



STATEMENT OF RESERVES DATA AND OTHER OIL AND GAS INFORMATION FORM 51-101F1

This Statement of Reserves Data and other Oil and Gas Information (the "Statement") for Canadian Spirit Resources Inc. ("CSRI" or the "Corporation") is dated September 20, 2024. The effective date of the information provided in this Statement is June 30, 2024, unless otherwise indicated. The Statement was prepared between June 30, 2023 and September 20, 2024.

Disclosure of Reserves Data

McDaniel and Associates Consultants Ltd. ("McDaniel") was engaged to prepare an independent reserve assessment on the Corporation's lands as at June 30, 2024 in accordance with the Canadian standards set out in the Canadian Oil and Gas Evaluation Handbook ("COGEH") and National Instrument 51-101 (NI 51-101), Standards of Disclosure for Oil and Gas Activities ("McDaniel Reserve Report").

The reserves data presented herein ("Reserves Data") is based on the McDaniel Reserve Report, with an effective date of June 30, 2024.

All of the Corporation's reserves are in British Columbia, Canada.

The Report on Reserves Data by the Independent Qualified Reserves Evaluator (Form 51-101F2) and the Report of Management and Directors on Oil and Gas Disclosure (Form 51-101F3) are attached in Appendices A and B, respectively.

The extent and nature of all information supplied by CSRI which may have included ownership, technical well data, production, prices, revenues, operating costs, capital costs, contracts, and other relevant data from public sources as well as non-public data, have been relied upon by McDaniel in preparing the McDaniel Reserve Report and were accepted as represented without independent verification. In the absence of such information, McDaniel relied, with the approval of CSRI, upon its opinion of reasonable practice in the industry. All information provided to McDaniel was as at June 30, 2024 and accordingly, some of such information may not be representative of current conditions.

The definitions of the various categories of reserves and expenditures are those set out in National Instrument 51-101 *Standards of Disclosure for Oil and Gas Activities* ("NI 51-101").

Abbreviations, Conversions, and Reserves Definitions are included in Appendix A

The Reserve Data presents a summary of the natural gas liquids and shale gas of the Corporation, and the net present values of the future net revenue of these reserves, using forecast prices and costs as of June 30, 2024. The reserves estimates and future net revenue forecasts have been prepared and presented in accordance with standards set out in the Canadian Oil and Gas Evaluation Handbook (COGEH) and National Instrument 51-101 (NI 51-101").

The reserve data and the future net revenues and net present values presented in the following tables were calculated using the average forecast price and costs of McDaniel & Associates Consultants Ltd. ("McDaniel"), GLJ Ltd. and Sproule Associates Limited as of July 1, 2024 ("Consultant Avg.") for the future crude oil, natural gas and natural gas product prices and were presented in Canadian dollars.

It should not be assumed that the estimates of future net revenues shown in the following tables represent the fair market value of the reserves. There is no assurance that the forecast prices and costs will be attained and variances could be material. The reserve and revenue estimates set forth below are estimates only and the actual reserves and realized revenue may be greater or less than those calculated.

Reserves Data – Forecast Prices and Costs

The following table summarizes the Corporation's oil and gas reserves as of June 30, 2024 based on forecast price and cost assumptions.

SUMMARY OF OIL AND GAS RESERVES⁽¹⁾ FORECAST PRICES AND COSTS AS OF JUNE 30, 2024

RESERVES CATEGORY	Natural Gas Liquids		Shale Gas ⁽¹⁾		Barrels of Oil Equivalent	
	Gross ⁽²⁾ (Mbbbl)	Net ⁽³⁾ (Mbbbl)	Gross ⁽²⁾ (MMcf)	Net ⁽³⁾ (MMcf)	Gross ⁽³⁾ (Mboe)	Net ⁽³⁾ (Mboe)
PROVED						
Producing	-	-	-	-	-	-
Developed Non-Producing	-	-	830	722	138	120
Undeveloped	-	-	-	-	-	-
TOTAL PROVED	-	-	830	722	138	120
TOTAL PROBABLE	-	-	173	138	29	23
TOTAL PROVED PLUS PROBABLE			1,003	860	167	143

(1) May not add due to rounding.

(2) Shale gas means natural gas contained in dense organic-rich rocks, including low-permeability shales, siltstones and carbonates, in which the natural gas is primarily absorbed on the kerogen or clay minerals, and that usually requires the use of hydraulic fracturing to achieve economic production rates.

(3) Gross reserves are working interest reserves before royalty deductions.

(4) Net reserves are working interest reserves after royalty deductions plus royalty interest reserves.

(5) Barrels of Oil Equivalent based on 6:1 for Natural Gas

The following table summarizes the net present value of the Corporation's reserves based on the McDaniel future price forecast as at June 30, 2024.

SUMMARY OF NET PRESENT VALUES⁽¹⁾ FORECAST PRICES AND COSTS AS OF JUNE 30, 2024

RESERVES CATEGORY	Discounted at				
	0% (M\$)	5% (M\$)	10% (M\$)	15% (M\$)	20% (M\$)
PROVED					
Producing	(3,220)	(1,990)	(1,352)	(1,000)	(793)
Developed Non-Producing	1,027	865	739	638	557
Undeveloped	-	-	-	-	-
TOTAL PROVED	(2,193)	(1,125)	(614)	(362)	(236)
TOTAL PROBABLE	175	135	106	84	68
TOTAL PROVED PLUS PROBABLE	(2,017)	(990)	(508)	(278)	(168)

(1) May not add due to rounding.

The following two tables provide additional information regarding the future net revenue attributable to total proved

reserves and total proved plus probable reserves.

The following table discloses, in the aggregate, certain elements of the Corporation's future net revenue attributable to its proved reserves and its proved plus probable reserves, estimated using forecast prices and costs, and calculated without discount. All properties are in British Columbia, Canada.

**TOTAL FUTURE NET REVENUE (UNDISCOUNTED) ⁽¹⁾
FORECAST PRICES AND COSTS AS OF JUNE 30, 2024**

RESERVE CATEGORY	REVENUE ⁽²⁾ (\$M)	ROYALTIES (\$M)	OPERATING COSTS (\$M)	DEVELOPMENT COSTS (\$M)	ABANDONMENT AND RECLAMATION COST ⁽³⁾ (\$M)	FUTURE NET REVENUE BEFORE INCOME TAXES ⁽⁴⁾ (\$M)	INCOME TAX (\$M)	FUTURE NET REVENUE AFTER INCOME TAXES ⁽⁵⁾ (\$M)
Total Proved	3,652	101	3,245	-	2,499	(2,193)	-	(2,193)
Total Proved Plus Probable	4,476	178	3,817	-	2,499	(2,017)	-	(2,017)

(1) Columns may not add due to rounding.

(2) Includes all product revenues and other revenues as forecast.

(3) Abandonment and reclamation costs, as defined by by NI 51-101: costs associated with the process of restoring CSRI's properties that have been disturbed by oil and gas activities, according to government and regulatory standards.

(4) (5) After Taxes = Before Taxes

The following table discloses, by product type, the net present value of the Corporation's future net revenue attributable to its proved reserves and its proved plus probable reserves, before deducting future income tax expenses, estimated using forecast prices and costs, and calculated using a 10% discount rate.

**FUTURE NET REVENUE BY PRODUCT TYPE
FORECAST PRICES AND COSTS AS OF JUNE 30, 2024**

RESERVE CATEGORY	PRODUCT TYPE	FUTURE NET REVENUE BEFORE INCOME TAXES (discounted @ 10%/year) (M\$)	UNIT VALUE ⁽¹⁾ BEFORE INCOME TAXES (discounted @ 10%/year) \$/Mcf	\$/BOE ⁽²⁾
TOTAL PROVED	Tight Oil (Including Solution Gas and By- products)	-	-	-
	Shale Gas (Including By-products)	(614)	(0.85)	(5.10)
TOTAL PROVED PLUS PROBABLE	Tight Oil (Including Solution Gas and By- products)	-	-	-
	Shale Gas (Including By-products)	(508)	(0.59)	(3.55)

(1) Unit values are calculated using the 10% discount rate divided by the Major Product Type Net reserves for each group

(2) BOE or Barrels of Oil Equivalent based on 6:1 for Natural Gas, 1:1 for Condensate and C5+, 1:1 for Ethane, 1:1 for Propane, 1:1 for butanes. BOE's may be misleading, particularly if used in isolation. A BOE conversion ratio of 6 Mcf:1 bbl is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead.

Forecast Prices and Costs

The price forecasts generated are based on an informed interpretation of the available data and while these forecasts are considered reasonable as of the date of the pricing schedule, there is a high degree of uncertainty associated with any commodity forecasting and users of this information should recognize that future revisions to the forecasts could be significant based on market fluctuations.

McDaniel generally updates the forecasts on a quarterly basis, and these updates are based on a detailed review of the most current commodity price and market information available. Data used in the forecasting of prices is compiled from government sources, industry publications and Canadian and international oil refiners, and natural gas marketers.

In all cases, estimates of the applicable capital expenditures and operating costs with an allowance for inflation were deducted in arriving at the Company's share of future net revenues. This includes an allowance for future abandonment, decommissioning and reclamation (ADR) costs.

The future net revenues and net present values were calculated using the average forecast price of McDaniel & Associates Consultants Ltd. ("McDaniel"), GLJ Ltd. and Sproule Associates Limited as of July 1, 2024 ("Consultant Avg.") for the future crude oil, natural gas and natural gas product prices and these are presented in Canadian dollars. The forecast reference prices used by McDaniel in preparing the Corporation's reserves data are provided in the table below:

**SUMMARY OF PRICE FORECASTS (McDaniel, GLJ and
Sproule) 3 CONSULTANTS AVERAGE ⁽¹⁾
As at JULY 1, 2024**

FORECAST YEAR	WTI CUSHING OKLAHOMA (\$US/bbl)	HENRY HUB (\$US/MMBtu)	B.C. WESTCOAST STATION 2 (%/Year)	INFLATION RATE (\$US/\$Cdn.)	EXCHANGE RATE (\$US/\$Cdn.)
2024 (6 mos)	80.75	2.92	1.55	-	0.738
2025	77.35	3.61	3.06	2.0	0.747
2026	77.01	4.02	3.77	2.0	0.753
2027	77.66	4.10	4.02	2.0	0.753
2028	79.22	4.18	4.10	2.0	0.753
2029	80.80	4.27	4.18	2.0	0.753
2030	82.42	4.35	4.26	2.0	0.753
2031	84.06	4.44	4.35	2.0	0.753
2032	85.74	4.53	4.44	2.0	0.753
2033	87.46	4.62	4.52	2.0	0.753
2034	89.21	4.71	4.61	2.0	0.753
2035	90.99	4.81	4.70	2.0	0.753
2036	92.81	4.90	4.80	2.0	0.753
2037	94.67	5.00	4.89	2.0	0.753
2038	96.56	5.10	4.99	2.0	0.753
Thereafter	+2%/yr	+2%/yr	+2%/yr	2.0	0.753

- (1) July 1, 2024 summary of price forecasts of 3 Consultant Average
- (2) West Texas Intermediate at Cushing Oklahoma 40 degrees API, 0.5% sulphur.
- (3) Inflation rate for forecast pricing and operating costs.
- (4) Exchange rates used to generate the benchmark reference prices in this table.

The Corporation's weighted average historical prices realized for the year ended June 30, 2024 was \$2,19 per Mcf.

Reconciliation of Changes in Reserves

The McDaniel Reserve Report represents the Corporation's Reserves Data as at June 30, 2024. The reconciliation of changes in reserves is based on the previous year end occurring as at June 30, 2024.

DETAILED RECONCILIATION OF GROSS RESERVES BY MAJOR PRODUCT TYPE FORECAST PRICES AND COSTS AS OF JUNE 30, 2024⁽¹⁾⁽²⁾

FACTORS	NATURAL GAS LIQUIDS ⁽³⁾ EQUIVALENT			SHALE GAS			BARRELS OF OIL		
	Gross Proved (Mbbbl)	Gross Probable (Mbbbl)	Gross Proved Plus Probable (Mbbbl)	Gross Proved (MMcft)	Gross Probable (MMcft)	Gross Proved Plus Probable (MMcft)	Gross Proved (MBOE)	Gross Probable (MBOE)	Gross Proved Plus Probable (MBOE)
June 30, 2023	-	-	-	1,064	178	1,242	177	30	207
Discoveries	-	-	-	-	-	-	-	-	-
Extensions	-	-	-	-	-	-	-	-	-
Infill Drilling	-	-	-	-	-	-	-	-	-
Improved Recovery	-	-	-	-	-	-	-	-	-
Technical Revisions ⁽⁴⁾	-	-	-	(116)	(21)	(137)	(19)	(11)	(23)
Acquisitions	-	-	-	-	-	-	-	-	-
Dispositions	-	-	-	-	-	-	-	-	-
Economic Factors ⁽⁵⁾	-	-	-	16	16	32	3	3	5
Production	-	-	-	(134)	-	(134)	(22)	-	(22)
June 30, 2024	-	-	-	830	173	1,003	138	29	167

(1) Columns may not add due to rounding.

(2) Gross reserves are working interest reserves before royalty deductions

(3) Natural Gas Liquids include Condensate volumes.

(4) Technical revisions can occur from moving reserves from one classification to another, and can also consist in changes in reserves relating to changes in operating costs, capital costs, commodity price offsets, and reserves reclassifications.

(5) Economic factors such as price forecasts, inflation rates, and operating and capital cost escalation rates can potentially change on a daily basis and can result in reserves estimates changing accordingly. The changes may be positive or negative depending upon the evaluator's perceptions of the future.

Changes to reserves between the current and the previous reporting periods are due to a number of factors, as presented above. Economic adjustments are the result of changes in long-term price forecasts, inflation rates, abandonment, decommissioning and reclamation liabilities, and regulatory change which can cause the property to reach its economic limit sooner. Production adjustments are the result of the natural depletion of reserves.

Additional Information Relating to Reserves Data

Undeveloped Reserves

Undeveloped reserves are attributed by McDaniel in accordance with standards and procedures contained in the COGE Handbook. Proved undeveloped reserves are those reserves that can be estimated with a high degree of certainty and are expected to be recovered from known accumulations where a significant expenditure is required to render them capable of production. Probable undeveloped reserves are those reserves that are less certain to be recovered than proved reserves and are expected to be recovered from known accumulations where a significant expenditure is required to render them capable of production. Proved and probable undeveloped reserves have been assigned in accordance with engineering and geological practices as defined under NI 51-101. In general, undeveloped reserves associated with the Corporation's assets are planned to be developed over the next two to five years.

In some cases, it will take longer than two to three years to develop these reserves. There are a number of factors that could result in delayed or cancelled development, including the following: (i) changing economic conditions (due to pricing, operating and capital expenditure fluctuations); (ii) changing technical conditions (including production anomalies, such as water breakthrough or accelerated depletion, or to changes in geological interpretation, including

reservoir continuity and quality); (iii) multi-zone developments (for instance, a prospective formation completion may be delayed until the initial completion formation is no longer economic); (iv) a larger development program may need to be spread out over several years to optimize capital allocation and facility utilization; and (v) surface access issues (including those relating to land owners, weather conditions and regulatory approvals).

Proved and Probable Undeveloped Reserves

The Corporation has no proved undeveloped reserves, and no probable undeveloped reserves, as at June 30, 2024.

The following table sets forth the probable undeveloped reserves, by product type, first attributed as reserves for the following financial periods and attributed to CSRI assets for the year ended June 30, 2024.

PROVED UNDEVELOPED RESERVES

	Natural Gas Liquid (Mbbbl)		Shale Gas (MMcf)		Barrels of Oil Equivalent (Mboe)	
	First Attributed ⁽¹⁾	Total at Year-End	First Attributed ⁽¹⁾	Total at Year-End	First Attributed ⁽¹⁾	Total at Year-End
2023 (6 mo)	N/A	N/A	N/A	N/A	N/A	N/A
2024	N/A	N/A	N/A	N/A	N/A	N/A
2025	N/A	N/A	N/A	N/A	N/A	N/A

PROBABLE UNDEVELOPED RESERVES

	Natural Gas Liquid (Mbbbl)		Shale Gas (MMcf)		Barrels of Oil Equivalent (Mboe)	
	First Attributed ⁽¹⁾	Total at Year-End	First Attributed ⁽¹⁾	Total at Year-End	First Attributed ⁽¹⁾	Total at Year-End
2023 (6 mo)	N/A	N/A	N/A	N/A	N/A	N/A
2024	N/A	N/A	N/A	N/A	N/A	N/A
2025	N/A	N/A	N/A	N/A	N/A	N/A

(1) First Attributed" refers to reserves first attributed at year-end of the corresponding fiscal year.

Significant Factors or Uncertainties Affecting Reserves Data

The process of estimating oil and gas reserves is complex, requiring significant judgments and decisions based on available geological, geophysical, engineering and economic data. These estimates may change substantially as additional data from ongoing development activities and production performance becomes available and as economic conditions impacting oil and gas processing and costs change. The reserve estimates contained herein are based on current production forecasts, prices and economic conditions, and are evaluated by an independent engineering firm. As circumstances change and additional data become available, reserve estimates also change.

Estimates made are reviewed and revised, either upward or downward, as warranted by the new information. Revisions are often required due to changes in well performance, prices and marketability of production, economic conditions, governmental regulations and/or restrictions affecting the development and cost of pace and cost of development, and governmental restrictions.

These factors and assumptions include, among others: (i) historical production in the area compared with production rates from analogous producing areas; (ii) initial production rates; (iii) production decline rates; (iv) ultimate recovery of reserves; (v) success of future development activities; (vi) marketability of production; (vii) effects of government regulations; (viii) other government levies imposed over the life of the reserves.

Although every reasonable effort is made to ensure that reserve estimates are accurate, the subjective decisions, new geological or production information and a changing environment may impact these estimates. Revisions to reserve estimates can arise from changes in period end gas prices and reservoir performance. Such revisions can be either positive or negative.

The reserve estimates of the Corporation's natural gas reserves produced in this document are estimates only. There is no assurance or guarantee that the estimated reserves will be recovered. Actual reserves may be greater or less than the estimates provided herein.

Future Development Costs

The following table provides information regarding the development costs deducted in the estimation of future net revenue attributable to the Corporation's reserves.

FUTURE DEVELOPMENT COSTS FORECAST PRICES & COSTS (M\$)⁽¹⁾

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	Remaining	Total
Total Proved																	
Undiscounted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Discounted @10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Proved Plus Probable																	
Undiscounted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Discounted @10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Future Abandonment, Decommissioning, and Reclamation Costs

Although there are no future costs associated with booked reserves in the McDaniel Reserve Report, this does not necessarily represent the Corporation's full exploration and development budget.

ABANDONMENT, DECOMMISSIONING AND RECLAMATION FORECAST PRICES & COSTS (M\$)⁽¹⁾

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	Remaining	Total
Total Proved																	
Undiscounted	-	187	-	-	-	-	87	-	-	-	153	-	678	-	-	1,393	2,499
Discounted @10%	-	178	-	-	-	-	51	-	-	-	61	-	226	-	-	319	836
Total Proved Plus Probable																	
Undiscounted	-	187	-	-	-	-	87	-	-	-	153	-	678	-	-	1,393	2,499
Discounted @10%	-	178	-	-	-	-	51	-	-	-	61	-	226	-	-	319	836

Abandonment, decommissioning and reclamation (ADR) costs for all producing wells, non-producing wells and other components (including but not limited to items such as: gathering systems, facilities, surface land development, etc.) are not included on individual entities, but represented on a consolidated basis at the corporate level. Future well capital cost estimates were provided by the Company and vetted based on the Company's experience in the area, as well as the Company's joint interest partner estimates.

Other Oil and Gas Information

CSRI's core area of activity is located in northeastern British Columbia, approximately 15 km north of the town of Hudson's Hope. The Corporation's primary core area is the Triassic Montney Formation shale gas ("Montney"). The Corporation also has oil and gas properties associated with the Cretaceous Gething Formation coals and tight sands.

On June 25, 2024, the Corporation completed the disposition of its eastern acreage located in the Farrell Creek and Attachie areas of Northeastern British Columbia (the "Disposition").

Prior to the disposition the Montney shale gas project consisted of 13 wells drilled with 10 (net 3.25) drilled on joint venture ("JV") lands and three on 100% CSRI lands. Post disposition, the Montney project includes 8 wells, with 6 (net 2.1) drilled on joint venture ("JV") lands and two on 100% CSRI lands. The Corporation's JV wells (5) produce through

the joint venture gas plant (CSRI 35%) and are pipeline connected to the Spectra Energy mainline. The Corporation's five JV wells were reactivated in Q42022 but were shut-in again in June 2023 due to low prices at Station 2. Of the remaining three wells that were drilled, two were cased and suspended and one was abandoned.

There are 14 Gething wells, of which 13 are abandoned and one is standing. The Gething pilot project was suspended in 2010 and the producing wells and gas plant are currently shut in. No reserves have been attributed to the Gething project.

Properties with No Attributed Reserves

Prior to the disposition, the Corporation's unproved properties consisted of 10,399 net hectares of Montney rights and 8,609 net hectares of Gething rights located in British Columbia, Canada, compared with 6,210 hectares of Montney rights and 6,655 net hectares of Gething rights, post disposition.

The presence of economic quantities of hydrocarbons on lands with no attributed reserves is uncertain until drilled and tested. Beyond the need to drill and test exploration areas, additional factors may influence the Corporation's ability to develop these lands, including escalation of capital costs and operating costs, the potential requirement to expand existing infrastructure and a material drop in commodities prices.

Forward Contracts

As at June 30, 2024, the Corporation had not entered into any forward contracts, transportation agreements or other future obligations.

Tax Horizon

Based on after tax economic forecasts prepared by McDaniel, income taxes are not payable in the foreseeable future by the Corporation.

Carbon Tax

Incremental Carbon Tax was included in the evaluation for the recently amended Canadian Federal Carbon Tax schedule which increased from \$65/ton in 2024 to \$170/ton in 2030 with a 2 percent per year increase thereafter.

Costs Incurred

The Corporation incurred \$0.04 million of costs related to retention of unproved properties and miscellaneous intangible and tangible costs. (These costs exclude non-cash charges and capitalized overhead).

Production Estimates

The following table summarizes the Corporation's estimated future average daily production volumes for the year ended June 30, 2024, as provided by the McDaniel Reserve Report. These values are gross to the Corporation's working interest before the deduction of royalty burdens. 2024 FORECAST OF PRODUCTION

FORECAST PRICES AND COSTS AS OF June 30, 2024

	Natural Gas Liquids Company Gross (Mbbbl)	Shale Gas Company Gross (MMcf)	Oil Equivalent Gross (MBOE)
Proved Producing	-	-	-
Proved Developed Nonproducing	-	-	-
Proved Undeveloped	-	-	-
Total Proved	-	-	-
Total Probable	-	-	-
Total Proved Plus Probable	-	-	-

Production History

The following table summarizes the Corporation's average gross daily production volumes for the financial year ended June 30, 2024. These values are gross to the Corporation's working interest before the deduction of royalty burdens.

PRODUCTION HISTORY YEAR ENDED JUNE 30, 2024

Shale Gas (MMcf/d)	Average Per Unit of Volume (\$/Mcf) Production				
	Production Volume ⁽¹⁾	Price	Royalties ⁽²⁾	Costs ⁽³⁾⁽⁴⁾	Netbacks
Q1 Ended Sept.30, 2023	N/A	N/A	N/A	N/A	N/A
Q2 Ended Dec.31, 2023	1.3	2.0	0.1	1.7	0.2
Q3 Ended Mar.31, 2024	0.7	2.4	0.1	3.2	(1.0)
Q4 Ended Jun. 30, 2024	0.6	1.7	0.1	11.9	(10.4)

(1) Production volumes reflect the Corporation's share of average daily production volume, before deduction of royalties.

(2) Royalties exclude credit but may include prior period adjustments.

(3) Production costs include transportation costs and production operating costs.

(4) Costs may include previous period adjustments.

APPENDIX A

ABBREVIATIONS AND DEFINITIONS

Reserves Definitions

The petroleum reserves estimates presented in this report have been based on the definitions and guidelines prepared by the Standing Committee on Reserves Definitions of the CIM (Petroleum Society) as presented in the COGE Handbook. A summary of those definitions is presented below.

Reserves Categories

Reserves are estimated remaining quantities of oil and natural gas and related substances anticipated to be recoverable from known accumulations, from a given date forward, based on:

- analysis of drilling, geological, geophysical and engineering data;
- the use of established technology; and
- specified economic conditions, which are generally accepted as being reasonable, and shall be disclosed.

Reserves are classified according to the degree of certainty associated with the estimates:

- **Proved reserves** are those reserves that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated proved reserves.
- **Probable reserves** are those additional reserves that are less certain to be recovered than proved reserves. It is equally likely that the actual remaining quantities recovered will be greater or less than the sum of the estimated proved + probable reserves.
- **Possible reserves** are those additional reserves that are less certain to be recovered than probable reserves. It is unlikely that the actual remaining quantities recovered will exceed the sum of the estimated proved + probable + possible reserves.

Other criteria that must also be met for the categorization of reserves are provided in the COGE Handbook.

Development and Production Status

Each of the reserves categories (proved, probable and possible) may be divided into developed and undeveloped categories:

- Developed reserves are those reserves that are expected to be recovered from existing wells and installed facilities or, if facilities have not been installed, that would involve a low expenditure (for example, when compared to the cost of drilling a well) to put the reserves on production. The developed category may be subdivided into producing and non-producing.
- Developed producing reserves are those reserves that are expected to be recovered from completion intervals open at the time of the estimate. These reserves may be currently producing or, if shut-in, they must have previously been on production, and the date of resumption of production must be known with reasonable certainty.
- Developed non-producing reserves are those reserves that either have not been on production, or have previously been on production, but are shut-in, and the date of resumption of production is unknown.

- Undeveloped reserves are those reserves expected to be recovered from known accumulations where a significant expenditure (for example, when compared to the cost of drilling a well) is required to render them capable of production. They must fully meet the requirements of the reserves classification (proved, probable, possible) to which they are assigned.

In multi-well pools it may be appropriate to allocate total pool reserves between the developed and undeveloped categories or to subdivide the developed reserves for the pool between developed producing and developed non-producing. This allocation should be based on the estimator's assessment as to the reserves that will be recovered from specific wells, facilities and completion intervals in the pool and their respective development and production status.

Levels of Certainty for Reported Reserves

The qualitative certainty levels referred to in the definitions above are applicable to individual reserves entities (which refers to the lowest-level at which reserves calculations are performed) and to reported reserves (which refers to the highest-level sum of individual entity estimates for which reserves estimates are presented). Reported reserves should target the following levels of certainty under a specific set of economic conditions:

- at least a 90 percent probability that the quantities actually recovered will equal or exceed the estimated proved reserves;
- at least a 50 percent probability that the quantities actually recovered will equal or exceed the sum of the estimated proved + probable reserves; and
- at least a 10 percent probability that the quantities actually recovered will equal or exceed the sum of the estimated proved + probable + possible reserves.

Additional clarification of certainty levels associated with reserves estimates and the effect of aggregation is provided in the COGE Handbook.

ADR	abandonment, decommissioning and reclamation costs
bbl	barrel
Bcf	billion cubic feet
BOE	barrels of oil equivalent
BOE/d	barrels of oil equivalent per day
Mbbl	thousand barrels
Mcf	thousand cubic feet
Mcf/d	thousand cubic feet per day
MD&A	Management's Discussion and Analysis
Mbbl	thousand barrels barrels
M\$	thousands dollars