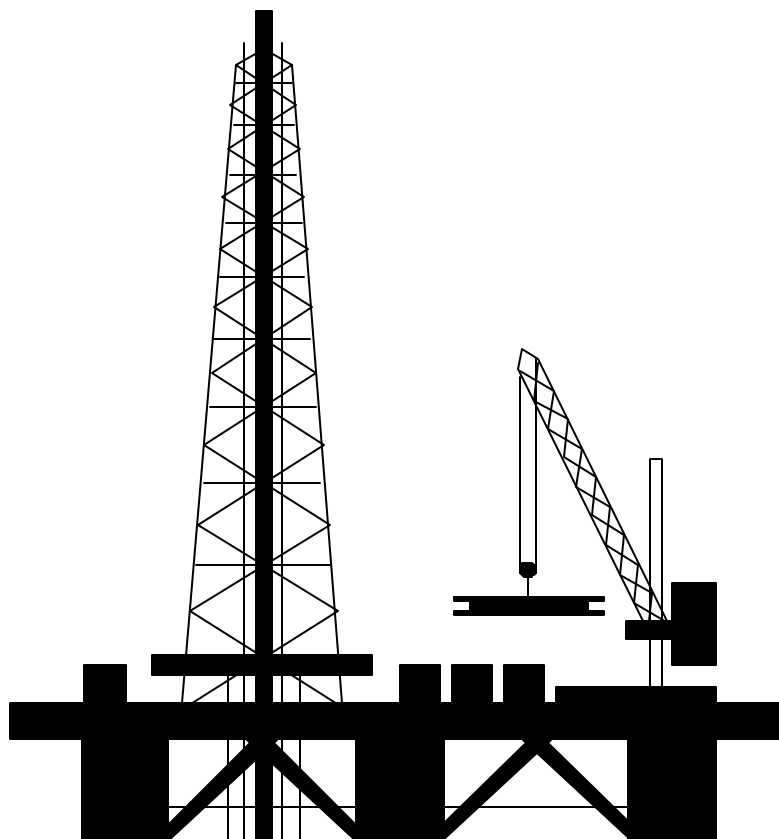


Central Gulf of Mexico Sale 178 – Part 1 March 28, 2001

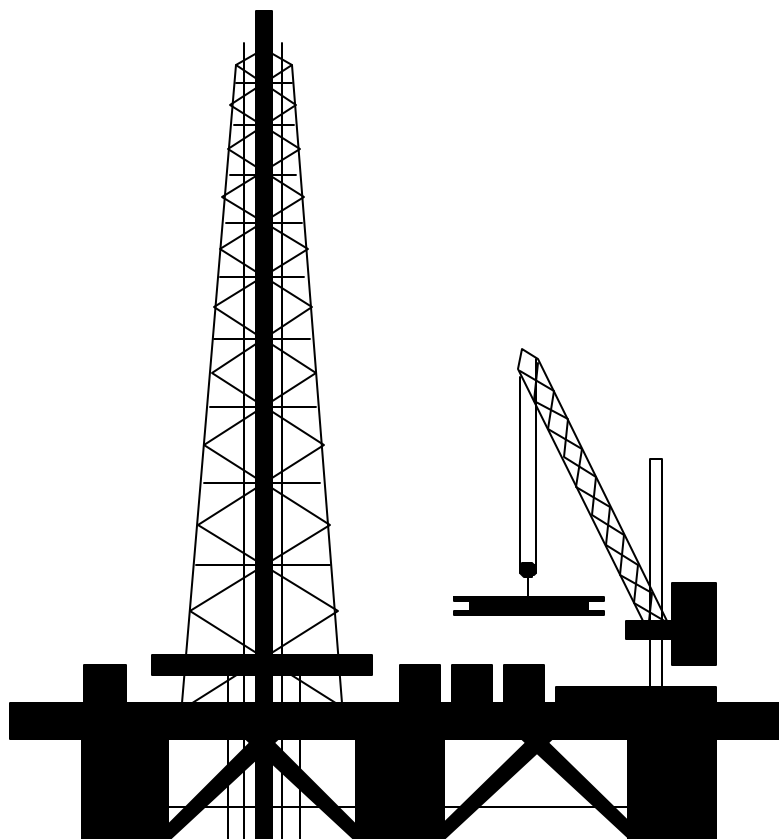
Sale Summary, Bidding Results and
Related Analyses



Central Gulf of Mexico Sale 178 – Part 1 March 28, 2001

Sale Summary, Bidding Results and
Related Analyses

By
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Central Gulf of Mexico

Sale 178 – Part 1 March 28, 2001 Sale Overview

Sale 178 – Part 1 in the Central Gulf of Mexico (CGOM) was the first sale in that planning area in which the sale’s royalty suspension volumes and water depth categories were specified in the notice of lease sale. The “new lease” provisions of the Deep Water Royalty Relief Act of 1995 (DWRRA) were no longer mandatory. In this sale, 547 tracts received 780 bids (an average of 1.43 bids per tract) and 157 of those tracts were in water depths eligible for royalty relief.

Bidding Results

Sale 178 – Part 1, in terms of the number of tracts receiving bids, was almost 60 percent larger than CGOM Sale 175 held in 2000. The increase in aggregate high bids in Sale 178 – Part 1 compared to Sale 175 was relatively large, as they rose 68 percent. In Sale 178 – Part 1, 547 tracts received 780 bids with high bids totaling \$505,468,501.

Bidding results by water depth zone are summarized in Table 1 and more complete details are presented in Appendix A.

Table 1.—*Bidding Activity by Water Depth Zone*

Water Depth	Tracts with Bids	High Bids (\$ MM)	Number of Bids	Average Bids/Tract
< 200 m.	338	\$167.55	502	1.49
200 - 399 m.	15	\$13.46	21	1.40
400 - 799 m.	37	\$50.27	41	1.11
800 – 1,599 m.	110	\$170.03	148	1.35
1,600+ m.	47	\$104.15	68	1.45
Total	547	\$505.47	780	1.43

Bidding activity in Sale 178 – Part 1 resulted in a large increase in the number of tracts receiving bids, number of bids, and aggregate high bids compared to the previous CGOM sale (Sale 175, March 15, 2000). In Sale 175, 344 tracts received 469 bids, whereas 547 tracts received 780 bids in Sale 178 – Part 1, resulting in increases of 59 and 66 percent, respectively. In addition, the sum of high bids submitted on tracts receiving bids in Sale 178 – Part 1 increased by about 68 percent compared to Sale 175 (\$505.47 million v. \$300.57 million). The increase in tracts, number of bids, and aggregate high bids was due to higher levels of bidding activity, especially

in water depths of less than 200 meters. The amount of competition for tracts was better than other recent GOM lease sales. About 73 percent of tracts received single-bids. Two-bid tracts accounted for the next highest percent of tracts receiving bids (about 17 percent). A summary of aggregate bidding results by number of bidders for the sale is presented in Table 2 and bidding results by number of bids for the various water depth zones are presented in Appendix B.

Table 2.—*Bidding Results by Number of Bids Submitted*¹

Bids	Tracts	Percent of Tracts	High Bids (\$ MM)	Percent of High Bids
1	398	72.76%	\$265.30	52.49%
2	93	17.00%	\$69.60	13.77%
3	35	6.40%	\$70.24	13.90%
4	15	2.74%	\$51.78	10.24%
5 or more	6	1.10%	\$48.55	9.61%
Total	547	100.00%	\$505.47	100.00%

In contrast to many sales in the CGOM, in Sale 178 – Part 1, more tracts received high bids of \$50 or more per acre than those receiving less. In Sale 178 – Part 1, tracts with high bids greater than \$150 per acre accounted for about 74 percent of aggregate high bids, an amount higher than that observed in Sale 175. A summary of bidding results by high bid per acre for the sale is presented in Table 3 and bidding results by high bid per acre for the various water depth zones are presented in Appendix C. In addition, a graphical presentation of bidding results is presented in Appendix D.

Table 3.—*Bidding Results by High Bid per Acre*

High Bid per Acre	Tracts	Percent of Tracts	High Bids (\$ MM)	Percent of High Bids
< \$50	248	45.34%	\$45.52	9.01%
\$50 - 74.99	82	14.99%	\$25.52	5.05%
\$75 - 99.99	59	10.79%	\$26.58	5.26%
\$100 - 149.99	54	9.87%	\$34.17	6.76%
\$150+	104	19.01%	\$373.68	73.93%
Total	547	100.00%	\$505.47	100.00%

¹ In the tables throughout this report, percent totals may not add exactly to 100.00% because of rounding. In addition, other totals in the tables, e.g., high bids, also may differ slightly from the text because of rounding.

Bidding on Royalty Suspension Volume Tracts

A total of 110 tracts in 800 – 1,599 meters that are eligible for royalty suspension volumes of 9 million barrels of oil equivalent (MMBOE) received bids as did 47 tracts in 1,600 meters or more that are eligible for royalty suspension volumes of 12 MMBOE. These tracts accounted for 29 percent of the tracts in the sale receiving bids and 54 percent of the sale's high bids. To put the magnitude of this bidding activity in perspective, the number of tracts receiving bids in water depths of 800 meters or more in Sale 178 – Part 1 was 17 percent higher and their associated high bids were 35 percent higher than those received in Sale 175. These results are interesting because the royalty relief offered with this sale's royalty suspension volumes is potentially much lower than that available in previous sales under the provisions of the DWRRA. In the water depth categories between 200 – 799 meters bidding activity in Sale 178 exceeded the level observed in Sale 175 for both tracts receiving bids and aggregate high bids. This result was somewhat surprising because previously tracts in these water depths were eligible for royalty suspension volumes under the provisions of the DWRRA. In Sale 178, tracts in 200 – 799 meters are not eligible for automatic royalty suspension volumes.

In comparing the average high bid per acre by water depth category between Sales 178 – Part 1 and 175, in every water depth category, the Sale 178 – Part 1 averages were above those observed in Sale 175. In water depths less than 200 meters, the Sale 178 – Part 1 average was \$106.64/acre and the Sale 175 average was \$99.51/acre. In 200-400 meters, Sale 178 – Part 1's average was \$160.58/acre and Sale 175's was \$57.10/acre. In 400-800 meters, Sale 178 – Part 1's average was \$235.88/acre and Sale 175's was \$140.41/acre. Finally, in 800 meters or more, Sale 178 – Part 1's average was \$303.19/acre and Sale 175's was \$284.49/acre. These results suggest that industry continues to perceive significant economic potential to exist in deep water despite the lower amounts of royalty suspension volumes currently being offered.

Phase 1 Results

Following the post-sale bid evaluation procedures, which include a modified 3-bid rule, high bids on 198 tracts were accepted in Phase 1 of Sale 178 – Part 1. High bids were accepted on 145 tracts in water depths less than 200 meters, 13 tracts in 200 – 799 meters, and 40 tracts in water depths of 800 meters or more, which are eligible for automatic royalty suspension volumes. The Phase 1-accepted high bids accounted for about 36 percent of the tracts, representing 13 percent of the high bids. In terms of Phase 1 bid acceptances, the three most successful companies were: Shell Offshore with 11 of 20 high bids accepted, Anadarko Petroleum with 9 of 17 high bids accepted, and PanCanadian Gulf of Mexico with 11 of 16 high bids accepted.

Phase 1-accepted high bids were in two categories of tracts. 194 were wildcat and confirmed tracts determined to be non-viable. Four tracts were accepted in Phase 1 by the number of bids rule. The Sale 178 – Part 1, Phase 1 results by number of bids and high bid per acre are presented in Tables 4 and 5, respectively.

Table 4.—Phase 1 Results by Number of Bids

Bids	Tracts	Percent of Tracts	High Bids (\$ MM)	Percent of High Bids
1	161	81.31%	\$50.02	75.37%
2	27	13.64%	\$7.33	11.04%
3+	10	5.05%	\$9.02	13.59%
Total	198	100.00%	\$66.37	100.00%

Table 5.—Phase 1 Results by High Bid per Acre

High Bid per Acre	Tracts	Percent of Tracts	High Bids (\$ MM)	Percent of High Bids
< \$50	119	60.10%	\$21.73	32.74%
\$50 - 74.99	30	15.15%	\$8.69	13.09%
\$75 - 99.99	24	12.12%	\$10.82	16.30%
\$100 - 149.99	18	9.09%	\$10.23	15.41%
\$150+	7	3.54%	\$14.90	22.45%
Total	198	100.00%	\$66.37	100.00%

Revised Arithmetic Average Measure of Tract (RAM)

The RAM is a secondary bid acceptance criterion that is used in Phase 2 of the Sale 178 – Part 1 bid evaluation process on multi-bid tracts that have high bids that do not exceed the Government’s Adjusted Delayed Value (ADV) of the tract. The ADV is explained in detail in Appendix J.

For evaluating the high bids on multi-bid tracts that do not exceed the ADV, the RAM is applied to (a) drainage and development tracts having three or more qualified bids with the third highest bid being at least 25 percent of the tract’s high bid and (b) confirmed and wildcat tracts having two or more qualified bids with the second highest bid being at least 25 percent of the tract’s high bid. Only bids that are at least 25 percent of the high bid are considered in calculating the RAM. If the high bid exceeds the RAM, it is accepted.

Use of the RAM allows the MMS to balance market factors and its own ADV evaluation in determining fair market value. Previously, using the Geometric Average Evaluation Of Tract (GAEOT), a few low losing bids on a tract were sufficient to require an MMS evaluation of the ADV well in excess of \$100 million for the high bid to be rejected. Using the RAM, the highest

ADV required to reject a high bid on a multi-bid tract in Sale 178 – Part 1 is about \$35 million. This value for a lease is not unreasonable relative to high bids observed in this sale.

In Sale 178 – Part 1, 46 tracts classified as wildcat and confirmed receiving three or more bids were passed to Phase 2 for evaluation. These tracts, potentially, could have their bid acceptance or rejection decision based on the RAM. After adjusting the number of bids to include only those bids that are at least 25 percent of a tract's high bid, 34 tracts could be eligible for a decision based on the RAM. These 34 tracts would require ADV's of around \$0.53 million to \$35 million for rejection. For two tracts (G22754 and G22756) in Sale 178 – Part 1, the RAM was the decision rule that allowed the high bid to be accepted. Detailed tables of tracts receiving three or more bids by water depth zone are presented in Appendix E.

Bidding Activity

The number of companies participating in Sale 178 – Part 1 increased to 90 from the 63 active in Sale 175, the previous CGOM sale. Twenty-one companies submitted bids (either solo or jointly) on 20 or more tracts. Magnum Hunter Production was the most active company in terms of bids submitted with 62. The most apparent high bids, 53, were submitted by Chevron U.S.A. However, Exxon Asset Management Company had the greatest aggregate high bids with a total of \$87.94 million.

With about 27 percent of the tracts receiving bids in the sale being multi-bid tracts, only one firm (Conoco) that submitted ten or more bids was the high bidder on every bid it submitted. For firms submitting 20 or more bids, the most successful bidder was Exxon Asset Management Company, with 20 high bids out of the 22 bids that it offered.

The ten most active bidders in terms of total amount of high bids are listed in Table 6. Also listed in the table are the total number of bids and number of high bids submitted by the companies with their rank indicated in parentheses. Appendix F contains a summary of bids for all companies that participated in the sale.

Although some companies that were most active in CGOM Sale 175 (March 15, 2000) continued to be among the most active in Sale 178 – Part 1, a number of changes were apparent when companies were ranked by high bids submitted. For example, two companies (EEX Corporation and Marathon Oil Company) that were in the Sale 175 top ten were not ranked among the top 20 participants in Sale 178 – Part 1. Also, two Sale 175 top ten firms (CNG Producing and Vastar Resources) did not participate in Sale 178 – Part 1.

Appendix G presents a listing of bidding by the most active companies in Sales 178 – Part 1 and 175.

Table 6.—*Most Active Bidders by Total Amount of High Bids*
(For number of bids and high bids, rank is in parentheses.)

Company	Total High Bids	Number of Bids	High Bids
Exxon Asset Management Company	\$87,940,000	22 (18)	20 (12)
Kerr-McGee Oil & Gas Corporation	\$55,923,220	36 (7)	32 (5)
Anadarko Petroleum Corporation	\$32,226,499	29 (11)	23 (10)
Murphy Exploration & Production Co.	\$31,982,944	23 (15)	14 (15)
Samedan Oil Corporation	\$27,536,748	42 (6)	33 (3)
Shell Offshore Inc.	\$25,531,974	34 (8)	27 (8)
Chevron U.S.A. Inc.	\$23,901,512	59 (2)	53 (1)
Dominion Exploration & Production Inc.	\$22,145,924	44 (5)	31 (7)
BP Exploration & Production Inc.	\$19,447,215	34 (8)	25 (9)
Spinnaker Exploration Company, L.L.C.	\$5,049,094	54 (3)	32 (5)

Sale 178 – Part 1 v. Sale 175

The results of Sale 178 – Part 1 surpassed the results of Sale 175 in every category of bidding activity. The average high bid per acre was \$182.31 in Sale 178 – Part 1 as compared with \$170.35 in Sale 175. In Sale 178 – Part 1, 547 tracts received 780 bids, thus exceeding the 344 tracts that received 469 bids in Sale 175. In addition, the number of bids per tract increased to 1.43 from 1.36 in the previous sale.

The amount of bidding activity in deep water in Sale 178 – Part 1 increased compared to Sale 175. Specifically, the number of tracts potentially eligible for deepwater royalty suspension volumes (water depth of 800 meters or more) receiving bids increased by about 35 percent, and the high bids on these tracts increased 45 percent. Appendix H presents a graphical comparison of sale results.

In Sale 178 – Part 1, five tracts with high bids that were rejected in Sale 175 received bids. The high bids on the five tracts increased from \$2,718,039 in Sale 175 to \$26,453,431 in Sale 178 – Part 1, an increase in high bids of 873 percent. The number of bids on these five tracts increased from 6 to 15, a gain of 150 percent. Subsequently, the high bid on one of the tracts was rejected in Sale 178 – Part 1. For the four tracts on which the high bids were accepted, the increase was 1,075 percent. The potential to realize substantial gains in high bids on tracts that were previously rejected highlights the importance of MMS’s bid adequacy procedure.

Appendix A

Central Gulf of Mexico
Outer Continental Shelf
Oil and Gas Lease Sale 178 – Part 1

Bidding Summary

Central Gulf of Mexico

OCS Oil and Gas Lease Sale 178 – Part 1

Sale Day Statistics by Royalty Rate

	<u>16 2/3% Royalty</u>	<u>12 1/2% Royalty</u>	<u>Sale Total</u>
Tracts Receiving Bids	353	194	547
Acres Receiving Bids	1,655,072.42	1,117,440.00	2,772,512.42
Sum of High Bids	\$181,012,667	\$324,455,834	\$505,468,501
Sum of All Bids	\$244,966,889	\$418,440,074	\$663,406,963
Total Number of Bids	523	257	780
Average Bids	1.48	1.32	1.43
Companies Bidding	78	30	90
Highest Bid per Tract	\$6,377,000	\$26,115,000	\$26,115,000
- Tract Number	22762	22914	22914
- Number of Bids	5	4	4
Highest Bid per Acre	\$1,437.89	\$4,533.85	\$4,533.85
- Tract Number	22762	22914	22914
- Number of Bids	5	4	4
Most Bids	5	6	6
- Tract Number	22762, 22524 22738	22918	22918

Central Gulf of Mexico

OCS Oil and Gas Lease Sale 178 – Part 1

Sale Day Statistics for 16 2/3% Royalty Rate Tracts

	<u>16 2/3% w/RS¹</u>	<u>16 2/3% w/ROY²</u>	<u>16 2/3% Total</u>
Tracts Receiving Bids	338	15	353
Acres Receiving Bids	1,571,220.28	83,852.14	1,655,072.42
Sum of High Bids	\$167,548,057	\$13,464,610	\$181,012,667
Sum of All Bids	\$227,653,997	\$17,312,892	\$244,966,889
Total Number of Bids	502	21	523
Average Bids	1.49	1.40	1.48
Companies Bidding	76	13	78
Highest Bid per Tract	\$6,377,000	\$4,036,420	\$6,377,000
- Tract Number	22762	22930	22762
- Number of Bids	5	1	5
Highest Bid per Acre	\$1,437.89	\$700.77	\$1,437.89
- Tract Number	22762	22930	22762
- Number of Bids	5	1	5
Most Bids	5	3	5
- Tract Number	22762, 22524 22738	22850	22762, 22524 22738

¹ “16 2/3% w/RS” is that category of tract in less than 200 meters of water with a royalty rate of 1/6 that is eligible for royalty suspension volumes of 20 billion cubic feet for natural gas from wells 15,000 feet or more deep.

² “16 2/3% w/ROY” is that category of tract in 200 to 399 meters of water with a royalty rate of 1/6 that is not eligible for an automatic royalty suspension volume.

Central Gulf of Mexico

OCS Oil and Gas Lease Sale 178 – Part 1

Sale Day Statistics for 12 1/2% Royalty Rate Tracts

	<u>12 1/2% w/ROY¹</u>	<u>12 1/2% w/RS3²</u>	<u>12 1/2% w/RS4³</u>
Tracts Receiving Bids	37	110	47
Acres Receiving Bids	213,120.00	633,600.00	270,720.00
Sum of High Bids	\$50,271,320	\$170,033,548	\$104,150,966
Sum of All Bids	\$51,172,600	\$195,355,512	\$171,911,962
Total Number of Bids	41	148	68
Average Bids	1.11	1.35	1.45
Companies Bidding	17	28	19
Highest Bid per Tract	\$17,134,420	\$13,352,352	\$26,115,000
- Tract Number	22932	22898	22914
- Number of Bids	1	3	4
Highest Bid per Acre	\$2,974.73	\$2,318.12	\$4,533.85
- Tract Number	22932	22898	22914
- Number of Bids	1	3	4
Most Bids	2	4	6
- Tract Number	22884, 22886 22905, 22910	22887, 22907	22918

¹ “12 1/2% w/ROY” is that category of tract in 400 to 799 meters of water with a royalty rate of 1/8 that is not eligible for an automatic royalty suspension volume.

² “12 1/2% w/RS3” is that category of tract in 800 to 1,599 meters of water with a royalty rate of 1/8 that is eligible for a royalty suspension volume of 9 MMBOE per lease.

³ “12 1/2% w/RS4” is that category of tract in 1,600 or more meters of water with a royalty rate of 1/8 that is eligible for a royalty suspension volume of 12 MMBOE per lease.

Appendix B

Central Gulf of Mexico
Outer Continental Shelf
Oil and Gas Lease Sale 178 – Part 1

Bidding by Number of Bids

Sale 178 – Part 1

All Tracts

No. Of Bids	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
1	398	72.76%	\$265.30	52.49%
2	93	17.00%	\$69.60	13.77%
3	35	6.40%	\$70.24	13.90%
4	15	2.74%	\$51.78	10.24%
<u>5+</u>	<u>6</u>	<u>1.10%</u>	<u>\$48.55</u>	<u>9.61%</u>
Total	547	100.00%	\$505.47	100.00%

Tracts with 1/6 Royalty Rate

No. Of Bids	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
1	245	69.41%	\$78.83	43.55%
2	64	18.13%	\$39.09	21.59%
3	29	8.22%	\$38.69	21.37%
4	12	3.40%	\$16.97	9.37%
<u>5+</u>	<u>3</u>	<u>0.85%</u>	<u>\$7.45</u>	<u>4.11%</u>
Total	353	100.00%	\$181.01	100.00%

Tracts with 1/8 Royalty Rate

No. Of Bids	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
1	153	78.87%	\$186.48	57.47%
2	29	14.95%	\$30.51	9.40%
3	6	3.09%	\$31.56	9.73%
4	3	1.55%	\$34.81	10.73%
<u>5+</u>	<u>3</u>	<u>1.55%</u>	<u>\$41.10</u>	<u>12.67%</u>
Total	194	100.00%	\$324.46	100.00%

Sale 178 – Part 1, by Water Depth Category

1/6 Royalty (<200 meters; 20 billion cubic feet Royalty Suspension Volume [RSV] for gas from deep wells, i.e., drilling depth of 15,000 feet or more)

No. Of Bids	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
1	235	69.53%	\$71.04	42.40%
2	60	17.75%	\$34.82	20.78%
3	28	8.28%	\$37.28	22.25%
4	12	3.55%	\$16.97	10.13%
<u>5+</u>	<u>3</u>	<u>0.89%</u>	<u>\$7.45</u>	<u>4.44%</u>
Total	338	100.00%	\$167.55	100.00%

1/6 Royalty (200-399 meters; no automatic RSV)

No. Of Bids	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
1	10	66.67%	\$7.79	57.84%
2	4	26.67%	\$4.27	31.72%
3	1	6.67%	\$1.41	10.44%
4	0	0.00%	\$0.00	0.00%
<u>5+</u>	<u>0</u>	<u>0.00%</u>	<u>\$0.00</u>	<u>0.00%</u>
Total	15	100.00%	\$13.46	100.00%

1/8 Royalty (400-799 meters; no automatic RSV)

No. Of Bids	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
1	33	89.19%	\$47.47	94.44%
2	4	10.81%	\$2.80	5.56%
3	0	0.00%	\$0.00	0.00%
4	0	0.00%	\$0.00	0.00%
<u>5+</u>	<u>0</u>	<u>0.00%</u>	<u>\$0.00</u>	<u>0.00%</u>
Total	37	100.00%	\$50.27	100.00%

1/8 Royalty (800-1,599 meters; 9 MMBOE RSV per lease)

No. Of Bids	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
1	82	74.55%	\$105.56	62.08%
2	20	18.18%	\$24.22	14.25%
3	6	5.45%	\$31.56	18.56%
4	2	1.82%	\$8.69	5.11%
<u>5+</u>	<u>0</u>	<u>0.00%</u>	<u>\$0.00</u>	<u>0.00%</u>
Total	110	100.00%	\$170.03	100.00%

1/8 Royalty (1,600 or more meters; 12 MMBOE RSV per lease)

No. Of Bids	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
1	38	80.85%	\$33.44	32.11%
2	5	10.64%	\$3.49	3.35%
3	0	0.00%	\$0.00	0.00%
4	1	2.13%	\$26.12	25.07%
<u>5+</u>	<u>3</u>	<u>6.38%</u>	<u>\$41.10</u>	<u>39.47%</u>
Total	47	100.00%	\$104.15	100.00%

Appendix C

Central Gulf of Mexico
Outer Continental Shelf
Oil and Gas Lease Sale 178 – Part 1

Bidding by High Bid per Acre

Sale 178 – Part 1

All Tracts

High Bid/acre	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
< \$50	248	45.34%	\$45.52	9.01%
\$50 - 74.99	82	14.99%	\$25.52	5.05%
\$75 - 99.99	59	10.79%	\$26.58	5.26%
\$100 - 149.99	54	9.87%	\$34.17	6.76%
<u>\$150+</u>	<u>104</u>	<u>19.01%</u>	<u>\$373.68</u>	<u>73.93%</u>
Total	547	100.00%	\$505.47	100.00%

Tracts with 1/6 Royalty Rate

High Bid/acre	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
< \$50	175	49.58%	\$28.75	15.88%
\$50 - 74.99	50	14.16%	\$14.32	7.91%
\$75 - 99.99	36	10.20%	\$14.81	8.18%
\$100 - 149.99	34	9.63%	\$19.45	10.75%
<u>\$150+</u>	<u>58</u>	<u>16.43%</u>	<u>\$103.68</u>	<u>57.28%</u>
Total	353	100.00%	\$181.01	100.00%

Tracts with 1/8 Royalty Rate

High Bid/acre	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
< \$50	73	37.63%	\$16.77	5.17%
\$50 - 74.99	32	16.49%	\$11.20	3.45%
\$75 - 99.99	23	11.86%	\$11.77	3.63%
\$100 - 149.99	20	10.31%	\$14.72	4.54%
<u>\$150+</u>	<u>46</u>	<u>23.71%</u>	<u>\$270.00</u>	<u>83.22%</u>
Total	194	100.00%	\$324.46	100.00%

Sale 178 – Part 1, by Water Depth Category

1/6 Royalty (<200 meters; 20 billion cubic feet Royalty Suspension Volume [RSV] for gas from deep wells, i.e., drilling depth of 15,000 feet or more)

High Bid/acre	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
< \$50	170	50.30%	\$27.81	16.60%
\$50 - 74.99	48	14.20%	\$13.55	8.09%
\$75 - 99.99	35	10.36%	\$14.27	8.52%
\$100 - 149.99	32	9.47%	\$18.02	10.76%
<u>\$150+</u>	<u>53</u>	<u>15.68%</u>	<u>\$93.89</u>	<u>56.04%</u>
Total	338	100.00%	\$167.55	100.00%

1/6 Royalty (200-399 meters; no automatic RSV)

High Bid/acre	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
< \$50	5	33.33%	\$0.93	6.94%
\$50 - 74.99	2	13.33%	\$0.77	5.75%
\$75 - 99.99	1	6.67%	\$0.54	4.00%
\$100 - 149.99	2	13.33%	\$1.43	10.62%
<u>\$150+</u>	<u>5</u>	<u>3.33%</u>	<u>\$9.79</u>	<u>72.70%</u>
Total	15	100.00%	\$13.46	100.00%

1/8 Royalty (400 - 799 meters; no automatic RSV)

High Bid/acre	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
< \$50	16	43.24%	\$2.99	5.95%
\$50 - 74.99	7	18.92%	\$2.54	5.04%
\$75 - 99.99	6	16.22%	\$2.93	5.83%
\$100 - 149.99	2	5.41%	\$1.36	2.70%
<u>\$150+</u>	<u>6</u>	<u>16.22%</u>	<u>\$40.45</u>	<u>80.47%</u>
Total	37	100.00%	\$50.27	100.00%

1/8 Royalty (800-1,599 meters; 9 MMBOE RSV per lease)

High Bid/acre	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
< \$50	30	27.27%	\$7.42	4.36%
\$50 - 74.99	22	20.00%	\$7.57	4.45%
\$75 - 99.99	14	12.73%	\$7.25	4.26%
\$100 - 149.99	15	13.64%	\$11.06	6.51%
<u>\$150+</u>	<u>29</u>	<u>26.36%</u>	<u>\$136.73</u>	<u>80.42%</u>
Total	110	100.00%	\$170.03	100.00%

1/8 Royalty (1,600 or more meters; 12 MMBOE RSV per lease)

High Bid/acre	Tracts	Percent of Tracts	High Bids (\$MM)	Percent of High Bids
< \$50	27	57.45%	\$6.36	6.11%
\$50 - 74.99	3	6.38%	\$1.09	1.05%
\$75 - 99.99	3	6.38%	\$1.58	1.52%
\$100 - 149.99	3	6.38%	\$2.30	2.21%
<u>\$150+</u>	<u>11</u>	<u>23.40%</u>	<u>\$92.81</u>	<u>89.11%</u>
Total	47	100.00%	\$104.15	100.00%

Appendix D

Central Gulf of Mexico
Outer Continental Shelf
Oil and Gas Lease Sale 178 – Part 1

Bidding Results – Graphs

Distribution of High Bids Sale 178 - Part 1, CGOM

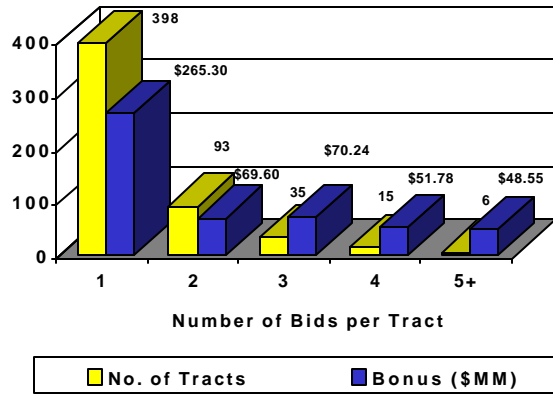
Prepared by:
Economics Division, MMS

Sale 178 - Part 1 (CGOM) Bidding Results

- 547 tracts received 780 bids (1.43 bids/tract)
- High bids were \$505.47 MM
- Average high bid per acre was \$182.31
- 90 companies submitted bids
- 353 tracts in < 400 meters received bids - 64.53% of tracts and 35.81% of high bids
- 194 tracts in 400+ meters received bids - 35.47% of tracts and 64.19% of high bids

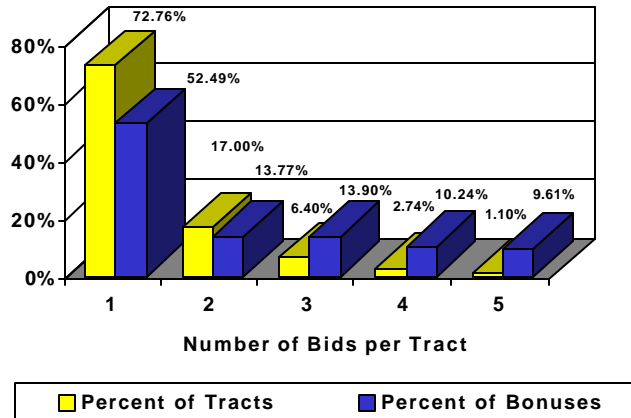
Sale 178-1, Aggregate

Bidding Activity by Bids per Tract



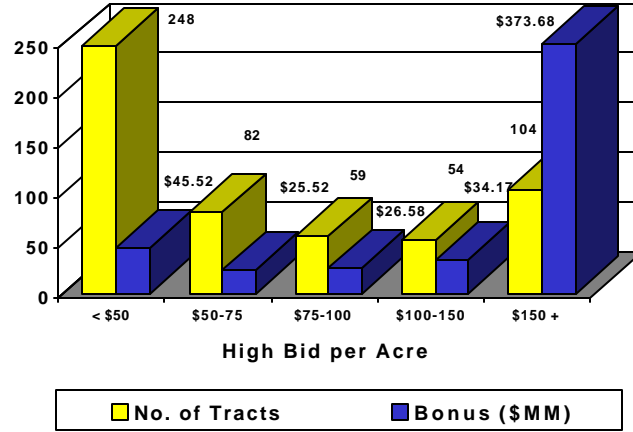
Sale 178-1, Aggregate

Bidding Activity by Bids per Tract



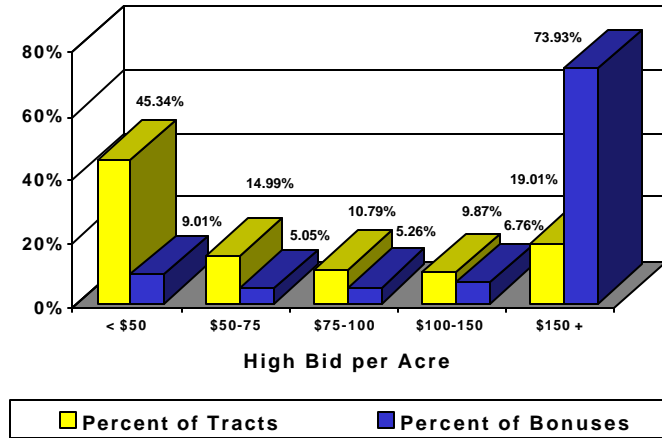
Sale 178-1, Aggregate

Bidding Activity by High Bid per Acre



Sale 178-1, Aggregate

Bidding Activity by High Bid per Acre



Sale 178 - Part 1

Bidding by Water Depth Category

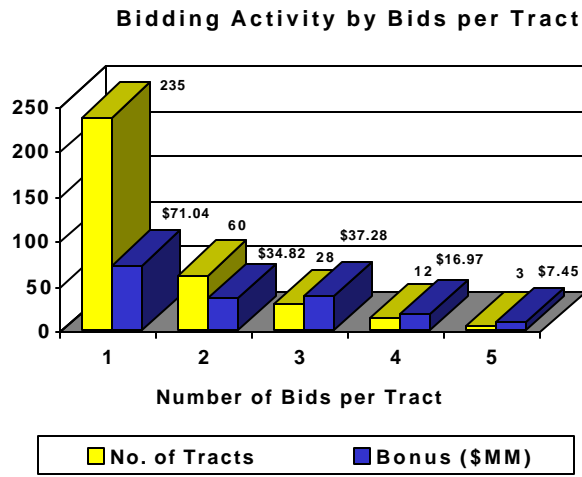
Prepared by:
Economics Division, MMS

Sale 178 - Part 1 (CGOM)

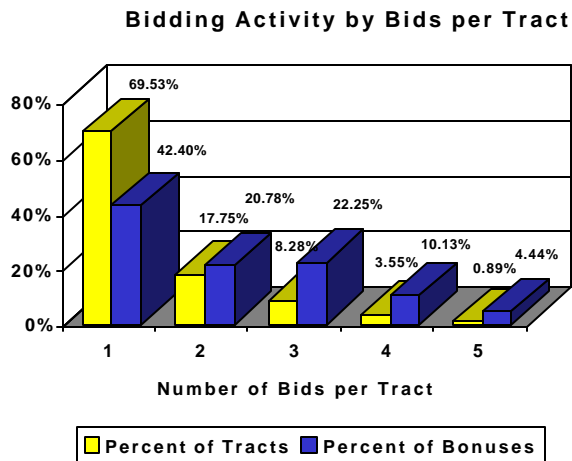
Bidding by Water Depth Category

- 338 tracts in < 200 meters received 502 bids and high bids of \$167.55 MM (\$106.64/acre)
- 15 tracts in 200-399 meters had 21 bids and high bids of \$13.46 MM (\$160.58/acre)
- 37 tracts in 400-799 meters had 41 bids and high bids of \$50.27 MM (\$235.88/acre)
- 157 tracts in > 800 meters had 216 bids and high bids of \$274.18 MM (\$302.53/acre)

Sale 178-1, Tracts in < 200 Meters Water Depth

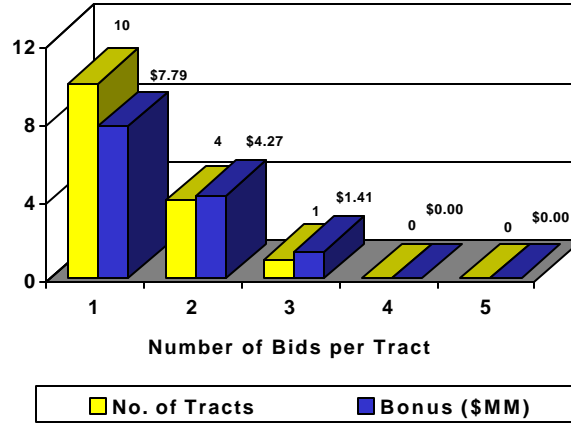


Sale 178-1, Tracts in < 200 Meters Water Depth



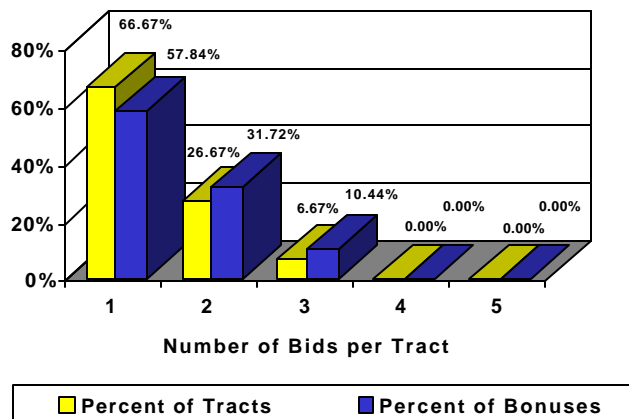
Sale 178-1, Tracts in 200-400 Meters Water Depth

Bidding Activity by Bids per Tract



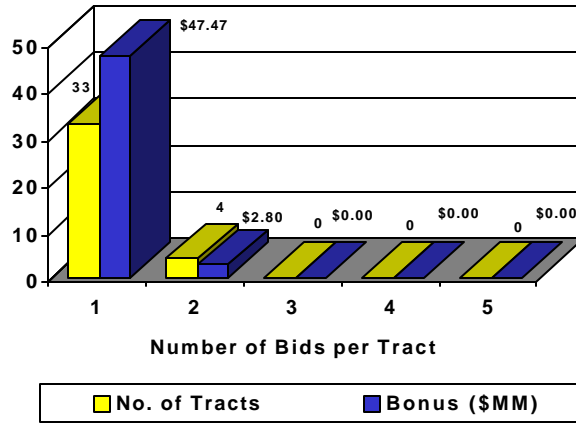
Sale 178-1, Tracts in 200-400 Meters Water Depth

Bidding Activity by Bids per Tract



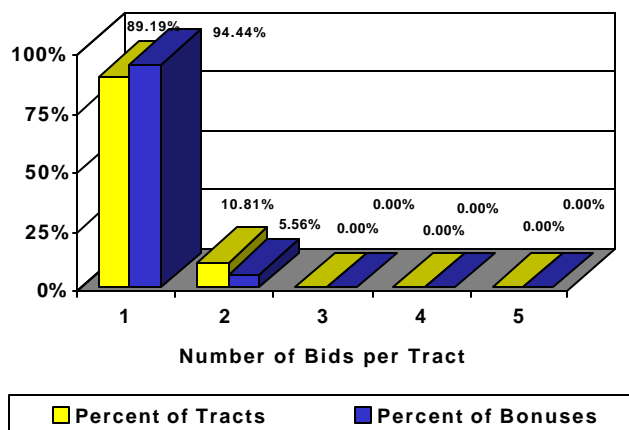
Sale 178-1, Tracts in 400-800 Meters Water Depth

Bidding Activity by Bids per Tract

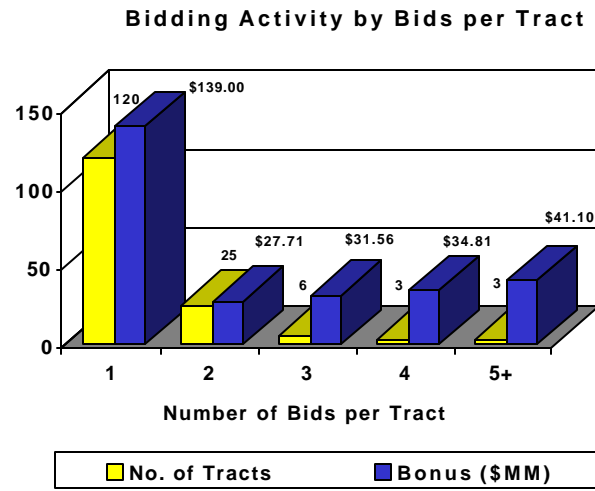


Sale 178-1, Tracts in 400-800 Meters Water Depth

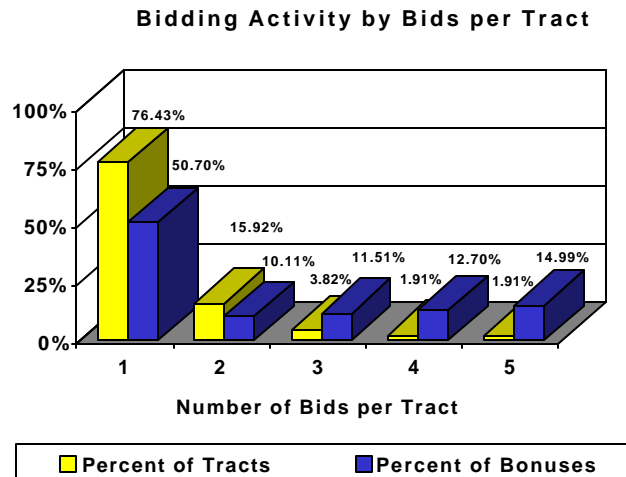
Bidding Activity by Bids per Tract



Sale 178-1, Tracts in 800+ Meters Water Depth

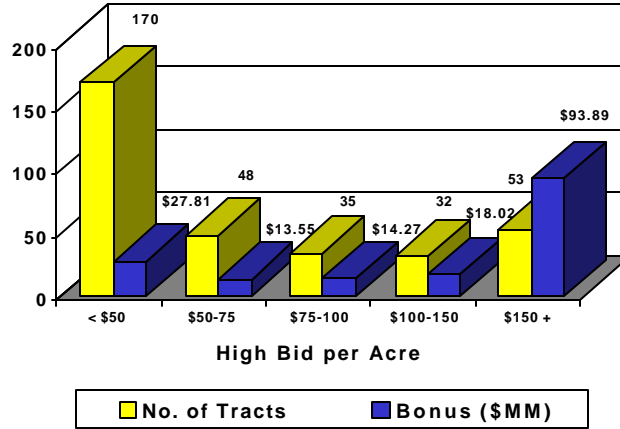


Sale 178-1, Tracts in 800+ Meters Water Depth



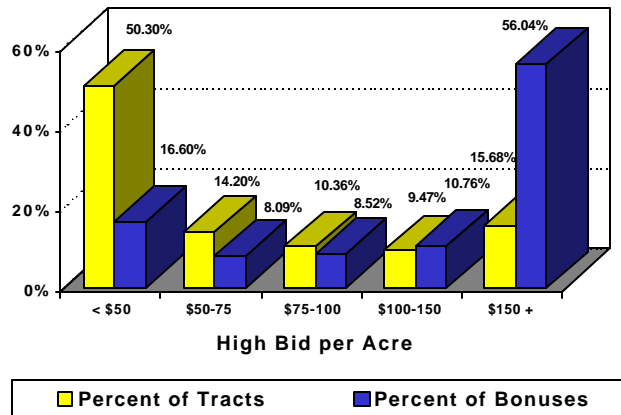
Sale 178-1, Tracts in < 200 Meters Water Depth

Bidding Activity by High Bid per Acre



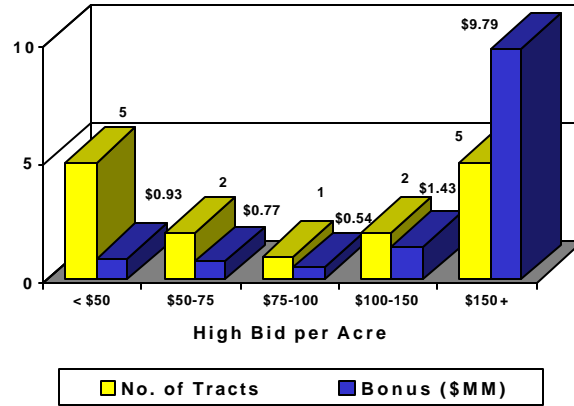
Sale 178-1, Tracts in < 200 Meters Water Depth

Bidding Activity by High Bid per Acre



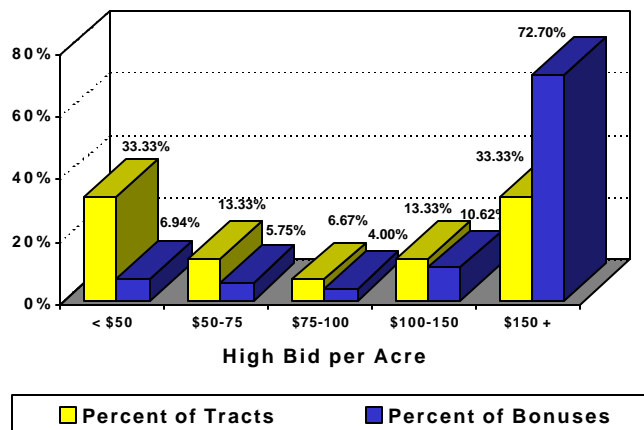
Sale 178-1, Tracts in 200-400 Meters Water Depth

Bidding Activity by High Bid per Acre



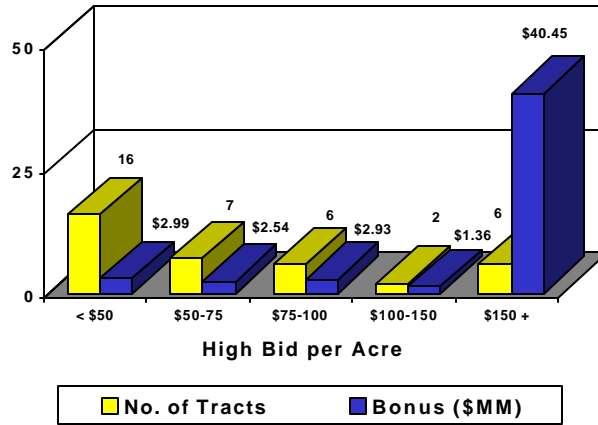
Sale 178-1 Tracts in 200-400 Meters Water Depth

Bidding Activity by High Bid per Acre



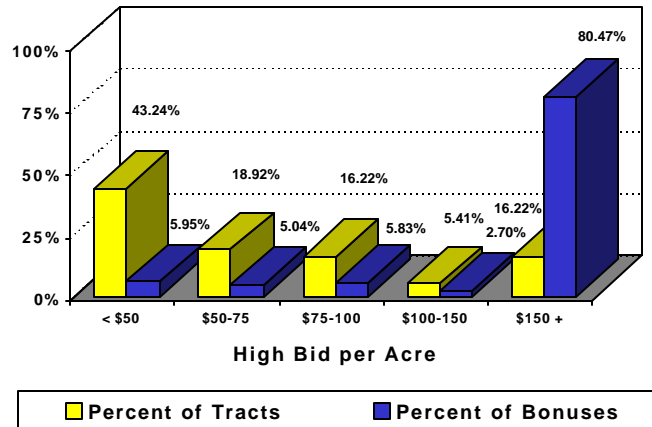
Sale 178-1, Tracts in 400-800 Meters Water Depth

Bidding Activity by High Bid per Acre



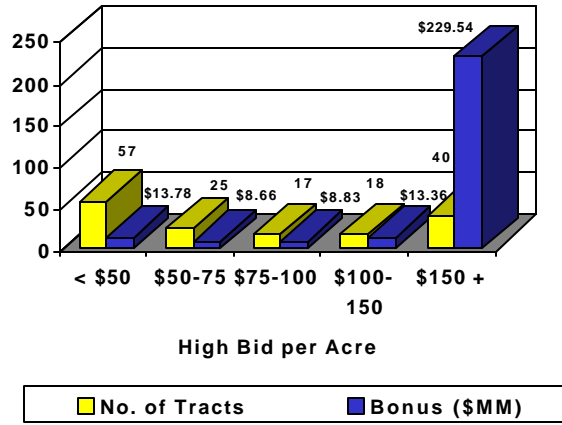
Sale 178-1, Tracts in 400-800 Meters Water Depth

Bidding Activity by High Bid per Acre



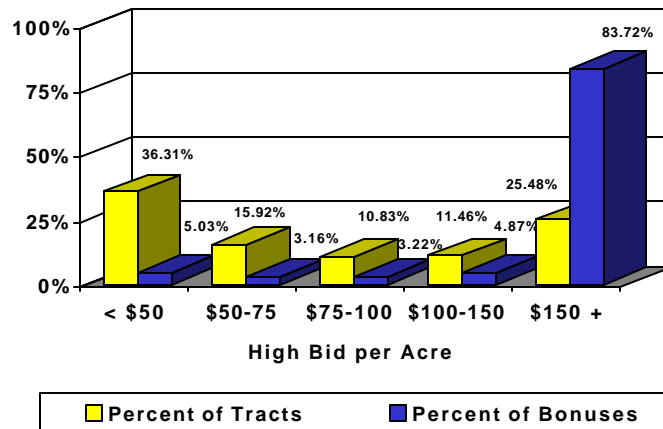
Sale 178-1, Tracts in 800+ Meters Water Depth

Bidding Activity by High Bid per Acre



Sale 178-1, Tracts in 800+ Meters Water Depth

Bidding Activity by High Bid per Acre



Appendix E

Revised Arithmetic Average Measure (RAM)

Sale 178 – Part 1, Tracts with Three-or-More Bids

In Sale 178 – Part 1, three or more bids were received on 56 tracts, all confirmed or wildcat. The distribution of those bids by water depth category and third bid as a percent of high bid is presented in Table E1.

Table E1.—*Percent Difference Between a Tract’s High Bid and Third Bid by Water Depth Category*

Category	< 25 %	25 - 50 %	50 - 75 %	> 75 %	Total
< 200 m.	20	15	5	3	43
200 - 399 m.	0	1	0	0	1
400 - 799 m.	0	0	0	0	0
800 – 1,599 m.	5	2	0	1	8
1,600 m. or more	1	2	1	0	4
Total	26	20	6	4	56

Sale 178 – Part 1 was the eighth sale in which the modified number of bids rule was used for Phase 1 acceptance of high bids on selected tracts receiving three or more bids. Under the rule, high bids on wildcat and confirmed tracts receiving three or more bids are accepted in Phase 1, if the third highest bid on the tract is at least 50 percent of the high bid and the high bid per acre ranks in the top 75 percent of high bids per acre for all three-or-more bid tracts within a specified water depth category. (The procedure is described in the *Federal Register*, vol. 64, no.132, pp. 37560-37562.) In Sale 178 – Part 1, four three-or-more bid tracts met the bid acceptance criteria described above. In addition, high bids on six additional three-or-more bid tracts were accepted in Phase 1 because the tracts were judged to be nonviable.

Sale 178 – Part 1 was also the eighth sale using a modified Phase 2 averaging rule, the “Revised Arithmetic Average Measure” (RAM) of tract value. The RAM is a secondary bid acceptance rule that is used on multi-bid tracts if the Government’s value of the tract (ADV) exceeds the high bid. The RAM is an arithmetic average of a tract’s high bid, ADV, and all other bids that are at least 25 percent of the high bid. If a bid on a tract is not at least 25 percent of the high bid, that bid is considered an outlier and not included in the RAM calculation. Thus, the adjusted number of bids on a tract for the RAM calculation can be less than the total number of bids that a tract receives.

For those tracts on which the RAM is used as the bid acceptance rule, if the RAM is less than the tract’s high bid, the high bid is accepted and if the RAM exceeds the high bid, the high bid is rejected.

Forty-six tracts were passed to Phase 2 for further evaluation that potentially could use the RAM as the bid acceptance decision rule. Of those, 12 did not have second bids that were at least 25 percent of the high bids, so the use of the RAM as a Phase 2 decision criterion for those tracts was not a possibility. For the remaining 34 tracts, the ADVs that would be needed to reject a tract's high bid using the RAM were calculated. Using the RAM, ten tracts need an ADV of less than \$1 million and one would need an ADV of over \$35 million for high bid acceptance based on this criterion. The results are presented in Table E2.

Table E2.—ADV Needed to Reject a High Bid Using the RAM by Water Depth Category

Category	< \$1 MM	\$1-5 MM	\$5-10 MM	> \$ 10 MM	Total
< 200 m.	6	18	3	0	27
200 - 399 m.	0	1	0	0	1
400 - 799 m.	0	0	0	0	0
800 – 1,599 m.	0	2	1	1	4
1,600 m. or more	0	0	0	2	2
Total	6	23	4	3	34

Sale 178 – Part 1, Tracts with Three or More Bids Passed to Phase 2

Table E3.—Tracts in < 200 Meters; potential Royalty Suspension Volume of 20 billion cubic feet for natural gas from deep (more than 15,000 feet) wells

Tract	High Bid	No. of Bids	3 rd Bid as % of High Bid	Adjusted No. of Bids	ADV to Reject w/RAM
G22502	\$331,031	3	47.00%	3	\$676,267
G22510	\$4,135,500	3	19.67%	2	\$5,993,546
G22513	\$1,236,007	3	35.36%	3	\$2,163,271
G22520	\$2,165,600	4	8.16%	1	Not Applicable
G22523	\$2,333,000	3	10.84%	1	Not Applicable
G22526	\$1,113,000	3	15.54%	1	Not Applicable
G22532	\$1,920,988	3	12.03%	2	\$3,108,976
G22539	\$810,600	3	19.20%	2	\$1,143,200
G22544	\$1,275,550	4	15.84%	1	Not Applicable
G22572	\$651,162	3	42.54%	3	\$1,043,486
G22574	\$3,201,300	3	6.39%	1	Not Applicable

Table E3. (continued) —Tracts in < 200 Meters; potential Royalty Suspension Volume of 20 billion cubic feet for natural gas from deep (more than 15,000 feet) wells

Tract	High Bid	No. of Bids	3 rd Bid as % of High Bid	Adjusted No. of Bids	ADV to Reject w/RAM
G22648	\$230,000	3	28.36%	3	\$532,419
G22649	\$580,000	4	26.38%	3	\$1,274,433
G22650	\$537,037	3	34.08%	3	\$1,186,400
G22651	\$3,601,000	3	9.72%	1	Not Applicable
G22660	\$1,335,000	4	22.55%	2	\$1,562,350
G22661	\$2,163,007	4	18.76%	2	\$3,772,689
G22668	\$553,700	3	48.14%	3	\$1,017,550
G22678	\$551,600	3	28.44%	3	\$1,292,022
G22679	\$851,550	3	37.65%	3	\$1,655,250
G22685	\$728,800	3	37.87%	3	\$1,582,665
G22696	\$316,988	3	56.78%	3	\$545,964
G22700	\$601,100	3	30.89%	3	\$1,308,050
G22708	\$337,000	4	44.90%	4	\$886,389
G22711	\$720,000	3	40.12%	3	\$1,296,111
G22713	\$2,050,000	3	8.54%	1	Not Applicable
G22738	\$351,600	5	89.68%	5	\$729,587
G22742	\$2,690,988	3	9.56%	2	\$4,276,176
G22754	\$4,201,100	4	28.84%	3	\$9,891,712
G22756	\$2,067,100	4	18.22%	2	\$3,267,089
G22757	\$3,101,600	3	4.27%	1	Not Applicable
G22762	\$6,377,000	5	15.87%	2	\$8,421,000
G22782	\$2,125,800	3	16.99%	2	\$2,139,823
G22812	\$1,388,550	4	16.28%	2	\$2,001,928
G22819	\$759,500	3	20.49%	2	\$955,747

Table E4.—*Tracts in 200 - 399 Meters; no Royalty Suspension Volume*

Tract	High Bid	No. of Bids	3rd Bid as % of High Bid	Adjusted No. of Bids	ADV to Reject w/RAM
G22850	\$1,405,440	3	25.44%	3	\$3,356,615

Table E5.—*Tracts in 800 – 1,599 Meters; 9 MMBOE Royalty Suspension Volume*

Tract	High Bid	No. of Bids	3rd Bid as % of High Bid	Adjusted No. of Bids	ADV to Reject w/RAM
G22887	\$3,158,885	4	9.64%	1	Not Applicable
G22897	\$6,687,501	3	12.95%	2	\$8,369,997
G22898	\$13,352,352	3	3.49%	1	Not Applicable
G22907	\$5,535,560	4	32.88%	3	\$11,180,314
G22919	\$1,245,388	3	17.81%	2	\$2,013,421
G22947	\$9,215,000	3	3.31%	1	Not Applicable
G22956	\$750,333	3	33.36%	2	\$1,195,666

Table E6.—*Tracts in 1,600 Meters or More; 12 MMBOE Royalty Suspension Volume*

Tract	High Bid	No. of Bids	3rd Bid as % of High Bid	Adjusted No. of Bids	ADV to Reject w/RAM
G22914	\$26,115,000	4	3.49%	1	Not Applicable
G22918	\$18,315,000	6	46.60%	3	\$35,043,700
G22987	\$18,378,000	5	47.70%	3	\$34,591,120

The RAM was used in the acceptance of the high bid on tracts G22754 and G22756. For tract G22754, although the ADV on the tract was \$5.1 million, which exceeded the high bid, the high bid was accepted because it was larger than the tract's RAM of \$3,003,172. Also, for tract G22756, the ADV on the tract was \$2.6 million, which exceeded the high bid, but the high bid was accepted because it was larger than the tract's RAM of \$1,844,737.

Appendix F

Summary of Company Bids

Sale 178 – Part 1, Company Bids by Total Amount of High Bids

Rank	Company #	Company Name	Total	High	Losers	Total Exposed	Total High Bids	Total Unsuccessful
1	2295	Exxon Asset Management	22	20	2	\$89,460,000	\$87,940,000	\$1,520,000
2	2219	Kerr-McGee Oil & Gas	36	32	4	\$59,266,020	\$55,923,220	\$3,342,800
3	981	Anadarko Petroleum	29	23	6	\$33,690,019	\$32,226,499	\$1,463,520
4	1689	Murphy E & P	23	14	9	\$39,204,120	\$31,982,944	\$7,221,176
5	185	Samedan Oil	42	33	9	\$40,529,829	\$27,536,748	\$12,993,081
6	689	Shell Offshore	34	27	7	\$28,354,770	\$25,531,974	\$2,822,796
7	78	Chevron U.S.A.	59	53	6	\$26,913,886	\$23,901,512	\$3,012,374
8	282	Dominion E & P	44	31	13	\$32,282,526	\$22,145,924	\$10,136,602
9	2481	BP Exploration & Production	34	25	9	\$36,322,288	\$19,447,215	\$16,875,073
10	2169	Spinnaker Exploration	54	32	22	\$32,179,161	\$15,683,935	\$16,495,226
11	59	Amerada Hess	26	14	12	\$22,913,214	\$11,080,411	\$11,832,804
12	560	Seneca Resources	12	7	5	\$13,339,856	\$11,015,916	\$2,323,940
13	2079	Nexen Petroleum	23	12	11	\$13,168,100	\$9,791,100	\$3,377,000
14	1704	Remington Oil & Gas	45	33	12	\$8,097,945	\$6,562,620	\$1,535,325
15	1385	Chieftain International	21	17	4	\$8,138,160	\$6,275,360	\$1,862,800
16	2277	BHP Petroleum	16	12	4	\$6,989,852	\$6,139,734	\$850,119
17	2349	Magnum Hunter	62	45	17	\$7,340,895	\$5,525,073	\$1,815,823
18	2421	Devon Energy	24	15	9	\$9,155,825	\$5,285,560	\$3,870,265
19	2401	Westport Resources	11	6	5	\$9,209,018	\$4,862,867	\$4,346,151
20	2268	Bois d'Arc Offshore	15	12	3	\$5,422,900	\$4,761,800	\$661,100
21	64	Hunt Oil	11	8	3	\$6,001,010	\$4,749,210	\$1,251,800
22	1834	Stone Energy	8	3	5	\$6,023,000	\$4,326,000	\$1,697,000
23	1046	The Houston Exploration Co.	9	3	6	\$5,905,900	\$3,998,300	\$1,907,600
24	2466	Gryphon Exploration	24	13	11	\$5,843,901	\$3,539,363	\$2,304,538
25	1	Conoco	13	13	0	\$3,501,000	\$3,501,000	\$0
26	3	Union Oil Co. of California	21	13	8	\$6,486,859	\$3,418,483	\$3,068,376
27	2375	Duke Energy Hydrocarbons	17	10	7	\$4,953,200	\$3,378,783	\$1,574,417
28	2397	Samson Offshore	23	12	11	\$5,653,626	\$3,378,065	\$2,275,561
29	818	Mariner Energy	4	3	1	\$6,756,644	\$3,214,244	\$3,542,400
30	2480	Davis Offshore	6	6	0	\$3,115,500	\$3,115,500	\$0

Rank	Company #	Company Name	Total	High	Losers	Total Exposed	Total High Bids	Total Unsuccessful
31	1001	IP Petroleum	14	8	6	\$4,286,004	\$2,976,306	\$1,309,699
32	846	Hall-Houston Oil	9	5	4	\$4,602,700	\$2,937,500	\$1,665,200
33	2058	LLOG Exploration	2	2	0	\$2,770,000	\$2,770,000	\$0
34	1904	Burlington Resources	2	2	0	\$2,669,084	\$2,669,084	\$0
35	771	Texaco E & P	3	2	1	\$2,642,836	\$2,577,600	\$65,236
36	2470	The Wiser Oil Co.	31	23	8	\$3,007,060	\$2,418,848	\$588,213
37	48	Forest Oil	6	5	1	\$2,848,107	\$2,415,004	\$433,103
38	1364	Newfield Exploration	14	8	6	\$4,710,000	\$2,349,000	\$2,361,000
39	730	Walter Oil & Gas	9	6	3	\$3,118,532	\$2,201,424	\$917,108
40	1978	The William G. Helis Co.	18	11	7	\$2,861,734	\$1,960,423	\$901,311
41	1138	EI Paso Production GOM	9	5	4	\$3,309,544	\$1,934,344	\$1,375,200
42	1217	AEDC (USA)	4	4	0	\$1,853,996	\$1,853,996	\$0
43	2479	Republic Exploration	9	5	4	\$2,445,510	\$1,726,587	\$718,923
44	2432	Andex Resources	11	9	2	\$2,818,941	\$1,692,402	\$1,126,539
45	105	Apache Corporation	1	1	0	\$1,618,386	\$1,618,386	\$0
46	724	Marathon Oil	8	4	4	\$2,677,680	\$1,518,240	\$1,159,440
47	2117	Enterprise Oil GOM	2	2	0	\$1,445,832	\$1,445,832	\$0
48	1500	TotalFinaElf E & P USA	3	1	2	\$3,744,000	\$1,405,440	\$2,338,560
49	2493	Pure Resources	7	6	1	\$2,380,141	\$1,324,252	\$1,055,889
50	2412	Century Exploration	1	1	0	\$1,275,550	\$1,275,550	\$0
51	2211	EEX	7	5	2	\$1,743,572	\$1,201,740	\$541,832
52	2330	Cheniere Energy	5	3	2	\$1,838,250	\$1,121,000	\$717,250
53	2291	Juniper Energy	3	3	0	\$1,000,000	\$1,000,000	\$0
54	1513	Callon Petroleum	7	4	3	\$4,227,905	\$937,523	\$3,290,382
55	2503	Contango Operators	9	5	4	\$1,245,826	\$879,582	\$366,244
56	2247	Ameritex Minerals	1	1	0	\$830,000	\$830,000	\$0
57	2312	McMoRan Oil & Gas	4	3	1	\$1,209,087	\$780,300	\$428,787
58	1958	Maxus (U.S.) Exploration	3	1	2	\$825,545	\$701,904	\$123,641
59	2494	MKJ Xploration	4	3	1	\$750,000	\$553,642	\$196,358
60	222	Aviara Energy	1	1	0	\$437,700	\$437,700	\$0

Rank	Company #	Company Name	Total	High	Losers	Total Exposed	Total High Bids	Total Unsuccessful
61	2222	PetroQuest Energy One	7	2	5	\$3,519,035	\$404,500	\$3,114,535
62	1819	ATP Oil & Gas	2	2	0	\$404,000	\$404,000	\$0
63	2200	Fairways Specialty	1	1	0	\$398,398	\$398,398	\$0
64	1777	Ocean Energy	5	3	2	\$743,500	\$368,150	\$375,350
65	1999	Houston Energy	22	12	10	\$1,321,857	\$364,699	\$957,158
66	1630	Cheyenne International	4	4	0	\$356,181	\$356,181	\$0
67	2377	MCX Gulf of Mexico	3	1	2	\$412,773	\$350,952	\$61,820
68	2392	Triangle Oil & Gas	1	1	0	\$340,130	\$340,130	\$0
69	1866	Range Energy Ventures	2	2	0	\$291,141	\$291,141	\$0
70	1482	Nippon Oil Exploration USA	2	2	0	\$262,400	\$262,400	\$0
71	56	Phillips Petroleum	3	1	2	\$1,568,000	\$236,000	\$1,332,000
72	145	J. M. Huber Corp.	2	2	0	\$208,484	\$208,484	\$0
73	276	Exxon Mobil	2	1	1	\$1,516,600	\$201,600	\$1,315,000
74	2407	Woodside Energy (USA)	6	2	4	\$966,920	\$193,960	\$772,960
75	1963	Apex Oil & Gas	3	1	2	\$572,553	\$177,750	\$394,803
76	1624	TDC Energy	2	1	1	\$252,600	\$176,700	\$75,900
77	2189	Bellwether Exploration	1	1	0	\$151,550	\$151,550	\$0
78	1355	Cabot Oil & Gas	1	1	0	\$151,000	\$151,000	\$0
79	2148	Westport Oil & Gas	3	1	2	\$400,600	\$149,000	\$251,600
80	537	Paragon Petroleum	1	1	0	\$142,500	\$142,500	\$0
81	2416	Dembury Resources	1	1	0	\$131,000	\$131,000	\$0
82	2463	EnField Operating	1	1	0	\$81,250	\$81,250	\$0
83	1687	Matrix Oil & Gas	1	1	0	\$76,192	\$76,192	\$0
84	2504	Aurora Exploration	5	3	2	\$96,750	\$59,000	\$37,750
85	1284	W & T Offshore	1	1	0	\$39,000	\$39,000	\$0
86	2266	Energy Partners	1	0	1	\$480,470	\$0	\$480,470
87	774	Taylor Energy	1	0	1	\$357,500	\$0	\$357,500
88	2248	Agip Petroleum Exploration	1	0	1	\$304,848	\$0	\$304,848
89	2428	Darcy Exploration	1	0	1	\$288,889	\$0	\$288,889
90	1935	Pioneer Natural Resources	1	0	1	\$158,300	\$0	\$158,300

Appendix G

Sales 178 – Part 1 and 175

Active Bidders

Companies Participating in 20 or More Bids in Sale 178 – Part 1

Company	Co. Code	< 200 m.	200-400 m.	400-800 m.	800 + m.	Total	Exposure (\$MM)	Exposure Rank	Exposure per Bid
Magnum Hunter Production	2349	62	0	0	0	62	\$7.34	18	\$118,402
Chevron U.S.A.	78	42	2	0	15	59	\$26.91	10	\$456,168
Spinnaker Exploration	2169	23	3	3	25	54	\$32.18	8	\$595,910
Remington Oil and Gas	1704	45	0	0	0	45	\$8.10	17	\$179,954
Dominion Exploration	282	19	1	0	24	44	\$32.28	7	\$733,694
Samedan Oil	185	18	0	3	21	42	\$40.53	3	\$964,996
Kerr-McGee Oil & Gas	2219	6	3	6	21	36	\$59.27	2	\$1,646,278
BP Exploration & Production	2481	14	2	3	15	34	\$36.32	5	\$1,068,303
Shell Offshore	689	19	0	6	9	34	\$28.35	9	\$833,964
The Wiser Oil Company	2470	31	0	0	0	31	\$3.01	39	\$97,002
Anadarko Petroleum	981	9	2	11	7	29	\$3.37	6	\$116,173
Amerada Hess	59	5	0	0	21	26	\$22.91	11	\$881,277
Devon Energy Production	2421	17	0	1	6	24	\$9.16	15	\$381,493
Gryphon Exploration	2466	24	0	0	0	24	\$5.84	25	\$243,496
Murphy Exploracion & Production	1689	1	0	0	22	23	\$39.20	4	\$1,704,527
Nexen Petroleum Offshore	2079	11	0	1	11	23	\$13.17	13	\$572,526
Samson Offshore	2397	23	0	0	0	23	\$5.65	26	\$245,810
Exxon Asset Management	2295	0	0	1	21	22	\$89.46	1	\$4,066,364
Houston Energy	1999	22	0	0	0	22	\$1.32	56	\$60,084
Chieftain International	1385	18	0	3	0	21	\$8.14	16	\$387,531
Union Oil Co. of California	3	12	0	0	9	21	\$6.49	21	\$308,898

Companies Participating in 14 or More Bids in Sale 175

Company	Co. Code	< 200 m.	200-400 m.	400-800 m.	800 + m.	Total	Exposure (\$MM)	Exposure Rank	Exposure per Bid
Vastar Resources	1855	6	0	2	34	42	\$28.58	4	\$680,565
Chevron USA	78	19	0	0	18	37	\$26.24	5	\$709,260
Anadarko Petroleum	981	25	0	7	2	34	\$24.98	6	\$734,616
Spinnaker Exploration	2169	9	1	0	20	30	\$10.79	13	\$359,813
CNG Producing	282	6	0	0	18	24	\$20.88	7	\$869,838
Murphy Exploration & Production	1689	3	0	1	18	22	\$16.21	10	\$737,018
Samedan Oil	185	13	1	1	7	22	\$11.60	12	\$527,311
EEX Corporation	2211	17	0	5	0	22	\$3.24	27	\$147,398
Kerr-McGee Oil & Gas	2219	1	0	0	18	19	\$10.12	14	\$532,647
Marathon Oil	724	0	0	2	16	18	\$50.96	2	\$2,831,242
Union Oil Co. – California	3	6	0	1	10	17	\$14.48	11	\$851,498
BP Exploration	1680	0	2	1	13	16	\$18.36	9	\$1,147,191
Exxon Asset Management	2295	0	1	3	10	14	\$65.30	1	\$4,664,286
Coastal Oil & Gas USA	2025	13	1	0	0	14	\$5.29	20	\$377,706
Chieftain International (US)	1385	12	0	2	0	14	\$4.07	24	\$290,732

Appendix H

Sales 178 – Part 1 and 175

Comparison of Sales - Graphs

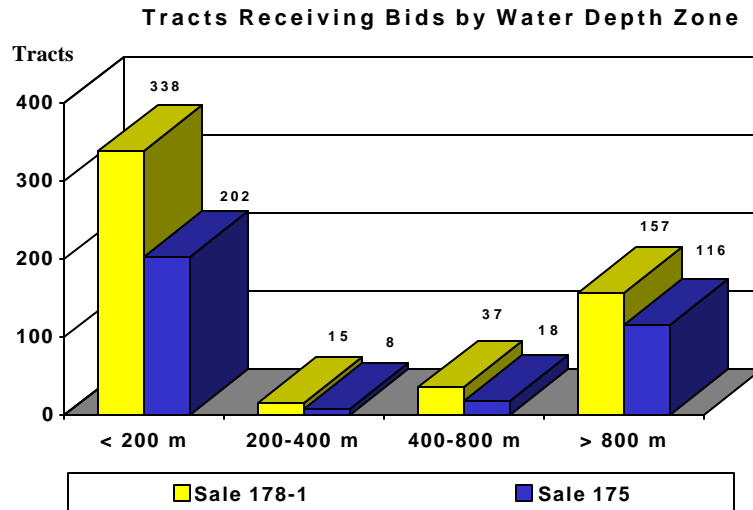
Sale 178 - Part 1 v. Sale 175

Prepared by:
Economics Division, MMS

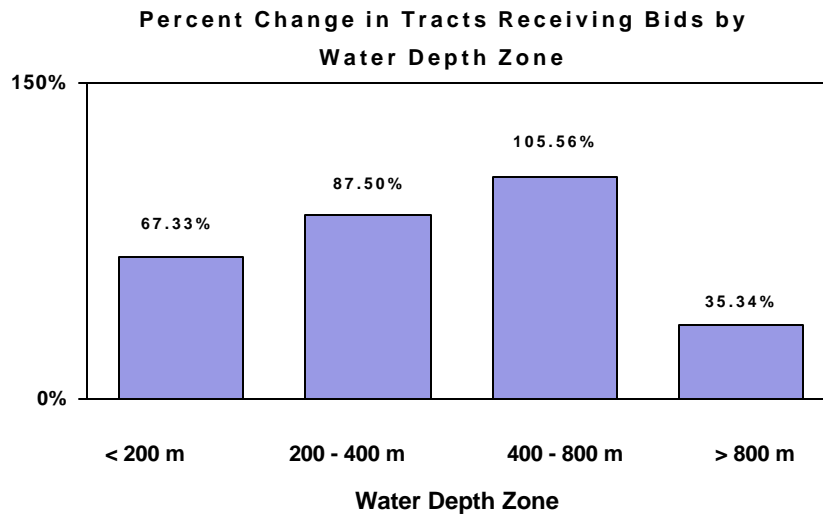
Sale 178 - Part 1 v. Sale 175 (CGOM) Comparison of Results

- In aggregate, 547 tracts received high bids of \$505.47 MM in Sale 178-1 and 344 tracts received high bids of \$300.57 MM in Sale 175
- Bids per tract increased from 1.36 to 1.43
- Sale 178-1 had 338 tracts in < 200 m. receiving high bids of \$167.55 MM v. 202 tracts and high bids of \$94.90 MM in Sale 175
- Sale 178-1 had 209 tracts in > 200 m. receiving high bids of \$337.92 MM v. 142 tracts and high bids of \$205.67 MM in Sale 175

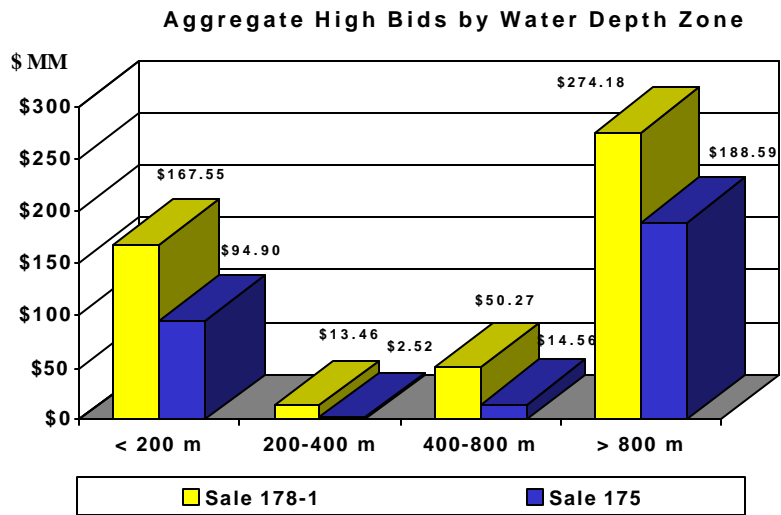
Sale 178-1 v. Sale 175 - Tracts



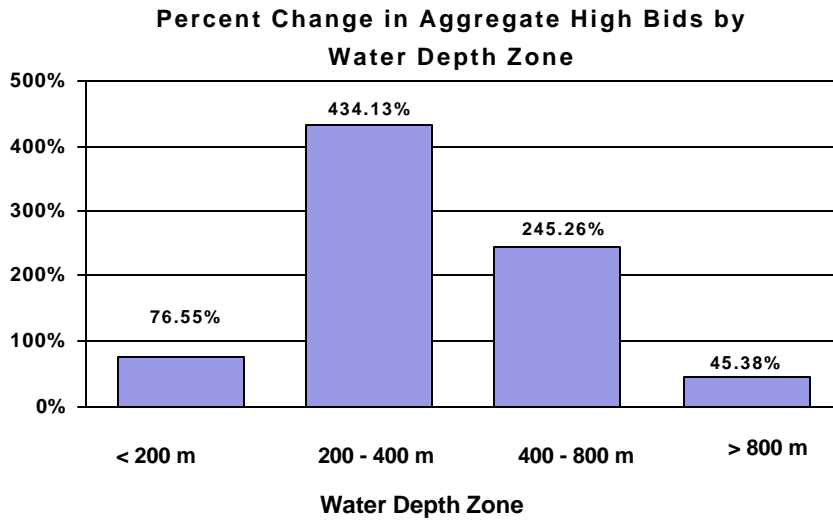
Sale 178-1 v. Sale 175 - Tracts



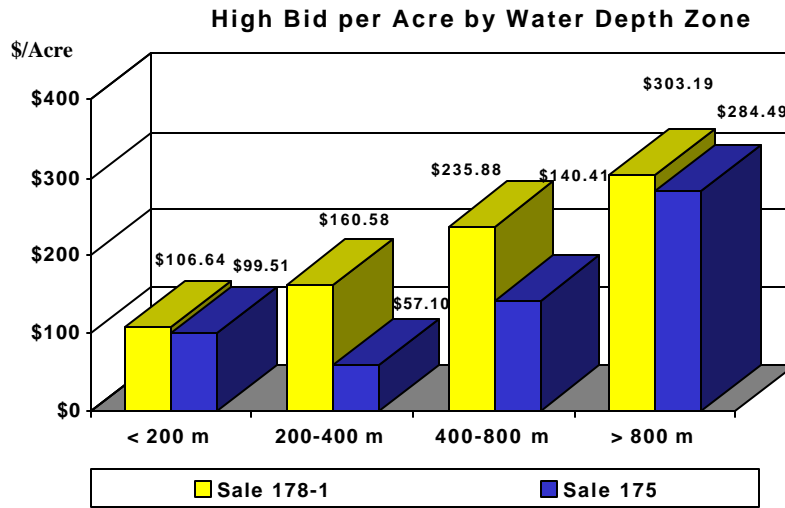
Sale 178-1 v. Sale 175 - Bonuses



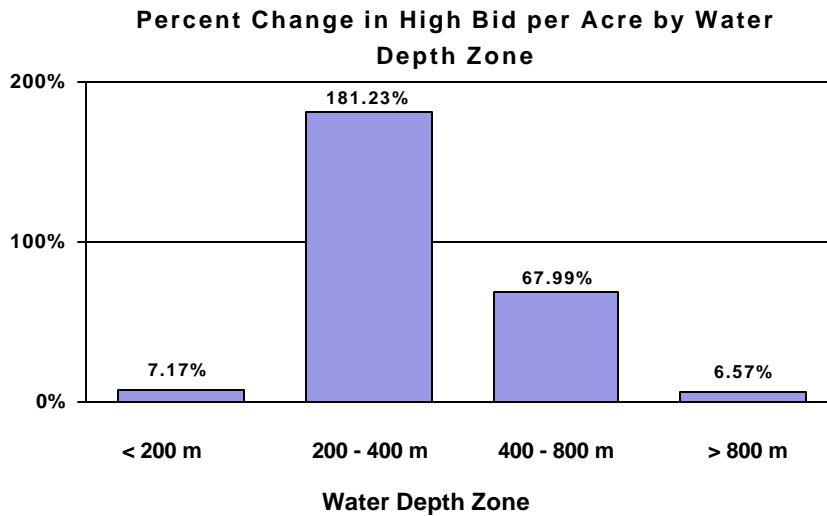
Sale 178-1 v. Sale 175 - Bonuses



Sale 178-1 v. Sale 175 - High Bid per Acre

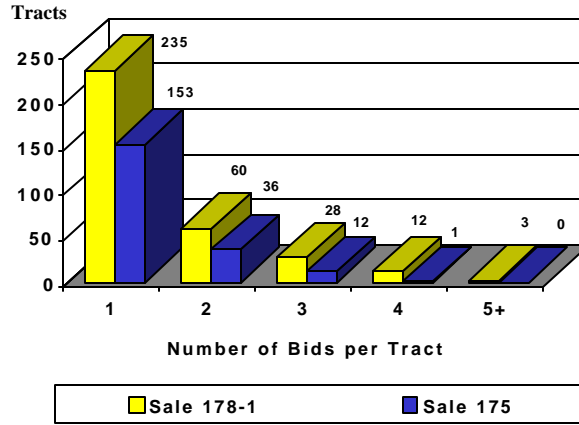


Sale 178-1 v. Sale 175 - High Bid per Acre



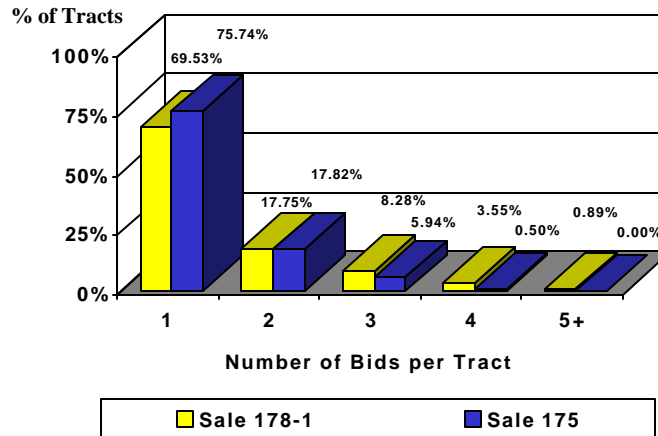
Sale 178-1 v. Sale 175 - Tracts < 200 Meters Water Depth

Bidding Activity by Bids per Tract

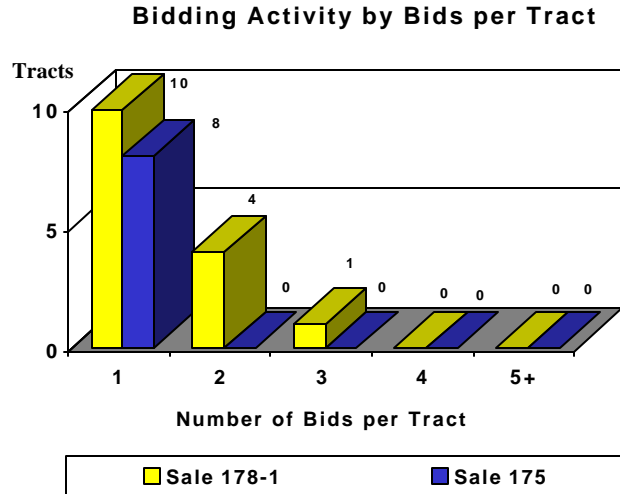


Sale 178-1 v. Sale 175 - Tracts < 200 Meters Water Depth

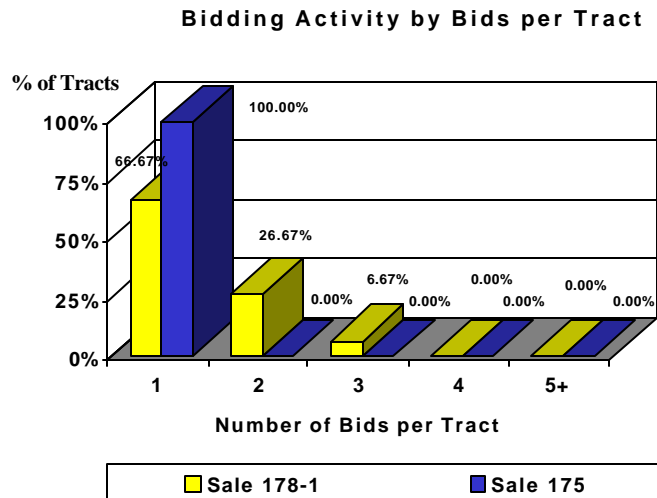
Bidding Activity by Bids per Tract



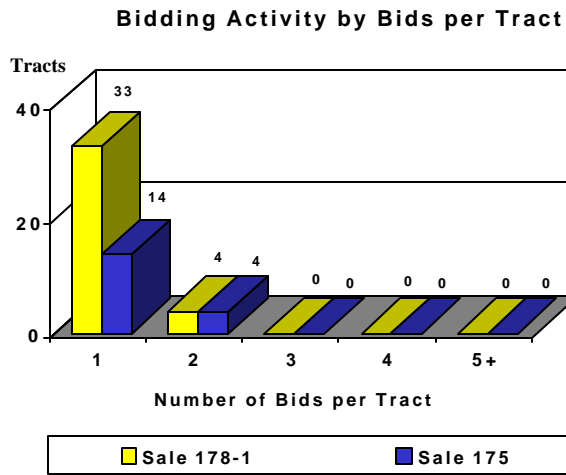
Sale 178-1 v. Sale 175 - Tracts in 200 to 400 Meters Water Depth



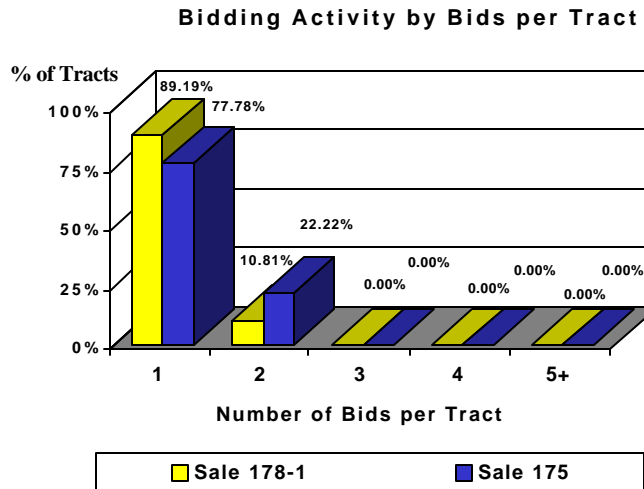
Sale 178-1 v. Sale 175 - Tracts in 200 to 400 Meters Water Depth



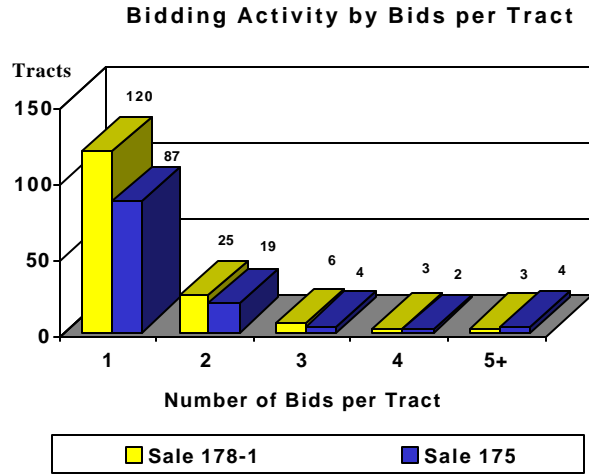
Sale 178-1 v. Sale 175 - Tracts in 400 to 800 Meters Water Depth



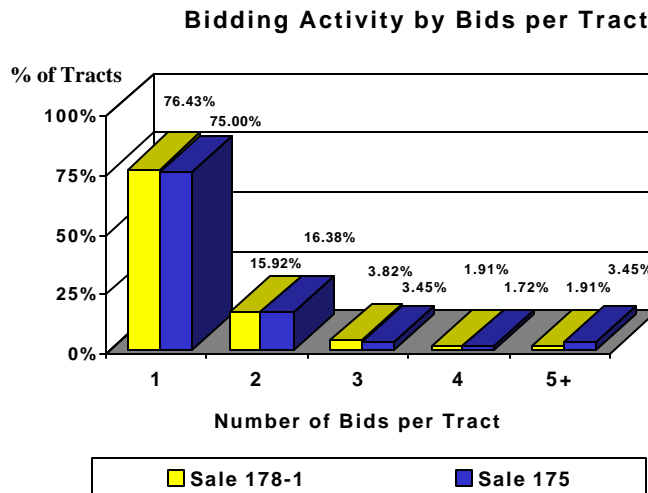
Sale 178-1 v. Sale 175 - Tracts in 400 to 800 Meters Water Depth



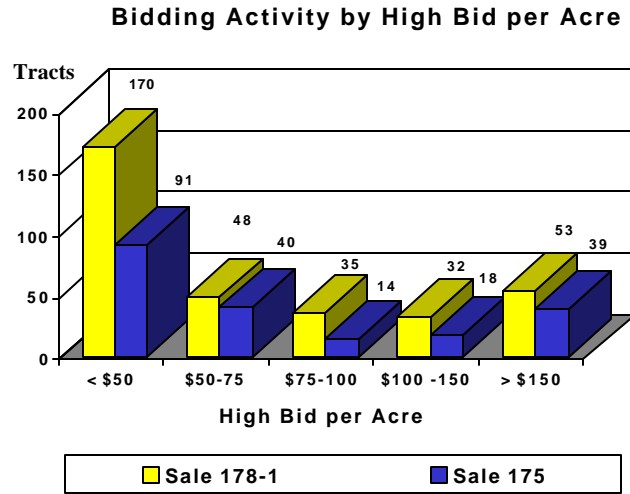
Sale 178-1 v. Sale 175 - Tracts in 800+ Meters Water Depth



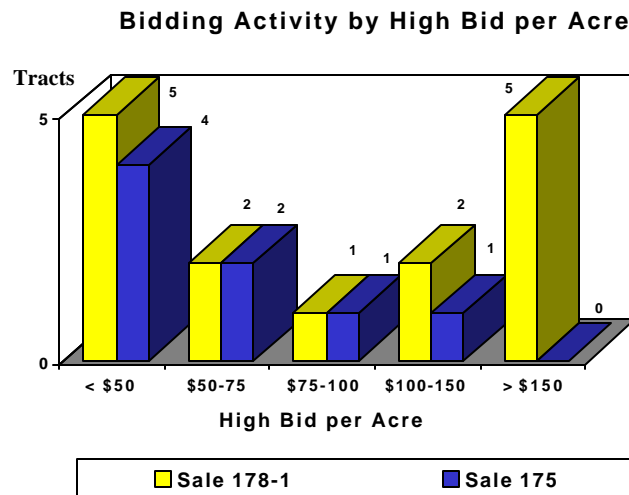
Sale 178-1 v. Sale 175 - Tracts in 800+ Meters Water Depth



Sale 178-1 v. Sale 175 - Tracts < 200 Meters Water Depth

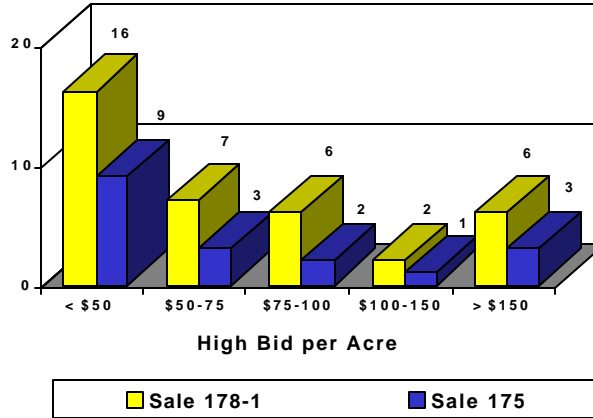


Sale 178-1 v. Sale 175 - Tracts in 200 to 400 Meters Water Depth



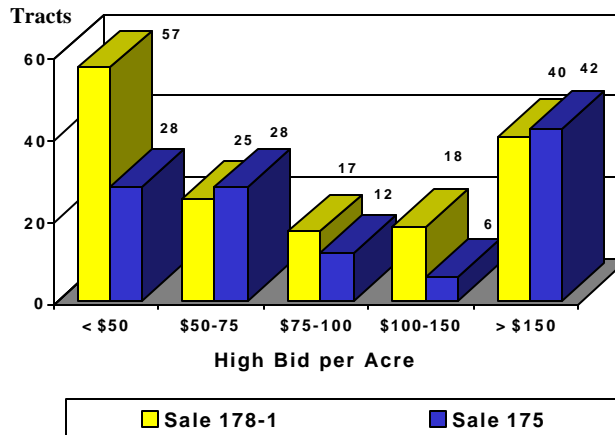
Sale 178-1 v. Sale 175 - Tracts in 400 to 800 Meters Water Depth

Bidding Activity by High Bid per Acre



Sale 178-1 v. Sale 175 - Tracts in 800+ Meters Water Depth

Bidding Activity by High Bid per Acre



Appendix I

High Bid Rejections

Sale 178-Part 1 Rejections

High bids on 13 tracts were rejected in Sale 178 – Part 1. Seven of the rejected blocks received one bid, five were two-bid tracts, and one was a three-bid tract. By water depth category, the rejections were as follows: five in less than 200 meters, three in 400 to 799 meters, three in 800 to 1,599 meters, and two in 1,600 meters or more.

Table I1.—*Sale 178-Part 1, Rejections in Water Depths Less than 200 Meters; Royalty Rate = 1/6; Potential Royalty Suspension Volume for Natural Gas from Deep (15,000 feet or more) Wells*

Tract No.	Bids	High Bid	ADV	RAM
22641	2	\$531,420	\$1,600,000	\$853,402
22668	3	\$553,700	\$1,800,000	\$749,313
22669	1	\$180,000	\$750,000	NA
22737	1	\$376,550	\$2,700,000	NA
22758	2	\$475,100	\$1,400,000	\$743,173

Table I2.—*Sale 178-Part 1 Rejections in Water Depths 400-799 Meters; Royalty Rate = 1/8; No Royalty Suspension Volume*

Tract No.	Bids	High Bid	ADV	RAM
22885	1	\$253,352	\$1,600,000	NA
22905	2	\$361,900	\$560,000	\$364,773
22910	2	\$361,900	\$1,600,000	\$711,440

Table I3.—*Sale 178-Part 1 Rejections in Water Depths 800-1,599 Meters; Royalty Rate = 1/8; 9 MMBOE Royalty Suspension Volume*

Tract No.	Bids	High Bid	ADV	RAM
22906	2	\$361,900	\$1,500,000	\$705,773
23013	1	\$221,761	\$1,900,000	NA
23024	1	\$1,015,000	\$3,900,000	NA

Table I4.—*Sale 178-Part 1 Rejections in Water Depths 1,600 Meters or More;*
Royalty Rate = 1/8; 12 MMBOE Royalty Suspension Volume

Tract No.	Bids	High Bid	ADV	RAM
22880	1	\$361,900	\$1,500,000	NA
23029	1	\$867,800	\$2,700,000	NA

Appendix J

Bid Adequacy Procedures

[Federal Register: July 12, 1999 (Volume 64, Number 132)]
[Notices]
[Page 37560-37562]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr12jy99-108]

DEPARTMENT OF THE INTERIOR

Minerals Management Service

Modifications to the Bid Adequacy Procedures

AGENCY: Minerals Management Service (MMS), Interior.

ACTION: Notification of procedural change.

SUMMARY: The Minerals Management Service (MMS) has changed a criterion in its existing bid adequacy procedures for ensuring receipt of fair market value on Outer Continental Shelf (OCS) oil and gas leases. The change ensures consistency in the evaluation of tracts.

DATES: This modification is effective July 1, 1999.

FOR FURTHER INFORMATION CONTACT: Dr. Marshall Rose, Chief, Economics Division, at (703) 787-1536.

The revised bid adequacy procedures are described below.

What Definitions Apply to These Procedures?

The *MROV* is a dollar measure of a tract's expected net present value, if that tract is leased in the current sale. The calculation of the *MROV* allows for exploration and economic risk, and includes tax consequences, e.g., depletion of the cash bonus.

The *delayed MROV (DMROV)* is a measure used to determine the size of the high bid needed in the current sale to equalize it with the discounted sum of the bonus and royalties expected in the next sale, less the foregone royalties from the current sale. The bonus for the next sale is computed as the *MROV* associated with the delay in leasing under the projected economic, engineering, and geological leasing receipts conditions, including drainage. If the high bid exceeds the *DMROV*, then the leasing receipts from the current sale are expected to be greater than those from the next sale, even in cases in which the *MROV* exceeds the high bid.

The *Adjusted Delayed Value (ADV)* is the minimum of the MROV and the DMROV.

The *RAM* is the revised arithmetic average measure of the MROV and all qualified bids on a tract that are equal to at least 25 percent of the high bid.

Anomalous bids are all but the highest bid submitted for a tract by the same company (bidding alone or jointly with another company), parent, or subsidiary. These bids are excluded when applying the number of bids rule or any other bid adequacy measure.

Legal bids are those bids which comply with the MMS regulations (30 CFR 256) and the Notice of Sale, e.g., equal or exceed the specified minimum bid. Any illegal bid will be returned to the bidder.

Qualified bids are those bids that are legal and not anomalous.

MONTCAR is a probabilistic, cash flow computer simulation model used to conduct a resource-economic evaluation that results in an estimate of the expected net present value of a tract (or prospect).

Nonviable tracts or prospects are those geographic or geologic configurations of hydrocarbons that are estimated to be uneconomic to produce with the costs and anticipated future prices used in the analysis.

Within the context of our bid adequacy procedures, the term “*unusual bidding patterns*” typically refers to a situation in which two or more companies bid against each other more often than would normally be expected. Companies could agree to bid against each other on certain sets of tracts in a sale so that the number of bids rule would apply for bid acceptance. Other forms of unusual bidding patterns exist as well, and generally involve anti-competitive practices, e.g., if it appears that companies are attempting to avoid bidding against each other in a sale on a set of prospective tracts.

A *confirmed tract* is a previously leased tract having a well(s) which encountered hydrocarbons and may have produced. It contains some oil and/or gas resources whose volume may or may not be known.

A *development tract* is a tract which has nearby productive (past or currently capable) wells with indicated hydrocarbons and which is not interpreted to have a productive reservoir extending under the tract. There should be evidence supporting the interpretation that at least part of the tract is on the same general structure as the proven productive well.

A *drainage tract* is a tract which has a nearby well which is capable of producing oil or gas, and the tract could incur drainage if and when such a well is placed on production. The reservoir, from which the nearby well is capable of producing, is interpreted to extend under the drainage tract to some extent.

A *wildcat tract* is a tract which has neither nearby productive (past or currently capable) wells, nor is interpreted to have a productive reservoir extending under the tract. It has high risk in addition to sparse well control.

Water depth categories for bid adequacy purposes in the Gulf of Mexico are designated as (1) less than 800 meters and (2) 800 meters or more.

If different water depth categories are used for a Gulf of Mexico sale, they will be specified in the sale's final notice. For areas other than the Gulf of Mexico, all tracts will be considered to be in the same water depth category, unless an alternative is specified in the final notice of sale.

What Problem Is Addressed by the Change?

In any OCS lease sale, a limited number of tracts may be reclassified from drainage or development (DD) in Phase 1 of the bid evaluation process to confirmed or wildcat (CW) in Phase 2. (The MMS reclassifies a tract if additional Phase 2 analysis supports a classification different than the one assigned the tract in Phase 1 of the evaluation.) However, under the old bid adequacy procedures, a tract classified as CW in Phase 1 was evaluated under different criteria than a tract that was reclassified as CW in Phase 2. This change ensures the consistent treatment of similarly classified tracts whether they are evaluated in Phase 1 or Phase 2.

What Change Is Being Made?

In Phase 1 of the bid adequacy procedures, the MMS classifies tracts as either CW or DD based on information available at the time of sale. Under the old (February 10, 1999) guidelines, tracts within designated water depth categories that were reclassified from DD to CW in Phase 2 only had to have a third largest bid within 50 percent of the high bid to be accepted. Now, DD tracts reclassified as CW tracts must satisfy the same criteria for acceptance that would have had to be met if they were classified as CW in Phase 1.

To ensure consistency in evaluations, the following change is being made. In Phase 1, for CW tracts receiving three-or-more qualified bids, acceptance under the number of bids rule will apply only if the third largest bid is within 50 percent of the high bid, and if the high bid is in the top 75 percent of high bids on a per acre basis for all three-or-more-bid tracts within designated water depth categories. In Phase 2 of the bid evaluation process, DD tracts that have been reclassified as CW will be subject to the same screening criteria that the CW tracts with three-or-more bids had to meet in Phase 1.

How Are Bids Evaluated?

During the bid review process, we conduct evaluations in a two-phased procedure for bid adequacy determination. We also review bids to ensure that they are for at least the minimum amount specified in the notice of sale and that unusual bidding patterns are not present.

What Happens in Phase 1 of the Bid Adequacy Procedures?

In Phase 1, we partition the tracts receiving bids into three general categories:

1. Those tracts with three-or-more bids, on which competitive market forces can be used to assure fair market value;
2. Those tracts which we identify as being nonviable based on adequate data and maps; and
3. Those tracts which we identify as being viable and on which we have the most detailed and reliable data, including tracts classified as DD.

What Phase 1 Rules Are Applied to All Tracts Receiving Bids?

Six Phase 1 rules are applied to all tracts receiving bids:

1. We accept the highest qualified bid on viable CW tracts receiving three-or-more qualified bids if the third largest bid on the tract is at least 50 percent of the highest qualified bid and if the high bid per acre ranks in the top 75 percent of high bids for all three-or-more-bid tracts within a specified water depth category.
2. We accept the highest qualified bid on CW tracts that we determine to be nonviable.
3. We pass to Phase 2 all tracts that require additional information to make a determination on viability or tract type.
4. We pass to Phase 2 all viable CW tracts receiving one or two qualified bids.
5. We pass to Phase 2 all viable CW tracts receiving three-or-more qualified bids if either the third largest such bid is less than 50 percent of the highest qualified bid or if the high bid per acre ranks in the lowest 25 percent of high bids for all three-or-more-bid tracts in the specified water depth category.
6. We pass to Phase 2 all DD tracts.

How Is the Percentile Ranking of a Tract's High Bid Calculated?

The percentile ranking of a tract's high bid is calculated by multiplying 100 times the ratio of the numerical ordering of the three-or-more-bid tract's high bid to the total number of all three-or-more-bid tracts in the designated water depth. For example, suppose there are 21 total tracts identified in Phase 1 as receiving three-or-more-bids in the designated water depth category of at least 800 meters. All tracts in this set having a high bid among the top 15 high bids would satisfy the 75 percent requirement; the 15th ranked high bid would represent the 71st percentile, i.e., $(100 * (15/21) = 71)$.

Can any Other Procedures Be Used in Phase 1 to Ensure the Receipt of Fair Market Value?

In ensuring the integrity of the bidding process, the Regional Director may identify an unusual bidding pattern at any time during the bid review process, but before a tract's high bid is accepted. If the finding is documented, the Regional Director has discretionary authority, after consultation with the Solicitor, to pass those identified tracts to Phase 2 for further analysis. The Regional Director may eliminate all but the largest of the unusual bids from consideration when applying any bid adequacy rule, may choose not to apply a bid adequacy rule, or may reject the tract's highest qualified bid.

How Long Does it Take To Complete the Phase 1 Procedures?

These procedures are generally completed within 3 weeks of the bid opening. All the leases that will be awarded as a result of the Phase 1 analysis are announced at the end of this period.

How Long Do the Phase 2 Procedures Take?

The Phase 2 bid adequacy determinations are normally completed sequentially over a period ranging between 21 and 90 days after the sale. Leases are awarded as the analysis of bids is completed over this time period. The total evaluation period can be extended, if needed, at the Regional Director's discretion (61 FR 34730, July 3, 1996).

What are the Initial Steps of the Bid Adequacy Process that Are Followed in Phase 2?

Activities to assess bids are undertaken by analyzing, partitioning, and evaluating tracts in two steps:

1. Further mapping and/or analysis is performed to review, modify, and finalize viability determinations and tract classifications.
2. Tracts we identify as being viable must undergo an evaluation to determine if fair market value has been received.

What Decision Rules Are Applied in Phase 2 of the Bid Evaluation Process?

After completing the initial two steps, a series of rules and procedures are followed.

1. We accept the highest qualified bid on newly classified CW tracts having three-or-more qualified bids if its third largest bid is at least 50 percent of the highest qualified bid and if its high bid per acre ranks in the top 75 percent of high bids for all three-or-more-bid tracts that reside within its specified water depth category.
2. We accept the highest qualified bid on all tracts determined to be nonviable.
3. We determine whether any categorical fair market evaluation technique(s) will be used.

If so we:

- A. Evaluate, define, and identify the appropriate threshold measure(s) for bid acceptance.
 - B. Accept all tracts whose individual measures of bid adequacy satisfy the threshold categorical requirements.
4. We conduct a full-scale evaluation, which could include the use of MONTCAR, on all remaining tracts passed to Phase 2 and still awaiting an acceptance or rejection decision.

What Subset of Tracts Comprise the “Remaining Tracts” That Still Need a Phase 2 Acceptance or Rejection Decision?

The remaining tracts include tracts not accepted by a categorical rule that we classify as:

- 1. DD tracts, or
- 2. CW tracts that are viable and received:
 - A. One or two qualified bids, or
 - B. Three-or-more qualified bids, if either its third largest bid is less than 50 percent of the highest qualified bid or the high bid is in the bottom 25 percent of all three-or-more-bid CW tracts within a designated water depth category.

What Procedures Are Followed for Evaluating the Adequacy of Bids on These Tracts?

For these tracts we:

- 1. Accept the highest qualified bid, if it equals or exceeds the tract's ADV.
- 2. Reject the highest qualified bid on DD tracts receiving three-or-more qualified bids, if the high bid is less than one-sixth of the tract's MROV.
- 3. Reject the highest qualified bid on DD tracts receiving one or two qualified bids and on CW tracts receiving only one qualified bid, if the high bid is less than the tract's ADV.

What Happens Next to the Tracts Still Awaiting an Acceptance or Rejection Decision?

At this stage of the process, the tracts still awaiting a decision consist of those having a highest qualified bid that is less than the ADV that are either:

- 1. DD tracts receiving three-or-more qualified bids with the highest bid exceeding one-sixth of the tract's MROV or
- 2. Viable CW tracts that receive two-or-more qualified bids.

From these tracts, we select the following:

- A. DD tracts having three-or-more qualified bids with the third largest bid being at least 25 percent of the highest qualified bid, and
- B. CW tracts having two-or-more qualified bids with the second largest bid being at least 25 percent of the highest qualified bid.

We then compare the highest qualified bid on each of these selected tracts to the tract's RAM. For all these tracts, we:

- 1. Accept the highest qualified bid, if the high bid equals or exceeds the tract's RAM, or
- 2. Reject the highest qualified bid, if the high bid is less than the tract's RAM.

Finally, we identify those tracts that are still awaiting a decision, but did not meet the requirements for comparison to the RAM and we reject the high bid on these tracts.

At this point, the acceptance or rejection decisions are made on all the high bids in the sale. The successful bidders are notified and their leases are awarded after the full payment of the high bid is received. The unsuccessful bidders are notified as well and their bid deposits are returned. Unsuccessful bidders may appeal a bid rejection decision as described in 30 CFR 256.47(e)(3).

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The Department of the Interior Mission

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.



The Minerals Management Service Mission

As a bureau of the Department of the Interior, the Minerals Management Service's (MMS) primary responsibilities are to manage the mineral resources located on the Nation's Outer Continental Shelf (OCS), collect revenue from the Federal OCS and onshore Federal and Indian lands, and distribute those revenues.

Moreover, in working to meet its responsibilities, the **Offshore Minerals Management Program** administers the OCS competitive leasing program and oversees the safe and environmentally sound exploration and production of our Nation's offshore natural gas, oil and other mineral resources. The MMS **Minerals Revenue Management** meets its responsibilities by ensuring the efficient, timely and accurate collection and disbursement of revenue from mineral leasing and production due to Indian tribes and allottees, States and the U.S. Treasury.

The MMS strives to fulfill its responsibilities through the general guiding principles of: (1) being responsive to the public's concerns and interests by maintaining a dialogue with all potentially affected parties and (2) carrying out its programs with an emphasis on working to enhance the quality of life for all Americans by lending MMS assistance and expertise to economic development and environmental protection.