

## APPENDIX 2

### GLOSSARY OF TERMS

-A-

**Access Probability:** The probability, expressed as a decimal fraction, of sufficient access (political and physical) to a particular assessment unit within a given time frame for the activities necessary to find an accumulation of minimum size and to add its volume to proved reserves. The time frame for this assessment is 30 years.

**Accumulation:** Consists of two types: conventional and continuous. A conventional accumulation is an individual producing unit consisting of a single pool or multiple pools of petroleum grouped on, or related to, a single structural or stratigraphic feature. A continuous accumulation is also an individual producing formation of regional extent that has among other features diffuse boundaries, no obvious oil water contact and no obvious relation to a structural or stratigraphic trap (see continuous-type accumulation).

**Affected Environment:** Surface or subsurface resources (including social and economic elements) within or adjacent to a geographic area that could potentially be affected by oil and gas activities; the environment of the area to be affected or created by the alternatives under consideration (40 CFR 1502.15).

**Alternative:** A combination of management prescriptions applied in specific amounts and locations to achieve a desired management emphasis as expressed in goals and objectives. One of several policies, plans, or projects proposed for decision-making. An alternative need not substitute for another in all respects.

**Alternative, No Action:** An alternative that maintains established trends or management direction and implements those actions previously analyzed and/or approved.

**Application:** A written request, petition, or offer to lease lands for the purpose of oil and gas exploration and/or the right of extraction.

**Application for Permit to Drill (APD):** An application to drill a well submitted by a lessee or operator to the BLM. The APD consists of a Drilling Plan that discusses downhole specifications and procedures (reviewed by the BLM) and a Surface Use Plan of Operations (SUPO) that examines surface uses, including access roads, well site layout, cut and fill diagrams, reclamation procedures, production facility locations, etc. (reviewed by the surface-managing agency). The approved APD is a contract between the operator and the Federal government and cannot be changed or modified unless authorized by the BLM and the surface-managing agency.

**Aquifer:** (1) A sand, gravel, or rock formation capable of storing or conveying water below the surface of the land (USDA, Natural Resources Conservation Services). (2)

The down-dip portion of a water-drive hydrocarbon reservoir that contains predominantly water.

**Archeological/historic site:** A site that contains either objects of antiquity or cultural value relating to history and/or prehistory that warrant special attention.

**Area of Critical Environmental Concern (ACEC):** Places that receive special management attention because of potential hazards and/or to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes.

**Assessment Unit:** A mappable volume of rock within a total petroleum system that encompasses accumulations (discovered and undiscovered) that share similar geologic traits and socio-economic factors. Accumulations within an assessment unit should constitute a sufficiently homogeneous population such that the chosen methodology of resource assessment is applicable. A total petroleum system might equate to a single assessment unit. If necessary, a total petroleum system can be subdivided into two or more assessment units in order that each unit is sufficiently homogeneous to assess individually. An assessment unit may be identified as conventional, if it contains conventional accumulations, or as continuous, if it contains continuous accumulations.

**Assessment Unit Probability:** Represents the likelihood, expressed as a decimal fraction, that, in a given assessment unit, at least one undiscovered accumulation of a selected minimum size exists that has the potential for its volume to be added to proved reserves in a given time frame. The assessment unit probability is the product of the probabilities of the three geologic attributes (charge, rocks, and timing) and the probability of access.

**Associated/Dissolved Gas:** Natural gas that occurs in an oil accumulation, either as a free gas cap or in solution; synonymous with gas in oil accumulations.

**-B-**

**Barrels of Oil Equivalent (BOE):** A unit of petroleum volume in which the gas portion is expressed in terms of its energy equivalent in barrels of oil. For this assessment, 6,000 cubic feet of gas equals 1 BOE.

**Basin:** (1) An area largely enclosed by higher lands. (2) A low in the Earth's crust of tectonic origin in which sediments have accumulated.

**Big Game:** Larger species of wildlife that are hunted, such as elk, deer, bighorn sheep, and pronghorn antelope.

**Big Game Winter Range:** An area available to and used by big game (large mammals normally managed for sport hunting) through the winter season.

**Buffer Zone:** (1) An area between two different land uses that is intended to resist, absorb, or otherwise preclude developments or intrusions between the two use areas. (2) A strip of undisturbed vegetation that retards the flow of runoff water, causing deposition of transported sediment.

**Bureau of Land Management:** An agency within the U.S. Department of the Interior that administers 261 million surface acres of America's public lands, located primarily in 12 Western States. The BLM sustains the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations. The BLM also manages 699 million subsurface acres for mineral leasing and development.

**-C-**

**Candidate Species:** (1) A species for which substantial biological information exists on file to support a proposal to list it as endangered or threatened, but for which no proposal has yet been published in the Federal Register. The list of candidate species is revised approximately every two years in the Notice of Review. (2) Any species not yet officially listed, but undergoing a status review or proposed for listing according to Federal Register notices published by the Secretary of the Interior or the Secretary of Commerce.

**Casing:** Steel pipe placed in an oil or gas well to prevent the hole from caving and to anchor well control equipment.

**Cell:** A subdivision or area within an assessment unit having dimensions related to the drainage areas of wells (not to be confused with finite-element cells). Three categories of cells are recognized: cells tested by drilling, untested cells, and untested cells having potential to provide additions to reserves within the forecast span of the assessment. A continuous-type assessment unit is a collection of petroleum-containing cells.

**Coalbed Natural Gas:** Natural gas found in coalbeds. Also termed “coalbed methane” or “coalbed gas”.

**Completion:** The activities and methods to prepare a well for production. Includes installation of equipment for production from an oil or gas well.

**Composite Total Petroleum System:** A mappable entity encompassing all or a portion of two or more total petroleum systems. Composite total petroleum systems are used when accumulations within an assessment unit are assumed to be charged by more than one source rock.

**Continuous-Type Accumulation:** A petroleum accumulation that is pervasive throughout a large area, that is not significantly affected by hydrodynamic influences, and has no obvious seal or trap. Continuous-type accumulations lack well-defined down-dip water contacts. The terms “continuous-type accumulation” and “continuous accumulation” are used interchangeably. Example of continuous-type accumulations include basin-centered gas, coalbed methane and shale gas.

**Controlled Surface Use (CSU):** Allowed use and occupancy (unless restricted by another stipulation) with identified resource values requiring special operational constraints that may modify the lease rights. CSU is used as an operating guideline, not as a substitute for NSO or Timing Limitations (TLs) stipulations.

**Conventional Accumulation:** A discrete petroleum accumulation, commonly bounded by a down-dip water contact that is significantly affected by the buoyancy of petroleum in water. Conventional accumulations occur as the result of discrete stratigraphic or structural traps.

**Council on Environmental Quality (CEQ):** An advisory council to the President established by the National Environmental Policy Act of 1969. It reviews Federal programs for their effect on the environment, conducts environmental studies, and advises the President on environmental matters.

**Crucial Winter Range (CWR):** Winter habitat on which a wildlife species depends for survival. Because of severe weather conditions or other limiting factors, no alternative habitat would be available.

**Cultural Resources:** Those fragile and nonrenewable physical remains of human activity, occupation, or endeavor reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works of art, architecture, burial mounds, petroglyphs, and natural features that were of importance in past human events. These resources consist of (1) physical remains; (2) areas where significant human events occurred, even though evidence of the event no longer remains; and (3) the environment immediately surrounding the resource. Cultural resources are commonly discussed in terms of prehistoric and historic values; however, each period represents a part of the full continuum of cultural values from the earliest to the most recent.

**Cumulative Petroleum Production:** Reported cumulative volume of petroleum that has been produced. Cumulative oil, cumulative gas, and cumulative production are sometimes used as abbreviated forms of this term.

**-D-**

**Directional Drilling:** The intentional deviation of a wellbore from vertical to reach subsurface targets that are not located directly below the drilling site.

**-E-**

**Endangered Species:** As defined in the Federal Endangered Species Act, any species that is in danger of extinction throughout all or a significant portion of its range. For terrestrial species, the U.S. Fish and Wildlife Service determines endangered status.

**Environmental Assessment (EA):** A public document for which a Federal agency is responsible that serves to: (1) briefly provide sufficient evidence and analysis for

determining whether to prepare an Environmental Impact Statement (EIS) or a finding of no significant impact; (2) help an agency comply with the NEPA when no EIS is necessary; and (3) facilitate the preparation of an EIS when one is necessary. An EA includes brief discussions of the need for the proposal and of the environmental impacts of the proposed action and other alternatives.

**Environmental Impact Statement (EIS):** A written analysis of the impacts on the natural, social, and economic environment of a proposed project or resource management plan.

**Estimated Ultimate Recovery (EUR):** The total expected recoverable volume of oil, gas, and natural gas liquids production from a well, lease, or field under present economic and engineering conditions; synonymous with total recovery.

**Extended Drilling Zone (EDZ):** A buffer zone along the perimeter of NSO areas into which directional drilling can occur in a generalized (as opposed to specific) sense. An EDZ relates NSO to NNSO areas (see below).

**-F-**

**Federal Land:** For the purpose of this inventory, land owned by the United States, without reference to how the land was acquired or which Federal agency administers the surface; includes mineral estates underlying private surface.

**Field:** A production unit consisting of a collection of oil and gas pools that, when projected to the surface, form an approximately contiguous area that can be circumscribed.

**Field Growth:** The increases in known petroleum volume that commonly occur as oil and gas fields are developed and produced; synonymous with reserve growth.

**Forecast Span:** A specified future time span in which petroleum accumulations have the potential to provide additions to reserves. A 30-year forecast span is used in the USGS assessments, which affects (1) the minimum undiscovered accumulation size, (2) the number of years in the future that reserve growth is estimated, (3) economic assessments, (4) the accumulations that are chosen to be considered, and (5) the risking structure as represented by access risk.

**Forest Plan (FP):** A land use plan for a unit of the National Forest system.

**Forest Service (USDA-FS):** An agency of the U.S. Department of Agriculture that manages 193 million acres of public lands in national forests and grasslands.

**-G-**

**Gas Accumulation:** An accumulation with a gas to oil ratio of 20,000 cubic feet/barrel or greater.

**Gas in Gas Accumulations:** Gas volumes in gas accumulations.

**Gas in Oil Accumulations:** Gas volumes in oil accumulations.

**Gas to Oil Ratio (GOR):** The ratio of gas to oil (in cubic feet/barrel) in an accumulation. GOR is calculated using known gas and oil volumes at surface conditions.

**Geographic Information System (GIS):** A computer system capable of assembling, storing, manipulating, and displaying geographically referenced information, i.e., data identified according to their locations.

**Geologic Province:** A USGS-defined area having characteristic dimensions of perhaps hundreds to thousands of kilometers encompassing a natural geologic entity (for example, a sedimentary basin, thrust belt, or delta) or some combination of contiguous geologic entities.

**Geospatial:** Information that identifies the geographic location and characteristics of natural or constructed features and boundaries on the earth. This information may be derived from remote sensing, mapping, and surveying technologies, or from other sources.

**Grown Petroleum Volume:** Known petroleum volume adjusted upward to account for future reserve growth. Thirty years of reserve growth is considered for the USGS assessments.

**-H-**

**Habitat:** A specific set of physical conditions that surround a single species, a group of species, or a large community. In wildlife management, the major components of habitat are considered to be food, water, cover, and living space.

**Hibernacula (Indiana bat):** The caves and mines in which the Indiana Bat hibernates.

**-I-**

**-J-**

**-K-**

**Known Petroleum Volume:** The sum of cumulative production and remaining reserves as reported in the databases used in support of an assessment. Also called estimated total recoverable volume (sometimes called "ultimate recoverable reserves" or "estimated ultimate recovery").

**-L-**

**Landscape:** A relatively large area of land with common climate, geology, and soils containing predictably occurring terrain features such as slopes, drainage channels, rock outcrops, etc.

**Lease (Oil and Gas):** An authorization to use Federal lands and minerals issued under the Act of February 25, 1920, as amended (30 U.S.C. 181, et seq.); the Act of May 21, 1930 (30 U.S.C. 351-359); the Act of August 7, 1947 (30 U.S.C. 351, et seq.); or the Act of November 16, 1981 (PL 97-98, 95 Stat. 1070).

**Lease Stipulations:** See Stipulations.

**Liquids to Gas Ratio (LGR):** Ratio of total petroleum liquids (including oil, condensate, and natural gas liquids) to gas (in barrels/million cubic feet) in a gas accumulation. The LGR is calculated using known petroleum liquids and gas volumes at surface conditions. This ratio is used to assess the liquid co-products associated with undiscovered gas in gas accumulations.

**-M-**

**Mineral:** Organic and inorganic substances occurring naturally, with characteristics and economic uses that bring them within the purview of mineral laws; a substance that may be obtained under applicable laws from public lands by purchase, lease, or pre-emptive entry.

**Minimum Accumulation Size:** The smallest accumulation size (volume of oil in oil accumulations or volume of gas in gas accumulations) that is considered in the USGS assessment process for conventional accumulations.

**Minimum Petroleum System:** The mappable part of a total petroleum system for which the presence of essential elements has been proved by discoveries of petroleum shows, seeps, and accumulations.

**Minimum Total Recovery Per Cell:** The smallest total recovery per cell (volume of oil or gas) that is considered in the USGS assessment process for continuous-type accumulations.

**Mitigation:** Includes the following:

- (1) Avoiding an impact altogether by not taking a certain action or parts of an action.
- (2) Minimizing impacts by limiting the degree of magnitude of the action and its implementation.
- (3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- (4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (5) Compensating for the impact by replacing or providing substitute resources or environments.

**Monitoring:** The orderly collection, analysis, and interpretation of resource data to evaluate progress toward meeting resource management objectives.

**-N-**

**National Environmental Policy Act (NEPA):** An Act to establish a national policy for the environment, to provide for the establishment of a Council on Environmental Quality, and for other purposes. The law requires the assessment and documentation of the environmental and social impacts of Federal actions. (PL 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by PL 94-52, July 3, 1975, PL 94-83, August 9, 1975, and PL 97-258, § 4(b), Sept. 13, 1982)

**National Forest (NF):** Created by an act of Congress in 1892, National Forests are Federal land reservations that are administered by the United States Department of Agriculture-Forest Service for multiple uses, including grazing, logging, minerals, and recreation.

**National Register of Historic Places (NRHP):** A Federal Government list of “. . . districts, sites, buildings, structures, and other objects significant in American history, architecture, archeology, and culture.” The National Register is maintained by the National Park Service, U.S. Department of the Interior, and is published in its entirety in the Federal Register each year in February.

**Natural Gas Liquids (NGL):** Petroleum that occurs naturally as a gas in the reservoir, but that is a liquid under surface conditions. Natural gas liquids are typically reported separately from crude oil.

**Natural Gas Liquids to Gas Ratio (for oil accumulations):** Ratio of natural gas liquids to gas (in barrels/million cubic feet) in an oil accumulation, calculated using known natural gas liquids and gas volumes at surface conditions. This ratio is used to assess the natural gas liquids associated with undiscovered gas in oil accumulations.

**Net No Surface Occupancy (NNSO):** NSO areas are areas that can be leased but stipulations prohibit surface occupancy for natural gas and oil drilling activities to protect identified resources. To access O&G resources under NSO areas in the inventory, use of directional drilling technology is taken into consideration resulting in NNSO resources. The impacts of NNSO are similar to NLA areas. See also No Surface Occupancy.

**Non-Associated Gas:** Natural gas that occurs in a gas accumulation; synonymous with gas in gas accumulations.

**No Surface Occupancy (NSO):** An area where no surface-disturbing activities of any nature or for any purpose are allowed. For example, construction or the permanent or long-term placement of structures or other facilities would be prohibited. It is also used as a stipulation or mitigation requirement for controlling or prohibiting selected land uses or activities that would conflict with other activities, uses, or values in a given area.



When used in this way, the NSO stipulation or mitigation requirement is applied to prohibit one or more specific types of land and resource development activities or surface uses in an area, while other—perhaps even similar— types of activities or uses (for other purposes) would be allowed. For example, protecting important rock art relics from destruction may require closing the area to the staking of mining claims and surface mining, off-road vehicle travel, construction or long-term placement of structures or pipelines, power lines, general purpose roads, and livestock grazing. Conversely, the construction of fences (to protect rock art from vandalism or from trampling or breakage by livestock), an access road or trail, and other visitor facilities to provide interpretation and opportunity for public enjoyment of the rock art would be allowed. Additionally, if there were potential and interest for leasing and consequent mineral development in the area, then leases for gas and oil, coal, etc., could be issued with a NSO stipulation or mitigation requirement for the rock art site, which would still allow access to the minerals from adjacent lands and underground. The term "no surface occupancy" has no relationship or relevance to the presence of people in an area.

In the NPRA, NSO stipulations generally apply only to permanent facilities but provide for wintertime exploration.

**Notice:** The communication of a pending Federal action; the notification to parties of Federal actions about to be taken. This is a part of due process.

**-O-**

**Occupancy:** Actual possession and use of land in something more than a slight or sporadic manner. As defined as a multiple use component, it is the management of public lands for occupancy involving the protection, regulated use, and development of lands as sites for economically and socially useful structures, either publicly or privately owned.

**Oil Accumulation:** An accumulation with a gas to oil ratio of less than 20,000 (in cubic feet/barrel).

**Oil in Gas Accumulations:** Oil volumes in gas accumulations. For the EPCA inventory, oil in gas accumulations was calculated with other liquids rather than separately.

**Oil in Oil Accumulations:** Oil volumes in oil accumulations.

**Operator:** An individual, group, association, or corporation authorized to conduct, for example, livestock grazing or oil and gas drilling on public lands.

**-P-**

**Petroleum:** A collective term for oil, gas, natural gas liquids, and tar.

**Play:** A set of known or postulated oil and gas accumulations sharing similar geologic, geographic, and temporal properties, such as source rock, migration pathway, timing, trapping mechanism, and hydrocarbon type. A play may or may not differ from an assessment unit; an assessment unit can include one or more plays.

**Proposed Species:** A species of plant or animal formally proposed by the U.S. Fish and Wildlife Service (USFWS) to be listed as threatened or endangered under the Endangered Species Act.

**Proved Reserves:** Quantities of crude oil, natural gas, or natural gas liquids that geological and engineering data demonstrate with reasonable certainty (defined as 90 percent or more probable) to be recoverable in future years from known reservoirs under existing economic and operating conditions.

**Public Lands:** Any land and interest in land owned by the United States that are administered by the Secretary of the Interior through the BLM, without regard to how the United States acquired ownership, except for (1) lands located on the Outer Continental Shelf and (2) lands held for the benefit of Indians, Aleuts, and Eskimos; includes public domain and acquired lands (see definitions). Vacant, unappropriated, and unreserved public lands, or public lands withdrawn by Executive Order 6910 of November 26, 1934, as amended, or by Executive Order 6964 of February 5, 1935, as amended, and not otherwise withdrawn or reserved, or public lands within grazing district established under Section 1 of the Act of June 28, 1934 (48 Stat. 1269), as amended, and not otherwise withdrawn or reserved.

-Q-

-R-

**Remaining Petroleum Reserves:** Volume of petroleum in discovered accumulations that has not yet been produced. Remaining reserves is sometimes used as an abbreviated form of this term.

**Reserve Growth:** The increases in known petroleum volume that commonly occur as oil and gas accumulations are developed and produced; synonymous with field growth.

**Resource Management Plan (RMP):** A land use plan that provides the basic, general direction and guidance for BLM-administered public lands, usually within a specific administrative area.

**Right-of-Way (ROW):** A permit or easement which authorizes the use of public land for certain specified purposes, commonly for pipelines, roads, telephone lines, etc.; also, the lands covered by such an easement or permit. It does not grant an estate of any kind, only the right of use. May also include a site.

**Riparian Areas:** The vegetation along the banks of rivers and streams and around springs, bogs, wet meadows, lakes, and ponds.

**Roadless:** Refers to an absence of roads that have been constructed and maintained by mechanical means to ensure regular and continuous use.

**Roads:** Vehicle routes that have been improved and maintained by mechanical means to ensure relatively regular and continuous use. (A way maintained strictly by the passage of vehicles does not constitute a road).

**-S-**

**Shapefile:** GIS file format usable with ESRI (such as ArcView) and other commercial GIS software. It is a nontopological data structure that does not explicitly store topological relationships. However, unlike other simple graphic data structures, one or more rings represent shapefile polygons. A ring is a closed, non-self-intersecting loop. This structure can represent complex structures, such as polygons, that contain “islands.” The vertices of a ring maintain a consistent, clockwise order so that the area to the right, as one “walks” along the ring boundary, is inside the polygon, while the area to the left is outside the polygon.

**Split Estate:** Federal mineral estate administered by the BLM, which is under either private lands, state lands, or lands administered by another Federal agency. On split estate lands, the surface owner or managing agency controls the surface uses but the mineral estate is the dominant estate. The BLM coordinates with surface owners on mineral leasing and development. In a few cases, the BLM administers the surface, but the minerals are owned by the state or a private entity.

**Stipulations:** Conditions, promises, or demands added to a lease when the environmental and planning record demonstrates the necessity for the stipulations. Stipulations, as such, are neither “standard” nor “special”; they are a necessary modification of the terms of the lease. In order to accommodate the variety of resources encountered on Federal lands, stipulations are categorized as to how the stipulation modifies the lease rights, not by the resource(s) to be protected. What, why, and how this mitigation/protection is to be accomplished is determined by the land management agency through land use planning and NEPA analysis. If, upon weighing the relative resource values, uses, and/or users, conflict with oil and gas operations is identified that cannot be adequately managed and/or accommodated on other lands, then a lease stipulation is necessary. Land use plans serve as the primary vehicle for determining the necessity for lease stipulations. Documentation of the necessity for a stipulation is disclosed in planning documents or through site-specific analysis. Land use plans and/or NEPA documents also establish the guidelines under which future waivers, exceptions, or modifications may be granted. Substantial modification or waiver of stipulations subsequent to lease issuance is subject to public review for at least a 30-day period in accordance with Section 5102.f of the Federal Onshore Oil and Gas Leasing Reform Act of 1987. Stipulations may be necessary if the authority to control the activity on the lease does not already exist under laws, regulations, or orders. An authorized Federal officer has the authority to modify the site location and design of facilities, control the rate of development and timing of activities, and require other

mitigation under standard lease terms. The necessity for individual lease stipulations is documented in the lease-file record with reference to the appropriate land use plan or other leasing analysis document. The necessity for exceptions, waivers, or modifications is documented in the lease-file record through reference to the appropriate plan or other analysis.<sup>1</sup>

**Study Areas:** Northern Alaska, Uinta-Piceance Basin, Paradox/San Juan Basins, Montana Thrust Belt, Powder River Basin, Wyoming Thrust Belt, Greater Green River Basin, Denver Basin, Florida Peninsula, Black Warrior Basin and the Appalachian Basin, which were selected as the geologic provinces for this inventory. They comprise the areas underlain by known or postulated oil and/or natural gas resources based upon USGS assessments.

**Subsurface Allocation:** An allocation of potential additions to reserves to land entities based on subsurface ownership of mineral rights.

**Surface Allocation:** An allocation of potential additions to reserves to land entities based on surface ownership.

**Sweet Spot:** An area within a continuous-type deposit where production characteristics are relatively more favorable.

-T-

**Technically Recoverable Resources:** In-place resources that are producible using current recovery technology but without reference to economic profitability. These resources are generally conceived as existing in accumulations of sufficient size to be amenable to the application of existing recovery technology.

**Timing Limitations (TLs):** Prohibit surface use during specified (usually seasonal) time periods to protect identified resource values. They do not apply to the operation and maintenance of production facilities unless there is a continued need for such mitigation and less stringent, project-specific mitigation measures would be insufficient. Also called a Seasonal Restriction.

**Total Petroleum System (TPS):** A mappable entity encompassing genetically related petroleum that occurs in seeps, shows, and accumulations (discovered or undiscovered) that have been generated by a pod or by closely related pods of mature source rock, together with the essential mappable geologic elements (source, reservoir, seal, and overburden rocks) that controlled fundamental processes of generation, migration, entrapment, and preservation of petroleum.

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<sup>1</sup> Taken from the booklet, "Uniform Format for Oil and Gas Lease Stipulations," prepared by the Rocky Mountain Regional Coordinating Committee in March 1989. These guidelines were developed by the BLM and USDA-FS.

**Total Recovery:** The total expected recoverable volume of oil, gas, and natural gas liquids production from a well, lease, or field under present economic and engineering conditions; synonymous with estimated ultimate recovery.

**-U-**

**Ultimate Recovery Appreciation (URA):** The generally observed increase of Estimated Ultimate Recovery over time.

**Undiscovered Petroleum Resources:** Resources postulated from geologic information and theory to exist outside of known oil and gas accumulations.

**USGS-Assessed Petroleum Volumes:** The quantities of oil, gas, and natural gas liquids that have the potential to be added to reserves within some future time frame, which for this assessment is 30 years. The USGS assessed petroleum volumes include both those from undiscovered accumulations, whose sizes are greater than or equal to the selected minimum accumulation size, and those from the reserve growth of fields already discovered.

**-V-**

**-W-**

**Wetlands:** Permanently wet or intermittently flooded areas where the water table (fresh, saline, or brackish) is at, near, or above the soil surface for extended intervals; where hydric wet soil conditions are normally exhibited; and where water depths generally do not exceed two meters. Marshes, shallows, swamps, muskegs, lake bogs, and wet meadows are examples of wetlands.

**Wilderness:** A Congressionally designated area of undeveloped Federal land retaining its primeval character and influence, without permanent improvement or human habitation, that is protected and managed so as to preserve its natural conditions and that (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least 5,000 acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and, (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

**Wildlife:** Animals that are neither human nor domesticated.

**Withdrawal:** An action that restricts the disposition of public lands and that holds them for specific public purposes; also, public lands that have been dedicated to public purposes (for example, recreation sites, office or warehouse sites, etc.).

**-X-**

**-Y-**

**-Z-**