

INDEX

	<u>DIRECT/ RE-DIRECT</u>	<u>CROSS/ RE-CROSS</u>	<u>EXAM. BY BOARD/STAFF</u>
1. Alfonso Pena	19-25	----	----
2. Gordon Royce	29-37 43-44	----	----
3. Roger Schalge	39-43 45-46	----	45 46
4. Robin Smith	49-52	----	----

10-6-00
MCA

MR

EXHIBITS

EXHIBIT NO. (ITEM NO.)	TITLE (TESTIMONY OF)	OFFERED	RECEIVED
Board Exhibit	Hearing Officer Order	15	15
Exhibit 1 (Item 5)	Affidavit of testimony (Hung Nguyen)	16	16
Exhibit 1 (Items 10 & 11)	Structure map, top Carter sand, East Detroit Field (Alfonso Pena)	25	25
Exhibit 2 (Items 10 & 11)	Montage of various logs, East Detroit Field (Alfonso Pena)	25	25
Exhibit 1 (Item 12)	Location map, Cavern No. 2, McIntosh Salt Dome (Gordon Royce)	37	37
Exhibit 2 (Item 12)	Brine well location Cavern No. 2, McIntosh Salt Dome (Gordon Royce)	37	37
Exhibit 3 (Item 12)	Cavern spacing, plan view, McIntosh Salt Dome (Gordon Royce)	37	37
Exhibit 4 (Item 12)	Cavern spacing, profile view, Cross Section A-A', McIntosh Salt Dome (Gordon Royce)	37	37

EXHIBITS

EXHIBIT NO. (ITEM NO.)	TITLE (TESTIMONY OF)	OFFERED	RECEIVED
Exhibit 5 (Item 12)	Cavern data, McIntosh Salt Dome Caverns (Gordon Royce)	37	37
Exhibit 6 (Item 12)	Sketch of storage facility Cavern No. 2, McIntosh Salt Dome (Gordon Royce)	37	37
Exhibit 7 (Item 12)	Conventional cavern, profile view, Cavern No. 2 McIntosh Salt Dome (Gordon Royce)	37	37
Exhibit 8 (Item 12)	Conventional leaching conceptual sketch, McIntosh Salt Dome (Gordon Royce)	37	37
Exhibit 9 (Item 12)	Smug cavern profile Cavern No. 2, McIntosh Salt Dome (Gordon Royce)	37	37
Exhibit 10 (Item 12)	Smug leaching conceptual sketch McIntosh Salt Dome (Gordon Royce)	37	37
Exhibit 11 (Item 12)	Smug wellhead configuration McIntosh Salt Dome (Gordon Royce)	37	37

EXHIBITS

EXHIBIT NO. (ITEM NO.)	TITLE (TESTIMONY OF)	OFFERED	RECEIVED
Exhibit 1 (Item 15)	Affidavit of testimony (Robert Hull)	47	47
Exhibit 2 (Item 15)	OGB-6, Propst 8-13 No. 1, Sec. 8, T17S, R13W, Fayette County	47	47
Exhibit 3 (Item 15)	OGB-7, Propost 8-13 No.1, Sec. 8, T17S, R13W, Fayette County	47	47
Exhibit 4 (Item 15)	OGB-9, Propst 8-13 No. 1, Sec. 8, T17S, R13W, Fayette County	47	47
Exhibit 1 (Item 18)	USGS topo map, Little Cedar Creek Field Conecuh County (Robin Smith)	52	52
Exhibit 2 (Item 18)	Structure map, top of Smackover, Little Cedar Creek Field, (Robin Smith)	52	52
Exhibit 3 (Item 18)	Cross section A-A', Little Cedar Creek Field (Robin Smith)	52	52
Exhibit 1 (Item 20)	Affidavit of testimony (Wayne K. Idol, Jr.)	53	53

EXHIBITS
(Incorporated by reference)

DESCRIPTION	OFFERED	RECEIVED
Engineering records relative to the East Detroit Gas Storage Facility	26	26
Permit application with related material relative to the McIntosh Salt Dome Cavern No. 2	26	27
All materials relating to first storage facility at the McIntosh Salt Dome including Docket Nos. 9-22-938A, 9-22-938B, 1-26-941 and 1-26-941A, 8-17-941, 9-24-944 and 2-1-952	27	27

STATE OIL AND GAS BOARD OF ALABAMA

Tuscaloosa, Alabama

August 23, 2000

Testimony and proceedings before a Hearing Officer in the Board Room of the State Oil and Gas Board Building, University of Alabama Campus, Tuscaloosa, Alabama, pursuant to adjournment, on this the 23rd day of August, 2000.

BEFORE:

Mr. Marvin Rogers..... Attorney

BOARD STAFF

Dr. Donald F. Oltz Secretary and Supervisor

Mr. Gary Wilson Deputy Supervisor

Mr. Jay H. MasingillAssistant Supervisor

Dr. David E. BolinAssistant Supervisor

Mr. Richard Hamilton..... Engineer

Mr. Henry Moore..... Engineer

APPEARANCES

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NAME

REPRESENTING

1.	Alfonso F. Pena 16825 Northchase Dr., Suite 400 Houston, Texas 77060	Swift Energy Co.
2.	Steve Harrison Tuscaloosa, AL	NW Alabama Gas District
3.	C. P. Armbrecht Mobile.AL	Bay Gas
4.	Mark Scogin Tuscaloosa, AL	Merit
5.	John Tyra Tuscaloosa, AL	Shuler Drilling
6.	Mark Hammitte P.O. Box 157 Hamilton, AL 35570	NW Alabama Gas District
7.	Tom Watson Tuscaloosa, AL	Midroc, ExxonMobil
8.	Robin Smith Shreveport, LA	Midroc

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PROCEEDINGS

(The hearing was convened at 10:05 a.m. on Wednesday,
August 23, 2000, at Tuscaloosa, Alabama.)

MR. ROGERS: This hearing is in session. Dr. Oltz, have the items to be heard today
been properly noticed?

DR. OLTZ: The items that are going to be heard today have been properly noticed. An
agenda of today's meeting has been transmitted to the recording secretary.

AGENDA
STATE OIL AND GAS BOARD MEETING
AUGUST 23 & 25, 2000

The State Oil and Gas Board of Alabama will hold its regular monthly meeting at
10:00 a.m. on Wednesday, August 23, and Friday, August 25, 2000, in the Board
Room of the State Oil and Gas Board Building, University of Alabama Campus,
Tuscaloosa, Alabama, to consider among other items of business the following
petitions:

1. DOCKET NO. 3-1-200010

Continued petition by VENTEX OPERATING CORP., a foreign corporation
authorized to do and doing business in the State of Alabama, requesting the State Oil
and Gas Board of Alabama to enter an Order approving the enhanced recovery
project for the East Haynesville Sand Oil Unit in the North Rome Field, Covington
County, Alabama, so as to qualify the project for the four percent (4%) privilege tax
for the incremental oil or gas production from said Unit, in accordance with Section
40-20-1, et seq., Code of Alabama (1975), as amended.

1 The Unit Area of the East Haynesville Sand Oil Unit, containing 406.25 acres, more
2 or less, is located in Covington County, Alabama, and is described as follows: The
3 East Half of the Northwest Quarter and the West Half of the Northeast Quarter;
4 the North Half of the Northwest Quarter of the Southeast Quarter; the North Half
5 of the South Half of the Northwest Quarter of the Southeast Quarter; the South
6 Half of the Southeast Quarter of the Northwest Quarter of the Southeast Quarter;
7 the North Half of the Northeast Quarter of the Northeast Quarter of the Southwest
8 Quarter; the Southeast Quarter of the Northeast Quarter of the Northeast Quarter
9 of the Southwest Quarter; the East Half of the Southwest Quarter of the Northeast
10 Quarter of the Northeast Quarter of the Southwest Quarter; the Northeast Quarter
11 of the Southeast Quarter of the Northeast Quarter of the Southwest Quarter; the
12 North Half of the Southeast Quarter of the Southwest Quarter of the Northwest
13 Quarter of the Southeast Quarter, all in Section 4, Township 2 North, Range 14
14 East, Covington County, Alabama and the West Half of the Northwest Quarter of
15 Section 3; the East Half of the Northeast Quarter and the Northeast Quarter of the
16 Southeast Quarter, less and except the South Half of the Southeast Quarter of the
17 Southeast Quarter of the Northeast Quarter of the Southeast Quarter of Section 4,
18 all in Township 2 North, Range 14 East, Covington County, Alabama.
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20 2. DOCKET NO. 4-5-20003

21 Continued petition by ROUNDTREE & ASSOCIATES, INC., a foreign
22 corporation authorized to do and doing business in the State of Alabama,
23 requesting the State Oil and Gas Board to enter an order force pooling, with a risk
24 compensation penalty, all tracts and interests in hydrocarbons produced from
25 formations of Mississippian and Pennsylvania Age, from Petitioner's proposed
26 Hollis 25-14 #1 Well to be drilled on a 320-acre unit consisting of the West Half
27 of Section 25, Township 15 South, Range 16 West, Lamar County, Alabama.
28 This Petition is in accordance with Section 9-17-13, Code of Alabama (1975), as
29 amended, and Rule 400-1-13-.01 of the State Oil and Gas Board of Alabama
30 Administrative Code.
31

32 3. DOCKET NO. 4-5-200015

33 Continued petition by ALABAMA MERIT ENERGY COMPANY, INC., a
34 foreign corporation, authorized to do and doing business in the State of Alabama,
35 requesting the State Oil and Gas Board of Alabama to enter an order extending
36 the temporarily abandoned status of certain wells located in the following areas:
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38 **Citronelle Unit**

39 Township 2 North, Range 3 West

40 Sections 23, 24, 25, 26, 27, 28, 34, 35

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Township 2 North, Range 2 West
Sections 19, 20, 29, 30, 31

Township 1 North, Range 3 West
Sections 1, 2, 3, 11, 12, 13, 14

Township 1 North, Range 2 West
Sections 5, 6, 7, 8, 9, 16, 17, 18

Southeast Citronelle Unit
Township 1 North, Range 2 West
Sections 4, 5, 9, 10

East Citronelle Unit
Township 1 North, Range 2 West
Sections 6, 31, 32

all in Mobile County, Alabama. Petitioner is requesting the Board to extend the temporarily abandoned status of said wells for a period of one year as an exception to Rule 400-1-3-.06 of the State Oil and Gas Board Administrative Code because said wells have potential for future utility. Said rule allows temporarily abandoned status to be granted for six month time periods.

4. DOCKET NO. 5-10-20007

Continued petition by VINTAGE PETROLEUM, INC., a foreign corporation authorized to do and doing business in the State of Alabama requesting the State Oil and Gas Board to enter an order granting exceptions to Rule 6A of the Special Field Rules for the Fanny Church Field, Escambia County, Alabama, for the Katie Mae Dixon, et al 26-7 #1 Well, Permit No. 10377-B, located on a 160-acre unit consisting of the Northeast Quarter of Section 26, Township 1 North, Range 8 East, Escambia County, Alabama, in the Fanny Church Field. Among other things, said Rule 6A requires that no well shall be cumulatively overproduced by more than three months' allowable in any balancing period. Said Rule 6A further requires that any well in a cumulatively overproduced status as of the balancing date that does not achieve a balance as to such overproduction during the make-up period shall be closed in until its future allowables effectuate a zero balance. Petitioner seeks exceptions to these provisions of said Rule 6A.

5. DOCKET NO. 5-10-20008A

Continued amended petition by VINTAGE PETROLEUM, INC., a foreign corporation authorized to do and doing business in the State of Alabama requesting

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the State Oil and Gas Board, pursuant to Section 9-17-1, et seq. Code of Alabama, (1975), and Rule 400-1-3-.06 of the State Oil and Gas Board of Alabama Administrative Code, to enter an order granting temporarily abandoned status for the Dora J. Steely #36-2 Well, Permit No. 1869-GI-97-1, in the Fanny Church Field, Escambia County, Alabama, for a period of six (6) months.

Petitioner is requesting this Board to grant temporarily abandoned status for said well for a period of six (6) months because said well has future utility and should not be plugged.

6. DOCKET NO. 7-25-20001

Continued petition by LAND AND NATURAL RESOURCE DEVELOPMENT, INC., an Alabama corporation, requesting the State Oil and Gas Board pursuant to Rule 400-3-4-.17(1) of the State Oil and Gas Board of Alabama Administrative Code to enter an order extending the temporarily abandoned status for 213 wells, all of which are located in the Moundville Coal Degasification Field, Tuscaloosa and Hale Counties, Alabama. Petitioner owns an interest in said wells and desires to renew their temporarily abandoned status in order that said wells can be re-entered and completed. Petitioner alleges that said wells have future utility. The wells are located in the following sections:

Township 23 North, Range 3 East
Sections: 13, 24

Township 23 North, Range 4 East

Sections: 7, 8, 10, 11, 12, 13, 14, 15, 16,
17, 18, 19, 20, 21, 22, 23, 24, 27, 28, 29, 30

Township 23 North, Range 5 East

Sections: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11
15, 16, 17, 18, 19, 20

Township 24 North, Range 4 East

Sections: 24, 25, 30

Township 24 North, Range 5 East

Sections 19, 30, 31

1 The previously granted temporarily abandoned status expires July 26, 2000.

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3 7. DOCKET NO. 7-25-20006

4 Continued petition by VENTEX OPERATING CORPORATION, a foreign
5 corporation authorized to do and doing business in the State of Alabama, requesting
6 the State Oil and Gas Board to amend Rule 2 of the Special Field Rules for the
7 North Rome Field, Covington County, Alabama, to add the Lower Cotton
8 Valley/Upper Haynesville Sand Oil Pool, to be construed to mean those strata of the
9 Lower Cotton Valley/Upper Haynesville sand productive of hydrocarbons in the
10 interval between 11,128 feet measured depth and 11,832 feet measured depth in the
11 Hart 4-7 #2 Well, Permit No. 11824, located 2,219 feet from the North line and
12 1,521 feet from the East line of Section 4, Township 2 North, Range 14 East,
13 Covington County, Alabama, as indicated on the High Res Induction-Spectral
14 Density-Dual Spaced Neutron Log of said well, and including those strata
15 productive of hydrocarbons which can be correlated therewith.

16
17 This petition is filed as a companion to petition bearing Docket No. 7-25-20007
18 requesting an order reforming a 40-acre wildcat drilling unit for the above-
19 referenced Hart 4-7 No. 2 Well to a 160-acre unit in the Lower Cotton Valley/Upper
20 Haynesville Sand Oil Pool located in the North Rome Field and also petition
21 bearing Docket No. 7-25-20008 requesting an order reforming the 160-acre unit for
22 said Hart 4-7 No. 2 Well to a 190-acre unit in the Lower Cotton Valley/Upper
23 Haynesville Sand Oil Pool located in the North Rome Field in accordance with the
24 50% tolerance allowed by Section 9-17-12(b) of the Code of Alabama (1975), as
25 amended.

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27 8. DOCKET NO. 7-25-20007

28 Continued petition by VENTEX OPERATING CORPORATION, a foreign
29 corporation authorized to do and doing business in the State of Alabama,
30 requesting the State Oil and Gas Board to enter an order reforming a 40-acre
31 wildcat drilling unit for the Hart 4-7 No. 2 Well, Permit No. 11824, consisting of
32 the East Half of the Southwest Quarter of the Northeast Quarter and the West Half
33 of the Southeast Quarter of the Northeast Quarter of Section 4, Township 2 North,
34 Range 14 East, Covington County, Alabama, to a 160-acre unit consisting of the
35 South Half of the Southeast Quarter of the Northeast Quarter of the Northeast
36 Quarter; Southwest Quarter of the Northeast Quarter of the Northeast Quarter;
37 South Half of the Northwest Quarter of the Northeast Quarter; South Half of the
38 Northeast Quarter; East Half of the East Half of the Southeast Quarter of the
39 Northwest Quarter; North Half of the Northwest Quarter of the Northwest Quarter
40 of the Southeast Quarter; Northeast Quarter of the Northwest Quarter of the
41 Southeast Quarter; and the North Half of the Northeast Quarter of the Southeast

1 Quarter, all in Section 4, Township 2 North, Range 14 East, in the Lower Cotton
2 Valley/Upper Haynesville Sand Oil Pool located in the North Rome Field. Said
3 well is located 2,219 feet from the North line and 1,521 feet from the East line of
4 said Section 4.
5

6 This petition is filed as a companion to petition bearing Docket No. 7-25-20006
7 requesting an order amending Rule 2 of the Special Field Rules for the North Rome
8 Field, Covington County, Alabama to add the Lower Cotton Valley/Upper
9 Haynesville Sand Oil Pool and also petition bearing Docket No. 7-25-20008
10 requesting an order reforming the 160-acre unit for said Hart 4-7 No. 2 Well to a
11 190-acre unit in the Lower Cotton Valley/Upper Haynesville Sand Oil Pool located
12 in the North Rome Field in accordance with the 50% tolerance allowed by Section
13 9-17-12(b) of the Code of Alabama (1975), as amended.
14

15 9. DOCKET NO. 7-25-20008

16 Continued petition by VENTEX OPERATING CORPORATION, a foreign
17 corporation authorized to do and doing business in the State of Alabama,
18 requesting the State Oil and Gas Board to enter an order reforming a 160-acre unit
19 for the Hart 4-7 No. 2 Well, Permit No. 11824, consisting of the South Half of the
20 Southeast Quarter of the Northeast Quarter of the Northeast Quarter; Southwest
21 Quarter of the Northeast Quarter of the Northeast Quarter; South Half of the
22 Northwest Quarter of the Northeast Quarter; South Half of the Northeast Quarter;
23 East Half of the East Half of the Southeast Quarter of the Northwest Quarter;
24 North Half of the Northwest Quarter of the Northwest Quarter of the Southeast
25 Quarter; Northeast Quarter of the Northwest Quarter of the Southeast Quarter;
26 and the North Half of the Northeast Quarter of the Southeast Quarter, all in
27 Section 4, Township 2 North, Range 14 East, to a 190-acre unit in the Lower
28 Cotton Valley/Upper Haynesville Sand Oil Pool located in the North Rome Field
29 in accordance with the 50% tolerance allowed by Section 9-17-12(b) of the Code of
30 Alabama (1975), as amended. The 190-acre production unit for said Hart 4-7 #2
31 Well would consist of the South Half of the Northwest Quarter of the Northeast
32 Quarter; the South Half of the Northeast Quarter of the Northeast Quarter; the South
33 Half of the Northeast Quarter; the East Half of the Southeast Quarter of the
34 Northwest Quarter; the North Half of the Northwest Quarter of the Southeast
35 Quarter; the North Half of the Northeast Quarter of the Southeast Quarter of Section
36 4 and the West Half of the West Half of the Southwest Quarter of the Northwest
37 Quarter of Section 3, all in Township 2 North, Range 14 East, Covington County,
38 Alabama, in the North Rome Field. Said well is located 2,219 feet from the North
39 line and 1,521 feet from the East line of said Section 4.

1 Section 9-17-12(b) of the Code of Alabama (1975), as amended, authorizes the
2 Board to grant units in excess of 160 acres when it is demonstrated that one well can
3 efficiently and economically drain the proposed area and that such a larger unit is
4 justified because of technical, economic, environmental or safety considerations, or
5 other reasons deemed valid by the Board. Said 190-acre unit would be an exception
6 to Rule 3(a) of the Special Field Rules for the North Rome Field.

7
8 This petition is filed as a companion to petition bearing Docket No. 7-25-20006
9 requesting an order amending Rule 2 of the Special Field Rules for the North Rome
10 Field, Covington County, Alabama, to add the Lower Cotton Valley/Upper
11 Haynesville Sand Oil Pool and also petition bearing Docket No. 7-25-20007
12 requesting an order reforming a 40-acre wildcat drilling unit for the above-
13 referenced Hart 4-7 No. 2 Well to a 160-acre unit in the Lower Cotton Valley/Upper
14 Haynesville Sand Oil Pool located in the North Rome Field.

15
16 10. DOCKET NO. 8-23-20001

17 Petition by NORTHWEST ALABAMA GAS DISTRICT, an Alabama municipal
18 corporation, requesting the State Oil and Gas Board of Alabama to enter an order
19 approving the existing wellbore of the Swift Energy Company NWAGD No. 1
20 Well, Permit No. 11850-GS-00-1, located in Section 10, Township 12 South,
21 Range 15 West, Lamar County, Alabama, in the East Detroit Gas Storage Facility,
22 as an exception to Rule 1 of the Special Underground Gas Storage Rules for said
23 East Detroit Gas Storage Facility. Among other things, said Rules define the
24 vertical boundaries of the Storage Facility, and the wellbore for said well
25 exceeded the vertical boundary by drilling out of the Carter Sand Reservoir into
26 shale at the end of the horizontal portion of the wellbore. Petitioner is Operator of
27 said East Detroit Gas Storage Facility.

28
29 This petition is filed as a companion to a petition bearing Docket No. 8-23-20002
30 requesting approval of an exception to Rule 400-5-2-.01 of the State Oil and Gas
31 Board of Alabama Administrative Code.

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33 11. DOCKET NO. 8-23-20002

34 Petition by NORTHWEST ALABAMA GAS DISTRICT, an Alabama municipal
35 corporation, requesting the State Oil and Gas Board of Alabama to enter an order
36 approving the existing wellbore of the Swift Energy Company NWAGD No. 1
37 Well, Permit No. 11850-GS-00-1, located in Section 10, Township 12 South,
38 Range 15 West, Lamar County, Alabama, in the East Detroit Gas Storage Facility,
39 as an exception to Rule 400-5-2-.01 of the State Oil and Gas Board of Alabama
40 Administrative Code. Said rule relates to requirements for a well permit for Rules
41 and Regulations Governing the Underground Storage of Gas in Reservoirs.

1 Among other things, said Rule 400-5-2-.01 requires a complete dual induction log
2 or equivalent log be run through the underground reservoir of each storage well
3 prior to setting of casing in the underground reservoir. Petitioner was unable to
4 run a log in approximately the last 340 feet of the horizontal portion of the
5 wellbore. Petitioner is Operator of said East Detroit Gas Storage Facility.
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7 This petition is filed as a companion to a petition bearing Docket No. 8-23-20001
8 requesting approval of an exception to Rule 1 of the Special Gas Storage Rules
9 for the East Detroit Gas Storage Facility.
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11 12. DOCKET NO. 8-23-20003

12 Petition by BAY GAS STORAGE COMPANY, LTD. ("Petitioner"), an Alabama
13 limited partnership whose general partner is MGS Storage Services, Inc., an
14 Alabama corporation, requesting that the State Oil and Gas Board of Alabama
15 ("Board") enter an order: approving the underground storage of gas by Petitioner
16 in a cavity created in a salt dome, said cavity and related equipment being located
17 in the Southeast ¼ of the Southeast ¼ of Section 36, T4N, R1W, Washington
18 County, Alabama; designating the horizontal and vertical boundaries of the "Bay
19 Gas Salt Dome Gas Storage Facility #2 at McIntosh" (or such other name as may
20 be deemed appropriate by the Board) including a buffer zone which extends into
21 the Southeast ¼ of Section 36, T4N, R1W, the Southwest ¼ of Section 37, T4N,
22 R1E, the Northwest ¼ of Section 29, T3N, R1E and the Northeast ¼ of Section 1,
23 T3N, R1W, Washington County, Alabama; promulgating Special Gas Storage
24 Rules for said facility and the operation thereof; and designating Petitioner as the
25 storage operator for said facility thereby authorizing Petitioner to exercise the
26 rights and authorities of such operator including operating rights and
27 condemnation authority, all as authorized by and in accordance with the
28 provisions of Ala. Code Sections 9-17-150 et seq. (and in particular Section 9-17-
29 152) and State Oil and Gas Board of Alabama Administrative Code Rules 400-6-
30 1-.01 et seq.
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32 13. DOCKET NO. 8-23-20004

33 Petition by NAUVOO LLC, an Alabama corporation authorized to do and doing
34 business in the State of Alabama, requesting the State Oil and Gas Board to enter
35 an order rescinding Order No. 2000-121 issued on May 12, 2000, in which the
36 Board ordered Striper Oil, Inc. to plug the following well in the North Swifts
37 Landing Field, Baldwin County, Alabama, within 60 days:

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<u>PERMIT NO.</u>	<u>WELL NAME</u>	<u>LOCATION</u>
4704	Swift et al Unit 39 #1	Sec. 39, T8S, R3E

Nauvoo LLC is currently evaluating the status of the Swift et al Unit 39 #1 and requests that this well not be plugged until this evaluation is completed.

14. DOCKET NO. 8-23-20005

Petition by NAUVOO LLC, an Alabama corporation authorized to do and doing business in the State of Alabama, requesting the State Oil and Gas Board to enter an order rescinding Order No. 2000-121 issued on May 12, 2000, in which the Board ordered Striper Oil, Inc. to plug the following well in the North Cooper's Landing Field, Baldwin County, Alabama, within 60 days:

<u>PERMIT NO.</u>	<u>WELL NAME</u>	<u>LOCATION</u>
4758	Thomas W. Walters et al Unit 13-10 #1	Sec. 13, T8S, R3E

Nauvoo LLC is currently evaluating the status of the Thomas W. Walters et al Unit 13-10 #1 and requests that this well not be plugged until this evaluation is completed.

15. DOCKET NO. 8-23-20006

Petition by SHULER DRILLING COMPANY, INC., an Arkansas corporation authorized to do and doing business in the State of Alabama, requesting the State Oil and Gas Board of Alabama to enter an order extending the temporarily abandoned status for sixty (60) days for the Propst 8-13 #1 Well, Permit No. 4216-A, located on a 320-acre wildcat drilling unit consisting of the South Half of Section 8, Township 17 South, Range 13 West, Fayette County, Alabama.

The previous temporarily abandoned status for this well has expired and Petitioner is requesting this Board to grant a sixty (60) day extension because the well is currently being evaluated for future utility and should not be plugged.

16. DOCKET NO. 8-23-20007

Petition by MOON-HINES-TIGRETT OPERATING CO., INC., a foreign corporation authorized to do and doing business in the State of Alabama, requesting the State Oil and Gas Board to enter an order approving an exceptional location for the proposed MHT No. 1 Holliman 36-7 Well to be drilled on a 320-acre drilling unit consisting of the North Half of Section 36, Township 17 South,

1 Range 14 West, Lamar County, Alabama, in the County Line Field. The proposed
2 location for the said well on said 320-acre drilling unit is 1,550 feet FEL and 2,310
3 feet FNL of said Section 36 and, as such, is an exception to Rule 3(b) of the Special
4 Field Rules for said field. Said Rule states, in part, that such a well shall be located
5 at least 660 feet from every exterior boundary of the drilling unit and the location of
6 the above described well is only 330 feet FSL of said drilling unit.

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8 This petition is filed as a companion to petition bearing Docket No. 8-23-20008
9 requesting forced pooling, with a risk compensation penalty, of the above-described
10 320-acre drilling unit.

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12 17. DOCKET NO. 8-23-20008

13 Petition by MOON-HINES-TIGRETT OPERATING CO., INC., a foreign
14 corporation authorized to do and doing business in the State of Alabama,
15 requesting the State Oil and Gas Board to enter an order force pooling, with a risk
16 compensation penalty, all tracts and interests in hydrocarbons produced from
17 Pennsylvanian and Mississippian Age strata from the MHT No. 1 Holliman 36-7
18 Well, to be drilled on a 320-acre unit consisting of the North Half of Section 36,
19 Township 17 South, Range 14 West, Lamar County, Alabama, in the County Line
20 Field. This Petition is in accordance with Section 9-17-13, Code of Alabama (1975),
21 as amended, and Rule 400-7-2-.01 of the State Oil and Gas Board of Alabama
22 Administrative Code.

23
24 This petition is filed as a companion to petition bearing Docket No. 8-23-20007
25 requesting approval of an exceptional location for the above-mentioned well.

26
27 18. DOCKET NO. 8-23-20009

28 Petition by MIDROC OPERATING CO., a foreign corporation authorized to do and
29 doing business in the State of Alabama, requesting the State Oil and Gas Board to
30 enter an order approving an exceptional location for the proposed Midroc Operating
31 Co. Cedar Creek Land & Timber 19-15 Well to be drilled on a 160-acre drilling unit
32 consisting of the Southeast Quarter of Section 19, Township 4 North, Range 12 East,
33 Conecuh County, Alabama, as a productive extension of the Little Cedar Creek
34 Field. The proposed location for the said well on said 160-acre drilling unit is 2,000
35 feet FEL and 330 feet FSL of said Section 19 and, as such, is an exception to Rule
36 3(b) of the Special Field Rules for said field. Said Rule states that such a well shall
37 be located at least 660 feet from any exterior boundary of the drilling unit and the
38 location of the above described well will be no closer than 330 feet FSL and 330 feet
39 FWL of said drilling unit.

1 19. DOCKET NO. 8-23-200010

2 Petition by VINTAGE PETROLEUM, INC., a foreign corporation authorized to do
3 and doing business in the State of Alabama requesting the State Oil and Gas Board
4 to enter an order amending the Special Field Rules relating to production allowables
5 for the Fanny Church Field, Escambia County, Alabama. The Fanny Church Field
6 consists of a unitized portion as well as a non-unitized portion and the Smackover
7 Oil produced from said Field contains hydrogen sulfide gas that is processed through
8 the Flomaton Cleansing Facility. When the Flomaton Cleansing Facility was
9 operating at maximum capacity, 5.28 percent of plant capacity was assigned to the
10 wells in the Fanny Church Field and the Special Field Rules currently establish
11 allowables and the balancing of allowables based on plant capacity restrictions. The
12 Flomaton Cleansing Facility is no longer operating at full capacity and it can process
13 all of the hydrogen sulfide gas produced from the Flomaton and Fanny Church
14 Fields. Petitioner proposes to amend the Special Field Rules for the Fanny Church
15 Field by adding provisions concerning production allowables, permissible tolerances
16 in production, and other rules reflective of operations where the cleansing facility
17 does not pose restrictions on volumes of hydrogen sulfide gas to be processed.
18

19 20. DOCKET NO. 8-23-200011

20 Petition by EXXON CORPORATION, a New Jersey corporation, authorized to do
21 and doing business in the State of Alabama, requesting the State Oil and Gas Board
22 to enter an order extending the temporary abandonment status of the T.R. Miller
23 Mill - State Line Oil Trust 31-3 No. 1 Well, Permit No. 1776, located in Section 31,
24 Township 1 North, Range 9 East, in the Jay-Little Escambia Creek Unit, Escambia
25 County, Alabama. Petitioner is requesting that the temporary abandonment status for
26 said well be extended for one (1) year from August 25, 2000, or until the next
27 regular hearing of the State Oil and Gas Board following the expiration of one (1)
28 year, in accordance with Rule 400-1-4-.17(1) of the State Oil and Gas Board of
29 Alabama Administrative Code.
30

31 21. DOCKET NO. 8-23-200012

32 Petition by RIVER GAS CORPORATION, an Alabama corporation, requesting
33 the State Oil and Gas Board to enter an order force pooling, with a risk
34 compensation penalty, all tracts and interests in hydrocarbons produced from the
35 Pottsville Formation from the Chevron 8-5-181 Well, to be drilled on a 40-acre unit
36 consisting of the Southwest Quarter of the Northwest Quarter of Section 8,
37 Township 17 South, Range 8 West, Tuscaloosa County, Alabama, in the White Oak
38 Creek Coal Degasification Field. This Petition is in accordance with Section 9-17-
39 13, Code of Alabama (1975), as amended, and Rule 400-7-2-.01 of the State Oil and
40 Gas Board of Alabama Administrative Code.

1 22. DOCKET NO. 8-23-200013

2 Petition by RIVER GAS CORPORATION, an Alabama corporation, requesting
3 the State Oil and Gas Board to enter an order force pooling, with a risk
4 compensation penalty, all tracts and interests in hydrocarbons produced from the
5 Pottsville Formation from the Chevron 8-12-182 Well, to be drilled on a 40-acre unit
6 consisting of the Northwest Quarter of the Southwest Quarter of Section 8,
7 Township 17 South, Range 8 West, Tuscaloosa County, Alabama, in the White Oak
8 Creek Coal Degasification Field. This Petition is in accordance with Section 9-17-
9 13, Code of Alabama (1975), as amended, and Rule 400-7-2-.01 of the State Oil and
10 Gas Board of Alabama Administrative Code.

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15 The public is advised that the Board may promulgate orders concerning a
16 petition which may differ from that requested by the petitioner concerning the
17 lands described in the notice. Pursuant to this hearing, Section 9-17-1 et seq. of
18 the Code of Alabama (1975), and the rules and regulations promulgated
19 thereunder, the Board will enter such order or orders as in its judgment may be
20 necessary based upon the evidence presented.

21
22 The State Oil and Gas Board was originally established by Act No. 1 of
23 the Legislature of Alabama in the Regular Session of 1945. The applicable law
24 pertaining to the establishment of the Board now appears in Section 9-17-1 et seq.
25 of the Code of Alabama (1975), as last amended. The applicable rules pertaining
26 to the conduct of hearings by the Board are found in Rule 400-7-1 of the State Oil
27 and Gas Board of Alabama Administrative Code.

28
29 Members of the public are invited to attend this meeting and to present to
30 the Board their position concerning these matters. If special accommodations are
31 needed to facilitate attendance or participation in the meeting, please call
32 205/349-2852, ext. 211.

33
34 The public is advised that the Board may promulgate orders concerning a
35 petition which may differ from that requested by the petitioner concerning the
36 lands described in the notice. Pursuant to this hearing, Section 9-17-1 et seq. of
37 the Code of Alabama (1975) and the rules and regulations promulgated
38 thereunder, the Board will enter such order or orders as in its judgment may be
39 necessary based upon the evidence presented.

1 3, Docket No. 4-5-200015, petition by Alabama Merit Energy Company, Inc.; Item 4, Docket
2 No. 5-10-20007, petition by Vintage Petroleum, Inc.; Item 19, Docket No. 8-23-200010, petition
3 by Vintage Petroleum, Inc. I will recommend that the following petition be dismissed without
4 prejudice: Item 17, Docket No. 8-23-20008, petition by Moon-Hines-Tigrett Operating
5 Company, Inc. The following items are set for hearing by the Board at the hearing on Friday:
6 Item 1, Docket No. 3-1-200010, petition by Ventex Operating Corporation; Item 2, Docket No.
7 4-5-20003, petition by Roundtree & Associates, Inc.; Item 6, Docket No. 7-25-20001, petition by
8 Land and Natural Resource Development, Inc.; Item 7, Docket No. 7-25-20006, petition by
9 Ventex Operating Corporation; Item 8, Docket No 7-25-20007, petition by Ventex; Item 9,
10 Docket No. 7-25-20008, petition by Ventex; Item 13, Docket No. 8-23-20004, petition by
11 Nauvoo LLC; Item 14, Docket No. 8-23-20005, petition by Nauvoo; Item 16, Docket No. 8-23-
12 20007A, petition by Moon-Hines-Tigrett Operating Company, Inc.; Item 21, Docket No. 8-23-
13 200012, petition by River Gas Corporation and Item 22, Docket No. 8-23-200013, petition by
14 River Gas. The first item for hearing today is Item 5, Docket No. 5-10-20008, petition by
15 Vintage Petroleum, Inc.

16 MR. WATSON: Mr. Rogers, I have prefiled an affidavit of testimony in support of
17 Vintage's request for temporary abandonment status for the Dora J. Steely 36-2 well. I would
18 ask that that affidavit be made a part of the record of this hearing.

19 MR. ROGERS: The affidavit dated August 17 is admitted.

20 (Whereupon, the affidavit was received in evidence)

1 MR. WATSON: I would ask that you make a recommendation to the Board that the TA
2 status be granted for this well for six months on the basis of the testimony contained in that
3 affidavit.

4 MR. ROGERS: We will review the evidence and make a recommendation to the Board.

5 MR. WATSON: Thank you.

6 MR. ROGERS: The next item is Item 10, Docket No. 8-23-20001, petition by Northwest
7 Alabama Gas District.

8 MR. HARRISON: Mr. Rogers, I'm Steve Harrison of Tuscaloosa representing
9 Northwest Alabama Gas District. I would ask that Items 10 and 11 be consolidated for hearing
10 purposes.

11 MR. ROGERS: Any objection? Your request is granted.

12 MR. HARRISON: I have one witness I would like to have sworn, please.

13 MR. ROGERS: Will you stand and state your name and address?

14 MR. PENA: My name is Alfonso G. Pena. I live in Houston, Texas.

15 (Witness was sworn by Mr. Rogers)

16 MR. HARRISON: Gentlemen, we have two petitions before you today dealing with
17 Swift Energy Company's NWAGD No. 1 Well located in Section 10, Township 12 South, Range
18 15 West, Lamar County, Alabama, in the East Detroit Gas Storage Facility. In the first petition
19 we are asking for an exception to Rule 1 of the Special Underground Gas Storage Rules for the
20 East Detroit Gas Storage Facility which defines the vertical boundaries of the storage facility.
21 The wellbore of this well exceeded those boundaries. We are asking for an exception for that

1 reason. The second petition deals with an exception to Rule 400-5-2-.01 of the rules and
2 regulations governing underground storage of gas in the reservoirs. This rule requires that a dual
3 induction log or equivalent log be run through the underground reservoir of each storage well
4 prior to setting casing. In this situation the last 340 feet was not logged. The gamma ray tool
5 failed and there was no log run. Mr. Pena, have you previously testified before this Board?

6 MR. PENA: No, I have not.

7 MR. HARRISON: Is there an affidavit of your qualifications on file with the Board?

8 MR. PENA: Yes, there is.

9 MR. HARRISON: Could you briefly explain those qualifications for us?

10 MR. PENA: Certainly. I started my career with Texaco, Inc. in New Orleans in 1980. I
11 worked there for three years. From 1983 to 1988 I worked for Fargo Trading as a geologist in
12 Corpus Christi. From 1989 to present I've worked for Swift Energy. I'm currently a senior
13 project geologist.

14 MR. HARRISON: I tender Mr. Pena as an expert.

15 MR. ROGERS: Could he briefly describe his academic background?

16 MR. PENA: Yes. I have a Bachelor of Science Degree in Geology from Texas Tech
17 University.

18 MR. ROGERS: We appreciate that. He is recognized as an expert. Glad to have him
19 with us.

20 MR. HARRISON: Thank you, Mr. Rogers.

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ALFONSO G. PENA

Appearing as a witness on behalf of Petitioner, Northwest Alabama Gas District, testified as follows:

DIRECT EXAMINATION

Questions by Mr. Harrison:

Q. Mr. Pena, have you prepared exhibits in support of our petitions?

A. Yes, I have prepared two exhibits.

Q. Could you explain the first one, please?

A. Yes, I will. The first exhibit is a structure map, the smaller of the two maps that you have before you. In the middle center of the page is the Swift Energy NWAGD No. 1 surface location. It shows the lateral which is approximately 1,745 feet of displacement to the end point of that particular lateral. The structure as revised on this particular map shows that we traversed in an updip manner from a subsea depth of 953 to 949. However, on this particular revised map this exhibit shows, as you can see, that we have crossed the nose here and are almost with a strike orientation in here. I preface that for the next exhibit. I will show you that we had a lesser dip. We were running about .4 of a degree dip here instead of an anticipated .9. That is specifically owing to our direction in an apparent dip instead of a true dip direction. We only crossed or traversed four feet of TVD depth. Structurally in that 1,700 feet course length we only crossed four feet of TVD.

Q. All right. Could you explain your second exhibit for us, the montage?

1 A. The second exhibit I have prepared, this montage, has a vertical to a horizontal mud log
2 profile that incorporates the drilling parameters, lithology, gamma ray, any show
3 information, as well as in the center of the exhibit there is a geosteering plot. We have a
4 contractor that we submit gamma ray information to. This gamma ray information is run
5 through a program. It takes the given log, the offset log, crunches a series of dip vectors
6 and enables us to restore or to position ourselves in the horizontal as we are drilling and
7 make geosteering corrections. Let me back up and talk to the mud log plot. On the far
8 left it shows the true vertical depth scale. It shows 300 in the top left corner to an 1,800
9 feet TVD depth. On the bottom scale in red it shows -300 and it goes out to a +1900 on
10 the end point. This represents the vertical section or rather that space is zero vertical
11 section. If you--uh--project from the top left, there is a zero and project that down, that
12 being the center of the wellbore, you take that distance from zero and project a distance
13 out to our last survey point which was at 2,975. The third number is an approximate
14 vertical section of 1,675--1,676 feet where we ended up with the distance from under the
15 rig, if you were to project the line straight down at zero and then take our lateral out to
16 the full extent. On the left tract it shows a drill time curve. It also shows a lithology
17 column on the far left. In the center it shows a graphic lithology color coded to sand,
18 shale, and limestone as we traverse down through the section, as well as in the center
19 where it's showing measured depth vertical section. It says vertical depth indicating true
20 vertical depth as we are drilling. Moving over to the right tract it shows gamma ray
21 which is in green. About halfway down the page it shows hot wire gas, if any, in the

1 next half of that column. Moving over to the text it shows a general narrative of what
2 happened on the well relative to mud weights, to picking up bits, to steering tools being
3 broken or things of that nature. They are annotated in that particular text, as well as the
4 date showing when those actions occurred. As we drilled this well we drilled
5 stratigraphically. Let me take you to the center, the geosteering plot. On the right-hand
6 tract of that there is a pseudo log which, if you look at that exhibit, is a different scale,
7 however, the values are the same. On the top scale it goes from 0 to 2,000 which
8 indicates the vertical section. It also has a TVD depth on the left tract which relates to
9 the same TVD on the mud log, the smaller scale. The same tract, in what we are showing
10 here, is structurally what has occurred on this particular lateral as we drilled it. The
11 stratigraphy is such as on the far right-hand side of that geosteering plot it shows a log.
12 Halfway down the page that log is in red. There is a red bar going across the cleanest
13 part of that sand. That was our approximate 38 foot thick Carter sand interval that we
14 targeted. Immediately above that sand, the first break before you get into the shale
15 baseline, there is a little knot there. This was what was planned and scheduled to drill
16 and casing set into this point in the well. If you will, look at that point where we set our
17 casing. If you come down on the mud log plot to the vertical section and you start
18 making the curve you can see where I placed the casing symbol on or about 1,705
19 measured depth. It is showing approximately 1,489 to 1,490. It's a little deeper. It's
20 showing about 1,491 and then 406 feet vertical section, the distance it is away from the
21 rig in the dip direction. We set our casing at that measured depth and drilled

1 approximately 30 more feet and encountered the Carter sand. Also on the geosteering
2 plot there is another small profile of the gamma ray. There are two curves. The
3 lowermost curve is the actual gamma that we are projecting as we are drilling. There are
4 two curves stacked together. The upper curve is from the offset. As we are drilling down
5 those gamma ray vectors are being transmitted every 30 to 60 feet. We are restoring
6 those to the program and positioning ourselves where we are relative to that target
7 interval. What it shows on that particular profile is at a distance of about 405 or 406--410
8 feet vertical section is where we have our casing. We drilled out and into the Carter sand
9 which is confirmed by the gamma ray. It has very clean counts. A gamma ray normally
10 reads--in a sand it is going to read very clean, anywhere from 10 to 20 units API. The
11 shales are going to deflect back to 70 to 90 or 100 gamma counts. So, for that purpose
12 and with the Carter being so sandy, so clean, we could tell where we were deflecting back
13 into a shale. We continued our traverse from setting our casing. We drilled out
14 approximately 30 feet. I'm on the mud log plot and I'm going down through the
15 lithology which is in orange which shows us going into the Carter sand. I show that at a
16 distance of about 750 feet--800 feet vertical section. We went completely through the
17 sand. That is also evidenced by the fact that in the graphic lithology we are showing a
18 small percentage of shale up until the time we are able to get back into zone which takes
19 approximately 150 feet. The reason I say that is the survey information is stated on the
20 bottom of the horizontal line. It shows the TVD information. It shows measured depth
21 information, TVD, vertical section, azimuthal data and it shows the particular inclination

1 survey that we are at that point--at points which are annotated with black X's and projects
2 them back into the lithology column. That point to approximately 700--800 feet vertical
3 section is where we get out of the sands--actually we bore out the bottom--we turn it back
4 immediately. The reason I say that is we've got 87, 89 degrees by projecting the surveys
5 and at approximately 789 feet vertical section you project that back in from the bottom.
6 We cranked it back to 95 degrees, almost 96 degrees, 95.5 degrees. In a horizontal any
7 degree or increment from 90 degrees, if that is considered horizontal when you are
8 drilling an updip well, 91, 92, 90.5, any increment indicates that you are going updip.
9 This increment of five degrees has us coming up at five degrees over horizontal. In fact,
10 our dip rate on this in the updip direction was .4 of a degree. What we ended up with
11 based on that geosteering plot to the north in the center of the page looks like more .3 of a
12 degree. We almost had a ten-fold increment in that we were coming up faster on the
13 average than what was really taking place structurally. We were drilling an apparent dip
14 and for all practical purposes .3 of a degree is almost flat. We were coming up three
15 times that fast--ten times that fast at almost 3 degrees a dip rate. Reverting back to where
16 we drilled out the bottom, we immediately turned it back to 95 and started drilling back
17 up. The next survey has us going from about the center, 95, 93 degrees, 94 degrees, 93,
18 until the time which we exit the sand which is approximately 1,360 feet vertical section.
19 That's where we exit the sand. We lose our gamma ray at approximately 1,100 feet. At
20 about 1,102 feet of vertical section we lose our gamma. We still have our mud logger
21 and we have a graphic lithology. We are coming in the updip direction based on the

1 surveys at approximately 13--I'm showing about 1,365 vertical section and we get into
2 100 percent shale. If you will take that survey point or the next one after, it's
3 approximately 2,700 feet measured depth. It's got 2,680 as the actual survey point. At
4 that point it's showing 90 degrees which, as I said, it's got 90.21. We're still knuckling
5 up but the next survey after that shows us 89.2, 90 degrees, 90, then 89, 89. The whole
6 time we are traversing in the lateral sense. We have turned the bit down. The bit is at the
7 shale sand interface. It doesn't bite until you get out to almost the very end of 2,975.
8 The graphic lithology shows that we get into sand at about 15 percent. At that point we
9 TD'd the well at about a little less than 1,700--1,675 feet vertical section away from zero
10 vertical.

11 Q. So Mr. Pena, you were attempting to get the bit back into the sandstone but it just didn't
12 work?

13 A. We were doing everything we could to get the bit back.

14 Q. Is it possible that gas could invade an underground source of drinking water?

15 A. Based on what was approved, the first plan that we ran through, we placed our casing at
16 approximately five feet above the Carter sand. If you will look at the casing on your
17 exhibit it is showing, covered up in brown there, 1,489. Actually at 1,700 this casing is a
18 little deeper and the TVD is actually about 1,491. It's showing 1,489 but anyway there's
19 two feet difference. You go over 1,084 feet to where we exited the sandstone into the
20 shale. If you look at our TVD depth it's still 1,490 feet. The dip is relatively flat in here.
21 We're talking about .3 to .4 of a degree. We came up four feet TVD in that traverse. In

1 my opinion and based on the mud log shows that we had, the shale, we were scratching
2 across the interface trying to bore back into the Carter sand. As we got further along and
3 scooted, the surveys are showing that we turned the bit down. The bit just won't grab at
4 the interface. It did the same thing as we came across where we bored out the bottom at
5 about 800 feet vertical section. For 150 feet of vertical section we turned it up and it took
6 it that far for the bit to bite back up. At any rate we set that within five feet of the top of
7 the Carter sand which is actually structurally deeper than where we set the casing.

8 Q. All right. Thank you, Mr. Pena.

9 MR. HARRISON: I would ask that Mr. Pena's two exhibits be admitted into evidence.

10 MR. ROGERS: The exhibits are admitted.

11 (Whereupon, the exhibits were received in evidence)

12 MR. HARRISON: We have nothing further at this point. I do have Mr. Buddy Scott, the
13 drilling superintendent for Swift, available if there are any questions for him but that's our
14 presentation.

15 MR. ROGERS: Mr. Harrison, will you state the request that you have made in these two
16 petitions?

17 MR. HARRISON: Yes, sir. We are asking for exceptions to Rule 1 of the Special
18 Underground Storage Rules for the East Detroit Gas Storage Facility and an exception to Rule
19 400-5-2-.01 of the rules and regulations governing underground storage in gas reservoirs.

20 MR. ROGERS: That rule provides for what?

1 MR. HARRISON: That rule requires a dual induction log be run to the end of a
2 wellbore. In this case we lost the gamma ray tool the last 340 feet of the wellbore. We are
3 simply asking for approval of this existing wellbore as an exception to those two rules.

4 DR. BOLIN: Mr. Hearing Officer, we would ask that the engineering records relative to
5 this project that is on file with the Board be incorporated into this record.

6 MR. ROGERS: Your request is granted.

7 (Whereupon, the engineering records relative to the
8 above-mentioned project were incorporated by reference)

9 MR. ROGERS: The staff has no further questions. We will review the evidence and
10 make a recommendation to the Board.

11 MR. HARRISON: Thank you.

12 MR. ROGERS: The next item is Item 12, Docket No. 8-23-20003, petition by Bay Gas
13 Storage Company, Ltd.

14 MR. ARMBRECHT: Mr. Rogers, I'm Conrad Armbrrecht from Mobile representing Bay
15 Gas Storage Company Ltd., the petitioner in this matter. We are here today to ask the Board for
16 approval of a second gas storage cavity at the McIntosh Salt Dome. Bay Gas has filed a permit
17 application for the well for this storage cavity and some related materials. We would request that
18 the Board take official notice of those items and make them a part of the record of this hearing.

19 MR. ROGERS: Your request is granted.

1 (Whereupon, the permit application and related material
2 relative to the above-referenced matter were incorporated
3 by reference)

4 MR. ARMBRECHT: Bay Gas also has a storage cavity that is already in operation on
5 the McIntosh Salt Dome. A number of materials have been filed with the Board in connection
6 with that storage cavity. There have been permit applications. There have also been a number of
7 hearings in which orders were issued approving that storage facility. We would like to request
8 that all of those materials relating to the first storage facility be made a part of the record for this
9 hearing and that the Board take official notice of those. There are some docket numbers that--I
10 believe I've got all of them. I will read them off. If I miss one, I'd like to pick up all of them
11 that relate to that first facility. It's Docket Nos. 9-22-938 and 938A and B, 1-26-941 and 941A,
12 8-17-941, 9-24-944, and 2-1-952. We would request that those be made a part of the record of
13 this hearing.

14 MR. ROGERS: That request is granted.

15 (Whereupon, all of the above referenced documents
16 were incorporated by reference)

17 MR. ARMBRECHT: I have two witnesses.

18 MR. ROGERS: Would you gentlemen stand and state your names and addresses?

19 MR. SCHALGE: Roger Schalge. My office is 200 Westlake Park Boulevard, Houston,
20 Texas 77079.

1 MR. ROYCE: Gordon L. Royce. My office is at 2828 Dauphin Street, Mobile,
2 Alabama, 36606.

3 (Witnesses were sworn by Mr. Rogers)

4 MR. ARMBRECHT: My first witness will be Mr. Royce. Gordon, would you state your
5 name and address for the record?

6 MR. ROYCE: My name is Gordon L. Royce. My office is at 2828 Dauphin Street,
7 Mobile, Alabama, 36606.

8 MR. ARMBRECHT: By whom are you employed and what is your present job?

9 MR. ROYCE: I'm Vice President of MGS Storage Services, Inc. and Director of Gas
10 Storage of Mobile Gas Service Corporation. MGS Storage Services, Inc. is a wholly-owned
11 subsidiary of Mobile Gas Service Corporation and is the General Partner of Bay Gas Storage
12 Company, Ltd., the petitioner. In my capacity as Vice President of MGS Storage I am
13 responsible for the design, engineering, construction, and operation of these storage facilities.

14 MR. ARMBRECHT: All right. You said that MGS Storage Services, Inc. is the General
15 Partner of Bay Gas Storage Company, Ltd. Does Bay Gas Storage have any other partners?

16 MR. ROYCE: Yes, the Olin Corporation of Stamford, Connecticut, is a limited partner
17 of Bay Gas Storage Limited.

18 MR. ARMBRECHT: Have you previously testified before this Board as an expert
19 witness?

20 MR. ROYCE: Yes.

21 MR. ARMBRECHT: Were your qualifications accepted by the Board?

1 MR. ROYCE: Yes.

2 MR. ARMBRECHT: Is an affidavit of your qualifications on file with the Board?

3 MR. ROYCE: Yes.

4 MR. ARMBRECHT: Since the date of your prior testimony, have you had additional
5 experience and education with regard to gas storage operations?

6 MR. ROYCE: Yes. I have managed the Bay Gas Storage project at the Bay Gas Salt
7 Dome Gas Storage Facility No. 1 at McIntosh which was previously approved by this Board
8 since its inception in 1994. I have attended a number of seminars and meetings relating to gas
9 storage including semi-annual meetings of the gas storage operators group. I am a member of
10 the AGA Underground Storage Committee.

11 MR. ARMBRECHT: Mr. Rogers, I would ask that Gordon Royce be accepted as an
12 expert in petroleum engineering and gas storage for the purpose of this hearing.

13 MR. ROGERS: He is so recognized.

14 MR. ARMBRECHT: Thank you.

15 GORDON L. ROYCE

16 Appearing as a witness on behalf of Petitioner, Bay Gas Storage Company, Ltd., testified
17 as follows:

18 DIRECT EXAMINATION

19 Questions by Mr. Armbricht:

20 Q. Gordon, would you briefly describe the proposed project?

1 A. Yes. Bay Gas proposes to develop a second underground gas storage cavity at the
2 McIntosh Salt Dome site. This project involves leaching a second brine cavity and
3 converting it to gas storage and installing an additional gathering line, additional
4 compression, and upgrading the withdraw facilities.

5 Q. Where will the cavity and additional facilities be located?

6 A. If you will, remove Exhibit 1. Exhibit 1 shows the general location of the facilities. The
7 compression withdraw facilities, which are not labeled on the map, will be located within
8 the present station confines just southeast of the McIntosh Dome. The present station
9 was constructed in 1994 to treat gas for Bay Gas Storage Company's Storage Facility No.
10 1. If you will, turn to Exhibit 2. Exhibit 2 shows the location of the proposed Cavity No.
11 2 in relation to the salt dome and well or cavity sites on the dome. Cavity No. 1--Bay
12 Gas Storage Cavity No. 1 is in Section 29, Township 3 North, Range 1 East. The
13 proposed Cavity No. 2 is 1,300 feet northwest of Cavity No. 1 in the Southeast Quarter of
14 the Southeast Quarter of Section 36, Township 4 North, Range 1 West, and about 1,700
15 feet from the edge of the dome. The legal description for the well was filed with the
16 drilling permit application.

17 Q. How far apart are the cavities?

18 A. Exhibit No. 3 shows the cavities in plan view with horizontal distances between the
19 cavity walls. Exhibit 4 shows the cavities in profile and better shows the spacing
20 between the gas cavities and the brine cavities due to the depth of each. Brine Well No. 4
21 is between Gas Cavities 1 and 2 but is about 1,600 feet from the walls of either gas cavity

1 because of the depth of the respective cavities. The walls of the gas cavities will be about
2 1,300 feet apart.

3 Q. Has Bay Gas acquired lease agreements for the proposed facilities?

4 A. Bay Gas has existing agreements with the landowner, Olin Corporation, for the proposed
5 cavities and facilities. Specific easement verbiage under the existing agreements are
6 currently being finalized.

7 Q. Would you turn to Exhibit No. 6 and describe the storage facility shown on that exhibit?

8 A. The facility is depicted on Exhibit 6. It consists of the cavity site, the well, the cavity,
9 and the buffer zone. These terms along with the term "facility boundaries" are defined in
10 the Board's new Cavity Storage Rules 400-6 governing the underground storage of gas in
11 solution-mined cavities. The cavity site for the proposed facility is described in the
12 petition and in the proposed Special Field Rules. As shown on Exhibit 6 the buffer zone
13 extends 400 feet from the cavity in all directions placing it in the Southeast Quarter of
14 Section 36, Township 4 North, Range 1 West, the Southwest Quarter of Section 37,
15 Township 4 North, Range 1 East, the Northwest Quarter of Section 29, Township 3
16 North, Range 1 East, and the Northeast Quarter of Section 1, Township 3 North, Range 1
17 West, Washington County, Alabama.

18 Q. How will you develop the proposed cavity?

19 A. We propose to develop the cavity in a two-stage manner. In the first stage we will leach
20 conventionally under a diesel blanket, the same as was done with Cavity No. 1. Exhibit 7
21 is a scaled profile view of the proposed 3.15 or larger million barrel cavity. The

1 cemented casing shoe will be set at about 4,000 feet and the cavity will be leached to a
2 maximum diameter of about 240 feet down to 4,450 then tapered to a 140 foot diameter
3 onto the bottom. The well will be drilled to about 5,200 feet. Of course, the bottom 200
4 feet will eventually fill with insolubles during leaching. Exhibit No. 8 is a conceptual
5 sketch of this to demonstrate the conventional leaching mode, again leaching under
6 diesel. Initially the entire 1,100 foot cavity interval is leached. The inner string shown as
7 dashed will be raised and only the upper portion of the cavity will be widened. When
8 stage one leaching is completed and tested and permission from this Board received to
9 begin gas storage operations, we will displace some of the brine with natural gas and
10 operate Cavity 2 just like operating Cavity 1 now. After beginning gas storage
11 operations, we propose to enlarge the cavity in a second stage using a method termed
12 "SMUG" which stands for solution mining under gas. This method is used throughout
13 Europe and has been used to expand two cavities in Texas and two in Louisiana, all four
14 by Market Partnership Storage. Under the SMUG method the top portion of the cavity
15 contains gas which allows the cavity to be operated for storage normally. The bottom
16 portion contains brine that is circulated to accomplish leaching and expand the cavity.
17 The gas serves as a blanket to keep the brine from leaching the cavity roof. Exhibit 9
18 shows a scaled profile of the cavity after stage two SMUG leaching is completed. Note
19 the narrower bottom portion of the cavity has widened to about 220 feet in diameter,
20 giving the overall cavity a more cylindrical shape. The expanded portion of the cavity
21 volume is shown in orange on the exhibit, how it would end up ultimately. Exhibit 10 is

1 a conceptual sketch again of the SMUG process. Note the brine level is much lower in
2 the cavity than it was in the first or conventional stage and leaching is taking place only
3 in the bottom portion of the cavity.

4 Q. Will you circulate brine for leaching and inject gas at the same time?

5 A. Although the method would allow one to circulate brine for leaching and inject or
6 withdraw gas simultaneously, we propose to either circulate brine or move gas but not
7 both at the same time. Of course, during any dewatering one injects gas while
8 withdrawing brine but not circulating the brine.

9 Q. In the SMUG method you will be circulating brine on the gas instead of under your diesel
10 blanket. Is gas soluble with brine?

11 A. Yes. Gas is soluble in brine particularly at higher gas pressures. Based on the data from
12 the four cavities previously leached in the United States under the SMUG concept, we do
13 not expect any significant gas to go into solution with the brine. The only place the gas
14 will contact the brine is at the gas/brine interface. So, it's less likely to go into solution.
15 As a safety precaution we plan to install a gas separator near the wellhead during the
16 SMUG phase. All returning brine will flow through this separator allowing any gas to
17 break out of the brine.

18 Q. Okay. Even though you don't expect any gas to be in the brine, you would have
19 something there in case any gas got into the brine to take care of it.

20 A. Strictly as a safety precaution.

1 Q. Why does Bay Gas want to use the SMUG method for leaching the second stage of the
2 cavity?

3 A. The time required to leach our cavity is dependent upon the ability of Olin to receive and
4 process our saturated brine which in turn is subject to their market conditions. We
5 estimate it will take 24 months, including 17 months of leaching, to construct a 3.15
6 million barrel cavity. The optimum cavity size is 4.2 million barrels but present contract
7 requirements are 24 months to be operational. Using the SMUG method will allow Bay
8 Gas to be operational within 24 months and still expand the cavity as needed. The
9 conventional Stage 1 cavity will be leached as large as possible, possibly larger than 3.15
10 million in the time available, then expanded to 4.2 million barrels later. Possibly even
11 more important, this SMUG process will allow us to maintain volume of the cavity
12 annually by releaching any volume loss to cavern shrinkage.

13 Q. How much is Bay Gas going to spend on this storage project?

14 A. This project will cost over \$30 million.

15 Q. Can you describe the wellhead configuration for the SMUG process?

16 A. Exhibit No. 11 is a drawing of the proposed wellhead. The two lowest outlet valves of
17 the wellhead are for gas injection and withdraw. The gas would move in the annulus
18 between the outer hanging casing string and the final cemented casing. The middle two
19 valves are for brine in the annulus between the inner and outer hanging strings, the upper
20 two brine valves tied to the inside of the inner hanging string. Brine can flow down the
21 inner string and up the inner annulus, which is termed direct leaching, or vice versa which

1 is termed indirect leaching. Exhibit No. 11, the drawing, also shows the manual shut-off
2 valves and the emergency shut down or ESD valves on the gas and brine lines. The four
3 ESD valves close automatically in the event of a problem.

4 Q. Do you have the well casing and cement data for this well?

5 A. The casing and cementing proposals were filed with the drilling permit application as
6 were the well and cavity site surveys, easement descriptions, the affidavit of control, the
7 gas storage bond, and the organization report.

8 Q. Are other state regulatory bodies involved in your proposed project other than this
9 Board?

10 A. Yes. The ADEM will regulate leaching in the conventional stage one portion of the
11 cavity in conjunction with the Oil and Gas Board. The ADEM has issued the Olin
12 Corporation a well field permit for drilling and operating solution mining wells in the
13 McIntosh Field. Olin will submit to ADEM an intent to drill for the Bay Gas Storage
14 Well No. 2 at the appropriate time. In addition, the Alabama Public Service Commission
15 Office of Pipeline Safety or OPS will have authority over the facilities outside the
16 automatic operated or ESD value, gas and brine valves, at the wellhead. In addition we
17 will need construction permits or approvals from various state or federal bodies for the
18 facilities that are under OPS regulations.

19 Q. Have you read the petition filed by Bay Gas in this matter?

20 A. Yes.

21 Q. Are the allegations contained in that petition true and correct?

1 A. Yes.

2 Q. Are you familiar with Alabama Code Sections 9-17-150 through 157?

3 A. Yes.

4 Q. In your opinion, does the proposed gas storage project meet all of the statutory
5 requirements for a gas storage project?

6 A. Yes.

7 Q. Is the storage facility that we are proposing here today suitable and feasible for the
8 injection, withdrawal, and storage of gas?

9 A. Yes.

10 Q. Would the establishment and approval of this facility be in the public interest?

11 A. Yes.

12 Q. Would this facility or the operation of this facility unduly endanger either lives or
13 property?

14 A. No.

15 Q. Will this facility or the operation of this facility contaminate other formations containing
16 fresh water, oil, gas, or other minerals?

17 A. No.

18 Q. Are there any known commercially recoverable oil or gas deposits in the proposed
19 facility boundaries?

20 A. No.

1 Q. Will the establishment and operation of this gas storage facility promote conservation of
2 natural gas?

3 A. Yes.

4 Q. Will it permit the accumulation of large quantities of gas in reserve for orderly
5 withdrawal in periods of peak demand?

6 A. Yes.

7 Q. Will it make gas more readily available to commercial, industrial, and residential
8 consumers?

9 A. Yes.

10 Q. Will this assist in providing for more uniform withdraw from various oil and gas fields?

11 A. Yes.

12 Q. Were Exhibits 1 through 11 that you have testified to today prepared by you or under
13 your direct supervision and control?

14 A. Yes.

15 Q. Do those exhibits accurately depict what they are intended to show?

16 A. Yes.

17 MR. ARMBRECHT: Mr. Rogers, we would request that the exhibits testified to by Mr.
18 Royce be admitted into evidence.

19 MR. ROGERS: The exhibits are admitted.

20 (Whereupon, the exhibits were received in evidence)

1 MR. ARMBRECHT: I would propose to just go on with Mr. Schalge and then tender
2 both witnesses for questions at the end, if that's alright.

3 MR. ROGERS: That will be fine.

4 MR. ARMBRECHT: Roger, would you state your name and address for the record?

5 MR. SCHALGE: My name is Roger Schalge, Sr. My office is at 200 Westlake Park
6 Boulevard, Houston. Texas.

7 MR. ARMBRECHT: By whom are you employed?

8 MR. SCHALGE: Sulfur Gas US, Inc.

9 MR. ARMBRECHT: What is your job?

10 MR. SCHALGE: I'm a senior project manager. In my capacity as senior project
11 manager I'm responsible for the engineering, design, and construction of hydrocarbon storage
12 projects in underground formations such as salt mine cavities, depleted oil and gas reservoirs.

13 MR. ARMBRECHT: Have you previously testified before this Board as an expert
14 witness?

15 MR. SCHALGE: Yes.

16 MR. ARMBRECHT: Is an affidavit of your qualifications on file with the Board?

17 MR. SCHALGE: Yes.

18 MR. ARMBRECHT: Mr. Rogers, I would request that Mr. Schalge be accepted as an
19 expert for the purposes of this hearing.

20 MR. ROGERS: He is so recognized.

1 ROGER SCHALGE

2 Appearing as a witness on behalf of Petitioner, Bay Gas Storage Company, Ltd., testified
3 as follows:

4 DIRECT EXAMINATION

5 Questions by Mr. Armbrecht:

6 Q. Are you familiar with the technical information about the design and construction of the
7 proposed new storage cavity for the Bay Gas Storage Company?

8 A. Yes.

9 Q. What are the properties of the salt that make it suitable for a gas storage cavity and insure
10 that gas migration from the cavity will not occur.

11 A. The McIntosh salt has extremely low permeability, good plasticity, sufficient structural
12 stability, and can be economically mined to create a cavity.

13 Q. How are the maximum and minimum operating pressures for this cavity determined?

14 A. The maximum pressure is limited to below the lithostatic gradient of the overburden. For
15 this cavity .85 psi per foot was used for a maximum cavity pressure. The minimum
16 pressure is selected to minimize creep in the salt to maintain cavern stability. For this
17 cavity we have selected 0.27 psi per foot. These values will be confirmed by a rock
18 mechanics study after cores are retrieved from the drilled well.

19 Q. How do the proposed minimum values compare to the minimums used in other natural
20 gas salt dome storage facilities?

1 A. There are two gas cavities in operation in the North Dayton Salt Dome in Texas that have
2 a minimum pressure--minimum operating pressures of 0.25 psi per foot, four on this
3 Spindle Top Salt Dome in Texas with a minimum pressure of 0.25 psi per foot, and two
4 in Texas on the Moss Bluff Dome with a minimum pressure of 0.19 psi per foot. These
5 cavities have been in operation for five or more years.

6 Q. How are the buffer zone limits determined for this cavity?

7 A. From experience and in calculating the stress distribution around the cavities, the stress
8 distribution and the walls between cavities is held below a safe stress intensity. At the
9 McIntosh Salt Dome we calculate the minimum safe distance between cavities to be 200
10 feet, but to allow for additional margin of safety we are proposing a buffer zone of 400
11 feet. We doubled the 200 feet to 400 feet to have a factor of safety so that another
12 operator would have to come to the Board and show, using sound engineering principles,
13 that another cavity constructed less than 400 feet would not jeopardize the structural
14 stability of either cavern.

15 Q. Sometimes we use the word cavity and sometimes cavern. Are those the synonyms as far
16 as you are concerned?

17 A. I believe they are interchangeable and are technical.

18 Q. What method is used to determine the mechanical integrity of a cavity?

19 A. Uh, a test is conducted after the cavern is constructed and is still full of brine and has
20 stabilized. The brine is fully saturated and notes of brine pressure and temperature are
21 recorded at the wellhead. Instrumentation is connected to the annulus and the inside of

1 the dewatering string. The brine in the wellbore is then displaced with a measured
2 amount of nitrogen to a preselected distance below the casing shoe into the wellbore. The
3 wellbore is the uncased hole from the casing shoe to the cavity roof. The distance from
4 the surface to the interface of the brine and nitrogen is then measured using an interface
5 or density logging tool. The interface measurement is again repeated after a selected
6 period of time to determine if any movement has occurred. The interface movement is
7 compared with the measured pressures at the surface to determine if there has been any
8 significant loss of nitrogen.

9 Q. How often is this done?

10 A. This is done once after initial construction of the cavity.

11 Q. Have you ever had a cavity fail a mechanical integrity test and if so what remedial action
12 is taken?

13 A. Yes. Usually the reason for failure of the MIT is an inadequate cement job of the
14 production casing. There are repair methods to repair inadequate cementing.

15 Q. How is the structural stability of the cavity determined?

16 A. The structural stability of the cavity is calculated using a field study called Rock
17 Mechanics. A popular software tool using finite element analysis calculates the stress
18 and strain around the cavity. The area around the cavity is broken up into a number of
19 discrete elements. Forces are applied and the results of the stress and strain are calculated
20 for each element. The resulting triaxle stresses are then compared with the strength

1 criteria developed from laboratory tested salt cores from the drill storage well and other
2 wells drilled at the McIntosh Salt Dome.

3 Q. Is the solution mining under gas, a SMUG process, a safe operation?

4 A. The SMUG process is a safe method of solution mining and a reasonable approach
5 constructing the natural gas storage cavity. In Europe it is common to use nitrogen as the
6 blanket material rather than diesel oil for solution mining. The SMUG process is almost
7 identical to using nitrogen as the blanket material.

8 Q. Is the location of the Cavity No. 2 safe for the construction of a natural gas storage
9 cavity?

10 A. Yes. I have analyzed the residual gravity map for the McIntosh Dome showing the
11 appropriate location of Cavity Well No. 2. The map indicates that the edge of the salt is
12 approximately 1,700 feet to the north of Cavity No. 2 and the salt dome broadens with
13 depth.

14 Q. Have you read the petition that has been filed by Bay Gas in this matter?

15 A. Yes.

16 Q. Are the allegations contained in that petition true and correct?

17 A. Yes.

18 Q. Are you familiar with the Alabama Code Sections 9-17-150 through 9-17-157?

19 A. Yes.

20 Q. In your opinion, does the proposed gas storage project meet all of the Alabama statutory
21 requirements for a gas storage project?

1 A. Yes.

2 Q. You mentioned earlier that--I believe Gordon mentioned earlier several other SMUG
3 developed cavities in the United States. Did you have involvement with those cavities?

4 A. Yes, I did.

5 Q. Okay. So you are familiar with what has been done?

6 A. Yes, I am.

7 MR. ARMBRECHT: I have no further questions and I tender the witnesses for questions
8 by the staff. Let me ask two more questions.

9 GORDON L. ROYCE

10 Appearing as a witness on behalf of Petitioner, Bay Gas Storage Company, Ltd., testified
11 as follows:

12 DIRECT EXAMINATION

13 Questions by Mr. Armbrecht:

14 Q. Gordon, what is Exhibit No. 5?

15 A. Exhibit No. 5 is a compilation of data for all of the cavities in the McIntosh Dome area.

16 Q. Gordon, is there any chance that we will need to amend the description of the cavity site
17 for this facility?

18 A. Yes. The final cavity site may require some small adjustment following the sonar
19 logging to compensate for leaching a cavity at the bottom of a non-vertical well.

20 Q. Have we made a provision for that in the Special Storage Rules that we have proposed to
21 the Board?

1 A. We have.

2 MR. ARMBRECHT: No further questions.

3 MR. ROGERS: I understand that we have a representative from ADEM here. Does he
4 wish to address the Board or ask any questions or make any comments? If you do, sir, you need
5 to come to a microphone so that we can record your statement. Glad to have you here.

6 MR. JOHNSON: My name is Curt Johnson and I'm with the Groundwater Branch of
7 ADEM. We have a permit with the Olin Corporation for development of these salt dome wells.
8 One thing that I want to just bring up that concerned me a little bit after hearing this discussion is
9 the difference in the way this one is going to be developed verses the previous one that was
10 developed, that's the SMUG process. I don't believe that--after reading the permit it may not
11 exactly meet the requirements of the permit, the ADEM permit. There may be a modification
12 required. Looking at it just now and hearing what this gentleman had to say, it appears that we
13 would have to take a look at that and see if that may require a permit modification. There is a
14 requirement in here and I'm not sure how this was handled in the past. It does say that the
15 permittee shall submit a permit modification request at least 180 days prior to any plan change in
16 the well field utilization such as the storage of hydrocarbons in solution cavities. Again, I'm not
17 sure how that was handled for the Well No. 1. I don't see any correspondence in this file
18 concerning that but there is a requirement of a permit for that.

19 MR. ARMBRECHT: Let me say something. We're at least two years away before you
20 would have a cavity in place. The SMUG process wouldn't come into effect. That would be the
21 normal leaching process. Is that correct, Gordon?

1 MR. ROYCE: Yes.

2 MR. ARMBRECHT: All right. So, we are much farther than 180 days away from the
3 SMUG. It would be how long before you would commence?

4 MR. ROYCE: 26 months, 25 months, something like that.

5 MR. ARMBRECHT: Whatever the appropriate requirements are with ADEM, we will
6 meet those before commencing any SMUG operations. Is that correct?

7 MR. SCHALGE: That is correct. We plan to do so and we are aware of that
8 requirement.

9 MR. JOHNSON: Thank you.

10 MR. ROGERS: Thank you, Mr. Johnson. Any questions from the staff?

11 ROGER SCHALGE

12 EXAMINATION BY BOARD/STAFF

13 Questions by Dr. Bolin:

14 Q. In regard to the SMUG concept having been done in a fairly limited number of cases,
15 would you characterize the development of a cavern under the SMUG process as a
16 industry accepted practice at this point?

17 A. I do consider it an industry practice because we are getting more and more requests for
18 this type of process in developing storage and salt domes.

19 DIRECT EXAMINATION

20 Questions by Mr. Armbrecht:

21 Q. Has this been done a number of times in Europe also?

1 A. Yes. It's done in Europe also. It was done there before it was done here. It's common
2 practice to have gas as the blanket material which is identical to a SMUG process.

3 EXAMINATION BY BOARD/STAFF

4 Questions by Dr. Bolin:

5 Q. You would not characterize it as an experimental process?

6 A. Absolutely not, no. There are four caverns. There are two in Louisiana and two in Texas
7 that have been in operation for about five or more years.

8 Q. In regard to your testimony regarding the reduced operating pressure, do you see that
9 request as materially effecting the integrity of the cavity or the operations in any way
10 over what we have been operating in Cavern No. 1.

11 A. Oh, absolutely not. Based upon experience from multiple other caverns, the minimum
12 pressures are much lower than what we are proposing for this operation. It does not
13 affect the stability of the cavern. We will confirm that with a rock mechanics study as
14 soon as we have salt cores from this new drilled well.

15 MR. ROGERS: We are incorporating the permit and associated documents that were
16 prefiled with the Board. Any other questions or comments? We will review the evidence and
17 make a recommendation to the Board. Thank you. We'll take a brief recess.

18 (Whereupon, the hearing was recessed for five minutes)

19 MR. ROGERS: The hearing is back in session. The next item will be Item 15, Docket
20 No. 8-23-20006, petition by Shuler Drilling Company, Inc.

1 MR. TYRA: Mr. Rogers, I'm John Tyra here on behalf of Shuler Drilling Company.
2 This is a request that the temporarily abandoned status of a well in Fayette County, Alabama, be
3 extended for an additional 60 day period. It's the Propst 8-13 No. 1 Well, Permit No. 4216-A. It
4 was extended two months ago for a 60-day period while we did testing and fracing. That testing
5 and fracing has been done but we are in the process of evaluating the data from the testing. I
6 have prefiled an affidavit of Robert Hull who is a petroleum engineer dealing with this well. I
7 would ask that that be made a part of the record at this time.

8 MR. ROGERS: The affidavit is admitted.

9 (Whereupon, the affidavit was received in evidence)

10 MR. TYRA: We are going to submit this to you on the basis of that affidavit and ask that
11 you consider it when you make your recommendation.

12 MR. ROGERS: The affidavit has been admitted. We will review the evidence and make
13 a recommendation to the Board. We also will admit into the record an OGB-9, first production
14 test, and related forms, OGB-6 and OGB-7. Those copies are admitted into the record.

15 (Whereupon, the OGB 6, 7 and 9 were received in evidence)

16 MR. TYRA: Thank you very much.

17 MR. ROGERS: Anything else? We will review the evidence and make a
18 recommendation to the Board. The next item is Item 18, Docket No. 8-23-20009, petition by
19 Midroc Operating Company.

20 MR. WATSON: Mr. Rogers, I have one witness and I would like to have him sworn in,
21 please, sir.

1 MR. ROGERS: Will you state your name and address?

2 MR. SMITH: Yes, sir. My name is Robin Smith. I'm with Midroc Operating Company
3 in Shreveport, Louisiana.

4 (Witness was sworn by Mr. Rogers)

5 MR. WATSON: Mr. Smith, you have not appeared before this Board but we have filed
6 an affidavit of your qualifications. Would you briefly give Mr. Rogers and the staff a summary
7 of your educational background and work experience?

8 MR. SMITH: Yes, sir. I graduated in 1979 from Stephen F. Austin State University in
9 Nacogdoches, Texas, with a BS Degree in Geology. Immediately after that I went to work and
10 worked for about 15 years in the oil and gas industry and continued working and got into school
11 again for the second time and got my MBA degree in 1998 from Centenary College in
12 Shreveport, Louisiana. In 1998 I joined Midroc Operating Company as an exploration geologist
13 and business manager.

14 MR. WATSON: Have you prepared exhibits in support of the request for an exceptional
15 location in Conecuh County?

16 MR. SMITH: Yes, sir, I have.

17 MR. WATSON: I tender Mr. Smith as an expert witness, Mr. Rogers.

18 MR. ROGERS: He is so recognized.

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ROBIN SMITH

Appearing as a witness on behalf of Petitioner, Midroc Operating Company, testified as follows:

DIRECT EXAMINATION

Questions by Mr. Watson:

- Q. Mr. Smith, I would ask you to turn in the booklet of exhibits to Exhibit No. 1. This request, Mr. Rogers, is requesting the Board to approve an exceptional location on a 160-acre drilling unit consisting of the Southeast Quarter of Section 19, 4 North, 12 East, in Conecuh County. Let's describe that request by using your Exhibit No. 1, if you would, please, Mr. Smith.
- A. Yes, sir. Exhibit No. 1 is a xerox reproduction of a USGS topographic map. The scale of this map is 1-inch equals 2,000 feet. The contour interval is ten feet. You will notice in Section 30, the Northeast Quarter of that section, the Midroc (Hunt) Cedar Creek Land and Timber 30-1 No. 1 Well. The well was originally drilled by Hunt Oil Company from Dallas, Texas, in 1994. Midroc took over operations earlier this year in 2000. That well spots 1,000 feet from the North line and 660 feet from the East line. You will notice in the Southeast Quarter of Section 19, 4 North, 12 East, shaded in red is our proposed location which is 330 feet from the South line and 2,000 feet from the East line. The distance between those two points is 1,887 feet.
- Q. All right, sir. Let's go to your Exhibit No. 2. Tell us what this exhibit is and describe the information shown there, Mr. Smith.

1 A. Okay. Exhibit No. 2 is a structure map. It is contoured on top of the Smackover
2 formation. The scale of this map is 1-inch equals 2,000 feet. The contour interval is 100
3 feet. There are two points of subsurface control on this map. The first point is the
4 producing well, the 30-1 No. 1, in the northeast of Section 30. The subsea top on the
5 Smackover in that well is -11,571. The other point of control is to the northwest--up in
6 the northwest part of the map in Section 14 of 4 North, 11 East. That's the Hunt Cedar
7 Creek 14-9 No. 1 Well. The subsurface point for the top of the Smackover is -11,362.
8 This structural interpretation is based on these two subsurface points and primarily
9 seismic information that we have interpreted. What you are seeing around the proposed
10 location is a small structural closure. We believe that a well drilled 330 from the South
11 line and 2,000 feet from the East line of Section 19 would be the optimum geological
12 location. Before we leave this exhibit I would like to point out the line of cross section
13 A-A' which runs from the northwest to the southeast beginning with the Hunt well, the
14 14-9 Hunt well, in Section 14 through the proposed location and down to the producing
15 well.

16 Q. All right, sir. Let's go to your cross section which is your Exhibit 3. Describe that line of
17 cross section, Mr. Smith.

18 A. Exhibit No. 3 is the stratigraphic cross section A-A'. Beginning on the left side of the
19 section or the northwest part, geologically speaking, is the Hunt Cedar Creek 14-9 No. 1
20 Well in Section 14. This well was drilled as a dry hole and plugged and abandoned in
21 March of 1995. You can see that it has very little Smackover development. Moving over

1 to the A' or to the right side of the cross section we have the Midroc Cedar Creek Land
2 and Timber 30-1 No. 1 Well. This well was completed December 12, 1994, in the
3 Smackover formation. Perforations are shaded in red. They are 11,870 to 11,883. The
4 well initially flowed 108 barrels per day. It is still producing today at a rate of about 40
5 barrels per day. The cumulative production as of March 2000 was 55,403 barrels of oil.
6 The top of the Smackover is shown here shaded in green. We had to compress the scale
7 here for illustration purposes so what you are seeing as far as a horizontal scale is
8 somewhat compressed for illustration. You will notice two locations sketched in. One of
9 them would be located 330 feet from the South line of Section 19 and the other location
10 would be located 660 feet from the South line of the location. We believe that location
11 660 feet would be off the stratigraphic buildup and is a high risk location. We believe
12 that the optimum geological location is 330 feet from the South line and 2,000 feet from
13 the East line.

14 Q. Referring back to your Exhibit No. 2, that 330 location falls within the closure of the
15 contour where the current 30-1 No. 1 Well is producing. Is that correct?

16 A. Yes, sir, that's correct.

17 Q. The 660 location based on your Exhibit No. 3 would fall off that contour, would be down
18 off the structure and, as you have described that, is a high risk location.

19 A. Yes, sir, that's correct.

1 Q. This well also we know from the permit application being 330 from the South line and
2 2,000 from the East line would be 640 feet from the West line of the southeast quarter. Is
3 that correct?

4 A. Yes, sir, that's correct.

5 Q. The rules require 660 and we have an exception to the south that would also be an
6 exception from the west line of that southeast quarter unit.

7 A. Yes, sir.

8 MR. WATSON: Mr. Rogers, I would ask that you receive into the record of the hearing
9 Exhibits 1 through 3 to the testimony of Mr. Smith.

10 MR. ROGERS: The exhibits are admitted.

11 (Whereupon, the exhibits were received in evidence)

12 Q. Mr. Smith, would the granting of this petition approving the exceptional location that you
13 have described prevent waste and protect coequal and correlative rights?

14 A. Yes, sir, it would.

15 Q. Would it avoid the drilling of unnecessary wells?

16 A. Yes, sir.

17 MR. WATSON: I tender my witness for any questions you have.

18 MR. ROGERS: The staff has no questions. We will review the evidence and make a
19 recommendation to the Board.

20 MR. WATSON: Thank you.

1 MR. ROGERS: The last item is Item 20, Docket No. 8-23-200011, petition by Exxon
2 Corporation.

3 MR. WATSON: Mr. Rogers, I have prefiled an affidavit of testimony by Wayne Idol in
4 support of this item to grant TA status to a well, the T. R. Miller Mill - State Line Oil Trust 31-3
5 No. 1 Well, in the Jay/Little Escambia Creek Unit, Escambia County, Alabama. I would ask that
6 you make that affidavit of testimony a part of the record of this hearing and recommend to the
7 Board approval of that based on the affidavit of testimony.

8 MR. ROGERS: Mr. Idol's affidavit is admitted.

9 (Whereupon, the affidavit was received in evidence)

10 MR. ROGERS: We will review the evidence and make a recommendation to the Board.
11 Thank you. This hearing is adjourned.

12 (Whereupon, the hearing was adjourned at 11:27 a.m.)


REPORTER'S CERTIFICATE

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STATE OF ALABAMA
COUNTY OF TUSCALOOSA

I, Rickey Estes, Hearing Reporter in and for the State of Alabama, do hereby certify that on Wednesday, August 23, 2000, in the Board Room of the State Oil and Gas Board Building, University of Alabama Campus, Tuscaloosa, Alabama, I reported the proceedings before a Hearing Officer; that the foregoing 53 typewritten pages contain a true and accurate verbatim transcription of said proceedings to the best of my ability, skill, knowledge, and belief.

I further certify that I am neither kin or counsel to the parties to said cause, nor in any manner interested in the results thereof.


Rickey Estes
Hearing Reporter
State of Alabama