

South Africa Awakens to Space Resources



Michael Neale
SASRA President



Start of the Space Revolution?

- Virgin Galactic
- Space-X
- Shackleton Energy Company
- Google X-Prize
- and many more...

SA Mining Industry

- Biggest producer of Pt
- One of leading producers of:
 - Gold
 - Base metals
 - Diamonds
 - Coal

Deepest Mines



Ultra Large Surface Mines



Sand Mining



Chilean Rescue



South Africa and Space

South Africa wants to be involved in space:

- SumdandilaSat
- MeerKAT / SKA



- SANSA
- IAC 2011



Founding SASRA

- Presented at 2010 SRR/PTMSS
- Presented at 3 other conferences
- Published an *Innovate* article
- Recognized need for social society
- 19 Feb 2011: signed constitution

SASRA objectives

1. To improve the awareness of the global space resources industry and potential in South Africa
2. To encourage South Africans to contribute technically to the global space resources industry
3. To positively enhance the education attitude of the South African youth, through the use of space resources as a potential future involvement

Milestones

- 20 Members.... Achieved
- Website.... Achieved ~~Brainwaves~~ Advertising Studio
- First presentation... in progress
- First publication... in the pipeline
- First research output... in conception

Future projects/research

- Structural lunar soil simulant
- Pisces student design
- NASA lunabotics
- Paper on lunar mine design (possibly sand mining)
- Paper on evaluation of pneumatic excavator
- Mining innovation overlap

SASRA now

- Currently a social group
- 21 members
 - > 50% mining engineering graduates
 - HoD Mining Eng (UP)
 - 33% post-graduate
 - Geology, metallurgy, IT, psychology
- 4 extra-ordinary members (support)
 - D. Boucher
 - Dr. Abbud-Madrid
 - Dr. Gertsch
 - Dr. Zacny

About Hatch

- Global Engineering Consultancy
- 10'000 employees on 6 continents
- 1'000+ employees in SA, mostly engineers
- Metals (mining), infrastructure, energy
- 57 years of serving Mining + Metals
- Conception to Implementation

Involving Hatch

- Presented at both SA branches
- Space Resources Community
- Instrument to source skills

Summary

- Do not forget/under-estimate SA
- SASRA, with Hatch, is sowing the seeds of space resources in SA
- Help from SASRA / Hatch
- Help to SASRA

Start of the Space Revolution?

South Africa wants in!

Questions / Comments