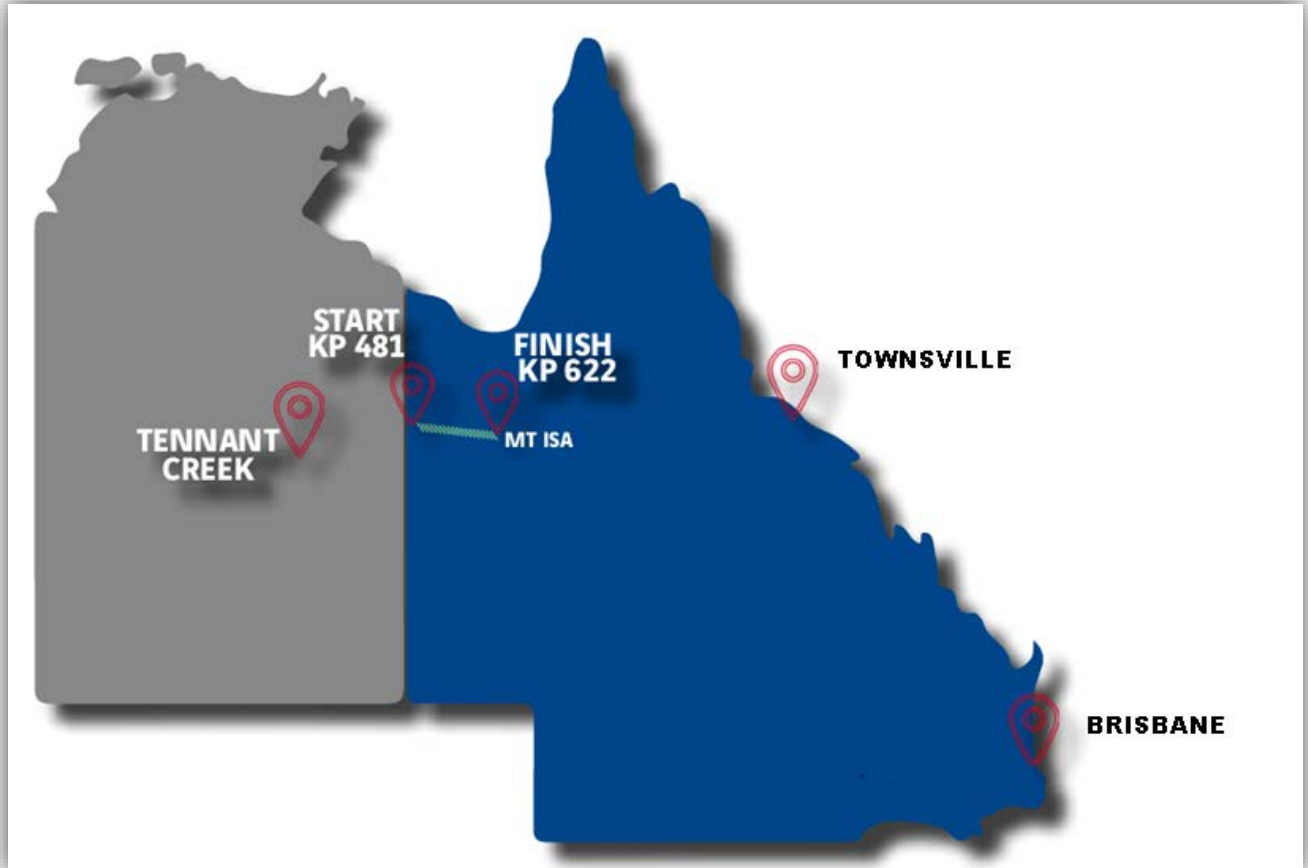


# Northern Gas Pipeline (NGP) Phase 2



## The Project

The NGP Project comprises the construction of a 623km pipeline connecting the Amadeus pipeline, at the (existing) APA Warrego Compressor Station, to the Carpentaria Gas Pipeline (CGP), near the (existing) Mica Creek metering facility.



Map of Project Location

The project was split into 2 parts with Spiecapag (SC) awarded the Part 2 scope from KP 481 to the Mount Isa Compressor Station (MICS) at a total length of 142km.

The pipe was DN300 API 5L X70 PLS2 ERW, with a standard wall thickness of 6.4 mm and areas of heavy wall thickness of 7.9 mm.

## Project Schedule

Due to land access restrictions at the Mount Isa (Eastern) end of the pipeline, SC were required to perform the works from west to east. This required a full camp and laydown area to be constructed prior to any pipeline activities commencing. The camp mobilisation and construction schedule was critical and SC pulled out all the stops to ensure this was performed in an expedient manner.

Pipeline construction works commenced on schedule with clear and grade activities starting on the 14<sup>th</sup> August 2017.

Due to uncertainty around access dates for the Eastern end of the easement, the scope of works was split in to 2 separable portions. The first to be completed prior to the wet season (KP 481 to KP 574), with the project team then demobilising and to return in March of the following year to complete the final 50kms (KP 574 to MICS).

Access was granted earlier than anticipated which allowed SC to capitalise on the high production rates being achieved and to safely complete all mainline construction activities prior to the Christmas period. This was a great achievement for all stakeholders involved.

The Client also awarded additional scope to Spiecapag in 2018 and Practical Completion of the whole of the works was achieved in June 2018.



## Logistics

Crews were initially accommodated in Camp Spiecapag located at KP530 and then transitioned to accommodation in Mount Isa for the later stages. A pipe load-out crew was also located in Tennant Creek (some 660kms away).

The majority of personnel were engaged on a fly-in fly-out basis working a 28 and 9 roster, however there was a significant portion of the workforce that were local to the area and employed from the Indigenous communities.

### Construction

Construction of the works was performed by one (1) mainline spread and a special section crew for any side cuts and hilly terrain.

The works are summarized in the table below:

Item	Qty	Description
Pipeline	142km	DN300 API5L WT 6.4mm HW 7.9mm
External coating	142km	700 microns of FBE + 50 Micron Internal coat
Cathodic Protection Units	3	
Cathodic Protection Test Posts	29	
Crossings	111	
<ul style="list-style-type: none"> <li>Road Crossing Bored</li> </ul>	1	
<ul style="list-style-type: none"> <li>Road Crossing Open Cut</li> </ul>	3	2 of which are Haul Roads
<ul style="list-style-type: none"> <li>Track</li> </ul>	53	
<ul style="list-style-type: none"> <li>Major Watercourse</li> </ul>	7	
<ul style="list-style-type: none"> <li>Minor Watercourse</li> </ul>	46	
<ul style="list-style-type: none"> <li>U/G Service Crossing</li> </ul>	1	

### Achievements



#### Indigenous Participation

Spiecapag placed great emphasis on ensuring that local indigenous traditional landowners from the area formed a significant portion of the project workforce. The indigenous engagement and training undertaken on the project was a great success, SC surpassed all targets and the indigenous groups in the area provided positive feedback in relation to the level of effort in engagement from SC.

#### Reinstatement

The Eastern end of the pipeline route consisted of rocky undulating terrain and required a number of major side cuts to be performed in order to safely install the pipeline. These were executed extremely well with a great deal of planning and design, finished off with effective sediment and erosion control for reinstatement.



### Collaborative Working with the Client

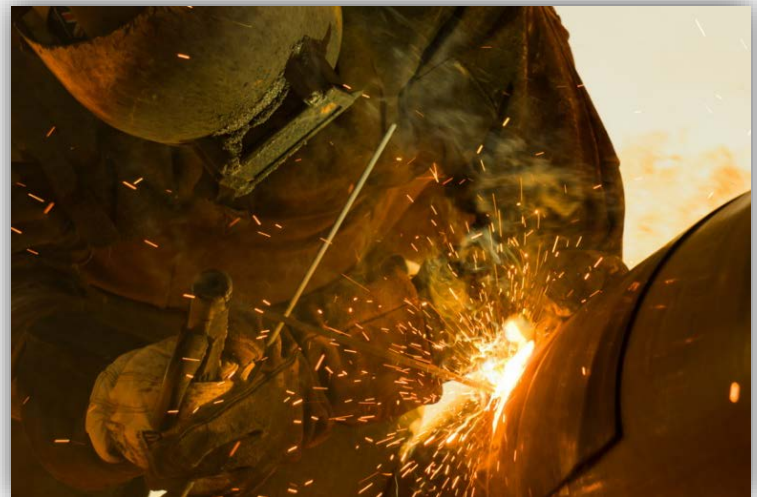
Throughout the works, SC and the Client worked collaboratively in ensuring that all actions and decisions were made on a best-for-project basis, with open lines of communication maintained at all times.

The project encountered some challenges associated with free issue line pipe failing during the hydrotesting, this caused significant impacts to the final completion. However, due to the collaborative approach from both parties the effects were minimised and all issues resolved expediently.

### Quality

The quality produced on the project was very good, with a great deal of reporting and data compilation required as part of the MDR. This was carried out efficiently, with final signed acceptance of the MDR achieved just two (2) days after completion of punch list activities.

The welding repair rate was 0.92%, this was built up of a repair rate of 0.92% on the mainline and 1.3% for Tie-Ins (SPIECAPAG’s KPI is ≤2.0%).



### Safety

Safety always remains a priority on any of Spiecapag’s projects. A comprehensive safety system was implemented at the start of the project and followed through to completion and handover.

Project Statistics	
No of man-hours worked	235,932
Fatalities	0
Loss Time Incidents	0
LTIFR	0
Medical Treatments	1
TRIFR	4.2

All Safety KPI’s established at the start of the project were achieved.

A number of new safety initiatives were also introduced on the project. The project team identified that working in the summer months in Northern Queensland posed a significant risk to personnel, particularly in relation to heat stress.



As a result, the Heatwave Campaign was compiled and rolled out to ensure that the workforce were educated on heat and UV related illnesses and provided with the tools necessary to mitigate the risks of the high UV index and extreme heat.

During the NGP Project, Spiecapag continued their lost time injury free record in Australia, which has been maintained for the last 5 years.

### **Cultural Heritage and Environmental**

The area the NGP route traversed was high in cultural significance and required systematic processes to be in place ensuring any items of interest were located, identified and preserved or temporarily relocated whilst the work was undertaken. Any items relocated were then returned to their original location during the reinstatement activities.

Spiecapag's environmental team worked tirelessly to ensure the works performed minimised any impact to the environment. A great deal of effort went into sediment and erosion control, especially in the undulating areas and side cut locations.



### **Project Video**

The following link can be used to view the project video.

[Ctrl + Click Here](#)