

*Case No COMP/M.1976 -
SHELL /
HALLIBURTON / WELL
DYNAMICS JV*

Only the English text is available and authentic.

**REGULATION (EEC) No 4064/89
MERGER PROCEDURE**

Article 6(1)(b) NON-OPPOSITION
Date: 15/03/2001

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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 15.03.2001

In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EEC) No 4064/89 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus [...]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

MERGER PROCEDURE
ARTICLE 6(1)(b) DECISION

To the notifying parties

Dear Sir/Madam,

**Subject: Case No COMP/M.1976-Shell/Halliburton/WellDynamics JV
Notification of 14.02.2001 pursuant to Article 4 of Council Regulation
No 4064/89¹**

1. On the 14.02.2001, the Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EEC) No. 4064/89, whereby the undertakings Shell Petroleum N.V. (Netherlands) and Halliburton Company (USA) acquire joint control by purchase of shares in a newly created company constituting a joint venture (WellDynamics).
2. After examining the notification, the Commission has concluded that the notified operation falls within the scope of Council Regulation (EEC) No.4064/89² and that it does not raise serious doubts as to its compatibility with the common market and with the EEA agreement.

I. THE PARTIES

3. Shell Petroleum N.V is a holding company within the Royal Dutch Shell group with world wide activities in exploration and production of oil and natural gas, oil products, chemicals etc.
4. Halliburton is a company active in diversified engineering and energy services for a range of large scale projects (incl. oilfield products and services).

¹ OJ L 395, 30.12.1989 p. 1; corrigendum OJ L 257 of 21.9.1990, p. 13; Regulation as last amended by Regulation (EC) No 1310/97 (OJ L 180, 9. 7. 1997, p. 1, corrigendum OJ L 40, 13.2.1998, p. 17).

² OJ L 395, 30.12.1989 p. 1; corrigendum OJ L 257 of 21.9.1990, p. 13; Regulation as last amended by Regulation (EC) No 1310/97 (OJ L 180, 9. 7. 1997, p. 1, corrigendum OJ L 40, 13.2.1998, p. 17).

II. THE OPERATION

5. The joint venture WellDynamics will be a full function joint venture specialising in intelligent well completion products, technology and services³.
6. Halliburton will contribute assets that represent its intelligent well completion operations by contributing its subsidiary PES. Halliburton will extract its current conventional completion business from its subsidiary PES, and this subsidiary will be re-organised in order to own and operate the intelligent well completion business which will be the core business of the new joint venture.
7. Shell will license its relevant intellectual property rights and know how regarding intelligent well completion to the joint venture. Shell has developed general operator know how of the area of well development and management. It has been conducting research in intelligent well completion solutions for captive use but has never had any sales to third parties in this area. As this technology is still at an early stage Shell has seen the possibility of either a) develop these options on its own, b) develop and license these technologies to third parties or c) develop these technologies with a party, which would enable the development of complete intelligent systems. With the proposed joint venture, Shell has chosen the latter option in order to share the risks involved in further developing its technologies.
8. Following completion of this process Shell and the Halliburton group will each acquire 50% of the shares in WellDynamics. In this sense, the parents will withdraw from the market activities in which WellDynamics will be active.
9. According to the information provided in the notification, WellDynamics will be a wholly self-sufficient company, operating autonomously on a market. According to the parties, it is necessary for WellDynamics to be able to compete with Halliburton, which will continue to provide conventional completions solutions. If WellDynamics and Halliburton were to enter into specific service contracts they would be established on an arm's length basis. It can therefore be concluded, that the joint venture will perform on a lasting basis all the functions of an autonomous economic entity.

III. CONCENTRATION

10. The transaction is a full function joint venture within the meaning of Article 3(2) of the Council Regulation Council Regulation (EEC) No.4064/89

IV. COMMUNITY DIMENSION

11. The operation has a Community Dimension pursuant to Article 1(2) of the Merger Regulation as the undertakings concerned have a combined aggregate world-wide turnover of more than €5 billion in 1999⁴ (Shell; €98.8 billion, Halliburton; €13.97 billion). Each of the undertakings concerned have a Community-wide turnover in excess of EUR 250 million (Shell; €44.5 billion, Halliburton; €2.2 billion) in 1999 but they do not achieve more than two-thirds of their aggregated Community-wide

³ According to the parties, "intelligent completion solutions" include those products and associated services which optimise the productive life of an oil or gas well through devices which either provide information to the operator at the surface for the purpose of enabling the operator to conduct intervention operations as necessary, or which regulate the well flow on some controlled basis, without the necessity of re-entering the well.

⁴ Turnover calculated in accordance with Article 5(1) of the Merger Regulation and the Commission Notice on the calculation of turnover (OJ C66, 2.3.1998, p25). To the extent that figures include turnover for the period before 1.1.1999, they are calculated on the basis of average ECU exchange rates and translated into EUR on a one-for-one basis.

turnover within one and the same Member State. The notified operation therefore has a Community dimension. Furthermore it constitutes a co-operation case under the EEA Agreement, pursuant to article 57 of that Agreement.

V. ASSESSMENT

12. Halliburton will contribute its subsidiary PES to the joint venture as this represents the group's intelligent well completion business. WellDynamics will develop and provide wholly intelligent systems that incorporate intelligent elements all the way through the completion process. Halliburton will continue to provide conventional completion solutions.

1. Product market

13. Completion products and services are used after a well is drilled to bring it into production in order to stabilise the well and to initiate and sustain the production of oil and gas. Completion products and services encompass several tasks and products, such as perforation, whereby holes are blown through the well casing to allow oil or gas to flow into the well bore. In addition packers are used as isolating devices to seal off underground formations and to direct the flow of underground fluids. In addition pumps, valves and flow controls as well as aboveground devices are used⁵.
14. The parties submit that the relevant product market ought to be considered as the market for completion products and services, i.e. solutions, without the need to further subdivide into narrower product markets (e.g. packers, subsurface flow controls, flow measurement, surface safety valves, sand control, etc.). This view has been supported by the investigation.
15. As far as the distinction between conventional completion and intelligent well completion is concerned the parties have submitted that many of the elements encompassed by a whole completion solution are common to both conventional and intelligent solutions. These products and services may be used in a variety of tailor made combinations depending on technical, environmental and other factors. Consequently, the parties have emphasised that a completion solution may be more or less intelligent depending on the chosen mix of so called conventional and intelligent elements.
16. The investigation has broadly confirmed the parties' view. Intelligent well completion solutions use the same range of products and services as conventional well completion solutions but with more advanced devices that can report information on the well conditions to the surface and receive direction from the surface without re-entering the well bore. An intelligent well is one where temperature, pressure, flow-rate or water sensors are deployed downhole together with devices that allow well engineers to use sensor information to optimise the production of the well without intervention.
17. According to the parties, it would not be relevant to make a distinction between conventional well completion solutions and intelligent well completion solutions due to the degree of substitutability from the demand perspective.
18. These views have broadly been supported by the customers that have replied to the Commission's investigation. They have submitted that at present their intelligent well completion solutions can always be substituted by conventional solutions.
19. With regard to the question of demand side substitutability one competitor has explained that with certain limited exceptions, well completions may be performed with either conventional or intelligent well completion solutions. This is due to the fact

⁵ Cf. Case No. COMP IV/M.1140 – Halliburton /Dresser of 06/07/1998.

that conventional solutions combined with intervention are technically equivalent to intelligent well completion solutions.

20. The overall goal of the operator, i.e. the oil company, is to optimise the economic life of the well in order to maximise the net present value of the well. In order to plan the completion of a well the operator has to make a decision about the planned production life of the well and the possible necessity of well intervention during the lifetime of the well, as they are both expensive and risky. The investigation has shown that the operator's decision whether to select an intelligent well completion solution is not mainly based on technical requirements. It is more a complex decision that involves several factors as an assessment of capital expenditure vs. operating expenses, production predictions, cost of interventions and risk assessment.
21. Before this background, it has been examined whether conventional well completion solutions may effectively constrain the prices of intelligent well completion solutions. According to the parties, the suppliers of intelligent solutions compete against those of conventional solutions and consequently have to price their intelligent solutions such as to be comparatively attractive. Most competitors have stated that the prices of conventional well completion products may not constrain the prices of the more complex intelligent solutions. However, in their opinion the prices of conventional well completion solutions do indeed serve as a benchmark for the pricing of intelligent solutions.
22. At this stage the intelligent solutions are an evolving business at a very early stage of development. The demand is still limited due to the fact that the operators have generally not completely adapted to these solutions. However, there is a general expectation in the sector that intelligent solutions will gradually substitute conventional solutions.
23. On the basis of these expectations all suppliers are trying to place themselves in a position to offer intelligent solutions. Some competitors have already launched these solutions in the market and several other competitors have such solutions under development. The parties argue that the suppliers and potential suppliers of both completion solutions are largely the same and suggest that this would lead to the conclusion that intelligent completion solutions are part of an overall market for completion solutions.
24. In conclusion, on the one hand it could appear premature to define a distinct market for intelligent well completion solutions due to the still considerable demand side substitutability and the fact that the competitors and the competitive conditions appear to be more or less the same whatever way the market is defined.
25. On the other hand intelligent solutions are likely to substitute conventional solutions to a significant degree in the course of the coming years and offer the operators solutions that provide the possibility of fewer interventions. This could in turn in the course of the next few years lead to an increasing number of situations where offers of intelligent solutions will no longer be constrained by offers of conventional solutions where the former are viable options for the well in question.
26. However, in this case it is not necessary to exactly define the relevant product market, as under none of the envisageable product market definitions competition problems would arise.

2. Geographic market

27. The notifying parties submit that the relevant geographic market is world-wide, as manpower, equipment and products are easily transportable. This conclusion has broadly been confirmed by the Commission's investigation.
28. It has been considered whether it is possible to make a distinction between different types of exploration with regard to the geographic scope of the market in particular in view of a possible preference for intelligent solutions in certain areas. This point has been raised by one competitor who referred in particular to the North Sea. In this area, he submitted that intelligent well completion might mainly be used as operators in this area have a tradition of being more willing to try new technologies.
29. The parties have submitted that the operators normally define three categories of completion operations irrespective of geographical location:
 - (1) application offshore in deep water;
 - (2) application offshore in shallow water and application in deep onshore wells;
 - (3) application in shallow onshore wells.
30. The parties argue that such operations "may also be categorised as high, medium and low in respect of cost and difficulty". According to the parties the same methodology of analysis is applied in every case, regardless of how the well is categorised and whether it is in the North Sea, Libya, Mexico, or elsewhere. The parties claim that purchases of conventional and of intelligent solutions are made across all categories in similar proportions.
31. The suppliers providing completion solutions are predominantly multinational companies with facilities in several major oil and gas producing areas.
32. In Halliburton's experience its own range of completion solutions are sold all over the world, and the same is expected to apply to WellDynamics.
33. Most of the competitors have confirmed the parties' view. They have submitted that initially intelligent well completion solutions are likely to be used in offshore fields. This is due to the fact that the cost of production is relatively higher in these fields and thereby the cost of intervention is proportionally high, and consequently the benefits of using intelligent well completion solutions is obvious in these areas. However in general, competitors are of the opinion that it is not relevant to make a distinction between offshore and onshore fields and they submit that intelligent well completion solutions have been installed in all water and land conditions. They have referred to the fact that in choosing the relevant type of completion solution, the customers' decision is primarily based on a cost benefit analysis and on the reservoir performance but not on the rig type. In conclusion, the geographic scope of the overall market for well completion products and services/(solutions) is most likely world-wide.
34. However, in this case it is not necessary to exactly define the relevant geographic market, as under none of the envisageable definitions the operation will give rise to competition concerns.

3. Competitive assessment

3.a) All completion solutions

3.a.i) Market shares and market structure

35. According to the parties, their combined market share, based on value, was [20-30]% (Halliburton [20-30]%; PES [<5]%) in 1999 on the overall well completion market on a world-wide basis. They accounted for a market share of [30-40]% (Halliburton [25-

35]%; PES [5-10]%) based on value on the overall well completion market in the EEA in 1999. The parties' best estimate of their shares on the overall well completion market in the North Sea in 1999 are roughly in the same and amount to [25-35]% (Halliburton [20-30]%; PES [5-10]%).

36. Competitors have confirmed that Shell has not supplied either conventional or intelligent solutions to any third parties. Consequently the notified transaction does not create any horizontal overlap.
37. According to the parties, the market structure would be as follows on the world-wide market for all completion work (including intelligent products and service). Baker Hughes' market position would be of roughly the same size as Halliburton/PES with a share of [20-30]%, and Schlumberger would account for a share of [5-15]% followed by several smaller competitors.

All completions	1997	1998	1999
World wide	(value based share)	(value based share)	(value based share)
	%	%	%
Halliburton	[20-30]%	[20-30]%	[20-30]%
PES	[<5]%	[<5]%	[<5]%
PES /Halliburton	[25-35]%	[25-35]%	[25-35]%
Schlumberger Camco	[5-15]%	[5-15]%	[5-15]%
Baker-Hughes	[20-30]%	[20-30]%	[20-30]%
Weatherford	[<5]%	[<5]%	[25]
Shell's sale to third parties	[0]	[0]	[0]
Others	[30-40]%	[30-40]%	[30-40]%
TOTAL	100%	100%	100%

38. The overall picture of the market structure does not vary to a large extent whatever geographic scope of the market mentioned is used. Competitors have estimated that the market share of the parties' largest competitors are higher than suggested by the parties. The "big three" competitors would be followed by several competitors (the category "others") which individually would account for quite small shares of the market.

3.a.ii) The competitor's strength with regard to intelligent elements

39. Third parties have submitted that more than 10 different companies have marketed well completion solutions comprising intelligent elements.
40. The major competing suppliers of these completion solutions are Baker Hughes, Camco-Schlumberger, Weatherford and ABB. Several third parties are of the opinion that these suppliers would be the main competitors capable of contesting the new

entity's position in solutions comprising intelligent elements. Halliburton/(PES), Camco-Schlumberger and Baker Hughes are regarded to be "the three big suppliers" of any kind of completion solutions. However, a second tier of smaller but more specialised suppliers can also be expected to challenge the new entity's market position albeit to a lesser extent.

3.a.iii) Buyer power

41. The customers in the market are predominantly large vertically integrated oil companies with considerable financial strength. This suggests that they have a relatively strong bargaining position and they would normally use the most appropriate procedures in order to ensure that there is sufficient competition among their suppliers. This has been confirmed by the investigation.

3.a.iv) Vertical integration

42. Several competitors have stressed the fact that Shell could become captive to WellDynamics and purchase all their future requirements of intelligent well completion products from the joint venture. Competitors argue that the joint venture thereby would obtain significant sales of intelligent well completion solutions to Shell, which could constitute a significant barrier to entry for current and potential competitors.
43. According to Shell its purchases in an overall completion market would represent a share in the range of [...] % of the total purchases world wide and only an insignificant part of them being intelligent well completion. On the EEA wide basis this share would amount to [...] %. On this basis, even if Shell were to be eliminated as a potential customer for third parties the transaction does not alter significantly the supply/demand economics of the market at stake as the joint venture will only provide intelligent well solutions.

3.b) Intelligent completion solutions

44. The parties' position in the new emerging business area of intelligent well completion solutions is likely to reflect their relative market position and strength on the overall well completion market. Under all relevant aspects, other competitors appear to be capable of contesting the new entity's position. It cannot be concluded that the parties in this emerging market will obtain a dominant position.
45. The assessment of the vertical integration between the well completion business and a customer of this business, Shell, does not differ from the one set out in point 3.a.iv) above.
46. In the light of these considerations the concentration will not create or strengthen a dominant position on any possible market for well completion solutions.

3.c) Access to information and Shell's position as an oil company

47. A concern raised by competitors is that WellDynamics would have extremely close and direct access to information about its customer's inner resources and decision making and this could prove useful to Shell in its capacity as an oil company.
48. In the notification, the parties have submitted that it is useful to distinguish between on the one hand intellectual property and on the other hand technical information about various geological formations, seismic data, production estimates. WellDynamics will acquire the latter type of information in the course of its business from the oil companies as its customers. Such information could arguably be helpful to Shell because Shell could use it as an indication of the effectiveness of particular strategies of its competitors in particular locations. Moreover, such information may be competitively sensitive, when operators are still competing in the exploration stage.

49. However, the parties have emphasised that such information loses its sensitivity afterwards because it becomes publicly available through sources as governmental energy and resource bodies /ministries. The parties have submitted that WellDynamics does not come in until the development stage and will therefore only obtain such information after it loses its commercial sensitivity.
50. On this basis, the Commission concludes that the presence of Shell in the joint venture does not raise concerns with regard to Shell's capacity as an oil company.

VI. ANCILLARY RESTRAINTS

51. The parties have requested an assessment in conjunction with the concentration for the clauses set out below.

Shareholders agreement - non compete clause (19.1)

52. Clause 19.1 of the shareholders' agreement stipulates that neither party nor any of its respective affiliates shall, for as long as such party/affiliate owns an interest in the joint venture, engage directly or indirectly in the intelligent well completion business. However, with the consent of the other party, either party may engage in activities that only incidentally involve activities within the field of intelligent well completion business (clause 19.1.3).
53. Clause 19.1 does not restrict either party, as a customer, from continuing with and entering into normal, arm's length customer-supplier relationships in the field of intelligent well completion business (Clause 19.2.1). According to the parties it does not either restrict any of the party's right to develop and/or acquire (rights to) technology, or either party's right to provide advice and services to its affiliates (Clauses 19.2.2 and 19.2.3).
54. The non-compete provisions enable the joint venture to fully utilise its assets and protect the parents' interest in the joint venture against competitive acts facilitated by the parent's privileged access to know-how and goodwill transferred to or developed by the joint venture. They may therefore be justified for a certain time period. However, the information provided in the notification is not sufficiently motivated to enable the Commission to take a position on the duration of the period for which these clauses may be regarded as directly related and necessary to the implementation of the concentration.

Technology licence agreements (clauses 3)

55. Under clause 3 of each of the Shell Technology License Agreement and the Halliburton License Agreement, Shell and Halliburton will grant to the joint venture technology licences which are (i) exclusive and (ii) only for a designated field of use, i.e. for use in the intelligent well completion business. This clause in each of the two agreements serves to transfer the necessary technology to the joint venture. The Commission therefore considers these agreements directly related and necessary to the implementation of the concentration.

VII. CONCLUSION

56. For the above reasons the Commission has decided not to oppose the notified operation, and to declare it compatible with the common market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) in Council Regulation (EEC) No. 4064/89 and Article 57 of the EEA Agreement.

For the Commission
Mario MONTI
Member of the Commission