



SAMEDAN OIL CORPORATION
AERA ENERGY LLC

173 IBLA 23

Decided November 14, 2007

Editor's Note: appeals filed Aera Energy LLC v. Kempthorne, et al. 1:08-cv-01614-RJL (D.D.C. Sept. 17, 2008), Noble Energy, Inc. v. Kempthorne, et al., 1:08-cv-02023-RJL (D.D.C. Nov. 24, 2008), summary judgment granted for DOI (March 4, 2010); appeals filed, No. 10-5101 (Aera) No. 10-5110 (Noble) (April 8, 2010)



United States Department of the Interior
Office of Hearings and Appeals
Interior Board of Land Appeals
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SAMEDAN OIL CORPORATION
AERA ENERGY LLC

IBLA 2000-142S; 2000-144S

Decided November 14, 2007

Appeals from separate decisions of the Regional Director, Pacific Outer Continental Shelf Region, Minerals Management Service, eliminating leases from two offshore units. OCS-P-0462; OCS-P-0420, 0424, 0429.

Proposed findings of fact adopted; MMS decisions affirmed.

1. Outer Continental Shelf Lands Act: Geological and Geophysical Exploration: Generally--Outer Continental Shelf Lands Act: Oil and Gas Leases--Outer Continental Shelf Lands Act: Unit Plans

In accordance with the Outer Continental Shelf Lands Act, 43 U.S.C. § 1334(a)(4) (2000), and its implementing regulations, 30 C.F.R. Subpart 250.1301, MMS may approve the voluntary joining of offshore oil and gas leases into a unit if unitized operations will (1) promote and expedite exploration and development or (2) prevent waste, conserve natural resources, or protect correlative rights, including Federal royalty interests, of a reasonably delineated and productive reservoir. The area included within a unit includes the minimum number of leases that will allow the lessees to minimize the number of platforms, facility installations, and wells necessary for efficient exploration, development, and production of mineral deposits, oil and gas reservoirs, or potential hydrocarbon accumulations. Activity on any lease within a unit is deemed to constitute activity on all leases within the unit, and if a unit area adjusts so that no part of a lease remains within the unit boundaries, the lease expires unless its initial term has not expired, the lessee conducts drilling, production, or well-reworking operations on the lease consistent with applicable regulations, or MMS orders a suspension of production or operations for the lease.

2. Outer Continental Shelf Lands Act: Geological and Geophysical Exploration: Generally--Outer Continental Shelf Lands Act: Oil and Gas Leases--Outer Continental Shelf Lands Act: Unit Plans

Exploratory offshore units are properly subject to adjustment if the more accurate delineation of the mineral reservoir uncovered by exploration activities shows that adjustment is warranted to ensure that leased areas that did not overlie the more precisely defined reservoir were excluded from the unit in keeping with the regulatory directive that a unit contain only the minimum number of leases necessary.

3. Outer Continental Shelf Lands Act: Geological and Geophysical Exploration: Generally--Outer Continental Shelf Lands Act: Oil and Gas Leases--Outer Continental Shelf Lands Act: Unit Plans

A decision to adjust an offshore oil and gas unit by removing leases from that unit will not be overturned where, although an appellant alleges that the decision was tainted by impermissible political considerations, the record establishes that the decision-making process and the actual decision-makers were sufficiently insulated from such pressure.

4. Outer Continental Shelf Lands Act: Geological and Geophysical Exploration: Generally--Outer Continental Shelf Lands Act: Oil and Gas Leases--Outer Continental Shelf Lands Act: Unit Plans

If completed exploration activities fail to uncover a potential hydrocarbon accumulation on an oil and gas lease included within an offshore unit, that lease is properly removed from the unit because it does not overlie the more precisely delineated reservoir circumscribing the appropriate unit area.

APPEARANCES: Steven J. Rosenbaum, Esq., and Thomas J. Cosgrove, Esq., Washington, D.C., for appellants; Geoffrey Heath, Esq., Barry E. Crowell, Esq., and Rodney J. Viera, Esq., Office of the Solicitor, U.S. Department of the Interior, Washington, D.C., for the Minerals Management Service.

OPINION BY ADMINISTRATIVE JUDGE GREENBERG

Samedan Oil Corporation (Samedan) and Aera Energy LLC (Aera) have appealed separate August 13, 1999, decisions of the Regional Director, Pacific Outer Continental Shelf (OCS) Region, Minerals Management Service (MMS), eliminating California OCS oil and gas lease OCS-P-0462 (lease 462) from the Gato Canyon Unit (GCU) operated by Samedan and California OCS oil and gas leases OCS-P-0420, 0424, and 0429 (leases 420, 424, 429) from the Santa Maria Unit (SMU) operated by Aera. The removal of the leases from their respective units caused those leases to terminate upon the expiration of the existing suspension operations covering the units because the leases' initial terms had expired and their exclusion from the units precluded them from falling within the scope of the subsequent suspensions issued for the units.

The Board consolidated the two appeals for review and issued a decision setting aside MMS's decisions and referring the appeals to the Hearings Division for a hearing and decision. *See Samedan Oil Corp.*, 163 IBLA 63 (2004). The Director, Office of Hearings and Appeals (OHA), reviewed the Board's decision and subsequent order denying MMS's request for reconsideration (IBLA 2000-142R, 2000-144R (Dec. 16, 2004)), and on December 22, 2005, vacated the Board's decision to the extent it set aside the MMS decisions under appeal and modified the decision to provide that the assigned administrative law judge (ALJ) would make proposed findings of fact on the issues relevant to the appeal and transmit them to the Board so that the Board could render a final decision. *Samedan Oil Corp.*, 32 OHA 61, 75 (2005). Administrative Law Judge Harvey C. Sweitzer issued his proposed findings of fact on December 5, 2006, and the matter is now ripe for dispositive action by the Board.

We find that the record amply supports Judge Sweitzer's factual findings which we accordingly adopt and incorporate by reference into this order.¹ We further conclude that those factual findings, the parties' submissions, and the record as a whole establish that the leases were properly excluded from the units because they lack the potential hydrocarbon accumulations necessary for continued inclusion in the units. We therefore affirm MMS's decisions to eliminate the leases from their respective units.

BACKGROUND

¹ A copy of Judge Sweitzer's order has been attached to this order and will be sent to the parties. Because of the confidentiality orders affecting these proceedings, the Judge's order will not be available to the public. *See* note 6, *infra*.

MMS issued lease 462 to Samedan in 1982, pursuant to the Outer Continental Shelf Lands Act (OCSLA), 43 U.S.C. § 1337(a)(1), (b)(2) (2000), for an initial period of 5 years and as long thereafter as oil or gas was produced in paying quantities or approved drilling or well reworking operations were conducted on the lease. In 1987, MMS approved the formation of the GCU encompassing lease 462 and two additional leases, lease 460 and lease 464, and Samedan's plan of operations for the unit and request for a suspension of production (SOP). Prior to the formation of the GCU, MMS had determined that an exploratory well drilled on lease 460 in 1985 (well 460#1) was capable of producing oil in paying quantities and that this well served as the discovery well for the unit; an additional well drilled in 1989 on that same lease (well 460#2) was also found to be capable of producing oil in paying quantities. No other wells have been drilled on the GCU. In 1991, MMS approved another SOP for the GCU which lasted until July 31, 1994.

MMS issued leases 420, 424, and 429 to Aera's predecessors-in-interest in July 1981, pursuant to the OCSLA, 43 U.S.C. § 1337 (a)(1), (b)(2) (2000), for initial periods of 5 years and as long thereafter as oil or gas was produced in paying quantities or approved drilling or well reworking operations were conducted on the leases. MMS approved the formation of the SMU encompassing those three leases and five others, leases 425, 430, 431, part of 433, and 434, effective June 11, 1986. Prior to unit approval, four wells had been drilled on the leases forming the SMU, including a well drilled in 1983 on lease 424 (well 424#1) by Aera's predecessor, Getty Oil. There was no surface production from any of these wells and MMS determined that none of them was capable of producing oil or gas in paying quantities. Shortly after the creation of the SMU, in July and August 1986, ARCO, another one of Aera's predecessors, drilled a well on lease 434 (well 434#1). MMS determined that well 434#1 was capable of producing oil in paying quantities and designated that well as the discovery well for the SMU. No other wells have been drilled on the SMU since unit formation. MMS approved SOPs for the SMU which lasted through June 30, 1994.

In 1992, MMS ordered a suspension of operations (SOO) for all 40 undeveloped California OCS leases, including those in the GCU and SMU, for the purpose of conducting the California Offshore Oil and Gas Energy Resources Study (COOGER study). The SOO was extended through June 30, 1999. SOOs ultimately remained in effect until August 16, 1999.

In anticipation of the expiration of the COOGER SOOs, MMS advised the unit operators in December 1998 that they had to submit new SOP requests by May 15, 1999, if they wanted to continue the GCU and SMU leases in suspension after the

SOOs ended. Both Aera and Samedan timely filed new SOP requests.² Upon discovering that, in addition to determining whether to grant the requested SOPs, MMS was also planning on reviewing whether to eliminate some of the leases from their respective units, Aera requested an opportunity to meet with MMS to demonstrate the continuing prospectivity³ of the leases included within the SMU. MMS agreed to hold the requested meeting on July 15, 1999, in Herndon, Virginia; Samedan also attended the meeting and presented justifications for retaining all its leases within the GCU. MMS attended a follow-up presentation by Aera on July 29, 1999, in Camarillo, California. Although Samedan was represented at the July 29 meeting, it did not provide any additional information at that meeting.

In the August 13, 1999, decision, issued to Samedan, MMS found that “based upon a recent technical presentation to the MMS by Samedan, we have determined that the geological and geophysical data and interpretation no longer support inclusion of Lease OCS-P 0462 within the [GCU]. Therefore, this lease will expire on August 16, 1999.”⁴ Aug. 13, 1999, Samedan Decision at 1. MMS directed a new SOO for the remaining leases in the GCU from August 17 through November 15, 1999, to allow Samedan time to provide additional information requested by MMS. The August 13, 1999, MMS decision issued to Aera similarly concluded that “based upon recent technical presentations to the MMS by Aera, we have determined that the geological and geophysical data and interpretation no longer support inclusion of Leases OCS-P 0420, 0424, and 0429 within the [SMU]. Therefore, these three leases will expire on August 16, 1999.” Aug. 13, 1999, Aera Decision at 1. MMS also directed a new SOO for the remaining leases in the SMU from August 17 through November 15, 1999, to allow Aera time to provide the additional information requested by MMS.⁵

² Aera initially submitted a single SOP request covering all four units and the single non-unitized lease located within the offshore Santa Maria Basin (SMB). In response to BLM’s subsequent directive, Aera provided separate SOP requests for each unit and the single lease on May 27, 1999.

³ The parties use the term “prospectivity” to refer to the possibility that leases contain a “potential hydrocarbon accumulation” justifying the continued inclusion of the leases in their respective units. See *Discussion* section below.

⁴ As noted above, the then extant SOOs expired on Aug. 16, 1999.

⁵ Although MMS granted the requested SOPs for the GCU and SMU, as well as for the other units and single non-unitized lease in the California OCS, on Nov. 12, 1999, the District Court for the Northern District of California subsequently held that those SOPs had been unlawfully entered and directed that they be terminated and that SOOs be issued blocking all activities on the remaining 36 California OCS leases,

(continued...)

Both Samedan and Aera appealed the MMS decisions to the Board. Given the similar factual context and issues presented, the Board consolidated the appeals for review. The Board set aside the MMS decisions because MMS had failed to provide the factual basis and analysis underlying the conclusory findings that the geological and geophysical data no longer supported inclusion of the lease(s) in their respective units. *See Samedan Oil Corp.*, 163 IBLA at 69-70. Because the Board found conflicting factual representations in the record, it referred the cases to the Hearings Division for an evidentiary hearing to determine whether MMS properly excluded the leases from the GCU and SMU, noting that resolution of that issue controlled the question of whether the leases terminated on August 16, 1999, at the end of the previously granted SOO. *Id.* at 68, 69-70.

MMS sought reconsideration of the Board's decision. MMS averred that the Board erroneously failed to identify the specific factual issues upon which the hearing was to be held; that the ALJ assigned to conduct the hearing lacked authority to render a final decision on the merits of the case but was limited to making proposed factual findings, with the Board retaining jurisdiction over the cases until a sufficient record was developed at the hearing to enable it to rule on the merits of the case; and that the Board's action in setting aside the MMS decisions for lack of supporting evidence was premature and should await receipt of the evidentiary record developed at the hearing.

The Board denied MMS's motion for reconsideration by order dated December 16, 2004. The Board rejected MMS's challenges to the propriety of setting aside the decisions and to the authority of the ALJ to issue a decision on the merits, citing Board precedent. Dec. 16, 2004, reconsideration order at 2-3. The Board found that a careful reading of its decision disclosed that the crucial issue to be resolved at the hearing was whether the facts known to MMS at the time of the decisions provided a reasonable basis for the decisions to exclude the leases from their respective units. *Id.* at 3. The Board specified that MMS had the burden of presenting a *prima facie* case in support of its findings that the leases were properly excluded from their units, with appellants bearing the ultimate burden of proof by a preponderance of the evidence. *Id.* at 4. The Board added that, in this case, the question of whether the leases were properly excluded from the units determined

⁵ (...continued)

pending correction of the deficiencies in the November 1999 SOPs. *California v. Norton*, 150 F. Supp. 2d 1046 (N.D. Cal. 2001); *aff'd*, 311 F.3d 1162 (9th Cir. 2002). The SOOs remain in effect. A breach of contract lawsuit arising out of the *California v. Norton* rulings, which affects all 40 undeveloped California OCS leases, is currently being litigated in the Court of Federal Claims. *See Amber Resources Co. v. United States*, 68 Fed. Cl. 535 (2005); *see also Amber Resources Co. v. United States*, 73 Fed. Cl. 738 (2006).

whether the leases terminated at the end of the previously granted SOO; that the issue of whether to grant a SOO or SOP for the leases did not need to be reached if the leases were properly excluded; that Samedan's and Aera's actual notice of the possibility that the leases might be eliminated from the units obviated any need to address the sufficiency of MMS's notification procedures; and that any purported political pressure was immaterial if the decisions were reasonably supported by the facts and analysis. The Board noted, however, that if the ALJ determined that aspects of these other issues were relevant to MMS's decisions, he could entertain them. *Id.*

MMS renewed its objections in a request for review by the Director of OHA, filed under 43 C.F.R. § 4.5(b). The Director concluded that neither the regulations nor any inherent Board authority empowered the Board to refer a case to an ALJ for a decision on the merits as opposed to for a hearing and proposed findings of fact. *Samedan Oil Corp.*, 32 OHA at 70. He also found that it was not appropriate for the Board to set aside a bureau decision and close the case on its docket when it made a referral to an ALJ but that it had to retain jurisdiction of the appeal and take dispositive action only after it received the ALJ's proposed findings. *Id.* at 71. The Director further determined that the crucial issue identified by the Board was more a standard of review than an issue of fact and that the Board had erred in failing to specify the ultimate issues of fact controlling the disposition of the appeal. Nevertheless, he decided that, given that the hearing had already concluded, rather than reversing the Board's decision and starting over either by remanding the cases to MMS or requiring the Board to specify the issues of fact to be heard before the ALJ, the appropriate course was to vacate the Board's decision to the extent it set aside MMS's decisions and to modify the decision to provide that the ALJ was to make proposed findings of fact on the issues relevant to the appeal and transmit them to the Board, upon receipt of which the Board was to consider the record in the case, the ALJ's proposed factual findings, and the briefs filed by the parties and render a final decision. *Id.* at 75.

PROCEEDINGS BEFORE THE ALJ

Judge Sweitzer held a hearing in these appeals on May 16-20 and June 20-24 and 27-28, 2005. Samedan and Aera presented the testimony of five witnesses: 1) Dr. J. Lisle Reed, the retired Regional Director of the Pacific OCS Region, MMS, who signed the appealed MMS decisions; 2) Jeffrey Milton, an exploration geologist with Aera who was declared to be an expert in geology and geological engineering, with special emphasis on the Southern San Joaquin Valley and the onshore and offshore Central Coast of California; 3) Dr. Walter S. Snyder, a professor and director of geoscience research at Boise State University who was qualified as an expert in sedimentary geology, structure, and tectonics; 4) Demetrius (Jim) Chaconas, a consulting drilling engineer who was deemed to be an expert in exploratory well drilling and testing, particularly of heavy oils in offshore California; 4) Dr. Robert

Mannon, a petroleum engineer who was accepted as an expert in reservoir engineering, economic analysis, oil and gas properties evaluation, drilling and production engineering, petroleum fluids analysis, and oil and gas reserves estimation; and 5) Ronald Heck, a geologist with almost 50 years of experience in oil and gas exploration who was personally involved in almost all of Samedan's activities with respect to the GCU, including the drilling of the exploratory well in 1989.

MMS also proffered the testimony of five witnesses: 1) Michael Hrabec, a geologist with the Office of Production and Development in MMS's Gulf of Mexico OCS Region who was qualified as an expert in unitization and petroleum geology; 2) Kevin Karl, an engineer with the Office of Production and Development in MMS's Gulf of Mexico OCS Region who participated in MMS's decision making process leading to the removal of the leases from their respective units; 3) Joan Barminski, the supervisor of the Production and Development Section, or its equivalent, in the Pacific OCS Region during the relevant time frame, who participated in MMS's decision making process resulting in the elimination of the leases from their respective units; 4) Dr. Iraj Ershaghi, a professor and the director of the petroleum engineering program for the University of Southern California who was declared to be an expert in formation evaluation and reservoir engineering; and 5) Harold Syms, an MMS geologist who was deemed an expert in petroleum geology, well log analysis, and reserve resource estimation. The hearing record included over 3,400 pages of transcript and voluminous exhibits. The parties also filed extensive post hearing submissions.

On December 5, 2006, Judge Sweitzer issued a 109-page single spaced order, summarizing the procedural background, the statutory and regulatory framework, and the parties' basic contentions and proffering 448 proposed findings of fact.⁶ The Judge's key findings addressing lease 462 and the GCU included his determination that the original decision to incorporate lease 462 into the GCU was based on maps indicating that the hydrocarbon reservoir discovered by well 460#1 extended onto lease 462, a supposition that was disproved by the subsequent analysis of additional data demonstrating that the reservoir did not reach lease 462, and his conclusion that the lack of evidence of closure of the subthrust trap Samedan posited existed on lease 462 refuted any claim that lease 462 contained a separate potential hydrocarbon accumulation. His critical factual findings concerning leases 420, 424, and 429 included his conclusions that the geological characteristics of the leased areas made it unlikely that the leases contained potential hydrocarbon accumulations; that the significant differences between the leases and the analogs relied upon by Aera undermined the validity of those comparisons; and that the purported deficiencies in

⁶ The Judge's decision and virtually the entire hearing record, including the pleadings, testimony, and exhibits, are subject to confidentiality orders issued on May 2, 2000, May 10, 2005, and July 1, 2005, pursuant to 43 C.F.R. § 4.31(a).

the testing of well 424#1 and allegedly improper cementing of the well did not change the geological facts that the formation penetrated by the well was tight and thin with low permeability.

We have carefully scrutinized the entire record and find that Judge Sweitzer's factual findings are fully supported by the record. We therefore adopt those findings *in toto*. To the extent relevant, those findings underpin our resolution of the legal issues raised in the original appeals of MMS's decisions, as amplified in the parties' subsequent submissions.⁷

STATUTORY AND REGULATORY FRAMEWORK

The OCS encompasses submerged lands seaward of state-owned submerged lands, which extend approximately three miles from the coastline. 43 U.S.C. §§ 1301(a)(2), 1331(a) (2000). The OCSLA, 43 U.S.C. § 1337(b)(4) (2000), empowers the Secretary of the Interior to sell leases on the OCS that "entitle the lessee to explore, develop and produce" the oil and gas contained within the leased area. The Secretary has delegated most of his authority under the OCSLA to MMS. 43 U.S.C. § 1337(a) (2000).

An OCS oil and gas lease usually covers a single block (typically three miles square), containing approximately 5,760 acres. *See* 43 U.S.C. § 1337(b) (2000); 30 C.F.R. § 256.28.⁸ OCS leases are auctioned through competitive public lease sales. Once a high bid has been accepted and the full cash bonus and first year's rental have been paid, the United States issues a lease to the successful bidder or bidders. *See* 43 U.S.C. § 1337(a)(1), (b) (2000); 30 C.F.R. §§ 256.29 through 256.50.

[1] OCS leases run for a fixed period between 5 and 10 years (the "primary term") and "as long [thereafter] as oil or gas is produced from the [lease] in paying quantities, or drilling or well reworking operations as approved by the Secretary are conducted." 43 U.S.C. § 1337(b)(2) (2000); 30 C.F.R. § 256.37. The OCSLA authorizes the Secretary to promulgate rules and regulations relating to offshore leasing, including provisions for suspensions of leases which stop the clock on the running of the primary term by a period equivalent to the period of such suspension, unless the suspension resulted from the lessee's gross negligence or willful violation.

⁷ Given the confidential nature of the information contained in the factual findings, our references to the relevant findings in our analysis of the issues before us will be somewhat circumspect.

⁸ Unless otherwise indicated, we, like the Judge, will refer to the regulations in effect at the time MMS issued the Aug. 13, 1999, decisions at issue in this proceeding.

See 43 U.S.C. § 1334(a)(1) (2000); 30 C.F.R. § 250.110(f), 256.73(a). The statute also directs the Secretary to prescribe regulations governing unitization of OCS leases. See 43 U.S.C. § 1334(a)(4) (2000).

The MMS regulations permit lessees voluntarily to join their leases into units for joint exploration and/or development.⁹ Such units are formed pursuant to written “unit agreements,” which must be submitted to MMS for approval. 30 C.F.R. § 250.1301.

The purpose of joint development and unitization is to:

- (a) Conserve natural resources;
- (b) Prevent waste; and/or
- (c) Protect correlative rights, including Federal royalty interests.

30 C.F.R. § 250.1300.

The Regional Supervisor may approve a request for voluntary unitization if unitized operations:

- (1) Promote and expedite exploration and development; or
- (2) Prevent waste, conserve natural resources, or protect correlative rights, including Federal royalty interests, of a reasonably delineated and productive reservoir.

30 C.F.R. § 250.1301(a).

The regulations define a “unit area” as

[t]he area that a unit includes is the minimum number of leases that will allow the lessees to minimize the number of platforms, facility installations, and wells necessary for efficient exploration, development,

⁹ After lease issuance, an OCS lessee may submit an exploration plan to the MMS for approval in accordance with 43 U.S.C. § 1340(c)(1) (2000), and if exploration discovers commercially producible oil or gas, the lessee may then submit a development and production plan describing the facilities and operations that will be used for development and production. See 43 U.S.C. § 1351(a), (c) (2000).

and production of mineral deposits, oil and gas reservoirs, or potential hydrocarbon accumulations. . . .

30 C.F.R. § 250.1301(c).

Activity on any lease within a unit is deemed to constitute activity on all of the leases in the unit. 30 C.F.R. § 250.1301(g). As the Board observed in our original decision in this matter:

Drilling, producing, or well-workover operations conducted on a lease within a unit which would serve to continue the lease in effect are considered to be undertaken for the benefit of all unit leases, and the terms of all the leases may be extended as long as there are such operations within the unit. 30 C.F.R. § 250.1302(g); 30 C.F.R. § 250.51(g) (1987).

Samedan Oil Corp., 163 IBLA at 68.

If a unit area adjusts¹⁰ so that no part of a lease remains within the unit boundaries, the lease expires unless:

- (1) Its initial term has not expired;
- (2) [The lessee] conducts drilling, production, or well-reworking operations on [the] lease consistent with applicable regulations; or
- (3) MMS orders or approves a suspension of production or operations for [the] lease.

30 C.F.R. § 250.1301(f). In the present case, it is undisputed that each lease excluded from its respective unit must be considered expired if the pertinent decision adjusting the unit area to exclude the lease was proper.

ISSUES ON APPEAL

Samedan and Aera raised seven issues in their original appeal submissions. They contended that 1) denial of the SOPs for some but not all of the leases in each unit violated the rule that suspension decisions were to be made with respect to the unit as a whole, not on an individual lease basis; 2) MMS's prior approval of the units, which necessarily entailed a finding that the leases were prospective, and the lack of any new information undermining that finding since unitization rendered

¹⁰ The regulations do not explicitly identify criteria for adjustment of a unit area.

MMS's unexplained change of position arbitrary and capricious; 3) MMS failed to provide adequate notice of its intention to reevaluate the prospectivity of the leases; 4) MMS did not adequately explain its rationale for excluding the leases from their respective units; 5) MMS's refusal to grant the SOP for the excluded leases was arbitrary and capricious given the current prohibition on leasing in the California OCS, which precluded MMS from leasing the excluded leases in the future; 6) the decisions to exclude the leases stemmed from improper political considerations; and 7) the technical evidence and analyses, which MMS ignored, demonstrated that the leases were highly prospective.

In his order, Judge Sweitzer limned the parties' basic contentions at the hearing, which focused primarily on the prospectivity of the excluded leases. MMS contended that the leases were excluded from their respective units because Samedan and Aera had not shown that the leases contained potentially productive oil and gas reservoirs that would contribute to the productivity of the unit.¹¹ MMS also argued that one of the requirements for unitization was that each lease contain a portion of a single common reservoir or single common structure (with multiple hydrocarbon accumulations) from which production was contemplated, and that the leases were properly excluded because, among other reasons, they did not share a common structure or reservoir with the other leases in their respective units. Samedan and Aera, on the other hand, maintained that the correct standard for determining whether the leases should remain in their respective units was not whether each contained a potentially productive reservoir, but rather whether each encompassed a potential hydrocarbon accumulation. They denied that the leases in a unit were required to share a common structure or reservoir but asserted that, if such a requirement did exist, MMS had misconstrued the meaning of the term "single structure." Appellants further averred that, regardless of the standard used, each of the excluded leases covered a potential hydrocarbon accumulation.

Judge Sweitzer identified the legal issues to be resolved by the Board. These issues included 1) the applicable legal criteria for the adjustment of a unit area; 2) the requirements for prospectivity, specifically whether the lease needed to be part of a potentially productive reservoir or merely needed to contain a potential hydrocarbon accumulation; 3) the meaning of the terms "single common reservoir" and "single common structure (with multiple reservoirs)"; and 4) the existence of a requirement that a lease contain a potential hydrocarbon accumulation within a geologic structure common to the other leases in the unit in order to properly be included within the unit and the validity of MMS's interpretation of any such requirement, *i.e.*, whether a common structure is required and, if so, whether the

¹¹ MMS had also contended that the lessees' lack of commitment to explore and develop the leases supported the decision to exclude the leases, an issue which the Judge considered subsequently abandoned. *See* ALJ order at 8.

structure that must be shared is a particular fault block, anticlinal structure, or some other structure. These questions, as well as the issues raised by appellants in their original appeal submissions, form the framework for our resolution of these appeals.

DISCUSSION

As noted by the Board in its order denying MMS's motion for reconsideration, MMS has the burden of presenting a *prima facie* case in support of its findings that the leases were properly excluded from their units while appellants bear the ultimate burden of proof by a preponderance of the evidence. Dec. 16, 2004, reconsideration order at 4. We have carefully analyzed the issues raised and find that none of them justifies reversing MMS's decisions excluding the leases from their respective units.

Appeal Issue 1

Samedan and Aera first challenged MMS's decisions as improperly ruling on the requested SOPs on a lease by lease, rather than unit-wide, basis. The August 13, 1999, decisions, however, neither granted nor denied the requested SOPs; instead, those decisions adjusted the unit areas to eliminate the excluded leases from their respective units because, according to MMS, the geological and geophysical data no longer supported the continued inclusion of the leases in those units. The removal of the leases from their respective units caused those leases to terminate when the then extant SOO expired on August 16, 1999, because their initial terms had expired and no drilling, production, or well-reworking operations were being conducted on the leases. *See* 30 C.F.R. § 250.1301(f). MMS's subsequent decisions on the requested SOPs did not differentiate among the individual leases remaining within each unit. Since the appealed decisions did not rule on the SOPs, appellants' first argument must be rejected.

Appeal Issue 2

Appellants next asserted that by approving the units, MMS necessarily determined that all of the leases were prospective, *i.e.*, that they contained potential hydrocarbon accumulations, and that no new evidence refuting that conclusion had been uncovered since unit formation. Appellants maintained that, to the contrary, the only activities on the units since that time had been positive, citing the drilling of well 434#1, the discovery well for the SMU, and well 460#2 on the GCU. They further pointed out that MMS had previously granted SOPs for the units and averred that, since the geological realities were no different now than when the unitization decisions were made, MMS had an obligation to explain the basis for its change of position which it had failed to do.

[2] Both the regulation in effect when the units were formed and the unit agreements themselves provide for the adjustment of the originally approved unit areas. See 30 C.F.R. § 250.50(b) (1987)¹²; GCU Unit Agreement at 7, Article 10.1; SMU Unit Agreement at 11, Article 10.1. The preamble to the applicable regulations explained that unitization for exploratory purposes was expressly authorized, although it was not highly encouraged, and that the provisions for adjustment of the unit area found at 30 C.F.R. § 250.50(b) (1987) were primarily addressed to exploratory units because completion of exploration activities would provide a better delineation of the mineral reservoir which could warrant adjustment of the unit. The preamble noted that such an adjustment might be required to ensure that leased areas that did not overlie the more precisely defined reservoir were excluded from the unit in keeping with the regulation's directive that the unit contain only the minimum number of leases necessary. 45 Fed. Reg. 29280, 29281 (May 2, 1980).¹³ Since both the GCU and the SMU were created as exploratory units, MMS clearly had the authority to re-evaluate the appropriateness of retaining the excluded leases in their respective units.

Although appellants insist that no new negative information has been uncovered since unit formation that would justify eliminating the leases from the units, the record in this matter belies that claim. As Judge Sweitzer found, Samedan's 1993 geological/geophysical study demonstrating that the anticlinal hydrocarbon accumulation previously thought to extend into lease 462 did not

¹² This regulation defined the "unit area" as including

the minimum number of leases or portions of leases required to permit one or more reservoirs or potential hydrocarbon accumulations to be served by an optimal number of artificial islands, installations, or other devices necessary for the efficient exploration for or development and production of oil and gas or other minerals. The Director shall conditionally approve the development and production of unitized substances on the lessees' acceptance of any necessary adjustment in the unit area. Procedures for the adjustment of a unit area shall be set forth in the unit agreement.

30 C.F.R. § 250.50(b) (1987).

¹³ The preamble also observed that, although 30 C.F.R. § 250.50(c) (1987) required the reasonable delineation of a reservoir or potential hydrocarbon accumulation before approval of the formation of a unit, such delineation could be established in the exploratory context by geological and geophysical data determined to be reliable, while for development and production unitization, such delineation had to be established through the results of exploratory drilling. *Id.*

underlie that lease and MMS's 1995 study confirming that conclusion constituted new information justifying the re-evaluation of the inclusion of that lease in the GCU. See ALJ order at 101-103, Factual Findings (FF) 414-22. Similarly, data gleaned from well 434#1 drilled on the SMU indicated that the well had penetrated a hydrocarbon accumulation both separate from and superior to any potential accumulations in the excluded leases, including in the areas penetrated by the other SMU wells, particularly well 424#1. Additionally, a 1987 report submitted by Shell Western Exploration and Production, Inc. (SWEPI), one of Aera's predecessors-in-interest, questioned the permeability of the Monterey Formation at the site of well 424#1. See ALJ order at 34-36, FF 129-30. We find, as did Judge Sweitzer, that the cited information qualifies as new data justifying the re-evaluation of the inclusion of the excluded leases in their respective units.

Appeal Issue 3

Although appellants complained that MMS failed to provide them with adequate notice that the prospectivity of the individual leases was being reassessed, they clearly had sufficient actual notice to request the opportunity to meet with MMS and present additional geological and geophysical information before the issuance of the appealed decisions. In any event, whatever inadequacies might have existed have been cured by subsequent events, including their pursuit of these appeals and the holding of the factual hearing in this proceeding. See Dec. 16, 2004, reconsideration order at 4.

Appeal Issue 4

Appellants' complaint that MMS failed to adequately explain the rationale for eliminating the leases from their respective units formed the basis for our initial decision setting aside MMS's decisions. See *Samedan Oil Corp.*, 163 IBLA at 70. The record associated with the hearing has now rectified MMS's error.

Appeal Issue 5

Appellants maintained that the prohibition on leasing in the California OCS should have weighed heavily in favor of retaining the excluded leases in their respective units because letting the leases lapse would lose rental revenue for the Government and would not make the tracts available for re-leasing to more aggressive lessees. However, as Judge Sweitzer found, the purpose of unitization is not to extend leases and neither the regulations nor written MMS policy permits unitization based on the potential loss of rental revenue or on the minimal likelihood of tract re-leasing. See ALJ order at 19, FF 51; see also 45 Fed. Reg. 29280, 29281 (May 2, 1980). We therefore find no error in MMS's refusal to accord substantial weight to the California OCS leasing moratorium.

Appeal Issue 6

[3] Appellants also argued that MMS's decisions were unduly tainted by impermissible political considerations, citing political opposition to California offshore development by California's congressional delegation and local and State officials. The courts have consistently held that administrative decisions based, even in part, on political considerations are invalid. *See, e.g., ATX, Inc. v. U.S. Department of Transportation*, 41 F.3d 1522, 1527 (D.C. Cir. 1994); *Koniag, Inc. v. Andrus*, 580 F.2d 601, 610-11 (D.C. Cir. 1978), *cert. denied*, 439 U.S. 1052 (1978); *D.C. Federation of Civic Ass'ns v. Volpe*, 459 F.2d 1231, 1246 (D.C. Cir. 1971); *Sokaogon Chippewa Community v. Babbitt*, 929 F. Supp. 1165, 1173-80 (W.D. Wisc. 1996); *Fallini v. Hodel*, 725 F. Supp. 1113, 1118 (D. Nev. 1989), *aff'd*, 963 F. 2d 275, 279 (9th Cir. 1992). However, when a decision maker, although aware of political pressure, insulates the decision-making process from such pressure courts have declined to set aside the agency decision since there was no nexus between the pressure and the decision. *See ATX, Inc. v. U.S. Department of Transportation*, 41 F.3d at 1527-28.

In this case, Judge Sweitzer found that Dr. Reed, the Pacific OCS Regional Director who signed the August 13, 1999, decisions, was aware of the political pressure to terminate at least some of the undeveloped California OCS leases. *See* ALJ order at 18, FF 48. The Judge noted, however, that Dr. Reed did not review or evaluate the data himself, but relied on the analysis of his staff who were not instructed that the excluded leases needed to be terminated or that any particular result was desired and who reached the decision that the leases should be excluded based strictly on the seismic, well log, and other geologic and geophysical data. *See id.* at 18, FF 49; *see also id.* at 38, FF 141 ("no one on Dr. Reed's staff in the Pacific Region was subjected to or improperly influenced by any political pressure or directed to reach any particular result"). Judge Sweitzer further concluded that MMS's technical staff was more qualified than Dr. Reed by training and relative familiarity with the relevant data to render an opinion on whether the leases should have been removed from the units. *Id.* at 19, FF 51. We therefore find that the decision-making process and actual decision-makers were sufficiently insulated from the political pressure to obviate the need to set aside MMS's decisions. Additionally, as addressed more fully below, the record developed during the hearing process clearly supports MMS's decisions to exclude the leases from their respective units.

Appeal Issue 7

The key issue raised in the original appeals, and the focal point of the hearing proceedings, was whether the evidence available to MMS at the time of the decisions formed a reasonable basis for the decisions to remove the leases from their respective

units. *See* Dec. 16, 2004, reconsideration order at 3. Resolution of this issue requires the delineation of the applicable legal criteria for the contraction of a unit area.

[4] The unit agreements for the GCU and the SMU contain identical provisions for the revision of the unit areas. These provisions authorize the contraction of that area “when such contraction is necessary or advisable to conform with the purposes of this Agreement.” GCU Unit Agreement at 7, Article 10.1; SMU Unit Agreement at 11, Article 10.1 Both unit agreements state that unitization of the oil and gas interests in the unit areas would promote “the interest of conservation, prevention of waste, and protection of correlative rights,” and that it would be “in the interest of conservation to conduct exploration, development, and production operations in the Unit Area as though the area were subject to a single lease.” GCU Unit Agreement at 1, SMU Unit Agreement at 1. These purposes correspond to the purposes of unitization set forth in the regulatory language in effect both when the unit agreements were executed and when MMS issued its decisions. *See* 30 C.F.R. § 250.50(a) (1987); 30 C.F.R. §§ 250.1300, 250.1301(a).¹⁴ We therefore look to the applicable regulations and relevant explanatory information for guidance in determining the relevant factors for unit contractions.

The regulations in effect when the units were created specified that the unit area

shall include the minimum number of leases or portions of leases required to permit one or more reservoirs or potential hydrocarbon accumulations to be served by an optimal number of artificial islands, installations, or other devices necessary for the efficient exploration for or development and production of oil and gas or other minerals. . . . Procedures for the adjustment of a unit area shall be set forth in the unit agreement.

30 C.F.R. § 250.50(b) (1987). The regulations effective when the MMS decisions were issued similarly defined the “unit area” as “the minimum number of leases that will allow the lessees to minimize the number of platforms, facility installations, and wells necessary for efficient exploration, development, and production of mineral deposits, oil and gas reservoirs, or potential hydrocarbon accumulations.” 30 C.F.R. § 250.1301(c).

Samedan and Aera emphasize the phrase “potential hydrocarbon accumulations,” which they construe as simply requiring them to show only the

¹⁴ As the preamble to the regulations in effect when unitization was approved makes explicitly clear, “the purpose of unitization is *not* to continue leases in force beyond their primary term.” 45 Fed. Reg. 29820, 29821 (May 2, 1980) (emphasis added).

potential for a hydrocarbon accumulation underlying the four excluded leases, *i.e.*, that there is a possibility that such an accumulation exists, not that such an accumulation actually exists or even is likely to exist, to demonstrate that the leases should have remained in the units. MMS, on the other hand, maintains that appellants must show that the excluded leases have *producible* hydrocarbon potential, because commercially producible reservoirs underlie the leases. MMS avers that appellants' construction conflicts with the intended application of the term to exploration situations in which wells have not yet been drilled and actual reservoirs have not yet been discovered, rather than the situation here where exploration has essentially been completed with drilled wells and known results. MMS asserts that the key question at this point is whether the discovered reservoirs extend onto the excluded leases. MMS further contends that even if the phrase "potential hydrocarbon accumulations" applies notwithstanding the completion of exploration activities, that phrase must necessarily mean potential *producible* hydrocarbon accumulations because adopting appellants' view and allowing the mere presence of any trace hydrocarbons or the factually unsupported speculation and conjecture that potential accumulations exist proffered here to suffice would essentially nullify the unitization rules.

The preamble to the regulations in effect when the units were formed explained that the use of the phrase "potential hydrocarbon accumulation" was "specifically intended to authorize unitization for *exploration* by covering the situations where the existence of a potential hydrocarbon bearing geologic structure has been reasonably delineated on the basis of reliable geophysical data, but the existence of a reservoir has yet to be proved." 45 Fed. Reg. 29280, 29283 (May 2, 1980) (emphasis added). The preamble also noted that, once exploration had been completed,

a better delineation of the mineral reservoir will be available and adjustments prior to development and production may be warranted. In keeping with the minimum area standard, the portions of the leased areas that do not overlie the more precisely delineated reservoir should be excluded from the unit in an adjustment.

Id. at 29281. Since neither Samedan nor Aera plans on conducting any further exploratory drilling on the excluded leases, exploration on those leases has essentially been completed. The question now becomes whether the exploration activities uncovered potential hydrocarbon accumulations on the excluded leases. If the leases do not overlie a more precisely delineated reservoir, they should be removed from the units.

Samedan's and Aera's construction of the phrase "potential hydrocarbon accumulations" as simply requiring the mere possibility that an accumulation exists

conflicts with the dictionary definition of “potential” as “existing in possibility: having the capacity or a *strong* possibility of actuality.” Webster’s New International Dictionary (3rd ed. 1966) (unabridged) (emphasis added). Thus contraction of a unit area is appropriate if the evidence does not show the requisite strong possibility of the presence of a hydrocarbon accumulation on the excluded leases. We find that MMS has met its burden of presenting a *prima facie* case that the leases were properly removed from their units because they do not contain potential hydrocarbon accumulations, and that appellants have not rebutted that *prima facie* case by a preponderance of the evidence.

There are three prerequisites for the creation of an oil or gas accumulation: 1) oil or gas generation from a source rock; 2) a favorable structural configuration that allows oil and gas to migrate to a high point through permeable rock yet traps the oil and gas with impermeable rock (*e.g.*, fault traps or anticline traps) before it seeps into the ocean; and 3) favorable reservoir rock with the capacity to store and produce oil and gas to the wellbore, which requires both porosity (pore spaces or fractures in the rock where oil or gas is stored) and permeability (naturally connected pores or fractures that will allow the oil or gas to flow through the rock to the wellbore). ALJ order at 20-22, FF 59-67. The ability of a formation, such as the Monterey Formation involved here, to serve as a reservoir rock has three components: fracturing, origin/diagenesis,¹⁵ and thickness/depth. *Id.* at 22, FF 70. Judge Sweitzer referenced these principles in reaching his factual findings on the prospectivity of the excluded leases.

In his factual findings relating to the GCU, Judge Sweitzer found that the original inclusion of lease 462 in the unit was based on maps indicating that the accumulation discovered by well 460#1 drilled on lease 460 extended onto lease 462. ALJ order at 99, FF 406-08. Although another successful well was drilled on lease 460 (well 460#2), the reprocessing of 3-D seismic data and the incorporation of data from well 460#2 led Samedan to the conclusion, expressed in its 1993 geological/geophysical study of the GCU, that the discovered accumulation did not, in fact, extend onto lease 462. ALJ order at 101-02, FF 412-16. According to the Judge, this conclusion, along with other information in the study, supported the finding that there was no potential hydrocarbon accumulation on lease 462. *Id.* at 102, FF 417. Although Samedan contended that a separate subthrust trap containing a potential hydrocarbon accumulation existed on lease 462, Judge Sweitzer discounted Samedan’s unsupported speculation and concluded that the lack of

¹⁵ Origin/diagenesis refers to the hardness of the rock. The harder the rock, the more brittle it is, which makes it more susceptible to fracturing and more prolific a producer. The hardest of the three diagenetic phases is the quartz phase. The other two phases, diatomite (or opal-A) and opal-C, are less prolific with opal-C being more prolific than opal-A. See ALJ order at 23, FF 75, 76.

evidence of a western closure of the purported trap fatally undermined that contention. *Id.* at 106, FF 433-35. Samedan's reliance on the lack of evidence showing that the trap does not close clearly does not satisfy its burden of establishing by the preponderance of the evidence that lease 462 contains a potential hydrocarbon accumulation. We therefore affirm MMS's decision eliminating lease 462 from the GCU.

Judge Sweitzer similarly concluded that Aera had not demonstrated the prospectivity of the leases eliminated from the SMU. He characterized Aera's arguments in support of the presence of potential hydrocarbon accumulations as frequently ignoring or trying to minimize the generally unfavorable data specific to those leases in favor of predictions based upon analogies to other areas and general facts about the Monterey Formation, the Pacific OCS, the Offshore SMB, and the SMU. ALJ order at 30, FF 110. In contrast, he observed that MMS had focused on information specific to the eliminated leases and had failed to provide an adequate explanation for only one of its positions, *i.e.*, that the excluded SMU leases lacked structure. *Id.*

The Judge noted that Aera's May 13, 1999, SOP request reiterated the findings of SWEPI's 1987 report that the area penetrated by well 424#1 was tight and thin with very low permeabilities. *Id.* at 39, FF 146-47. He also found that Aera's plan for development of the SMU, which did not include drilling on the three excluded leases, supported a finding that the prospectivity of the leases was poor and not good enough to justify drilling more exploratory wells there. *See* ALJ order at 47-48, FF 183-85.

The bulk of the Judge's factual findings delved more deeply into Aera's specific evidence and assumptions about the leases' prospectivity. He first addressed the three geological and geophysical prerequisites for oil or gas accumulations: oil or gas generation; structural configuration; and reservoir rock, finding that only trace amounts of oil had actually been recovered from well 424#1 and that the recovered oil was very viscous and heavy; that, MMS's opinions to the contrary notwithstanding, the weight of the evidence showed that the structural configurations of the fault blocks affecting the excluded leases were capable of serving as oil traps; and that the characteristics of the reservoir rock, *i.e.*, fracturing, thickness/depth, and origin/diagenesis, on the three excluded leases were not promising. *See* ALJ order at 56-57, FF 214-22; *see also id.* at 58-64, FF 223-49.

Judge Sweitzer next discredited the analogs Aera had relied upon, concluding that the significant differences between each analog (the onshore SMB, the Point Pederales Field, and the offshore SMB) and the excluded leases undermined the purported comparability of the analogs to the leases. *See* ALJ order at 64-68, FF 250-59.

The Judge also rejected Aera's claims that alleged deficiencies in the testing and cementing of well 424#1 caused the poor recovery from that well and that if the well had been adequately tested with recovery enhancement techniques and properly cemented, much better test results would have been achieved. In so doing, he delineated the flaws in the testimony of Aera's witnesses and in Aera's challenges to the persuasiveness of MMS's witnesses, especially Dr. Ershaghi, who, the Judge found, correctly based his testimony on the geology of the leases, not on testing techniques. *See* ALJ order at 68-87, FF 260-343.

Judge Sweitzer further dismissed Aera's contention that even if the poor test results for well 424#1 were indicative of actual conditions rather than inadequate testing and cementing, that well did not provide a basis for concluding that the three eliminated leases lacked potential hydrocarbon accumulations. He concluded that, to the contrary, the data from well 424#1 was the best evidence of conditions in the west fault block encompassing lease 429 and most of lease 424, and that the weight of the evidence showed that this fault block sat on a regional high where the Monterey Formation was likely to be tight and unproductive for many reasons, including its relative thinness and shallowness, missing lower members, paucity of faulting and folding, and less cherty and siliceous and more detrital content. He also concluded that the north fault block covering the northeast corner of lease 424 and the southern portion of lease 420, while more promising because of the increased faulting and folding, had tested very poorly when penetrated by well 425#1, with the indicators of fracture density/permeability supporting a finding of poor fracture density, and that the east fault block encompassing a sliver of lease 420 also tested poorly when penetrated by well 425#2 with the indicators of fracture density/permeability similarly suggesting poor fracture density. *See* ALJ order at 87-89, FF 344-356.

Judge Sweitzer next concluded that Aera's minimum and maximum accumulations estimates were not sustainable because they were based on speculative assumptions difficult to reconcile with the unfavorable indicators, including the recovery of only trace amounts of oil from rock containing high levels of shale and other detrital material in the only wells within those projected accumulations. *See* ALJ Order at 89-92, FF 356-370. Finally, Judge Sweitzer discounted Aera's production economics analysis, finding that its estimation of recoverable reserves was based on the discredited minimum and maximum estimates and underlying faulty assumptions and that its economic analysis erroneously relied on horizontal drilling for the development of the excluded leases, the feasibility of which was questionable. *See* ALJ order at 95, FF 385-86.

The Judge's factual findings and the record as a whole clearly demonstrate that the excluded leases do not contain potential hydrocarbon accumulations. Accordingly, we affirm MMS's decision to eliminate them from the SMU.¹⁶

Therefore, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 C.F.R. § 4.1, we adopt Judge Sweitzer's proposed factual findings and affirm the appealed MMS decisions.

_____/s/_____
Sara B. Greenberg
Administrative Judge

I concur:

_____/s/_____
James F. Roberts
Administrative Judge

¹⁶ Because we find that none of the excluded leases on the GCU and the SMU contains a potential hydrocarbon accumulation, we need not address the proper interpretation of the terms "single common reservoir" and "single common structure with multiple reservoirs" nor will we discuss whether the regulations require that the leases in a unit share a common geologic structure and, if so, whether that structure is a particular fault block, anticlinal structure, or some other structure. We note, however, that the preamble to the regulations effective when the units were created observed that units generally would be formed for single reservoirs or structures where potential hydrocarbon accumulations were anticipated, but recognized that exploration might discover the presence of several noncontiguous reservoirs in a single structure or that nongeological constraints might require unitization of an area containing more than one reservoir and stated that such reservoirs did not need to be excluded from the unit area even if a noncontiguous unit area resulted. *See* 45 Fed. Reg. 29280, 29281 (May 2, 1980).