1.	Record Nr. Autore Titolo	UNINA9910694423703321 Lucius Jeffrey E An introduction to using surface geophysics to characterize sand and gravel deposits [[electronic resource] /] / by Jeffrey E. Lucius, William H. Langer, and Karl J. Ellefsen
	Pubbl/distr/stampa	Reston, Va. : , : U.S. Geological Survey, , 2007
	Descrizione fisica	iv, 33 pages : digital, PDF file
	Collana	Circular ; ; 1310
	Altri autori (Persone)	LangerWilliam H EllefsenKarl
	Soggetti	Prospecting - Geophysical methods Sand and gravel mines and mining Sand Aggregates (Building materials) Gravel
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Title from Web page (viewed on Sept. 28, 2007).
	Nota di bibliografia	Includes bibliographical references (pages 25-26).
	Sommario/riassunto	This report is an introduction to surface geophysical techniques that aggregate producers can use to characterize known deposits of sand and gravel. Five well-established and well-tested geophysical methods are presented: seismic refraction and reflection, resistivity, ground penetrating radar, time-domain electromagnetism, and frequency- domain electromagnetism. Depending on site conditions and the selected method(s), geophysical surveys can provide information concerning areal extent and thickness of the deposit, thickness of overburden, depth to the water table, critical geologic contacts, and location and correlation of geologic features. In addition, geophysical surveys can be conducted prior to intensive drilling to help locate auger or drill holes, reduce the number of drill holes required, calculate stripping ratios to help manage mining costs, and provide continuity between sampling sites to upgrade the confidence of reserve calculations from probable reserves to proved reserves. Perhaps the greatest value of geophysics to aggregate producers may be the speed

of data acquisition, reduced overall costs, and improved subsurface characterization.