Activity Description	Coiling TEC Cable Above Hanger and Gauge Testing	Assessment No:	GN014	Rev:	1.0			
& Location:	Onshore, Australia	Date:	11-Dec2019					
Defenses	Wellsite Permit to Work System / Client Wellsite Permit System	Assessment Team:	t Team: G. Humphreys, J. Hollingworth					
References used:	SOP GN013 Install Permanent Downhole Gauges	Company / Dept.:	Huracan / Reservoir Monitoring					
(Inc. Legal obligations)		Frequency of Activity:	: Regular : Huracan Crew, Rig Crew					
		Persons Affected:						

OPERATION / EVENT	HAZARD	RISK	Initial Risk		Initial Risk CONTROLS				Residual Risk		
Steps	Energy source to cause harm / damage	Consequence of hazard – harm / damage to occur	Pr	Со	RS	Detail	Person to implement	Person to monitor	Pr	Со	RS
Cutting Cable and Stripping Encapsulation	Unsuitable / Restricted worksite Manual handling	Equipment damage — Huracan Injury — Personnel Injury from longer than normal cable length, rig floor restrictions	Possible	Major	Med C4	 Ensure all PPE is used as per SOP Remove all non-essential personnel from the rig floor Visual inspection / hazard hunt of worksite Measure cable length to ensure adequate length to uncoil cable and have it a minimum of 3m from the wellhead. (Outside of Zone 2) Ensure two people help to strip encapsulation from cable using encapsulation stripping tool While stripping ensure cable is not kinked and damaged 	Huracan Crew, Rig Crew	Huracan Supervisor	Remote	Major	Low E4
Pass Cable through Tubing Hanger	Moving equipmentManual Handling	Injury – Struck by cable Equipment damage – Huracan cable	Possible	Major	Med C3	 Place Borethough fittings on as normal Lift hanger to head height as to provide enough room to pass the cable through the hanger without kinking 	Huracan Crew, Rig Crew	Huracan Supervisor	Remote	Major	Low D3



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QHSE MANAGEMENT SYSTEM RESOURCE JOB SAFETY ANALYSIS (JSA) AND RISK ASSESSMENT (RA)

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						Pass cable through Borethough fittings and secure as normal					
Wrap Cable Around Landing Joint	 Lifting operations Moving equipment Manual handling 	 Injury – Struck by cable Damage to cable 	Possible	Major	Med C4	 Tape cable in a 2m loop as to make easier to handle Ensure adequate straight length of cable will be available through the rodlock for ease of install of the Wellhead Outlet before starting to wrap Tape cable to landing joint above straight section Wrap remaining cable around landing joint and ensure wrap finishes below the annular as this will be used to pressure test After wrapping, slacken cable so that BPV will fit through the cable Cut tape above straight cable section and remove for ease of landing joint removal Land hanger and pressure test as per SOP 	Huracan Crew, Rig Crew	All personnel	Remote	Major	Low E4
Testing Gauge	Ignition source Tripping Hazard	 Injury to personnel from tripping Damage to cable from long cable length 	Possible	Major	MED C4	 After removing the BOP as per SOP straighten coiled cable section Ensure personnel working around the longer section of cable are aware to avoid tripping Pass cable through the rodlock and land Test gauge function outside of the hazardous area (3m minimum) and confirm with OCR 	Huracan Crew, Rig Crew	Huracan Gauge Installation Supervisor	Unlikely	Major	Low E4



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QHSE MANAGEMENT SYSTEM RESOURCE JOB SAFETY ANALYSIS (JSA) AND RISK ASSESSMENT (RA)

DOCUMENT NUMBER
COILING CABLE ABOVE HANGER AND GAUGE TESTING GN014 HSE-LP-JSAV1.0

									V 1.0
					Cut cable and install WHO bulkhead as per SOP Pressure test rodlock Place housing over WHO as per SOP				
Approved By: J. Ho	llingworth	Signature:	9. 740	llingworth		Date:	11-Dec	:-19	



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NOTE: Using the Risk Matrix below, identify the Consequence & Probability of each risk occurring and enter the risk score in the Inherent column. Review the consequence, probability and risk score after appropriate controls have been agreed upon. Remember, the consequence does not change unless you eliminate the hazard (only the probability may change!

Consequence

	HEALTH SAFE		First Aid Injury (FAI)	Medical Treatment (MTI)	Lost time Injury (LTI)	Permanent	Disability / Fatality	Fatalities (multiple)		
		FINANCIAL IMPACT	< \$20K	\$20K - \$200K	\$200K - \$2M	\$2	2M - \$20M	\$20M+		
		REPUTATION	Minimal impact on business reputation, land holder only	Some impact on business reputation, local community exposure			impact on business tional media exposure	Critical impact on reputation, international media exposure		
	HURACAN	ENVIRO.	Incident. No breach of regulations / EA. Minimal and short term impact to any local environment.	Minor breach of regulations EA resulting in notification t regulator. Localised, short term, recoverable minor impact o flora and fauna	 / EA resulting in reporting to regulator, investigation, environment notice or fines. 	in prosecut regulate Serious and impact and e	of legislation resulting cition or litigation and cry intervention. long term ecological environmental harm. lanagement activated.	Significant compliance breach resulting in prosecution / class action or loss of licence. Severe environmental harm with widespread or permanent Impact Crisis Management activated.		
_	HOIVACAI		1. Insignificant	2. Minor	3. Moderate		4. Major	5. Catastrophic		
	A common event that is likely to occur in the industry many times per year	A. Highly Likely	Medium (A1)	Medium (A2)	High (A3)		Extreme (A4)	Extreme (A5)		
	An event likely to occur more than once a year in the industry	B. Likely	Low (B1)	Medium (B2)	Medium (B3)	High (B4)		Extreme (B5)		
Likelihood	An event that may occur in the industry over 10 years	C. Possible	Low (C1)	Low (C2)	Medium (C3)	Medium (C4)		High (C5)		
	An event not likely to occur in the industry over 10 years	D. Unlikely	Negligible (D1)	Low (D2)	Low (D3)	Medium (D4)		Medium (D5)		
	An event that has not previously been experienced in the industry but may occur in exceptional circumstances	E. Remote	Negligible (E1)	Negligible Low (E2) (E3)		Low (E4)		Medium (E5)		
	Hierarchy of Cont	rols	Level 1 – Eliminate	e the Hazard	Level 2 – Substitute, Isolate & E	ngineer	Level 3 - Admin & PPE Controls			
	Reporting Requirements		Report Only – All Negligi	ble Classifications	Investigate - All Low to Med	lium	TapRoot – High or above, or any Hi-Po			



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