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Based at Ryder Scott's Houston office, Herman G. Acuña brings more than 30 years of experience to his role as President. With a background in petroleum engineering, he has specialized in reserves evaluations, integrated reservoir studies, and probabilistic analysis.

Holding both a Master of Science and a Bachelor of Science in Petroleum Engineering from the University of Tulsa, Herman has developed proficiency in reservoir simulation, field optimization, and international advisory. Throughout his career, he has made significant contributions to Ryder Scott Co., L.P., including advising on strategic planning and optimizing field development through advanced simulation models.

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SEC & SPE-PRMS CHANGES AND IMPLICATIONS

Herman G. Acuña

President, Ryder Scott Company



Content

- SEC's Oil and Gas Disclosures
 - Enhanced and Standardized Climate-Related Disclosures
- SPE-PRMS
 - SPE Oil and Gas Reserves Committee (OGRC)
 - OGRC Subcommittees
 - 2028 SPE-PRMS Update
 - Role of the PRMS in Energy Sustainability

SEC's Oil and Gas Disclosures

What is the Code of Federal Regulations (CFR)

- **The Code of Federal Regulations (CFR)** annual edition is the codification of the general and permanent rules published in the **Federal Register** by the departments and agencies of the Federal Government.
- Organized into 50 Titles, each with many sections

- Title 1: General Provisions
- Title 2: Grants and Agreements
- Title 3: The President
- Title 4: Accounts
- Title 5: Administrative Personnel
- Title 6: Domestic Security
- Title 7: Agriculture
- Title 8: Aliens and Nationality
- Title 9: Animals and Animal Products
- Title 10: Energy
- Title 11: Federal Elections
- Title 12: Banks and Banking
- Title 13: Business Credit and Assistance
- Title 14: Aeronautics and Space (also known as the Federal Aviation Regulations)
- Title 15: Commerce and Foreign Trade
- Title 16: Commercial Practices **Protect the Investor**
- Title 17: Commodity and Securities Exchanges
- Title 18: Conservation of Power and Water Resources
- Title 19: Customs Duties
- Title 20: Employees' Benefits
- Title 21: Food and Drugs
- Title 22: Foreign Relations
- Title 23: Highways
- Title 24: Housing and Urban Development
- Title 25: Indians

- Title 26: Internal Revenue (also known as the Treasury Regulations)
- Title 27: Alcohol, Tobacco Products and Firearms
- Title 28: Judicial Administration
- Title 29: Labor
- Title 30: Mineral Resources
- Title 31: Money and Finance: Treasury
- Title 32: National Defense
- Title 33: Navigation and Navigable Waters
- Title 34: Education
- Title 35: Reserved (formerly Panama Canal)
- Title 36: Parks, Forests, and Public Property
- Title 37: Patents, Trademarks, and Copyrights
- Title 38: Pensions, Bonuses, and Veterans' Relief
- Title 39: Postal Service **Protect the Environment**
- Title 40: Protection of Environment
- Title 41: Public Contracts and Property Management
- Title 42: Public Health
- Title 43: Public Lands: Interior
- Title 44: Emergency Management and Assistance
- Title 45: Public Welfare
- Title 46: Shipping
- Title 47: Telecommunication
- Title 48: Federal Acquisition Regulations System
- Title 49: Transportation
- Title 50: Wildlife and Fisheries



FEDERAL REGISTER
The Daily Journal of the United States Government



17 CFR Part 210 and 229

- Title 17: Commodity and Securities Exchanges
 - Chapter II: Securities and Exchange Commission
 - **Part 210**: Form and Content of and Requirements for Financial Statements, Securities Act of 1933, Securities Exchange Act of 1934, Investment Company Act of 1940, Investment Advisers Act of 1940, and Energy Policy and Conservation Act of 1975 – **REGULATION S-X**
 - **Part 229**: Standard Instructions for Filing Forms Under Securities Act of 1933, Securities Exchange Act of 1934, and Energy Policy and Conservation Act of 1975—**REGULATION S-K**
- 2009 Modernization of Oil and Gas Reporting; Final Rule (SEC Definitions)
 - Amend Regulation S-X Part 210.4-10
 - Additions to Regulation S-K Part 229 subpart 1200 and adding 1201-1208

Enhancement and Standardization of Climate-Related Disclosures

- **On March 21, 2022**, the SEC proposed rules – public comment requested
- **On March 6, 2024**, the SEC issues final rules
 - On March 28, 2024, the SEC published final rules in the **Federal Register**
- **On March 18, 2024**, the Fifth Circuit Court of Appeals issued an emergency administrative stay of the Final Rule
- **As of April 12, 2024**, the effective date of the Final Rules, published at [89 FR 21668](#), March 28, 2024, is delayed indefinitely.



Enhancement and Standardization of Climate-Related Disclosures

Commission Reference		CFR Citation (17 CFR)
Regulation S-X	Article 8-01	§ 210.8-01
	Article 14-01	§ 210.14-01
	Article 14-02	§ 210.14-02
Regulation S-K	Items 1500 through 1508	§§ 229.1500 through 229.1508
	Item 601	§ 229.601
Regulation S-T	Item 405	§ 232.405

Climate-Related Disclosure Requirements

Disclosure requirements can be broadly described by the following:

1. Disclosure of climate-related risks **and opportunities** that could materially impact business results.



2. Quantitative disclosure of greenhouse gas (GHG) emissions.

- GHG Emissions Scopes 1, 2 **and 3**

CO ₂ e emissions ('000 tonnes)	2010	2009	Adjusted base year		Percentage change	
			2007	2012	2009/2010	2007/2010
Scope 1	432	521	645	364	-17%	-33%
Scope 2	1,293	1,386	1,494	1,038	-7%	-13%
Total Scope 1 and 2 emissions	1,725	1,907	2,139	1,402	-10%	-19%
Scope 3	7,245	7,320	8,001	6,101	-1%	-9%
Total emissions	8,970	9,227	10,140	7,503	-3%	-12%

Greenhouse gas emissions intensity (CO ₂ e '000 tonnes/Plp M revenue)	2010	2009	Adjusted base year	
			2007	Target 2012
Scope 1	0.100	0.157	0.229	0.057
Scope 2	0.299	0.418	0.531	0.162
Scope 3	1.675	2.208	2.841	0.953
Total	2.074	2.783	3.601	1.172

3. Corporate management systems and governance of climate-related risks and strategies.

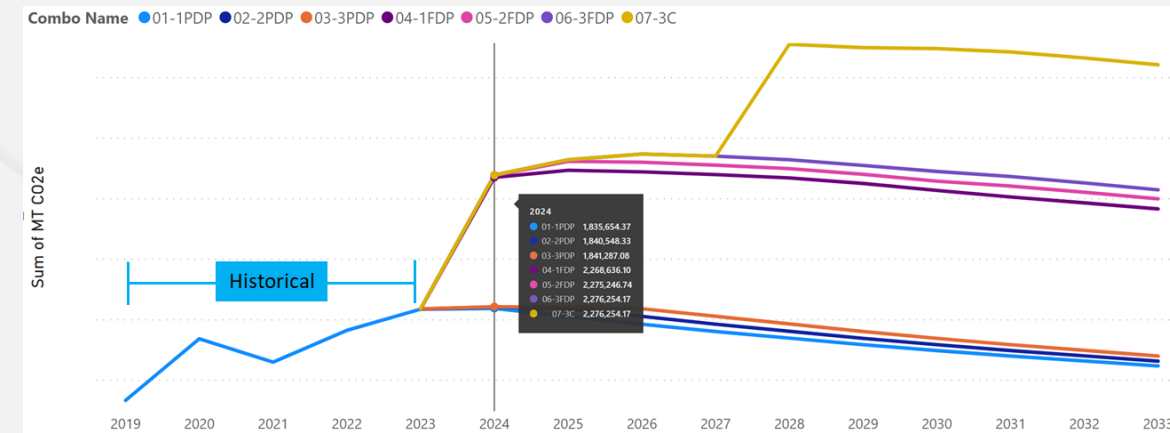


XXXX Indicate key changes between the proposed and final ruling.

Climate Related Disclosure Requirements

1. Material Impacts of Climate-Related Risks on **Strategy, Business Model, and Outlook**
2. Transition Plan
3. **Scenario Analysis If Used**
4. Maintained Internal Carbon Price
5. Board Oversight
6. Management Oversight
7. Risk Management
8. **Targets and Goals**
9. Scope 1 & 2 GHG Emissions
10. Attestation Over GHG Emissions Disclosure (third-party verification & validation)

Implication: Forward Looking GHG Statements need to be consistent with Reserves Disclosures



**Are these Emissions Acceptable and Consistent with the Company's Strategy?
Is Company's Commitment to the Projects in Jeopardy?
Has Carbon Costs been taken into account?**

Phased Compliance

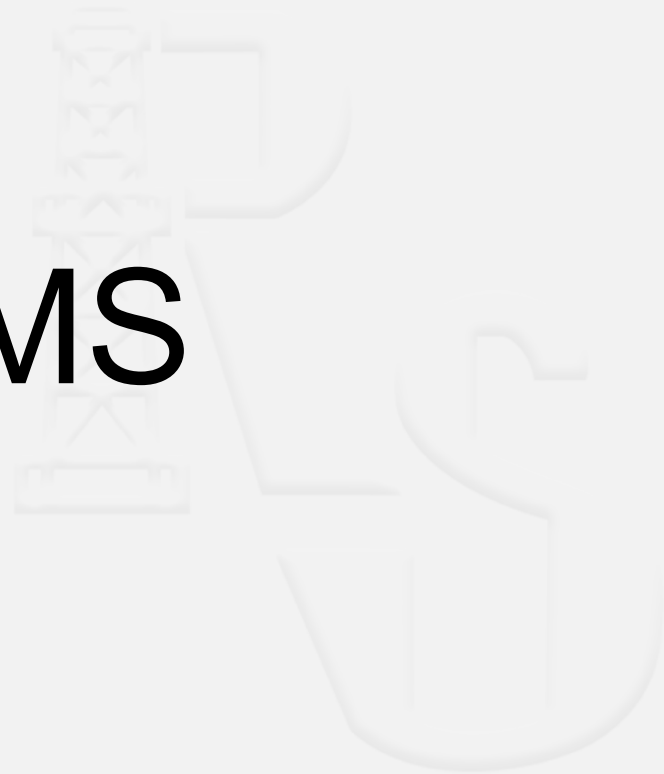
Registrant Type	Compliance Dates under the Final Rules ¹					
	Disclosure and Financial Statement Effects Audit		GHG Emissions/Assurance			Electronic Tagging
	<i>All Reg. S-K and S-X disclosures, other than as noted in this table</i>	<i>Item 1502(d)(2), Item 1502(e)(2), and Item 1504(c)(2)</i>	<i>Item 1505 (Scopes 1 and 2 GHG emissions)</i>	<i>Item 1506 - Limited Assurance</i>	<i>Item 1506 - Reasonable Assurance</i>	<i>Item 1508 - Inline XBRL tagging for subpart 1500²</i>
LAFs	FYB 2025	FYB 2026	FYB 2026	FYB 2029	FYB 2033	FYB 2026
AFs (other than SRCs and EGCs)	FYB 2026	FYB 2027	FYB 2028	FYB 2031	N/A	FYB 2026
SRCs, EGCs, and NAFs	FYB 2027	FYB 2028	N/A	N/A	N/A	FYB 2027
	<p>1 As used in this chart, "FYB" refers to any fiscal year beginning in the calendar year listed.</p> <p>2 Financial statement disclosures under Article 14 will be required to be tagged in accordance with existing rules pertaining to the tagging of financial statements. See Rule 405(b)(1)(i) of Regulation S-T.</p>					

Enhanced and Standardized Climate-Related Disclosures - Conclusions

- Final Rules are currently delayed indefinitely pending Judicial Review
 - But just like winter, the Final Rules are coming
- Begin making preparations to address disclosure requirements
 - Align reserves scenarios with GHG emissions forecast
 - Ensure smooth and consistent disclosures
 - Improve investors' confidence

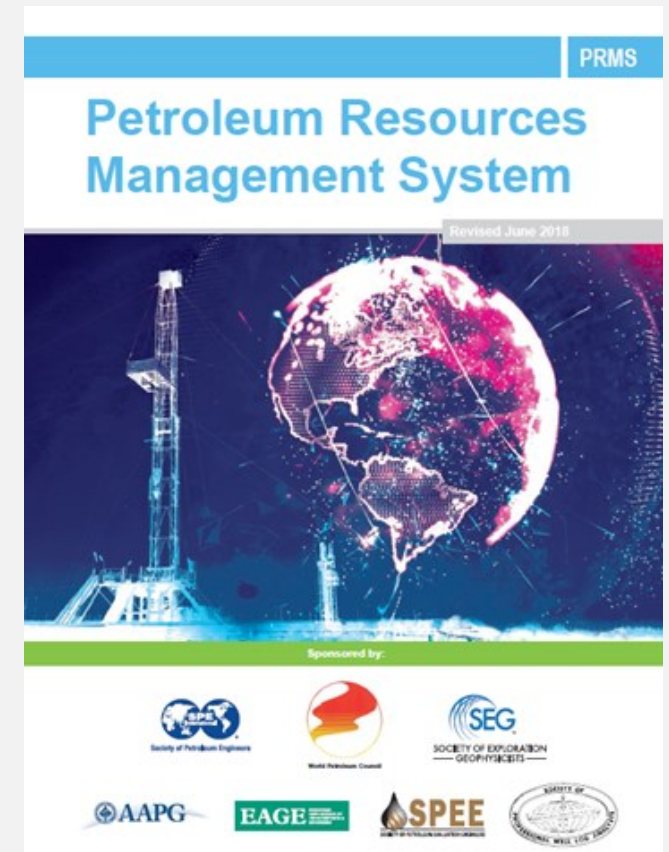


SPE - PRMS



2018 SPE - PRMS

- Petroleum Resources Management System (PRMS) provides a tool that:
 - Supports enterprise activities through the categorization and classification of resources to reflect technical and commercial risk and uncertainty
 - Is globally recognized and accepted as a standard while at the same time is practical to implement
- The current version is the 2018 PRMS sponsored by:
 - Society of Petroleum Engineers (SPE)
 - American Association of Petroleum Geologists (AAPG)
 - European Association of Geoscientists & Engineer (EAGE)
 - Society of Exploration Geophysicists (SEG)
 - Society of Petroleum Evaluation Engineers (SPEE)
 - Society of Professional Well Log Analysts (SPWLA)
 - World Petroleum Council (WPC)



SPE Oil and Gas Reserves Committee (OGRC)

- The SPE Oil and Gas Reserves Committee (OGRC) is chartered by the SPE Board to maintain and update the PRMS
- 2023-2024 OGRC has 18 members from across the world and industry
 - Current Chairman is Dr. John Lee from Texas A&M University
 - Multiple subcommittees to address various initiatives
 - Participation of industry observers and sponsoring organizations
- The OGRC Committee meets twice a year (Spring and Fall) but works throughout the year to advance various initiatives and respond to industry needs.

OGRC SUB-COMMITTEES

- PRMS Training: Chair - Steven McCants
- PRMS AG Spanish Translation: Chair - Herman Acuña
- PRMS Examples: Chair – Daniel DiLuzio
- PRMS Application Guidelines: Chair – Charles Vanorsdale
- Reserves Estimation and Auditing Guidelines: Chair – Rick Krennek
- **PRMS 2028 Update:** Chairs – Herman Acuña and Monica Clapauch

2028 SPE-PRMS UPDATE

- A 14-member sub-committee has been appointed and activities started in the 4Q 2023
 - Chairs Herman G. Acuna (Ryder Scott Company) & Monica Clapauch Motta (Petrobras)
 - Additional subcommittee members, subject matter experts, and contributors may be incorporated as the project progresses
- Ensure the PRMS provides a relevant resources management framework for the industry
 - Maintain the current principles-based core structure while addressing the changing energy landscape.
 - Improve clarity and granularity as necessary
 - Address public comments and experience gained from the application of the 2018 PRMS

2028 SPE-PRMS UPDATE

Public Comments

- Public Comments were solicited through various media 12/2023 and received through end of 6/2024
- Feedback was also requested from the supporting organization during the same period
- The OGRC received good public response.
 - Over 50 contributors
 - Contributors generally discussed multiple topics in their comments



2028 SPE-PRMS UPDATE

Public Comments – Hot Buttons

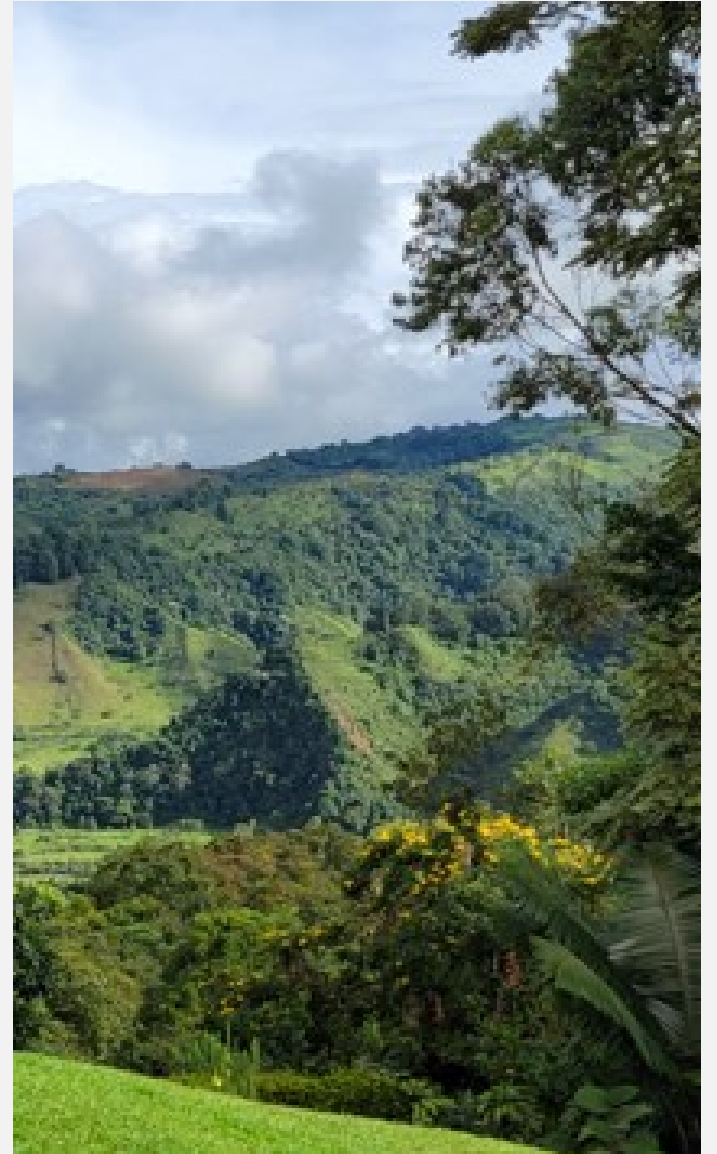
- Technically Recoverable Resources (TRR)
- Stand-Alone Possible Reserves
- Reconciliation of deterministic and probabilistic analysis
 - Incremental versus cumulative cases
- Commercial versus economic evaluations
- PRMS Sub-Classes – definitions and requirements
- Split classifications
- Address sustainability and application of the PRMS to non-hydrocarbons

Role of the PRMS in Energy Sustainability

- In August 2022, the SPE/OGRC communicated that it would not object to the application of the PRMS to the following applications if the PRMS principles have been followed:
 - Gaseous Extraction such as Carbon Dioxide, Helium & Hydrogen
 - Solution extraction of trace elements contained in brine solutions in aquifers such as bromine or lithium
 - Geothermal water or heat sources used for heating or electricity generation
 - Synthetic gas production such as coal seam gasification projects to convert coal in situ to synthetic gas

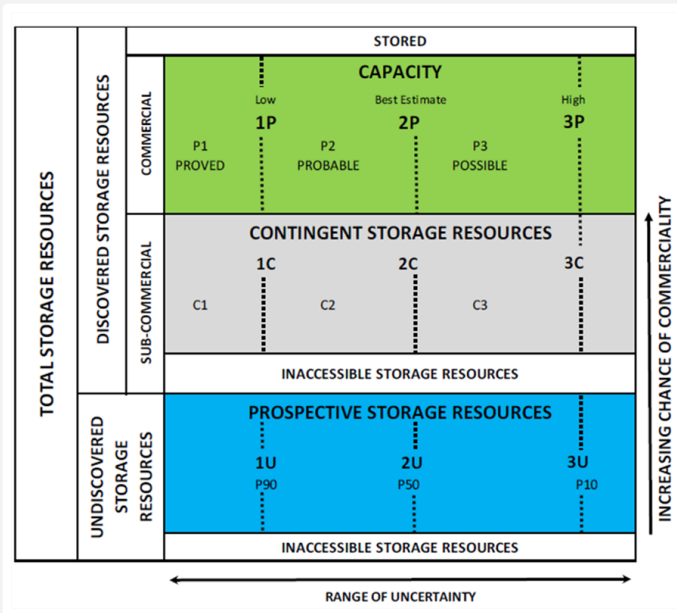
Role of the PRMS in Energy Sustainability

- The PRMS already addresses the importance of social and environmental issues as integral components of the categorization and classification framework
 - Commercialization cannot be declared without resolving environmental and social concerns; including social acceptance issues.
- Climate concerns have elevated these factors to the forefront of the energy sustainability discussion
- The OGRC is committed to continuing to provide a relevant resources management framework for the industry
 - Continue to raise awareness of these PRMS requirements

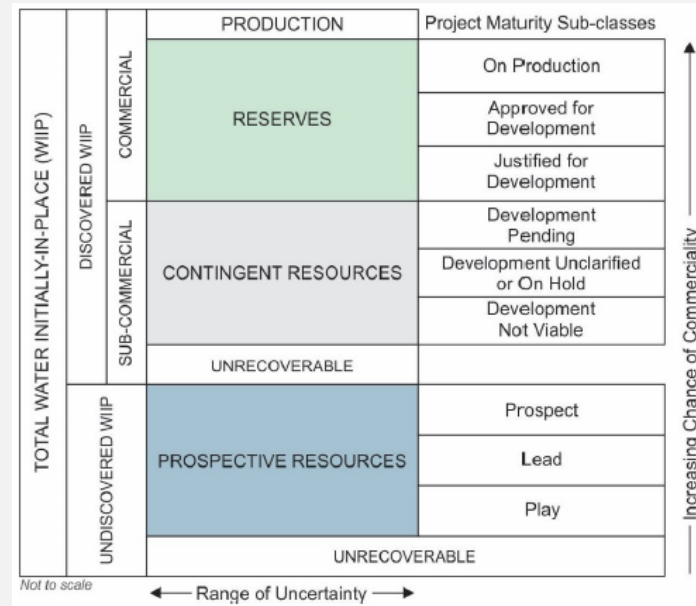


Role of the PRMS in Energy Sustainability

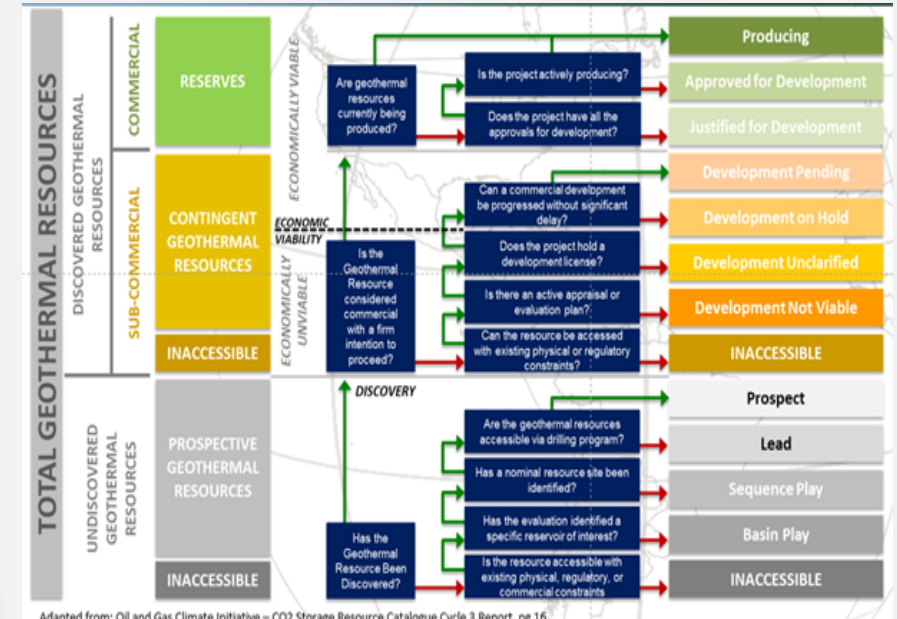
Storage Resources Management System (SRMS)



Water Resources Management System (WRMS)



Geothermal Resources Management System (GRMS)



Adapted from: Oil and Gas Climate Initiative – CO2 Storage Resource Catalogue Cycle 3 Report, pg 16

U.S. DEPARTMENT OF ENERGY



Geothermal Energy from Oil and Gas Demonstrated Engineering

Thank you

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