



**BLACK RANGE  
MINERALS**

**AUSTRALIAN URANIUM CONFERENCE  
20-21 JULY 2011**

**Mike Haynes  
Managing Director**



# Corporate Overview



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- Black Range Minerals Limited controls 100% of the third largest uranium resource in the USA – the Taylor Ranch/Hansen Uranium Project in Colorado, USA:
  - JORC indicated and inferred resources of 90.9 million pounds of  $U_3O_8$  at a grade of 0.060%  $U_3O_8$ .
  - 3 feasibility studies completed previously on the Hansen Deposit, culminating in issue of all permits required to commence mining in the early 1980s.
- 738 million shares on issue.
- Market capitalisation of ~\$22.1 million (at \$0.03).
- Current cash reserves of approximately \$8.1 million\*.
- Exceptionally undervalued, with Enterprise Value equating to \$0.15 per pound of  $U_3O_8$ .

\* Cash payments totaling US\$2million are due in the near term as part consideration payable to secure 100% interest in the Hansen Deposit.



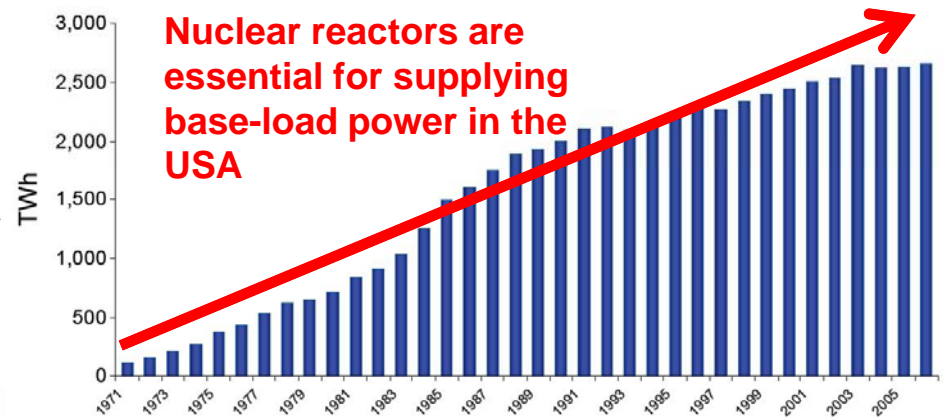
Looking south over the Hansen Uranium Deposit.



Black Range Minerals Limited share price during the past 12 months.

# Deliberately Targeting Uranium in the USA – The World’s Largest Consumer

- 104 (23%) of the world’s 441 nuclear power plants are located within the US.
- 21 additional reactors are either proposed, planned or under construction in the US.
- 20% of US electricity comes from nuclear power plants.
- The US generates more electricity from nuclear power plants than any other country in the world.
- US reactors consume around 50 million pounds  $U_3O_8$  per annum - 85% of which is imported.
- In 2010 the US produced 4.23 million pounds of  $U_3O_8$ , with 6 active production facilities currently operating.
- Considerable shortfall of supply from within the US.



Annual power output from nuclear plants since 1971. Source: WNA

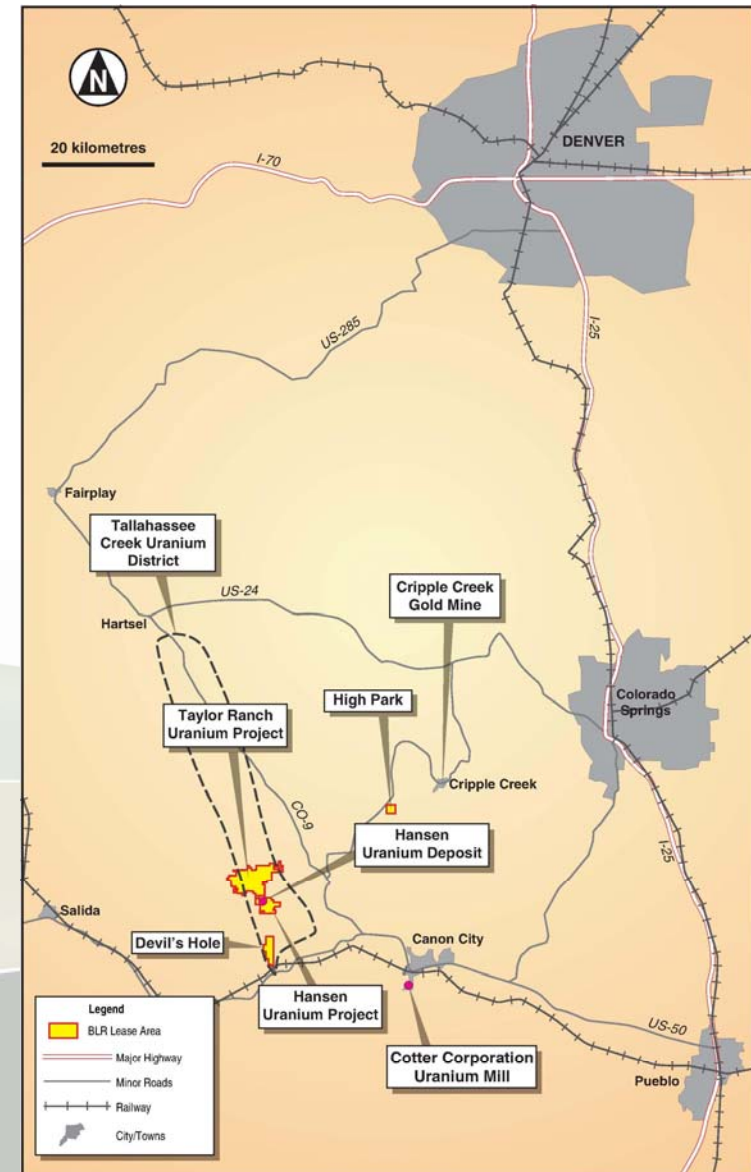
# Taylor Ranch/Hansen Uranium Project –



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## Location

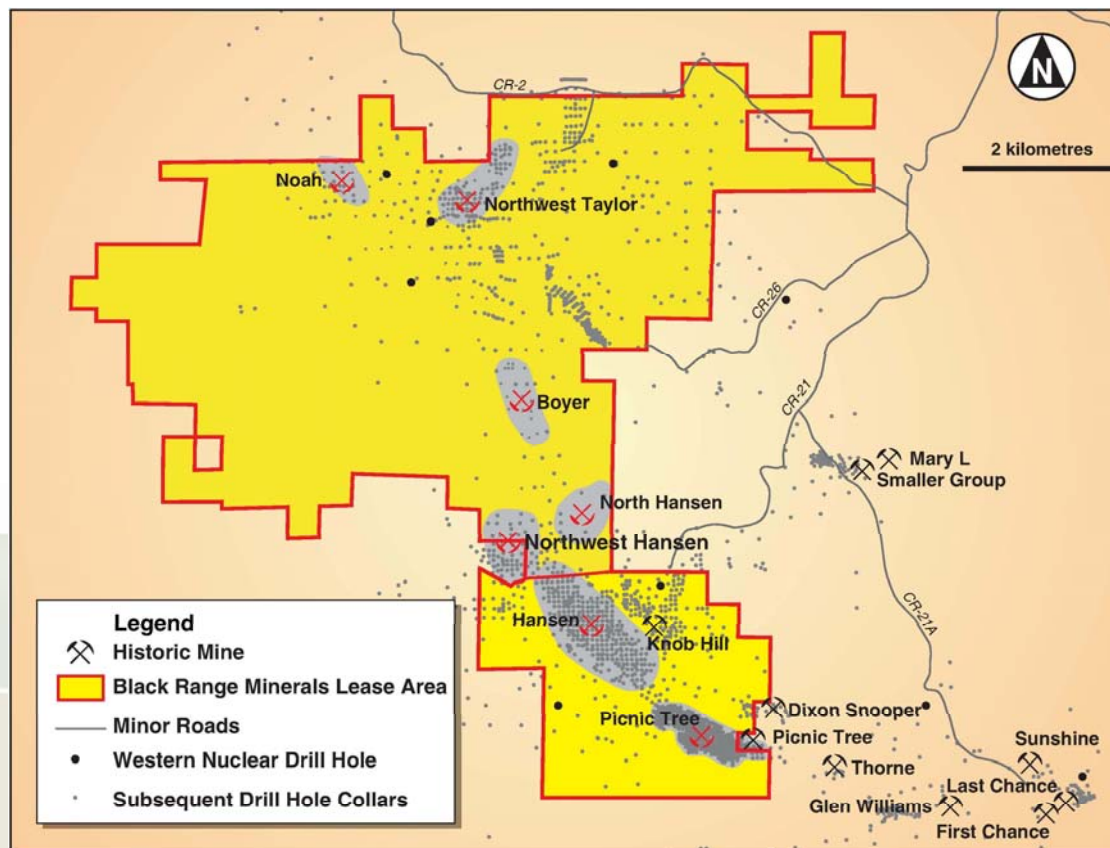
- Project is located 30km NW of Canon City, the location of one of the USA's four licensed uranium mills.
- Black Range controls a 100% interest in ~13,000 acres.
- These leases provide Black Range the right to **explore, mine and develop infrastructure** on its properties.
- AngloGold-Ashanti's large Cripple Creek heap leach gold mine is operating immediately to the east (historic production of 23Moz gold).
- Established mining industry and mining culture in the district.
- Pro-uranium mining jurisdiction.
  - 5 conventional uranium mines permitted in Colorado during the past 3 years.
  - Energy Fuels Resources Corp. has obtained virtually all permits required to build the first new conventional uranium processing facility in the USA in the past 25 years – in Colorado.
- Largest employer in the district is the prison industry.





# Tallahassee Creek Uranium District – History

- Uranium was first discovered in the district in 1954.
- From 1954 until 1972 16 small open pit and underground uranium mines operated in the Tallahassee Creek district.
- Total production was 79,306 tonnes at an average grade of 0.25%  $U_3O_8$  for a total of ~435,000 lb's  $U_3O_8$ .
- Hansen Uranium Deposit was discovered in 1977.
- The Hansen Deposit was fully permitted for mining in 1981.
- More than 2,200 holes have been drilled for more than 350,000 metres.

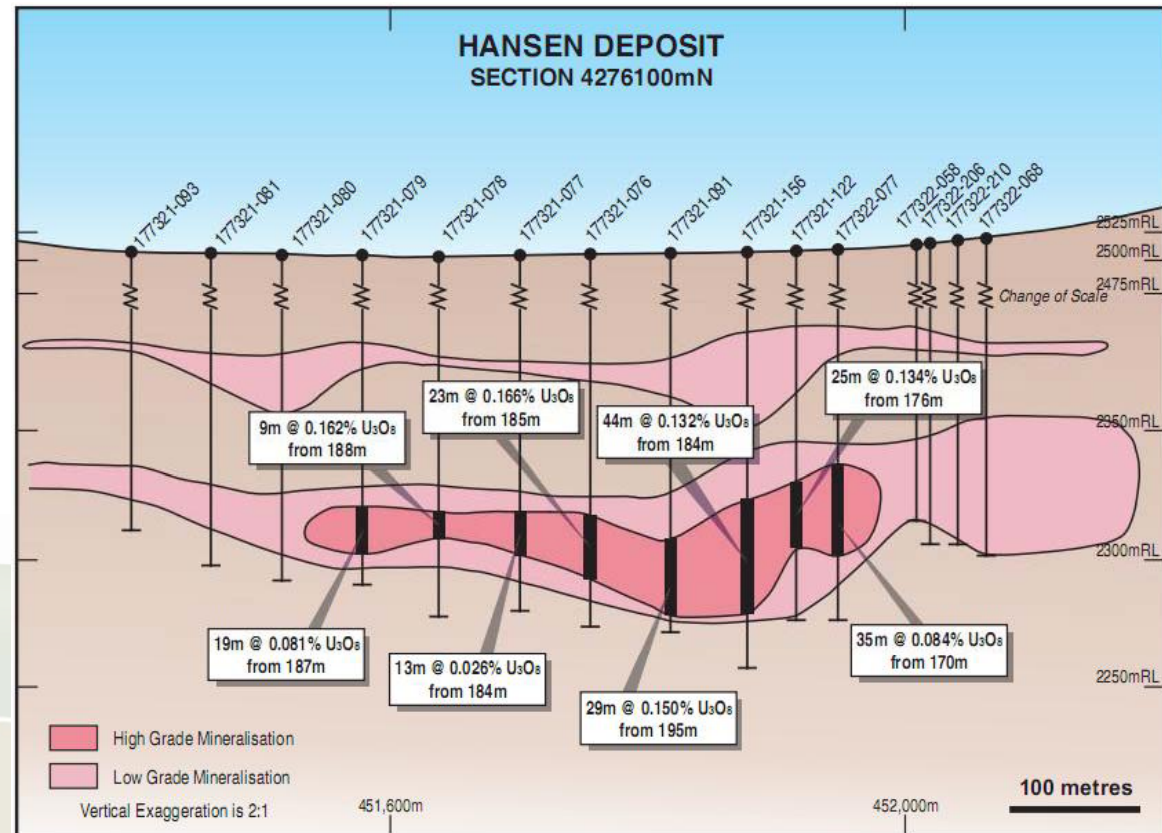


# The Hansen Uranium Deposit



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- Approximately 1,000 holes have been drilled previously.
- JORC resource comprises **28 Mt at a grade of 0.064%  $U_3O_8$  for 39.4 million pounds of  $U_3O_8$ .**
- The Hansen Deposit was fully permitted for mining in 1981.
- Mining was to be an open cut operation followed by underground mining.
- Planned mining rate was ~1Mtpa.
- Recoveries of +95% anticipated with conventional acid leaching.
- All permits had been obtained to commence mining and to construct a processing facility on the Taylor Ranch property.
- Mining never eventuated due to the collapse of the uranium price.



# Taylor Ranch/Hansen Uranium Project Company's Progress



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- November 2006: Secured initial lease over the Taylor Ranch (~4,300 acres).  
*Initial exploration target was 2-3 million pounds  $U_3O_8$ .*
- March- July 2007: Secured leases over the Boyer Ranch and over State Section 16 (additional ~6,200 acres).
- June 2008: Awarded 8-year permit from Fremont County to conduct exploration over these leases.
- Aug-Nov 2008: Completed 71 drill holes for 25,000 metres.
- June 2009: Secured option to acquire 49% of the Hansen Deposit.
- Sept. 2009: Upgraded resource to 60.2 million pounds of  $U_3O_8$  (just within 100% owned properties, excluding the Hansen Deposit).
- May 2010: Executed Letter of Intent to acquire remaining 51% interest in the Hansen Deposit.
- Nov 2010: Secured 8-year permit to conduct further exploration and feasibility studies at the Hansen Deposit.
- Feb 2011: Finalised right to acquire 100% of the Hansen Deposit.
- May 2011: Commenced drilling at the Hansen Uranium Deposit.
- July 2011: Upgraded JORC resource to 90.9 million pounds of  $U_3O_8$ .



Drilling at the Taylor Ranch Uranium Project.



# Taylor Ranch/Hansen Uranium Project

## Terms to Acquire the Hansen Deposit

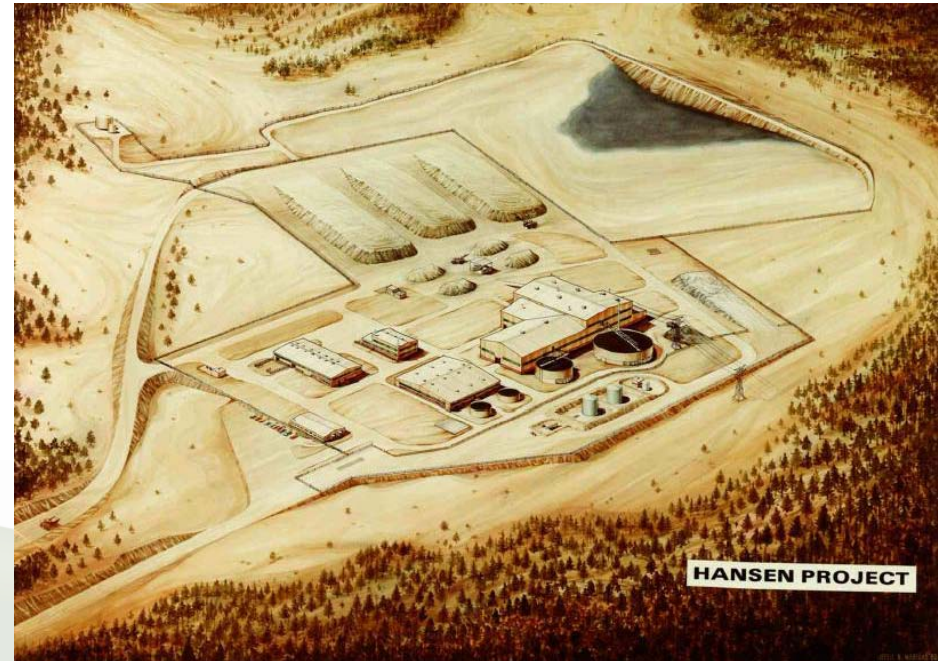
- To acquire a 49% interest in the Hansen Deposit:
  - US\$1m cash and US\$1m shares on execution of agreement to acquire the 51% interest.
  - US\$2m cash and US\$2m in shares on commencement of commercial scale production.
  - 1.47% royalty.
- To acquire the remaining 51% interest in the Hansen Deposit:
  - US\$1m in cash and US\$2.5m in shares on satisfaction of conditions precedent.
  - US\$2m in cash and US\$7.5m in shares to exercise option at any time in next 6 years.
  - If option not exercised after 3 years, additional US\$1m in cash and US\$1m in shares payable to extend the option for a further 3 years.
  - 1.5% royalty.



View from the Boyer Uranium Deposit, south across the Hansen Uranium Deposit.

# The Hansen Uranium Deposit – Historic Feasibility Study

- Positive feasibility study into development of the Hansen Deposit completed in the 1980s:
  - Reserves delineated.
  - Engineering studies conducted.
  - Mine designed.
  - Metallurgical test work conducted.
  - Processing stream designed.
  - Environmental approvals obtained.
- Hansen is the most advanced deposit in the district, hence the logical starter mine.
- Anticipated that cash flows from the Hansen Deposit will be used to explore and develop the other deposits in the district.
- Opportunity to capitalise on economies of scale not previously possible in the district, as BLR has discovered an additional 60 million pounds of  $U_3O_8$  since the Hansen Deposit was permitted in 1981.
- Program now being implemented to update historic feasibility studies.



Proposed site layout for the development of the Hansen Uranium Deposit – early 1980s.

# Taylor Ranch/Hansen Uranium Project



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## Current activities

- 10-12 diamond core hole drilling program has commenced to acquire additional:
  - Geological
  - Geotechnical;
  - Metallurgical; and
  - Hydrological data.
- Have completed four drill holes at the Hansen Deposit as part of the program to update historic feasibility studies.
- Multiple horizons of thick, high grade uranium intersected.
- Results include:
  - 33.5 metres at 0.061% eU<sub>3</sub>O<sub>8</sub>, including**
    - 10.1 metres at 0.093% eU<sub>3</sub>O<sub>8</sub>,**
    - 4.3 metres at 0.100% eU<sub>3</sub>O<sub>8</sub>, and**
    - 1.5 metres at 0.171% eU<sub>3</sub>O<sub>8</sub>**
  - 24.8 metres at 0.070% eU<sub>3</sub>O<sub>8</sub>, including**
    - 5.8 metres at 0.138% eU<sub>3</sub>O<sub>8</sub>**
  - 13.4 metres at 0.063% eU<sub>3</sub>O<sub>8</sub>, including**
    - 2.7 metres at 0.103% eU<sub>3</sub>O<sub>8</sub>**



Diamond core drilling at the Hansen Uranium Deposit.



# Taylor Ranch/Hansen Uranium Project



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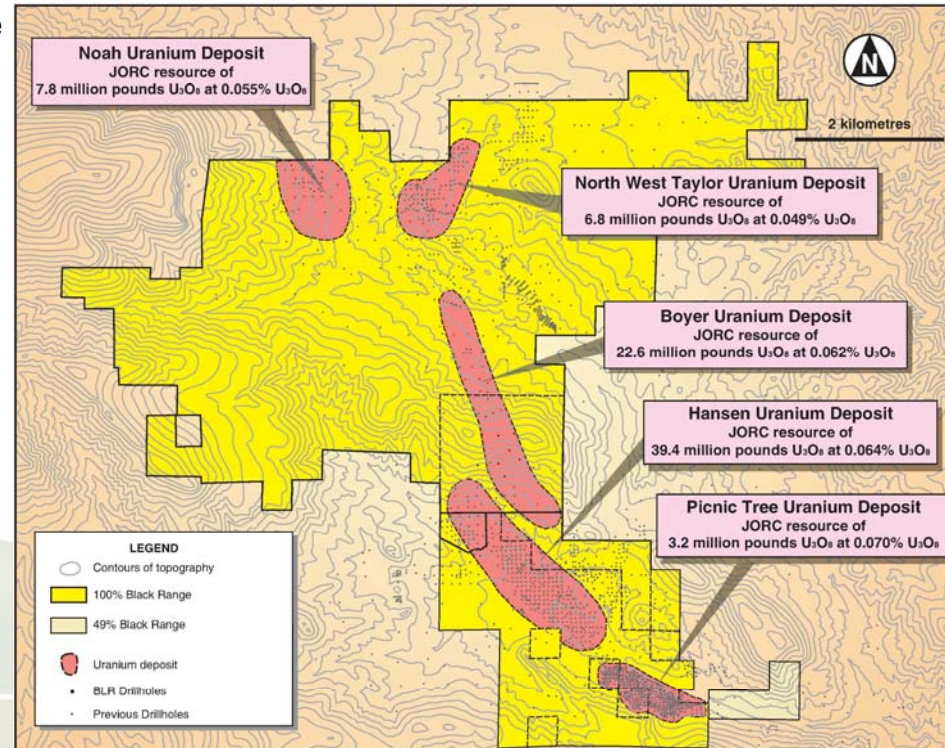
## JORC Resource Upgrade

- JORC resources recently upgraded to include the Hansen Uranium Deposit.
- 51% increase in resources at the Project.
- JORC Code compliant resources, **applying a 0.025% cut-off:**

**68.9 Mt at 0.060% U<sub>3</sub>O<sub>8</sub> for  
90.9 million pounds of U<sub>3</sub>O<sub>8</sub>**

- JORC Code compliant resources, **applying a 0.075% cut-off:**

**16.6 Mt at 0.120% U<sub>3</sub>O<sub>8</sub> for  
43.8 million pounds of U<sub>3</sub>O<sub>8</sub>**



Applying a 0.025% cut-off:

Category	Tonnes	Grade(%)	Pounds of U <sub>3</sub> O <sub>8</sub>
Indicated	28,928,480	0.062	39,749,941
Inferred	40,064,232	0.058	51,179,428
<b>TOTAL</b>	<b>68,992,711</b>	<b>0.060</b>	<b>90,929,369</b>

Applying a 0.075% cut-off:

Category	Tonnes	Grade(%)	Pounds of U <sub>3</sub> O <sub>8</sub>
Indicated	7,713,001	0.121	20,519,713
Inferred	8,863,534	0.119	23,328,680
<b>TOTAL</b>	<b>16,576,535</b>	<b>0.120</b>	<b>43,848,392</b>

# Taylor Ranch/Hansen Uranium Project



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## Forward Plan

- Drilling program expected to be completed Q3 2011.
  - Electrical logging results then chemical assay results to be released systematically.
- Historic feasibility study will then be updated.
- Further development plans will then be formulated.
- Base line environmental studies have been continuing in preparation for mine permitting.



Yellowcake – typically the first stage product recovered when processing uranium ore.



# Black Range Minerals Limited – Peer Comparison



Company	Mkt Cap (A\$m)	Cash (A\$m)	Resource (Mt)	Grade (ppm)	Contained		Location
					U <sub>3</sub> O <sub>8</sub> (Mlb)	EV/resource (A\$/lb U <sub>3</sub> O <sub>8</sub> )	
A-Cap Resources Limited (ACB)	\$69	\$14.9	780	152	261	\$0.28	Botswana
Bannerman Resources Limited (BMN)	\$100	\$18	400	190	170	\$0.48	Namibia
<b>Black Range Minerals (BLR)</b>	<b>\$22</b>	<b>\$8.1</b>	<b>69</b>	<b>600</b>	<b>91</b>	<b>\$0.15</b>	<b>USA</b>
Berkeley Resources Limited (BKY)	\$132	\$53	79	455	78	\$1.01	Spain
Deep Yellow Limited (DYL)	\$202	\$16.9	168	264	98	\$1.89	Namibia, Northern Territory & Queensland
Energia Minerals NL (EMX)	\$7	\$2.8	12	290	7	\$0.60	Western Australia
Energy and Minerals Australia Limited (EMA)	\$49	\$2.5	55	491	60	\$0.77	Western Australia
Energy Resources of Australia Limited (ERA)	\$799	\$187	184	1543	633	\$0.97	Northern Territory
Extract Resources Limited (EXT)	\$3,789	\$86.5	530	417	488	\$5.85	Namibia
Forte Energy NL (FTE)	\$62	\$12	46	284	29	\$1.72	Guinea and Mauritania
Manhattan Corporation Limited (MHC)	\$27	\$0.59	26	300	17	\$1.55	Western Australia & South Australia
Mantra Resources Limited (MRU) (Pre-Takeover)	\$950	\$51.7	108	422	101	\$8.89	Tanzania
Paladin Energy Limited (PDN)	\$1,959	\$181	392	587	495	\$3.59	Namibia, Malawi, NT, QLD & Canada
Peninsula Energy Limited (PEN)	\$149	\$31	44	412	41	\$2.87	USA
Thundelarra Exploration Limited (THX)	\$51	\$14.9	-	0	0	-	Northern Territory, Western Australia
Toro Energy Limited (TOE)	\$80	\$32.2	30	467	31	\$1.56	Western Australia
Uranex NL (UNX)	\$73	\$5.1	120	160	43	\$1.58	Tanzania
UraniumSA Limited (USA)	\$29	\$6.2	46	280	28	\$0.81	South Australia

*Adapted from Austock Securities – January 2011 Uranium Sector Review.*

- Black Range Minerals has one of the largest resources.
- Black Range Minerals has one of the highest grade resources.
- Black Range Minerals is exceptionally cheap compared to its peers.

# Taylor Ranch/Hansen Uranium Project



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## Summary

- ✓ One of the largest uranium resource bases in the USA.
- ✓ Thick, high grade mineralisation.
- ✓ Previously permitted for mining.
- ✓ Consolidation of ownership completed.
- ✓ Consolidation allows Black Range to control the development of the district to optimise economics.
- ✓ Update of previous feasibility study commenced.
- ✓ 10-12 hole drilling program commenced in May 2011.
- ✓ Outstanding initial results.
- ✓ Feasibility study will be updated on completion of drilling program
- ✓ Black Range Minerals Limited exceptionally cheap compared to its peers.



Drilling at the Taylor Ranch Uranium Project.



# Competent Persons Statement



*The information in this report that relates to Mineral Resources at the Hansen and Taylor Ranch Uranium Projects is based on information compiled by Mr. John Rozelle who is a member of the American Institute of Professional Geologists. Mr John Rozelle compiled this information in his capacity as a Principal Geologist of Tetra Tech. Mr. John Rozelle has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the “Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Mr. John Rozelle consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

*The information in this report that relates to Exploration Results is based on information compiled by Mr. Ben Vallerine, who is a member of The Australian Institute of Mining and Metallurgy. Mr Vallerine is Exploration Manager, USA for Black Range Minerals Ltd. Mr. Vallerine has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the “Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Mr. Vallerine consents to the inclusion in the report if the matters based on his information in the form and context in which it appears.*

