

CLASSIFICATION OF THE LEVEL OF IMPACT OF THE ACTIVITY OF GROUND GEOPHYSICAL OPERATIONS (NON-SEISMIC) IN SOUTH AUSTRALIA																		
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Using the following criteria, the activity of geophysical operations, as described in the environmental impact report for geophysical operations (non-seismic) in South Australia (PIRSA 2007) has been assessed as a low impact activity.																		
				ABBREVIATIONS: H = High certainty; M = Medium certainty; L = Low certainty														
REFERENCE	TYPE OF IMPACT	EVENT(S)	POTENTIAL CONSEQUENCES	PREDICTABILITY						MANAGEABILITY						ENVIRONMENTAL SIGNIFICANCE		
				SIZE	SCOPE	DURATION	FREQUENCY	STAKEHOLDERS	SIGNIFICANCE	AVOIDANCE	PROBABILITY	DURATION	SIZE AND SCOPE	CUMULATIVE EFFECTS	STAKEHOLDERS		SIGNIFICANCE	COMMENTS
	Natural Environment Impacts																	
	Soil Impacts																	
EIR p. 5, 10, 11, 15, 16, 17		Movement of vehicles when surveying traverses, acquiring geophysical data and occupying campsites	Soil disturbance and compaction, wheel ruts and dust generation	H	H	H	H	H	1	No	Low	Short	Small	Small	Low	1	Management strategies include: - Project planning considers what the minimum number of passes along a traverse to acquire data is; - no survey traverse preparation; - only vehicles used for data acquisition drive along traverses; - quad bikes, light vehicles or on foot as appropriate in sensitive areas; no driving in wet conditions - no vehicle access to steeply inclined tablelands; - no vehicle access to salt lake and densely vegetated floodplain areas; - when applicable, previously established survey tracks utilised for survey traverses.	Low
EIR p. 5, 10, 11, 15, 16, 17		Fuel, oil and other contaminant spills	Contamination of soils	H	H	H	H	H	1	No	Low	Short	Small	Small	Low	1	Refuelling of supplementary survey vehicles may be required by individual surveys. When this is so, immediate clean up and remediation. Spill kits readily available. Refuelling only takes place in designated areas where any spills are easily confined; therefore the volume of other spills is likely to be minimal.	Low
	Air																	
EIR p. 5, 10, 11, 15, 16, 17		Movement of vehicles when surveying traverses, acquiring geophysical data and occupying campsites	Generation of dust	H	H	H	H	H	1	Yes	Low	Short	Small	Small	Low	1	Access to properties is kept to minimum amount to acquire data. Tracks susceptible to bulldust are avoided. Vehicles travel at slow speeds near homesteads, associated facilities etc.	Low
	Surface Water																	
EIR p. 5, 10, 11, 15, 16, 17		Fuel, oil and other contaminant spills	Pollution of surface waters, including sensitive wetlands	H	H	H	H	H	1	No	Low	Short	Small	Small	Low	1	Refuelling of supplementary survey vehicles may be required by individual surveys. When this is so, immediate clean up and remediation. Spill kits readily available. Refuelling only takes place in designated areas where any spills are easily confined; therefore the volume of other spills is likely to be minimal.	Low
	Flora																	
EIR p. 5, 10, 11, 15, 16, 17		Movement of vehicles when surveying traverses, acquiring geophysical data and occupying campsites	Introduction and spread of weed species, diseases and pathogens	H	H	H	H	M	2	Yes	Low	Short	Small	Small	Low	1	All vehicle and equipment are washed down prior to entering the survey area or in known infested locations. Weed and disease management strategies are to be developed by operators and control measures put in place.	Low
EIR p. 5, 10, 11, 15, 16, 17		Movement of vehicles when surveying traverses, acquiring geophysical data and occupying campsites	Vegetation damage and/or loss; impacts on species diversity	H	H	H	H	H	1	No	Low	Short	Small	Small	Low	1	Drive only on designated areas (i.e. lease and access tracks). Dense or medium cover vegetation areas (faunal habitats) are not trafficked by vehicle - only on foot.	Low
EIR p. 5, 10, 11, 15, 16, 17		Campsite utilisation and access	Vegetation damage and/or loss; impacts on species diversity	H	H	H	H	H	1	Yes	Low	Short	Small	Small	Low	1	Camp sites are selected in clear areas which are naturally devoid of vegetation. Site access impacts are reduced by locating sites adjacent to established tracks and using only these for access.	Low

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EIR p. 5, 10, 11, 15, 16, 17		Fuel, oil and other contaminant spills	Vegetation damage and/or loss; impacts on species diversity	H	H	H	H	H	1	No	Low	Short	Small	Small	Low	1	Refuelling of supplementary survey vehicles may be required by individual surveys. When this is so, immediate clean up and remediation. Spill kits readily available. Refuelling only takes place in designated areas where any spills are easily confined; therefore the volume of other spills is likely to be minimal.	
	Fauna Impacts																	
EIR p. 5, 10, 11, 15, 16, 17		Movement of vehicles when surveying traverses, acquiring geophysical data and occupying campsites	Disturbance, injury or loss of fauna	H	H	H	H	H	1	No	Low	Short	Small	Small	Low	1	Drive only on designated areas (i.e. lease and access tracks). Areas of vegetation avoided.	Low
EIR p. 5, 10, 11, 15, 16, 17		Movement of vehicles when surveying traverses, acquiring geophysical data and occupying campsites	Loss of faunal habitat	H	H	H	H	H	1	No	Low	Short	Small	Small	Low	1	Drive only on designated areas (i.e. lease and access tracks). Areas of vegetation (for habitats) avoided as much as possible.	Low
EIR p. 5, 10, 11, 15, 16, 17		Campsite utilisation and access to site	Disturbance, injury or loss of fauna	H	H	H	H	H	1	No	Low	Short	Small	Small	Low	1	Camp sites are to be located at least 1 km from stock watering holes to minimise interaction/contact with stock. Camps must not be located near watercourses, creeks or other surface water bodies to minimise interaction/contact with associated fauna.	Low
EIR p. 5, 10, 11, 15, 16, 17		Storage and transportation of domestic wastes	Pest outbreaks	H	H	H	H	H	1	Yes	Low	Short	Small	Small	Low	1	Appropriate procedures and guidelines include: - minimise generation of waste; - providing of suitable covered bins; - all loads of rubbish leaving camps covered to ensure no spillage; and - all other wastes managed effectively.	Low
	Social Environment																	
	Community Resource Impacts																	
EIR p. 5, 10, 11, 15, 16, 17		Movement of vehicles when surveying traverses, acquiring geophysical data and occupying campsites	Damage to third party infrastructure	H	H	H	H	H	1	No	Low	Short	Small	None	None	1	Minimise any disturbance by careful site selection, including: - driving on designated access tracks only; - avoiding homesteads, associated buildings, stockyards, airstrips, dams and tanks.; and - only data acquisition vehicles trafficking survey traverses	Low
EIR p. 5, 10, 11, 15, 16, 17		Litter and survey materials (e.g. pegs and flagging tape)	Loss of visual amenity	H	H	H	H	H	1	Yes	Low	Short	Small	Medium	Medium	1	All litter and survey materials (except for permanent marks) are to be removed from survey area (especially from camp sites).	Low
EIR p. 5, 10, 11, 15, 16, 17	Cultural & Heritage Impacts																	
EIR p. 5, 10, 11, 15, 16, 17		Site disturbance by vehicles or personnel when surveying traverses, acquiring geophysical data and occupying campsites	Damage sites of cultural significance	H	H	H	H	M	2	No	Low	Long	Small	None	Medium	1	Cultural heritage surveys are conducted, using experienced anthropologists and people representing the traditional landholders, to identify sites of significance and duly mark them off to prevent disturbance. Most post-settlement cultural sites are in the whole previously established and noted. Crews surveying traverses are trained to locate any other possible cultural heritage sites.	Low
EIR p. 5, 10, 11, 15, 16, 17		Campsite preparation	Damage sites of cultural significance	H	H	H	H	M	2	No	Low	Long	Small	None	Medium	1	Camp sites are located adjacent to previous tracks which were likely to be encompassed in previous cultural heritage surveys. No preparation of ground surface is permitted.	Low
	Community Health & Safety																	
EIR p. 5, 10, 11, 15, 17		Movement of vehicles (including camp site moves) along public roads	Collisions with other road uses	H	H	H	H	H	1	No	Low	Short	Small	None	None	1	Appropriate procedures and guidelines include: - driver training; - road signage; - avoiding situations that lead to driver fatigue	Low

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EIR p. 5, 10, 11, 15, 17		Movement of vehicles (including camp site moves) along public roads	Dust from vehicles decreases visibility and increases risk of vehicle collisions	H	H	H	H	H	1	No	Low	Short	Small	None	Medium	1	Susceptible tracks are avoided. Company policy should ban employees from driving into dust. Any stakeholder concerns are addressed.	Low
EIR p. 5, 10, 11, 15, 17		Movement of vehicles around homesteads	Airborne dust and noise generation	H	H	H	H	H	1	No	Low	Short	Small	Low	Low	1	Vehicles travel at slow speed in the vicinity of homesteads.	Low
	Economic Environment																	
	Existing Land Use Impacts																	
EIR p. 5, 10, 11, 14, 15, 16, 17		Movement of vehicles when surveying traverses, acquiring geophysical data and occupying campsites	Injury or loss of livestock	H	H	H	H	H	1	No	Low	Short	Small	None	None	1	Drive only on designated areas (i.e. lease and access tracks, seismic lines). camp sites are to be located at least 1 km from stock watering holes to minimise interaction/contact with stock.	Low
EIR p. 5, 10, 11, 14, 15, 16, 17		Movement of vehicles when surveying traverses, acquiring geophysical data and occupying campsites	Introduction and spread of weed species, diseases and pathogens	H	H	H	H	H	1	No	Low	Long	Small	None	None	3	All vehicle and equipment are washed down prior to entering the State or in known infested locations. Weed management strategies are to be developed by operators and control measures put in place.	Low
EIR p. 5, 10, 11, 14, 15, 16, 17		Movement of vehicles when surveying traverses, acquiring geophysical data and occupying campsites	Disruption to land use (e.g. grazing, horticulture, cropping and tourism)	H	H	H	H	M	2	No	Low	Short	Small	None	None	1	Drive only on designated areas (i.e. lease and access tracks, seismic lines). Work is scheduled to fit in with stock locations and mustering movements	Low
EIR p. 5, 10, 11, 14, 15, 16, 18		General operations	Wildfire initiated by field operations	H	H	H	H	H	1	Yes	Low	Long	Large	Some	Yes	2	Wildfire prevention is a key component in field operations with the requirement for comprehensive fire prevention management system to be in place for all operations	Low
EIR p. 5, 10, 11, 14, 15, 16, 17		Movement of vehicles when surveying traverses, acquiring geophysical data and occupying campsites	Damage to third party infrastructure	H	H	H	H	H	1	No	Low	Short	Small	None	None	1	Drive only on designated areas (i.e. lease and access tracks, seismic lines - provided they are still part of a current program and are not in an advanced state of rehabilitation). Survey traverses are deviated to miss well heads by 30 m. Traffic is detoured around pipelines or are crossed at authorised points only.	Low