

APPENDIX 16—SOCIOECONOMIC DATA AND ASSUMPTIONS

Tables A16-1 to A16-3 show total full-time and part-time employment by industry for the study area, for Wyoming, and for the United States.

Table A16-1. Total Full-Time and Part-Time Employment by Industry in 1979, 1989, and 1999 for Study Area^a

	1979	1989	1999
Total full-time and part-time employment	45,028	41,545	49,048
Agriculture services, forestry, fishing, and other	186	326	550
Mining	10,595	5,664	4,846
Construction	4,832	2,383	3,964
Manufacturing	1,247	1,322	2,428
Transportation and public utilities	2,903	2,903	2,820
Wholesale trade	1,067	1,184	1,068
Retail trade	7,156	6,809	8,915
Finance, insurance, and real estate	1,650	2,102	2,441
Services	7,241	8,795	11,573
Farm employment	1,836	1,732	1,704
Government and government enterprises	6,315	8,325	8,739
Percentage of Total Employment			
Agriculture services, forestry, fishing, and other	0.4%	0.8%	1.1%
Mining	23.5%	13.6%	9.9%
Construction	10.7%	5.7%	8.1%
Manufacturing	2.8%	3.2%	5.0%
Transportation and public utilities	6.4%	7.0%	5.7%
Wholesale trade	2.4%	2.8%	2.2%
Retail trade	15.9%	16.4%	18.2%
Finance, insurance, and real estate	3.7%	5.1%	5.0%
Services	16.1%	21.2%	23.6%
Farm employment	4.1%	4.2%	3.5%
Government and government enterprises	14.0%	20.0%	17.8%
Growth in Employment by Sector	1979–1999	1979–1989	1989–1999
Total Full-Time and Part-Time Employment	8.9%	-7.7%	18.1%
Agriculture services, forestry, fishing, and other	195.7%	75.3%	68.7%
Mining	-54.3%	-46.5%	-14.4%
Construction	-18.0%	-50.7%	66.3%
Manufacturing	94.7%	6.0%	83.7%
Transportation and public utilities	-2.9%	0.0%	-2.9%
Wholesale trade	0.1%	11.0%	-9.8%
Retail trade	24.6%	-4.8%	30.9%
Finance, insurance, and real estate	47.9%	27.4%	16.1%
Services	59.8%	21.5%	31.6%
Farm employment	-7.2%	-5.7%	-1.6%
Government and government enterprises	38.4%	31.8%	5.0%

^a Study area includes Fremont, Sublette, and Sweetwater counties in Wyoming.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Accounts Data, Table SA25, Total Full-Time and Part-Time Employment by Industry.

**Table A16-2. Total Full-Time and Part-Time Employment by Industry
in 1979, 1989, and 1999 for Wyoming**

	1979	1989	1999
Total full-time and part-time employment	266,605	267,048	321,592
Agriculture services, forestry, fishing, and other	1,998	3,154	4,719
Mining	34,622	20,111	17,811
Construction	26,059	15,124	23,909
Manufacturing	10,780	10,449	13,435
Transportation and public utilities	17,895	16,560	17,061
Wholesale trade	9,126	8,017	8,585
Retail trade	42,933	45,609	57,487
Finance, insurance, and real estate	15,615	17,532	21,966
Services	45,462	59,554	82,327
Farm Employment	14,526	12,455	12,168
Government Employment	47,589	58,483	62,124
Percentage of Total Employment			
Agriculture services, forestry, fishing, and other	0.7%	1.2%	1.5%
Mining	13.0%	7.5%	5.5%
Construction	9.8%	5.7%	7.4%
Manufacturing	4.0%	3.9%	4.2%
Transportation and public utilities	6.7%	6.2%	5.3%
Wholesale trade	3.4%	3.0%	2.7%
Retail trade	16.1%	17.1%	17.9%
Finance, insurance, and real estate	5.9%	6.6%	6.8%
Services	17.1%	22.3%	25.6%
Farm Employment	5.4%	4.7%	3.8%
Government Employment	17.9%	21.9%	19.3%
Growth in Employment by Sector	1979– 1999	1979–1989	1989–1999
Total full-time and part-time employment	20.6%	0.2%	20.4%
Agriculture services, forestry, fishing, and other	136.2%	57.9%	49.6%
Mining	-48.6%	-41.9%	-11.4%
Construction	-8.3%	-42.0%	58.1%
Manufacturing	24.6%	-3.1%	28.6%
Transportation and public utilities	-4.7%	-7.5%	3.0%
Wholesale trade	-5.9%	-12.2%	7.1%
Retail trade	33.9%	6.2%	26.0%
Finance, insurance, and real estate	40.7%	12.3%	25.3%
Services	81.1%	31.0%	38.2%
Farm Employment	30.5%	22.9%	6.2%
Government Employment	-16.2%	-14.3%	-2.3%

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Accounts Data, Table SA25, Total Full-Time and Part-Time Employment by Industry.

**Table A16-3. Total Full-Time and Private Employment by Industry
In 1979, 1989, 1999 for United States**

	1979	1989	1999
Total full-time and part-time employment	113,289,100	137,240,800	163,757,900
Agriculture services, forestry, fishing, and other	868,500	1,374,300	2,048,400
Mining	1,154,200	1,047,700	782,100
Construction	5,906,200	7,293,500	9,254,000
Manufacturing	21,498,000	19,992,500	19,252,700
Transportation and public utilities	5,627,400	6,361,600	7,970,300
Wholesale trade	5,672,600	6,704,300	7,464,700
Retail trade	17,780,500	22,687,600	26,910,000
Finance, insurance, and real estate	8,538,100	10,663,400	12,978,700
Services	24,082,600	37,170,900	51,669,000
Farm Employment	3,764,000	3,200,000	3,172,000
Government Employment	18,397,000	20,745,000	22,256,000
Percentage of Total Employment			
Agriculture services, forestry, fishing, and other	0.8%	1.0%	1.3%
Mining	1.0%	0.8%	0.5%
Construction	5.2%	5.3%	5.7%
Manufacturing	19.0%	14.6%	11.8%
Transportation and public utilities	5.0%	4.6%	4.9%
Wholesale trade	5.0%	4.9%	4.6%
Retail trade	15.7%	16.5%	16.4%
Finance, insurance, and real estate	7.5%	7.8%	7.9%
Services	21.3%	27.1%	31.6%
Farm Employment	3.3%	2.3%	1.9%
Government Employment	16.2%	15.1%	13.6%
Growth in Private Employment by Sector	1979-1999	1979-1989	1989-1999
Total full-time and part-time employment	44.5%	21.1%	19.3%
Agriculture services, forestry, fishing, and other	135.9%	58.2%	49.1%
Mining	-32.2%	-9.2%	-25.4%
Construction	56.7%	23.5%	26.9%
Manufacturing	-10.4%	-7.0%	-3.7%
Transportation and public utilities	41.6%	13.0%	25.3%
Wholesale trade	31.6%	18.2%	11.3%
Retail trade	51.3%	27.6%	18.6%
Finance, insurance, and real estate	52.0%	24.9%	21.7%
Services	114.5%	54.3%	39.0%
Farm Employment	51.8%	24.3%	22.1%
Government Employment	-15.7%	-15.0%	-0.9%

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Accounts Data, Table SA25, Total Full-Time and Part-Time Employment by Industry.

Tables A16-4 to A16-6 summarize gross earnings for 1979, 1989, and 1999 for the study area, Wyoming, and the United States.

**Table A16-4. Gross Labor Earnings by Industry
in 1979, 1989, and 1999 for Study Area^a**

	1979	1989	1999
Total Gross Labor Earnings (1,000\$)	\$1,720,553	\$1,538,039	\$2,003,395
Agriculture services, forestry, fishing, and other	\$2,961	\$3,118	\$4,620
Mining	\$574,033	\$373,733	\$332,537
Construction	\$221,865	\$76,802	\$119,073
Manufacturing	\$47,485	\$35,992	\$110,045
Transportation and public utilities	\$129,570	\$130,544	\$130,625
Wholesale trade	\$36,912	\$38,183	\$30,157
Retail trade	\$137,389	\$96,852	\$134,252
Finance, insurance, and real estate	\$27,745	\$26,217	\$45,425
Services	\$174,983	\$160,430	\$229,860
Farm earnings	\$21,919	\$7,914	\$16,422
Federal, State and Local Government	\$178,387	\$245,280	\$274,346
Percentage of Total Gross Earnings			
Agriculture services, forestry, fishing, and other	0.2%	0.2%	0.2%
Mining	33.4%	24.3%	16.6%
Construction	12.9%	5.0%	5.9%
Manufacturing	2.8%	2.3%	5.5%
Transportation and public utilities	7.5%	8.5%	6.5%
Wholesale trade	2.1%	2.5%	1.5%
Retail trade	8.0%	6.3%	6.7%
Finance, insurance, and real estate	1.6%	1.7%	2.3%
Services	10.2%	10.4%	11.5%
Farm earnings	1.3%	0.5%	0.8%
Federal, State and Local Government	10.4%	15.9%	13.7%
Growth in Gross Labor Earnings	1979-1999	1979-1989	1989-1999
Total gross labor earnings	16%	-10.6%	30.3%
Agriculture services, forestry, fishing, and other	56%	5.3%	48.2%
Mining	-42%	-34.9%	-11.0%
Construction	-46%	-65.4%	55.0%
Manufacturing	132%	-24.2%	205.7%
Transportation and public utilities	1%	0.8%	0.1%
Wholesale trade	-18%	3.4%	-21.0%
Retail trade	-2%	-29.5%	38.6%
Finance, insurance, and real estate	64%	-5.5%	73.3%
Services	31%	-8.3%	43.3%
Farm earnings	-25%	-63.9%	107.5%
Federal, State and Local Government	54%	37.5%	11.9%

^a Study area includes Fremont, Sublette, and Sweetwater counties in Wyoming.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Table CA05, Personal Income by Major Source and Earnings by Industry, 1979-1999.

**Table A16-5. Gross Labor Earnings by Industry
in 1979, 1989, 1999 for Wyoming**

Gross Labor Earnings by Industry	Real Dollars (2001\$)		
	1979	1989	1999
Total Gross Labor Earnings (1,000\$)	\$8,329,148	\$6,971,189	\$8,731,046
Agriculture services, forestry, fishing, and other	\$31,981	\$44,876	\$69,286
Mining	\$1,924,385	\$1,231,393	\$1,198,771
Construction	\$1,059,820	\$469,295	\$739,548
Manufacturing	\$443,244	\$319,859	\$454,122
Transportation and public utilities	\$812,461	\$706,161	\$778,282
Wholesale trade	\$334,734	\$255,654	\$287,143
Retail trade	\$816,368	\$639,216	\$844,364
Finance, insurance, and real estate	\$263,545	\$241,652	\$449,663
Services	\$1,019,721	\$1,085,319	\$1,681,233
Farm Earnings	\$211,230	\$106,176	\$149,514
Federal, State, and Local Government	\$1,411,658	\$1,871,589	\$2,079,120
Percentage of Total Gross Earnings	1979	1989	1999
Agriculture services, forestry, fishing, and other	0.4%	0.6%	0.8%
Mining	23.1%	17.7%	13.7%
Construction	12.7%	6.7%	8.5%
Manufacturing	5.3%	4.6%	5.2%
Transportation and public utilities	9.8%	10.1%	8.9%
Wholesale trade	4.0%	3.7%	3.3%
Retail trade	9.8%	9.2%	9.7%
Finance, insurance, and real estate	3.2%	3.5%	5.2%
Services	12.2%	15.6%	19.3%
Farm Earnings	2.5%	1.5%	1.7%
Federal, State, and Local Government	16.9%	26.8%	23.8%
Growth in Gross Labor Earnings	1979-1999	1979-1989	1989-1999
Total Gross Labor Earnings	4.8%	-16.3%	25.2%
Agriculture services, forestry, fishing, and other	-37.7%	-36.0%	-2.6%
Mining	-30.2%	-55.7%	57.6%
Construction	2.5%	-27.8%	42.0%
Manufacturing	-4.2%	-13.1%	10.2%
Transportation and public utilities	-14.2%	-23.6%	12.3%
Wholesale trade	3.4%	-21.7%	32.1%
Retail trade	70.6%	-8.3%	86.1%
Finance, insurance, and real estate	64.9%	6.4%	54.9%
Services	-29.2%	-49.7%	40.8%
Farm Earnings	47.3%	32.6%	11.1%
Federal, State, and Local Government	1.0%	0.5%	0.5%

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Table CA05, Personal Income by Major Source and Earnings by Industry, 1979-1999.

**Table A16-6. Gross Labor Earnings by Industry in
1979, 1989, and 1999 for United States**

Gross Labor Earnings by Industry	Real Dollars (2001\$)		
	1979	1989	1999
Total Gross Labor Earnings (1,000\$)	\$2,473,711,917	\$3,213,383,025	\$4,498,593,061
Agriculture services, forestry, fishing, and other	\$11,571,539	\$19,448,185	\$32,032,777
Mining	\$5,287,312	\$2,850,445	\$2,462,143
Construction	\$54,560,355	\$61,805,723	\$73,127,276
Manufacturing	\$487,005,399	\$486,935,561	\$543,740,656
Transportation and public utilities	\$25,406,865	\$14,937,485	\$13,479,969
Wholesale trade	\$306,783,648	\$372,747,055	\$482,546,483
Retail trade	\$18,470,883	\$21,332,051	\$28,449,300
Finance, insurance, and real estate	\$56,380,640	\$87,843,232	\$126,468,277
Services	\$22,219,437	\$31,870,642	\$47,090,282
Farm Earnings	\$59,676,051	\$52,125,511	\$42,903,968
Federal, State, and Local Government	\$133,987,659	\$153,653,522	\$171,826,720
Percentage of Total Gross Earnings	1979	1989	1999
Agriculture services, forestry, fishing, and other	0.5%	0.6%	0.7%
Mining	0.2%	0.1%	0.1%
Construction	2.2%	1.9%	1.6%
Manufacturing	19.7%	15.2%	12.1%
Transportation and public utilities	1.0%	0.5%	0.3%
Wholesale trade	12.4%	11.6%	10.7%
Retail trade	0.7%	0.7%	0.6%
Finance, insurance, and real estate	2.3%	2.7%	2.8%
Services	0.9%	1.0%	1.0%
Farm Earnings	2.4%	1.6%	1.0%
Federal, State, and Local Government	5.4%	4.8%	3.8%
Growth in Gross Labor Earnings	1979-1999	1979-1989	1989-1999
Total Gross Labor Earnings	81.9%	29.9%	40.0%
Agriculture services, forestry, fishing, and other	-53.4%	-46.1%	-13.6%
Mining	34.0%	13.3%	18.3%
Construction	11.6%	0.0%	11.7%
Manufacturing	-46.9%	-41.2%	-9.8%
Transportation and public utilities	57.3%	21.5%	29.5%
Wholesale trade	54.0%	15.5%	33.4%
Retail trade	124.3%	55.8%	44.0%
Finance, insurance, and real estate	111.9%	43.4%	47.8%
Services	-28.1%	-12.7%	-17.7%
Farm Earnings	28.2%	14.7%	11.8%
Federal, State, and Local Government	1.0%	0.5%	0.5%

Source: Data derived from the U.S. Department of Commerce, Bureau of Economic Analysis, Table CA05, Personal Income by Major Source and Earnings by Industry, 1979-1999.

ECONOMIC IMPACT ANALYSIS METHODOLOGY

The following section provides a detailed summary of the economic impact analysis by resources use.

Oil and Gas Exploration and Development

The economic impact of oil and gas operations were analyzed in two phases:

- Phase I: Exploration and Development
- Phase II: Production

Phase I considered how many exploratory and development wells would be drilled under each alternative in Jack Morrow Hills (JMH), and what percentage of these wells would be completed. This includes both conventional wells and coal bed methane development. Table A16-7 summarizes the economic assumptions used in analyzing the exploration and development phase associated with each alternative.

Table A16-7. Economic Assumptions for Gas Exploration and Development

	Gas Wells Drilled and Completed ^a (2001\$)	Gas Wells Drilled and Abandoned (2001\$)	Coal Bed Methane Wells Drilled and Abandoned (2001\$)
Direct Expenditures	\$620,784	\$303,830	\$142,640
Total Economic Impact Per Well	\$847,180	\$413,090	\$193,957
Earnings Per Well	\$130,697	\$62,997	\$29,583
Jobs Per Well	4.395	2.121	0.996

a Conventional wells were assumed to average 9,000 feet in depth.

b Coal bed methane wells were assumed to average less than 1,200 feet in depth.

Phase II considered the economic impact of producing additional gas reserves as a result of the exploration and development under Phase I. This analysis considered only the production of gas reserves given the small amount of current and expected crude oil production within JMH. In addition, it was assumed that coal bed methane development would not lead to additional gas production in the study area. Table A16-8 summarizes the economic assumptions used to analyze gas production estimated to occur under each alternative.

Table A16-8. Economic Assumptions for Gas Production

	Natural Gas (MCF) (2001\$)
Value of Production	\$2.81
Total Economic Impact	\$2,793
Earnings	\$188
Jobs	0.005387

The average price of natural gas used for this analysis was estimated with data from the Energy Information Administration, which published a 20-year gas price forecast for the Rocky Mountain Region (EIA 2001). This price forecast was adjusted for inflation and averaged over

17 years (2003–2020) to estimate an average future price for gas production in JMH as summarized in Table A16-8.

Grazing

Grazing activities were analyzed under each alternative as follows. First, BLM was contacted regarding historical grazing use within JMH. Table 3-7 in the Supplemental Draft EIS for the JMH CAP provides a summary of historical grazing use by operator for the last 5 years. The value of grazing animal unit months (AUM) for cattle and sheep were estimated as summarized in Tables A16-9 and A16-10. For cattle AUMs, as shown in columns 2 and 3, data were obtained from the Wyoming Agricultural Statistical Service and include the value of cattle sold in Wyoming each year between 1996 to 2000. Total cattle sales were divided by the number of cows that have calved in each year, which provided a value per cow sold as summarized in column 4. The value per cow was then divided by an AUM conversion factor, which resulted in an estimated value per AUM per year. This annual value was adjusted for inflation each year as summarized in column 7. The economic analysis used the 5-year average value of AUMs, or \$33.59/AUM in inflation-adjusted dollars.

Table A16-9. Estimated Value of Cattle AUMs

Year	Value of Production (1,000\$) ^a	Cows that have Calved (1,000 Head) ^a	Value Per Cow	AUM Conversion (AUMs/cow) ^b	Value of Production Per AUM (Nominal \$)	Value of Production Per AUM (Real 2001\$)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1996	\$359,805	810	\$444.20	16	\$27.76	\$30.36
1997	\$442,717	870	\$508.87	16	\$31.80	\$34.12
1998	\$400,637	880	\$455.27	16	\$28.45	\$30.10
1999	\$452,058	830	\$544.65	16	\$34.04	\$35.55
2000	\$490,707	830	\$591.21	16	\$36.95	\$37.80
					5-year Average: \$33.59	

^a Wyoming Agricultural Statistics.

^b Workman, J.P. 1986. *Range Economics*. New York: McMillian Publishing, Inc.

A similar method was used to value sheep AUMs as summarized in Table A16-10. The value and number of AUMs per alternative were then used in combination with the input-output (I/O) model to estimate economic impacts of grazing under each alternative. The economic assumptions used to analyze grazing impacts are summarized in Table A16-11.

Table A16-10. Value of Sheep AUMs

Year	Value of Production Sheep and Lambs (1,000\$) a	Value of Wool Production (1,000\$)a	Total Value of Production	Ewes 1 Year and Older (1,000 Head)a	Value Per Ewe	Conversion to AUMs (AUMs/Ewe)b	Value of Production Per AUM (Nominal \$)	Value of Production Per AUM (Real 2001\$)
(1)	(2)	(3)	(4)=(2)+(3)	(5)	(6) = (4)/(5)	(7)	(8)=(6)/(7)	(9)
1996	\$31,708	\$4,997	\$36,705	455	\$80.67	3.2	\$25.21	\$27.57
1997	\$33,935	\$5,576	\$39,511	450	\$87.80	3.2	\$27.44	\$29.44
1998	\$24,493	\$4,266	\$28,759	430	\$66.88	3.2	\$20.90	\$22.11
1999	\$22,489	\$2,416	\$24,905	385	\$64.69	3.2	\$20.22	\$21.11
2000	\$23,448	\$2,143	\$25,591	365	\$70.11	3.2	\$21.91	\$22.42
							5-year Average: \$24.53	

^a Wyoming Agricultural Statistics.

^b Workman, J.P. 1986. *Range Economics*. New York: McMillian Publishing, Inc.

Table A16-11. Economic Assumptions for Grazing

	Cattle Grazing (2001\$)	Sheep Grazing (2001\$)
Direct Expenditures	\$33.53	\$24.53
Total Economic Impact Per AUM	\$65.58	\$46.18
Earnings Per AUM	\$11.90	\$10.09
Jobs Per AUM	0.000654	0.000656

Recreation

Recreational impacts were analyzed as follows. The number of Recreational Visitor Days (RVD) was estimated for each alternative, considering several assumptions. These assumptions are summarized in Table A16-12. Once the number of RVDs was estimated by activity, the RVDs were separated into resident and nonresident use and analyzed separately. Residents were considered any individual living in the three-county study area, whereas nonresidents lived outside the three-county region. Residents of the study area associated with big game hunting were determined by evaluating zip codes of hunters that applied for licenses from the Wyoming Game and Fish Department within the relevant hunting areas. This information is not available for upland species, so sage grouse nonresidents include out-of-state visitors only. Residents and nonresidents participating in off-highway vehicle (OHV) and other dispersed use were based on observations of the BLM staff for this area.

The economic impact of recreation in JMH considered activities only of nonresidents. This is based on the theory that nonresidents provide an economic stimulus to the area due to increased expenditures. Money spent by nonresidents is respent in the local economy, generating additional income and jobs for local residents. Residential spending on recreation does not play into this analysis, because if residents do not spend money related to recreational activities in JMH, they likely substitute their spending on another activity in the local area, thus there is no net change in spending.

Total annual recreational expenditures of nonresidents were estimated for each alternative using the estimated RVDs per activity and the average expenditures per day per activity. Table A16-13 summarizes the average expenditures used for each activity and summarizes other economic assumptions used to estimate the economic impact of recreation in JMH.

Table A16-12. Recreation Assumptions

Use Type	No Action	Alternative 1	Alternative 2	Alternative 3	Preferred Alternative
Non-Consumptive					
OHV	OHV use is estimated to increase by 2.5% per year until 2010, when OHV use will remain constant until the end of study period. Increases in OHV use are expected due to improvements in facilities near Sand Dunes area.	OHV use is expected to increase by 2.5% per year until 2008, when OHV use will remain constant until the end of study period. Increases in OHV use are expected due to improvements in facilities near Sand Dunes Area. OHV will not increase as much as No Action because of limits in access.	OHV use is expected to remain constant during first 5 years of study period, then decline by 10% during next 15 years because of limited access and no improvements in facilities near Sand Dunes Area.	OHV use is expected to remain constant over the study period because of limited access and no improvements in facilities near Sand Dunes Area	OHV use is estimated to increase by 2.5% per year until 2010, when OHV use will remain constant until the end of study period. Increases in OHV use are expected due to improvements in facilities near Sand Dunes area.
Other Recreational Uses	Nonconsumptive RVDs are estimated to increase by 1.5% per year over the next 20 years. Some recreational planning will occur under this alternative, but not at the same level of effort as for Alternatives 2 and 3. Limits on dispersed camping are not as strong under this alternative as with Alternatives 2 and 3, which will increase camping activities.	Nonconsumptive RVDs are estimated to increase by 1.5% over the next 5 years, then remain constant for the remainder of the study period. Recreational planning will occur under this alternative, but not at the same level as for Alternatives 2 and 3. Restrictions on dispersed camping are not as strong as under Alternatives 2 and 3. Recreation is not expected to increase throughout the study period because of increased development activities.	Nonconsumptive use is expected to increase by 1% per year over the study period. This is due to the increased recreational planning and interpretive prospectus development for several important sites. However, dispersed camping activities would be limited, restricting growth of this activity for this area.	Nonconsumptive use is expected to increase by 1% per year over the study period. This is due to the increased recreational planning and interpretive prospectus development for several important sites. However, dispersed camping activities would be limited, restricting growth of this activity for this area.	Nonconsumptive RVDs are estimated to increase by 2% per year over the next 20 years. This is due to the increased recreational planning and interpretive prospectus development for several important sites. Dispersed camping would not be limited as under Alternatives 2 and 3, which will allow for increased camping opportunities in the planning area.

Table A16-12. Recreation Assumptions (Continued)

Use Type	No Action	Alternative 1	Alternative 2	Alternative 3	Preferred Alternative
Consumptive					
Elk	Hunting days for elk are expected to remain constant at 5-year historic average for the entire planning period. Wyoming G&F will not increase the number of licenses, and changes in management should not significantly disrupt current hunting activities.	Hunting days for Elk are expected to increase 10% during the first 5 years of the study period because of increased development that is likely to disperse Elk in the planning area. During the second 5 years of the study period, hunting days are expected to fall as development activities drop off and as the herd objective is reached. The remaining years of the study period, hunting days for Elk are expected to remain constant.	Hunting days for Elk are expected to increase by 10% per year during the first 5 years of the study period, then remain constant for the rest of the study period. The increase follows recent trends in hunting days in the area. In addition, hunting days are expected to increase under this alternative because of access restrictions.	Hunting days for Elk are expected to remain constant at 5-year historic average for the entire planning period. Wyoming G&F will not increase the number of licenses, and changes in management should not significantly disrupt current hunting activities.	Hunting days for Elk are expected to remain constant at 5-year historic average for the entire planning period. Wyoming G&F will not be increasing the number of licenses, and changes in management should not significantly disrupt current hunting activities.
Antelope	Hunting days for antelope are expected to remain constant at the 5-year historic average during the study period.	Same as No Action	Same as No Action	Same as No Action	Same as No Action
Mule Deer	Hunting days for mule deer are expected to remain constant at the 5-year historic average during the study period.	Same as No Action	Same as No Action	Same as No Action	Same as No Action
Sage Grouse	Hunting days for sage grouse are expected to remain constant during the study period.	Same as No Action	Same as No Action	Same as No Action	Same as No Action

Table A16-13. Economic Assumptions for Recreation

	OHV (2001\$)	Other Dispersed Recreation (2001\$)	Elk Hunting (2001\$)	Antelope Hunting (2001\$)	Mule Deer Hunting (2001\$)	Sage Grouse (2001\$)
Direct Expenditures	\$124.70	\$59.00	\$256.82	\$257.06	\$149.18	\$104.58
Total Economic Impact Per RVD	\$173.44	\$86.66	\$354.76	\$355.36	\$194.24	\$142.62
Earnings Per RVD	\$24.50	\$14.12	\$50.72	\$48.91	\$22.62	\$18.71
Jobs Per RVD	0.001687	0.001051	0.003307	0.003214	0.001525	0.001272

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**



**WYOMING STATE OFFICE
RESERVOIR MANAGEMENT GROUP
AND ROCK SPRINGS FIELD OFFICE**

*LESSEE PAYMENTS TO THE UNITED STATES FOR
NON-PRODUCING OIL AND GAS LEASES
IN THE JACK MORROW HILLS EIS AREA*

**ROCK SPRINGS FIELD OFFICE
WYOMING**

November 25, 2002

SAMPLE COVER

Lessee Payments to the United States For Non-Producing Oil and Gas Leases in the Jack Morrow Hills

Summary

We prepared this report at the request of the Rock Springs Field Office, Assistant Field Manager and the Jack Morrow Hills Project Coordinator. We were asked to prepare an analysis to determine the payments that have been made to the United States to purchase and maintain leases in the Jack Morrow Hills area. A review of those payments is required in order to assist in the determination of the potential costs that would be associated with a proposed “lease buyback” recommendation for Alternative 2 of the Draft Jack Morrow Hills EIS. The Coordinator asked that the underlying assumption for this estimate would be that productive lands not be considered for any potential “lease buyback.”

This report summarizes only those payments made to the United States to purchase and maintain leases in the Jack Morrow Hills area. Those costs include payment of bonus bids, rentals, and application or filing fees. It does not review any other costs such as seismic acquisition and interpretation, business overhead, permitting, etc., that the lessee’s may have already incurred to manage and explore their leases. Also not reviewed in this report is an estimate of the potential hydrocarbon resource that the lessee may expect to develop if allowed. We believe that any complete estimate of lease buyback costs would also need to consider these items when negotiating with a potential willing seller.

We calculated lease payments on a dollar per acre basis for all active leases included in our study. We found that payments to date have ranged from a low of \$4.08 per acre for Lease WYW 147705 to a high of \$153.38 per acre for Lease WYW 135785. The average payment for the 204 leases included in this review has been \$21.50 per acre.

Criteria for Lease Exclusion

We used the Bureau of Land Management’s LR2000 online database (<http://lr2000.blm.gov/>) to access all active lease records for the Jack Morrow Hills area. The Coordinator had requested that producing leases be excluded from this analysis. We determined that “producing leases” are those that are Held By Production because they are in a producing unit (Buccaneer, Nitchie Gulch, Rim Rock, or Steamboat Mountain Unit) or Communitization Agreement or because they contain a producing well. Forty-two leases are Held By Production and those “producing leases” were excluded from our study.

The LR2000 database was created circa 1988, and consequently a complete history of payments was not available for all older leases. We were able to project payments back to issue date for some of the older leases, but could not project the entire rental history for all of them. Ten leases were excluded from analysis because we could not project their entire rental history. We found 204 leases, covering 230,693.34 acres, which could be used for analysis. A summary of all 204 leases is included in the attached table.

Lease Payments Made

Three types of payments may be made to the United States to purchase and maintain the right to develop oil and gas resources on federal lands in the Jack Morrow Hills area. The first payment that may be made is a lease bonus. Most of the 204 leases have been opened to a bidding process and 147 (72%) have been leased with a bonus bid. The other 57 were leased

without a bonus bid. The minimum lease bonus bid allowed is \$2.00 per acre. Our LR2000 online database reports the winning bonus bid on a per acre basis. Those bids have ranged from \$2.00 to \$140.00 per acre (see “Bonus Bid” on attached table). We used the bonus bid to then calculate the “Lease Bonus Bid Paid” for the lands in each lease (see attached table). A total of \$2,347,749 in lease bonus bids has been paid.

The second payment made on the 204 leases is an annual rental. The annual rental is paid unless a suspension has been approved. Lease segregation, assignment, and relinquishment affect the total acres within a lease and consequently the rental paid. The LR2000 records of rental payments had to be adjusted where lease acre changes due to segregation, assignment, and relinquishment had been made. A “Lease Rental Paid” calculation was made for each lease (see attached table). Individual lease rentals have ranged from \$180 to \$82,930.50. A total of \$2,612,316.06 in rental has been paid to date on the 204 active leases reviewed in the Jack Morrow Hills area.

The third payment made is an application or filing fee. We have assumed that this fee averages \$75 per lease, or \$15,300 for the 204 leases.

The per acre amount paid to the government, to date, for each lease is calculated as follows:

$$\text{Lease Bonus Bid Paid} + \text{Lease Rental Paid} + \text{Application Fee} / \text{Lease Acres}$$

Our calculations show that payments to date have ranged from \$4.08 per acre to \$153.38 per acre (see attached table). The average payment for the 204 leases included in this review has been \$21.50 per acre.

JMh Lease Information

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Govern- ment (\$/acre)	Lease Acre Changes	
	4	50508	638.65	23N 104W 1: S2NW, SW, lots 3,4 S2N2, lots 1-4	6/1/1975	3/22/2002		\$0.00	\$2,556.00	\$4.12	No
	154	96020	1826.6	26N 102W 30: E2, E2W2, LOTS 1-4 31: E2, NENW, SESW, LOTS 1-4 ALL	12/1/1985	none		\$0.00	\$32,713.00	\$17.95	Segregation
	146	96029	240	26N 103W 25: E2NW, SWNW, N2SE, SWSE	11/1/1985	none		\$0.00	\$6,245.00	\$26.33	No
	212	97241	1646.44	23N 103W 1: S2N2, S2, LOTS 1-4 32: E2 NENE E2 24N 103W 25: N2SW, LOTS 1 & 2 14: E2NW, W2SE, SESE	1/1/1986	none		\$0.00	\$36,234.00	\$22.05	No
	224	99297	395.79	24N 102W 30: LOTS 1 & 2 W2NE	5/1/1986	none		\$0.00	\$3,960.00	\$10.19	No
	246	101715	640	23N 102W 8: ALL	11/1/1986	none		\$0.00	\$5,120.00	\$8.12	No
	228	101716	637.06	23N 102W 5: S2NE, SE, LOTS 1 & 2 24N 102W 32: E2	10/1/1986	none		\$0.00	\$5,742.00	\$9.13	No
	222	103470	2560	24N 102W 21: ALL ALL ALL ALL	2/1/1987	none		\$0.00	\$20,736.00	\$8.13	No
	256	103476	1200	23N 103W 12: ALL 22: N2, SW, N2SE	2/1/1987	none		\$0.00	\$10,800.00	\$9.06	No
	182	106130	2360	25N 103W 13: ALL 28: N2, SW, W2SE W2E2, W2, SESE 13: ALL	11/1/1987	none		\$0.00	\$66,080.00	\$28.03	Segregation
	169	107597	320	25N 102W 15: W2	3/1/1988	none		\$0.00	\$4,050.00	\$12.89	No
	172	108031	40	25N 102W 20: SESE	3/1/1988	none		\$0.00	\$720.00	\$19.88	Segregation
	159	108056	493.28	22N 105W 2: LOTS 5-12 24: LOTS 5, 6, 11, 12	3/1/1988	none		\$0.00	\$2,470.00	\$5.16	Segregation

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JMH Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
234	108058	960	23N 105W 34: E2 ALL	3/1/1988	none		\$0.00	\$9,600.00	\$10.08	Relinquishment & Segregation
227	108862	1692.89	23N 102W 5: S2NW, E2SW, LOTS 3 & 4 S2NE, SENW, E2SW, SE, LOTS 35: 1-7 E2, E2W2, LOTS 1-4 24N 102W 31: SESW, S2SE 6: S2SW, LOT 4	5/1/1988	none		\$0.00	\$49,102.00	\$29.05	No
165	108863	640	25N 102W 8: ALL 7:	5/1/1988	none		\$0.00	\$7,253.34	\$11.45	Segregation
170	115575	150.3	25N 102W 15: LOTS 1-4	4/1/1989	none		\$0.00	\$3,368.00	\$22.91	No
247	115934	936.88	23N 102W 17: N2NE, NW, N2SW E2, E2W2, LOTS 1-4	5/1/1989	none	\$14.00	\$13,118.00	\$8,901.50	\$23.58	Segregation
220	115935	1259.48	24N 102W 13: ALL E2, E2W2, NWNW, LOTS 1-3 18:	5/1/1989	none	\$2.00	\$2,520.00	\$11,970.00	\$11.56	Segregation
219	115936	2459.54	24N 102W 14: ALL ALL 24: ALL N2NE, SWNE, W2, LOTS 1 & 2	5/1/1989	none	\$2.00	\$4,920.00	\$28,290.00	\$13.53	No
205	117839	1160	24N 103W 13: W2 20: 23: ALL W2W2 SESE	11/1/1989	none	\$12.00	\$13,920.00	\$11,020.00	\$21.56	Segregation
204	117840	1520	24N 103W 11: NE, NENW, S2NW, S2 23: 24: N2, SW, NESE, W2SE E2	11/1/1989	none	\$10.00	\$15,200.00	\$19,000.00	\$22.55	No
214	117841	800	24N 103W 34: N2, SW, N2SE, SWSE 2: 13: NWNW, NW	11/1/1989	none	\$11.00	\$8,800.00	\$10,000.00	\$23.59	No
225	118721	40	24N 102W 30: SESW	1/1/1990	none		\$0.00	\$380.00	\$11.38	No
226	120587	80	24N 102W 29: SWNW 35: SENE	7/1/1990	none	\$30.00	\$2,400.00	\$640.00	\$38.94	No

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JMH Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
3	126047	2480	23N 101W 2: S2SW, SE ALL ALL N2N2 11: 12: N2N2	2/1/1992	1/31/2002		\$0.00	\$43,400.00	\$17.53	No
6	126761	777.67	24N 101W 3: lot 8 14: ALL S2N2, SW, W2SE, lots 5-8 15: lots 5-8 lots 1-7	5/1/1992	4/30/2002		\$0.00	\$12,448.00	\$16.10	No
5	126762	640	26N 101W 34: ALL	5/1/1992	4/30/2002		\$0.00	\$10,240.00	\$16.12	No
145	127446	2560	26N 103W 27: ALL 16: ALL ALL ALL	9/1/1992	none		\$0.00	\$34,560.00	\$13.53	No
7	127448	1266.8	28N 106W 10: ALL 34: E2, E2W2, lots 1-4 35:	9/1/1992	8/31/2002		\$0.00	\$22,172.50	\$17.56	No
8	127850	600	25N 103W 21: NE, NENW, S2NW, S2	11/1/1992	10/31/2002		\$0.00	\$8,400.00	\$14.13	No
10	128244	1183.66	23N 100W 6: E2SW, SE, lot 1-4 19: E2, E2W2, lots 5-8 W2NW, SENW, SW	1/1/1993	12/31/2002		\$0.00	\$18,352.00	\$15.57	No
9	128248	602.1	26N 102W 3: S2N2, S2, lots 2-4	1/1/1993	12/31/2002		\$0.00	\$9,826.50	\$16.44	No
166	128872	640	25N 102W 9: ALL	5/1/1993	none		\$0.00	\$9,066.76	\$14.28	Segregation
11	128873	200	25N 104W 10: SW SENE	5/1/1993	4/30/2003		\$0.00	\$3,100.00	\$15.88	No
14	129124	1000	23N 102W 13: N2NW N2 11: N2NE, SWNE, NW S2	6/1/1993	5/31/2003	\$2.00	\$2,000.00	\$15,500.00	\$17.58	No
13	129130	640	23N 106W 14: S2NE, SW 22: S2N2, W2SE 24: N2NE, S2NW 26:	6/1/1993	5/31/2003	\$2.00	\$1,280.00	\$8,000.00	\$14.62	No

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JMh Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
12	129131	1280	23N 106W 27: ALL ALL	6/1/1993	5/31/2003	\$2.00	\$2,560.00	\$17,920.00	\$16.06	No
155	129606	640	26N 102W 29: ALL	7/1/1993	none	\$2.00	\$1,280.00	\$9,066.64	\$16.28	No
210	129607	622.92	24N 103W 30: E2, E2W2, LOTS1-4	7/1/1993	none	\$13.00	\$8,099.00	\$7,164.50	\$24.62	No
144	129608	640	26N 103W 28: ALL	7/1/1993	none	\$2.00	\$1,280.00	\$8,640.00	\$15.62	No
149	129698	2548.9	26N 102W 7: E2W2, SE, LOTS 1-4 ALL E2, E2W2, LOTS 1-4 LOTS 1-4 ALL	8/1/1993	none		\$0.00	\$29,313.50	\$11.53	No
15	129748	1477.84	17: 25N 104W 31: E2SW, SE?, lots 3 & 4 S2 19: 20N 105W 1: E2SW, SE, lots 1-4, 32: SW, N2SE, SWSE, lots 1-4 NWNW	7/1/1993	6/30/2003		\$0.00	\$22,909.00	\$15.55	No
16	129911	947.26	25N 104W 30: E2 E2SW excl. 17.88 ac RR ROW 11: N2	8/1/1993	7/31/2003		\$0.00	\$14,694.00	\$15.59	Relinquishm ent
17	130222	2280	28N 105W 9: N2, N2SW, SESW, SE ALL 32: excl 12.62 ac RR ROW W2, W2SE	9/1/1993	8/31/2003	\$2.00	\$4,560.00	\$35,340.00	\$17.53	No

10:
11:
12:

JMh Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
18	130363	5112.37	26N 103W 2: SENE SESE ALL ALL S2 11: SW 12: NE, E2W2, N2SE, SWSE 13: SESE excl 6.43 ac RR ROW 14: 15: SENE, NESW, NESE, S2SE, 18: 19: ALL lots 1-4 S2 ALL LOT 2, NWNE, E2NW, lots 1,2 20: NESW, N2SE, lot 3 21: NESE excl 21.2 ac RR ROW 22: N2S2	10/1/1993	9/30/2003		\$0.00	\$69,025.50	\$13.52	No
160	130450	621.24	25N 101W 6: S2NE, SENW, E2SW, SE, LOTS 37: 37:	10/1/1993	none		\$0.00	\$8,086.00	\$13.14	No
23	130711	2557.16	24N 102W 3: S2N2, S2, lots 1-4 S2N2, S2, lots 1-4 SWNE ALL 4: 5: 9: 10: ALL	12/1/1993	11/30/2003	\$2.00	\$5,116.00	\$34,533.00	\$15.53	No
221	130712	639.97	24N 102W 19: N2NE, SENE, NENW, NESE, S2SE, 9: 10: ALL N2NW, SENW	12/1/1993	none	\$6.00	\$3,798.00	\$1,899.00	\$9.02	No
171	130714	2400	25N 102W 13: ALL ALL N2, N2S2 29: LOTS 1-7 ALL	12/1/1993	none	\$2.00	\$4,800.00	\$27,600.00	\$13.53	No
175	130715	160	25N 102W 23: S2S2 4: 4:	12/1/1993	none	\$2.00	\$320.00	\$1,840.00	\$13.97	No
22	130719	622.68	24N 103W 19: E2, E2W2, lots 1-4 24: 24:	12/1/1993	11/30/2003	\$30.00	\$18,690.00	\$8,410.50	\$43.64	No

JMH Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes	
	24	130722	960	23N 104W 21: NE, N2NW, SWNW NENE ALL	12/1/1993	11/30/2003	\$13.00	\$12,480.00	\$11,040.00	\$24.58	No
	19	130723	882.18	25N 104W 4: S2N2, S2, lots 1-4 28: W2NE, NW	12/1/1993	11/30/2003	\$6.00	\$5,298.00	\$11,920.50	\$19.60	No
	20	130724	880	25N 104W 10: SWNE, NW, SE 29: N2NE, SWNE, W2 9: E2NW	12/1/1993	11/30/2003	\$6.00	\$5,280.00	\$11,880.00	\$19.59	No
	21	130725	1440	25N 104W 12: S2 11: E2 12: N2NE, SENE, NENW	12/1/1993	11/30/2003	\$6.00	\$8,640.00	\$19,440.00	\$19.55	No
	33	131363	480	24N 101W 7: E2, E2W2	2/1/1994	1/37/04	\$3.00	\$1,440.00	\$6,480.00	\$16.66	No
	28	131364	120	24N 101W 5: W2SW, SESW	2/1/1994	1/31/2004	\$2.00	\$240.00	\$1,620.00	\$16.13	No
	163	131370	159.47	25N 102W 7: E2SW, LOTS 3 & 4	2/1/1994	none	\$3.00	\$478.00	\$720.00	\$7.98	Assignment
	36	131375	600	23N 103W 23: NWSW N2, N2SW, SE	2/1/1994	1/31/2004	\$27.00	\$16,200.00	\$8,100.00	\$40.63	No
	32	131376	80	24N 103W 17: W2SE	2/1/1994	1/31/2004	\$25.00	\$2,000.00	\$1,080.00	\$39.44	No
	29	131378	800	26N 103W 23: NE, NWNW, SW, SESE 26: NE, NWNW, SW, SESE	2/1/1994	1/31/2004	\$2.00	\$1,600.00	\$10,800.00	\$15.59	No
	147	131379	400	26N 103W 25: NE, NWNW, SW, SESE	2/1/1994	none	\$2.00	\$800.00	\$5,333.36	\$15.52	Segregation
	35	131382	1210.6	23N 104W 19: SESW 24: E2, E2W2, LOTS 1-4 24: E2, E2W2, LOTS 1-4	2/1/1994	1/31/2004	\$26.00	\$31,486.00	\$16,348.50	\$39.58	No
	34	131384	1280	23N 106W 34: ALL 30: 31: ALL	2/1/1994	1/31/2004	\$6.00	\$7,680.00	\$17,280.00	\$19.56	No

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JMh Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
25	131433	6142.68	25N 100W 2: S2N2, S2, lots 1-4 S2N2, S2, lots 1-4 ALL E2, E2W2, lots 1-4 E2, E2W2, lots 1-4 3: 11: ALL 18: ALL 19: E2, E2W2, lots 1-4 20: NE, E2NW, N2SE 21: ALL 23: 24: 25: 26: 27: 28: 29: 30: 31: 32:	1/1/1994	12/31/2003		\$0.00	\$82,930.50	\$13.51	No
27	131438	2197.7	23N 105W 2: SW, S2SE S2 S2 ALL EXCL 2.3 RR ROW ALL NENW 3: 4: 24: 25: 26: 27: 28: 29: 30: 31: 32:	1/1/1994	12/31/2003		\$0.00	\$29,673.00	\$13.54	No
26	131439	291.62	24N 99W 6: lots 10-14 lots 5-8 14: 17:	1/1/1994	12/31/2003		\$0.00	\$3,942.00	\$13.77	No
31	131440	640	25N 101W 26: ALL 25: 26: 27: 28: 29: 30: 31: 32:	2/1/1994	1/31/2004		\$0.00	\$8,640.00	\$13.62	No
38	131874	1282.07	25N 101W 3: S2N2, S2, LOTS 1-4 S2N2, S2, LOTS 1-4 25: 26: 27: 28: 29: 30: 31: 32:	4/1/1994	3/31/2004	\$5.00	\$6,415.00	\$7,698.00	\$11.07	No
37	131875	639.6	25N 101W 5: S2N2, S2, LOTS 1-4 25: 26: 27: 28: 29: 30: 31: 32:	4/1/1994	3/31/2004	\$7.00	\$4,480.00	\$8,640.00	\$20.63	No
39	131876	960	25N 101W 7: E2 ALL 4: 25: 26: 27: 28: 29: 30: 31: 32:	4/1/1994	3/31/2004	\$10.00	\$9,600.00	\$12,960.00	\$23.58	No
40	131877	1280	25N 101W 9: ALL ALL 8: 25: 26: 27: 28: 29: 30: 31: 32:	4/1/1994	3/31/2004	\$7.00	\$8,960.00	\$14,720.00	\$18.56	No
157	131882	640	26N 102W 33: N2, SW NW 10: 26: 27: 28: 29: 30: 31: 32:	4/1/1994	none	\$7.00	\$4,480.00	\$6,933.36	\$17.95	Segregation
44	131890	799.32	25N 103W 2: S2NW, LOTS 3 & 4 S2N2, S2, LOTS 1-4 34: 25: 26: 27: 28: 29: 30: 31: 32:	4/1/1994	3/31/2004	\$26.00	\$20,800.00	\$10,800.00	\$39.63	Segregation
180	131891	160	25N 103W 12: W2W2 25: 26: 27: 28: 29: 30: 31: 32:	4/1/1994	none	\$42.00	\$6,720.00	\$1,733.36	\$53.30	Segregation
45	131892	640	25N 103W 28: ALL 3: 25: 26: 27: 28: 29: 30: 31: 32:	4/1/1994	3/31/2004	\$43.00	\$27,520.00	\$8,640.00	\$56.62	No

JMH Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
46	131893	120	25N 103W 33: W2NW, NWSW	4/1/1994	3/31/2004	\$32.00	\$3,840.00	\$1,380.00	\$44.13	No
41	131897	640	25N 104W 17: ALL	4/1/1994	3/31/2004	\$2.00	\$1,280.00	\$8,640.00	\$15.62	No
42	131898	560	25N 104W 29: W2NE, W2, SE	4/1/1994	3/31/2004	\$14.00	\$7,840.00	\$7,560.00	\$27.63	No
49	132388	613.9	24N 103W 6: SENW, E2SW, LOTS 3-7 W2	6/1/1994	5/31/2004	\$33.00	\$20,262.00	\$8,289.00	\$46.63	No
47	132389	1077.76	25N 103W 7: E2, E2W2, LOTS 1-4 NWNW 12: NWNW, NENE, NENW 25N 104W 13: E2E2 E2E2 8:	6/1/1994	5/31/2004	\$7.00	\$7,546.00	\$14,553.00	\$20.57	No
188	132393	1960	24N 104W 13: W2E2, W2 N2S2, SESW, SWSE 25: ALL NE, NENW, S2NW, S2	6/1/1994	none	\$100.00	\$196,000.00	\$18,620.00	\$109.54	No
48	132394	1240	25N 104W 22: W2NE, SENE, W2, SE 23: ALL	6/1/1994	5/31/2004	\$28.00	\$34,720.00	\$16,740.00	\$41.56	No
168	133028	1881.06	25N 102W 17: ALL E2, E2W2, LOTS 1-4 23: N2, SW, N2SE, SWSE	8/1/1994	none	\$28.00	\$52,696.00	\$22,270.00	\$39.89	No
50	133040	1271.24	22N 105W 18: E2, E2W2, LOTS 5-8 19: E2, E2W2, LOTS 5-8	8/1/1994	7/31/2004	\$2.00	\$2,544.00	\$17,172.00	\$15.57	No
232	133041	1760	23N 105W 23: E2, SW ALL 19: ALL	8/1/1994	none	\$27.00	\$47,520.00	\$13,200.00	\$34.54	Segregation
51	133043	2160	23N 106W 13: ALL 24: N2NE, NW 25: SW S2NE, N2NW, S2 14: ALL	8/1/1994	7/31/2004	\$7.00	\$15,120.00	\$29,160.00	\$20.53	No
59	133726	1521.05	24N 99W 5: S2NE, SWNW, N2S2, SWSW, S2SE, 24: ALL N2	10/1/1994	9/30/2004	\$120.00	\$182,640.00	\$20,547.00	\$133.63	No

JMH Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
56	133732	1281.6	25N 99W 7: E2, E2W2, LOTS 1-4 ALL	10/1/1994	9/30/2004	\$37.00	\$47,434.00	\$17,307.00	\$50.57	No
57	133735	1280	25N 99W 17: ALL 9: ALL	10/1/1994	9/30/2004	\$28.00	\$35,840.00	\$17,280.00	\$41.56	No
58	133737	1079.34	24N 100W 11: NE S2NE, SENW, LOT 2 20: E2 W2 N2NE, SWNE	10/1/1994	9/30/2004	\$36.00	\$38,880.00	\$14,580.00	\$49.60	No
53	133747	320	25N 102W 5: SE 23: NE 24: NE	10/1/1994	9/30/2004	\$2.00	\$640.00	\$3,680.00	\$13.73	No
54	133750	1160	25N 103W 8: E2, NENW, S2NW, SW W2 7: E2NE, SE	10/1/1994	3/30/2004	\$7.00	\$8,120.00	\$15,660.00	\$20.56	No
55	133751	1879	25N 103W 29: ALL 17: E2, E2W2, LOTS 1-4 18: N2, SW, N2SE, SWSE	10/1/1994	9/30/2004	\$2.00	\$3,760.00	\$25,380.00	\$15.55	No
60	133752	480	23N 104W 20: NE, SW 31: SW 32: SW	10/1/1994	9/30/2004	\$38.00	\$18,240.00	\$6,480.00	\$51.66	No
61	133753	1920	23N 104W 22: ALL 32: ALL N2, N2SE, SESE SW, NWSE	10/1/1994	9/30/2004	\$45.00	\$86,400.00	\$22,080.00	\$56.54	No
62	134401	2560	25N 102W 14: ALL 25: ALL 26: ALL 27: ALL	11/1/1994	10/31/2004	\$17.00	\$43,520.00	\$34,560.00	\$30.53	No
63	134402	960	25N 101W 32: E2 22: ALL 23: ALL	11/1/1994	10/31/2004	\$22.00	\$21,120.00	\$12,960.00	\$35.58	No
197	134415	270.71	24N 103W 2: S2NW, N2SW, SESW, LOTS 3 & 4	11/1/1994	none	\$18.00	\$4,878.00	\$2,574.50	\$27.81	No
207	134416	160	24N 103W 20: NW	11/1/1994	none	\$29.00	\$4,640.00	\$1,520.00	\$38.97	No
64	134422	320	23N 104W 24: E2	11/1/1994	10/31/2004	\$75.00	\$24,000.00	\$3,680.00	\$86.73	No

JMH Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
72	135061	1920	25N 99W 3: S2 S2 ALL ALL	2/1/1995	1/31/2005	\$42.00	\$80,640.00	\$29,760.00	\$57.54	No
73	135062	1281.24	25N 99W 30: E2, E2W2, LOTS 1-4 8: 10: ALL	2/1/1995	1/31/2005	\$41.00	\$52,562.00	\$14,743.00	\$52.59	No
74	135074	40	24 100W 22: SWNW	2/1/1995	1/31/2005	\$2.00	\$80.00	\$460.00	\$15.38	No
71	135075	1280	25N 100W 13: ALL 33: ALL	2/1/1995	1/31/2005	\$31.00	\$39,680.00	\$14,720.00	\$42.56	No
67	135083	1655.1	25N 101W 11: E2 W2E2, W2, LOTS 1-4 24: W2E2, W2, LOTS 1-4	2/1/1995	1/31/2005	\$13.00	\$21,528.00	\$19,044.00	\$24.56	No
68	135084	1318.74	25N 101W 24: W2E2, W2, LOTS 1-4 12: 13: W2E2, W2, LOTS 1-4	2/1/1995	1/31/2005	\$16.00	\$21,104.00	\$15,168.50	\$27.56	No
174	135091	640	25N 102W 22: ALL	2/1/1995	none	\$16.00	\$10,240.00	\$6,826.72	\$26.78	No
66	135107	1244.72	24N 104W 6: S2NE, SENW, E2SW, SE, 24: LOTS 1-7 E2, E2W2, LOTS 1-4	2/1/1995	1/31/2005	\$8.00	\$9,960.00	\$14,317.50	\$19.56	No
189	135109	40	24N 104W 23: SESE	2/1/1995	none	\$54.00	\$2,160.00	\$380.00	\$65.38	No
69	135110	2522.57	25N 105W 1: S2N2, SW, W2SE, E2SE 7: ALL ALL EXCL 27.09 AC RR ROW ALL	2/1/1995	1/31/2005	\$18.00	\$45,414.00	\$29,014.50	\$29.53	No
70	135111	2477.25	25N 105W 23: ALL EXCL 18 AC RR ROW 24: LOTS 1-4 12: 14: ALL EXCL 2.75 AC RR ROW ALL N2, SW, N2SE	2/1/1995	1/31/2005	\$34.00	\$84,252.00	\$28,497.00	\$45.54	No
65	135115	1827.96	24N 106W 2: S2N2, S2, LOTS 1-4 24: 26: 27: ALL E2, E2NW, NESW, LOTS 1-3	1/1/1995	12/31/2004	\$55.00	\$100,540.00	\$21,022.00	\$66.54	No
77	135785	40	24N 99W 5: SENW 21: 30:	4/1/1995	3/31/2005	\$140.00	\$5,600.00	\$460.00	\$153.38	No

JMh Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
78	135786	1459.44	24N 99W 17: W2E2, W2, LOTS 1-4 E2, E2W2, LOTS 5-8 NE, E2NW, LOTS 5 & 6	4/1/1995	3/31/2005	\$28.00	\$40,880.00	\$16,790.00	\$39.57	No
79	135796	1200	24N 104W 28: W2NE, SENE, W2, SE 30: W2NE, SENE, NW	4/1/1995	3/31/2005	\$18.00	\$21,600.00	\$13,800.00	\$29.56	No
80	135797	280	23N 104W 32: W2NE, SENE, NW	4/1/1995	3/31/2005	\$15.00	\$4,200.00	\$3,220.00	\$26.77	No
76	135798	80	24N 105W 7: E2NW	4/1/1995	3/31/2005	\$10.00	\$800.00	\$800.00	\$20.94	No
95	136269	640.4	25N 99W 18: E2, E2W2, LOTS 1-4	5/1/1995	4/30/2005	\$5.00	\$3,205.00	\$6,410.00	\$15.13	No
87	136270	316.6	26N 99W 31: E2SW, SE, LOTS 3 & 4	5/1/1995	4/30/2005	\$6.00	\$1,902.00	\$3,170.00	\$16.26	No
91	136278	623.93	25N 100W 6: S2NE, SENW, E2SW, SE, LOTS 1-7	5/1/1995	4/30/2005	\$7.00	\$4,368.00	\$6,240.00	\$17.12	No
92	136279	1920	25N 100W 8: ALL ALL ALL	5/1/1995	4/30/2005	\$8.00	\$15,360.00	\$19,200.00	\$18.04	No
93	136280	2560	25N 100W 23: ALL 9-17: ALL ALL ALL	5/1/1995	4/30/2005	\$7.00	\$17,920.00	\$25,600.00	\$17.03	No
94	136281	640	25N 100W 26: S2 28: S2 29:	5/1/1995	4/30/2005	\$7.00	\$4,480.00	\$6,400.00	\$17.12	No
82	136282	1756.1	26N 100W 7: S2NE, SENW, E2SW, SE, LOTS 2-4 34: ALL ALL	5/1/1995	4/30/2005	\$5.00	\$8,785.00	\$20,205.50	\$16.55	No
83	136283	2423.84	26N 100W 8: S2N2, S2 28: ALL 33: E2, E2W2, LOTS 1-4 E2, E2W2, LOTS 1-4 17: NENE	5/1/1995	4/30/2005	\$2.00	\$4,848.00	\$27,876.00	\$13.53	No
88	136287	680	25N 101W 2: SESE 19: ALL 20:	5/1/1995	4/30/2005	\$7.00	\$4,760.00	\$6,800.00	\$17.11	No
89	136288	320	25N 101W 11: W2	5/1/1995	4/30/2005	\$8.00	\$2,560.00	\$3,200.00	\$18.23	No

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JMH Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
90	136289	1280	25N 101W 21: ALL ALL	5/1/1995	4/30/2005	\$9.00	\$11,520.00	\$12,800.00	\$19.06	No
143	136290	1400	26N 101W 15: S2SW, SWSE ALL 28: ALL	5/1/1995	none	\$2.00	\$2,800.00	\$13,300.00	\$11.55	No
84	136291	1292.32	26N 101W 19: E2, E2W2, LOTS 1-4 27: ALL	5/1/1995	4/30/2005	\$2.00	\$2,586.00	\$14,869.50	\$13.57	No
85	136308	1679.64	26N 103W 1: S2N2, S2, LOTS 1-3 25: E2 21: E2, NENW, S2NW N2	5/1/1995	4/30/2005	\$7.00	\$11,760.00	\$16,800.00	\$17.05	No
86	136309	637.72	26N 103W 14: N2 15: NE, E2NW, LOTS 1 & 2 21:	5/1/1995	4/30/2005	\$7.00	\$4,466.00	\$6,380.00	\$17.13	No
81	136320	640	26N 104W 14: ALL	5/1/1995	4/30/2005	\$10.00	\$6,400.00	\$6,400.00	\$20.12	No
96	136325	2534.55	23N 105W 18: E2, E2W2, LOTS 1-4 31: E2, E2W2, LOTS 1-4 23N 106W 11: ALL ALL	5/1/1995	4/30/2005	\$17.00	\$43,095.00	\$29,152.50	\$28.53	No
97	136806	2102.69	26N 104W 3: S2N2, LOTS 1-4 12: S2N2, S2, LOTS 1-4 S2NW, SW, SESE, S2NE, N2SE, AC 4: 5: SW, E2SE, W2SE, EXCL 12.16 AC SWSE, LOTS 1-4, EXCL 24.33 NW, N2SW	7/1/1995	6/30/2005	\$4.00	\$8,412.00	\$24,185.50	\$15.54	No
98	136808	2543.15	26N 104W 18: E2, E2W2, LOTS 1-4 E2, W2NW, NWSW, SWSW, RR ROW NWNW 20: E2, E2W2, LOTS 1-4 NWSW EXCL 24.79 AC RR ROW	7/1/1995	6/30/2005	\$4.00	\$10,176.00	\$29,256.00	\$15.53	No
103	136809	160	23N 104W 21: SE	8/1/1995	7/31/2005	\$22.00	\$3,520.00	\$1,840.00	\$33.97	No

A16-28

E2, E2W2, SWSW, W2NW,

Jack Morrow Hills Coordinated Activity Plan

EXCL 16.98 AC RR ROW

JMh Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
102	136810	614.29	23N 104W 29: E2, E2NW, SWSW, W2NW, N2SW ROW	7/1/1995	6/30/2005	\$8.00	\$4,920.00	\$7,069.50	\$19.64	No
100	136811	1000	25N 104W 11: SE W2NW W2 SESW, EXCL. E2, E2W E2, E2W RR NENE	7/1/1995	6/30/2005	\$3.00	\$3,000.00	\$11,500.00	\$14.58	No
101	136813	640	24N 105W 17: ALL	7/1/1995	6/30/2005	\$8.00	\$9,920.00	\$7,360.00	\$27.12	Relinquishment
99	136814	2320	25N 105W 15: ALL N2NW, SE ALL E2, E2W2 N2	7/1/1995	6/30/2005	\$9.00	\$20,880.00	\$26,684.00	\$20.53	No
104	137340	683.86	22N 105W 7: SENW, E2SW, SE, LOTS 6-13	9/1/1995	8/31/2005		\$0.00	\$7,866.00	\$11.61	No
176	137392	1080	25N 102W 29: NE, N2SE, SWSE SE ALL	3/1/1988	none		\$0.00	\$19,440.00	\$18.07	Segregation
173	137393	800	8: W2SW, SESW 25N 102W 21: SE 31: ALL	5/1/1988	none		\$0.00	\$11,120.00	\$13.99	Segregation
167	137395	640	32: 25N 102W 10: ALL	5/1/1993	none		\$0.00	\$8,640.00	\$13.62	Segregation
43	137396	1280.08	25N 103W 4: S2N2, S2, LOTS 1-4 28: S2N2, S2, LOTS 1-4	4/1/1994	3/31/2004	\$26.00	\$52,480.00	\$17,290.50	\$54.56	Segregation
106	137742	800	26N 99W 28: S2S2 S2 5: S2	11/1/1995	10/31/2005	\$4.00	\$3,200.00	\$7,600.00	\$13.59	No
105	137743	1117	26N 99W 29: S2S2 33: NE, E2NW, LOTS 1 & 2 35: ALL	11/1/1995	10/31/2005	\$2.00	\$2,234.00	\$10,611.50	\$11.57	No

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JMH Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
108	137747	1349.17	25N 100W 4: LOT 2 S2N2, S2, LOTS 1-4 25N 101W 1: SWNE, S2NW, SW, W2SE,	11/1/1995	10/31/2005	\$4.00	\$5,400.00	\$15,525.00	\$15.57	No
107	137750	601.96	25N 101W 2: S2N2, SW, N2SE, SWSE, LOTS 1-4	11/1/1995	10/31/2005	\$4.00	\$2,408.00	\$6,923.00	\$15.63	No
162	137758	2402.02	25N 102W 1: S2N2, S2, LOTS 1-4 LOTS 1-7 S2N2, S2, LOTS 1-4 E2NE, W2NW, S2 ALL	11/1/1995	none	\$2.00	\$4,806.00	\$19,244.50	\$10.04	No
109	137766	960	23N 104W 14: S2 2: 11: N2 12: N2	11/1/1995	10/31/2005	\$14.00	\$13,440.00	\$11,040.00	\$25.58	No
110	138168	800	25N 104W 21: N2, SW 27: NE, N2NW, SENW, NESW 25:	2/1/1996	1/31/2006	\$11.00	\$8,800.00	\$7,600.00	\$20.59	No
112	138169	1640	24N 105W 8: ALL ALL 28: N2NE, SWNE, NW, N2SW	2/1/1996	1/31/2006	\$15.00	\$24,600.00	\$15,580.00	\$24.55	No
114	138247	560	23N 105W 1: SWSW 9: SWNW 10: S2N2, S2	2/1/1996	1/31/2006		\$0.00	\$5,320.00	\$9.63	No
113	138248	1253.36	23N 105W 6: S2NE, SENW, E2SW, SE, LOTS 1-7 5: E2, E2W2, LOTS 1-4	2/1/1996	1/31/2006		\$0.00	\$11,913.00	\$9.56	No
118	138511	640	23N 100W 15: NE, S2NW, N2S2, SESE NWNW, S2N2	4/1/1996	3/31/2006	\$2.00	\$1,280.00	\$6,080.00	\$11.62	No
116	138512	208.14	24N 100W 6: S2NE, LOTS 8-11	4/1/1996	3/31/2006	\$2.00	\$418.00	\$1,985.50	\$11.91	No
115	138516	948.61	26N 101W 12: LOTS 2-4 22: W2E2, LOTS 1-4 W2E2, SENW, SW, LOTS 1-4	4/1/1996	3/31/2006	\$2.00	\$1,898.00	\$9,016.00	\$11.58	No
117	138656	231.02	24N 103W 4: S2NW, S2SW, LOTS 3&4 13:	4/1/1996	3/31/2006		\$0.00	\$1,856.00	\$8.36	No
124	139232	640	24N 100W 12: N2 25N 100W 35: S2	7/1/1996	6/30/2006	\$2.00	\$1,280.00	\$6,080.00	\$11.62	No

JMh Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
125	139245	1280	24N 101W 17: ALL ALL	7/1/1996	6/30/2006	\$2.00	\$2,560.00	\$10,240.00	\$10.06	No
126	139246	637.16	24N 101W 19: E2, E2W2, LOTS 5-8	7/1/1996	6/30/2006	\$2.00	\$1,276.00	\$6,061.00	\$11.63	No
121	139247	2197.27	25N 101W 7: E2W2, LOTS 1-4 ALL E2, E2W2, LOTS 1-4 E2, E2W2. LOTS 1-4	7/1/1996	6/30/2006	\$8.00	\$17,560.00	\$20,852.50	\$17.52	No
122	139248	1272.01	25N 101W 20: ALL 18: N2 19: NE, E2NW, LOTS 1 & 2	7/1/1996	6/30/2006	\$8.00	\$10,184.00	\$12,094.00	\$17.57	No
123	139249	640	25N 101W 35: ALL	7/1/1996	6/30/2006	\$12.00	\$7,680.00	\$6,080.00	\$21.62	No
119	139280	308.07	23N 104W 8: E2NE, NW, W2N2 EXCL 11.93 AC	7/1/1996	6/30/2006	\$2.00	\$618.00	\$2,935.50	\$11.78	No
127	139281	40	23N 104W 34: SWSW	7/1/1996	6/30/2006	\$17.00	\$680.00	\$300.00	\$26.38	No
120	139283	320	22N 105W 17: N2	7/1/1996	6/30/2006	\$2.00	\$640.00	\$3,040.00	\$11.73	No
128	139389	2224.93	22N 102W 6: S2NE, SENW, E2SW, SE, LOT 17 SP ROW 22N 102W 8: NE, SW 22N 102W 10: ALL 23N 102W 32: ALL	7/1/1996	6/30/2006		\$0.00	\$17,800.00	\$8.03	No
129	139955	40	23N 104W 15: SESE	11/1/1996	10/31/2006		\$0.00	\$300.00	\$9.38	No
130	141153	4893.69	27N 102W 1: S2N2, N2SW, LOTS 1-4 S2N2, NESW, SE, LOTS 1-4 S2N2, S2, LOTS 1-4 S2N2, S2, LOTS 1-4 NWN2, SENE, W2, SE 2: SENE, SWNW, S2 3: S2N2, S2 4: ALL 10: ALL 11: ALL	5/1/1997	4/30/2007		\$0.00	\$36,705.00	\$7.52	No
151	141820	1280	26N 102 13: ALL 15: ALL 23:	8/1/1997	none		\$0.00	\$5,760.00	\$4.56	No

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JMH Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
184	141821	40	25N 103 23: NESE	8/1/1997	none		\$0.00	\$220.00	\$7.38	Segregation
230	141847	6260.56	27N 100W 15: ALL E2SW, SE, LOTS 3 & 4 E2W2, E2, LOTS 1-4 N2, SW, W2SE, SESE S2N2, S2 18: N2SW, SESW, SE 19: NE, SW, N2SE, SWSE 20: E2NW, NE, LOTS 1 & 2 21: 101W 12: ALL 22: ALL 23: ALL 31: ALL	8/1/1997	none		\$0.00	\$28,174.50	\$4.51	No
148	141850	3042.76	23N 102W 4: S2N2, S2, LOTS 1-4 24: S2N2, SW 25: ALL ALL ALL 5: 8:	8/1/1997	none		\$0.00	\$13,693.50	\$4.53	No
233	144124	640	23N 105W 26: ALL	2/1/1998	none	\$7.00	\$4,480.00	\$2,880.00	\$11.62	Segregation
131	144125	428.69	24N 105W 6: E2SW, SE, LOTS 1-6	2/1/1998	1/31/2008	\$70.00	\$30,030.00	\$3,574.00	\$78.56	No
133	144652	319.25	23N 102W 1: S2NE, SE, LOTS 1 & 2	4/1/1998	3/31/2008	\$10.00	\$3,200.00	\$1,920.00	\$16.27	No
134	144653	720	23N 102W 12: E2, SENW, E2SW S2NE, SE NWSW	4/1/1998	3/31/2008	\$10.00	\$7,200.00	\$4,320.00	\$16.10	No
164	145001	479.03	25N 102W 7: E2, E2NW, LOTS 1 & 2	2/1/1994	none	\$3.00	\$1,437.00	\$4,795.50	\$13.17	Assignment
161	145052	637.67	25N 102W 6: S2NE, SENW, E2SW, SE, LOTS 1-7	2/1/1994	none	\$3.00	\$1,916.00	\$6,380.00	\$13.13	Assignment
152	146160	480	26N 102W 19: E2, E2W2	12/1/1985	none		\$0.00	\$8,000.00	\$16.82	Segregation
181	146161	160	25N 103W 15: SE	11/1/1987	none		\$0.00	\$5,613.35	\$35.55	Segregation
30	146162	400	26N 103W 26: NE, NWNW, SW, SESE	2/1/1994	1/31/2004	\$2.00	\$800.00	\$5,400.00	\$15.69	Segregation
153	146163	1920	26N 102W 22: ALL ALL ALL	4/1/1994	none	\$7.00	\$13,440.00	\$22,080.00	\$18.54	Segregation
178	146164	480.36	25N 103W 2: S2NE, S2, LOTS 1 & 2 27: 28:	4/1/1994	none	\$42.00	\$20,202.00	\$4,569.50	\$51.72	Segregation

JMH Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Government (\$/acre)	Lease Acre Changes
179	146165	1440	25N 103W 10: NE, S2 ALL W2	4/1/1994	none	\$42.00	\$60,480.00	\$16,560.00	\$53.55	Segregation
177	146166	320	25N 102W 33: W2	5/1/1988	none		\$0.00	\$4,746.67	\$15.07	Segregation
183	146167	40	25N 103W 22: NESE	8/1/1997	none		\$0.00	\$180.00	\$6.38	Segregation
52	146176	240	23N 105W 23: NW NWNW NENE	8/1/1994	7/31/2004	\$27.00	\$6,480.00	\$2,760.00	\$38.81	Segregation
132	146177	80	23N 105W 27: E2SE	2/1/1998	1/31/2008	\$7.00	\$560.00	\$360.00	\$12.44	Segregation
135	146462	2160	27N 103W 23: ALL ALL NW, S2SW, SE NE, N2NW, SENW, SW, NWSE	10/1/1998	9/30/2008	\$2.00	\$4,320.00	\$12,960.00	\$8.03	No
136	147242	4197.2	23N 102W 25: N2, SW, N2SE 25: 26: 26: 29: 30: ALL N2, N2SW, SESW, SE E2, E2W2, LOTS 1-4 S2NE, E2W2, S2, LOTS 1-4 NE, NENW, S2NW, S2 N2, SW, N2SE, SWSE	12/1/1998	11/30/2008		\$0.00	\$18,891.00	\$4.52	No
137	147473	566.13	26N 98W 30: E2, SENW, E2SW, LOTS 2-4	2/1/1999	1/31/2009	\$2.00	\$1,134.00	\$2,550.00	\$6.64	No
75	147705	1000	25N 106W 24: ALL SENE, NWSW, NESE, S2SE SE	4/1/1995	3/31/2005		\$0.00	\$4,000.00	\$4.08	Segregation
111	147706	1684.25	24N 106W 3: LOT 5 & 6 25: 26: 4: 6: 7: 13: 17: 18: 23: 25: 35: LOT 5-7 LOT 7-9 E2NW, LOTS 1 & 2 S2NW S2NW N2NE, NENW, LOT1 E2 NESW, S2SW NE, S2NW, S2	2/1/1996	1/31/2006	\$8.00	\$13,480.00	\$13,482.00	\$16.05	Segregation

JMH Lease Information (Continued)

	Lease Serial Number (WYW)	Lease Acres	Lease Description	Lease Effective Date	Lease Expiration Date	Bonus Bid (\$/acre)	Lease Bonus Bid Paid	Lease Rental Paid	Paid to Govern- ment (\$/acre)	Lease Acre Changes
138	149015	1860.97	22N 106W 1: S2, NW, SW, W2SE, LOTS 8-10 S2N2, S2, LOTS 5-12 ALL	10/1/1999	9/30/2009	\$10.00	\$18,610.00	\$5,584.00	\$13.04	No
139	149024	1429.04	23N 106W 22: W2W2 ALL 2: E2, E2W2, LOTS 104 11:	10/1/1999	9/30/2009	\$6.00	\$8,580.00	\$4,290.00	\$9.06	No
140	150044	1268.45	25N 105W 2: LOTS 3 & 4 28: S2N2, SW, LOTS 1-4 31: S2NE, SE, LOTS 1-4 W2	4/1/2000	3/31/2010	\$13.00	\$16,497.00	\$3,808.00	\$16.07	No
141	150859	160	25N 99W 32: N2S2	8/1/2000	7/31/2010	\$16.00	\$2,560.00	\$480.00	\$19.47	No
142	151788	1160	28N 100W 5: S2SW, SWSE 10: ALL SESE S2S2 S2S2, NESE 8: 10:	12/1/2000	11/30/2010	\$8.00	\$9,280.00	\$1,740.00	\$9.56	No
		230,693.34	11: 12:				\$2,347,749.00	\$2,612,316.06		