MCGRATH RENTCORP Form DEFA14A December 20, 2001

# SCHEDULE 14A (RULE 14a-101)

INFORMATION REQUIRED IN PROXY STATEMENT SCHEDULE 14A INFORMATION

PROXY STATEMENT PURSUANT TO SECTION 14(a) OF THE SECURITIES EXCHANGE ACT OF 1934

Filed by the registrant [X]
Filed by a party other than the registrant [_]
Check the appropriate box:
<ul> <li>[_] Preliminary proxy statement.</li> <li>[_] Confidential, for use of the Commission only (as permitted by Rule 14a-6(e)(2)).</li> <li>[_] Definitive proxy statement.</li> <li>[_] Definitive additional materials.</li> <li>[X] Soliciting material under Rule 14a-12.</li> </ul>
MCGRATH RENTCORP
(Name of Registrant as Specified in Its Charter)
(Name of Person(s) Filing Proxy Statement, if Other Than the Registrant)
Payment of filing fee (check the appropriate box):
<pre>[X] No fee required. [_] Fee computed on table below per Exchange Act Rule 14a-6(i)(4) and 0-11.</pre>
(1) Title of each class of securities to which transaction applies:
(2) Aggregate number of securities to which transaction applies:
(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):
(4) Proposed maximum aggregate value of transaction:
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	(1) Amount Previously Paid:
	(2) Form, Schedule or Registration Statement No.:
	(3) Filing Party:
	(4) Date Filed:

The following is a joint press release issued by McGrath RentCorp and Tyco International Ltd. on December 20, 2001:

FOR IMMEDIATE RELEASE

CONTACTS:

TYCO INTERNATIONAL LTD.

MCGRATH RENTCORP

MEDIA RELATIONS Maryanne Kane Chief Communications Officer President and COO 212-424-1300/508-747-0800

MEDIA AND INVESTOR RELATIONS Dennis Kakures 925-606-9200

INVESTOR RELATIONS R. Jackson Blackstock Senior Vice President 212-424-1344

TYCO INTERNATIONAL TO ACQUIRE MCGRATH RENTCORP

ACQUISITION EXPANDS TYCO CAPITAL'S PRODUCT PORTFOLIO AND RECURRING REVENUE BASE

IMMEDIATELY ACCRETIVE TO TYCO EARNINGS AND CASH FLOW

Pembroke, Bermuda and Livermore, California, December 20, 2001: Tyco International Ltd. (NYSE: TYC; LSE: TYI; BSX: TYC), a diversified manufacturing and services company, and McGrath RentCorp (NASDAQ: MGRC), a leading rental provider of modular offices and classrooms and electronic test equipment, announced today that they have entered into a definitive agreement pursuant to which a subsidiary of Tyco will acquire McGrath RentCorp. The transaction is valued at \$38.00 per share to McGrath RentCorp shareholders or approximately \$482 million, based on McGrath RentCorp's 12.7 million outstanding shares. The

consideration will be paid by Tyco in the form of cash and Tyco shares. McGrath RentCorp shareholders will have the right to elect the percentage of their consideration paid in cash or Tyco shares, subject to the limitation that no less than 50% and no more than 75% of the consideration will be in the form of shares.

According to L. Dennis Kozlowski, Tyco Chairman and CEO: "McGrath RentCorp, with its attractive returns and strong management team, is an outstanding addition to Tyco Capital. The relocatable modular buildings business adds to our large existing equipment rental and lease operation and provides a strong platform to grow an exceptional base of recurring rental revenue. The electronic test equipment leasing business adds scale to our existing offerings and provides the ability to spread costs over a wider asset base. As is the case with all Tyco acquisitions, the transaction will be immediately accretive to both Tyco's earnings and cash flow."

McGrath RentCorp rents and sells modular buildings and accessories as well as electronic test equipment. Robert McGrath, Founder and CEO of McGrath RentCorp commented: "We are very pleased about the value of this transaction for our employees, shareholders and customers. In joining Tyco Capital, McGrath RentCorp will become part of a leading force in the leasing industry. That will open significant new

avenues of growth opportunities for the business, which never would have been realized with RentCorp as an independent operator."

The transaction is subject to customary regulatory review and approval by McGrath RentCorp shareholders. The Boards of Directors of both companies have approved the transaction, the stock component of which is expected to be tax-free for the shareholders of McGrath.

#### ABOUT MCGRATH RENTCORP

Founded in 1979, McGrath RentCorp, under the trade name Mobile Modular Management Corporation, rents and sells modular buildings to fulfill customer's temporary and permanent space needs in California and Texas. Mobile Modular Management believes it is the largest provider of relocatable classrooms for rental to school districts for grades K - 12 in California. Through its RenTelco division, McGrath RentCorp rents and sells electronic test equipment and is recognized as the leader in communications and fiber-optic test equipment rentals throughout the United States. McGrath RentCorp's majority owned subsidiary, Enviroplex, manufactures and sells classrooms directly to school districts in California.

Drawing from McGrath RentCorp's 20 plus years of asset rent experience and business management know-how, eRentNetwork, a wholly owned subsidiary of McGrath RentCorp, develops Internet based programs and web sites serving the rental industry.

#### ABOUT TYCO CAPITAL

The Tyco Capital family of companies are subsidiaries of Tyco International Ltd. Tyco Capital is a leading, global source of financing and leasing capital and advisor for companies in more than 30 industries. Managing more than \$50 billion in assets across a diversified portfolio, Tyco Capital, formerly known as CIT, empowers many of today's industry leaders and emerging businesses offering vendor, equipment, factoring, consumer, and structured financing capabilities. Tyco Capital operates in the United States and Canada with strategic locations in Europe, Latin and South America, and the Pacific Rim.

#### ABOUT TYCO INTERNATIONAL LTD.

Tyco International Ltd. is a diversified manufacturing and service company. Tyco is the world's largest manufacturer and servicer of electrical and electronic components; the world's largest designer, manufacturer, installer and servicer of undersea telecommunications systems; the world's largest manufacturer, installer and provider of fire protection systems and electronic security services; and the world's largest manufacturer of specialty valves. Tyco also holds strong leadership positions in disposable medical products, financing and leasing capital, plastics and adhesives. Tyco operates in more than 100 countries and had fiscal 2001 revenues in excess of \$36 billion.

#### FORWARD LOOKING INFORMATION

This release contains certain "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on management's current expectations and are subject to uncertainty and changes in circumstances. Actual results may vary materially from the expectations contained in the forward-looking statements. The forward-looking statements in this release include statements addressing the following subjects: future financial and operating results; and, the benefits of the acquisition.

The following factors, among others, could cause actual results to differ materially from those described in the forward-looking statements: the risk that the businesses of Tyco and McGrath RentCorp will not be integrated successfully; other economic, business, competitive and/or regulatory factors affecting Tyco's and McGrath RentCorp's businesses generally.

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Investors and security holders are advised to read the proxy statement/prospectus regarding the business combination transaction referenced in the foregoing information, when it becomes available, because it will contain important information. The proxy statement/prospectus will be filed with the Securities and Exchange Commission by Tyco and McGrath RentCorp. Investors and security holders may obtain a free copy of the proxy statement/prospectus (when available) and other documents filed by Tyco and McGrath RentCorp at the Commission's web site at www.sec.gov. The proxy statement/prospectus and such other documents may also be obtained from Tyco or from McGrath RentCorp by directing such request to Tyco International Ltd., The Zurich Centre, Second Floor, 90 Pitts Bay Road, Pembroke HM 08, Bermuda, Tel: (441) 292-8674; or to McGrathRentCorp: Corporate Secretary, 5700 Las Positas Road, Livermore, California 94550, Tel: (925) 606-9200.

McGrath RentCorp and certain other persons referred to below may be deemed to be participants in the solicitation of proxies of McGrath RentCorp's shareholders to adopt the agreement providing for Tyco's acquisition of McGrath RentCorp. The participants in this solicitation may include the directors and executive officers of McGrath RentCorp, who may have an interest in the transaction, including as a result of holding stock or options of McGrath RentCorp. A detailed list of names and interests of McGrath RentCorp's directors and executive officers is contained in McGrath RentCorp's Proxy Statement for its Annual Meeting, held on May 30, 2001, which may be obtained without charge at the Commission's web site at www.sec.gov.

tom:Opt;width:94pt;">Provision for income taxes 2009 2008

Current

\$4,661,395 \$

Minimum tax

798,690

Benefit of net operating loss

(4,661,395)

Deferred

24,040,749 49,112,685

\$24,839,439 \$49,112,685

The following is a reconciliation of income taxes computed using the U.S. federal statutory rate to the provision for income taxes:

Rate Reconciliation	2009	2008
Tax at federal statutory rate (34%)	\$ 22,825,430	\$ 45,128,161
Non-deductible expenses		29,406
State tax, net of federal benefit	2,014,009	4,380,086
Other		(424,968)
	\$ 24,839,439	\$ 49,112,685
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F-43

#### ARENA RESOURCES, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

#### **NOTE 9 INCOME TAXES (Continued)**

As of December 31, 2009, the Company had net operating loss carry forwards for federal income tax reporting purposes of approximately \$75 million which, if unused, will expire in 2026, 2027 and 2028. The Company has minimum tax credits of \$1,765,774 which do not expire.

The net deferred tax liability consisted of the following:

Deferred taxes:	2009	2008
Deferred tax liabilities		
Current unrealized gain on oil derivative	\$	\$ 6,046,508
Property and equipment	124,200,047	107,316,108
Total deferred tax liabilities	124,200,047	113,362,616
Deferred tax assets		
Stock-based compensation	5,243,557	3,953,790
Minimum tax credit	1,765,774	967,084
Unrealized loss on oil derivative		
Operating loss and IDC carryforwards	8,567,917	17,861,815
Total deferred tax assets	15,577,248	22,782,689
Net deferred income tax liability	\$ 108,622,799	\$ 90,579,927

Accounting for Uncertainty in Income Taxes In accordance with generally accepted accounting principles, the Company has analyzed its filing positions in all jurisdictions where it is required to file income tax returns for the open tax years in such jurisdictions. The Company has identified its federal income tax return and its state income tax returns in Texas, New Mexico, Oklahoma and Kansas in which it operates as "major" tax jurisdictions. The Company's federal income tax returns for the years ended December 31, 2006 through 2008 remain subject to examination. The Company's income tax returns in major state income tax jurisdictions remain subject to examination for years ended December 31, 2006 through 2008, with the exception of Texas, which would also include the year ended December 31, 2005. The Company currently believes that all significant filing positions are highly certain and that all of its significant income tax filing positions and deductions would be sustained upon audit. Therefore, the Company has no significant reserves for uncertain tax positions and no adjustments to such reserves were required by generally accepted accounting principles. No interest or penalties have been levied against the Company and none are anticipated, therefore interest or penalty has been included in our provision for income taxes in the consolidated statements of operations.

#### NOTE 10 DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

Under generally accepted accounting principles, the nature of a derivative instrument must be evaluated to determine if it qualifies for hedge accounting treatment. Instruments qualifying for hedge accounting treatment are recorded as an asset or liability measured at fair value and subsequent changes in fair value are recognized in equity through other comprehensive income, net of related taxes, to the extent the hedge is effective. The Company's derivative instrument qualified for hedge accounting for all periods presented. The change in fair value of the derivative instrument was recorded to other comprehensive income for the years ended December 31, 2008 and 2009. The cash settlements of cash flow hedges are recorded in the operating section of the Company's statement of operations. Instruments not qualifying for

### ARENA RESOURCES, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

### NOTE 10 DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES (Continued)

hedge accounting treatment are recorded in the balance sheet at fair value and changes in fair value are recognized on the statement of operations.

The Company's hedges are specifically referenced to NYMEX prices. The effectiveness of hedges is evaluated at the time the contracts are entered into, as well as periodically over the life of the contracts, by analyzing the correlation between NYMEX prices and the posted prices received from the designated production. Through this analysis, the Company is able to determine if a high correlation exists between the prices received for its designated production and the NYMEX prices at which the hedges will be settled. At December 31, 2008 and 2009, the Company's hedge contracts were considered effective cash flow hedges.

The statement of operations includes a realized gain on derivative instruments of \$14,884,846 for 2009 and a realized loss on derivative instruments of \$4,275,330 for 2008.

As of December 31, 2009, the Company had entered into the following costless collar contracts accounted for as a cash flow hedge:

Commodity	Remaining Period	Volume (Bbls)	Floor	Ceiling
	January 2010 - December			
WTI Crude Oil	2010	730,000	\$ 65.00	\$ 93.00
	January 2010 - December			
WTI Crude Oil	2010	365,000	\$ 70.00	\$ 92.85

		Volume		
Commodity	Remaining Period	(MMBTU)	Floor	Ceiling
	January 2010 - December			
El Paso Permian Gas	2010	1 825 000	\$ 4.00	\$ 7.87

There were no hedges in effect as of December 31, 2009, therefore the Company did not record an asset or a liability. The fair value of the 2010 hedges is zero as of December 31, 2009, as the relative price curve for the index prices used is between the floor and the ceiling.

#### NOTE 11 FAIR VALUE MEASUREMENTS

Generally accepted accounting principles establish a fair value hierarchy that prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement). The Company's fair value balances are based on the observability of those inputs. The three levels of the fair value hierarchy are as follows:

Level 1 Quoted prices in active markets for identical assets or liabilities that the Company has the ability to access. Active markets are those in which transactions for the asset or liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis. The Company does not have any fair value balances classified as Level 1.

Level 2 Inputs other than quoted prices in active markets included in Level 1, that are either directly or indirectly observable. These inputs are either directly observable in the marketplace or indirectly observable through corroboration with market data for substantially the full contractual term of the asset or liability being measured. The Company's Level 2 items consist of a costless collar.

Level 3 Includes inputs that are not observable for which there is little, if any, market activity for the asset or liability being measured. These inputs reflect management's best estimate of the

F-45

#### ARENA RESOURCES, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

#### NOTE 11 FAIR VALUE MEASUREMENTS (Continued)

assumptions market participants would use in determining fair value. Level 3 would include instruments valued using industry standard pricing models and other valuation methods that utilize unobservable pricing inputs that are significant to the overall fair value. The Company does not have any fair value balances classified as Level 3.

In valuing certain contracts, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. For disclosure purposes, assets and liabilities are classified in their entirety in the fair value hierarchy level based on the lowest level of input that is significant to the overall fair value measurement. Our assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the placement within the fair value hierarchy levels.

The fair value of all hedge instruments was zero as of December 31, 2009, therefore the Company does not have either an asset or a liability recorded in connection with those instruments.

#### NOTE 12 EMPLOYEES' BENEFIT PLANS

The Company's employees are eligible to participate in a 401(k) plan after attaining the age of 21. Participants may defer up to 100% of eligible compensation. The Company matches participant contributions dollar for dollar up to 6% of participant compensation not exceeding \$16,500 per employee (\$22,000 for those over 50, choosing to catch-up). For the year ended December 31, 2009 and 2008, the Company made contributions to the plan totaling 290,695 and \$311,825, respectively.

#### NOTE 13 QUARTERLY FINANCIAL DATA (UNAUDITED)

Quarterly financial information is presented in the following summary:

## Three Months Ended

	March 31	June 30		September 30		December 31	
Revenues	\$ 45,312,392	\$	62,159,281	\$	68,412,686	\$	32,974,286
Operating Income	29,650,936		39,637,781		42,188,778		21,097,908
Net Income	18,318,395		24,794,349		26,922,966		13,581,491
Basic Net Income Per Share	\$ 0.52	\$	0.69	\$	0.71	\$	0.36
Diluted Net Income Per Share	0.51		0.67		0.69		0.35

#### 2009

#### **Three Months Ended**

	March 31 June 30		September 30		Γ	December 31	
Revenues	\$ 20,193,160	\$	27,636,695	\$	36,060,878	\$	42,350,044
Operating Income	9,998,248		22,702,454		18,954,179		14,649,746
Net Income	6,465,449		14,436,065		12,113,026		9,279,639
Basic Net Income Per Share	\$ 0.17	\$	0.38	\$	0.32	\$	0.24
Diluted Net Income Per Share	0.17		0.37		0.31		0.24

The net income per share information above will not match the income statement due to rounding.

### Table of Contents

### ARENA RESOURCES, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

### NOTE 14 SIGNIFICANT FOURTH QUARTER ADJUSTMENTS

There were no material fourth quarter adjustments or accounting changes.

#### NOTE 15 SUBSEQUENT EVENTS

Subsequent to December 31, 2009, the Company issued a total of 75,000 shares of stock pursuant to the restricted stock award plan. These shares were valued based on the market price of the shares of \$45.05 on the date of grant of January 6, 2010. These shares will vest 50% per year for two years and the fair value of these shares will be expensed over that period.

We have evaluated subsequent events after the balance sheet date of December 31, 2009 through the time of filing with the SEC on March 1, 2010, which is the date the financial statements were issued.

F-47

#### ARENA RESOURCES, INC.

#### SUPPLEMENTAL INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES

#### (Unaudited)

Results of Operations from Oil and Gas Producing Activities The Company's results of operations from oil and gas producing activities exclude interest expense, gain from change in fair value of put options, and other financing expense. Income taxes are based on statutory tax rates, reflecting allowable deductions.

For the Years Ended December 31,	2009	2008
Oil and gas revenues	\$ 126,240,777 \$	208,858,645
Production costs	(15,543,461)	(17,833,144)
Production taxes	(6,455,585)	(10,518,370)
Realized loss on oil derivative	14,884,846	(4,275,330)
Depreciation, depletion, amortization and accretion	(39,368,567)	(30,099,196)
General and administrative (exclusive of corporate overhead)	(3,804,383)	(3,034,525)
Results of operations before income taxes	75,953,627	143,098,080
Provision for income taxes	(28,102,842)	(52,946,290)
Results of Oil and Gas Producing Operations	\$ 47,850,785 \$	90,151,790

Recent SEC and FASB Rule-Making Activity In December 2008, the SEC announced that it had approved revisions designed to modernize the oil and gas company reserves reporting requirements. See Note 1 Organization and Summary of Significant Accounting Policies New Accounting Policies. We adopted the rules effective December 31, 2009 and the rule changes, including those related to pricing and technology, are included in our reserves estimates. The new rule does not allow for prior-year reserve information to be restated, so all information related to periods prior to 2009 is presented consistent with prior SEC rules for the estimation of proved reserves.

In addition, in January 2010 the FASB issued Accounting Standards Update 2010-03, "Oil and Gas Reserve Estimation and Disclosures", to provide consistency with the SEC rules. See Note 1 Organization and Summary of Significant Accounting Policies New Accounting Policies.

Reserve Quantities Information The following estimates of proved and proved developed reserve quantities and related standardized measure of discounted net cash flow are estimates only, and do not purport to reflect realizable values or fair market values of the Company's reserves. The Company emphasizes that reserve estimates are inherently imprecise and that estimates of new discoveries are more imprecise than those of producing oil and gas properties. Accordingly, these estimates are expected to change as future information becomes available. All of the Company's reserves are located in the United States of America.

Proved reserves are estimated reserves of crude oil (including condensate and natural gas liquids) and natural gas that geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions. Proved developed reserves are those expected to be recovered through existing wells, equipment and methods.

The standardized measure of discounted future net cash flows is computed by applying the price according to the SEC guidelines for oil and gas to the estimated future production of proved oil and gas reserves, less estimated future expenditures (based on year-end costs) to be incurred in developing and producing the proved reserves, less estimated future income tax expenses (based on year-end statutory tax

### ARENA RESOURCES, INC.

### SUPPLEMENTAL INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES (Continued)

#### (Unaudited)

rates) to be incurred on pretax net cash flows less tax basis of the properties and available credits, and assuming continuation of existing economic conditions. The estimated future net cash flows are then discounted using a rate of 10 percent per year to reflect the estimated timing of the future cash flows.

	2009		2008	
For the Years Ended December 31,	Oil <sup>(1)</sup>	Gas(1)	$Oil^{(1)}$	Gas(1)
Proved Developed and Undeveloped Reserves				
Beginning of year	55,845,257	58,804,662	47,413,322	48,074,962
Purchases of minerals in place	1,589,141	2,791,611	3,638,095	2,364,908
Improved recovery and extensions	14,360,492	13,605,184	9,547,981	11,391,853
Production	(2,004,498)	(2,172,790)	(2,018,335)	(1,911,713)
Revision of previous estimate	(10,074,880)	(15,813,979)	(2,735,806)	(1,115,348)
End of year	59,715,512	57,214,688	55,845,257	58,804,662
Proved Developed at end of year	21,144,906	28,302,469	20,231,477	28,659,033

Oil reserves are stated in barrels; gas reserves are stated in thousand cubic feet.

December 31,	2009	2008
Future cash flows	\$ 3,721,873,750	\$ 2,391,888,946
Future production costs	(902,963,847)	(716,121,604)
Future development costs	(543,022,875)	(330,672,457)
Future income taxes	(746,548,080)	(394,800,287)
Future net cash flows	1,529,338,948	950,294,598
10% annual discount for estimated timing of cash flows	(775,105,191)	(489,607,688)
Standardized Measure of Discounted Cash Flows	\$ 754,233,757	\$ 460,686,910

F-49

### ARENA RESOURCES, INC.

### SUPPLEMENTAL INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES (Continued)

### (Unaudited)

### Changes in Standardized Measure of Discounted Future Net Cash Flows

	2009	2008
Beginning of the year	\$ 460,686,910	\$ 1,276,166,354
Purchase of minerals in place	28,329,307	41,597,736
Extensions, discoveries and improved recovery, less related costs	253,485,559	129,110,323
Development costs incurred during the year	107,237,470	190,631,820
Sales of oil and gas produced, net of production costs	(110,697,316)	(190,374,853)
Accretion of discount	48,058,341	131,684,244
Net changes in price and production costs	619,543,318	(1,526,963,575)
Net change in estimated future development costs	6,550,757	(22,637,628)
Revision of previous quantity estimates	(447,110,784)	293,723,576
Revision of estimated timing of cash flows	(35,543,586)	(409,158,356)
Net change in income taxes	(176,306,219)	546,907,269
End of the Year	\$ 754,233,757	\$ 460,686,910

F-50

#### Table of Contents

#### ANNEX A

May 23, 2011

Mr. Rodney Johnson SandRidge Energy, Inc. 123 Robert S. Kerr Avenue Oklahoma City, Oklahoma 73102

Dear Mr. Johnson:

In accordance with your request, we have estimated the proved reserves and future revenue, as of March 31, 2011, to the SandRidge Energy, Inc. (SandRidge) interest in certain oil and gas properties located in Texas and referred to herein as the "Arena properties". It is our understanding that the proved reserves estimated in this report constitute approximately 7 percent of all proved reserves owned by SandRidge. A proposed royalty interest in such reserves is to be conveyed later this year to SandRidge Permian Trust with an effective date of April 1, 2011. As requested, the proposed royalty interest is included in the SandRidge interest in this report. This is an update of our report dated February 10, 2011, which sets forth our estimates of reserves and future revenue to the SandRidge interest as of December 31, 2010. For the purposes of this report, projections for wells that have been drilled since the original report have been reviewed and updated. Proved undeveloped projections have been adjusted based on additional analog performance data and rescheduled in accordance with SandRidge's updated drilling schedule. The remaining projections have been "rolled forward" from our estimates as of December 31, 2010. We completed our evaluation on May 23, 2011. The estimates in this report have been prepared in accordance with the definitions and guidelines of the U.S. Securities and Exchange Commission (SEC) and conform to the FASB Accounting Standards Codification Topic 932, Extractive Activities Oil and Gas, except that per-well overhead expenses are excluded for operated properties and future income taxes are excluded for all properties. Definitions are presented immediately following this letter. This report has been prepared for SandRidge's use in filing with the SEC; in our opinion the assumptions, data, methods, and procedures used in the preparation of this report are appropriate for such purpose.

We estimate the net reserves and future net revenue to the SandRidge interest in the Arena properties, as of March 31, 2011, to be:

	Net Reserves		<b>Future Net Revenue (M\$)</b>		
	Oil	Gas		Present Worth	
Category	(MBBL)	(MMCF)	Total	at 10%	
Proved Developed					
Producing	6,996.5	1,732.8	351,841.9	198,325.5	
Proved Developed					
Non-Producing	585.0	135.6	29,602.2	14,992.1	
Proved					
Undeveloped	23,062.7	5,346.2	946,290.3	367,436.3	
Total Proved	30,644.2	7,214.6	1,327,734.4	580,753.9	

The oil reserves shown include crude oil, condensate, and natural gas liquids. Oil volumes are expressed in thousands of barrels (MBBL); a barrel is equivalent to 42 United States gallons. Gas volumes are expressed in millions of cubic feet (MMCF) at standard temperature and pressure bases.

#### Table of Contents

The estimates shown in this report are for proved reserves. No study was made to determine whether probable or possible reserves might be established for these properties. This report does not include any value that could be attributed to interests in undeveloped acreage beyond those tracts for which undeveloped reserves have been estimated. Reserves categorization conveys the relative degree of certainty; reserves subcategorization is based on development and production status. The estimates of reserves and future revenue included herein have not been adjusted for risk.

Future gross revenue to the SandRidge interest is prior to deducting state production taxes and ad valorem taxes. Future net revenue is after deductions for these taxes, future capital costs, operating expenses, and abandonment costs but before consideration of any income taxes. The future net revenue has been discounted at an annual rate of 10 percent to determine its present worth, which is shown to indicate the effect of time on the value of money. Future net revenue presented in this report, whether discounted or undiscounted, should not be construed as being the fair market value of the properties.

For the purposes of this report, we did not perform any field inspection of the properties, nor did we examine the mechanical operation or condition of the wells and facilities. We have not investigated possible environmental liability related to the properties; therefore, our estimates do not include any costs due to such possible liability. Our estimates of future net revenue do not include any salvage value for the lease and well equipment but do include SandRidge's estimates of the costs to abandon the wells and production facilities.

Prices used in this report are based on the 12-month unweighted arithmetic average of the first-day-of-the-month price for each month in the period April 2010 through March 2011. For oil volumes, the average West Texas Intermediate posted price of \$80.04 per barrel is adjusted for quality, transportation fees, and a regional price differential. For gas volumes, the average Henry Hub Gas Daily price of \$4.102 per MMBTU is adjusted for energy content, transportation fees, and a regional price differential. The adjusted oil and gas prices of \$79.33 per barrel and \$3.002 per MCF are held constant throughout the lives of the properties.

Lease and well operating costs used in this report are based on operating expense records of SandRidge. For nonoperated properties, these costs include the per-well overhead expenses allowed under joint operating agreements along with estimates of costs to be incurred at and below the district and field levels. As requested, lease and well operating costs for the operated properties include only direct lease- and field-level costs. For all properties, headquarters general and administrative overhead expenses of SandRidge are not included. Lease and well operating costs are held constant throughout the lives of the properties. Capital costs are included as required for workovers, new development wells, and production equipment. The future capital costs are held constant to the date of expenditure.

We have made no investigation of potential gas volume and value imbalances resulting from overdelivery or underdelivery to the SandRidge interest. Therefore, our estimates of reserves and future revenue do not include adjustments for the settlement of any such imbalances; our projections are based on SandRidge receiving its share of estimated future gross gas production.

The reserves shown in this report are estimates only and should not be construed as exact quantities. Proved reserves are those quantities of oil and gas which, by analysis of engineering and geoscience data, can be estimated with reasonable certainty to be economically producible. Estimates of reserves may increase or decrease as a result of market conditions, future operations, changes in regulations, or actual reservoir performance. In addition to the primary economic assumptions discussed herein, our estimates are based on certain assumptions including, but not limited to, that the properties will be developed consistent with current development plans, that the properties will be operated in a prudent manner, that no governmental regulations or controls will be put in place that would impact the ability of the interest owner to recover the reserves, and that our projections of future production will prove consistent with actual performance. If the reserves are recovered, the revenues therefrom and the costs related thereto could be more or less than the estimated amounts. Because of governmental policies and uncertainties of supply and demand, the sales rates, prices received for the reserves, and costs incurred in recovering such reserves may vary from assumptions made while preparing this report.

#### **Table of Contents**

For the purposes of this report, we used technical and economic data including, but not limited to, well test data, production data, historical price and cost information, and property ownership interests. The reserves in this report have been estimated using deterministic methods; these estimates have been prepared in accordance with the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers (SPE Standards). We used standard engineering and geoscience methods, or a combination of methods, including performance analysis and analogy, that we considered to be appropriate and necessary to categorize and estimate reserves in accordance with SEC definitions and guidelines. A substantial portion of these reserves are for undeveloped locations and producing wells that lack sufficient production history upon which performance-related estimates of reserves can be based. Therefore, these reserves are based on estimates of reservoir volumes and recovery efficiencies along with analogy to properties with similar geologic and reservoir characteristics. As in all aspects of oil and gas evaluation, there are uncertainties inherent in the interpretation of engineering and geoscience data; therefore, our conclusions necessarily represent only informed professional judgment.

The data used in our estimates were obtained from SandRidge and the nonconfidential files of Netherland, Sewell & Associates, Inc. (NSAI) and were accepted as accurate. Supporting geoscience, performance, and work data are on file in our office. The titles to the properties have not been examined by NSAI, nor has the actual degree or type of interest owned been independently confirmed. The technical persons responsible for preparing the estimates presented herein meet the requirements regarding qualifications, independence, objectivity, and confidentiality set forth in the SPE Standards. We are independent petroleum engineers, geologists, geophysicists, and petrophysicists; we do not own an interest in these properties nor are we employed on a contingent basis.

Sincerely,

#### NETHERLAND, SEWELL & ASSOCIATES, INC.

Texas Registered Engineering Firm F-002699

By: /s/ C.H. (SCOTT) REES III

C.H. (Scott) Rees III, P.E. Chairman and Chief Executive Officer

By: /s/ JAY P. MITCHELL

Jay P. Mitchell, P.G. 1649 Vice President

Date Signed: May 23, 2011

By: /s/ DAVID T. MILLER

David T. Miller, P.E. 96134 Vice President

Date Signed: May 23, 2011

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#### **DEFINITIONS OF OIL AND GAS RESERVES**

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

The following definitions are set forth in U.S. Securities and Exchange Commission (SEC) Regulation S-X Section 210.4-10(a). Also included is supplemental information from (1) the 2007 Petroleum Resources Management System approved by the Society of Petroleum Engineers, (2) the FASB Accounting Standards Codification Topic 932, Extractive Activities Oil and Gas, and (3) the SEC's Compliance and Disclosure Interpretations.

- (1) Acquisition of properties. Costs incurred to purchase, lease or otherwise acquire a property, including costs of lease bonuses and options to purchase or lease properties, the portion of costs applicable to minerals when land including mineral rights is purchased in fee, brokers' fees, recording fees, legal costs, and other costs incurred in acquiring properties.
- (2) Analogous reservoir. Analogous reservoirs, as used in resources assessments, have similar rock and fluid properties, reservoir conditions (depth, temperature, and pressure) and drive mechanisms, but are typically at a more advanced stage of development than the reservoir of interest and thus may provide concepts to assist in the interpretation of more limited data and estimation of recovery. When used to support proved reserves, an "analogous reservoir" refers to a reservoir that shares the following characteristics with the reservoir of interest:
  - (i) Same geological formation (but not necessarily in pressure communication with the reservoir of interest);
  - (ii) Same environment of deposition;
  - (iii) Similar geological structure; and
  - (iv) Same drive mechanism.

Instruction to paragraph (a)(2): Reservoir properties must, in the aggregate, be no more favorable in the analog than in the reservoir of interest.

- (3) *Bitumen.* Bitumen, sometimes referred to as natural bitumen, is petroleum in a solid or semi-solid state in natural deposits with a viscosity greater than 10,000 centipoise measured at original temperature in the deposit and atmospheric pressure, on a gas free basis. In its natural state it usually contains sulfur, metals, and other non-hydrocarbons.
- (4) *Condensate*. Condensate is a mixture of hydrocarbons that exists in the gaseous phase at original reservoir temperature and pressure, but that, when produced, is in the liquid phase at surface pressure and temperature.
- (5) Deterministic estimate. The method of estimating reserves or resources is called deterministic when a single value for each parameter (from the geoscience, engineering, or economic data) in the reserves calculation is used in the reserves estimation procedure.
  - (6) Developed oil and gas reserves. Developed oil and gas reserves are reserves of any category that can be expected to be recovered:
    - (i)

      Through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and
    - (ii)

      Through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is by means not involving a well.

#### **DEFINITIONS OF OIL AND GAS RESERVES**

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

Supplemental definitions from the 2007 Petroleum Resources Management System:

Developed Producing Reserves Developed Producing Reserves are expected to be recovered from completion intervals that are open and producing at the time of the estimate. Improved recovery reserves are considered producing only after the improved recovery project is in operation.

Developed Non-Producing Reserves Developed Non-Producing Reserves include shut-in and behind-pipe Reserves. Shut-in Reserves are expected to be recovered from (1) completion intervals which are open at the time of the estimate but which have not yet started producing, (2) wells which were shut-in for market conditions or pipeline connections, or (3) wells not capable of production for mechanical reasons. Behind-pipe Reserves are expected to be recovered from zones in existing wells which will require additional completion work or future recompletion prior to start of production. In all cases, production can be initiated or restored with relatively low expenditure compared to the cost of drilling a new well.

- (7) Development costs. Costs incurred to obtain access to proved reserves and to provide facilities for extracting, treating, gathering and storing the oil and gas. More specifically, development costs, including depreciation and applicable operating costs of support equipment and facilities and other costs of development activities, are costs incurred to:
  - (i) Gain access to and prepare well locations for drilling, including surveying well locations for the purpose of determining specific development drilling sites, clearing ground, draining, road building, and relocating public roads, gas lines, and power lines, to the extent necessary in developing the proved reserves.
  - (ii)

    Drill and equip development wells, development-type stratigraphic test wells, and service wells, including the costs of platforms and of well equipment such as casing, tubing, pumping equipment, and the wellhead assembly.
  - (iii) Acquire, construct, and install production facilities such as lease flow lines, separators, treaters, heaters, manifolds, measuring devices, and production storage tanks, natural gas cycling and processing plants, and central utility and waste disposal systems.
  - (iv) Provide improved recovery systems.
- (8) Development project. A development project is the means by which petroleum resources are brought to the status of economically producible. As examples, the development of a single reservoir or field, an incremental development in a producing field, or the integrated development of a group of several fields and associated facilities with a common ownership may constitute a development project.
- (9) Development well. A well drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive.
- (10) *Economically producible.* The term economically producible, as it relates to a resource, means a resource which generates revenue that exceeds, or is reasonably expected to exceed, the costs of the operation. The value of the products that generate revenue shall be determined at the terminal point of oil and gas producing activities as defined in paragraph (a)(16) of this section.
- (11) Estimated ultimate recovery (EUR). Estimated ultimate recovery is the sum of reserves remaining as of a given date and cumulative production as of that date.

#### **DEFINITIONS OF OIL AND GAS RESERVES**

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

- (12) Exploration costs. Costs incurred in identifying areas that may warrant examination and in examining specific areas that are considered to have prospects of containing oil and gas reserves, including costs of drilling exploratory wells and exploratory-type stratigraphic test wells. Exploration costs may be incurred both before acquiring the related property (sometimes referred to in part as prospecting costs) and after acquiring the property. Principal types of exploration costs, which include depreciation and applicable operating costs of support equipment and facilities and other costs of exploration activities, are:
  - (i)

    Costs of topographical, geographical and geophysical studies, rights of access to properties to conduct those studies, and salaries and other expenses of geologists, geophysical crews, and others conducting those studies. Collectively, these are sometimes referred to as geological and geophysical or "G&G" costs.
  - (ii) Costs of carrying and retaining undeveloped properties, such as delay rentals, ad valorem taxes on properties, legal costs for title defense, and the maintenance of land and lease records.
  - (iii) Dry hole contributions and bottom hole contributions.
  - (iv) Costs of drilling and equipping exploratory wells.
  - (v)

    Costs of drilling exploratory-type stratigraphic test wells.
- (13) *Exploratory well.* An exploratory well is a well drilled to find a new field or to find a new reservoir in a field previously found to be productive of oil or gas in another reservoir. Generally, an exploratory well is any well that is not a development well, an extension well, a service well, or a stratigraphic test well as those items are defined in this section.
  - (14) Extension well. An extension well is a well drilled to extend the limits of a known reservoir.
- (15) Field. An area consisting of a single reservoir or multiple reservoirs all grouped on or related to the same individual geological structural feature and/or stratigraphic condition. There may be two or more reservoirs in a field which are separated vertically by intervening impervious strata, or laterally by local geologic barriers, or by both. Reservoirs that are associated by being in overlapping or adjacent fields may be treated as a single or common operational field. The geological terms "structural feature" and "stratigraphic condition" are intended to identify localized geological features as opposed to the broader terms of basins, trends, provinces, plays, areas-of-interest, etc.
  - (16) Oil and gas producing activities.
    - (i) Oil and gas producing activities include:
      - (A)

        The search for crude oil, including condensate and natural gas liquids, or natural gas ("oil and gas") in their natural states and original locations;
      - (B)

        The acquisition of property rights or properties for the purpose of further exploration or for the purpose of removing the oil or gas from such properties;
      - (C)

The construction, drilling, and production activities necessary to retrieve oil and gas from their natural reservoirs, including the acquisition, construction, installation, and maintenance of field gathering and storage systems, such as:

(I) Lifting the oil and gas to the surface; and

#### **DEFINITIONS OF OIL AND GAS RESERVES**

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

- (2)
  Gathering, treating, and field processing (as in the case of processing gas to extract liquid hydrocarbons);
  and
- (D)

  Extraction of saleable hydrocarbons, in the solid, liquid, or gaseous state, from oil sands, shale, coalbeds, or other nonrenewable natural resources which are intended to be upgraded into synthetic oil or gas, and activities undertaken with a view to such extraction.

Instruction 1 to paragraph (a)(16)(i): The oil and gas production function shall be regarded as ending at a "terminal point", which is the outlet valve on the lease or field storage tank. If unusual physical or operational circumstances exist, it may be appropriate to regard the terminal point for the production function as:

- a.
   The first point at which oil, gas, or gas liquids, natural or synthetic, are delivered to a main pipeline, a common carrier, a refinery, or a marine terminal; and
- b.

  In the case of natural resources that are intended to be upgraded into synthetic oil or gas, if those natural resources are delivered to a purchaser prior to upgrading, the first point at which the natural resources are delivered to a main pipeline, a common carrier, a refinery, a marine terminal, or a facility which upgrades such natural resources into synthetic oil or gas.

*Instruction 2 to paragraph (a)(16)(i):* For purposes of this paragraph (a)(16), the term *saleable hydrocarbons* means hydrocarbons that are saleable in the state in which the hydrocarbons are delivered.

- (ii) Oil and gas producing activities do not include:
  - (A) Transporting, refining, or marketing oil and gas;
  - (B)

    Processing of produced oil, gas, or natural resources that can be upgraded into synthetic oil or gas by a registrant that does not have the legal right to produce or a revenue interest in such production;
  - (C)

    Activities relating to the production of natural resources other than oil, gas, or natural resources from which synthetic oil and gas can be extracted; or
  - (D) Production of geothermal steam.
- (17) Possible reserves. Possible reserves are those additional reserves that are less certain to be recovered than probable reserves.
  - (i)

    When deterministic methods are used, the total quantities ultimately recovered from a project have a low probability of exceeding proved plus probable plus possible reserves. When probabilistic methods are used, there should be at least a 10% probability that the total quantities ultimately recovered will equal or exceed the proved plus probable plus possible reserves estimates.
  - (ii)

Possible reserves may be assigned to areas of a reservoir adjacent to probable reserves where data control and interpretations of available data are progressively less certain. Frequently, this will be in areas where geoscience and engineering data are unable to define clearly the area and vertical limits of commercial production from the reservoir by a defined project.

#### **DEFINITIONS OF OIL AND GAS RESERVES**

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

- (iii)

  Possible reserves also include incremental quantities associated with a greater percentage recovery of the hydrocarbons in place than the recovery quantities assumed for probable reserves.
- (iv)

  The proved plus probable and proved plus probable plus possible reserves estimates must be based on reasonable alternative technical and commercial interpretations within the reservoir or subject project that are clearly documented, including comparisons to results in successful similar projects.
- Possible reserves may be assigned where geoscience and engineering data identify directly adjacent portions of a reservoir within the same accumulation that may be separated from proved areas by faults with displacement less than formation thickness or other geological discontinuities and that have not been penetrated by a wellbore, and the registrant believes that such adjacent portions are in communication with the known (proved) reservoir. Possible reserves may be assigned to areas that are structurally higher or lower than the proved area if these areas are in communication with the proved reservoir.
- Pursuant to paragraph (a)(22)(iii) of this section, where direct observation has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves should be assigned in the structurally higher portions of the reservoir above the HKO only if the higher contact can be established with reasonable certainty through reliable technology. Portions of the reservoir that do not meet this reasonable certainty criterion may be assigned as probable and possible oil or gas based on reservoir fluid properties and pressure gradient interpretations.
- (18) *Probable reserves*. Probable reserves are those additional reserves that are less certain to be recovered than proved reserves but which, together with proved reserves, are as likely as not to be recovered.
  - (i) When deterministic methods are used, it is as likely as not that actual remaining quantities recovered will exceed the sum of estimated proved plus probable reserves. When probabilistic methods are used, there should be at least a 50% probability that the actual quantities recovered will equal or exceed the proved plus probable reserves estimates.
  - (ii)

    Probable reserves may be assigned to areas of a reservoir adjacent to proved reserves where data control or interpretations of available data are less certain, even if the interpreted reservoir continuity of structure or productivity does not meet the reasonable certainty criterion. Probable reserves may be assigned to areas that are structurally higher than the proved area if these areas are in communication with the proved reservoir.
  - (iii) Probable reserves estimates also include potential incremental quantities associated with a greater percentage recovery of the hydrocarbons in place than assumed for proved reserves.
  - (iv) See also guidelines in paragraphs (a)(17)(iv) and (a)(17)(vi) of this section.
- (19) *Probabilistic estimate.* The method of estimation of reserves or resources is called probabilistic when the full range of values that could reasonably occur for each unknown parameter (from the geoscience and engineering data) is used to generate a full range of possible outcomes and their associated probabilities of occurrence.

#### **DEFINITIONS OF OIL AND GAS RESERVES**

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

,	(20)	) Production	1 costs
1	20	) Proauciioi	ı cosis.

(i)

Costs incurred to operate and maintain wells and related equipment and facilities, including depreciation and applicable operating costs of support equipment and facilities and other costs of operating and maintaining those wells and related equipment and facilities. They become part of the cost of oil and gas produced. Examples of production costs (sometimes called lifting costs) are:

- (A) Costs of labor to operate the wells and related equipment and facilities.
- (B) Repairs and maintenance.
- (C) Materials, supplies, and fuel consumed and supplies utilized in operating the wells and related equipment and facilities.
- (D)

  Property taxes and insurance applicable to proved properties and wells and related equipment and facilities.
- (E) Severance taxes.
- (ii)

  Some support equipment or facilities may serve two or more oil and gas producing activities and may also serve transportation, refining, and marketing activities. To the extent that the support equipment and facilities are used in oil and gas producing activities, their depreciation and applicable operating costs become exploration, development or production costs, as appropriate. Depreciation, depletion, and amortization of capitalized acquisition, exploration, and development costs are not production costs but also become part of the cost of oil and gas produced along with production (lifting) costs identified above.
- (21) Proved area. The part of a property to which proved reserves have been specifically attributed.
- (22) Proved oil and gas reserves. Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time.
  - (i) The area of the reservoir considered as proved includes:
    - (A) The area identified by drilling and limited by fluid contacts, if any, and
    - (B)

      Adjacent undrilled portions of the reservoir that can, with reasonable certainty, be judged to be continuous with it and to contain economically producible oil or gas on the basis of available geoscience and engineering data.

(ii)

In the absence of data on fluid contacts, proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless geoscience, engineering, or performance data and reliable technology establishes a lower contact with reasonable certainty.

(iii)

Where direct observation from well penetrations has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves may be assigned in the structurally higher portions of the reservoir only if geoscience, engineering, or performance data and reliable technology establish the higher contact with reasonable certainty.

#### DEFINITIONS OF OIL AND GAS RESERVES

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

- (iv)

  Reserves which can be produced economically through application of improved recovery techniques (including, but not limited to, fluid injection) are included in the proved classification when:
  - (A)

    Successful testing by a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole, the operation of an installed program in the reservoir or an analogous reservoir, or other evidence using reliable technology establishes the reasonable certainty of the engineering analysis on which the project or program was based; and
  - (B)
    The project has been approved for development by all necessary parties and entities, including governmental entities.
- (v)

  Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined.

  The price shall be the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions.
- (23) *Proved properties*. Properties with proved reserves.
- (24) Reasonable certainty. If deterministic methods are used, reasonable certainty means a high degree of confidence that the quantities will be recovered. If probabilistic methods are used, there should be at least a 90% probability that the quantities actually recovered will equal or exceed the estimate. A high degree of confidence exists if the quantity is much more likely to be achieved than not, and, as changes due to increased availability of geoscience (geological, geophysical, and geochemical), engineering, and economic data are made to estimated ultimate recovery (EUR) with time, reasonably certain EUR is much more likely to increase or remain constant than to decrease.
- (25) Reliable technology. Reliable technology is a grouping of one or more technologies (including computational methods) that has been field tested and has been demonstrated to provide reasonably certain results with consistency and repeatability in the formation being evaluated or in an analogous formation.
- (26) Reserves. Reserves are estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations. In addition, there must exist, or there must be a reasonable expectation that there will exist, the legal right to produce or a revenue interest in the production, installed means of delivering oil and gas or related substances to market, and all permits and financing required to implement the project.

*Note to paragraph (a)(26)*: Reserves should not be assigned to adjacent reservoirs isolated by major, potentially sealing, faults until those reservoirs are penetrated and evaluated as economically producible. Reserves should not be assigned to areas that are clearly separated from a known accumulation by a non-productive reservoir (i.e., absence of reservoir, structurally low reservoir, or negative test results). Such areas may contain prospective resources (i.e., potentially recoverable resources from undiscovered accumulations).

d.

#### **DEFINITIONS OF OIL AND GAS RESERVES**

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

Excerpted from the FASB Accounting Standards Codification Topic 932, Extractive Activities Oil and Gas:

932-235-50-30 A standardized measure of discounted future net cash flows relating to an entity's interests in both of the following shall be disclosed as of the end of the year:

- a.

  Proved oil and gas reserves (see paragraphs 932-235-50-3 through 50-11B)
- b.

  Oil and gas subject to purchase under long-term supply, purchase, or similar agreements and contracts in which the entity participates in the operation of the properties on which the oil or gas is located or otherwise serves as the producer of those reserves (see paragraph 932-235-50-7).

The standardized measure of discounted future net cash flows relating to those two types of interests in reserves may be combined for reporting purposes.

932-235-50-31 All of the following information shall be disclosed in the aggregate and for each geographic area for which reserve quantities are disclosed in accordance with paragraphs 932-235-50-3 through 50-11B:

- a.

  Future cash inflows. These shall be computed by applying prices used in estimating the entity's proved oil and gas reserves to the year-end quantities of those reserves. Future price changes shall be considered only to the extent provided by contractual arrangements in existence at year-end.
- b.

  Future development and production costs. These costs shall be computed by estimating the expenditures to be incurred in developing and producing the proved oil and gas reserves at the end of the year, based on year-end costs and assuming continuation of existing economic conditions. If estimated development expenditures are significant, they shall be presented separately from estimated production costs.
- c.

  Future income tax expenses. These expenses shall be computed by applying the appropriate year-end statutory tax rates, with consideration of future tax rates already legislated, to the future pretax net cash flows relating to the entity's proved oil and gas reserves, less the tax basis of the properties involved. The future income tax expenses shall give effect to tax deductions and tax credits and allowances relating to the entity's proved oil and gas reserves.
- Future net cash flows. These amounts are the result of subtracting future development and production costs and future income tax expenses from future cash inflows.
- Discount. This amount shall be derived from using a discount rate of 10 percent a year to reflect the timing of the future net cash flows relating to proved oil and gas reserves.
- f.

  Standardized measure of discounted future net cash flows. This amount is the future net cash flows less the computed discount.

<sup>(27)</sup> Reservoir. A porous and permeable underground formation containing a natural accumulation of producible oil and/or gas that is confined by impermeable rock or water barriers and is individual and separate from other reservoirs.

(28) *Resources*. Resources are quantities of oil and gas estimated to exist in naturally occurring accumulations. A portion of the resources may be estimated to be recoverable, and another portion may be considered to be unrecoverable. Resources include both discovered and undiscovered accumulations.

#### **DEFINITIONS OF OIL AND GAS RESERVES**

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

- (29) Service well. A well drilled or completed for the purpose of supporting production in an existing field. Specific purposes of service wells include gas injection, water injection, steam injection, air injection, salt-water disposal, water supply for injection, observation, or injection for in-situ combustion.
- (30) Stratigraphic test well. A stratigraphic test well is a drilling effort, geologically directed, to obtain information pertaining to a specific geologic condition. Such wells customarily are drilled without the intent of being completed for hydrocarbon production. The classification also includes tests identified as core tests and all types of expendable holes related to hydrocarbon exploration. Stratigraphic tests are classified as "exploratory type" if not drilled in a known area or "development type" if drilled in a known area.
- (31) *Undeveloped oil and gas reserves*. Undeveloped oil and gas reserves are reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion.
  - (i)

    Reserves on undrilled acreage shall be limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances.
  - (ii)
    Undrilled locations can be classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances, justify a longer time.

From the SEC's Compliance and Disclosure Interpretations (October 26, 2009):

Although several types of projects such as constructing offshore platforms and development in urban areas, remote locations or environmentally sensitive locations by their nature customarily take a longer time to develop and therefore often do justify longer time periods, this determination must always take into consideration all of the facts and circumstances. No particular type of project per se justifies a longer time period, and any extension beyond five years should be the exception, and not the rule.

Factors that a company should consider in determining whether or not circumstances justify recognizing reserves even though development may extend past five years include, but are not limited to, the following:

The company's level of ongoing significant development activities in the area to be developed (for example, drilling only the minimum number of wells necessary to maintain the lease generally would not constitute significant development activities);

The company's historical record at completing development of comparable long-term projects;

The amount of time in which the company has maintained the leases, or booked the reserves, without significant development activities;

The extent to which the company has followed a previously adopted development plan (for example, if a company has changed its development plan several times without taking significant steps to implement any of those plans, recognizing proved undeveloped reserves typically would not be appropriate); and

#### **DEFINITIONS OF OIL AND GAS RESERVES**

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

The extent to which delays in development are caused by external factors related to the physical operating environment (for example, restrictions on development on Federal lands, but not obtaining government permits), rather than by internal factors (for example, shifting resources to develop properties with higher priority).

- (iii)

  Under no circumstances shall estimates for undeveloped reserves be attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual projects in the same reservoir or an analogous reservoir, as defined in paragraph (a)(2) of this section, or by other evidence using reliable technology establishing reasonable certainty.
- (32) Unproved properties. Properties with no proved reserves.

May 24, 2011

Mr. Rodney Johnson SandRidge Energy, Inc. 123 Robert S. Kerr Avenue Oklahoma City, Oklahoma 73102

Dear Mr. Johnson:

In accordance with your request, we have estimated the proved reserves and future revenue, as of March 31, 2011, to the proposed royalty interest to be owned by SandRidge Permian Trust (SRPT) in certain oil and gas properties located in Texas and referred to herein as the "Arena properties". It is our understanding that a proposed royalty interest currently owned by SandRidge Energy, Inc. (SandRidge) will be conveyed later this year to SRPT with an effective date of April 1, 2011, and that the proved reserves estimated in this report constitute all of the proved reserves to be owned by SRPT. This is an update of our report dated February 10, 2011, which sets forth our estimates of reserves and future revenue to the SandRidge interest as of December 31, 2010. For the purposes of this report, projections for wells that have been drilled since the original report have been reviewed and updated. Proved undeveloped projections have been adjusted based on additional analog performance data and rescheduled in accordance with SandRidge's updated drilling schedule. The remaining projections have been "rolled forward" from our estimates as of December 31, 2010. We completed our evaluation on May 24, 2011. The estimates in this report have been prepared in accordance with the definitions and guidelines of the U.S. Securities and Exchange Commission (SEC) and, with the exception of the exclusion of future income taxes, conform to the FASB Accounting Standards Codification Topic 932, Extractive Activities Oil and Gas. Definitions are presented immediately following this letter. This report has been prepared for SRPT's use in filing with the SEC; in our opinion the assumptions, data, methods, and procedures used in the preparation of this report are appropriate for such purpose.

We estimate the net reserves and future net revenue to the SRPT interest in the Arena properties, as of March 31, 2011, to be:

#### **Future Net Revenue (M\$)**

Net Reserves						
		Gas		Present Worth		
Category	Oil (MBBL)	(MMCF)	Total	at 10%		
Proved Developed Producing	5,126.8	1,270.8	362,637.1	196,278.1		
Proved Developed Non-Producing	450.0	104.3	31,901.4	17,435.1		
Proved Undeveloped	15,400.5	3,570.1	1,091,881.6	555,778.3		
Total Proved	20,977.4	4,945.2	1,486,420.1	769,491.5		

Totals may not add because of rounding.

The oil reserves shown include crude oil, condensate, and natural gas liquids. Oil volumes are expressed in thousands of barrels (MBBL); a barrel is equivalent to 42 United States gallons. Gas volumes are expressed in millions of cubic feet (MMCF) at standard temperature and pressure bases.

The estimates shown in this report are for proved reserves. No study was made to determine whether probable or possible reserves might be established for these properties. This report does not include any value that could be attributed to interests in undeveloped acreage beyond those tracts for which undeveloped reserves have been estimated. Reserves categorization conveys the relative degree of certainty; reserves subcategorization is based on development and production status. The estimates of reserves and future revenue included herein have not been adjusted for risk.

Future gross revenue to the SRPT proposed royalty interest is prior to deducting state production taxes and ad valorem taxes. Future net revenue is after deductions for these taxes but before consideration of any income taxes. The future net revenue has been discounted at an annual rate of 10 percent to determine its present worth, which is shown to indicate the effect of time on the value of money. Future net revenue presented in this report, whether discounted or undiscounted, should not be construed as being the fair market value of the properties.

For the purposes of this report, we did not perform any field inspection of the properties, nor did we examine the mechanical operation or condition of the wells and facilities. Since SRPT would own a royalty interest rather than a working interest in these properties, it would not incur any costs due to abandonment or possible environmental liability, nor would it realize any salvage value for the lease and well equipment.

Prices used in this report are based on the 12-month unweighted arithmetic average of the first-day-of-the-month price for each month in the period April 2010 through March 2011. For oil volumes, the average West Texas Intermediate posted price of \$80.04 per barrel is adjusted for quality, transportation fees, and a regional price differential. For gas volumes, the average Henry Hub Gas Daily price of \$4.102 per MMBTU is adjusted for energy content, transportation fees, and a regional price differential. The adjusted oil and gas prices of \$79.33 per barrel and \$3.002 per MCF are held constant throughout the lives of the properties.

Because SRPT would own no working interest in these properties, lease and well operating costs would not be incurred. However, estimated lease and well operating costs have been used in the determination of the economic limits for the properties. Lease and well operating costs used in this report are based on operating expense records of SandRidge and are held constant throughout the lives of the properties. Capital costs have been included to determine whether workovers, new development wells, and production equipment requirements are economic. The future capital costs are held constant to the date of expenditure.

We have made no investigation of potential gas volume and value imbalances resulting from overdelivery or underdelivery to the SRPT proposed royalty interest. Therefore, our estimates of reserves and future revenue do not include adjustments for the settlement of any such imbalances; our projections are based on SRPT receiving its proposed royalty interest share of estimated future gross gas production.

The reserves shown in this report are estimates only and should not be construed as exact quantities. Proved reserves are those quantities of oil and gas which, by analysis of engineering and geoscience data, can be estimated with reasonable certainty to be economically producible. Estimates of reserves may increase or decrease as a result of market conditions, future operations, changes in regulations, or actual reservoir performance. In addition to the primary economic assumptions discussed herein, our estimates are based on certain assumptions including, but not limited to, that the properties will be developed consistent with current development plans, that the properties will be operated in a prudent manner, that no governmental regulations or controls will be put in place that would impact the ability of the interest owner to recover the reserves, and that our projections of future production will prove consistent with actual performance. If the reserves are recovered, the revenues therefrom and the costs related thereto could be more or less than the estimated amounts. Because of governmental policies and uncertainties of supply and demand, the sales rates, prices received for the reserves, and costs incurred by the working interest owners in recovering such reserves may vary from assumptions made while preparing this report.

For the purposes of this report, we used technical and economic data including, but not limited to, well test data, production data, historical price and cost information, and property ownership interests. The reserves in this report have been estimated using deterministic methods; these estimates have been prepared in accordance with the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers (SPE Standards). We used standard engineering and geoscience methods, or a combination of methods, including performance analysis and analogy, that we considered to be appropriate and necessary to categorize and estimate reserves in accordance with SEC definitions and guidelines. A substantial portion of these reserves are for undeveloped locations and producing wells that lack sufficient production history upon which performance-related estimates of reserves can be based. Therefore, these reserves are based on estimates of reservoir volumes and recovery efficiencies along with analogy to properties with similar geologic and reservoir characteristics. As in all aspects of oil and gas evaluation, there are uncertainties inherent in the interpretation of engineering and geoscience data; therefore, our conclusions necessarily represent only informed professional judgment.

The data used in our estimates were obtained from SandRidge and the nonconfidential files of Netherland, Sewell & Associates, Inc. (NSAI) and were accepted as accurate. Supporting geoscience, performance, and work data are on file in our office. The titles to the properties have not been examined by NSAI, nor has the actual degree or type of interest owned been independently confirmed. The technical persons responsible for preparing the estimates presented herein meet the requirements regarding qualifications, independence, objectivity, and confidentiality set forth in the SPE Standards. We are independent petroleum engineers, geologists, geophysicists, and petrophysicists; we do not own an interest in these properties nor are we employed on a contingent basis.

Sincerely,

# NETHERLAND, SEWELL & ASSOCIATES, INC.

Texas Registered Engineering Firm F-002699

By: /s/ C.H. (SCOTT) REES III

C.H. (Scott) Rees III, P.E.

Chairman and Chief Executive Officer

By: /s/ DAVID T. MILLER By: /s/ JAY P. MITCHELL

David T. Miller, P.E. 96134

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Jay P. Mitchell, P.G. 1649

Vice President

Date Signed: May 24, 2011 Date Signed: May 24, 2011

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#### DEFINITIONS OF OIL AND GAS RESERVES

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

The following definitions are set forth in U.S. Securities and Exchange Commission (SEC) Regulation S-X Section 210.4-10(a). Also included is supplemental information from (1) the 2007 Petroleum Resources Management System approved by the Society of Petroleum Engineers, (2) the FASB Accounting Standards Codification Topic 932, Extractive Activities Oil and Gas, and (3) the SEC's Compliance and Disclosure Interpretations.

- (1) Acquisition of properties. Costs incurred to purchase, lease or otherwise acquire a property, including costs of lease bonuses and options to purchase or lease properties, the portion of costs applicable to minerals when land including mineral rights is purchased in fee, brokers' fees, recording fees, legal costs, and other costs incurred in acquiring properties.
- (2) Analogous reservoir. Analogous reservoirs, as used in resources assessments, have similar rock and fluid properties, reservoir conditions (depth, temperature, and pressure) and drive mechanisms, but are typically at a more advanced stage of development than the reservoir of interest and thus may provide concepts to assist in the interpretation of more limited data and estimation of recovery. When used to support proved reserves, an "analogous reservoir" refers to a reservoir that shares the following characteristics with the reservoir of interest:
  - (i) Same geological formation (but not necessarily in pressure communication with the reservoir of interest);
  - (ii) Same environment of deposition;
  - (iii) Similar geological structure; and
  - (iv) Same drive mechanism.

Instruction to paragraph (a)(2): Reservoir properties must, in the aggregate, be no more favorable in the analog than in the reservoir of interest.

- (3) *Bitumen*. Bitumen, sometimes referred to as natural bitumen, is petroleum in a solid or semi-solid state in natural deposits with a viscosity greater than 10,000 centipoise measured at original temperature in the deposit and atmospheric pressure, on a gas free basis. In its natural state it usually contains sulfur, metals, and other non-hydrocarbons.
- (4) *Condensate*. Condensate is a mixture of hydrocarbons that exists in the gaseous phase at original reservoir temperature and pressure, but that, when produced, is in the liquid phase at surface pressure and temperature.
- (5) Deterministic estimate. The method of estimating reserves or resources is called deterministic when a single value for each parameter (from the geoscience, engineering, or economic data) in the reserves calculation is used in the reserves estimation procedure.
  - (6) Developed oil and gas reserves. Developed oil and gas reserves are reserves of any category that can be expected to be recovered:
    - (i)

      Through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and
    - (ii)

      Through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is by means not involving a well.

#### **DEFINITIONS OF OIL AND GAS RESERVES**

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

Supplemental definitions from the 2007 Petroleum Resources Management System:

Developed Producing Reserves Developed Producing Reserves are expected to be recovered from completion intervals that are open and producing at the time of the estimate. Improved recovery reserves are considered producing only after the improved recovery project is in operation.

Developed Non-Producing Reserves Developed Non-Producing Reserves include shut-in and behind-pipe Reserves. Shut-in Reserves are expected to be recovered from (1) completion intervals which are open at the time of the estimate but which have not yet started producing, (2) wells which were shut-in for market conditions or pipeline connections, or (3) wells not capable of production for mechanical reasons. Behind-pipe Reserves are expected to be recovered from zones in existing wells which will require additional completion work or future recompletion prior to start of production. In all cases, production can be initiated or restored with relatively low expenditure compared to the cost of drilling a new well.

- (7) Development costs. Costs incurred to obtain access to proved reserves and to provide facilities for extracting, treating, gathering and storing the oil and gas. More specifically, development costs, including depreciation and applicable operating costs of support equipment and facilities and other costs of development activities, are costs incurred to:
  - (i) Gain access to and prepare well locations for drilling, including surveying well locations for the purpose of determining specific development drilling sites, clearing ground, draining, road building, and relocating public roads, gas lines, and power lines, to the extent necessary in developing the proved reserves.
  - (ii)

    Drill and equip development wells, development-type stratigraphic test wells, and service wells, including the costs of platforms and of well equipment such as casing, tubing, pumping equipment, and the wellhead assembly.
  - (iii) Acquire, construct, and install production facilities such as lease flow lines, separators, treaters, heaters, manifolds, measuring devices, and production storage tanks, natural gas cycling and processing plants, and central utility and waste disposal systems.
  - (iv) Provide improved recovery systems.
- (8) Development project. A development project is the means by which petroleum resources are brought to the status of economically producible. As examples, the development of a single reservoir or field, an incremental development in a producing field, or the integrated development of a group of several fields and associated facilities with a common ownership may constitute a development project.
- (9) Development well. A well drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive.
- (10) *Economically producible.* The term economically producible, as it relates to a resource, means a resource which generates revenue that exceeds, or is reasonably expected to exceed, the costs of the operation. The value of the products that generate revenue shall be determined at the terminal point of oil and gas producing activities as defined in paragraph (a)(16) of this section.
- (11) Estimated ultimate recovery (EUR). Estimated ultimate recovery is the sum of reserves remaining as of a given date and cumulative production as of that date.

#### **DEFINITIONS OF OIL AND GAS RESERVES**

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

- (12) Exploration costs. Costs incurred in identifying areas that may warrant examination and in examining specific areas that are considered to have prospects of containing oil and gas reserves, including costs of drilling exploratory wells and exploratory-type stratigraphic test wells. Exploration costs may be incurred both before acquiring the related property (sometimes referred to in part as prospecting costs) and after acquiring the property. Principal types of exploration costs, which include depreciation and applicable operating costs of support equipment and facilities and other costs of exploration activities, are:
  - (i)

    Costs of topographical, geographical and geophysical studies, rights of access to properties to conduct those studies, and salaries and other expenses of geologists, geophysical crews, and others conducting those studies. Collectively, these are sometimes referred to as geological and geophysical or "G&G" costs.
  - (ii) Costs of carrying and retaining undeveloped properties, such as delay rentals, ad valorem taxes on properties, legal costs for title defense, and the maintenance of land and lease records.
  - (iii) Dry hole contributions and bottom hole contributions.
  - (iv)Costs of drilling and equipping exploratory wells.
  - (v)

    Costs of drilling exploratory-type stratigraphic test wells.
- (13) *Exploratory well.* An exploratory well is a well drilled to find a new field or to find a new reservoir in a field previously found to be productive of oil or gas in another reservoir. Generally, an exploratory well is any well that is not a development well, an extension well, a service well, or a stratigraphic test well as those items are defined in this section.
  - (14) Extension well. An extension well is a well drilled to extend the limits of a known reservoir.
- (15) Field. An area consisting of a single reservoir or multiple reservoirs all grouped on or related to the same individual geological structural feature and/or stratigraphic condition. There may be two or more reservoirs in a field which are separated vertically by intervening impervious strata, or laterally by local geologic barriers, or by both. Reservoirs that are associated by being in overlapping or adjacent fields may be treated as a single or common operational field. The geological terms "structural feature" and "stratigraphic condition" are intended to identify localized geological features as opposed to the broader terms of basins, trends, provinces, plays, areas-of-interest, etc.
  - (16) Oil and gas producing activities.
    - (i) Oil and gas producing activities include:
      - (A)

        The search for crude oil, including condensate and natural gas liquids, or natural gas ("oil and gas") in their natural states and original locations;
      - (B)
        The acquisition of property rights or properties for the purpose of further exploration or for the purpose of removing the oil or gas from such properties;
      - (C)

        The construction, drilling, and production activities necessary to retrieve oil and gas from their natural reservoirs, including the acquisition, construction, installation, and maintenance of field gathering and storage systems, such as:

(1)

Lifting the oil and gas to the surface; and

#### **DEFINITIONS OF OIL AND GAS RESERVES**

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

- (2)
  Gathering, treating, and field processing (as in the case of processing gas to extract liquid hydrocarbons); and
- (D)

  Extraction of saleable hydrocarbons, in the solid, liquid, or gaseous state, from oil sands, shale, coalbeds, or other nonrenewable natural resources which are intended to be upgraded into synthetic oil or gas, and activities undertaken with a view to such extraction.

Instruction 1 to paragraph (a)(16)(i): The oil and gas production function shall be regarded as ending at a "terminal point", which is the outlet valve on the lease or field storage tank. If unusual physical or operational circumstances exist, it may be appropriate to regard the terminal point for the production function as:

- The first point at which oil, gas, or gas liquids, natural or synthetic, are delivered to a main pipeline, a common carrier, a refinery, or a marine terminal; and
- b.

  In the case of natural resources that are intended to be upgraded into synthetic oil or gas, if those natural resources are delivered to a purchaser prior to upgrading, the first point at which the natural resources are delivered to a main pipeline, a common carrier, a refinery, a marine terminal, or a facility which upgrades such natural resources into synthetic oil or gas.

Instruction 2 to paragraph (a)(16)(i): For purposes of this paragraph (a)(16), the term saleable hydrocarbons means hydrocarbons that are saleable in the state in which the hydrocarbons are delivered.

- (ii) Oil and gas producing activities do not include:
  - (A) Transporting, refining, or marketing oil and gas;
  - (B)

    Processing of produced oil, gas, or natural resources that can be upgraded into synthetic oil or gas by a registrant that does not have the legal right to produce or a revenue interest in such production;
  - (C)

    Activities relating to the production of natural resources other than oil, gas, or natural resources from which synthetic oil and gas can be extracted; or
  - (D) Production of geothermal steam.
- (17) Possible reserves. Possible reserves are those additional reserves that are less certain to be recovered than probable reserves.
  - (i)

    When deterministic methods are used, the total quantities ultimately recovered from a project have a low probability of exceeding proved plus probable plus possible reserves. When probabilistic methods are used, there should be at least a 10% probability that the total quantities ultimately recovered will equal or exceed the proved plus probable plus possible reserves estimates.
  - (ii)

    Possible reserves may be assigned to areas of a reservoir adjacent to probable reserves where data control and interpretations of available data are progressively less certain. Frequently, this will be in areas where geoscience and engineering data are unable to define clearly the area and vertical limits of commercial production from the reservoir by a defined project.

(iii)

Possible reserves also include incremental quantities associated with a greater percentage recovery of the hydrocarbons in place than the recovery quantities assumed for probable reserves.

#### **DEFINITIONS OF OIL AND GAS RESERVES**

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

- (iv)

  The proved plus probable and proved plus probable plus possible reserves estimates must be based on reasonable alternative technical and commercial interpretations within the reservoir or subject project that are clearly documented, including comparisons to results in successful similar projects.
- Possible reserves may be assigned where geoscience and engineering data identify directly adjacent portions of a reservoir within the same accumulation that may be separated from proved areas by faults with displacement less than formation thickness or other geological discontinuities and that have not been penetrated by a wellbore, and the registrant believes that such adjacent portions are in communication with the known (proved) reservoir. Possible reserves may be assigned to areas that are structurally higher or lower than the proved area if these areas are in communication with the proved reservoir.
- (vi)

  Pursuant to paragraph (a)(22)(iii) of this section, where direct observation has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves should be assigned in the structurally higher portions of the reservoir above the HKO only if the higher contact can be established with reasonable certainty through reliable technology. Portions of the reservoir that do not meet this reasonable certainty criterion may be assigned as probable and possible oil or gas based on reservoir fluid properties and pressure gradient interpretations.
- (18) *Probable reserves*. Probable reserves are those additional reserves that are less certain to be recovered than proved reserves but which, together with proved reserves, are as likely as not to be recovered.
  - (i)
    When deterministic methods are used, it is as likely as not that actual remaining quantities recovered will exceed the sum of estimated proved plus probable reserves. When probabilistic methods are used, there should be at least a 50% probability that the actual quantities recovered will equal or exceed the proved plus probable reserves estimates.
  - (ii)

    Probable reserves may be assigned to areas of a reservoir adjacent to proved reserves where data control or interpretations of available data are less certain, even if the interpreted reservoir continuity of structure or productivity does not meet the reasonable certainty criterion. Probable reserves may be assigned to areas that are structurally higher than the proved area if these areas are in communication with the proved reservoir.
  - (iii)

    Probable reserves estimates also include potential incremental quantities associated with a greater percentage recovery of the hydrocarbons in place than assumed for proved reserves.
  - (iv) See also guidelines in paragraphs (a)(17)(iv) and (a)(17)(vi) of this section.
  - (19) Probabilistic estimate. The method of estimation of reserves or resources is called probabilistic when the full range of val