

**1. Welcome (JRU)**

**2. Introductions (All)**

**PRESENT:** Peter Bentham (BP), Anne Constant (Cairn Energy), Andy Henery (Chrysaor), John Millington (CNOOC Intl.), Chris Leppard (Equinor), Russell Reekie (Neo Energy), Andy Bell (Shell), Husnein Ahmed (Total), John Underhill (JU: Heriot-Watt), Lorna Morrow (LM; Heriot-Watt);

Apologies: Chris Thomas (ExxonMobil) (internet connection problems)

**3. Status of OG CDT – Update (JRU/LM)**

**3.1 Context**

Impact of the CV-19 pandemic for OG CDT (JRU/LM) – Can't deliver residential (classroom and field) courses and all of programme beyond first week in June 2020 has been deferred to 2021. OG Training Academy Committee (TAC) met in April – online courses and self-directed learning now eligible, subject to a justification and subsequent approval by the TAC. Geological Society of London (GSL) sympathetic regarding accreditation and amendments to course content to take into account current pandemic restrictions.

Communications course for 2018 cohort (normally held in Manchester), and Careers event for 2016 cohort (normally held in Manchester/Derbyshire) are being converted to virtual online events and will run at end May and first week of June respectively.

We had hoped to have an virtual fieldtrip or e-classroom provision but CDT tutors and field trip leaders are fully occupied with transferring their own Universities' UG/PGT courses to online formats in time for Q3 2020/2021 first semester delivery so current workload too great for them to consider similar transfer for CDT trip materials. IAB supportive of this approach.

JU - Ideally CDT would still like to be able to offer an online field trip, perhaps along the line of Imperial's Pyrenees online field trip, which as a CDT partner, we may be able to persuade them to run for our CDT students. JU has attended a 'lessons learnt' workshop led by the IC team to understand the challenges they faced and learn what worked well (and what didn't).

We are trying to ensure students complete the 100 days training requirement and are asking them to put forward online courses and other training courses they may have done on their own account in previous years for consideration. CDT priority is to safeguard the quality of our courses and support students to achieve 100 days. We are also committed to maintaining the gold standard of courses and so, will be vigilant to any that fall short.

**3.2 Training Module Contributions (JRU/LM)**

Nautilus courses online – need paying customers and limiting classes to 20 to comply with tutors' wishes not to engage with a bigger community online as there is lots of communication for weeks after the field trip which is an extra burden on contributors. JU awaits the outcome of in-house deliberations for opportunities thru' the Nautilus e-learning program. TRACS spoken to through Mark Bentley. Geologica also has a number of courses online and we're pursuing them but JU not hopeful that there will be access to these in the short term. PB suggested approaching PetroSkills Alliance (PB to send message to Ford Brett to find out if there's any willingness to help the CDT) – short list of students who might be interested

– not geoscience deep but offers broader, industry-centric material. PB agreed to take this up and work with JU if there was traction.

Extended 6 months' funding for 2016 cohort. However, there will be a bottleneck for training availability, both for course leaders and students.

IAB members are very welcome to join the fortnightly CDT presentation seminars on Tuesday afternoons. JU sent link after the IAB meeting so that IAB members could join today's seminar if they wished to.

### **3.3. Finance (JU/LM)**

Anna willing to be furloughed from June (80% government /20% IAB). Not clear how long government scheme will operate for, or if Training Officer post will be eligible. Need to retain industry contributions to deliver GNZ CDT training programme but industry capacity for this could be constrained. There will be a hiatus in training provision from 7<sup>th</sup> June 2020 until residential courses can re-commence, which may only be in March/April 2021 (i.e. 8 months) and training programme may well need to be amended to fit in with student/course leader availability.

LM and JU are working with Heriot-Watt finance and HR teams to determine options for contract amendments for Anna and Lorna, both of whom have 3 month notice contracts and current funding is covered until end August 2020. CDT management duties may reduce for a period if new GNZ students do not register at their universities until January 2021 with consequent delay in start of GNZ training programme. Priority is to conserve training budget for when training recommences.

During ensuing online discussion, IAB agreed that what was laid out sounds like a reasonable plan. There was an appreciation that a lot of the heavy lifting is done so it feels like the training role in the CDT is becoming more part-time. Also stated that, as harsh as this sounds, it does seem there is a natural break in support, until GNZ is up and running. It was also considered that there may be a need to evaluate a swap out of the training role for a different skill set, if we assume online/remote training programme need to be developed. Also stated by IAB member that changes will only help CDT budget balancing, and give time to assess the role/needs going forward. The IAB thought that there was also a strong case for furlough being accepted.

### **3.4 Consequences for Timing, Mode of Delivery and Support (JRU/LM)**

Annual Conference may need to be deferred and JRU/LM have explored alternative dates. Sheraton has offered ones in March/April 2021, which is our Plan B if November seems unfeasible. Following the example of EGU conference – plan C for virtual CDT conference. The latter would reduce the carbon footprint which may be a key driver in attitudes of new GNZ recruits and other sponsors.

## **4. Status of GNZ CDT – Update (JU/LM)**

### **4.1. University Contracts (LM)**

£2.5m for 24 PhDs (8 x 4 year studentships in each of 3 entry years). Expectation is that training programme will be part of the CDT but not actually stipulated in NeoEnergy studentship award letter. Draft HEI partner contracts were circulated to individual partner legal contacts last week. Option for Heriot-Watt to have individual contracts with each academic partner rather than one agreement signed by all HEIs as this approach caused lengthy delays in signing the O&G academic partner agreement. Key terms and conditions will be common, but it would allow for differences in IP wording for example. NeoEnergy contract with Heriot-Watt for studentships is estimated to be concluded by end May 2020.

#### **4.2. Impact of the CV-19 pandemic for GNZ PhD Recruitment & Applications (JRU/LM):**

HEI partners confirm that they have had a good crop of applications in sufficient numbers to recruit although start dates may be postponed to January 2021 in some cases meaning we will build the first cohort between September 2020 and January 2021. Anecdotal reports that projects with specific net zero focus have been more popular and attracted the better applicants.

#### **4.3. Future Industry Funding (JRU)**

Recognise that company training budgets could be under severe pressure in the near future. 43 students in first two cohorts are in employment with 6 who have just submitted, or are near submission. Opportunities for companies in environmental sector/renewables to join given the new CDT's Net Zero remit. There is a recognition that £40k subscription fee is high for some smaller companies in the environmental field in particular. Associate partners for O&G have donated data, training discounts and other in-kind support.

JU approached Head of NERC, Duncan Wingham, after GNZ studentship award was announced and NERC has agreed to support the GNZ CDT with a small amount of Innovation money (£50k in year 1). NERC kite mark provides academic credibility across the environmental sector, helps universities and we can use their logo on advertising/projects etc. Also allows CDT students to attend NERC-provided courses, and Heriot-Watt can bid for future NERC and other UKRI (e.g. EPSRC) funding for the CDT. JU asked for the IAB's help and support in getting the CASE and Industrial PhD funding scheme reinstated – if it were, the companies could access the funding to formulate PhDs that would then be undertaken as part of the CDT.

BGS as NERC Research Centre gave BUFI funding, which was discontinued. However, discussions with new BGS CEO have resurrected the partnership and BGS have now agreed to support the RTSG for a number of projects which align with BGS interests in decarbonisation under the British universities Funding Initiative (BUFI) scheme.

OGA still gives points in licensing rounds for supporting CDT (@£40k per annum) which is arguably still a much better value proposition than a multi-million £ seismic survey. CDT also aligns with Environmental and Social Responsibility (ESR) statements.

#### **4.4. Inaugural Event and First GNZ Conference timing (JRU):**

If O&G conference is postponed from November 2020 to early 2021 as may well be the case, and GNZ students only begin their studies in early 2021, proposal is to delay first GNZ conference to later in 2022 to give students time to generate meaningful results to present. This will also produce a considerable saving. We would still go ahead with an inaugural introductory event to introduce the first cohort to the opportunity and their training options, but it would not be on the same scale as the Conference.

#### **4.5. Training Module Contributions/Timing/Delivery/Support (JRU/LM):**

Timing of start of GNZ programme will depend on start date of first cohort and a return to being able to run residential courses. HEI's greatly appreciate the central support provided by Heriot-Watt for general CDT management and training course delivery and are keen for this to be retained. Recognition of the financial challenges however, and there are options for training to be provided in a different model to the O&G CDT if necessary. Each HEI partner is providing a course or courses comprising at least 5 days giving 12 out of the proposed 20 week training schedule so less need to source course providers than there was for the O&G CDT. HEI partners providing details of their courses by end May 2020, review O&G courses to see which offerings could be re-purposed for the GNZ CDT (especially field trips), and consult with industry funders to identify the gaps in training and how to fill these.

Recognition that moving from the bespoke residential model of the O&G CDT will put in jeopardy the offer to PhD+ applicants. Very different training offer if there's no industry funding. However, JU doesn't want to over-reach and promise more than we can deliver.

Company budget setting usually from September so contracts/MoUs for GNZ industry funding should go out as soon as possible and certainly by June. IAB partners would circulate/socialise the proposal internally and seek funding within their own organisation and confirm, hopefully by September, their commitment to funding the GNZ CDT Training Academy programme with continued annual subscriptions. Subscription payments can be timed within the October 2020 – September 2021 academic session to suit individual companies.

Early discussions had with some of the GNZ University partners to approach their industry contacts in renewables/environment sector regarding new industry supporters for GNZ training programme and CASE-like PhD project sponsorship.

## 5. Q & A/AOCB (All)

Marit Brommer – IGA, possible new funder in geothermal. PB offered to broker a conversation between Ms Brommer and JU, who suggested it may be useful to attach his September 2020 Geoscientist article.

## APPENDIX A – IAB MEETING CHAT DISCUSSION

[9:43 AM] Andrew Henery  
CV19 response sounds appropriate

[9:43 AM] Christopher Leppard  
Sounds like a sensible approach from my side, thanks for the coordination here  
Edited

[9:44 AM] Anne  
Sounds good

[9:44 AM] Husnein AHMED  
How many student for the cohort will gain the credits and what/how would the deferred credits be achieved

[9:48 AM] Bentham, Peter  
Can any of the third party training partners offer virtual delivery of courses? I'm thinking of TRACS or Nautilus, for example

[9:48 AM] Christopher Leppard  
I was forwarded the imperial lessons learnt overview, it was insightful but importantly required specific individuals to deliver (one key point was extra 'demonstrators'). Is there a risk with availability of sufficient qualified instructors to deliver competent virtual field courses?

[9:49 AM] Husnein AHMED  
Sounds good

[9:51 AM] Christopher Leppard  
Limiting numbers at nautilus links to the key lessons learnt from imperial, increased pressure on instructors to communicate and follow-up virtually

[9:51 AM] Bentham, Peter

Glad that you have at least tested the relationship

[9:55 AM] Anne

A difficult balance being managed as well as possible given the circumstances John and Lorna

[9:55 AM] Bentham, Peter

I am very much dealing with the same issues and constraints delivering subsurface courses within BP

[9:55 AM] Christopher Leppard

Have you defined timeline scenarios? So that delivery of components doesn't come too late, when the situation has evolved?

[9:57 AM] Christopher Leppard

What is required module credit wise for Sept 2020 to fit those finishing this year?

[9:57 AM] Christopher Leppard

That should be priority one

[9:59 AM] John Millington

I'm glad to hear about the extended funding from NERC. Sensible stuff!

[10:00 AM] Christopher Leppard

Yep

[10:01 AM] Husnein AHMED

Are the students finding difficulties in completing their PhDs?

[10:02 AM] Bentham, Peter

One final thought on training - I wonder whether PetroSkills might be willing to open up their PetroAcademy online content to CDT students who might need to complete a few days of suitable training. BP & Shell are founding members of the PetroSkills Alliance.

[10:03 AM] Morrow, Lorna H

There are still a number of students in the 2016 cohort who need labs for data analysis and or better internet connections to access high end software, even though they're in their writing up year.

[10:08 AM] Anne

Self-paced modules would help with bottlenecking and give students additional flexibility?

[10:11 AM] Anne

Yes

[10:11 AM] Christopher Leppard

Yes

[10:11 AM] Bentham, Peter

Yes

[10:11 AM] Husnein AHMED

Yes

[10:11 AM] John Millington

Yes...

[10:11 AM] russell.reekie@neweuropeanoffshore.com

Yes

[10:11 AM] Bell, Andy GSNL-PTD/E/F  
Yes - pragmatic solution

[10:12 AM] Anne  
An online version should perhaps be worked in parallel given we might not get back to the way it was before

[10:19 AM] Husnein AHMED  
Isn't the gov furlough option time limited?

[10:21 AM] Christopher Leppard  
In retrospect it will be impossible to apply, as we are having this discussion I think there is a plausible case to apply.

[10:21 AM] Andrew Henery  
What you laid out sounds like a reasonable plan; as you said, a lot of the heavy lifting is done so it feels like the role in the CDT is becoming more part time

[10:22 AM] Bentham, Peter  
As harsh as this sounds - it does seem there is a natural break in support, until GNZ is up and running

[10:23 AM] Anne  
Is there a need to swap out for a different skill set, if we assume online/remote training programme need to be developed? More IT based or?....

[10:23 AM] Christopher Leppard  
If the furlough case is accepted it will only help your budget balancing, and give you time to assess the role/needs going forward

[10:24 AM] Bell, Andy GSNL-PTD/E/F  
Unknown territory here of course. Given the nature of Anna's job - I would have thought a strong case for furlough being accepted

[10:28 AM] Husnein AHMED  
If Anna is prepared to be furloughed, then this may be an option to go for

[10:31 AM] Bentham, Peter  
Is there any conflict in funds bleeding over from one CDT to the other?

[10:34 AM] Husnein AHMED  
We may also need to look at new contracts with the sponsors

[10:35 AM] Anne  
100% of funds should be retained given the possible difficulty of attracting funds going forwards. Whether they are repurposed to GNZ or provide extra flexibility for O&G, should be your call

[10:36 AM] Morrow, Lorna H  
At the moment, the industry subscribers are the same for both CDTs and companies have agreed to continue with supporting the GNZ training programme and there's not been a call from any partner in the O&G CDT for a pro rata return of money provided for O&G training when a partner leaves.

[10:37 AM] russell.reekie@neweuropeanoffshore.com  
Yes. Good summary and approach

[10:37 AM] Andrew Henery  
Agreed

[10:38 AM] Anne  
Yes, CDT has a proven track record of budget management

[10:38 AM] Christopher Leppard  
Agreed

[10:38 AM] Bentham, Peter  
Yes - from me too.

[10:38 AM] John Millington  
Yes..

[10:38 AM] Bentham, Peter  
Perfect

[10:38 AM] Husnein AHMED  
Yes, but there must be contractual split between O&G and GNZ CDT

[10:38 AM] Anne  
Ok

[10:39 AM] Christopher Leppard  
Agree with new contract point, keep all elements as clean as possible

[10:40 AM] Bentham, Peter  
I'm back

[10:40 AM] Christopher Leppard  
Here

[10:40 AM] Andrew Henery  
Here

[10:41 AM] John Millington  
Ready!

[10:41 AM] russell.reekie@neweuropeanoffshore.com  
Here sir

[10:41 AM] Husnein AHMED  
OK

[10:47 AM] Bentham, Peter  
Do you have a timeline?

[10:47 AM] russell.reekie@neweuropeanoffshore.com  
NEO have two Asset acquisition deals planned to complete next week (Tuesday). This has sucked in legal resources. We will get this finalised once this this has happened and the legal team are freed up.

[10:49 AM] Husnein AHMED  
We need internal lobby for commitment, the sooner the better, perhaps in June when we may have a better foresight with COVID-19

[10:50 AM] Andrew Henery  
I think we'll also need a clear description of the plan for/outline of the GNZ and differences from CDT to 'socialise this'...alongside the general budget/funding discussion

[10:50 AM] Christopher Leppard

We look at these elements in a long term holistic view so timing is not an (intentionally biased) contributing factor. A question from me is what is the proposed level, given learning from the CDT budget allocation, and potential optimizing of training elements through (potentially) lower cost delivery options?

[10:54 AM] russell.reekie@neweuropeanoffshore.com  
Fingers crossed

[10:54 AM] russell.reekie@neweuropeanoffshore.com  
The completion has been a bit of a moving target

[10:59 AM] Bentham, Peter  
That Timing makes a lot of sense to me

[11:00 AM] Anne  
Sounds an ideal plan. I like the separation of GNZ and O&G

[11:00 AM] Andrew Henery  
Agree

[11:00 AM] Bell, Andy GSNL-PTD/E/F  
Again a pragmatic solution.

[11:00 AM] Christopher Leppard  
Yes

[11:00 AM] russell.reekie@neweuropeanoffshore.com  
Yes

[11:00 AM] John Millington  
Good approach...

[11:01 AM] Husnein AHMED  
But there will be some parallel work between the 2 CDTs

[11:01 AM] Morrow, Lorna H  
There will need to be a final conference for 2018 O&G students, but it will be smaller if the CDTs are kept separate.

[11:01 AM] Anne  
Have previously committed to the CDT funds for 20/21, but if a new contract is issued, this will draw attention which might make things more difficult at Cairn. The more support the better

[11:04 AM] Bentham, Peter  
I think a clear and distinct proposal is needed - laying out the forward timeline, learning from the current CDT, etc.

[11:04 AM] Anne  
GNZ IAB still populated with O&G, is there any prospect of other industries contributing?

[11:05 AM] Andrew Henery  
Think it needs a kick-off event for them to get the cohort started

[11:10 AM] Husnein AHMED  
Excellent news

[11:10 AM] Anne  
Well done John...your terrier-like qualities have paid off

[11:12 AM] Anne

Does this allow you to call in NERC GNZ? Or does it just become part of the funding model?

[11:15 AM] Husnein AHMED  
How much is NERC funding

[11:19 AM] Husnein AHMED  
Excellent work to get our foot in, congrats. Will we also get points for exploration licence applications?

[11:20 AM] Husnein AHMED  
Great update, thanks, appreciate the difficulties encountered

[11:24 AM] russell.reekie@neweuropeanoffshore.com  
If we actively attempt to attract a larger pool of training academy funders from a broader range of industries could this then reduce the annual sponsorship requirements per company?

[11:24 AM] Andrew Henery  
Totally agree with those comments about CDT upsides falling away without the "full CDT package".....

[11:26 AM] Andrew Henery  
For us, sooner the better to 'socialise'

[11:26 AM] Bell, Andy GSNL-PTD/E/F  
Same timing for Shell

[11:26 AM] Anne  
Contracts by mid-late summer for budgets putting together Sept

[11:26 AM] Christopher Leppard  
Likewise

[11:28 AM] Andrew Henery  
Yes, agree with your comments Peter about comfort around management of the funds in the pot....

[11:30 AM] Andrew Henery  
Good point Russell, it is the same cast of characters potentially just with a different program name

[11:32 AM] Christopher Leppard  
Apologies i need to go to another meeting

[11:32 AM] Anne  
The mix of PhD projects are the best example of the increasing diversity at the moment

[11:33 AM] Bentham, Peter  
Have you spoken to Marit Brommer at the IGA?

[11:34 AM] Husnein AHMED  
Thank a lot John, Lorna and all the rest. Stay safe

[11:34 AM] Anne  
Thank you John & Lorna....a very good update and well done in such difficult circumstances

[11:35 AM] Bentham, Peter  
Many thanks

[11:35 AM] russell.reekie@neweuropeanoffshore.com  
Thanks all. Very good discussion

[11:35 AM] John Millington  
Many thanks for all the hard work...