## **Permanent Monitoring Installation Report**



Client         Santos Ltd         Tubing Size         2-7/8in 6.5 lb/ft           Well Name         Mt Kingsley 31         Casing Size         5-1/2in 20lb/ft           Well Location         Arcadia Valley         SHP         0 psi           Rig         Sav. 68         BHP         1000 psi           Customer Rep         C. Gustafson         SHT         20 °C           Service Eng         M. Auld / J. Edgley         BHT         40 °C           Activity         Date         Time         Activity         Date         Time           Depart Base         14-09-2019         7:45         Job End         14-09-2019         17:15           Job Start         14-09-2019         8:15         Return Base         14-09-2019         18:00           Gauge Use         Pump Control         Surface Card         Not required         Analogue           Gauge Type         4-20mA 0-1.5k psi, 105 DegC         Surface Output         4-20mA           Pres Range         0-1500 psia         Cable Splice Depth         N/A           Batch         Mar-19 Rev. 2         Tubing Hanger         3/8in NPT - 1/4in Swagelok           Max Devi         <15°	Field Ticket #	RGS19091408	10	FOT	752 4	
Well Name         Mt Kingsley 31         Casing Size         5-1/2in 20lb/ft           Well Location         Arcadia Valley         SHP         0 psi           Rig         Sav. 68         BHP         1000 psi           Customer Rep         C. Gustafson         SHT         20 °C           Service Eng         M. Auld / J. Edgley         BHT         40 °C           Activity         Date         Time         Activity         Date         Time           Depart Base         14-09-2019         7:45         Job End         14-09-2019         17:15           Job Start         14-09-2019         8:15         Return Base         14-09-2019         18:00           Gauge Use         Pump Control         Surface Card         Not required           Gauge Depth         741.6         Telemetry         Analogue           Gauge Type         4-20mA 0-1.5k psi, 105 DegC         Surface Output         4-20mA           Pres Range         0-1500 psia         Cable Splice Depth         N/A           Batch         Mar-19 Rev. 2         Tubing Hanger         3/8in NPT - 1/4in Swagelok           Max Devi         <15°		110313031400	10		753.1 m	
Well Location         Arcadia Valley         SHP         0 psi           Rig         Sav. 68         BHP         1000 psi           Customer Rep         C. Gustafson         SHT         20 °C           Service Eng         M. Auld / J. Edgley         BHT         40 °C           Activity         Date         Time         Activity         Date         Time           Depart Base         14-09-2019         7:45         Job End         14-09-2019         17:15           Job Start         14-09-2019         8:15         Return Base         14-09-2019         18:00           Gauge Use         Pump Control         Surface Card         Not required           Gauge Depth         741.6         Telemetry         Analogue           Gauge Type         4-20mA 0-1.5k psi, 105 DegC         Surface Output         4-20mA           Pres Range         0-1500 psia         Cable Splice Depth         N/A           Batch         Mar-19 Rev. 2         Tubing Hanger         3/8in NPT - 1/4in Swagelok           Max Devi         <15°	Client	Santos Ltd		Tubing Size	2-7/8in 6.5 lb/ft	
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Customer Rep Service EngC. Gustafson M. Auld / J. EdgleySHT BHT20 °C HTIME ActivityActivity Depart Base Job StartDate 14-09-2019 14-09-2019 14-09-2019 14-09-2019 14-09-2019 15-15 14-09-2019 15-15 16-16	Well Location	Arcadia Valley	′	SHP	0 psi	
Service EngM. Auld / J. EdgleyBHT40 °CActivityDateTimeActivityDateTimeDepart Base14-09-20197:45Job End14-09-201917:15Job Start14-09-20198:15Return Base14-09-201918:00Gauge UsePump ControlSurface CardNot requiredGauge Depth741.6TelemetryAnalogueGauge Type4-20mA 0-1.5k psi, 105 DegC Surface Output4-20mAPres Range0-1500 psiaCable Splice DepthN/ABatchMar-19 Rev. 2Tubing Hanger3/8in NPT - 1/4in SwagelokMax Devi<15°	Rig	Sav. 68		ВНР	1000 psi	
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Depart Base         14-09-2019 7:45         Job End         14-09-2019 17:15           Job Start         14-09-2019 8:15         Return Base         14-09-2019 18:00           Gauge Use         Pump Control         Surface Card         Not required           Gauge Depth         741.6         Telemetry         Analogue           Gauge Type         4-20mA 0-1.5k psi, 105 DegC Surface Output         4-20mA           Pres Range         0-1500 psia         Cable Splice Depth         N/A           Batch         Mar-19 Rev. 2         Tubing Hanger         3/8in NPT - 1/4in Swagelok           Max Devi         <15°	Service Eng	M. Auld / J. Ed	dgley	ВНТ	40 °C	
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Material316L SSTemp Rating150 DegCGaugeAnaloguePres SensorPiezoresistiveSerial NumberLC00355Calibration Range0 -1500 psiaDepth741.60 mTemp SensorN/AOD1"Temp RangeN/A	Conductor	16 AWG Solid Copper		Material	Polypropylene	
GaugeAnaloguePres SensorPiezoresistiveSerial NumberLC00355Calibration Range0 -1500 psiaDepth741.60 mTemp SensorN/AOD1"Temp RangeN/A	Tube OD	0.25"		Pres Rating	15 kpsi	
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Depth 741.60 m Temp Sensor N/A OD 1" Temp Range N/A	Gauge	Analogue		Pres Sensor	Piezoresistive	
OD 1" Temp Range N/A	Serial Number	LC00355		Calibration Range	0 -1500 psia	
	Depth	741.60 m		Temp Sensor	N/A	
	OD	1"		Temp Range	N/A	
Vibration N/A Vibration Range N/A	Vibration	N/A		Vibration Range	N/A	
Gauge Carrier Welded Pup Joint	Gauge Carrier		Welded Pup Jo	oint		
Running OD 4.286"	Running OD		4.286"			
Serial Number N/A	Serial Number		N/A			
Cross Coupling Protectors 2-3/8in - 2-7/8in Wiper Blade Style Stainless Steel	Cross Coupling Protectors		·			
Running OD 4.216"			· · · · · · · · · · · · · · · · · · ·			
Oty Installed 79	Qty Installed		78			
Kity installed 70	Bands and Clips Material		0.25" x 0.75" w-7/8" Buckle 316SS			
·	Qty Installed		158			

Comments: Gauge Carrier Pup Joint installed above PSN. 4-20mA Analogue gauge installed. RIH installing 78 banded CCP. Installed 2 x 1/4in NPT fittings in the hanger and pressure tested. Nippled down and installed Rod lock and AnTech wellhead outlet.



## **Permanent Monitoring Installation Report**

	Sequence of Events				
Date	Time	Description			
14/09/2019	6:00	Standby at camp.			
	8:15	Arrive location.			
		Unload and spot equipment.			
		Drift and measure gauge carrier 1.79m, 1.15m to Gauge Port.			
	9:30	Safety meeting with crew.			
	9:45	Pick up Sheave and make up BHA.			
	10:15	Make up gauge carrier and gauge to completion.			
		RIH first 4 joints then increase back tension on spooling unit.			
		Installed 78 banded cross coupling protectors.			
	13:15	Strip encapsulation and pass cable through tubing hanger and tighten TEC seals.			
	13:30	Land hanger and start pressure test to 1500 psi.			
		Rig down floor.			
		Nippled down.			
	16:00	Land and nipple up rod-lock.			
		Pressure test rod lock to 300/3000 psi.			
	17:00	Install AnTech wellhead outlet.			
	17:15	Final gauge reading 1000.3psia			
	17:20	Prepare report.			
	17:30	Depart location for Camp.			
	18:00	Standby at camp.			