Industry Partner Updates

Moderator: Marcus Ogle

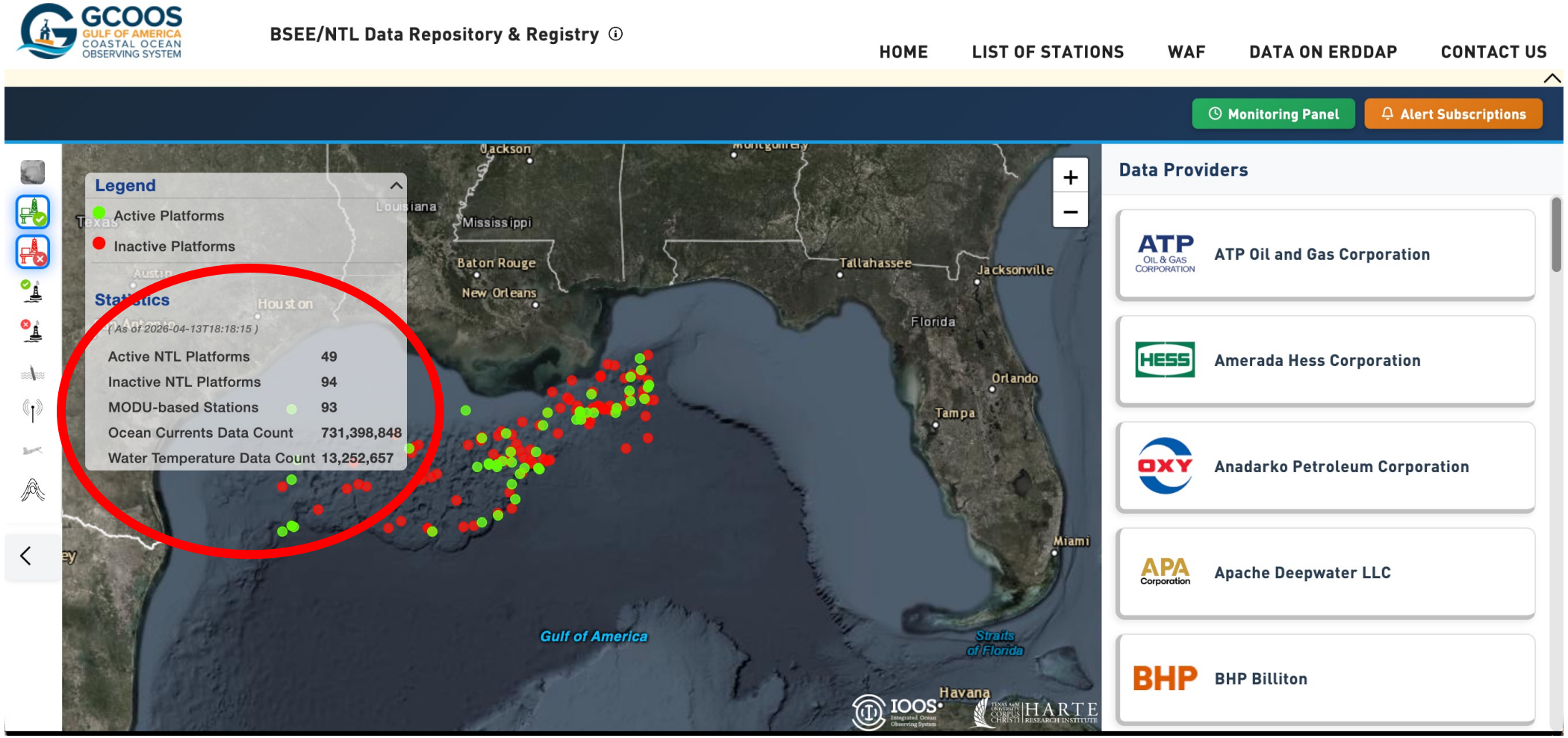
Notice to Lessees

- NTL 2018-G01 (Ocean Current Monitoring)

  “For MODU operations, continuously monitor and gather ocean current data on a real time basis from near the ocean surface (~30 meters (100 feet) to ~1,000 meters (3,280 feet)) using an appropriate current monitoring device (CMD). At least once every 12 hours, report the data from the CMD to the National Data Buoy Center (NDBC) Internet website”

- NBDC ➡️ GCOOS

GCOOS NTL Portal



- ntl.gcoos.org

Session 1

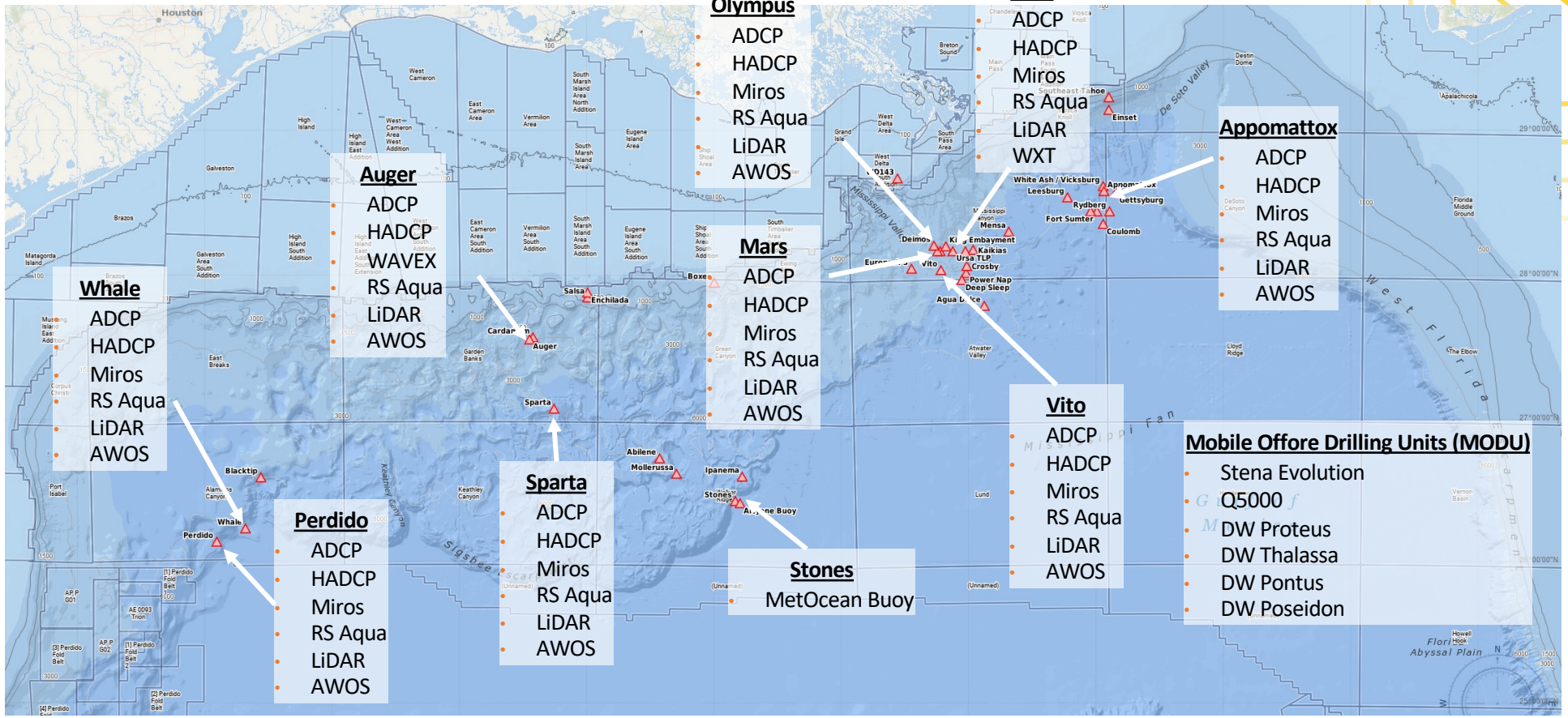
- Dr. Sergio Jaramillo, Shell
- Dr. Mike Yang, Chevron

Session 2

- Ben Williams, Fugro
- Keith Kurrus, RPS
- Dr. Rafael Ramos, Woods Hole Group

Dr. Sergio Jaramillo, Shell

Shell's Gulf Observing System



Instrumentation

Platform / Asset type	Instrument	Parameter measured	Sent to GCOOS
Fixed platforms (Appomattox, Perdido, Whale, Auger, Vito, Ursa, Olympus, Mars, Sparta)	ADCP	Currents (to ~1000 m)	✓
	HADCP	Near-surface currents (~10-40m)	✓
	MIROS	Directional waves	✗
	RS Aqua (airgap)	Omni-directional waves / draft	✗
	WAVEX (where installed)	Waves / surface current proxy	✗
	LiDAR	Wind profile	✗
	AWOS / WXT	Meteorology (wind, temp, pressure, etc.)	✗
Stones FPSO	MetOcean buoy (Aquadopp / Signature 55)	Currents (to ~1000 m)	✓
	MetOcean buoy	Waves, meteorology	✗
	MetOcean buoy (Bottom 75kHz ADCP)	Self-contained currents (~2500-3000 m)	✗
MODUs (Stena Evolution, Q5000, DW Proteus, DW Thalassa, DW Pontus, DW Poseidon)	**ADCP**	Currents (to ~1000m)	✓

Why we collect metocean data

- **Operational Support**
- Weather window analysis for offshore activities
- Real-time decision support for drilling, marine, and construction operations

- **Engineering and Design**
- Metocean design criteria for facilities and infrastructure
- Riser analysis and current-induced loading assessment
- Fatigue analysis using measured and long-term metocean data

- **Marine and Subsea Operations**
- Route planning for vessels and offshore campaigns
- Pipeline and seabed survey support

- **Safety and Emergency Response**
- Emergency response support (storms, drift, loss-of-station/containment events)
- Real-time conditions to support personnel and asset safety

- **Asset Integrity and Longevity**
- Life-extension studies and reassessment of existing facilities

- **Regulatory and Compliance**
- Governmental compliance (e.g., BSEE / NTL current-monitoring requirements)

Data Sharing

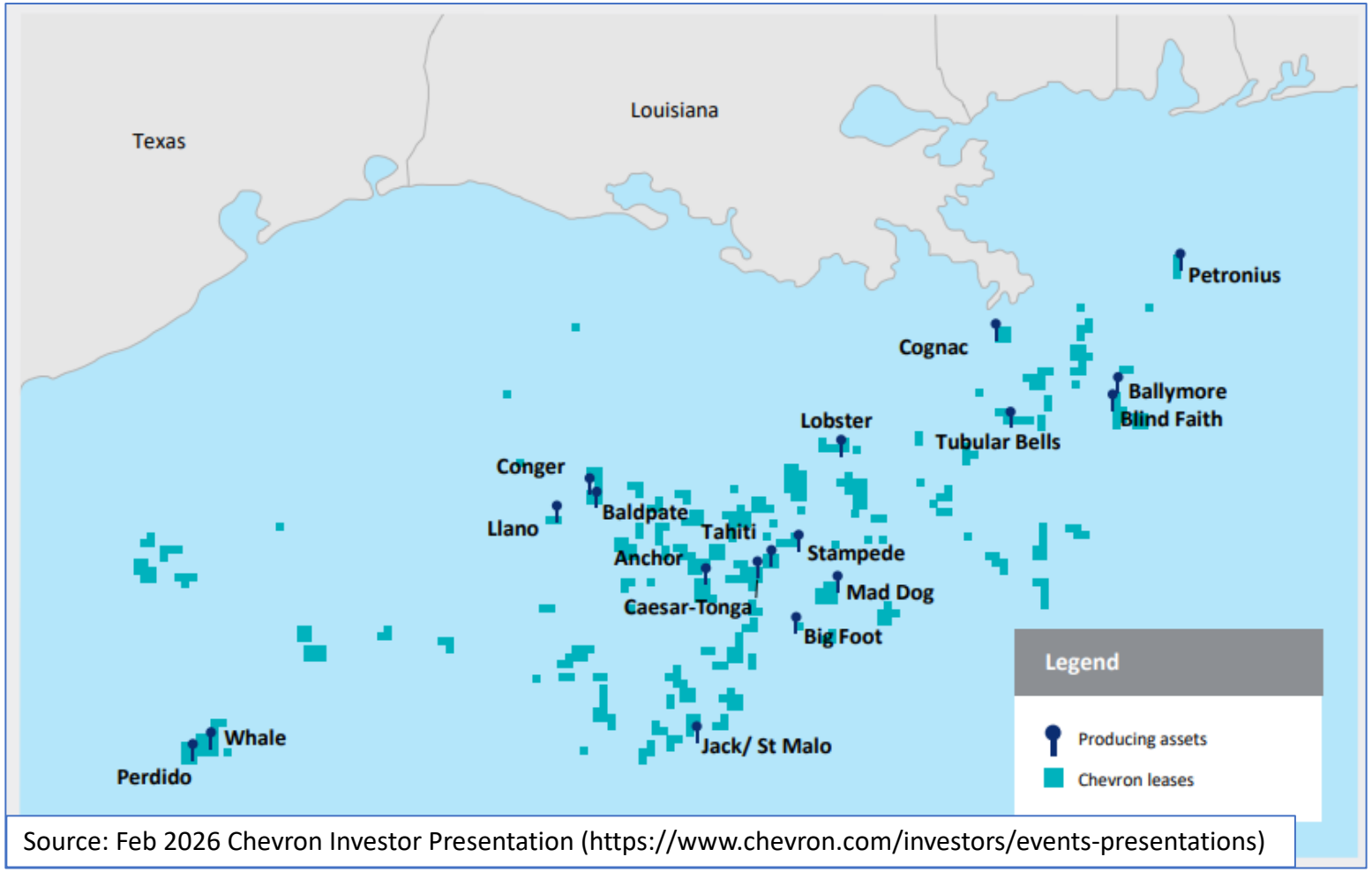
- **The primary value of NTL data sharing is risk reduction and improved decision quality, rather than direct cost savings.**

- **Enables informed decisions for high-cost, time-critical offshore activities, particularly where local measurements are unavailable:**
- Reduces uncertainty in offshore operations and design
- Improves confidence in weather windows and environmental limits
- Extends situational awareness beyond instrumented assets through regional data coverage
- Avoids re-work driven by ad-hoc, sparse, or inconsistent datasets
- Supports faster decision-making during time-critical operations
- Improves alignment across operators, regulators, and contractors

- **Practical impacts include:**
- Reduced schedule delays during offshore campaigns
- Fewer design iterations driven by data gaps or inconsistent spatial coverage
- Earlier identification of elevated current or weather risk away from existing assets
- Increased confidence when operating or planning in data-sparse areas
- Smoother regulatory engagement using trusted, shared regional datasets

Dr. Mike Yang, Chevron

Chevron Interest Areas in GOA



Source: Feb 2026 Chevron Investor Presentation (https://www.chevron.com/investors/events-presentations)

Instrumentation

- ADCPs: deployed on all permanent platforms and MODUs to measure current profiles – shared with GCOOS per BSEE NTL
- Surface Current Imaging System (SCINS): developed under DeepStar; pilot unit deployed on Big Foot to measure surface current velocities since 2019 – shared with GCOOS per BSEE NTL
- Drifter Buoy Data, Current Survey Vessel Data, and ROCIS Aircraft Data: occasionally shared with GCOOS for archiving post-project in support of initiatives like UGOS

Data Importance

- Loop Current / Eddy monitoring and data collection:
  - Real-time monitoring supports current forecasting for exploration and drilling activities, ongoing offshore operations / installation campaigns
  - Collected data used to support project design / operating criteria development
- Integration with Numerical Modeling:
  - Provides observational data to validate and improve hindcast and forecast models

Data Sharing

- The GCOOS data catalogue is essential to Chevron and industry for:
- Supporting forecasts aimed at reducing Loop / Eddy Current–related downtime
- Supporting forecasts aimed at reducing operational risks and improving safety – avoid potential costly incidents
- Supporting development of robust design / operating criteria – avoid later upward revisions of criteria / potential re-assessments and mitigations associated with such

Discussion