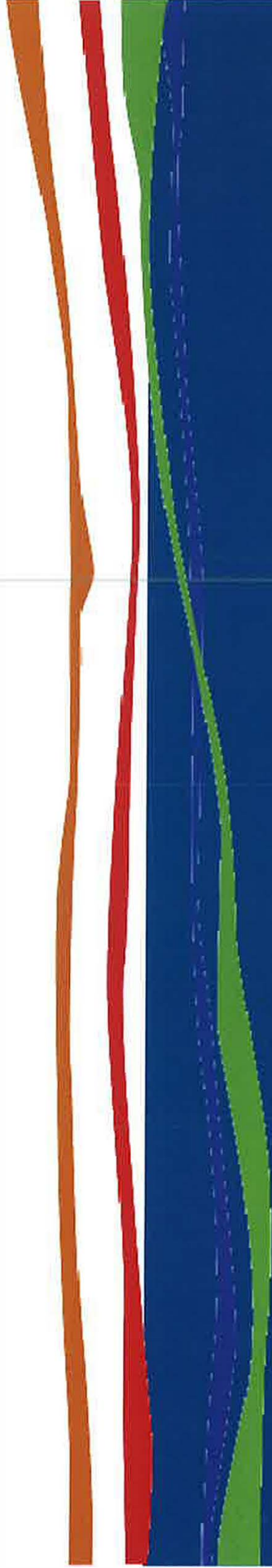




PANGAEA



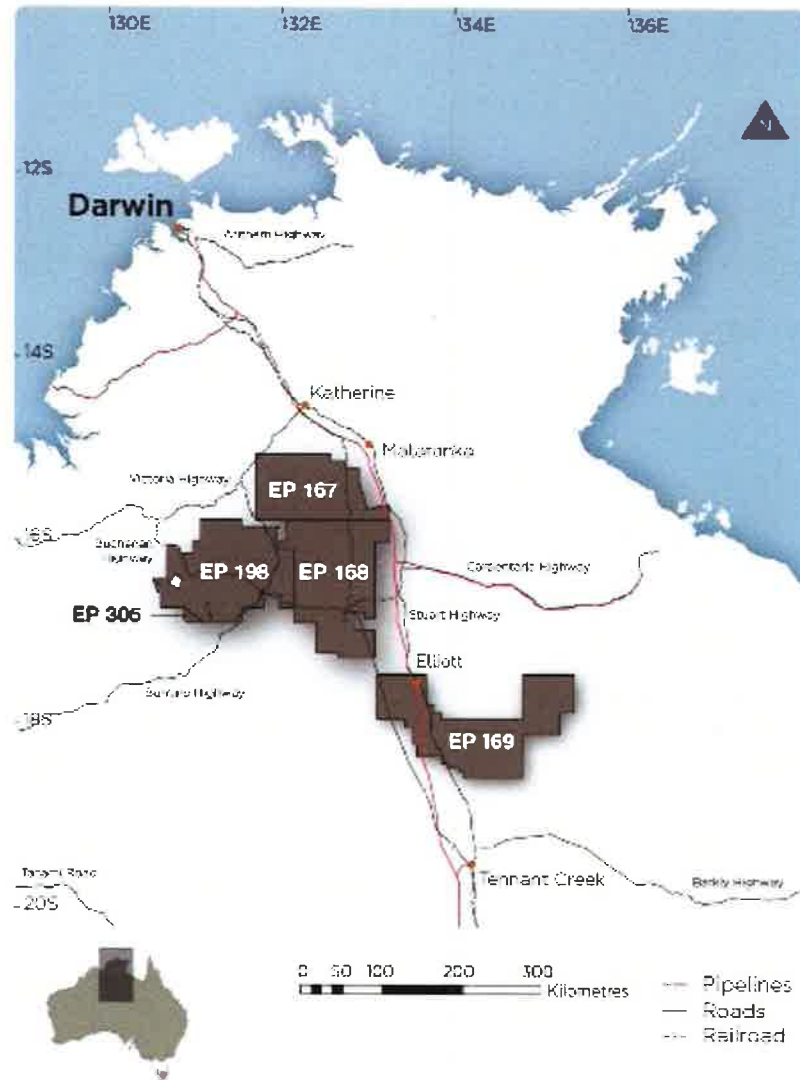
Pangaea in the Northern Territory - "The NT way"

10th March 2017

Pangaea in the NT



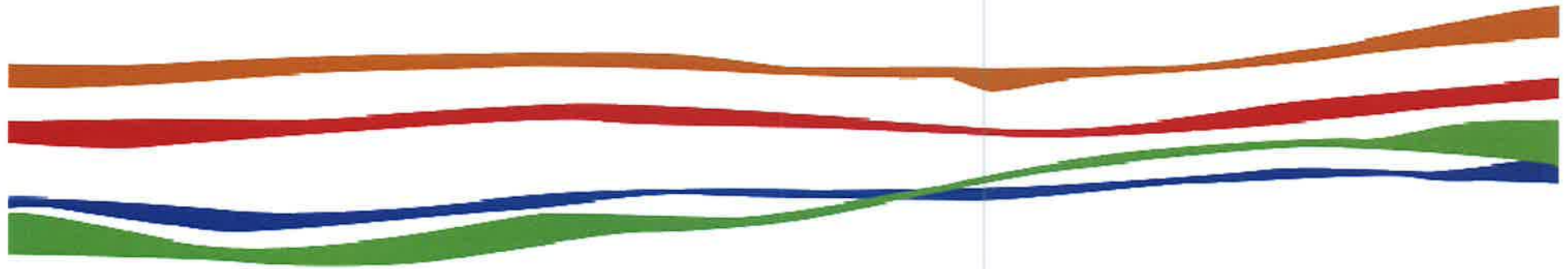
PANGAEA



- The NT Way
- A fair day's work for a fair day's pay
- Health and Safety primary focus
- Stakeholder Engagement including community, pastoralists/land owners, employees and traditional owners
- Risk management above and below the surface
- Use of local content by both Pangaea and sub contractors
- Creation of an Industry Capability Network with local service industries



PANGAEA



The NT Way

Natural gas Industry info seminar



Long Term Focus Towards Community Integration

Natural Gas
Industry info seminar

Collaboration delivers for graduates



The program that has delivered a new generation of graduates is the result of a collaborative effort between industry and education. The program is designed to provide graduates with the skills and knowledge needed to succeed in the industry. The program is a partnership between the industry and education, designed to provide graduates with the skills and knowledge needed to succeed in the industry. The program is a partnership between the industry and education, designed to provide graduates with the skills and knowledge needed to succeed in the industry.

Hands-on the best approach for work



Hands-on learning is the best approach for work. It allows graduates to gain practical experience and develop the skills needed for the industry. The program is designed to provide graduates with the skills and knowledge needed to succeed in the industry. The program is a partnership between the industry and education, designed to provide graduates with the skills and knowledge needed to succeed in the industry.

Traditional Owners
Local Content - Business
Government - Legislation

Rural

Home | Agriculture | Livestock | Pubs | Grains | Mining | Add Industry | Weather | Markets



Fracking, Indigenous participation and lingering issues from live export ban: Tom Stockwell delivers his first NTCA presidential speech

ABC Rural | by Mark Brown

The head of the Northern Territory Cattleman's Association (NTCA) says there might be more in the northern beef sector now, his history has shows it can change quickly.


In his first presidential speech, Tom Stockwell claimed it could take another decade for the north's cattle industry to fully recover from the issues caused by the temporary suspension of live export trade to Indonesia in 2011.

"While we live with volatility in prices, in seasons of staff shortages, the beef trade is resilient."


OIL & GAS.

It's not about the money. It's about the people. It's about the future. It's about the energy that powers our lives. It's about the energy that powers our lives. It's about the energy that powers our lives.



OIL & GAS.

It's not about the money. It's about the people. It's about the future. It's about the energy that powers our lives. It's about the energy that powers our lives. It's about the energy that powers our lives.



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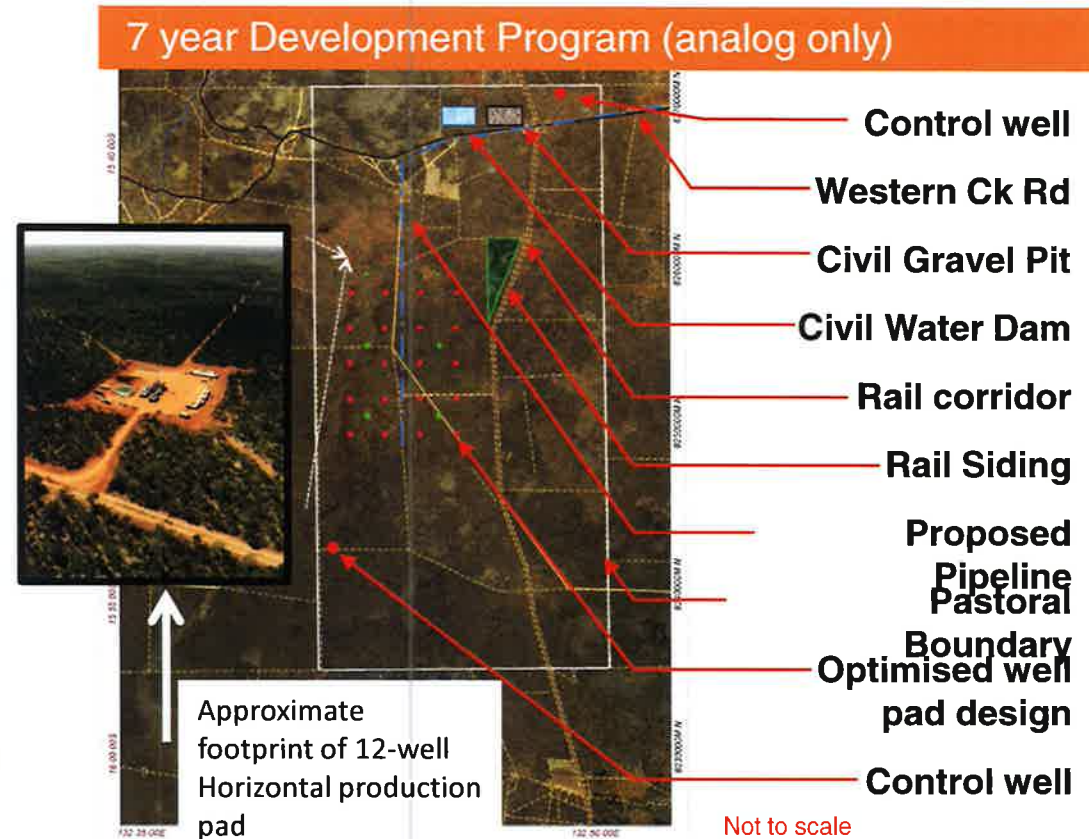
Micro Benefits and Impacts

Natural Gas
Industry info seminar

Potential to underpin initiatives across the top end for public benefit along side Federal Government's \$5bn Northern Australia Infrastructure Facility Fund

Local employment opportunities:

- Earthworks
- Camp construction/hire
- Water haulage
- Maintenance
- Fencing
- Traditional Owner Employment
- Traditional Owner Training
- Traditional Owner Business development
- Ongoing Pastoral liaison
- Cultural – Business - Government development initiatives
- Local cultural community development abilities
- Business and cultural schooling, scholarship and championing
- Logistics
- Infrastructure engineering, design and construction, Rail siding, pipelines, O/G facilities.



Technological Advancements Continue to Reduce this Footprint Further

APPEA Video

Natural Gas
Industry info seminar

Gas & Graziers



<https://vimeo.com/173435806>

Jobs to Lift Communities

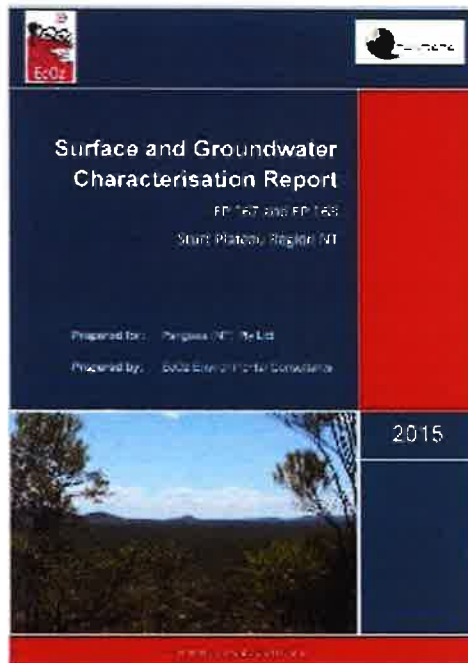


<https://vimeo.com/174169715>

Environmental Baseline Studies

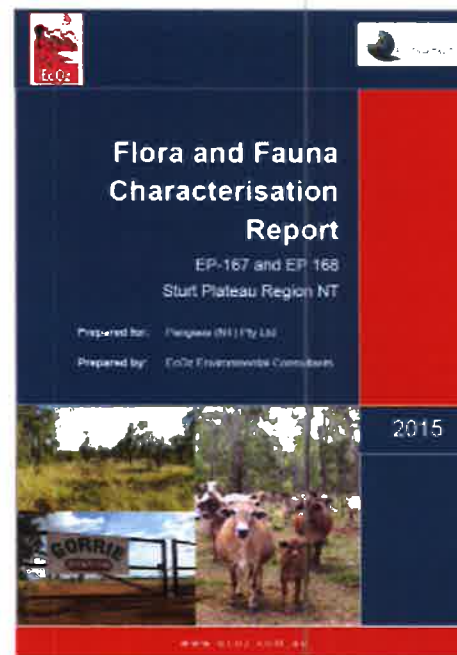


1. Landmark regionally extensive environmental baseline study completed by government preferred environmental firm
2. Extensive regional baseline water studies complete



No Major Risk Areas

- Sinkholes mapped in production area
- Surface water monitoring program to be implemented
- Water extraction impact plan to be considered



No Major Risk Areas

- No conservation reserves
- Low to moderate fire frequency
- No endangered species
- Weeds manageable through proper procedures

Indigenous Employment Pilot



PANGAEA

A red graphic with a stylized smiley face outline. It contains four photographs: a group of people in orange shirts, people in a meeting, a person on a tractor, and a person on a forklift. Text includes "Indigenous Employment Training Pilot Program" and "Program Synopsis & Review September 2015".

Indigenous
Employment
Training
Pilot
Program

Program Synopsis & Review
September 2015

Pangaea Utilizes Strong Local Content



PANGAEA



LARRIMAH
WAYSIDE
INN



NORTHERN
HEAVY HAULAGE

MAWPUMP DARWIN



RED DIRT
ELECTRICAL



DUNDEE BEACH
ENGINEERING SERVICE



MATARANKA TERRITORY MANOR
MOTEL & CARAVAN PARK



TRAFFICWERX NT PTY LTD

WJ DRILLING



MS CONTRACTING



L & S Water
Service &
Supplies



KATHERINE TILT TRAYS
& TIPPER HIRE

DARWIN OFFSHORE
LOGISTICS BASE

Safety | Relationships | Operational Excellence | Local Focus Global Reach | Diversity | Employees

Velkerri Shale vs Vaca Muerta Shale



PANGAEA



Velkerri Shale (Beetaloo Basin) – Northern Territory

- Velkerri Shale discovery in 2014
- First horizontal well drilled and tested in 2016
- The Velkerri varies from 200 ft to 1,800 ft thick with an average thickness of 1,500 ft at an average depth of 8,500 ft
- Shale play covers approximately 6.8 million acres
- Beetaloo basin reserve size OGIP >300 Tcf and ytd oil
- Committed capital pending the lifting of the hydraulic fracture stimulation moratorium



Vaca Muerta Shale (Neuquén Basin) - Argentina

- Vaca Muerta Shale discovery in 2010
- First horizontal well drilled and tested in 2011
- The Vaca Muerta varies from 150 ft to 2700 ft thick with an average thickness of 1,500 ft at an avg. depth of 9,000 ft.
- Shale play covers approximately 7.5 million acres
- Total recoverable hydrocarbons is 16.2 billion bbls oil and 308 Tcf gas
- Committed capital of \$5 billion 2017 and \$10 billion in 2018

Indigenous Employment Training Pilot Program



Program Synopsis & Review
September 2015



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Written & compiled by Damian Wall of Red-Gum Environmental Consulting Pty Ltd

Reference:

Wall, D.J., 2015, *Pilot Indigenous Employment Training Pilot Program: Program Synopsis & Review, September 2015*. Pangaea (NT) Pty Ltd, Sydney, NSW 2000.

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Front cover art "Biddy Country", 2013, screen print by Jimmy Wavehill. Jimmy is a Senior Elder overseeing the implementation of the program described herein. The symbols in this print are those used as body painting on the torso during ceremony. The design tells the story of how the white cockatoo (pankara) follows the kangaroo (wampana) and, whenever the kangaroo stops to rest at the waterhole, the cockatoo wakes him and warns him to keep moving as he is being followed by Tjanpa, a tall spirit man with two spears.

Indigenous Employment Training Pilot Program

Program Synopsis & Review
September 2015

Executive Summary

Pangaea (NT) Pty Ltd (“Pangaea”) has been exploring for oil and gas, south of Katherine in the Northern Territory’s Sturt Plateau since 2012.

Success depends on the resources and then having the capability to access them in a way that has ‘nil-impact’ on the natural and cultural environment. Our aim is to use the economic development of the resources to bring training and employment to remote areas of the Territory and so create opportunities and higher living standards for local Aboriginal people who are uniquely capable of the cultural and environmental management of land within the Pangaea tenements. Pangaea, working through our service delivery partners, believes that the local people can contribute to, and benefit from, participation in the Territory’s new growth industry.

All our local operations are conducted under a Co-Existence & Exploration Deed (“the Deed”) agreed with the Northern Land Council (“NLC”) on behalf of the Native Title Holders. Pangaea considers vital the collaborative participation of the NLC and we take great pride in the partnership approach we have developed. Pangaea would especially like to acknowledge the NLC for its assistance in delivering the Indigenous Employment Training Pilot Program (“the Program”) during 2015.

The knowledge provided by the NLC over the last 3 years has been invaluable.

Likewise our success would not have been possible without the involvement of local business & industry, particularly Mark Sullivan Contracting Pty Ltd (MSC). MSC is to be congratulated for its professionalism and commitment to delivering employment and training outcomes at the training facility - *Flying Fox Centre of Excellence*.

A vital part of making the training and employment sustainable is that the Program design provides an appropriate level of support to participants after transition from training to employment, or from training to higher education. This additional level of support has proved to be a critical element for ensuring *meaningful employment* beyond initial training outcomes.

Pangaea sees this year’s program as the first step towards providing long-term employment to many younger First Australians who want to continue to care-for-country in our Territory exploration tenements – especially on the Sturt Plateau. As a company, we acknowledge the importance of land as ‘mother’ and wish to ensure that younger generations of the country also understand our commitment to ‘walk together’ and ‘walk lightly’ into the future.

Pangaea is grateful for the support provided by Elders and spokespersons from the *Liwaja*, *Wubalawun* and *Jalalabayin* peoples. We thank them for their continuing guidance and acknowledge that it is only through our partnership and the training and employment of local people, that we can all share the benefits of the Territory’s economic development.

Tim Radburn
Pangaea (NT) Pty Ltd

A Cooperative Partnership

The Northern Land Council has worked closely with Territory employment service providers and, industry groups to provide a clear pathway to employment in the resources/civil industry. The Indigenous Employment Training Pilot Program, sponsored by Pangaea (NT) has provided an effective training and employment program built around 'hands-on' training and life-skills support to create a model program.

We believe the program's success will be found in long-term employment that is possible because of the close partnership that has been created between private enterprises, the resources industry and traditional Aboriginal owners of the areas where they operate.

In the case of Pangaea, a close partnership between the company, local contractors and the NLC enabled the development of a program to identify and train a group of cadets with the special cultural knowledge and support of the traditional owners of the land. The program has been designed to ensure that young people have the opportunity to work 'on their country' while having the support network of family during placement.

In early 2015, the NLC helped Pangaea begin a round of consultation with senior Elders and spokespersons from each of the three family groups (*Liwaja*, *Wubalawun* and *Jalalabayin* people) on whose country its 2015 exploration campaign was being conducted. The meetings introduced the Program opportunity, but most importantly, engaged with 'Mentors' from each family group who could assist in selecting the most appropriate candidates from their extended families to take advantage of the training and employment opportunity.

The model of linking 'country to candidates' is essential for success. The over-riding sense of responsibility for country - and each other - in a family group was critical to ensuring completion rates and enthusiasm. In the future it also means that the land has been respected and its value preserved for future traditional owners.

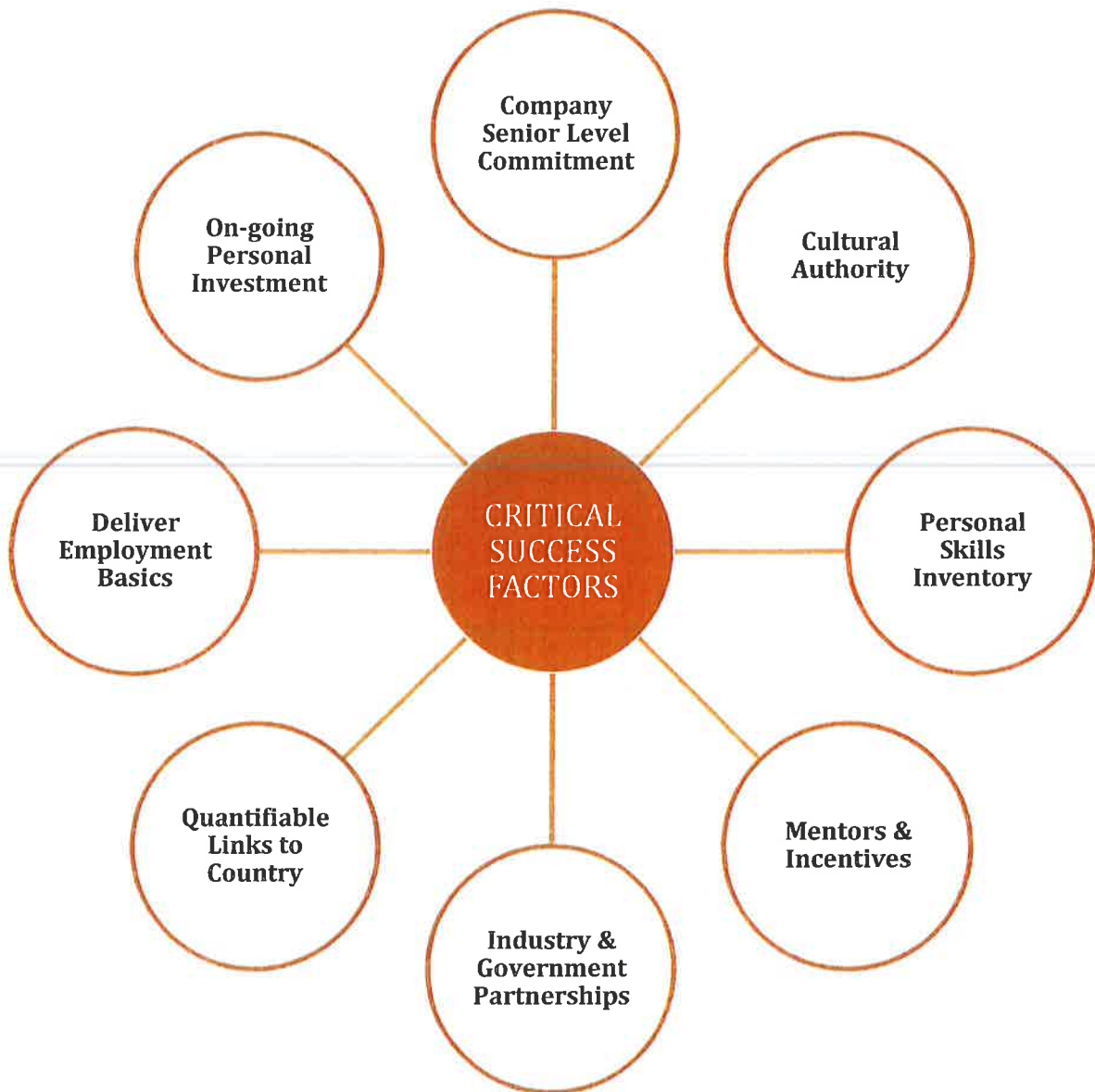
The NLC's aim is to promote employment opportunities for traditional owners and training is a vital first step. But there also needs to be job opportunities. The Pangaea drilling project, and others like it, are creating jobs which are needed to ensure that these training opportunities lead to the social, cultural and economic benefits that we need for our communities.

With the slow-down in other mining projects the NLC's Jobs and Careers Service (JACS) has faced difficulties promoting local employment opportunities. The Pangaea Project has been a great boost and potentially holds great opportunity for traditional Aboriginal owners to employ their knowledge in managing their own country in the future.

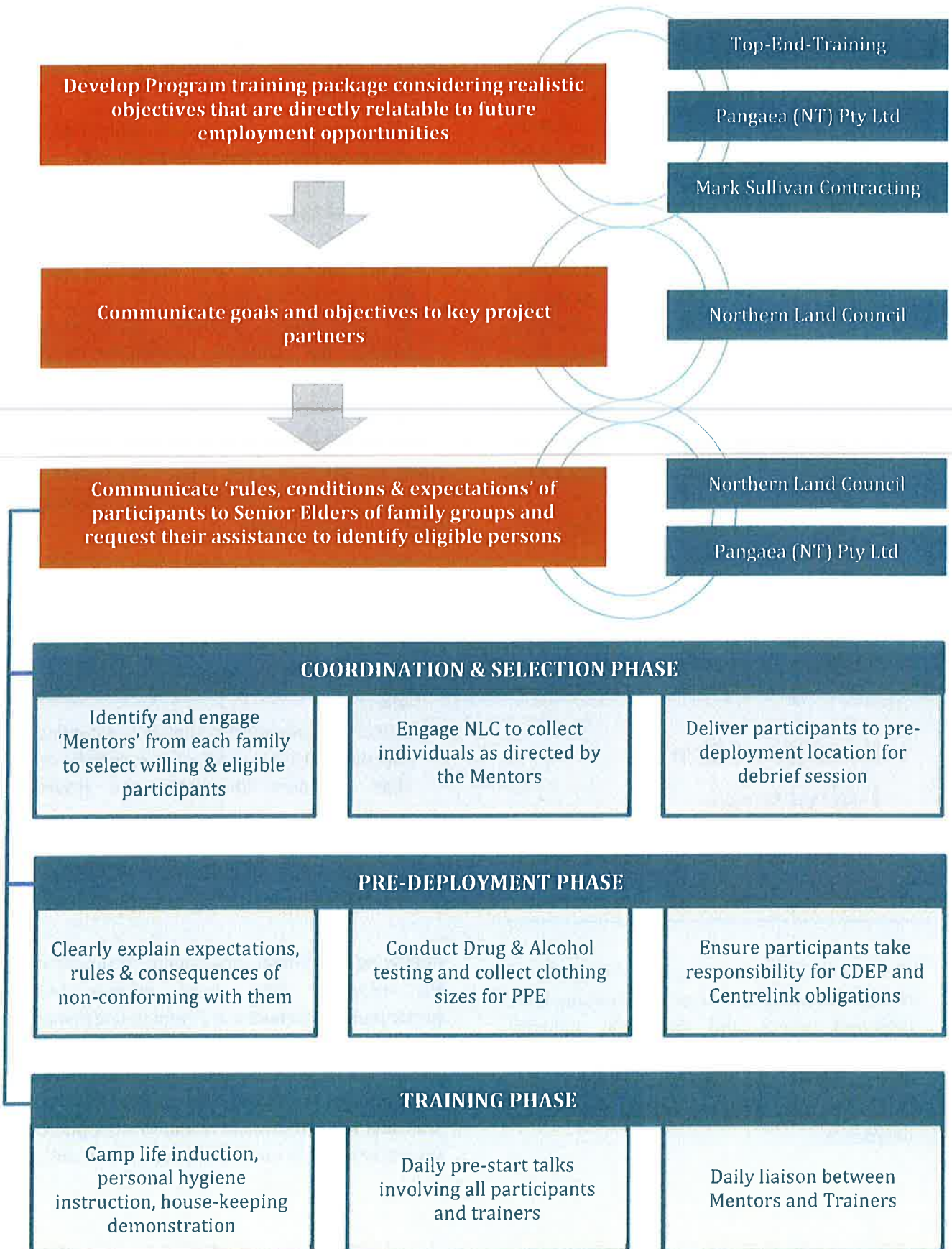
Leanne Liddle

Northern Land Council

CRITICAL SUCCESS FACTORS



PROGRAM DESIGN & IMPLEMENTATION



Introduction

Pangaea developed and delivered a program of industry-specific training targeted to the local Traditional Owners. It aimed to provide participants with the minimum entry-level skills to for employment within the Pangaea tenements beyond 2015.

The Program included 'soft skills' associated with confidence building and self-esteem, communication and workplace discipline which are helpful for their personal development and employment whatever their future vocation.

This report:

1. Presents the results of Pangaea's Indigenous Employment Training Pilot Program
2. Describes the adopted principles that guided the program
3. Describes the program delivery
4. Highlights a pathway for future improvement; and
5. Reports on program experiences.

1. Results of the Indigenous Employment Training Pilot Program

Mark Sullivan Contracting Pty Ltd (MSC) in close partnership with Top End Training have delivered on-site and on-the-job, industry specific training to twelve participants via two separate fifteen-day placements at Flying Fox Station located within Pangaea exploration tenements.

At completion, all twelve participants achieved a *Certificate 1 in Resources & Infrastructure Operations*. Additionally, the participants all received credentials in related work place competencies:

- 12 participants achieved competency tickets for *Operate Roller & Compactor*,
- 12 participants achieved competency tickets for *Conduct Tractor Operations*,
- 12 participants achieved competency tickets for *Conduct Civil Operations Skid Steer/Loaded Operations*,
- 12 participants achieved competency tickets for *Conduct Operations with Integrated Tool Carrier*; and
- 12 participants achieved competency tickets for *Operate a 4 Wheel drive vehicle*.

Further, the Program has successfully delivered necessary *preconditions* for achieving employment, including:

- Work readiness support by providing 100+ hours driver time that can be used by participants to obtain their Drivers License 'Learner' permits and delivery of HLTAID002 Provide Basic Emergency First Aid,
- Participant mentoring that has extended beyond short-term goals to a 'career focus' that considers life goals and future aspirations.
- Development of a work ready attitude, consideration of realistic target setting and self-evaluation.

Following individual assessment throughout the Program, MSC have offered five participants placements in *Training Cadetships* to continue development of the basic skills obtained through the program. The cadetships will focus on developing civil and mechanical skill sets that are directly required to support the infrastructure and other projects currently

being developed in the Territory, by Pangaea and others in the years ahead.

2. Adopted program design principles

- Deliver training that is 'job related' and culturally appropriate.
- Collaboration with Indigenous Elders & Mentors who have 'cultural authority'.
- Identify and address personal barriers and learning difficulties.
- Motivate participants and encourage decisions that enhance their individual employability.
- Clear communication of program goals to partners and participants.
- Provide post program support to encourage the participant to take personal responsibility for their future.

Job related & culturally appropriate training

Pangaea and local contractor MSC have developed a strong corporate partnership. From this base a range of new, industry-focused collaborations between a range of NT service providers, employers and trainers will be created. With the involvement of the NLC, Pangaea have fostered an environment based on *mutual assistance and respect* which has been critical to broadening the reach of the program, while maintaining interest and support amongst our Traditional Owner partners.

The program has been based on developing civil construction skills – readying the participants to take advantage of work opportunities that Pangaea foresees (on their country) as we move forward in the NT.

Collaboration with Indigenous Elders and Mentors who have 'cultural authority'

Our relationship with Traditional Owners from *Liwaja, Wubalawun* and *Jalalabayin* family groups is strong and critical to our continued success in the NT.

Program design included a process of communicating our goals and program requirements to Senior Elders before the program was offered to participants. With their help and guidance, Pangaea was able to:

- Identify 'Mentors' from each family group that would be able to actively recruit participants that are most likely to make the most of their opportunity.
- Ensure a clear agreement was reached in-so-far as working on each others' country was concerned.
- Ensure that the wider community and relatives understood the importance of remaining at distance and supporting the participants while they attended training

Identify & address personal barriers and learning difficulties.

Individual assessment of participants before, during and after training is critical to success. Without an understanding of the individual – a clear employment outcome is unlikely.

Pangaea undertook regular individual interviews with participants and with their trainers to understand:

- Personal motivations,
- Previous training and experience levels,
- Numeracy and literacy issues if any,
- Aspirations and goals; and
- Limitations to successful achievement of the training program.

Motivate participants and encourage decisions that enhance their individual employability

Pangaea considers it important that the program is not 'training for training's sake'. Making the training relevant to both the participant and the anticipated job opportunities in the Pangaea tenements benefits all parties.

To this end and mindful of MSC's growing need for skilled employees for their other contracts (aside of Pangaea) the program included specific *competencies* to supplement more generic workplace skills.

The competencies list was also, in part, determined by the results of individual interviews with participants that were used to develop an appreciation of the applicant's goals, aspirations and expectations.

Clear communication of program goals to partners and participants

Pangaea, MSC and the NLC went to great lengths to clearly communicate the program goals and expectations about what can be achieved from the program – upfront to both program participants and program deliverers. A clear understanding of the intended 'end-point' was vital to ensuring we had participants in the correct frame-of-mind before leaving home and family.

Post program support encourages the participant to take personal responsibility for their future.

Pangaea had put processes in place to support participants - who successfully completed the program - to be kept informed of opportunities for employment that might arise.

Our partnerships with NT service providers and the NLC are critical to a seamless transition

from the training environment to full-time employment. Barriers at this point in the journey cause delays, undermine participants' confidence and dampen their enthusiasm for continued employment leading to a loss of skills and wasted training resources.

Through the Mentors, cultural authority was used to encourage younger participants to make life changes beyond this program and to continue on the road to employment basics with credentials like Driver's Licenses and Senior First Aid certificates.

3. Program delivery

Pangaea and our service providers, MSC and Top End Training understood that the success of the program (for all our best intentions and carefully considered design) ultimately comes down to how well it is delivered and how engaging it is for participants.

To maintain participant interest, the Program must be in part implemented 'on-country' and focus on real-life civil skills.

The program offered a mix of 'in-class', 'hands-on' and 'on-country' lessons. All sessions were assessable by *Top End Training* in some form and were an extension of the course work defined by the Level 1 certificate.

Participants were actively involved in:

- White Card (Work Safely in the Construction Industry) training
- Use of GPS to locate access routes to defined locations around drilling sites in the field
- Heavy machinery operation in a controlled environment
- Task orientated construction of a lay-down pad for storage equipment
- Clearing of re-growth
- Road formation activities

- Welding and grinding and construction of farm infrastructure
- Pump maintenance and repair
- Machinery maintenance and repair.

Relationships were key to the success of the program. The relationship between the trainers and participants, the participants *and* the Mentors and the Mentors and the trainers ALL need to be based on respect and patience. Ultimately, all relationships were defined differently – but none were *more* important than others. The Pangaea approach relied heavily on the importance and support networks of ‘family’, the desire to work on-country so that they are ‘work-ready’ when future opportunities present.

Work placement was divided into two 15 day programs delivered at Flying Fox Station – the MSC Centre for Training Excellence – and in the Pangaea tenements.

The location of the training was remote and not on either family groups’ country – which proved an important consideration. Trainees were encouraged to develop friendships outside their own family groups, by the Mentors, who had the cultural authority to make that happen. Camp life harmony was of paramount importance and was achieved via this model. Work on country was even divided amongst family members with an equal number from each group travelling to site, working and living together without incident.

The program adopted a ‘learn-by-do’ philosophy as recommended by our Traditional Owner collaborators and Senior Elders. It maximised the hands on experience which makes the training more meaningful.

The MSC approach to work safety, environmental protection and industry best practice was promoted throughout the training – constantly reinforced by strict camp life rules, start-up and pre-work meetings on a daily basis. The intent was to encourage and develop

a range of behaviours that underpin the MSC work culture and hopefully develop future employees that are future assets to the company.

At the end of the first 15 day program, a feedback session identified that the participants felt too much time was spent being idle while other participants used equipment. TET and MSC consequently changed their delivery model in the second placement period to ensure that smaller teams were assigned different tasks concurrently - rotating between the tasks, ensuring full occupation of their time.

4. Program improvement

Pangaea, in-conjunction with our NT service providers and program partners will fully evaluate the success of the 2015 program – involving all our project collaborators (MSC, TET, Senior Elders & Mentors and the NLC).

Individual discussions with participants are key to identifying if expectations were met, exceeded or otherwise. It is also a valuable exercise in assessing attitude change, social development and personal growth in the participants themselves.

Pangaea has already determined that:

- Program participants must be assisted with literacy and numeracy skills, health and nutrition awareness, and education on ZERO tolerance on drugs and alcohol in the petroleum industry.
- To be adequately prepared for placement in the civil construction industry, training and development to at least Cert 3 level is most desirable.
- The *Mentor approach* created a culture of family support amongst participants and integrating training with work ‘on-country’ is a key to maintaining participant focus and dedication to future programs.

- More effort is to be made on affording and encouraging *female* participants to attend future training opportunities.
- Employability is key. Future programs should infuse a degree of basic self-promotion (e.g. CV writing) and life essentials (e.g. Drivers License theory).

5. Program experiences

“I thought the training was good. The best thing about it was driving the machines and meeting new people. The only thing I thought would have been better was to be able to spend more time at Tarlee and driving newer machines”

- Liam McIlwain, Participant

Liam has previously been a Process Technician at Batchelor Nickel, coal and copper mine with Compass Resources and also held positions with John Holland constructing the new cancer ward at Darwin Royal Hospital. He completed a Certificate II in Mining and Manifest when working at Jabaru Mine with geo-technicians conducting core sample tests.

He has a Heavy Rigid truck and loader licence and 6 years experience working for the ADF at Robinson barracks, Shoal Bay, in security detail. Liam graduated with a Certificate 1 in Resources & Infrastructure Operations, all the civil competencies offered and Basic Emergency First Aid.

“I really want to get my tickets for the loader, bobcat and roller. Wouldn't mind doing a bit of welding because I'd like to start an apprenticeship as mechanical fitter”

- Edmund Shandley, Participant

Edmund has had previously held trainee positions with large companies including Rio Tinto and at Argyle mine in WA. He has successfully completed a drill and blast course and 2 years of a 4 year Mechanical Fitter apprenticeship. Edmund graduated with a Certificate 1 in Resources & Infrastructure Operations, all the civil competencies offered and Basic Emergency First Aid.

Edmund also accepted a place in the Trainee Cadetship offered by MSC which will begin in late 2015.

“The best part of the training was actually learning how to use the machinery! Not just reading about how to use it. I was also happy to work at Tarlee and learn how to use a GPS to locate the spots around the drill site.”

- George Maroney, Participant

George is straight from High School, Casuarina Senior College Darwin, where he completed Year 11. George enjoys machinery operation but is also highly suited a technical or field assessment based career. George would like to become a cultural field liaison in the future as he wants to go through lore and learn about country in the Birdum area.

“The best part of my time here was making new friends, sitting around the fire trading stories, getting on the machines and learning new things when working as a team.”

- Aquinas Johns, Participant

Aquinas (aka “AJ”) completed Year 10 at Kunnanurra High School and left school to work with a Ranger Group, conducting Wildlife monitoring, Conservation and Land Management activities. AJ has completed

training in Melbourne for Export Abattoirs, as a slaughter man and has existing Competency Tickets for front end loader, backhoe and grader operation – plus a Working at Heights qualification. AJ is directly related to senior Traditional Owners in Birdum and in the Tanami.

AJ graduated with a Certificate 1 in Resources & Infrastructure Operations, all the civil competencies offered and Basic Emergency First Aid. AJ also accepted a place in the Trainee Cadetship offered by MSC which will begin in late 2015.

“The operating of machines has been one of the main keys to the success of this course so far. Without the ability to allow the boys to operate machines we would not be able to hold their attention span for the required bookwork for their white cards.

“Taking the boys in groups of three with an Elder over to the civil camp at Tarlee has been a valuable learning experience for them. They were subjected to an initial camp induction, as per MSC regulations and then had to create a very basic JSA, they were also required to attend the daily prestart meeting with the rest of the camp staff and required to undergo random BAC test as per MSC regulation.

“Having the boys in a remote bush environment puts a little twinkle in eye of all of them and they really enjoyed the job (and the tucker).”

– Kevin Maddigan, Trainer, MSC.

Kevin assisted with the first 15 day placement and focused on in-field delivery of the program and machinery operation.

“The boys are a very pleasant mob. They are always courteous and leave their rooms cleaner than most that come through here! They are a credit to their families and I hope they do well”.

– Margaret, Kitchen Manager, MSC.

Margaret is a veteran camp kitchen and camp manager who was present for the duration of the program.

“We’ve had our challenges, our good days and bad days but overall had a very pleasing experience here at the Fox.

“The participants now need to take on some personal responsibility for their own futures and use this start to launch into a career.”

– Murray Lauritsen, Senior Trainer, Top End Training.

Murray has delivered both 15-day placements and all Competency Modules offered during the program.

