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CREAMER MEDIA'S MINING WEEKLY
http://www.miningweekly.com/article/biogas-buy-in-2014-11-07

Biogas power generation has huge potential for postmining land use

7TH NOVEMBER 2014 BY: CHANTELLE KOTZE

Creamer Media's Mining Weekly 7 November 2014

MINE IMPACTED LAND IS CHALLENGING

Rock brought from deep underground, processed in a mineral processing plant and then stored on a Temporary Storage Facility (TFS) or slimes dam

Processing residues from mineral processing plant

Pyrites

Radioisotopes

Harsh environment

- pH 2.5 - 3.3 common
- Totally devoid of carbon

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Dec 2011 – March 2012	**Prefeasibility Study** **Scope – key considerations** • **5MW bioenergy or 157,000GJ** • **Impacted land** • **Non-food crops**
April 2012	**Commence trial crops**
May 2012	**Peer Review**
July 2012 – July 2013	**Feasibility Study** • **350ha yielding 183,000 GJ** • **R150m**
Oct 2013	**Scope change - REDUCED CAPEX OPTION** • **100ha** • **Max R50m**
Jan 2014 – June 2014	**Feasibility Study**
August 2014	**Implementation Order**
August 2015	**Scheduled soft commissioning**

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TRIAL CROPS

Impacted & lesser impacted land

Various crops

- Lucerne – pioneer crop
- Oats
- Sorghum
- Energy beet
- GKG

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25 October 2013

20 March 2014

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IMPLEMENTATION – AGRICULTURE WORK PACKAGE

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- Order received Aug 2014
- Contractors orders placed Oct 2014
- Mobilisation Nov 2014
- Break ground Dec 2014
- First planting Jan 2015

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End January 2015

5 March 2015

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ENGINEERING WORK PACKAGE

Taken possession of the site
Old Pachuca tanks are being converted to fermentation tanks

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LESSONS LEARNT

No quick fix

- **Environmental authorisations at least 1 year**

Need to reduce system losses

- **Imperfect ground & climate**
- **Crop yield**
- **Conversion of dry matter to biogas**

Thank you for the opportunity

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