## **Permanent Monitoring Installation Report**



|                           |                     |   | -                     |                            |       |
|---------------------------|---------------------|---|-----------------------|----------------------------|-------|
| Field Ticket #            | RGS2001250718       |   | EOT                   | 962.4 m MD                 |       |
| Client                    | Santos Ltd          |   | Tubing Size           | 2-3/8in 4.7 lb/ft          |       |
| Well Name                 | RM90-12-1           |   | Casing Size           | 7in 23lb/ft                |       |
| Well Location             | Roma                |   | SHP                   | 14 psi                     |       |
| Rig                       | WildDesert 4        |   | ВНР                   | 1237 psi                   |       |
| Customer Rep              | A.Riches            |   | SHT                   | 20 °C                      |       |
| Service Eng               | A.Hamilton          |   | ВНТ                   | 45 °C                      |       |
| Activity                  | Date                | Time  | Activity              | Date                       | Time  |
| Depart Base               | 25-Jan-20           | 3:30  | Job End               | 25-Jan-20                  | 9:30  |
| Job Start                 | 25-Jan-20           | 4:30  | Return Base           | 25-Jan-20                  | 10:30 |
| Gauge Use                 | Pump Control        |   | Surface Card          | Not required               |       |
| Gauge Depth               | 933.66 m            |   | Telemetry             | Analogue                   |       |
| Gauge Type                | 4-20mA 0-1.5k       | c psi, 105 DegC                                     | Surface Output        | 4-20mA                     |       |
| Pres Range                | 0-1500 psia         |   | Cable Splice Depth    | N/A                        |       |
| Batch                     | DEC19 BI Tested     |   | Tubing Hanger         | 1/4in NPT - 1/4in Swagelok |       |
| Max Devi                  | 0.0°                |   | Wellhead Outlet       | 19-042107                  |       |
| TEC Cable                 | 0.25" x 11mm        | Encap   | Encapsulation         | Square 11mm                |       |
| Serial Number             | '1015502582         |   | Manufacturer          | Draka                      |       |
| Conductor                 | 16 AWG Solid Copper |   | Material              | Polypropylene              |       |
| Tube OD                   | 0.25"               |   | Pres Rating           | 15 kpsi                    |       |
| Material                  | 316L SS             |   | Temp Rating           | 150 DegC                   |       |
| Gauge                     | Analogue            |   | Pres Sensor           | Piezoresistive             |       |
| Serial Number             | LC00720             |   | Calibration Range     | 0 -1500 psia               |       |
| Depth                     | 933.66 m            |   | Temp Sensor           | N/A                        |       |
| OD                        | 1"                  |   | Temp Range            | N/A                        |       |
| Vibration                 | N/A                 |   | Vibration Range       | N/A                        |       |
| Gauge Carrier             |                     | Cannon Clamp  | Type with Vibration S | leeve                      |       |
| Running OD                |                     | 4.600"  |                       |                            |       |
| Serial Number             |                     | N/A   |                       |                            |       |
| Cross Coupling Protectors |                     | 2-3/8in - 3-1/2in Wiper Blade Style Stainless Steel |                       |                            |       |
| Running OD                |                     | 4.000"  |                       |                            |       |
| Qty Installed             |                     | 10  |                       |                            |       |
| Bands and Clips Material  |                     | 0.25" x 0.75" w-7/8" Buckle 316SS                   |                       |                            |       |
| Qty Installed             |                     | 22  |                       |                            |       |

Comments: Gauge Carrier installed 2 full joints above PCP. 4-20mA Analogue gauge installed. RIH installing 10 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.



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|           | Sequence of Events |   |  |  |  |
|-----------|--------------------|---|--|--|--|
| Date      | Time               | Description   |  |  |  |
| 25-Jan-20 | 3:30               | Depart Base   |  |  |  |
|           | 4:30               | Arrive at location  |  |  |  |
|           |                    | Wildesert Rig Crew to perform Gauge install.                                    |  |  |  |
|           |                    | Pick up Sheave and make up BHA.   |  |  |  |
|           |                    | Make up gauge carrier and gauge to completion.                                  |  |  |  |
|           |                    | RIH first 4 joints then increase back tension on spooling unit.                 |  |  |  |
|           | 6:30               | Installed 10 banded cross coupling protectors.                                  |  |  |  |
|           | 6:45               | Make up hanger.   |  |  |  |
|           | 7:00               | Strip encapsulation and pass cable through tubing hanger and tighten TEC seals. |  |  |  |
|           | 7:15               | Land hanger and start pressure test to 1500 psi.                                |  |  |  |
|           | 7:30               | Rig down floor.   |  |  |  |
|           | 8:00               | Nippled down.   |  |  |  |
|           | 8:15               | Land and nipple up rod-lock.  |  |  |  |
|           | 8:30               | 8:30 Pressure test rod lock to 300/3000 psi.                                    |  |  |  |
|           | 8:45               | Install AnTech wellhead outlet.   |  |  |  |
|           | 9:00               | Final gauge reading 1236.56 psia.   |  |  |  |
|           | 9:15               | Prepare report.   |  |  |  |
|           | 9:30               | Depart location for Roma.   |  |  |  |
|           | 10:30              | Arrive at Roma.   |  |  |  |