

Anticipated acquisition by Compagnie Générale De Géophysique
Veritas SA of Fugro NV's Geoscience Division

ME/5780/12

The OFT's decision on reference under section 33(1) given on 10 January 2013.
Full text of decision published 24 January 2013

Please note that the square brackets indicate figures or text which have been deleted or replaced in ranges at the request of the parties or third parties for reasons of commercial confidentiality.

PARTIES

1. **Compagnie Générale De Géophysique Veritas SA (CGGVeritas)** is an international company headquartered in France, active in the supply of a broad range of geophysical information and services to the oil and gas exploration and production industry. It is also a global manufacturer of seismic acquisition equipment through its subsidiary, Sercel. CGGVeritas is principally active in the UK through CGGVeritas Services (UK) Limited and Sercel England UK Limited.
2. The business to be acquired (**the Target**) comprises the majority of **Fugro NV's Geoscience Division**, which is also active in the supply of geophysical information to oil and gas companies. In the financial year to 31 December 2011 the Target had a worldwide turnover of approximately £[] million of which approximately £[] million was realised in the UK.
3. **Fugro NV** is split into three divisions – Geotechnical, Survey and Geoscience, providing a range of services and activities to the oil and gas, construction, and mining industries and governmental organisations. Fugro retains the marine data acquisition multi-client business of the Geoscience Division and its Shallow Water and Ocean Bottom Services (SWOBS) business. The activities of this latter business will be contributed to a planned Seabed Joint Venture with CGGVeritas simultaneously on completion.

TRANSACTION

4. CGGVeritas intends to acquire the Target, which is made up of the following activities of Fugro's Geoscience division:
 - marine seismic data acquisition
 - seismic data processing
 - high-end reservoir characterisation
 - exploration and geology services
 - data management
 - marine gravity and electromagnetic
 - airborne geophysical services
 - equipment.
5. Related to the transaction, Fugro will grant CGGVeritas preferred supplier status for activities including marine high resolution processing with Fugro seismic imaging technology, while CGGVeritas will grant Fugro preferred supplier status for the provision of services including land geomonitoring information.
6. The transaction is also conditional on the creation of a Joint Venture (the Seabed JV) by CGGVeritas and Fugro where the parties will combine their shallow water and ocean bottom services (SWOBS).
7. The parties notified the proposed transaction on 5 November and the administrative deadline for a decision is therefore 14 January 2013.
8. The transaction was also notified in Australia, Norway and Turkey, and has been cleared by the Norwegian Competition authority.ⁱ

JURISDICTION

9. As a result of this transaction CGGVeritas and the Target will cease to be distinct. The UK turnover of the Target is less than £70 million, therefore the turnover test in section 23(1)(b) of the Enterprise Act 2002 (the Act) is not satisfied. The parties overlap in the supply of seismic data processing services in the UK leading to an estimated combined share of supply for the parties in excess of 25 per cent; therefore the Office of Fair Trading (OFT) considers that the share of supply test in section 23 of the Act is met.

10. As noted above, as a condition of the proposed transaction the parties are creating a joint venture by combining their respective SWOBS businesses into the Seabed JV. The parties have submitted that the creation of the Seabed JV is not a relevant merger situation because, neither the share of supply nor turnover test of the Act are met. However, since the joint venture and the proposed acquisition of the Target business involve the same parties and the events are conditional on each other, the OFT has treated the two transactions as a single merger.
11. The OFT therefore believes that it is or may be the case that arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation.

RATIONALE

12. The parties submitted that the transaction will provide access to marine vessels (instead of new builds) at a time of market recovery, and will enhance CGGVeritas' multi-client offering through access to new libraries and a reinforced marketing team. As well as creating a business that is less cyclical by adding lower capital intensive services and a broader range of solutions.

BACKGROUND

13. The OFT last considered this market in 2007 in the transaction that created CGGVeritas,¹ and previously in the merger of the surface seismic data acquisition and processing interests of Schlumberger Limited and Baker Hughes Inc. in 2000.² In the former case, the product markets considered were those of seismic data acquisition, seismic data processing and seismic data acquisition equipment. In all these markets, the OFT did not find it necessary to conclude on the geographic scope.

¹ Completed acquisition by Compagnie Générale de Geophysique of Veritas Inc -6 February 2007.

² Completed merger of the seismic data acquisition and data processing interests of Schlumberger Limited and Baker Hughes Incorporated – Report under section 125(4) of the Fair Trading Act 1973 of the Director General's advice, dated 21 December 2000, to the Secretary of State for Trade and Industry under section 76 of the Act.

MARKET DEFINITION

Seabed Joint Venture

14. As mentioned in paragraph 5 above, the transaction is conditional on the creation of the Seabed JV by CGGVeritas and Fugro to combine the shallow water and ocean bottom services (SWOBS) of the two companies.
15. The parties submitted that the Seabed JV will only be active in the provision of SWOBS³ data acquisition services, which, as in other types of marine seismic data acquisition, the parties consider to be a worldwide market.
16. The parties provided worldwide market shares for SWOBS for 2011, which gave CGG and Fugro a combined market share of [10-20] per cent, increment [zero – 10] per cent. [].
17. As no competition concerns arise, it has not been necessary to conclude on either market or geographic definition. Therefore the Seabed JV has not been considered further.
18. CGGVeritas and the Target also overlap in the supply of the following services:
 - marine seismic data acquisition
 - seismic data processing, and
 - ancillary services, such as reservoir characterisation.

Product scope

Marine seismic data acquisition

19. Seismic data acquisition involves the release of sound waves into the soil under the seabed and the collection of the reflected sound waves. Marine seismic data is usually acquired by means of lines of streamer cables carrying hydrophones that are trailed behind a survey vessel. This process can result in 2D data – where a single line is used; 3D data where a

³ Acquiring data in the zone from 15 metres to 3,000 metres of water depth using non streamer methods.

number of parallel lines are used and 4D data where the 3D process is carried out at the same location at set time intervals (typically every one or two years).

20. Seismic data acquisition may be carried out on a proprietary basis, or on a multi-client basis. The former will be generally commissioned by oil and gas companies,⁴ typically after a competitive tender, and any data acquired is for the exclusive use of the client. Multi-client data acquisition is carried out by seismic companies on their own initiative, and at their own expense. Although a third party submitted that multi-client data acquisition is often sponsored by at least 50 per cent by an oil and gas company. This multi-client data then forms part of a multi-client library of data, which can be licensed to multiple clients.
21. The OFT considered whether it was necessary to define separate relevant markets for 2D, 3D and 4D marine data acquisition, as well as, within each of these segments, markets for proprietary and multi-client data.⁵ The OFT has not needed to conclude on market definition, as no realistic prospect for a substantial lessening of competition was identified, however the market was defined. However, on a cautious basis, the OFT assessed the transaction both on the basis of all marine seismic data acquisition, and on 2D and 3D proprietary seismic data acquisition separately.

Geographic scope

22. The parties submitted that both CGGVeritas and the Target operate in all regions of the world and will transit vessels on a global basis to where contracts are available. The parties also submitted that as key customers, such as the major oil and gas companies, generally purchased on a global basis and vessels transit from basin to basin depending on business opportunities the market for marine data acquisition services is worldwide in scope.
23. Third parties unanimously supported a worldwide market. However, while the largest suppliers operate globally and have vessels scattered across the globe, smaller competitors tended to operate on a regional basis. A third

⁴ Other customers generally include universities and research centres.

⁵ 2D, 3D and 4D seismic data acquisition is done for different purposes: 2D determines where the reservoirs may be, 3D is a more detailed scan of the soil, while 4D is used to determine the value of a reservoir over time.

party commented that the transport costs involved in moving a vessel between regions for a contract would be unprofitable, but acknowledged that vessels did move from regions during winter months.

24. The OFT considers that the narrowest geographic market is likely to be the North Sea area.⁶ While, it has not been necessary to conclude on geographic scope, as the transaction raises no competition issues on any geographic basis, the OFT, on a cautious basis, will examine the effects of this merger both on a North Sea area and worldwide basis.

Seismic data processing

25. Seismic data processing is the process of converting the raw data collected at the data acquisition stage into a format that can be easily interpreted by the client. This process is undertaken by signal processing algorithms, which the parties submitted were essentially the same for marine and land based seismic information and for the different types, (for example, 2D and 3D).
26. The OFT considers that the provision of processing services for 2D, 3D and 4D data are not substitutes from a demand-side perspective, as customers need the appropriate processing for the data acquired. However, on the supply side, the parties submitted that the data processing centres of the parties and their competitors' are typically able to process all types of seismic data. The Target, for example, despite not acquiring 4D data, provides processing services for 4D data. Third parties confirmed the parties' view.
27. Third parties explained that they use nearly the same resources (mainly personnel, computers and software) to process 2D, 3D and 4D data and are able to switch these resources across the different types of data processing services on demand. However, one competitor also explained that 3D and 4D data processing were more profitable and that therefore, as a strategy, it tended to minimise 2D processing and maximise 3D and 4D processing.

⁶ In Compagnie Générale de Geophysique of Veritas Inc -6 February 2007 the parties defined the North Sea Area as comprising the waters of the UK, Norway and the Faroe Islands and those countries bordering the North Sea, namely the UK, Ireland, Norway, Denmark, the Faroe Islands, The Netherlands and Germany.

28. The OFT has not needed to conclude on market definition in this case, as no realistic prospect for a substantial lessening of competition was identified however the relevant market is defined. In this case the OFT assessed the transaction on the basis of the provision of all seismic data processing.

Geographic scope

29. The parties submitted that the relevant geographic scope for the seismic data processing market to be worldwide, on the basis that seismic data can be processed remotely around the world, that many of the large seismic data processing providers offer their services on a worldwide basis and have regional processing centres worldwide, that the key customers are predominately global corporations that purchase this processing globally and that there are no significant barriers to offering these services across national borders.
30. Third parties unanimously supported a worldwide market for seismic data processing, on the basis that there are no transport costs or regional impediments to a global market.
31. Although, it has not been necessary to conclude on the geographic market for seismic data processing, as no competition concerns are raised whatever definition is used, the OFT has considered market shares on the bases of the North Sea area and worldwide.

Ancillary services

32. Some seismic services companies also offer ancillary services that are aimed at enhancing the exploration and production activities of the customers. These ancillary services may include data management services, exploration consultancy services, or reservoir characterisation services. However, the parties only overlap in reservoir characterisation services.
33. Reservoir characterisation services allow the oil and gas company to analyse existing reserves to maximise the recovery of oil and/or gas. Experts, either in-house or external consultants, will use specialist software to analyse processed seismic data. Reservoir characterisation includes both

software and consultancy services and involves the refining the data interpretation.

34. The OFT has not needed to conclude on the market definition, as no realistic prospect for a substantial lessening of competition was identified however the market was defined.

Geographic scope

35. The Parties submitted that, to the extent that reservoir characterisation services are considered to be a market in its own right, then, consistent with it view of the geographic market for seismic data acquisition and processing, competition takes place on a global basis, as customers will often buy a global licence for software from a supplier of reservoir characterisation services and use that software, with consultancy services, across its global network.
36. Third parties agreed with the view that this market was global in nature and that there were no transport costs or regional impediments that would restrict the geographic scope of the market. However, it has not been necessary to conclude as the transaction raises no competition issues on any geographic basis.

HORIZONTAL ISSUES

Market shares

Marine seismic data acquisition

37. At a worldwide level, in 2011 the parties' combined market share, by revenue,⁷ for all ⁸ marine seismic data acquisition were [20-30] per cent, increment [zero-10] per cent.

⁷ The parties estimates of worldwide market shares excludes the value of marine seismic data acquisition undertaken in the Russian domestic market and includes only a limited figure for activities in China, which has opened to international service providers. The parties submit that this is because, historically, China and Russia have not been open to international contractors and most Chinese and Russian oil and gas companies have used national seismic services providers.

⁸ 2D, 3D, 4D and both proprietary and multi-client seismic data acquisition.

38. In the North Sea area, the parties' combined market share, by revenue, in 2011 for all seismic data acquisition were [10-20] per cent, increment [zero-10] per cent.
39. If, on a cautious basis, 2011 market shares for 2D and 3D proprietary seismic data acquisition are considered separately; the parties would have, for 2D proprietary seismic data acquisition, a combined worldwide share, by revenue, of [10-20] per cent, increment [zero-10] per cent, while for 3D proprietary seismic data acquisition their combined worldwide market share, by revenue, would be [40-50] per cent, increment [10-20] per cent.
40. There was no increment to CGG's 2011 market share with regard to proprietary 2D seismic data acquisition in the North Sea area. The parties were able to provide estimates for combined market shares, by revenue, for 2011 for marine seismic data acquisition for 3D/4D, proprietary and multi-client, which gave them a combined share of [10-20] per cent, increment [zero-10] per cent in the North Sea area. The parties, however, do not overlap in either 4D or multi-client ⁹ activities in the North Sea area.
41. The parties face a competitive constraint from a number of competitors. In particular, the parties estimated that on a worldwide basis, by revenue, WesternGeco would hold a [20-30] per cent market share, PGS [10-20] per cent and TGS [zero-10] per cent and a long tail of smaller competitors. In the North Sea area for all marine seismic data acquisition in 2011, the parties faced competition from PGS – [30-40] per cent, WesternGeco – [10-20] per cent, Dolphin – [10-20] per cent and Polarcus – [10-20] per cent.

Seismic data processing

42. The parties estimated that their combined 2011 worldwide market share for seismic data processing was [30-40] per cent, increment [zero-10] per cent. This figure only includes external processing revenues, and does not include processing for internal multi-client library projects. The parties submitted that these market share estimates were therefore likely to overstate the parties' market shares for a number of reasons, including the fact that not all competitors report revenues at this level, a number of contracts are awarded by Oil and Gas companies without a competitive

⁹ As Fugro's multi-client library will be retained by Fugro post-merger,

tender, and that the estimates would not include any seismic data processed in house. The parties estimated that WesternGeco and PGS held [20-30] per cent and [zero-10] per cent market shares respectively and that there is a long tail of smaller competitors.

43. In the North Sea area, the parties' 2011 combined market share was [40-50] per cent, increment [zero-10] per cent. WesternGeco and PGS had similar market shares as they do worldwide. Third parties considered that there were viable alternatives to the parties.

Reservoir characterisation

44. The parties' estimated combined market shares for 2011 for reservoir data acquisition on a worldwide basis were [10-20] per cent, increment [zero-10] per cent. The market leader Schlumberger had an estimated [40-50] per cent market share. While Paradigm and Halliburton had an estimated [10-20] and [10-20] per cent share respectively. The parties submitted that this market also has a long tail of smaller competitors.

Closeness of competition

45. The parties submitted that all the overlapping markets were bidding markets and provided bidding data showing the winner, where known, of each of the bids where CGGVeritas tendered in the last three years. Although bidding data was provided for data acquisition, data processing and reservoir characterisation, the OFT considers that the bidding data for data processing and reservoir characterisation was characterised by a degree of uncertainty. The bidding data for data acquisition, on the other hand, was not affected by the same degree of uncertainty. Having said that, the OFT considered the data provided as a partial but still of some evidential value. They are therefore discussed below.

Marine seismic data acquisition

46. The bidding data provided by CGGVeritas shows that Fugro¹⁰ []. []. []. [].

Seismic data processing

47. Again the bidding data shows that Fugro []. []. []. [].

¹⁰ Note, the Target is part of Fugro's Geoscience division, see paragraph 3 above.

48. Despite the bidding data being subject to a degree of uncertainty []. Third parties commented that the parties were not each other's closest competitor, with one remarking that it did not consider Fugro to be a credible alternative to CGGVeritas, and that there were several alternative suppliers operating in the market.

Reservoir characterisation

49. The bidding data provided showed that Fugro []. []. [].
50. []. In particular, third parties considered that the parties are not each other's closest competitor and that there are several other credible alternative suppliers operating in the market.

BARRIERS TO ENTRY AND EXPANSION

Marine seismic data acquisition

51. The parties submitted that the threat of new entry would constrain the merged entity post acquisition. The parties submitted that as the demand for oil and gas had increased, oil and gas companies were placing a significant investment in exploration.
52. Third parties told the OFT that barriers to entry or expansion for the marine market were high due to the cost of acquiring, fitting out and manning new ocean-going vessels, which the parties acknowledge is not insignificant, with a third party suggesting a new vessel would take some two years to build and cost between \$180 to \$200 million. However, the parties submitted that both new entrants and current participants looking to expand had been able to either purchase second hand vessels or lease the necessary vessels from other market participants. A third party also commented that new entrants with business models based on the leasing of equipment faced much more modest costs. CGGVeritas pointed to TGS which, while not owning any vessels, charters from other participants in the market, Polarcus, which commenced operations in 2009, with the newest fleet on the market, all having been built since 2009, recently launching two additional vessels, and Dolphin, established in 2010, and

currently operating five vessels intending, the parties submit, to launch a further three vessels by the end of 2014.¹¹

53. The parties also submitted that competitors from China were expanding out of their domestic markets to operate on the worldwide marine seismic data acquisition market, and that Russian companies, such as DMNG, JSC MAGE and SMNG all had experience with the major oil and gas companies which may assist them when domestic seismic data acquisition services are further opened to international competition.

Seismic data processing

54. The parties submitted that barriers to entry and expansion for seismic data processing were considered to be low as a substantial capital investment to begin operations was not required, since Cloud and outsourced computing could be utilised to establish processing activities quickly and to allow for expansion.
55. The parties submitted that new entrants enter the market on a regular basis, with many examples of successful new entrants. The parties submitted that in terms of their UK activities []. The parties submitted, and third parties agreed, that the main barrier to entry was the recruitment of personnel, which was not considered significant.

Reservoir characterisation

56. The parties submitted that in addition to the large number of existing competitors it would face the threat of new entry post merger. The parties submitted that new entrants in this sector included Lumina Geophysical and Sigma Cubed, and that new entry did not require substantial capital investment, since only software, which can be licensed from other suppliers, and personnel with the relevant experience were required.

¹¹ The parties also submitted that Sinopec, a Chinese state-owned company will launch a new vessel in 2013, ONGC, an Indian state-owned Oil and Gas company may launch a new vessel in 2013, PGS will launch four new vessels by the end of 2015 and WesternGeoco will launch two new vessels before the end of 2014, and has an option to build a further two.

57. It has not been necessary, however, to conclude on barriers to entry or expansion in the three overlap markets as no competition concerns arise in this case.

BUYER POWER

58. The parties submitted that their main customers, oil and gas majors, had considerable buyer power. This view was supported by third party competitors and customers. A third party commented that as the oil and gas companies tended to have in-house seismic divisions during the 1970s and 1980s they had retained residual knowledge of the processes, which they were able to use in negotiations. However, it has not been necessary to conclude on buyer power since no competition concerns arise however the market is defined.

VERTICAL ISSUES

59. While both CGGVeritas and the Target manufacture and supply seismic data acquisition equipment, the parties submitted that no horizontal overlap occurs since CGGVeritas' equipment activities, through its subsidiary Sercel, consist of the manufacture of various geophysical equipment for land and marine seismic data acquisition, while the Target's activities through De Regt Marine Cables, are limited to the manufacture of a number of speciality cables, which are not manufactured, and [] by CGGVeritas.
60. The OFT examined the ability and incentive for CGGVeritas post merger to refuse to supply their downstream competitors in seismic data acquisition in order to limit their ability to compete in the downstream market.
61. One competitor raised concerns that the parties post merger might not have the ability to supply their downstream competitors, given the need to also supply the Target's vessels.
62. The OFT, however, considers that the Target's demand would be unlikely to exhaust the entire supply of the merged entity. The OFT also considers that, even if the Target's demand for seismic data acquisition equipment matched the current level of supply of CGGVeritas, it may still have an incentive to expand capacity to satisfy additional demand from competitors.

63. In addition, the OFT notes that the parties largest competitors currently self-supply seismic data acquisition equipment. The parties would be unlikely to make a material gain from any foreclosure, as their strongest competitors would still be present in the downstream market. The OFT therefore considers that the balance between the little gains and larger losses from foreclosure would be unlikely to provide the parties with the incentive to carry out this strategy.
64. Further, the complainant acknowledged that it would not find it difficult to find alternative suppliers and considered that the vertically integrated competitors were likely to be willing to supply other competitors on demand. Finally, the complainant told the OFT that it would also consider self-supply. The OFT therefore considers that the parties would also be unlikely to have the ability (in addition to the incentive) to foreclose their competitors.
65. The OFT therefore considers that the parties would be unlikely to have the ability and the incentive to carry out a vertical foreclosure strategy and that the merger does not raise any competition concerns in this regard.

THIRD PARTY VIEWS

66. Third party comments have been rehearsed above where relevant. In general, third parties regarded the various overlapping markets as competitive, and had no competition concerns.

ASSESSMENT

67. CGGVeritas and the Target overlap in the supply of Marine seismic data acquisition, Seismic data processing, and Ancillary services, such as reservoir characterisation.
68. While it has not been necessary to conclude on either product or geographic market definitions the OFT, on a cautious basis, considered this transaction in the following manner:
 - marine seismic data acquisition on the basis of the North Sea area and worldwide
 - seismic data processing on the basis of the North Sea area and worldwide, and

- reservoir characterisation services on a worldwide basis.

Marine seismic data acquisition

69. On a worldwide level the parties' combined market share, by revenue, for 2011 was [20-30] per cent, increment [zero-10] per cent for all marine seismic data acquisition. While in the North Sea area the parties' combined share in 2011 was [10-20] per cent, increment [zero-10] per cent.
70. Bidding data provided by the parties indicated that [] and third parties raised no competition concerns, identifying a number of credible alternative suppliers.

Seismic data processing

71. The parties estimated combined market shares for 2011 for data processing on a worldwide basis were [30-40] per cent, increment [zero-10] per cent. While in the North Sea area, the combined shares were [40-50] per cent increment [zero-10] per cent. [] the parties were not close competitors, which was confirmed by third parties.

Reservoir characterisation

72. The parties' estimated combined market shares for 2011 for reservoir data acquisition on a worldwide basis were [10-20] per cent, increment [zero-10] per cent. Market share estimates provided by the parties show that Schlumberger is the market leader with an estimated [40-50] per cent market share. [] the parties are not particularly close competitors and third parties confirmed this view, commenting that there were several other credible alternative suppliers.
73. The OFT considers that barriers to entry and expansion for the marine seismic data acquisition sector were high given the need for significant financial investment in the necessary vessels, although some companies do rent vessels from other market participants. In the data processing and reservoir characterisation sectors, the OFT considered that barriers to entry and expansion were lower, with the main entry barrier being the recruitment of qualified staff. These views were supported by third parties.

74. Both the parties and third parties considered that there was considerable buyer power. However, it has not been necessary to conclude on buyer power since no competition concerns arise however the market is defined.
75. CGGVeritas is a major supplier of seismic data acquisition equipment. As many seismic data acquisition competitors self supply, one competitor was concerned that the merged entity would be unable to supply to third party competitors post merger due to having to supply the Target. However, this third party recognised that should CGGVeritas stop supplying its downstream competitors it would not be difficult to procure the equipment elsewhere and that other, existing, vertically integrated companies would be likely to enter the market. The OFT therefore considers that the parties would be unlikely to have the ability and/or incentive to carry out a vertical foreclosure strategy and therefore the merger does not raise any competition concerns in this regard.
76. Consequently, the OFT does not believe that it is or may be the case that the merger may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom.

DECISION

77. This merger will therefore **not be referred** to the Competition Commission under section 33(1) of the Act.

ⁱ The parties subsequently advised that the Australian and Turkish competition authorities had also cleared the transaction.