

# TULLOW OIL PARTNERS with CFK: A MODEL FOR SUSTAINABLE DEVELOPMENT IN UGANDA



To contribute to Africa's sustainable development, Tullow Oil made a generous Grant to The Council for Frontiers of Knowledge (The CFK) to support students to pursue Masters Courses at Makerere University. The Scholarships were awarded to qualifying Ugandan Students to read for a two year Masters Course that commenced in the fourth quarter of last year (2011) at Makerere University in Civil Engineering, Chemistry and Environment.

The CFK received multiple submissions, and through a rigorous international review process, The CFK Selection and Evaluation Tullow Oil-CFK Scholarship Committee (Chaired by Professor Pamela Weathers and with Members: Professor Fionn Murtagh, Professor Jenny Emnéus, Professor Syed Hasan and Professor Pankaj Vadgama) acting on behalf of The CFK Board, awarded five (5) two-year Masters Scholarships.

The Tullow-CFK students and their courses are: Mr. Robert Tumwesige, Ms. Prossy Atolere and Mr. Bwambale Barnabas all MSc. Civil Engineering, Ms. Christine Ainabyona, MSc. Environment and Natural Resources and Mr. John Mugisa, MSc. Chemistry.

12-16 June, 2012, four (4) of the five (5) Masters Tullow Oil-CFK Sponsored students (the 5th had just had a baby), and three (3) supervisors, attended specialised technical presentations and discussions at Tullow Oil in Dublin, Ireland.

Technical presentations by a team of specialists at Tullow Oil, led by Dr. Joe Mongan, were comprehensive and the students and supervisors really benefited. This was also the case for other CFK visitors including Atkins Katusabe and Professors Pamela Weathers, and Fionn Murtagh.

The Dublin trip provided a valuable discussion venue for students with their Tullow mentors along with their academic advisors. Tullow-CFK Sponsored Students clearly benefited by discussing their specific research projects, identifying objectives, and discussing limitations. Students also saw firsthand how the different sectors of the industry have to partner in order to achieve a successful commercial outcome. Similarly, they and their academic advisors from Makerere University learned more about the technical and logistic details of the challenges faced by Tullow Oil in the Albertine Graben. Prof. Chris Bean and Prof. Stephen Daly from University College Dublin also visited the group and met with the Makerere faculty and students. Ideas were freely exchanged from both sides, and this will definitely strengthen the overall education of the students, while also benefitting Tullow.

Other issues that were discussed, included how The CFK intends to present its achievements to Tullow Oil in Kampala, and planning in connection with The CFK Conference, 12-16 November, in Kampala.

Also attending from the CFK Board were Prof. John Haslett, Trinity College Dublin, and Prof. Pankaj Vadgama from Queen Mary University of London who participated by conference call. The CFK thanks Tullow Oil for their enormous support in this joint effort and looks forward to continuing our strong collaboration. Central to this is having our collective successes being Uganda-based.

The CFK commends Tullow Oil for its responsible and transparent approach to Oil and Gas exploration and production in Africa and particularly in Uganda. In this effort Tullow Oil clearly provides a model for other Oil Companies to emulate.

From the above reflection, with an excellent monitoring and reporting system guiding the entire Programme, the Tullow Oil-CFK Fellows are progressing very well with their studies at Makerere University and we anticipate that they will present their work at the upcoming CFK November 2012 International Conference in Kampala.

#### **About Tullow Oil:**

Tullow Oil has become Africa's Leading Independent Oil Company. The Oil and Gas Industry is long-term by nature, given the capital resources required and the many decades between successfully finding Oil and Gas and the useful life of a field or basin. Major projects in two new Oil Countries in Africa – Uganda and Ghana – have focused Tullow Oil's attention on the need to create and share success as these projects evolve and develop. For these reasons, Tullow Oil is partnering with The Council for Frontiers of Knowledge in order to sustainably contribute to the growth, strengthening and development of African science and engineering.



# Tullow-CFK Project Dublin, Ireland Programme 12-16<sup>th</sup> June 2012



# **Tullow-CFK Sponsored Masters Students:**

Mr. Robert Tumwesige - Master of Science in Civil Engineering

Mr. Barnabas Bwambale - Master of Science in Civil Engineering

Mr. John Mugisa - Master of Science in Chemistry

Ms. Christine Ainabyona - Master of Science Environment and Natural Resources

Ms. Atolere Prossy -Master of Science in Civil Engineering

### **Supervisors:**

Dr. Anthony Gidudu

Dr. Umaru Bagampadde

Dr. George Nyakairu

## The Council for Frontiers of Knowledge:

Atkins Katusabe - Director, International Relations, The Council for Frontiers of Knowledge (The CFK)

Prof. Fionn Murtagh, PhD – Director, Information, Communications & Emergent Technologies, Science Foundation Ireland

Prof. Pamela J. Weathers, PhD – Professor of Biology & Biotechnology and Professor of Chemistry & Biochemistry, Worcester Polytechnic Institute, MA, USA

**Tullow Contributors**: Dr. Joe Mongan (JM), Dr. John Doherty (JD), Dr. Mick Igoe (MI) Dr. Rob Hardy (RH), Dr. Michelle Galvin (MG), Dr. Conor Ryan (CR), Dr. Francesca Martini (FM), Dr. Gareth O' Brien (GOB), Eloise Rogers (ER), Dr. Ciaran Peyton (CP), Dr. Chris Read (CR)

#### Tuesday, 12th June

14:30-15:30 - Introduction & Greeting - JM, PU, FM

15:30-15:45 – Photographer for Group photo & student individual

15:45-17:30 - Discussion with students - Anne-Lise Christmas& SE Team

#### Wednesday, 13th June

09:30-10:00 - Review of the exploration timeline in the Albertine Graben, Uganda - JD

10:00-12:30 - Introduction to the Seismic Acquisition and Processing - RH

13:15-16:00 – Review of Uganda seismic data – MG/MI

16:15-17:00 – Review of numerical modelling techniques – GOB

\* 19:00 – Bus to Dinner and evening entertainment – Merry Ploughboy

### Thursday, 14th June

09:30-10:00 - Introduction to Full Tensor Gravity Gradiometry technique - ER

10:00-10:30 - Review of FTG survey in Uganda Block 2 - ER

10:45-11:45 - Introduction to rock physics - EF

11:45-12:30 - Introduction to multi-component seismic - FM

13:15-14:15 - Introduction to remote sensing as applied to exploration - CP

14:00- 14:30\*\* - Conference Call with CFK Deputy Chair Professor Pankaj Vadgama

14:30-15:00 - Introduction to passive seismic techniques - FM

15:00-15:30 - Results from passive seismic study in Block 2, Uganda - FM

16:00-17:30 – SEG Virtual Class – Principles of Microseismic Monitoring

#### Friday, 15th June

09:30-11:00 - Introduction to GeoEngineering applications in the exploration industry - CR

11:15-12:30 – Discussions between students, supervisors &mentors

13:30-14:00 – Closing Remarks – Joe Mongan and Atkins Katusabe, followed by lunch

14:00-18:00 -Free time in Dublin

### Saturday, 16th June

Return to Uganda

#### **PROJECTS**

1. Relationship between conventional and geophysical characterisation of the subsurface. A case study of the Albertine Region.

Mr. Robert Tumwesige - Dr. Conor Ryan

2. Geochemical analysis of near surface sediments and oil seeps using hyper spectral analysis.

Mr. John Mugisa - Dr. Ciaran Peyton

3. Seismic hazard assessment of the Lake Albert region of Uganda.

Mr. Barnabas Bwambale - Dr. Francesca Martini

4. Environmental impacts of seismic surveys in the Lake Albertine region. Integrated geology and geophysics using shallow borehole drilling.

\*\*Ms. Christine Ainabyona – Dr. Niamh O'Sullivan and Dr. Eloise Rogers\*\*

5. Analysis of passive seismic to serve vertical velocity profiles through the incorporation of rock physics data.

Ms. Atolere Prossy - Dr. Francesca Martini and Dr. Gareth O'Brien

<sup>\*\*</sup> Student presentations continue in parallel with this CFK conference call



Tullow Faculty, CFK Representatives and Makerere Students and their Supervisors at Tullow Oil Offices in Dublin