CGG and Ardiseis complete highest-density seismic survey ever acquired to deliver quantum shift in Imaging, Resolution and Reservoir Characterization

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CGG, its technology partner, and Ardiseis, subsidiary of the Arabian Geophysical and Surveying Company (ARGAS), the Middle East's seismic acquisition specialist, have announced the successful completion of the world's highest-density broadband seismic survey ever acquired onshore or offshore. The ultra-high density of the data recorded on the West-Kalabsha survey on behalf of Apache Corporation (Apache) heralds a step-change in the quality of seismic that can be economically acquired in Egypt's Western Desert and a quantum leap in imaging for the Middle East and North Africa region.

Apache set Ardiseis the ambitious challenge of delivering reservoir characterization-ready broadband seismic data from a 2,000-km^2, ultra-dense survey, representing 72 million traces per km^2, two-to-three times denser than any survey acquired to date worldwide. To achieve the ultra-high productivity acquisition required to produce the data at a comparable pace and cost to conventional land acquisition, Ardiseis deployed CGG's proprietary Unconstrained Blended Acquisition technology for the first time in Egypt. This technique optimizes field operations to the extreme, with a large fleet of vibrators operating simultaneously and independently from each other non-stop. CGG successfully deblended the data by running its proprietary sophisticated deblending algorithm on its massive computing resources. In addition, Ardiseis used CGG's broadband suite of technologies, CleanSweep™ and EmphaSeis™, to acquire the required low-frequency-rich broadband data (starting from 1.5Hz), which is free of the harmonic noise contamination that has so far hindered industry adoption of true broadband high-productivity Vibroseis acquisition.

Joe Versfelt, Apache's Egypt region Exploration Manager, said: "Since Apache was awarded the West Kalabsha concession in 2004, 19 oil fields have been discovered and production capacity is currently over 55,000 bpd and growing. However, the large volume of 3D seismic data Apache has acquired over the years has limitations for imaging some structures, faults and stratigraphy. Apache saw the potential of new land broadband 3D technology to deliver a quantum leap in imaging and resolution as well as our ability to take advantage of the most advanced quantitative interpretation technologies. Our focus was to reduce risk in existing plays, develop new prospects and potentially discover new plays. We are extremely grateful to EGPC for once again supporting us in our ongoing efforts to introduce new technologies to Egypt in order to optimize our E&P operations. The preliminary results of the West Kalabsha 3D survey are extremely encouraging and we plan to acquire more of this high-grade seismic data in the region."

Saad Saud A. Al-Akeel, ARGAS CEO and Ardiseis MD, said: "On this game-changing survey we demonstrated how the combination of outstanding operational performance from ARGAS and Ardiseis, together with technical excellence and innovation from CGG, can make this new generation of high-

fidelity seismic an affordable reality. Having proven the feasibility of this technology in Egypt with reduced turnaround time and quality improvements, we can see its potential for successful application in other desert areas in the wider Middle East region for both exploration and field development applications."

Jean-Georges Malcor, CEO, CGG, said: "CGG was pleased to have had this opportunity to continue our pioneering work with Apache and Ardiseis, and once again introduce new acquisition technologies to Egypt. By deploying our suite of land broadband technologies, ARGAS and Ardiseis have shown that it is possible to acquire affordable high-fidelity data that can be used for both exploration and field development purposes on a large scale. The benefits in terms of reduced costs, increased chances of identifying secondary prospects, more efficient field development plans and earlier returns on investment are obvious when we compare the previous approach of acquiring sparse 3D exploration surveys and returning at a later date to separately acquire smaller higher-density datasets for field development."

About ARGAS

ARGAS (www.argas.com) was established in 1966 as a joint venture between the Industrialization & Energy Services Company (TAQA) of Saudi Arabia and Compagnie Générale de Géophysique (CGG) of France. Throughout its 50-year history seismic data acquisition has been at the heart of its business. Until 2007, ARGAS specialized in 2D and 3D land acquisition in the Kingdom of Saudi Arabia. Since then, the Company has expanded its services to cover the whole of the Middle East. During that time, its acquisition services diversified to include 2D and 3D shallow water surveys, including the world's largest Ocean Bottom Cable survey in the Arabian Gulf. ARGAS now offers clients a full range of geoscience services including non-seismic geophysical techniques such as airborne gravity and magnetic surveys. It also offers permanent reservoir monitoring and micro-seismic surveys, processing, and interpretation of all geophysical data. The ARGAS Technology Center opened in Al Khobar in 2009 providing the latest technology in seismic imaging, reservoir characterization, and training services. In 2012 ARGAS joined the Dhahran Techno Valley conglomerate of companies specialized in energy-related research and development activities, with a premier location at the heart of Saudi Arabia's hydrocarbon industry, representing a great stride towards achieving our strategic goal of addressing the region's challenges and transferring technology.

About CGG

CGG (www.cgg.com) is a fully integrated Geoscience company providing leading geological, geophysical and reservoir capabilities to its broad base of customers primarily from the global oil and gas industry. Through its three complementary business divisions of Equipment, Acquisition and Geology, Geophysics & Reservoir (GGR), CGG brings value across all aspects of natural resource exploration and exploitation. CGG employs over 5,300 people around the world, all with a Passion for Geoscience and working together to deliver the best solutions to its customers.

CGG is listed on the Euronext Paris SA (ISIN: 0013181864) and the New York Stock Exchange (in the form of American Depositary Shares. NYSE: CGG).

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