TANAMI GAS PIPELINE DESCRIPTION

REV Draft

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ABBREVIATION AND DEFINITIONS

AGIG	Australian Gas Infrastructure Group
AGIT	AGI Tanami Pty Limited
AGN	Australian Gas Networks
AGP	Amadeus Gas Pipeline
APA	APA Group
API	American Petroleum Institute
AS	Australian Standard
ASME	American Society of Mechanical Engineers
CP	Cathodic Protection
DBS	Dead Bullock Soak Mine
DN	Diameter Nominal
FEED	Front End Engineering Design
GMS	Granite Mine Power Station
IG	Insulating Gasket
km	Kilometre
KP	Kilometre Point
KPI	Key Performance Indicators
m	Metre
mm	Millimetre
MAOP	Maximum Allowable Operating Pressure
MLV	Main Line Valve
MPa	Mega Pascal
P&ID	Piping and Instrument Diagrams
PCV	Pressure Control Valve
PLC	Programmable Logic Controller
RTU	Remote Terminal Unit
SCADA	Supervisory Control and Data Acquisition
TJ/day	Terra Joule per day
TLV	Tanami Line Valve
TNP	Tanami Gas Pipeline

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1. INTRODUCTION

AGI Tanami Pty Limited (AGIT) has constructed the Tanami Gas Pipeline (TNP), a DN200 underground pipeline bringing natural gas to the Newmont Tanami mine sites.

Running for approximately 440km, the Tanami Gas Pipeline will carry gas from an Inlet Meter Station connecting to the Amadeus Gas Pipeline (AGP), at a location approximately 180km north-west of Alice Springs, to the Granites and Dead Bullock Soak power stations at the Newmont Tanami facilities.

All facilities associated with the Tanami Gas Pipeline development have been constructed and operate under Pipeline Licence PL36 together with gas delivery under a Gas Transportation Agreement.

The power stations at the Newmont Tanami facilities are owned by Newmont and constructed and operated by Zenith Pacific.

2. PIPELINE OVERVIEW

Tanami Gas Pipeline is 8-inch, 440 km pipeline transports natural gas from the Inlet Meter Station connecting the Amadeus Gas Pipeline to the Newmont's gas fired power stations in the central region of the Northern Territory. Final 40km of pipeline is within Newmont's mine lease where two custody meter stations were constructed at Granites and Dead Bullock Soak.

The TNP consists of the following pipelines, facilities and interconnection:

- The Pipeline:
  - DN200 x 440km high pressure natural gas pipeline.
- Inlet Meter Station at KP0:
  - Facility is located adjacent to AGP's Tanami Scrapper Station and includes a short section of pipeline that ties-in to the pipework within the Amadeus Gas Pipeline Scrapper Station
  - Remote operable mainline valve with a manual bypass
  - Inlet filter coalescer
  - 2 Flow metering and flow control runs
  - Aboveground pipework and pig launching facilities
  - SCADA data connectivity, telecommunications and solar power supply
  - Cathodic Protection (CP) system
- Scraper Station 1 Yuendumu at KP145:
  - Pig receiving facilities and associated pipework
  - Remote operable mainline valve with a manual bypass
  - Pig launching facilities and associated pipework
  - SCADA data connectivity, telecommunications and solar power supply
  - Cathodic Protection (CP) system
- Scraper Station 2 Chilla Well at KP278:
  - Pig receiving facilities and associated pipework.
  - Remote operable mainline valve with a manual bypass
  - Pig launching facilities and associated pipework.
  - SCADA data connectivity, telecommunications and solar power supply
  - Cathodic Protection (CP) system
- Granites Mine Station at KP395:
  - Facility is located at Granites Mine site
  - Remote operable actuated isolation valve with manual bypass
  - Dust filter
  - Flow metering
  - Electric immersion gas heaters – 2 off 75% duty
  - Pressure reduction control – 2 runs
  - SCADA Data connectivity
  - 415VAC main power supply (from Mine Power Station)
  - Cathodic Protection (CP) system
  - Satellite and mobile data communications systems

- Dead Bullocks Soak Mine Station at KP440:
  - Facility is located at Dead Bullocks Soak Mine Site
  - Pig receiving facilities and associated pipework.
  - Remote Operable isolation valve with manual bypass
  - Dust filter
  - Flow metering
  - Electric immersion gas heaters – 2 off 75% duty
  - Pressure reduction control – 2 runs
  - SCADA data connectivity
  - 415VAC power supply (from Mine Power Station)
  - Satellite and mobile data Communications systems

The following schematic shows the pipeline and the facilities.

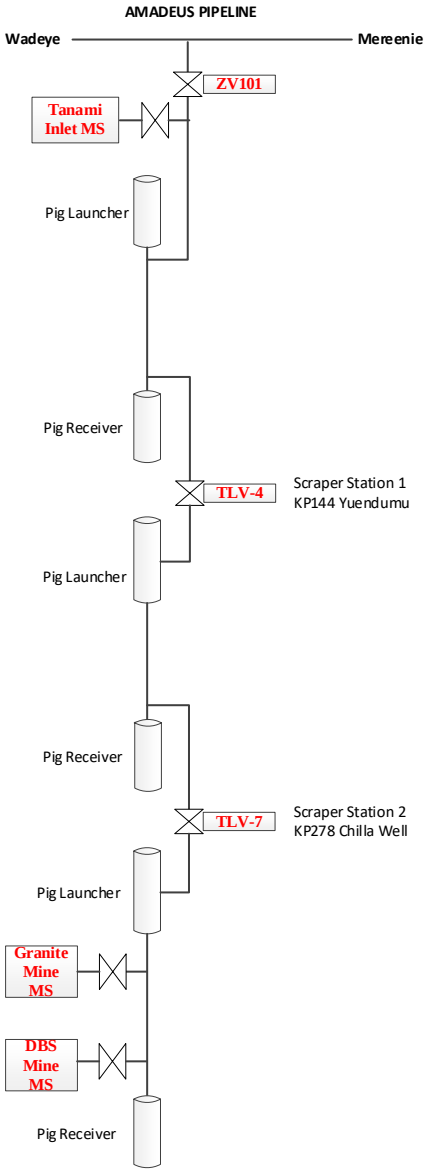

Figure 1: Tanami Pipeline System

3. DESCRIPTION

Table 1 **PHYSICAL CHARACTERISTICS**

Section:	**KP0 (Pipeline Inlet) to TLV-4**
Length	145 km
Nominal size	219.1 mm
Nominal wall thickness	5.6 mm
Steel type	API 5L X52 (L360M)
MAOP	10.2 MPa (gauge)

Section:	**TLV-4 to TLV-7**
Length	135 km
Nominal size	219.1 mm
Nominal wall thickness	5.6 mm
Steel type	API 5L X52 (L360M)
MAOP	10.2 MPa (gauge)

Section:	**TLV-7 to Granites and Dead Bull Soaks**
Length	160 km
Nominal size	219.1 mm
Wall thickness	5.6 mm
Steel type	API 5L X52 (L360M)
MAOP	10.2 MPa (gauge)

4. TANAMI PIPELINE SYSTEM CAPACITY SERVICES

The following table shows the current available capacity services on the TNP.

Service	Capacity Service	Inlet	Outlet	Capacity (TJ/d)
TNP	**Tanami Pipeline System (TOTAL)**	**Tanami Metering Station**	**Scrapper Station 2**	**13.42 TJ/d**

Map of Tanami Gas Pipeline