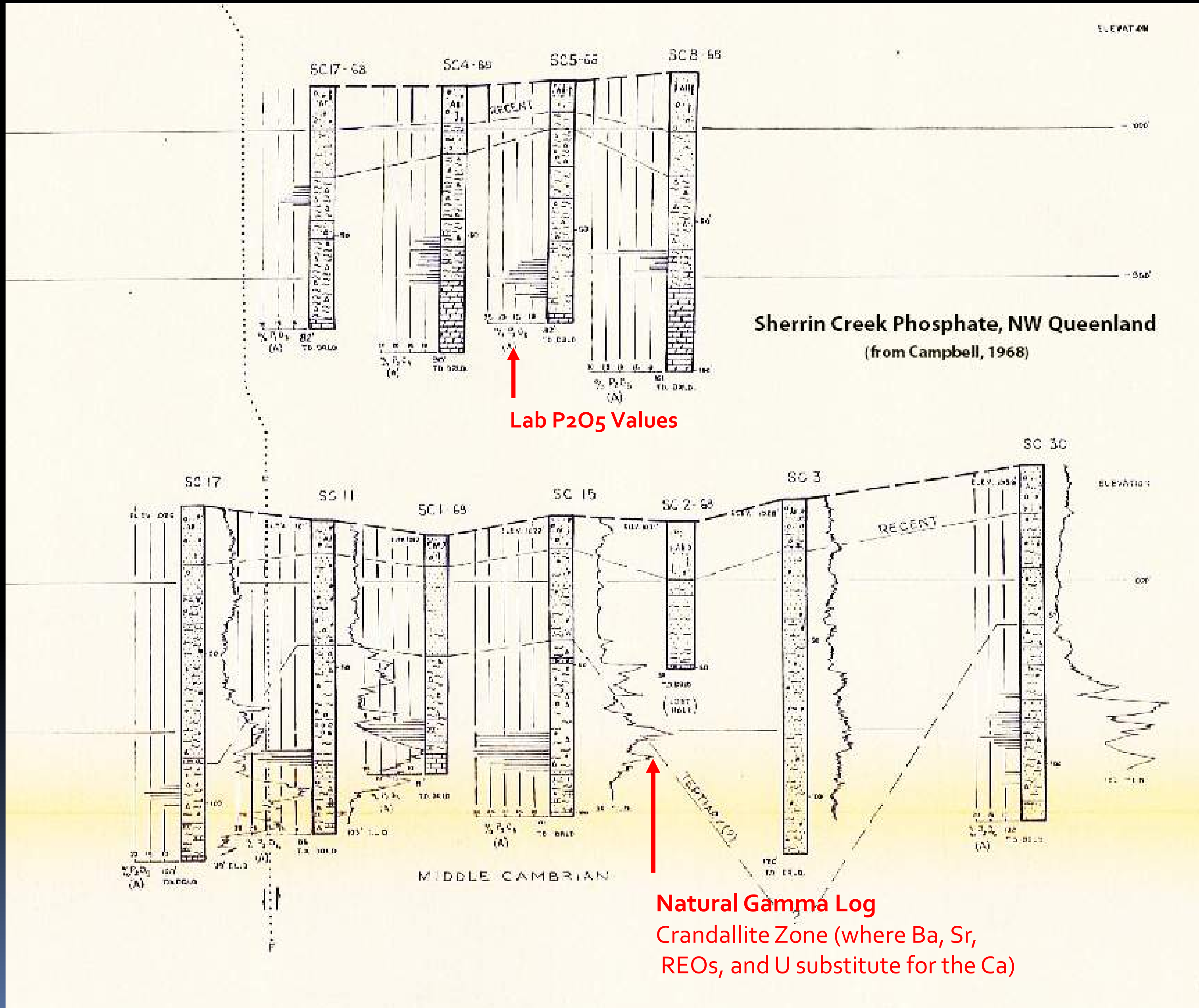
Phosphate in Queensland ….. and Northern Territory



Phosphate in Queensland ….. and Northern Territory



Phosphate in Queensland ….. and Northern Territory

Sherrin Creek Drilling Summary - 1968

TABLE I

Hole	Total Depth (ft)	Depth to Top of Zone (ft)	Thickness of Zone	Average % P_2O_5 of Zone ($\geq$10%)	
SC 1-68	81	61	8 ft	20.1%	26.1%
SC 2-68	51	- Lost Hole	-	-	
SC 3-68	105	47 (1st Zone)	2 ft	10.5%	13.7%
		72 (2nd Zone)	5 ft	15.6%	20.3%
		85 (3rd Zone)	4 ft	13.0%	16.9%
SC 4-68	90	50	16 ft	12.6%	16.4%
SC 5-68	82	59	14 ft	14.8%	19.2%
SC 8-68	101	59	8 ft	15.5%	20.2%
SC 17-68	82	33	7 ft	11.1%	14.4%
SC 18-68	91	74	8 ft	14.1%	18.3%
SC 19-68	86	74	1 ft	11.4%	14.8%
SC 20-68	79	59 (1st Zone)	4 ft	12.8%	16.6%
		68 (2nd Zone)	1 ft	10.6%	13.8%

Total Holes: 10   Total Ft. Drilled 848

Note: Subsequent drilling with cased holes by others indicated +30% higher P2O5 values. Why? Drilling P2O5 dust loss and vuggy formation: In-out subsurface air flow as noted by Campbell (1968) captures P2O5 dust.

Sherrin Creek, Qld…. and Alroy Downs, NT Areas

Queensland

FIELD SHAPIRO (F)

and

A.M.D.E.L. SHAPIRO (A)

SHERRIN CREEK AREA

SC 1-68

Footage	F	A
	% P_2O_5	
53-54	< 1	-
55	< 1	-
56	< 1	-
57	< 1	-
58	2	-
59	< 1	-
60	2	-
61	10	9.0
62	15	10.0
63	10	12.4
64	25-30	24.4
65	25-30	26.5
66	25-30	25.3
67	25	24.9
68	25	21.6
69	18	15.3
70	9	7.9
71	9	6.6
71-72	8	6.6

Northern Territory

Alroy Downs Area

FIELD SHAPIRO (F)

and

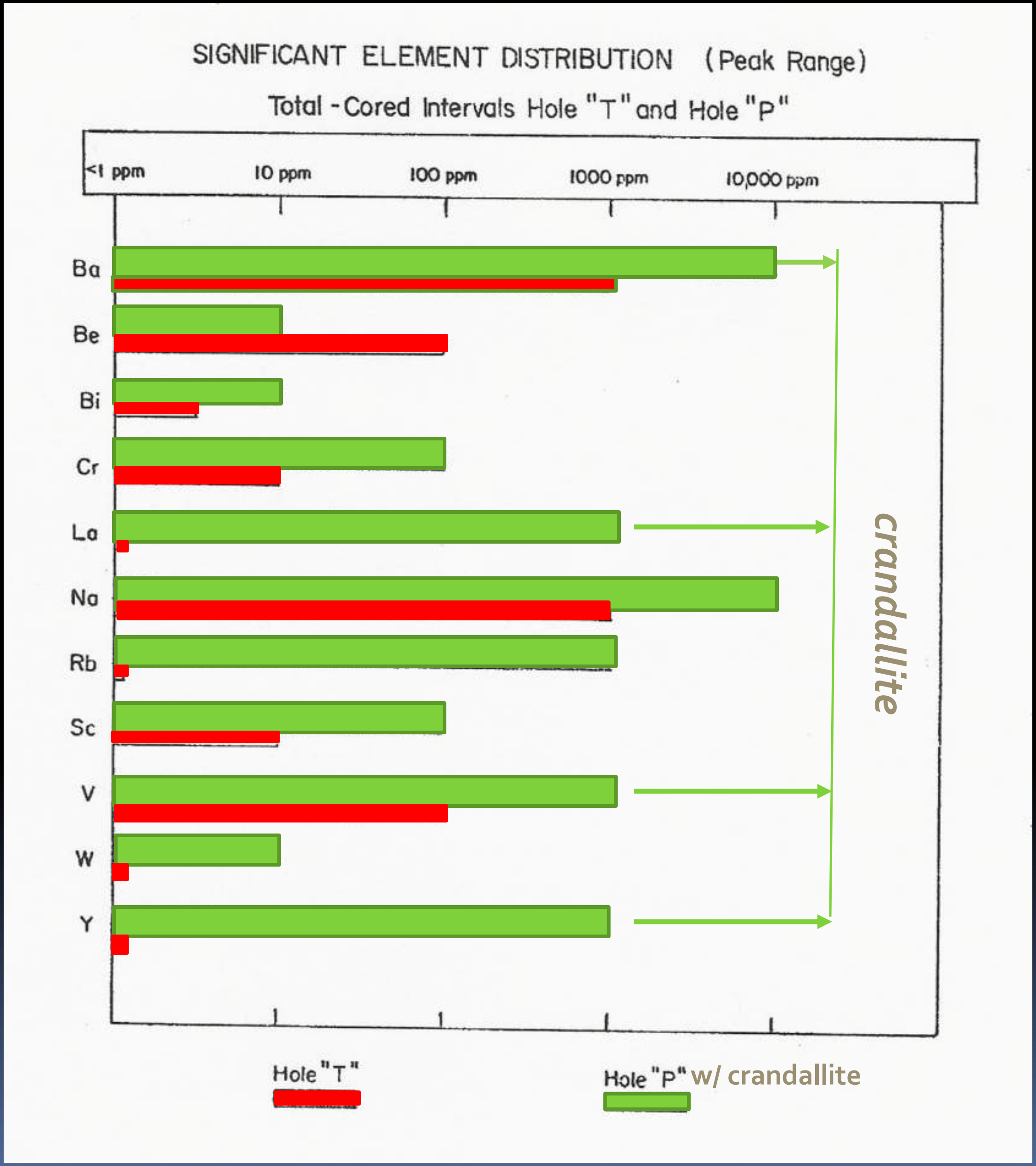
A.M.D.E.L. SHAPIRO (A)

Alroy 2A

Footage	F	A	
	% P_2O_5		
0-50	-	-	
51	4	-	
52	2	-	
53	1	-	
54	1	-	
55	1	-	
56	1	-	
57	1	-	
58	1	-	
59	4	1.4	
60	9	-	
61	11	11.4	
62	13	15.6	
63	15	12.0	
64	16	14.7	
65	16	12.3	
66	14	21.3	27.7%
67	9	7.3	9.5%
68	10	9.4	
69	10	9.8	
70	4	5.5	
71	4	4.4	
72	5	4.5	
73	6	6.2	
74	4	4.9	
75	5	4.7	
76	8	10.1	
77	10	8.1	
78	9	9.7	
79	10	10.3	
80	3	-	
/			

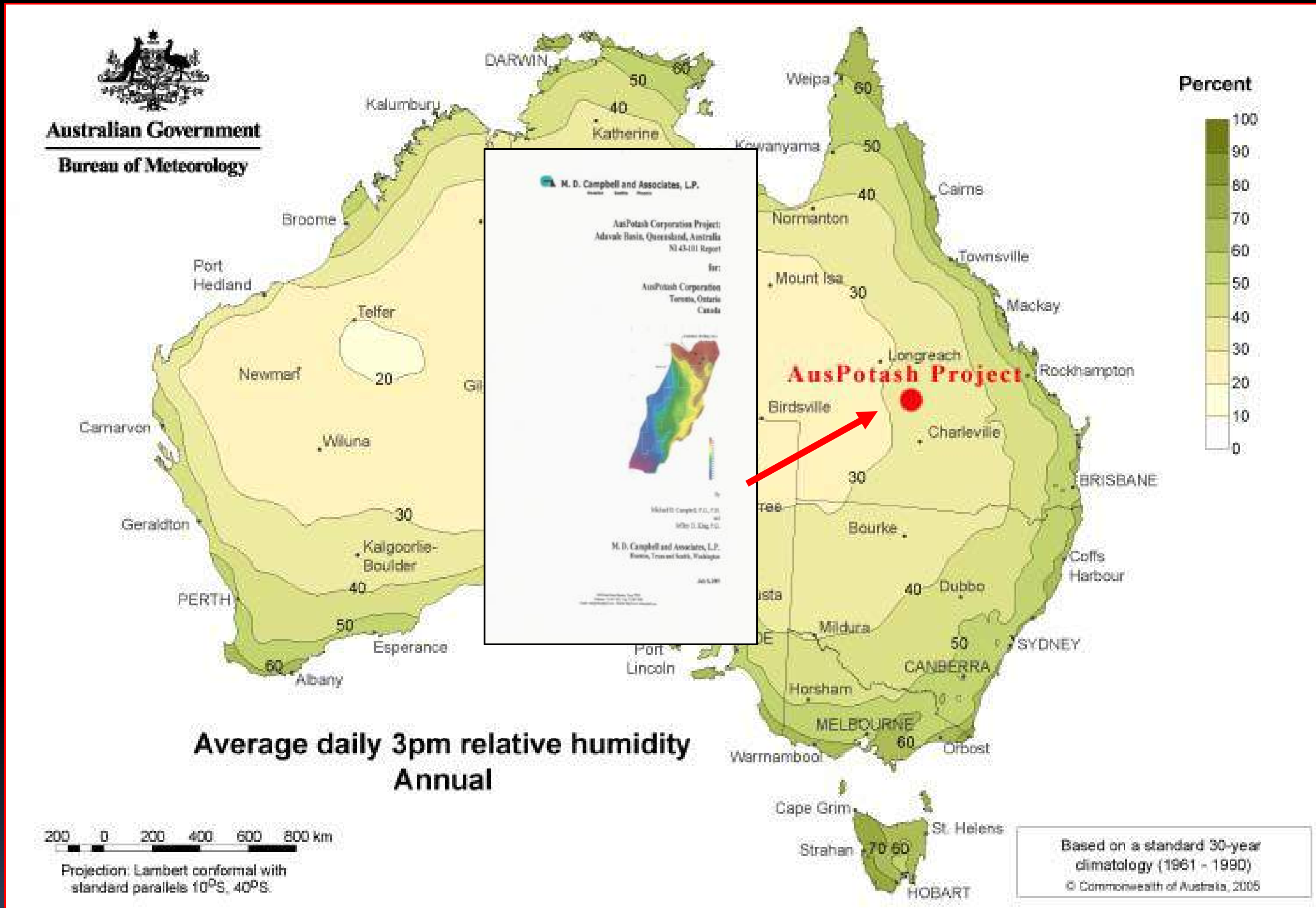
I2M Associates, LLC

Sherrin Creek, Queensland



After Campbell (1969), p.25 and Plate III

Queensland Potash



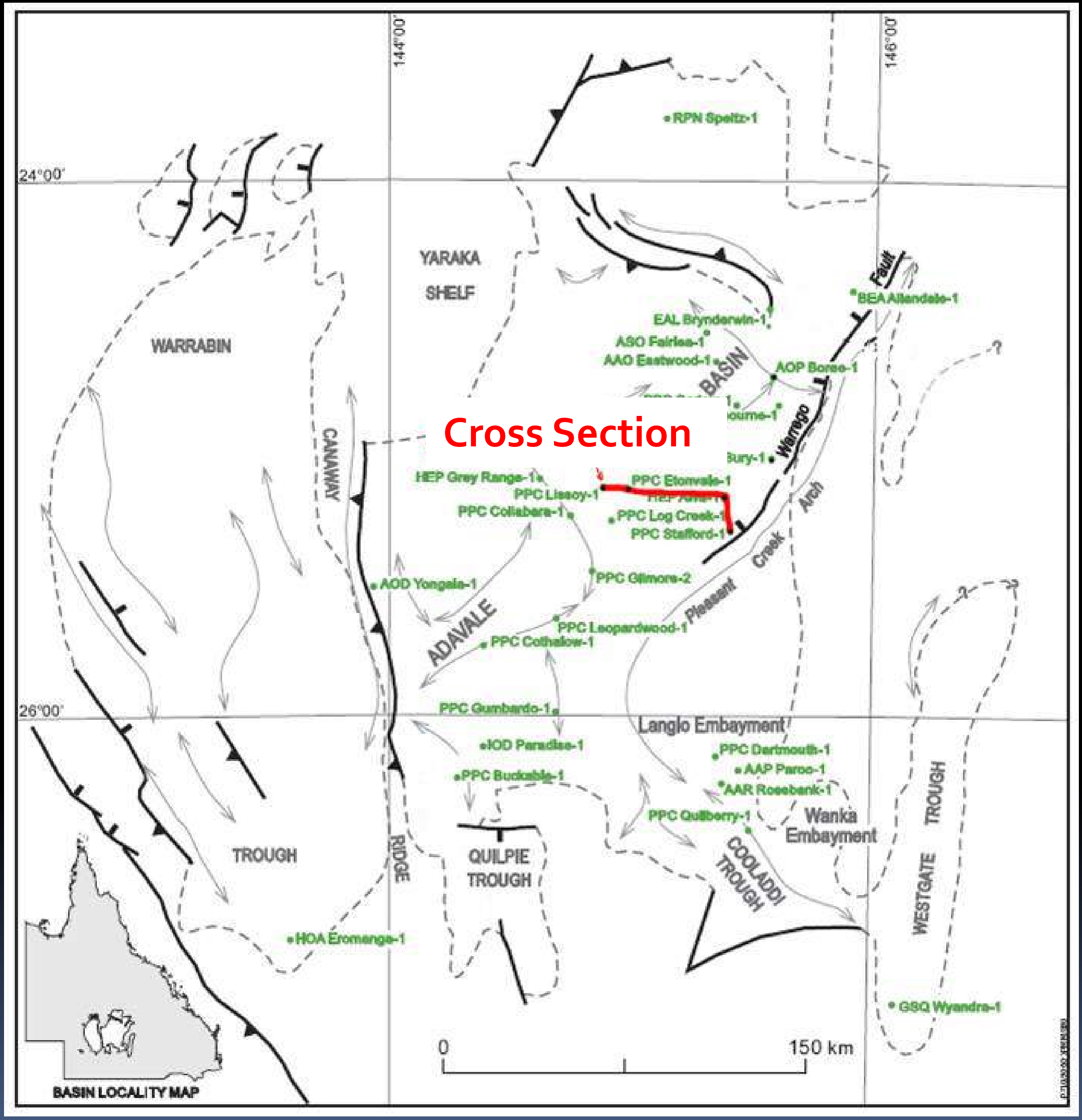
Queensland Potash

I2M Principals on the Tenement

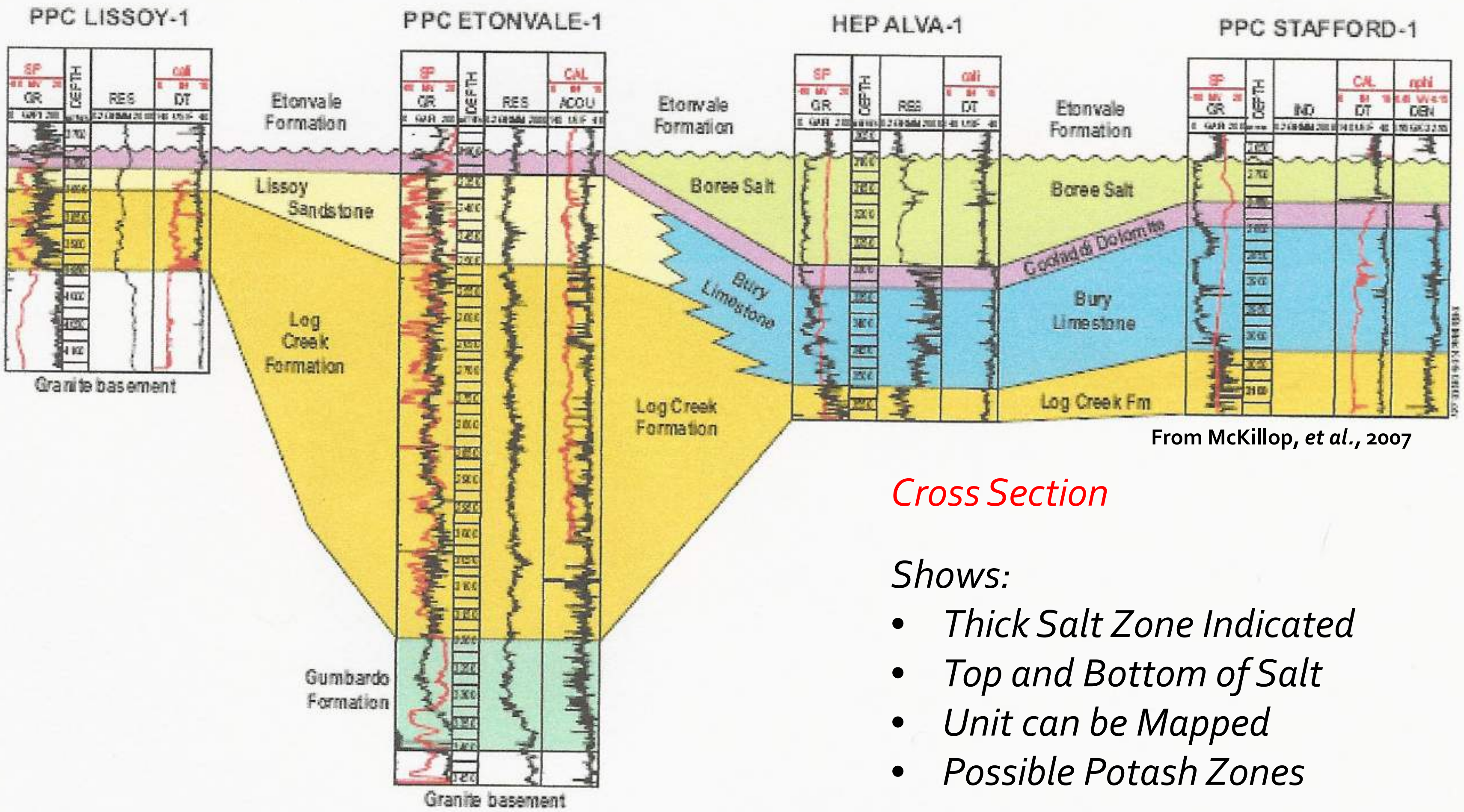
South-Central Queensland Outback

Queensland Potash

- Oil & Gas Drilling
- Adavale Basin
- Thick Salt Intervals
- Potash Zones?
- Cross Section Location



Queensland Potash



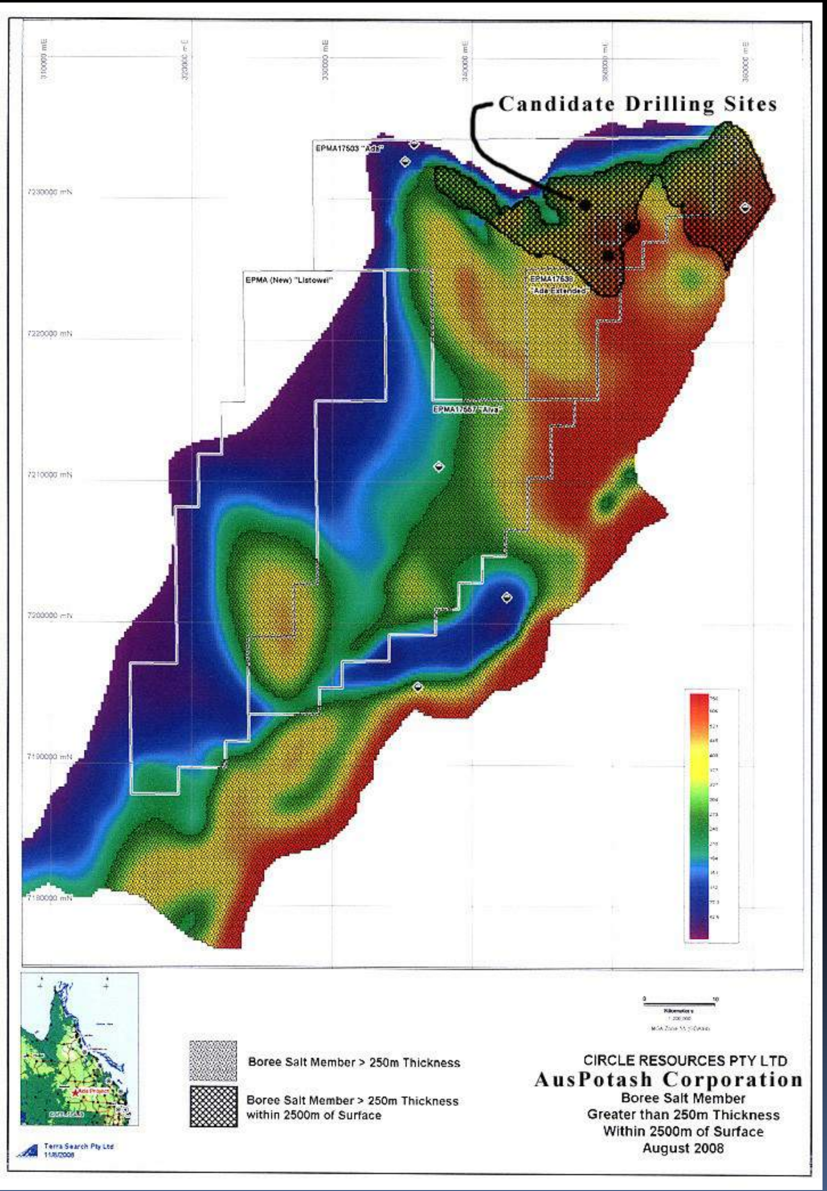
From McKillop, *et al.*, 2007

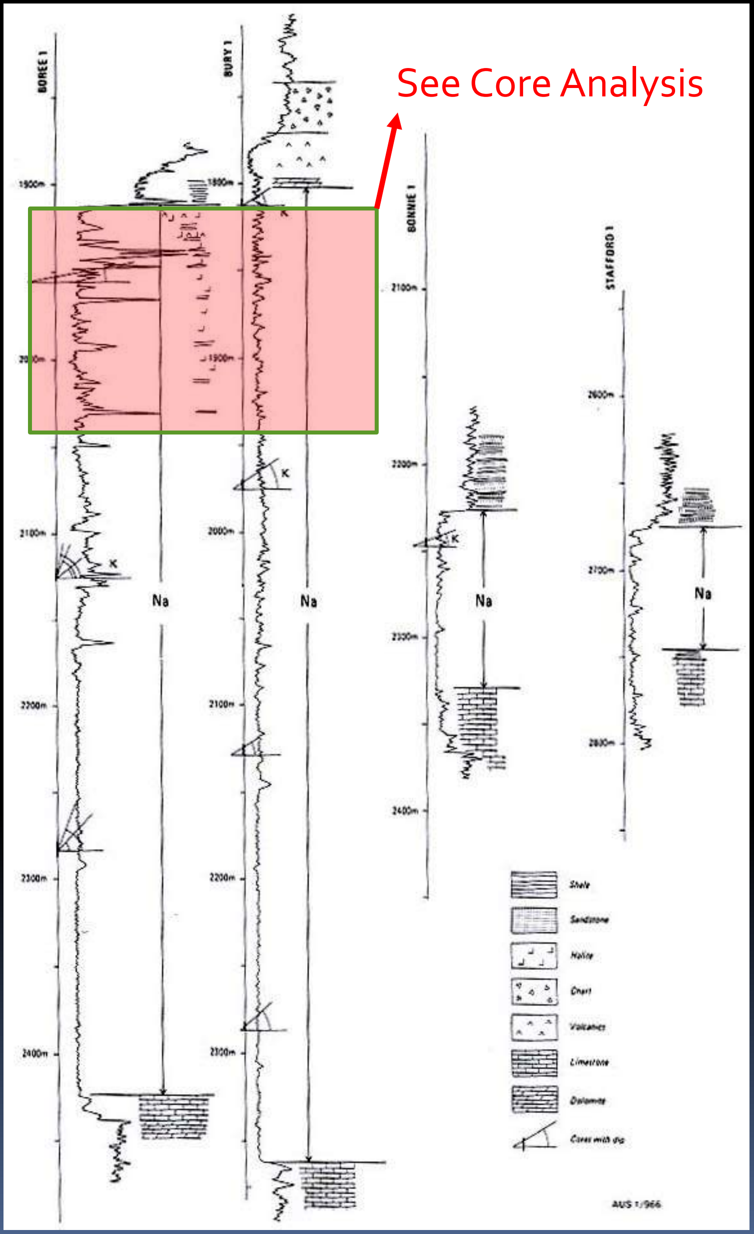
Cross Section

Shows:

- *Thick Salt Zone Indicated*
- *Top and Bottom of Salt*
- *Unit can be Mapped*
- *Possible Potash Zones*

Queensland Potash





Salt Member > 250 Meters Thick, also within 2,500 meters of the Surface

Queensland Potash

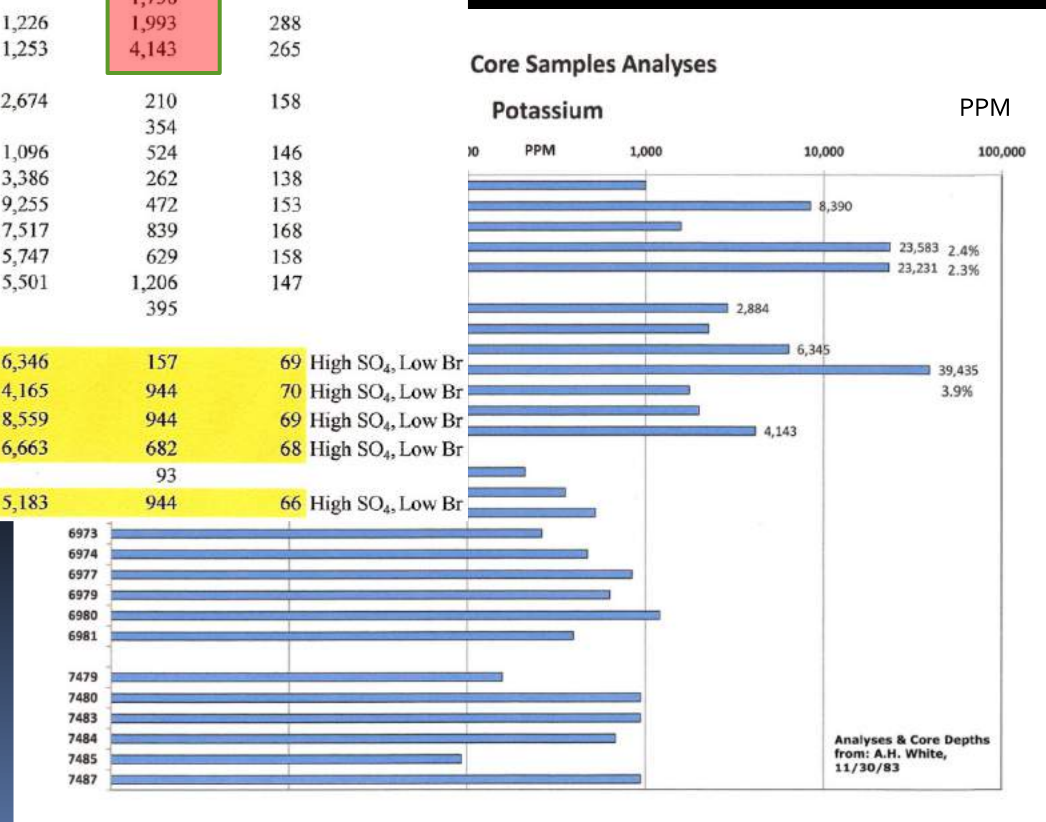
Core Analyses Showing Some High Potassium Values

Chemical Analyses for Bury No. 1 Cores

(From A. H. White, Poseidon Limited, 11/30/83)

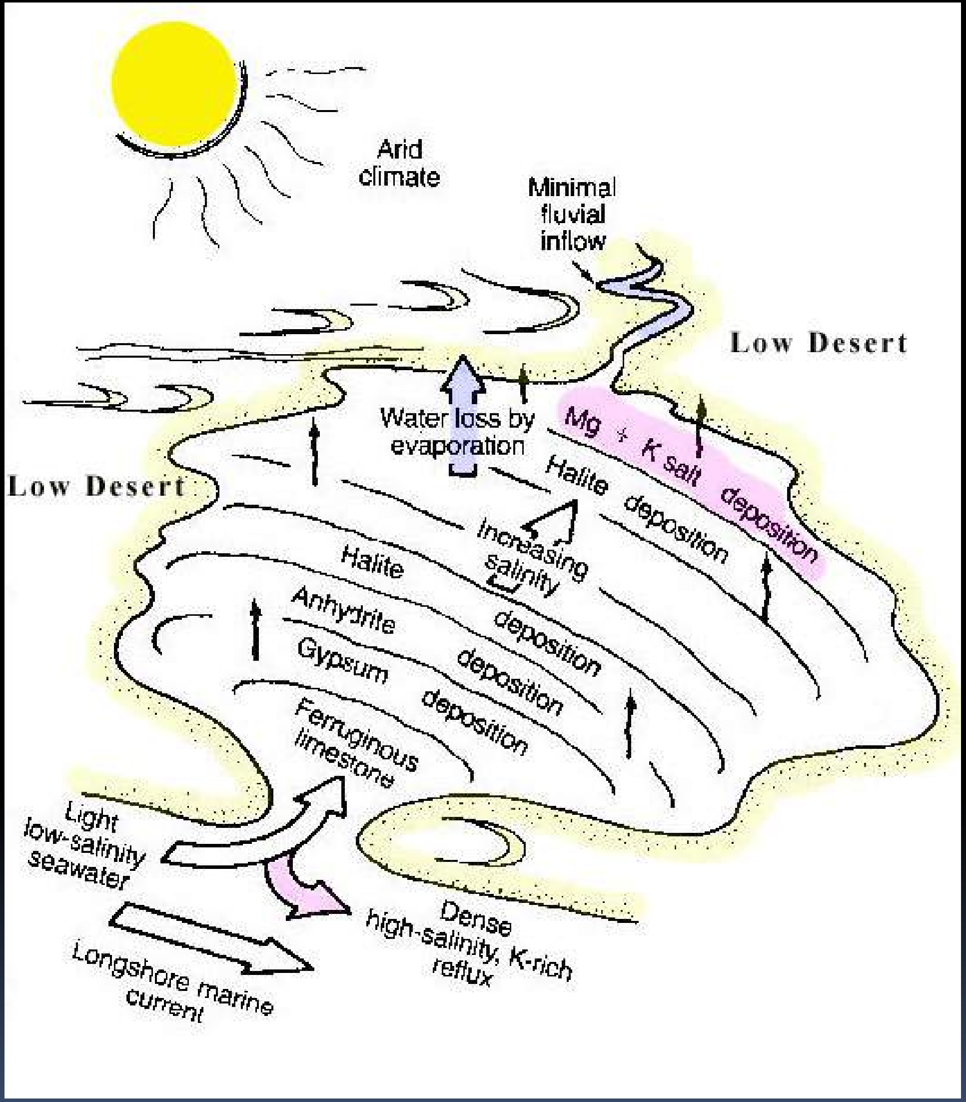
PPM

Core	Depth (Ft)	NaCl (%)	Insoluble (%)	Calcium	Magnesium	Sulfate	Potassium	Bromine	
8	5938(1980m)	99.4	0.4840	527	25	722	996	189	
8	5941	96.4	0.9130	1,116	36	1,801	8,390	235	
8	5943	97.6	1.0150	1,056	26	1,617	1,573	173	
9	5943	94.4	0.0588	647	21		23,583		
8	5945	94.6	0.6150	836	47	1,282	23,231	294	
9	6460	93.2	4.5630	4,544	310	6,886	2,884	256	
9	6461	92.7	0.4155	1,569	158		2,268		
9	6463	86.8	8.6200	6,068	1,151	9,202	6,345	280	
9	6465	88.4	2.7420	3,518	168	5,573	39,435	444	
9	6466	89.2	0.9134	4,494	160		1,758		
9	6467	98.1	0.7951	831	100	1,226	1,993	288	
9	6469	97.3	2.4110	1,142	425	1,253	4,143	265	
10	6969	98.3	0.8780	5,601	22	2,674	210	158	
9	6970	98.7	0.0337	589	14		354		
10	6971	97.3	1.9840	688	42	1,096	524	146	
10	6973	96.2	2.7320	2,080	99	3,386	262	138	
10	6974	92.4	5.0209	4,714	249	9,255	472	153	
10	6977	70.3	17.5140	8,399	526	17,517	839	168	
10	6979	96.6	1.3070	2,734	43	5,747	629	158	
10	6980	94.6	3.7970	2,569	133	5,501	1,206	147	
10	6981	94.5	0.7847	1,982	80		395		
11	7479	94.9	2.9670	2,927	53	6,346	157	69	High SO_4, Low Br
11	7480	98.5	0.9680	1,998	6	4,165	944	70	High SO_4, Low Br
11	7483	92.6	6.3920	4,542	35	8,559	944	69	High SO_4, Low Br
11	7484	95.0	4.0700	3,296	24	6,663	682	68	High SO_4, Low Br
11	7485	93.6	0.2384	1,397	20		93		
11	7487(2495m)	96.3	1.7850	2,669	16	5,183	944	66	High SO_4, Low Br



Queensland Potash

Possible Downhole Solution Mining



Model of Potash Formation

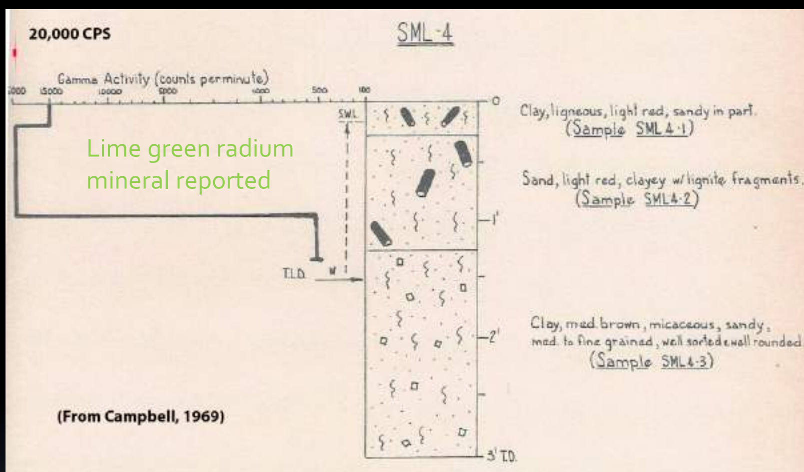
South Australia Uranium

Scope of Work for Assessment:

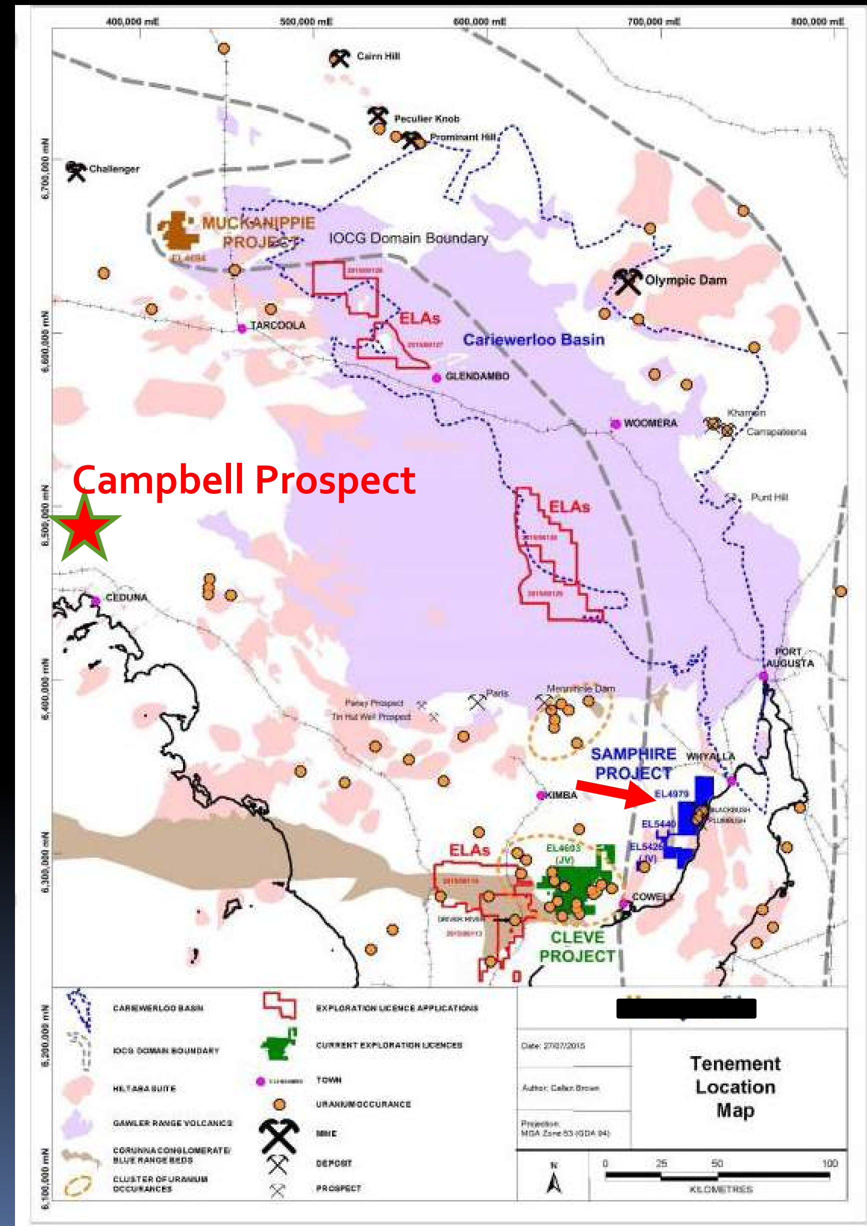
- evaluate the available reports on the uranium resources available and the in situ recovery (ISR) methodology under consideration by the Company in the exploration and development activities to date by performing a geological and metallurgical peer review and due diligence [redacted] Project in South Australia,
- evaluate the professional staff of [redacted] the Company and associated hydrogeological consultant,
- review assumptions in the financial model emphasizing capital expenditures and operating costs and the associated impacts, and
- identify associated risks regarding the proposed in situ uranium leaching and recovery process for production of yellowcake and sale on the spot market or other markets,

South Australia Uranium

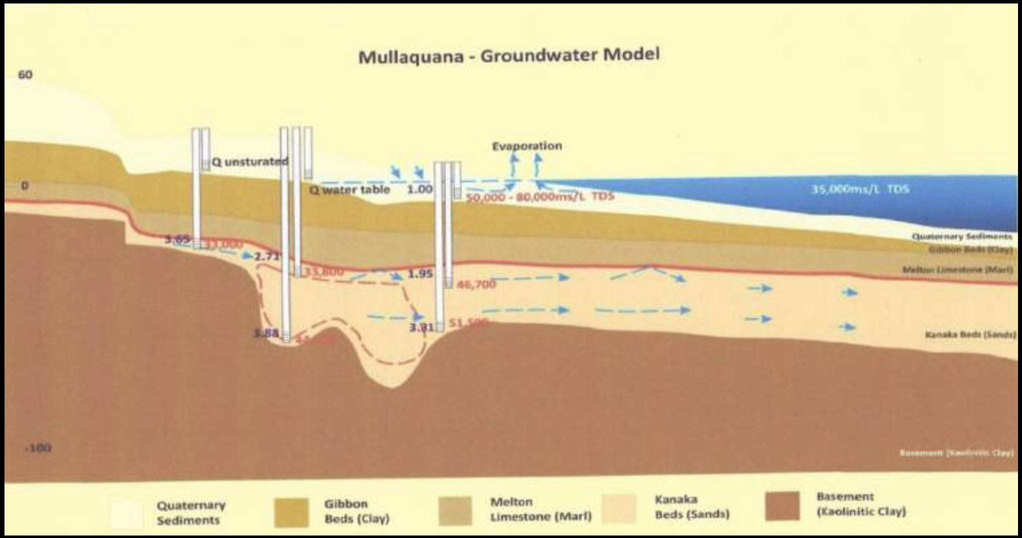
Previous Work



Hand Augering
Dry Lake Beds

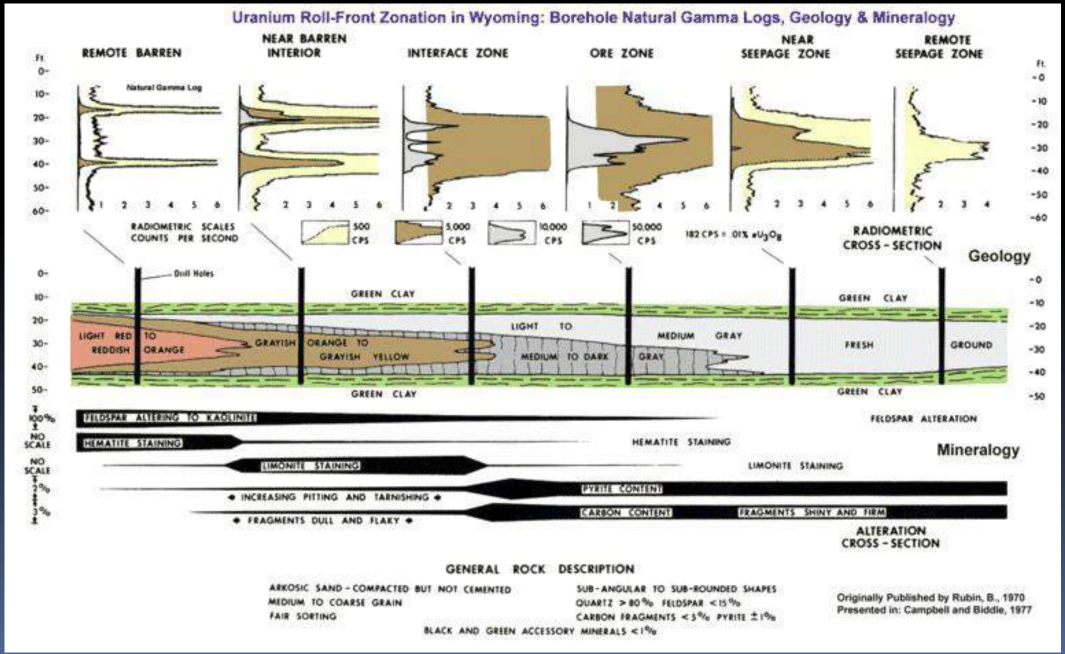


South Australia Uranium



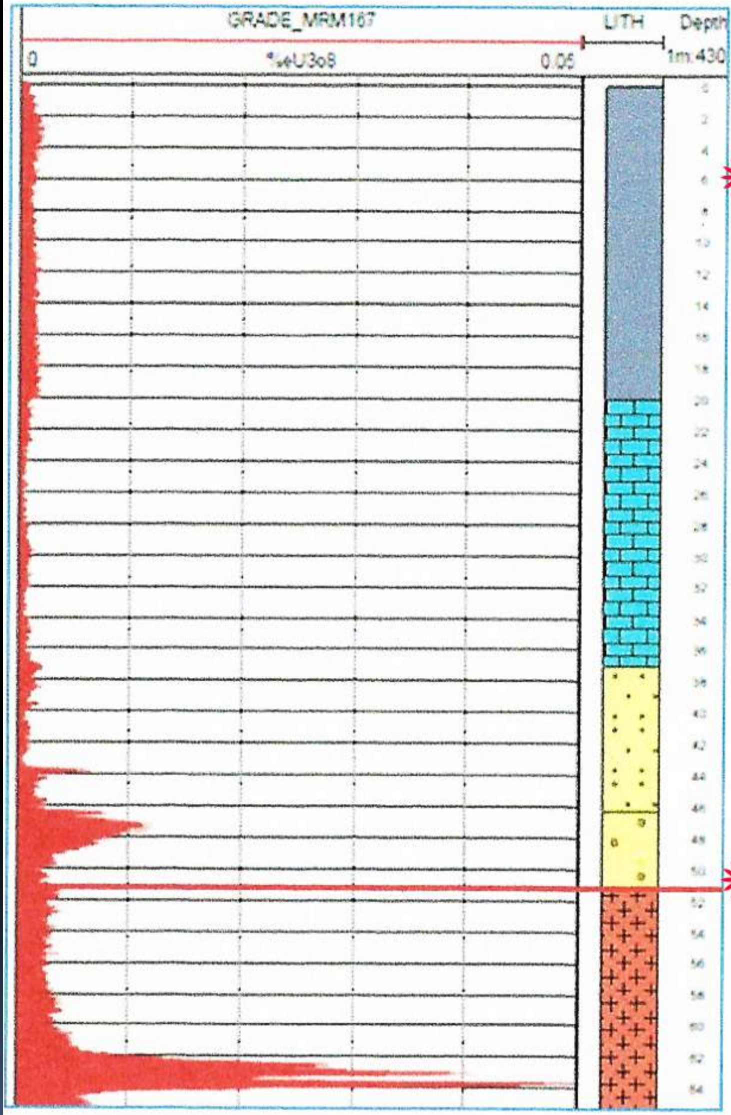
Pre-Visit Model of Uranium Occurrence

Classical Roll-Front Uranium Model for Exploration



I2M Associates, LLC

South Australia Uranium



Rotary mud drill hole MRM 167 drilled at the eastern extremity of the [redacted] deposit

radiometrically anomalous clay-altered granite ~12m below the Eocene unconformity.

During I2M Visit: Identified Potential Role of Unconformity Uranium Model

Eocene unconformity, ~51m

Radiometrically anomalous clay-altered granite, ~63m

South Australia Uranium

Summary and Conclusions of I2M Report:

- Based on the grid drilling conducted to date, the Company has discovered two areas with significant uranium mineralization (i.e., the [redacted] areas).
- Upon assessing the resource characterization from the logs, cores and geological review, it appears that the available mineralization of the discovery is less than that indicated by the Company. This would result in substantially less in situ recovery from certain areas of the deposit thus reducing the ultimate recovery of grade uranium (U_3O_8).
- The existing drill holes are insufficient in number and spacing to identify the interior characteristics of the uranium mineralization.
- The underlying granite and its uranium content needs to be better understood as it could contain potentially economic quantities of uranium.
- More core drilling should occur to better understand the geology of the deposit, the amount of available uranium in the sediments and in the underlying granite basement.
- In situ processing of the uranium would be unusually difficult to control under the high-saline environment present in the subsurface.
- The risk of economic recovery from in situ leaching and ion exchange is high due to acid soluble calcium prevalent in the subsurface system, high chloride levels and unknown distribution of the uranium mineralization.
- A move to an open-pit method of mining the deposit should be reviewed, but this method introduces the necessity of re-initiating further permitting, drilling and coring thus delaying production dates.

Disequilibrium Studies:

South Australia Uranium

"MRM 881 reported a peak grade of **5.04% eU_3O_8** (50,362 ppm) within a broader high grade intercept (*cut-off 100ppm eU_3O_8*):

MRM 881	[redacted]	**26.5m**	**@ 0.19% eU_3O_8**	*1,900ppm eU_3O_8*
including		**15.9m**	**@ 0.30% eU_3O_8**	*3,050ppm eU_3O_8*
including		**4.5m**	**@ 1.02% eU_3O_8**	*10,180ppm eU_3O_8*

PFN results from the high grade interval show positive disequilibria;

peak grade	natural gamma sonde	5.04% eU_3O_8
	PFN	7.41% pU_3O_8
4.5m intercept	natural gamma sonde	1.02% eU_3O_8
	PFN	1.15% pU_3O_8 "

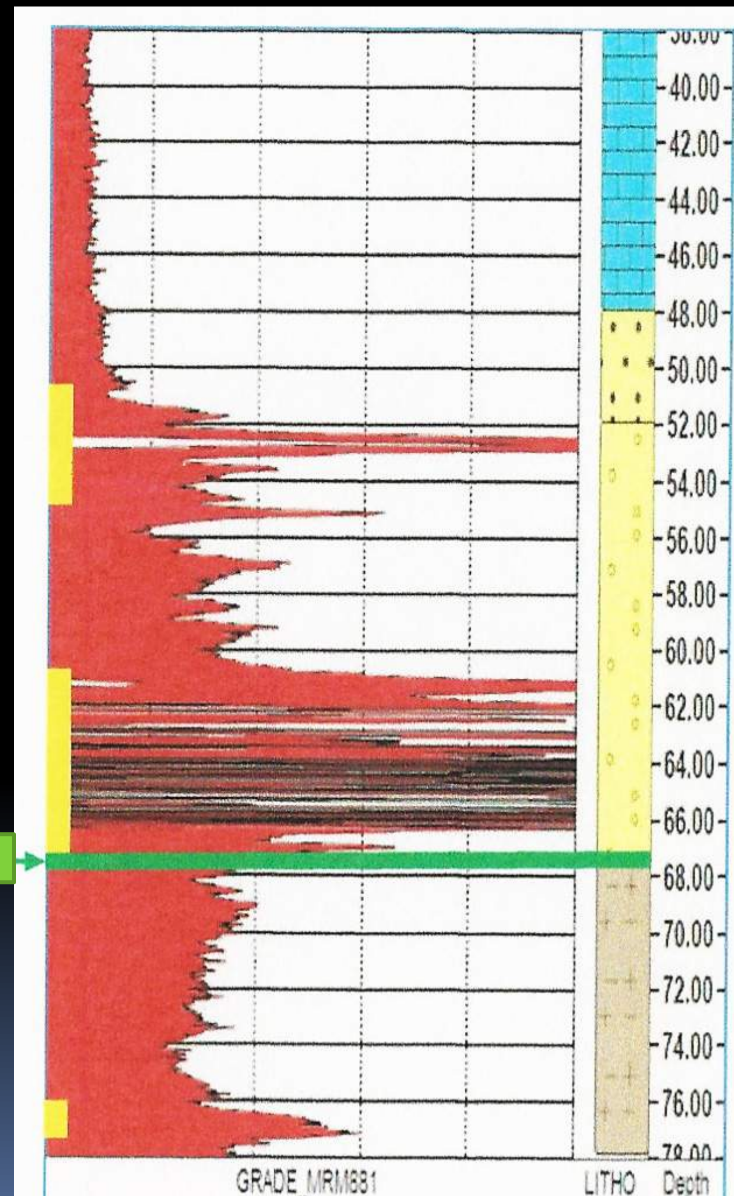
- **PFN (Prompt Fission Neutron) Logging**
  - **Direct measure of ^{235}U**
  - **Provides spontaneous measure of disequilibrium**
  - **Expensive, complex, high maintenance system**
  - **Requires specialist radiation licensing**
  - **Limited availability**
  - **Very slow logging speed (~0.5m/min)**

- **Total Gamma Logging**
  - Indirect measurement of uranium (^{214}Bi and ^{214}Pb)
  - Cheap and reliable equipment
  - Measures all radio nucleotides (Sum of K+Th+U…)

- **Spectral Gamma Logging**
  - Measures the energy spectrum of gamma radiation and can discern between different radio nucleotides such as uranium (^{214}Bi), thorium (^{208}Tl), K.

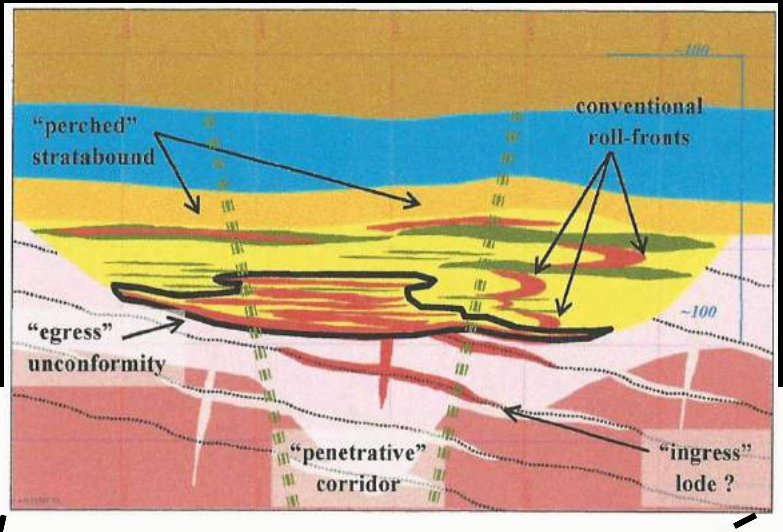
(After Skidmore (2009))

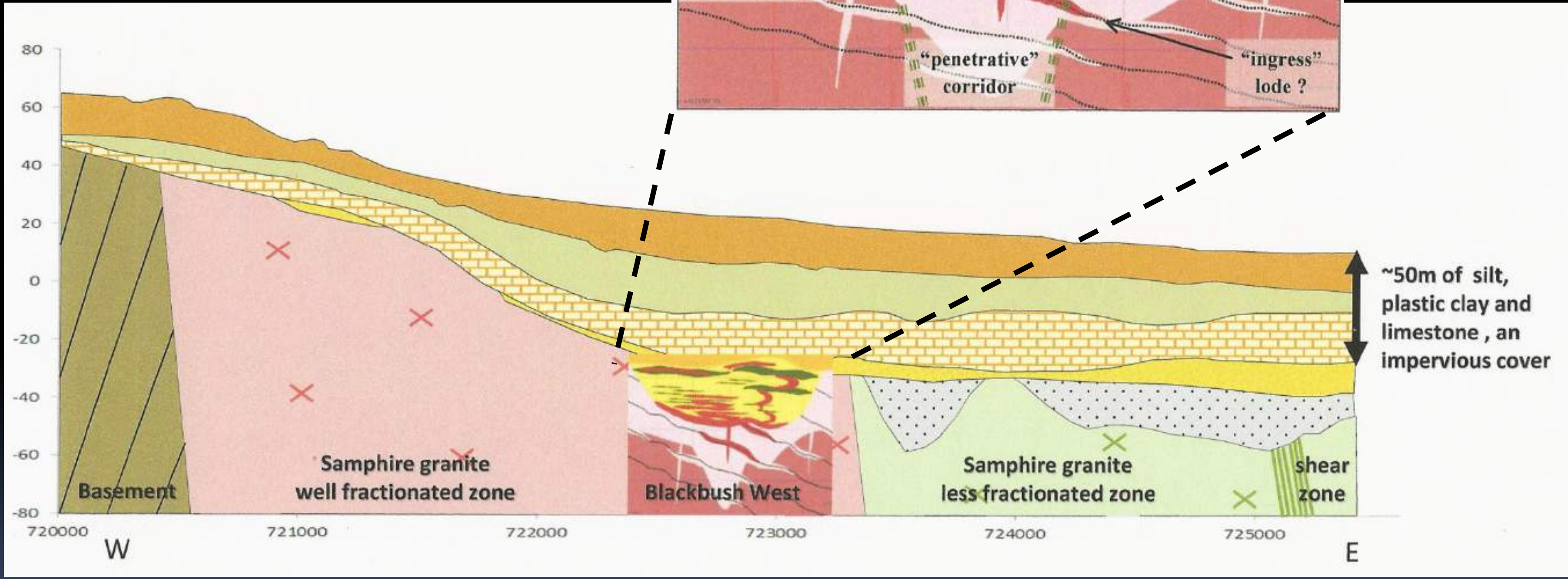
Unconformity



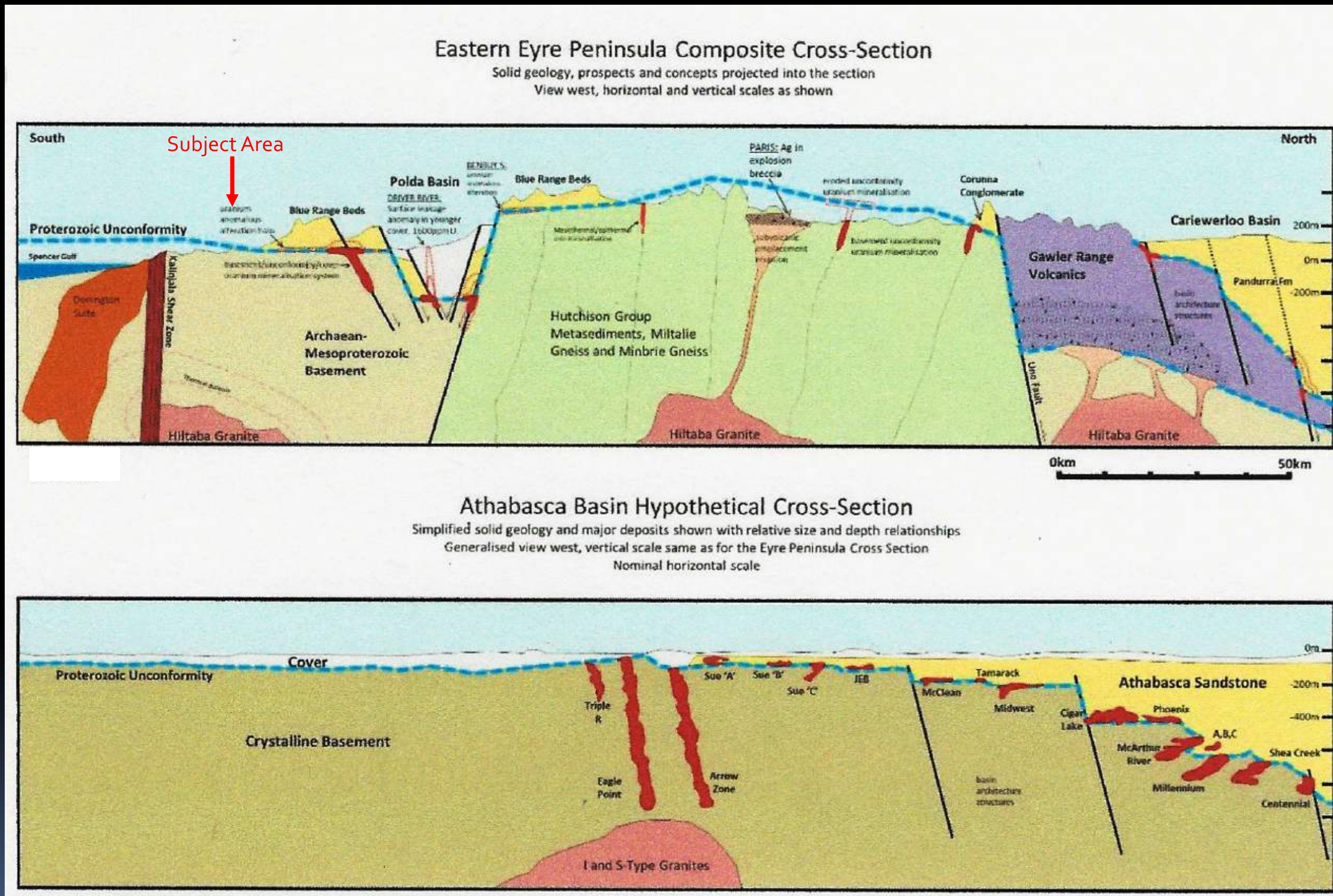
South Australia Uranium

Subsequent Work on the Unconformity-Related Uranium Occurrences





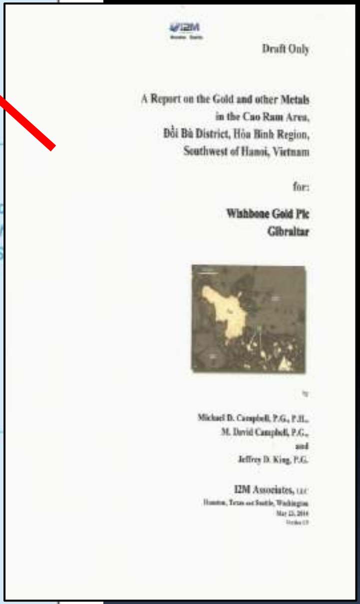
South Australia Uranium



New Model of Uranium in the Subject Area

Vietnam Gold

Figure 1 - PROJECT AREA MAP
Vietnam Project 7244



Draft Only

A Report on the Gold and other Metals
in the Cao Ram Area,
Đồi Bù District, Hòa Bình Region,
Southwest of Hanoi, Vietnam

for:

Wishbone Gold Plc
Gibraltar

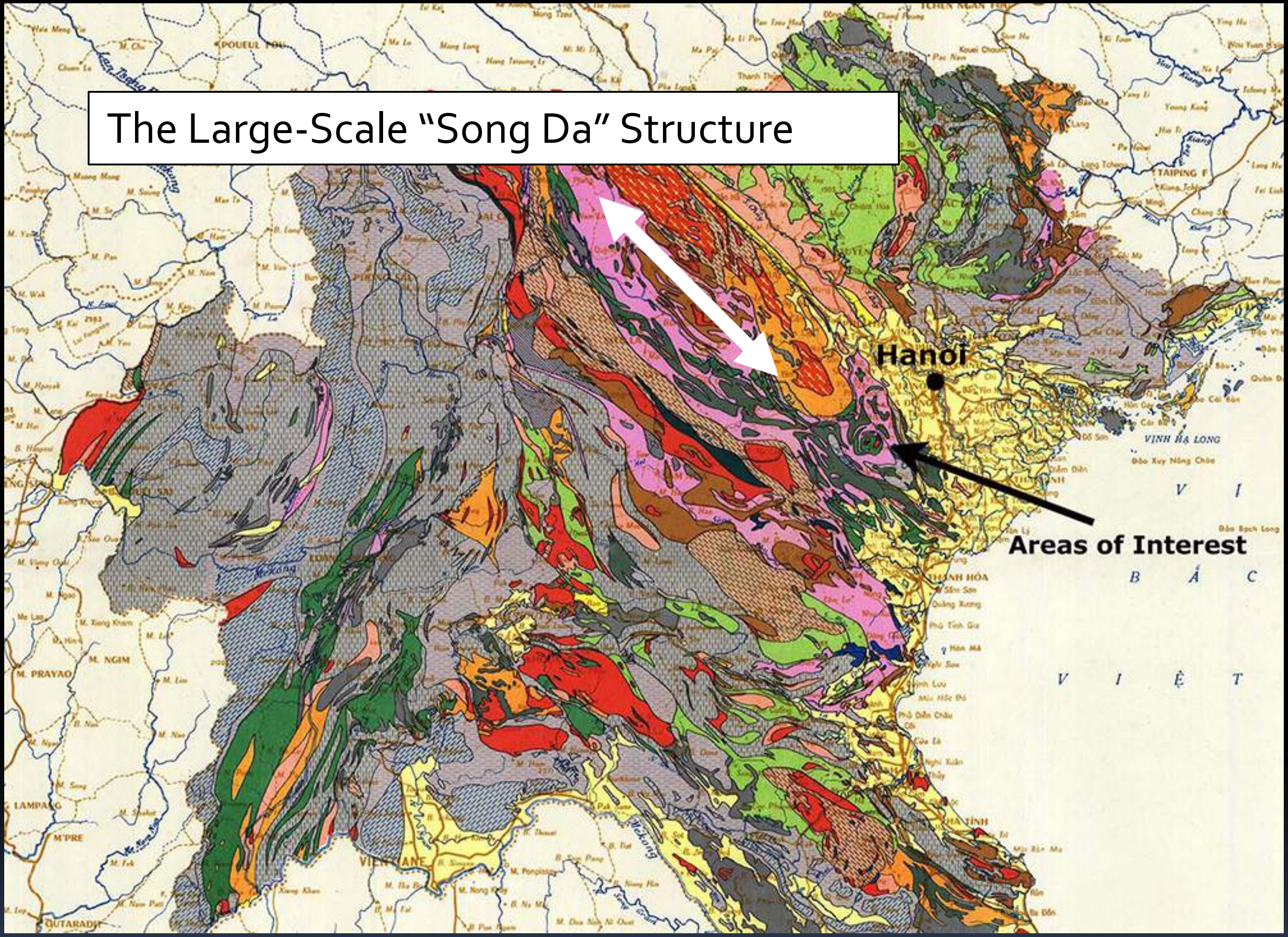
Michael D. Campbell, P.G., P.H.,
M. David Campbell, P.G.,
and
Jeffrey D. King, P.G.

I2M Associates, LLC
Houston, Texas and Seattle, Washington

Vietnam Gold

In Hanoi, Preparing for the Vietnamese Lunar New Year celebration – called TET. Government extolling virtues of their accomplishments over the past year …. Increased commerce and electricity…

Vietnam Gold



Domal structure and is composed of volcanic rocks surrounded by faulted sedimentary rocks underlain by intrusive bodies of mafic and mafic-intermediate composition intersected by fault systems of NW-SE and conjugant NE-SW strike.

Vietnam Gold

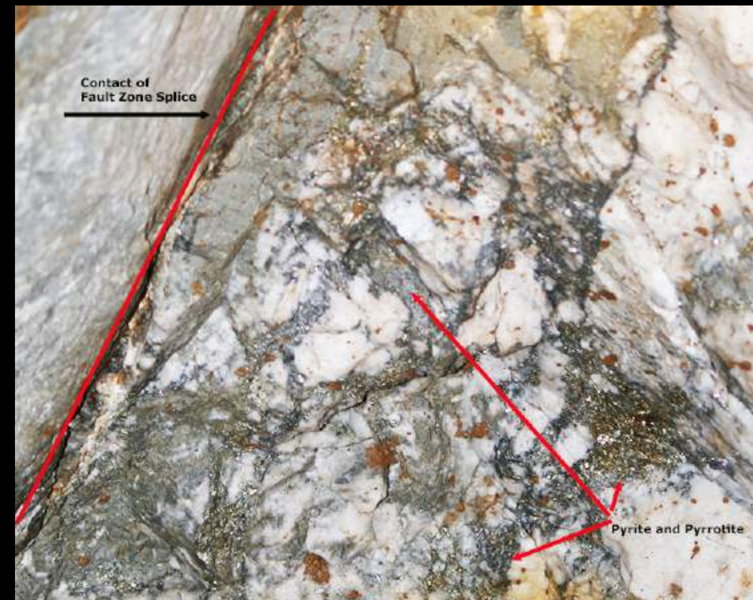
Pre-hip replacement field transportation up and down the mountains

Underground mining by adit of about 200 yards to working mine face adits.

Client-Consultant discussions at mine

Vietnam Gold

Ore Dump



Hanging Wall-Footwall w/ Mineralization

Sampling at the Mining Face

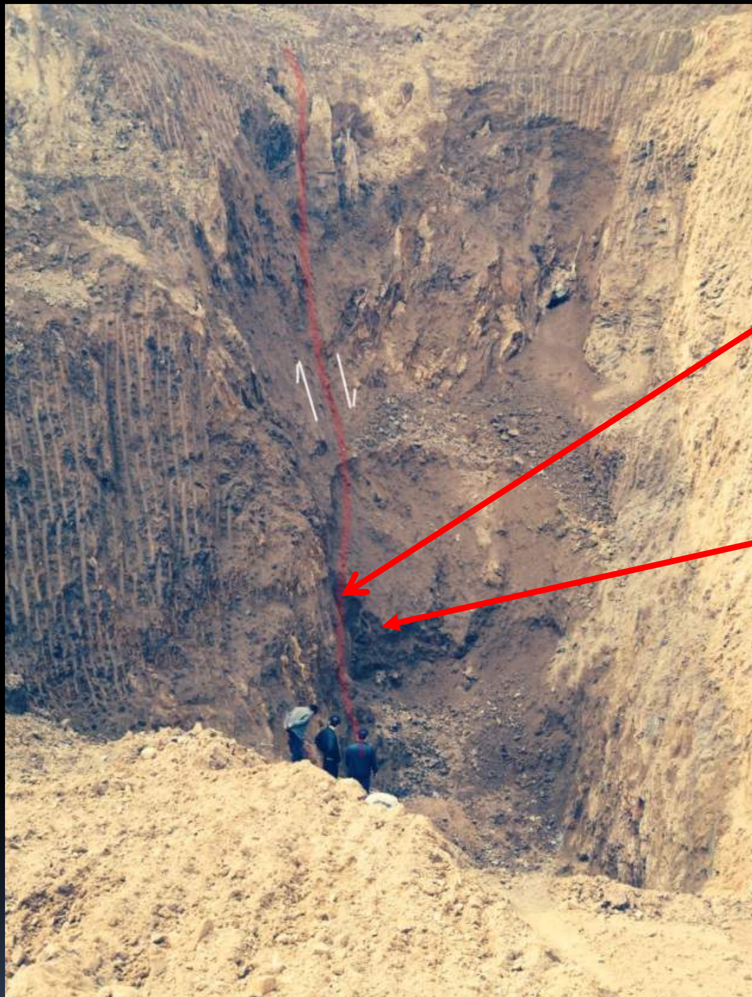
Minerals Associated with Mineralized Zones in the Doi Bu Area*

Mineralized Zones		Gangue Minerals	
Primary	Secondary	Hydrothermal Minerals	Dike Minerals
Pyrite	Goethite	Chlorite	Quartz
Arsenopyrite	Hydrogoethite	Epidote	Calcite
Galena	Anglesite	Sericite	Chlorite
Sphalerite	Coveline	Ankerite	Epidote
Chalcopyrite	Chalcosine	Calcite	
Native gold	Malachite	Feldspar	
Electrum	Azurite		
Pyrrhotite	Bromite		
Bornite	Svanbergite		
Bronze	Pyromorphite		

* Note: Modified from table in Nguyen Dac Lu, No Date, "Brief Outlines on Gold of Vietnam," 15 p

I2M Associates, LLC

Vietnam Gold



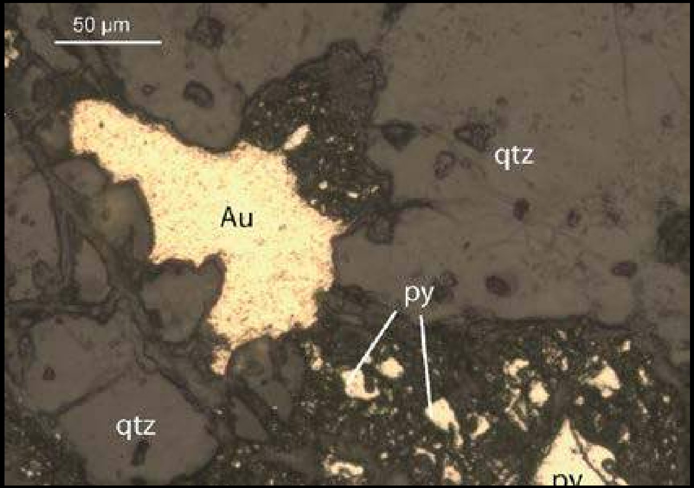
New Pit …safety hazard!

Slickensides

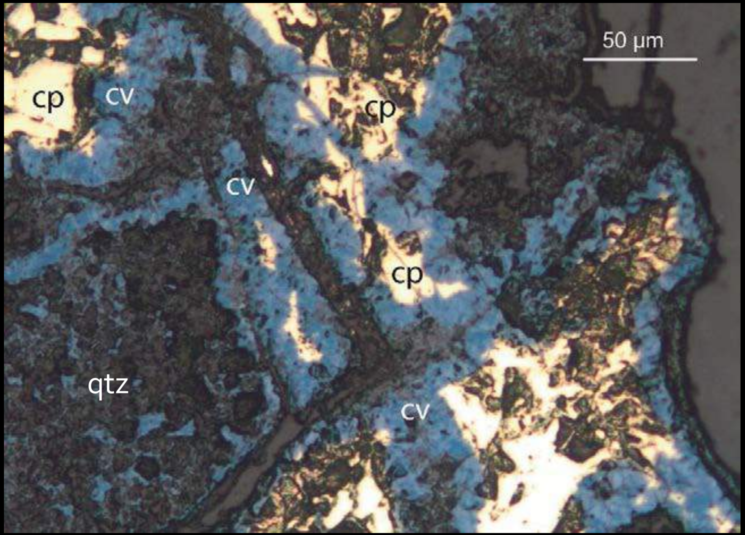
Mineralized Quartz Breccia

Mining Company, Government, and I2M Personnel

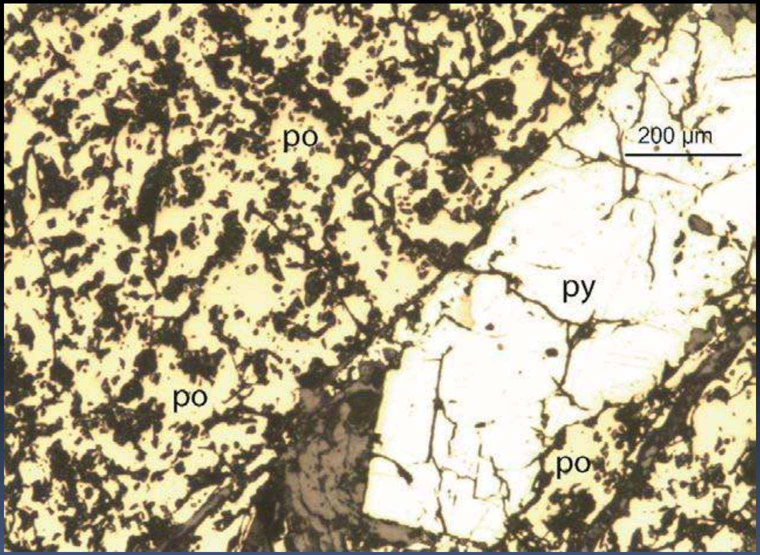
Vietnam Gold



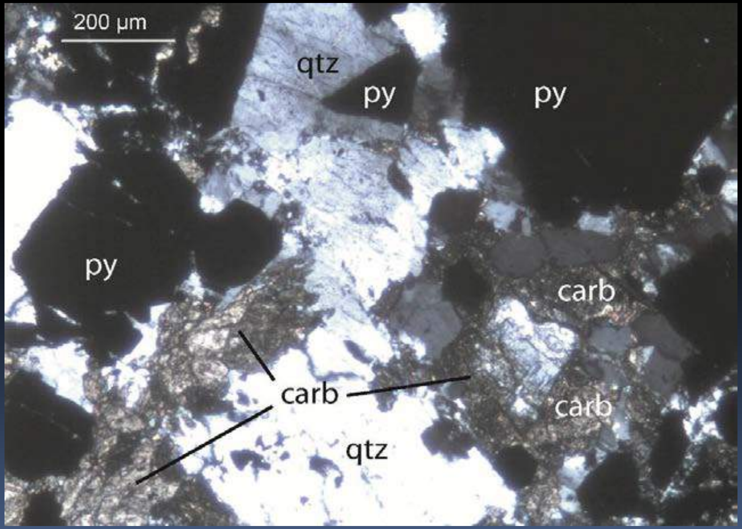
Native Gold and Pyrite



Chalcopyrite and Covellite



Pyrrhotite, Pyrite and Quartz



Pyrite, Calcite, and Quartz

Vietnam Gold

Regional Geological Survey of Vietnam

Presentation of Geological Information

Heading to Meetings with Mining Company Personnel

Vietnam Gold

Processing Plant

Primary Crusher, Flotation Cells and Primary Filters

Toward Rice Fields

Vietnam Gold

Final Filtration System – Pond Missing

Breach in Tailings Pond Wall into Local Creek

Sampling Tailings Pond Sediments of Final Filters

Vietnam Gold

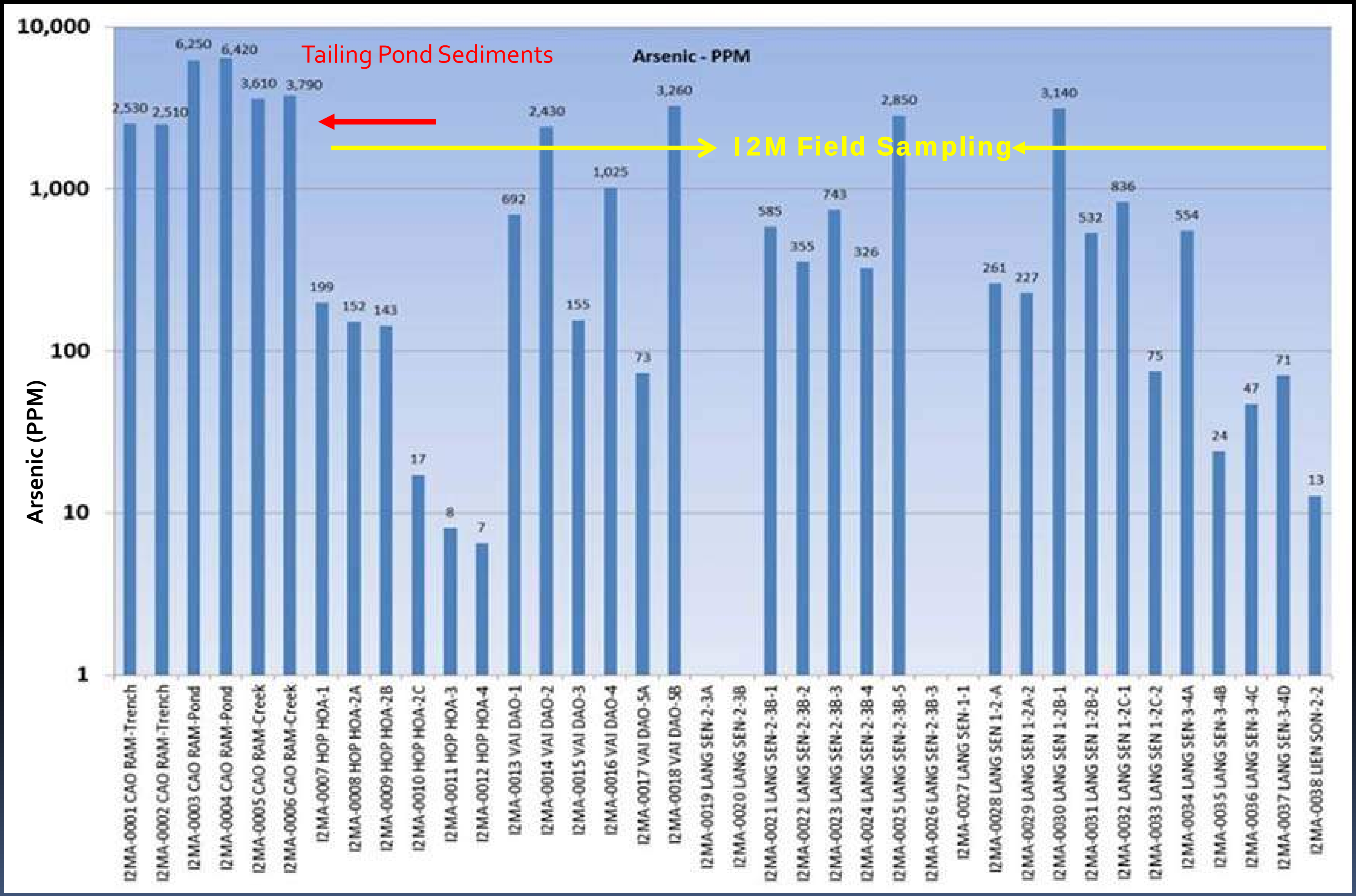
Tailings Geochemistry

Plant Trench, Tailings Pond and Stream Sediments
Arsenic, Cadmium, Mercury, and Lead

Sample ID#	Sample Area	Arsenic (ppm)	Cadmium (ppb)	Mercury (ppb)	Lead (ppm)
I2MA-0001	CAO Ram Trench	2,530	620	178	47.0
I2MA-0002	CAO Ram Trench	2,510	560	182	41.9
I2MA-0003	CAO Ram Pond	6,250	860	346	42.7
I2MA-0004	CAO Ram Pond	6,420	870	342	45.8
I2MA-0005	CAO Ram Creek	3,610	660	158	30.9
I2MA-0006	CAO Ram Creek	3,790	730	177	33.5
Detection Limit		0.2	20	5	0.5

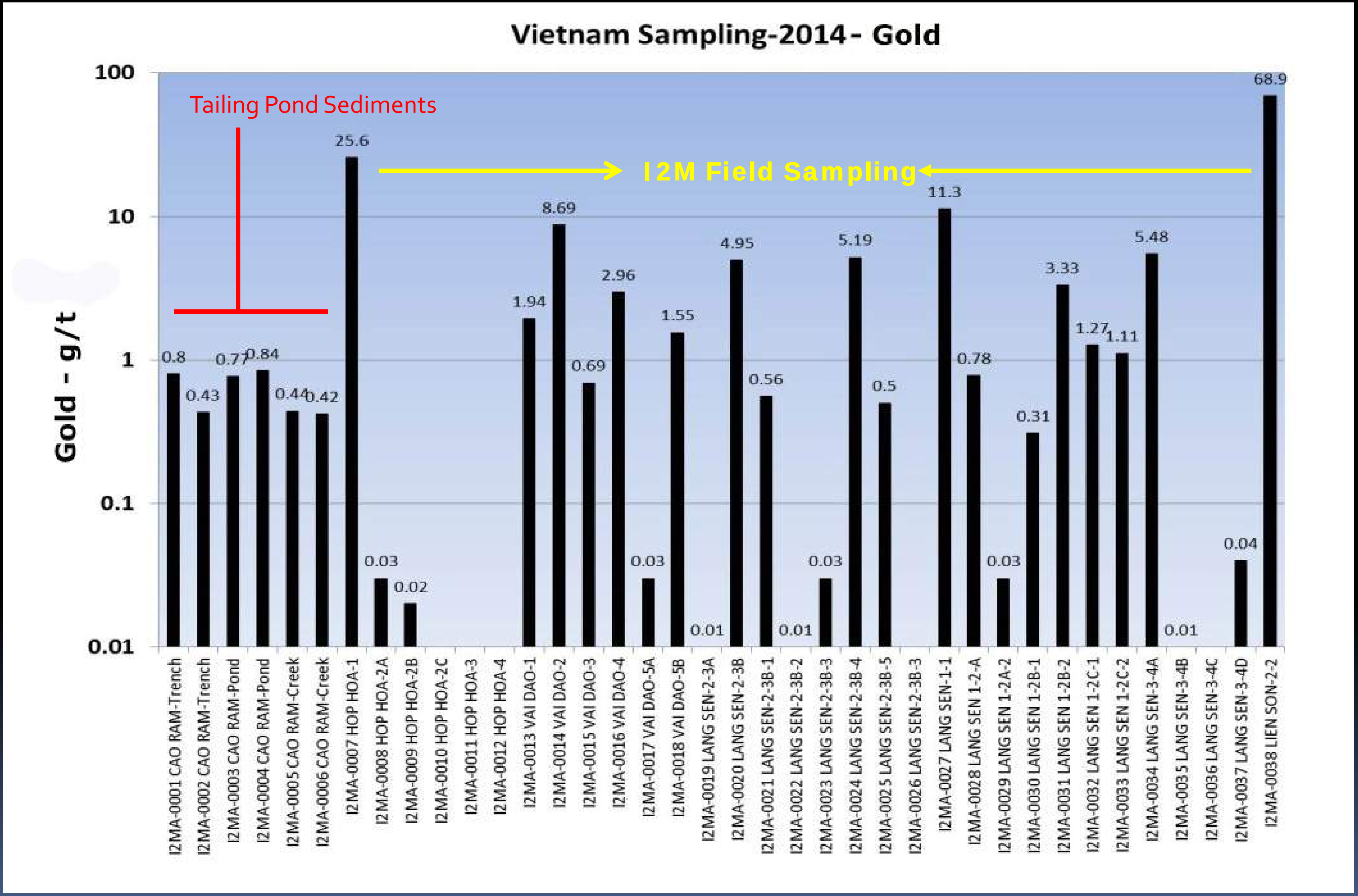
Sampling Results for Arsenic, Cadmium, Mercury, and Lead

Vietnam Gold



Sampling Results for Arsenic

Vietnam Gold



Sampling Results for Gold

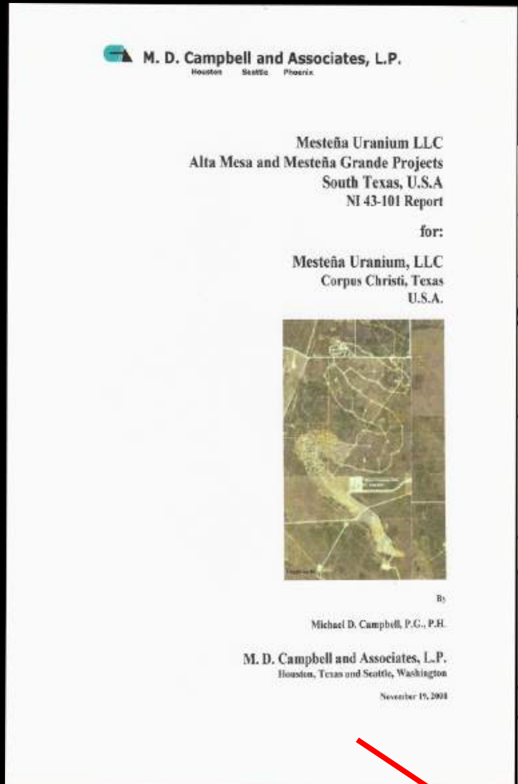
Vietnam Gold

Last Evening Dinner Ceremony at the Metropole Hotel

Preparing for the Tet at Hanoi University

Farewell to Vietnam and off to Hong Kong

Texas Uranium



M. D. Campbell and Associates, L.P.
Houston Seattle Phoenix

Mesteña Uranium LLC
Alta Mesa and Mesteña Grande Projects
South Texas, U.S.A
NI 43-101 Report

for:

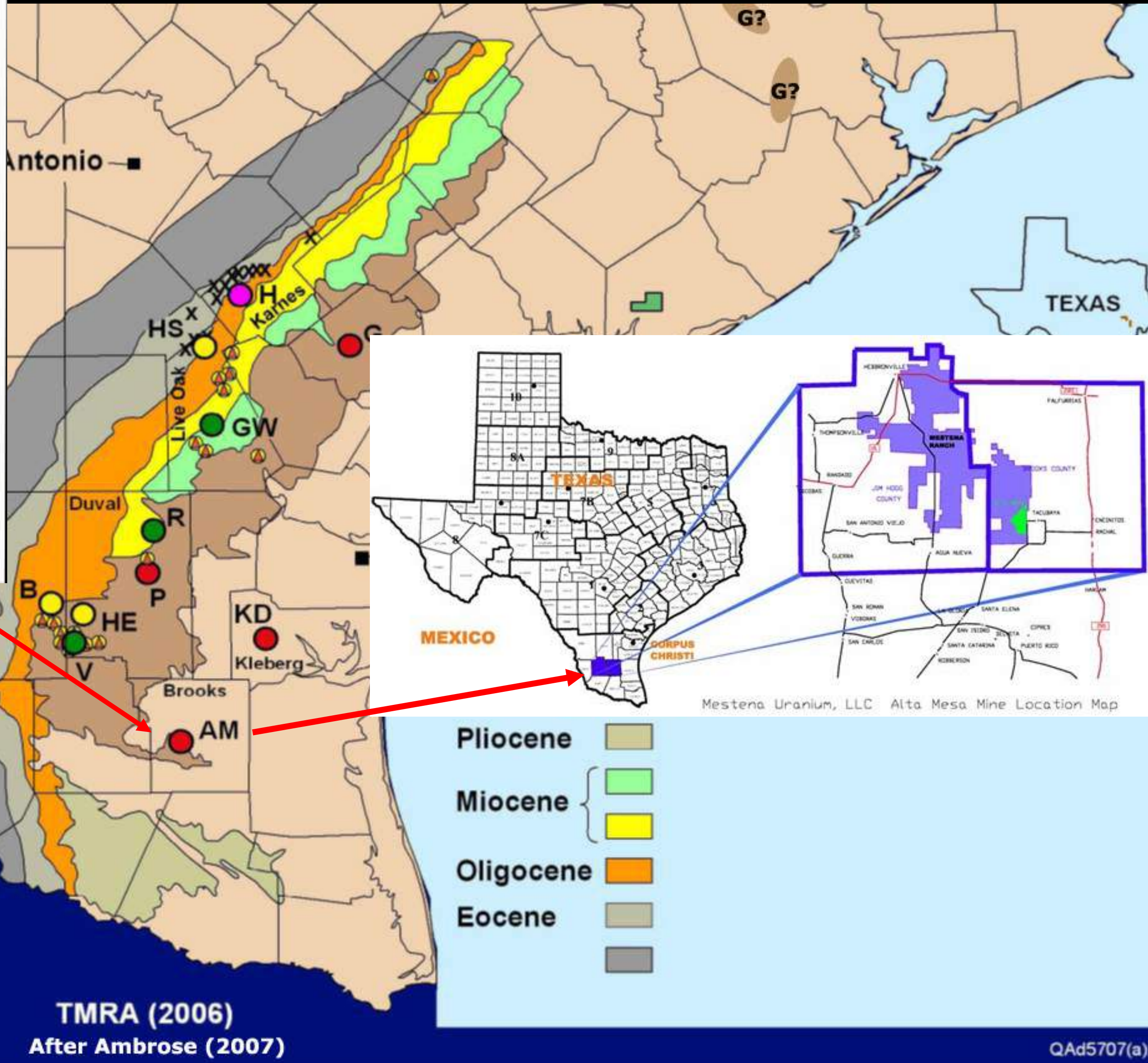
Mesteña Uranium, LLC
Corpus Christi, Texas
U.S.A.

By

Michael D. Campbell, P.G., P.H.

M. D. Campbell and Associates, L.P.
Houston, Texas and Seattle, Washington

November 19, 2008



Texas Uranium

Typical Uranium Deposit in Selected Formations of U.S. Gulf Coast

Significant Differences at Mestena:

1. Classical mineralization also fault-related in part.
2. Re-reduced mineralization by methane or hydrogen sulfide.
3. Uranium occurs at multiple levels

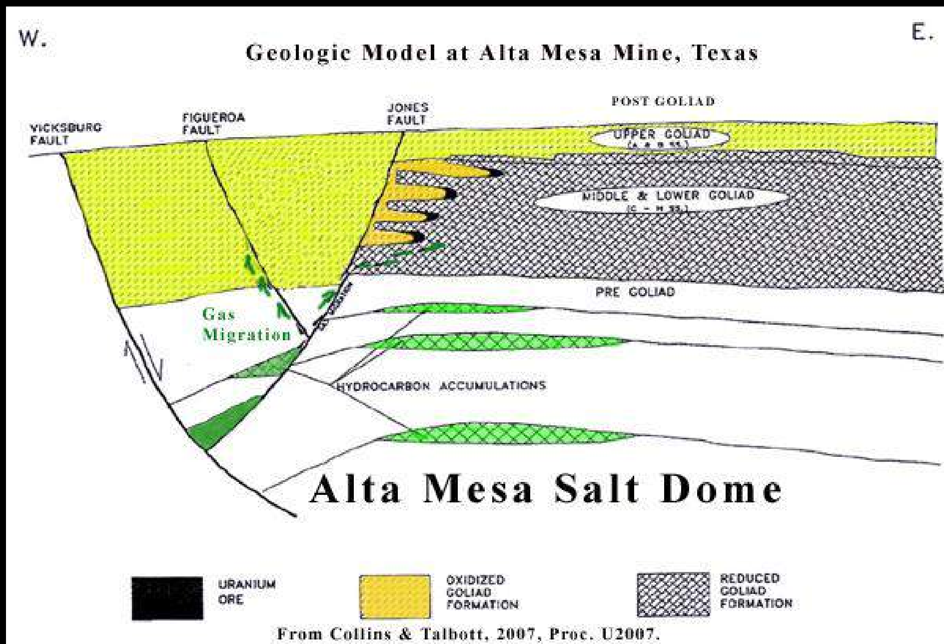
Drill Samples

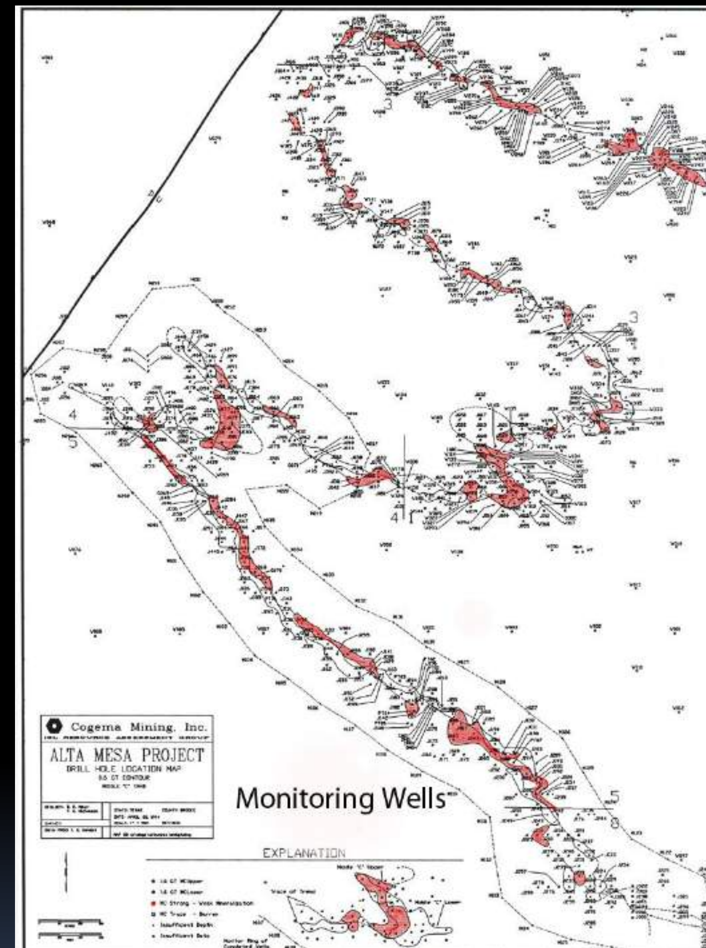
*

* in 1977 HGS Text

Texas Uranium

Typical Uranium Deposit in Selected Formations of U.S. Gulf Coast





Downhole Wireline Logging

Yellowcake Production

I2M

Texas Uranium

Our optimistic economic conclusions were qualified as:

1) Assuming yellowcake price does not increase as projected herein

2) Assuming nuclear power plant construction slows or is halted.

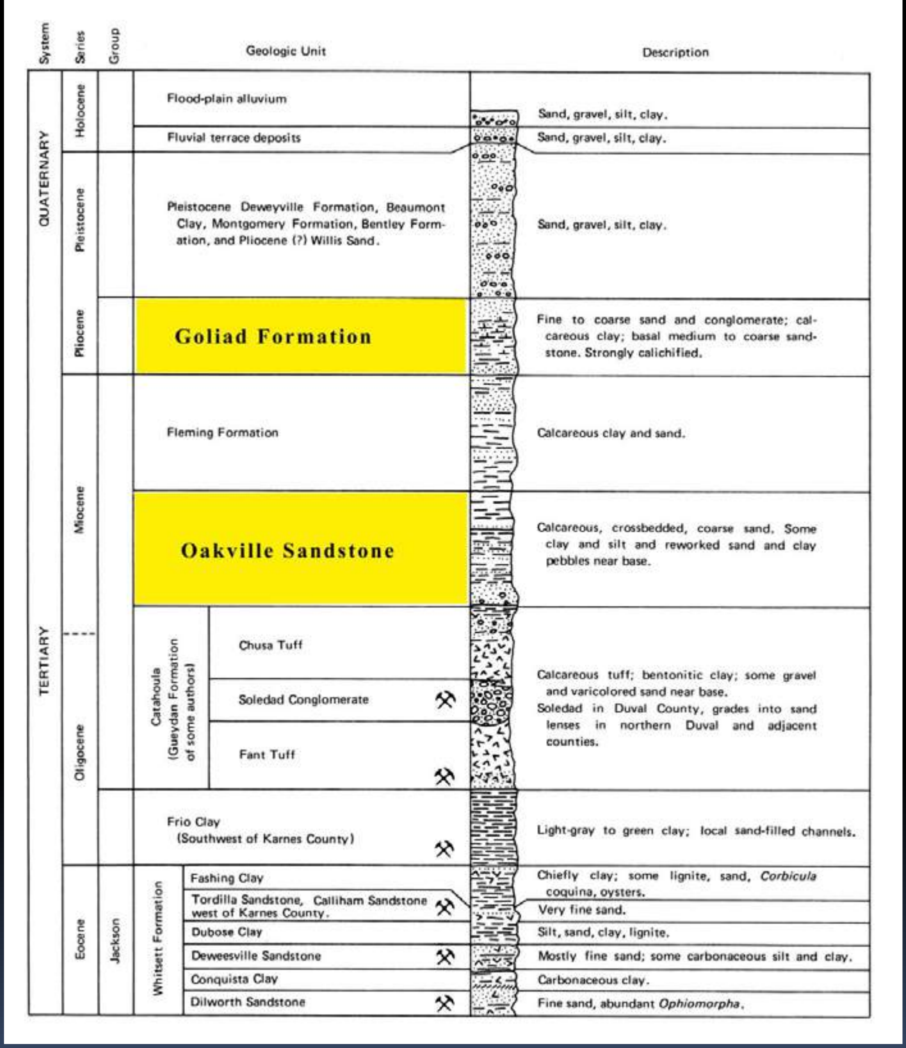
3) Assuming development problems do not develop with the ore present in the Mesteña Grande area (to northwest).

4) Assuming a materials shortage does not develop that could delay construction of the new processing plant or compromise the operation of the present plant .

5) Assuming no substantial cost inflation occurs.

6) Assuming a major regulatory issue does not develop relating to an accident, leak, or spill at the existing plant.

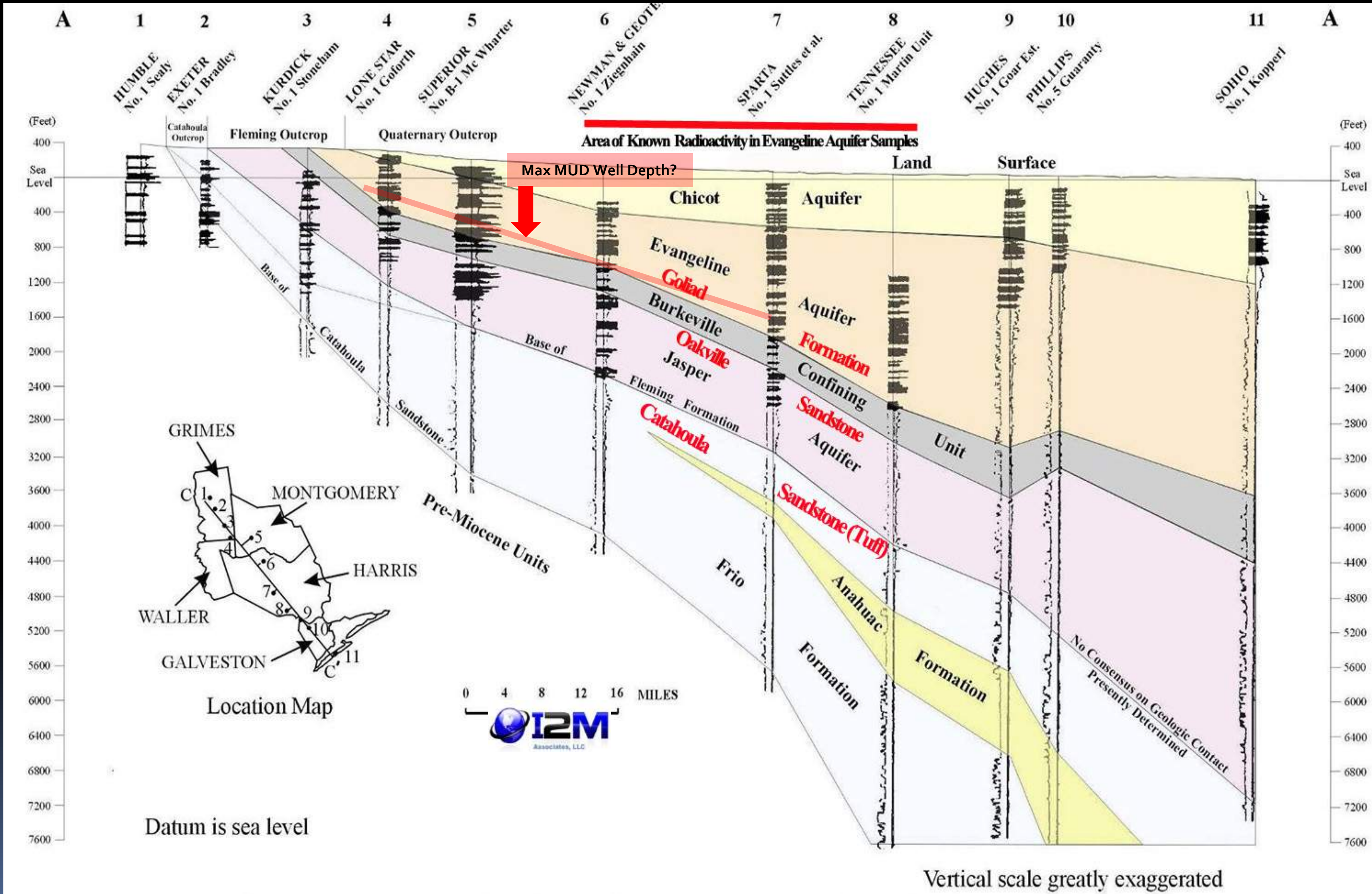
Total Production to Date: 4.6 million pounds (U_3O_8)



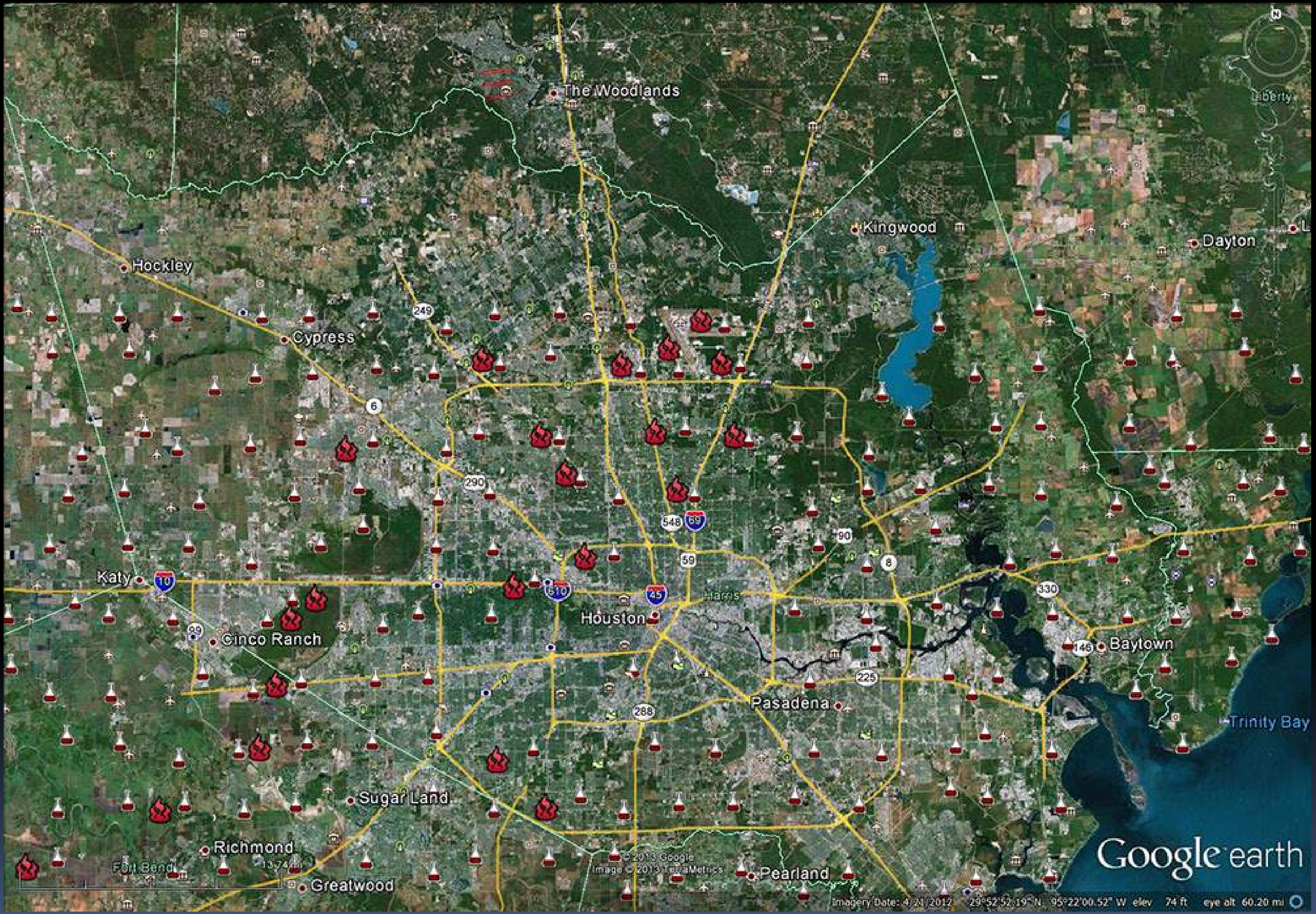
News: Energy Fuels is acquiring Mestena !

I2M Associates, LLC

Uranium Elsewhere in Texas



Uranium Elsewhere in Texas



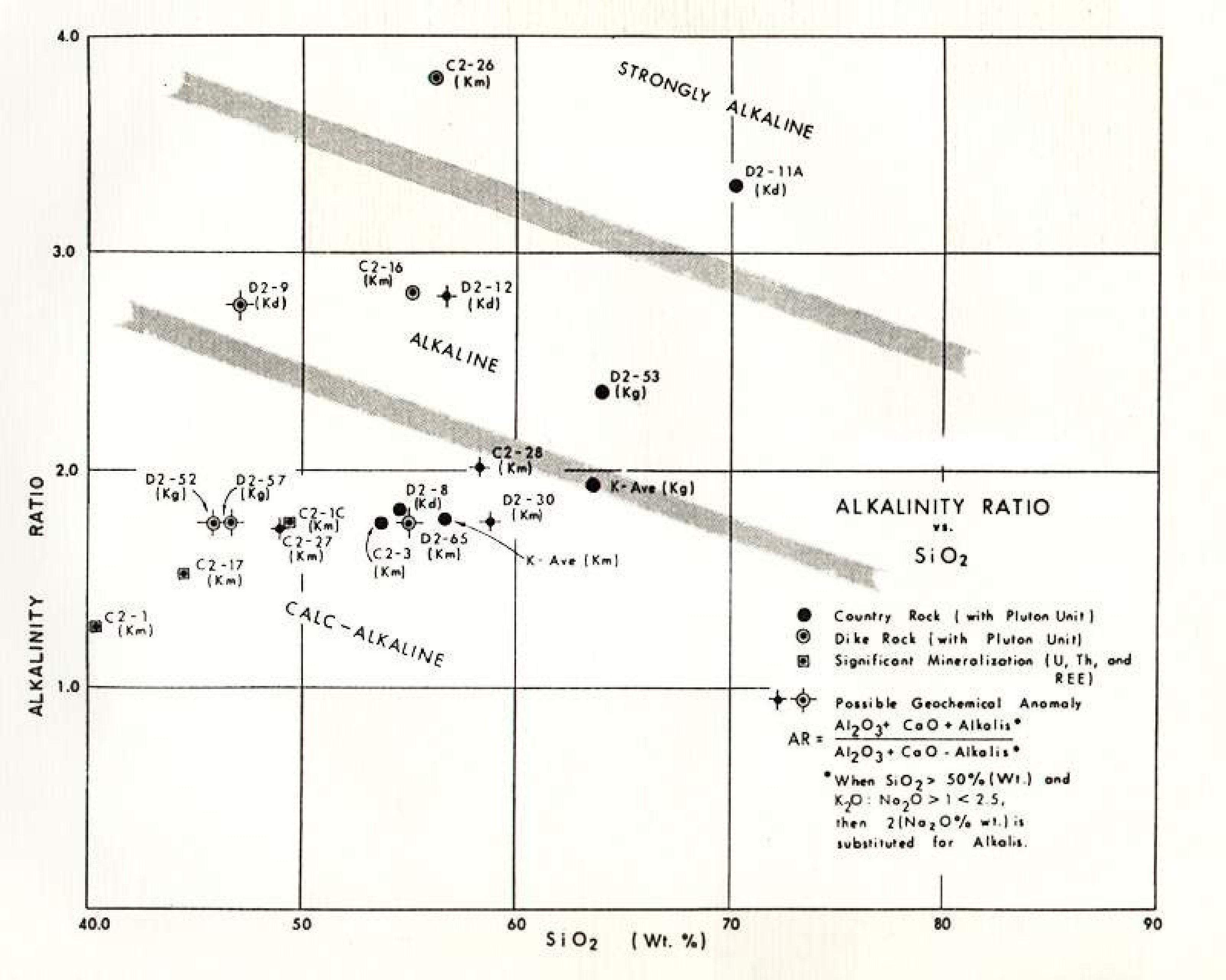
Red flames symbols indicate anomalous uranium in groundwater samples from water wells (see Campbell, et al., 2015 pp. 21-28).

Alaska Uranium and Rare Earths

Field Management Team

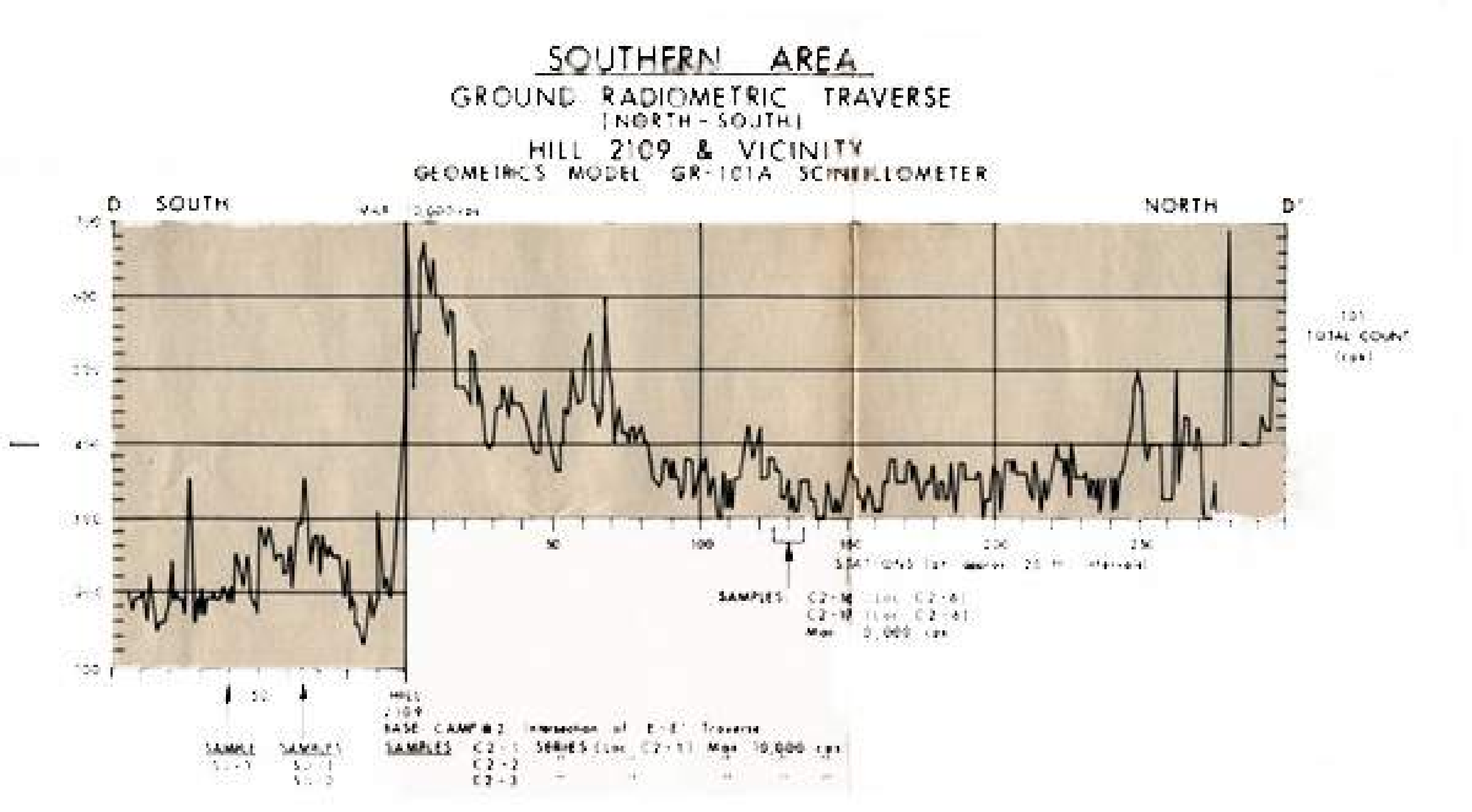
1st Year Team: Reconnaissance

2nd Year Team: Geological Mapping and Sampling



ALKALINITY RATIO
vs.
SiO2
STRONGLY ALKALINE
ALKALINE
CALC-ALKALINE
C2-26 (Km)
D2-11A (Kd)
C2-16 (Km)
D2-12 (Kd)
D2-9 (Kd)
D2-53 (Kg)
C2-28 (Km)
K-Ave (Kg)
D2-52 (Kg)
D2-57 (Kg)
C2-1C (Km)
C2-27 (Km)
D2-8 (Kd)
D2-30 (Km)
D2-65 (Km)
C2-3 (Km)
K-Ave (Km)
C2-17 (Km)
C2-1 (Km)
Country Rock (with Pluton Unit)
Dike Rock (with Pluton Unit)
Significant Mineralization (U, Th, and REE)
Possible Geochemical Anomaly
AR = Al2O3 + CaO + Alkalis* / Al2O3 + CaO - Alkalis*
*When SiO2 > 50% (Wt.) and K2O : Na2O > 1 < 2.5, then 2(Na2O% wt.) is substituted for Alkalis.
ALKALINITY RATIO
SiO2 (Wt. %)
4.0
3.0
2.0
1.0
40.0
50
60
70
80
90

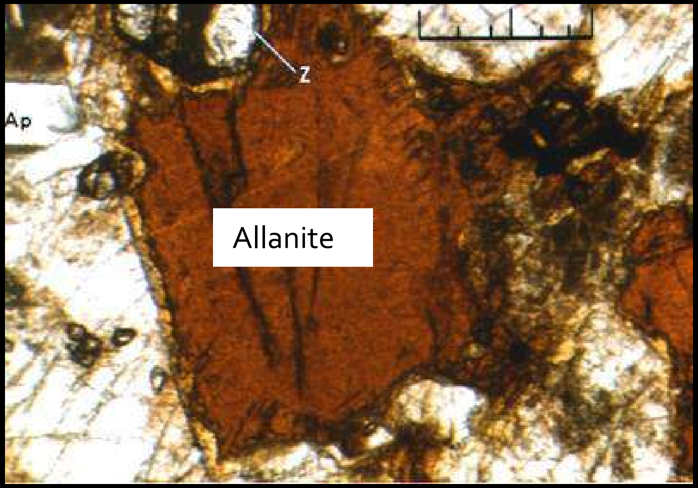
Alaska Uranium and Rare Earths



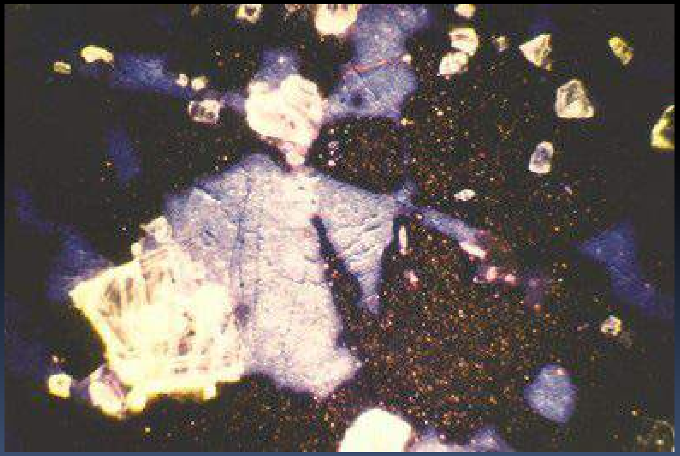
- Led to the area by results of the NURE Program of the late 1970's
- Field reconnaissance discovered new uranium and rare-earth deposits
- More than $300,000 spent to date but remains to be developed

Alaska Uranium and Rare Earths

Allanite $Ca(Ce,La,Y,Ca)Al_2(Fe^{2+},Fe^{3+})(SiO_4)(Si_2O_7)O(OH)$



- Allanite is a member of the epidote mineral group, where some calcium atoms are replaced by REE, particularly cerium..
- The REE content of allanite is typically about 5 % REO, but can vary widely from 3 to 51 %, depending on the local geological conditions, i.e., faulting, contacts with plutonic bodies, etc.



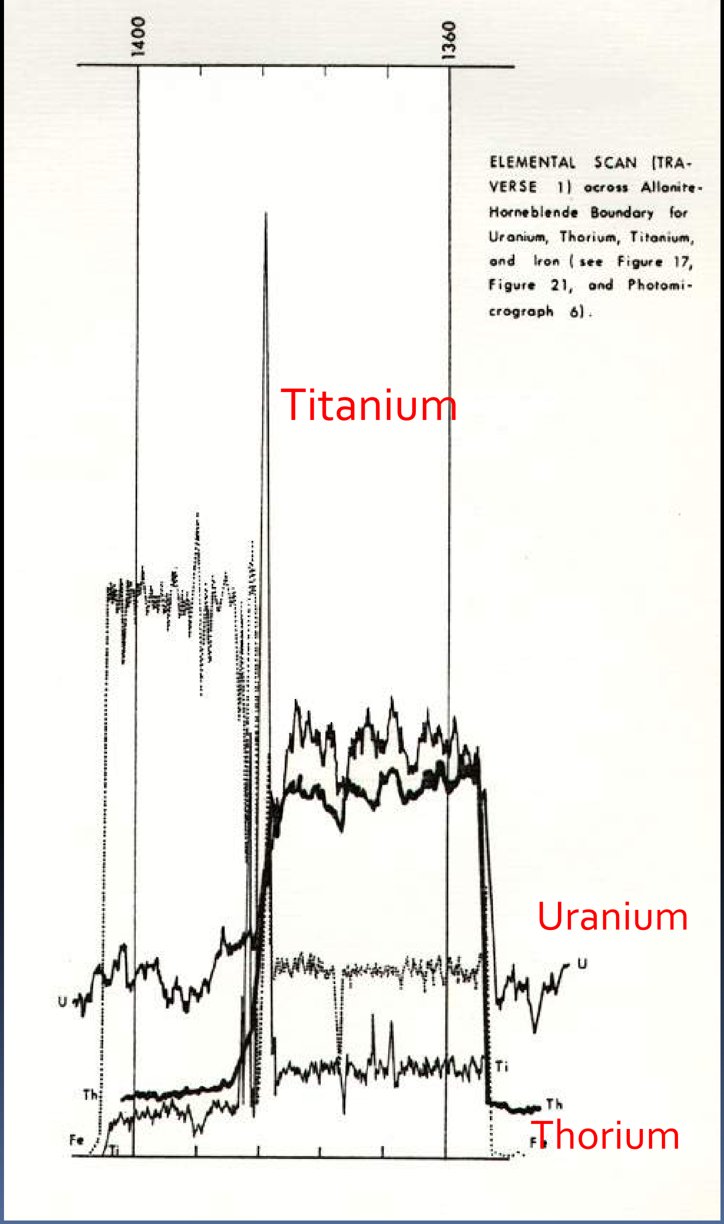
Cathodoluminescence Studies

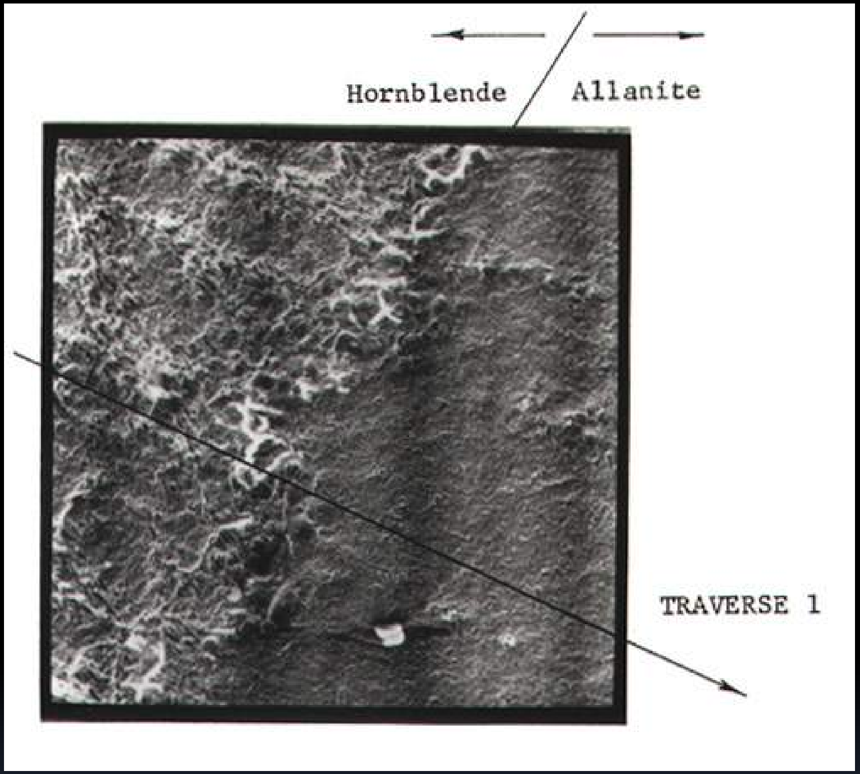
Alaska Uranium and Rare Earths

- Allanite is most commonly found as an accessory mineral in igneous rocks, but rarely in sufficient concentration to be economically mined.
- Typically these igneous rocks include granites, syenites, diorites, and their associated pegmatites.
- The mineral usually occurs as black to dark brown and brownish-violet tabular grains. It has a conchoidal fracture and is often metamict (i.e., its crystal lattice is disrupted while the mineral grain retains its original morphology) due to radioactive decay of thorium, which can weaken the crystal structure.
- The specific gravity of allanite is 3.4 to 4.2 and its hardness is between 5 to 6.5 Moh's scale. these characteristics suggest a possibility of making concentrates during processing of ore during mining. However, metamict varieties may weather rapidly.

Thin Section Analysis

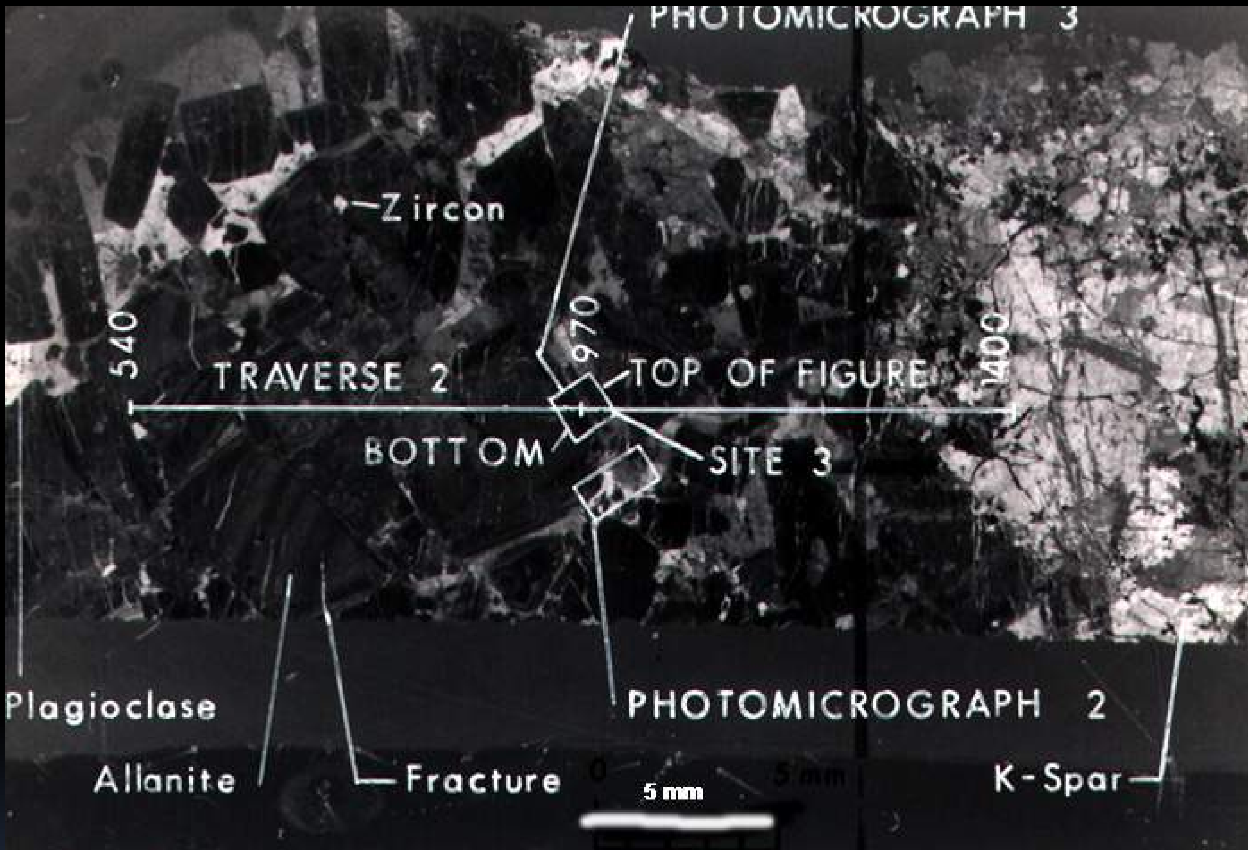
Alaska Uranium and Rare Earths



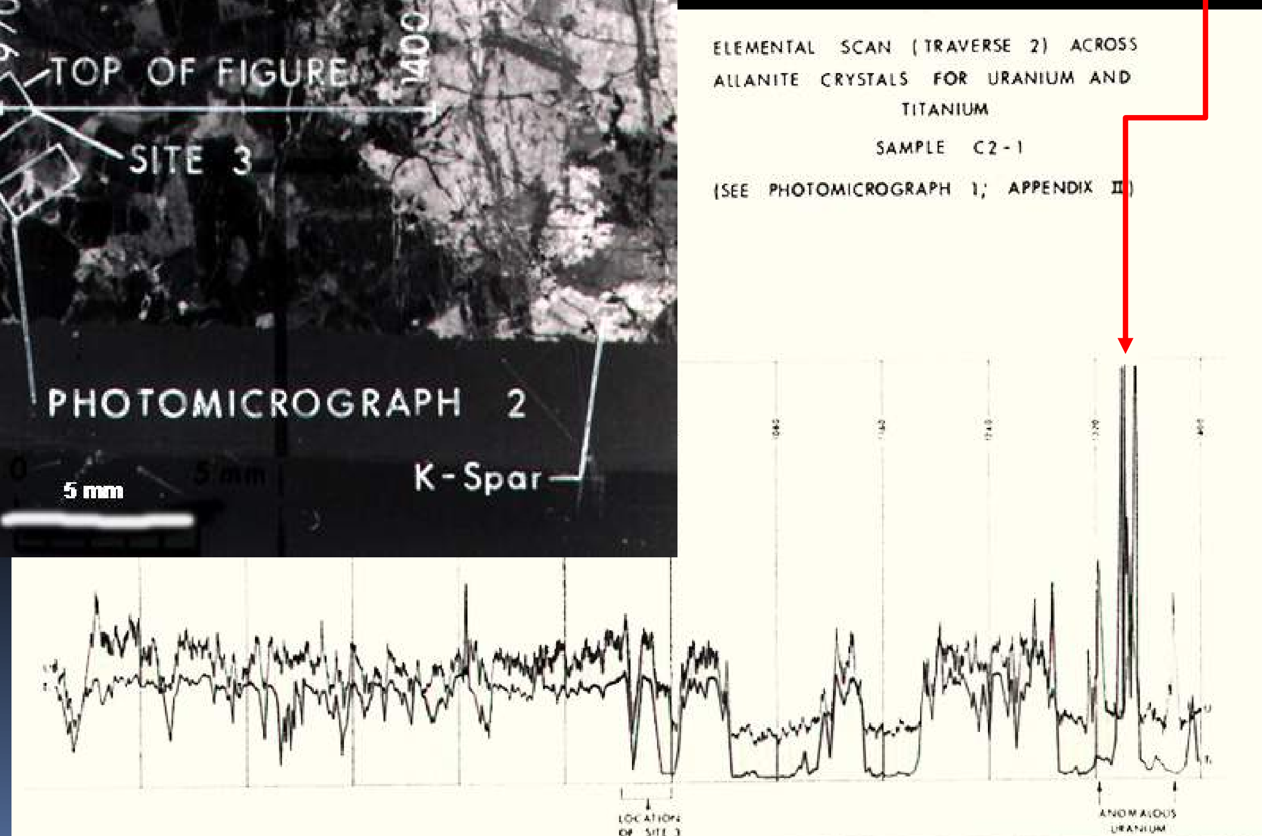


Elemental Scans across Allanite Zones

Alaska Uranium and Rare Earths



Uranium & Titanium Enrichment at Contact



Alaska Uranium and Rare Earths

Table 1. Rare-earth oxide industry uses and market prices.*

	Metal Oxide	Principal Uses	Price US$/kg	Conversion: 2.2 kg to U.S. $/lb Range	
→	Lanthanum oxide 99% min	Rechargeable batteries	8.50 –9.00	3.86	4.09
★	Cerium oxide 99% min	Catalysts, glass, polishing	4.70 –4.90	2.14	2.23
→	Praseodymium oxide 99% min	Magnets, glasses colorant	31.80–32.70	14.45	14.86
→	Neodymium oxide 99% min	Magnets, lasers, glass	32.50–33.00	14.77	15.00
→	Samarium oxide 99% min	Magnets, lighting, lasers	4.25 –4.75	1.93	2.16
→	Europium oxide 99% min	TV color phosphors: red	470.00–490.00	213.64	222.73
★	Terbium oxide 99% min	Phosphors: green magnets	720.00–740.00	327.27	336.36
→	Dysprosium oxide 99% min	Magnets: lasers	115.00–120.00	52.27	54.55
	Gadolinium oxide 99% min	Magnets, superconductors	10.00–10.50	4.55	4.77
★	Yttrium oxide 99.99% min	Phosphors, ceramics, lasers	15.90–16.40	7.23	7.45
★	Lutetium oxide 99.99% min	Ceramics, glass, phosphors and lasers	Up to 2.000/kg	454.55	909.09
	Thulium oxide 99.99% min	Superconductors, ceramic magnets, lasers, x-ray devices	Up to 3.000/kg	681.82	1363.64

*Source: Substantially modified from MetalPrices.com, October 2008.

Note: → **Present >100 to 1,000 ppm in Allanite Samples, with Uranium and Thorium >1,000 ppm.**

★ **Present < 100 ppm**

I2M Assessments

Sudan Uranium and Gold

Utah Uranium

Ohio Phase II Environmental Projects

Australia Gold and Other Metals

Alaska Uranium, Thorium, Rare Earths

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