










Pull Permanent Downhole Gauges SOP		SOP# GN014
Scope of Work	The following Standard Operating Procedure specifically applies to: Pull Permanent Downhole Gauge	
QHSE References <i>(Applicable SOP's, Management Plans, Systems & Client / Industry Information)</i>	<ul style="list-style-type: none"> Huracan Pre Job Safety Meeting & Induction Record JSA GN010 Permanent Gauge Installation KIN-AOG-QHSE-MAP002 -HSEMP KIN-AOG-QHSE-MAP008-Field Ops ERP Current version of Wellsite Permit to Work System 	
Last Updated	Revision 1.0, 2-Dec-19	
Responsibilities	Wellsite crew to abide by SOP at all times	
Specialist Equipment	Pneumatic Installation Unit	
Associated & Additional Controls Required	<ul style="list-style-type: none"> <i>All employees have the right and the responsibility to stop a job if they feel that the job is unsafe or if there is a danger to themselves or any other fellow worker / contractor from the activity or if there is the potential of damage or failure of any equipment or damage to the environment.</i> <i>If an operating company procedure and Service Company procedure do not correspond, then a procedural review shall be undertaken and endorsed by the relevant Supervisor to determine the acceptable way forward. In the absence of the review / endorsement process as above, the operating company procedure shall prevail.</i> <i>All employees, contractors and others engaged to work for or on behalf of Huracan Australian Oil & Gas are responsible for taking 'all practicable steps' to protect their own health and safety and the health and safety of others by complying with the WHS Act 2011 and by adhering to all relevant legislation, company and client/customer safety requirements.</i> 	

Any statement in <i>Bold and Italics</i> is a critical step and must be carried out as it is written.	
Icon	Description
	<i>Information to assist in the safe completion of this procedure</i>
	<i>Insert Cautions points between steps as required.</i>
	<i>Insert hold points between steps as required.</i>
	<i>Insert Dangerous Goods points where Hazardous Chemicals / Dangerous Goods use occurs</i>
	<i>Insert Manual Handling points where manual handling is required</i>

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	A spotter must be used to direct Huracan Vehicles when interaction between Mobile Plant and Plant & Equipment is 3 metres or less e.g. Rigging Up & Down Operations. The Spotter shall be a suitably competent Huracan worker as designated by the Huracan Crew and will have control of the site / area whilst interaction between plant occurs. The form of communication between all applicable parties shall be established & confirmed by the spotter prior to commencing.	
1	<p>Before departing for location:</p> <ul style="list-style-type: none"> • Confirm tubing install depth then check there is the required meterage on the spool. • Check TEC Cable insulation and continuity. • Check gauge is as requested by client. Perform function test on gauge and compare to calibrated crystal gauge pressure. • Check sufficient cross coupling protectors and bands for installation • Check suitable wellhead outlet for rod lock / wellhead. • Cable splice <p>You will need an assortment of Swagelok fittings / Fittings for the job (Job Specific):</p> <ul style="list-style-type: none"> • 1/8" NPTM male to 1/4" tubing • 1/4" NPTM male to 1/4" tubing • 3/8" NPTM male to 1/4" tubing • 1/2" NPTM male to 1/4" tubing • 3/4" NPTM male to 1/4" tubing • 1" NPTM male to 1/4" tubing • 1/2" NPTM to 1" NPTF Bushes • 1/2" NPTM to 1" NPTF Bushes <p>Job Specific Tools include:</p> <ul style="list-style-type: none"> • Shifters, spanners to suit all sizes of pipework • Encapsulation stripper • Thread tape • Pipe bender • Pipe cutter • Crystal gauge • Allen Keys • Pressure test pump and oil 	
 CAUTION	The use of the megohm meter is restricted to an area >30m from the wellhead. Use of all other meters within the 30m is to be in conjunction with continuous gas testing and a Hot Work Permit.	
2	<ul style="list-style-type: none"> • Report to Client OCR and confirm scope of work has not changed and set depth; • Report to Rig Manager and complete any third-party checklists and inductions • Huracan Supervisor to provide a copy of relevant documentation (HSEMP, ERP, Inductions as required) 	
3	<p>Hold toolbox meeting with all applicable parties & discuss job scope including any exclusion zones i.e. from spooling unit to rig floor.</p> <p>A WPTW Hot Work Permit is required due to the use of non-intrinsically safe equipment inside the 30m, Zone 2 area around the wellhead.</p>	

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4	Spotting Spooling Unit and Rig Up: <ul style="list-style-type: none"> Huracan spotter to assist driver to reverse any truck into position Move TEC cable spooling unit to agreed location on site. Install bunting / barricading to prevent un-authorised access around spooling unit Install exclusion zone from spooler to rig floor Ensure gas monitoring is used while surface acquisition unit is within hazardous area Attach sheave to tugger line from rig Place banding gun, banding material and clips in suitable area on rig floor (be aware of introducing trip hazards) and hook to air supply. 	
	<i>Install barricading - run barrier tape from the spooling unit to the wellhead to stop unauthorised access.</i>	
5	Cut cable and Hang Sheave <ul style="list-style-type: none"> Once the tubing hanger is retrieved cut cable below hanger and pull sufficient tubing joints to get the cable back to the spooling unit Feed cable through sheave and hang sheave as per rig specific requirements Feed the cable back to the spooling unit 	
6	Splice cable onto to spool <ul style="list-style-type: none"> Prepare the cut cable and the spool cable ends for splice Install electrical/mechanical cable splice Turn on surface box and ensure gauge is functioning, record reading Spool excess cable onto spool 	
7	POOH with TEC Cable <ul style="list-style-type: none"> Ensure that there is sufficient room between the slips so that TEC cable is not damaged while POOH Ensure no tension on cable when cutting bands from cross coupling protectors Continue to monitor gauge while POOH. 	
	<i>Whenever preparing to break the next connection by closing the slips to hold the production tubing – it is essential that you hold the TEC Cable in a location that it will not be crushed by the slips as this would render the TEC cable inoperable and requiring an additional splice.</i>	
8	Remove gauge carrier <ul style="list-style-type: none"> Once the gauge carrier is at surface, release any tension on the cable Add tape the the spool to avoid back spooling Remove gauge carrier 	
9	Inspect all equipment <ul style="list-style-type: none"> Inspect gauge for corrossions or damage Check gauge calibration Remove old bands from cross coupling protectors and inspect for damage and discard damaged CCP's. Inspect and redress wellhead outlet Remove used fitting from tubing hanger and dsicard 	

Standard Operating Procedure – Preparation, Review and Approval

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