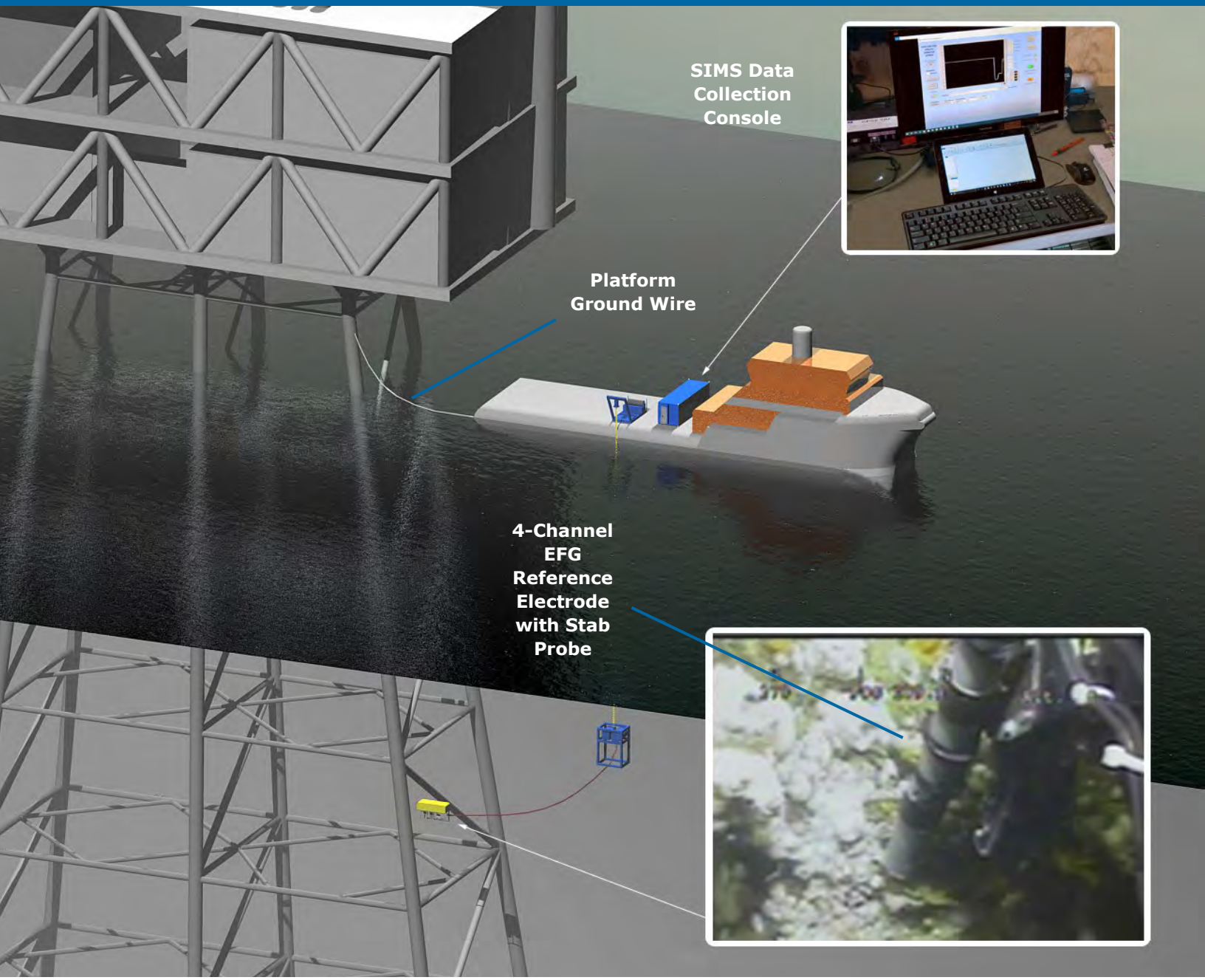
SUBSEA CATHODIC PROTECTION SURVEYS HALF THE COST AND 10x THE DATA

MPM'S PROVEN SUBSEA INSPECTION MANAGEMENT SYSTEM



What is SIMS? — The MPM Subsea Inspection Management System (SIMS) is our proprietary PC-based CP data collection system which can be utilized either with ROVs, divers, or in our towed fish configuration. All data is collected and stored on the SIMS computer while CP values and ROV coordinates are automatically overlaid on the ROV or diver video in real time.

MPM®
MARINE PROJECT MANAGEMENT, INC.

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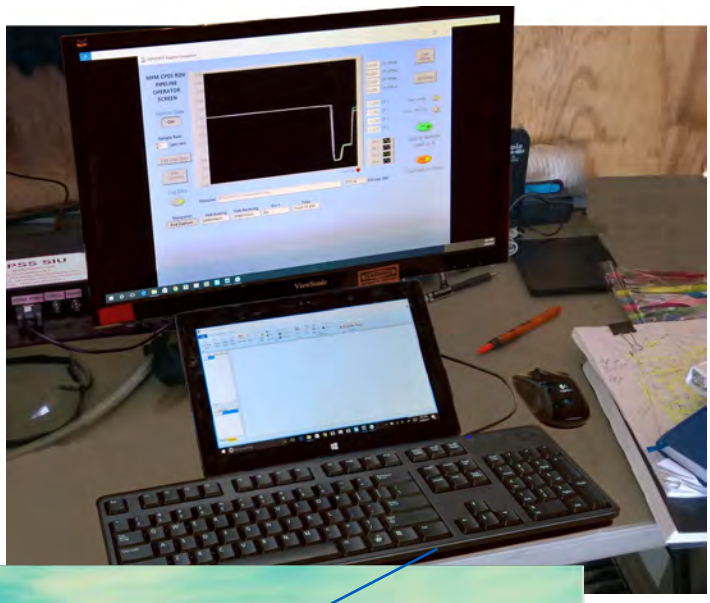
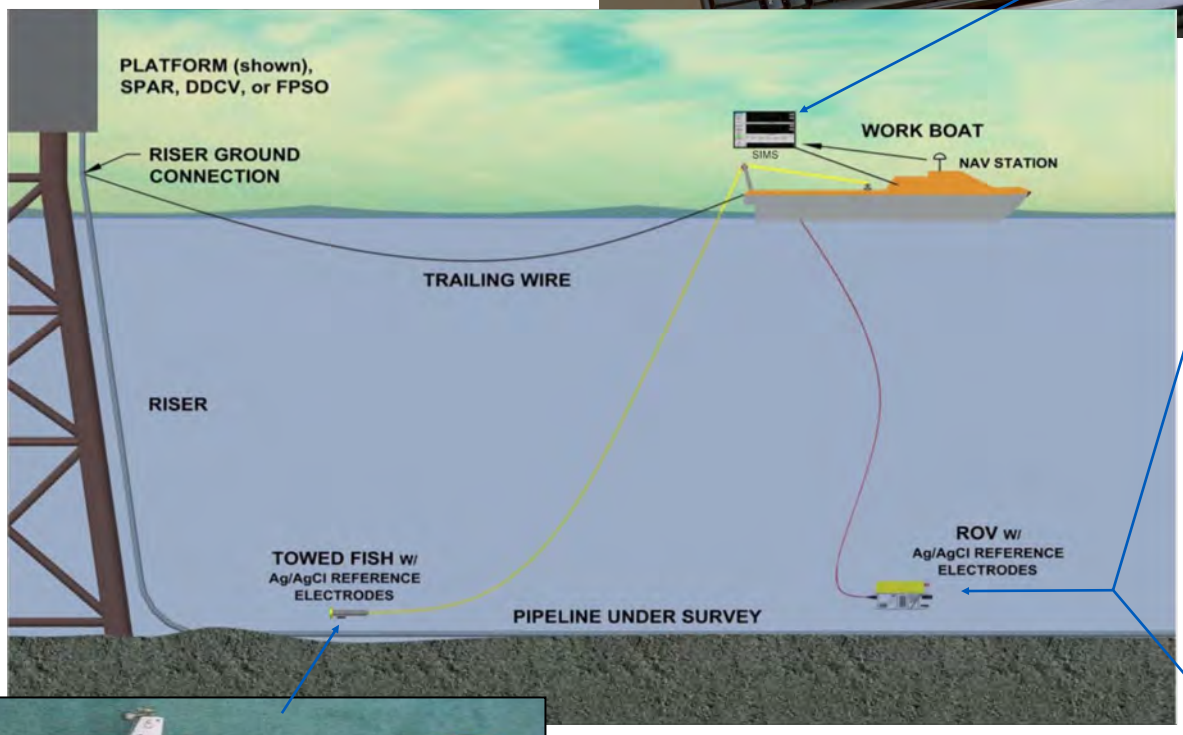
SIMS CONFIGURATIONS

- √ Our proprietary PC based software can collect potential data at up to 25 samples per second and import navigation positions in real time.
- √ In the ROV or diver configuration, the CP and navigation data can be overlaid on ROV or diver video in real time.
- √ SIMS is equipped to perform EFG surveys in ROV pipeline or platform inspection modes.





The tow fish configuration utilizes a Side Scan Sonar body retrofitted with MPM electronics, and two Ag/AgCl reference electrodes and is applicable to 550fsw / 167m.

MPM SIMS electronics bottle (working depth 6900fsw/2100m)and stab probe assembly comprised of ground stab and two dual Ag/AgCl reference electrodes configured for EFG surveys for mounting on an ROV.

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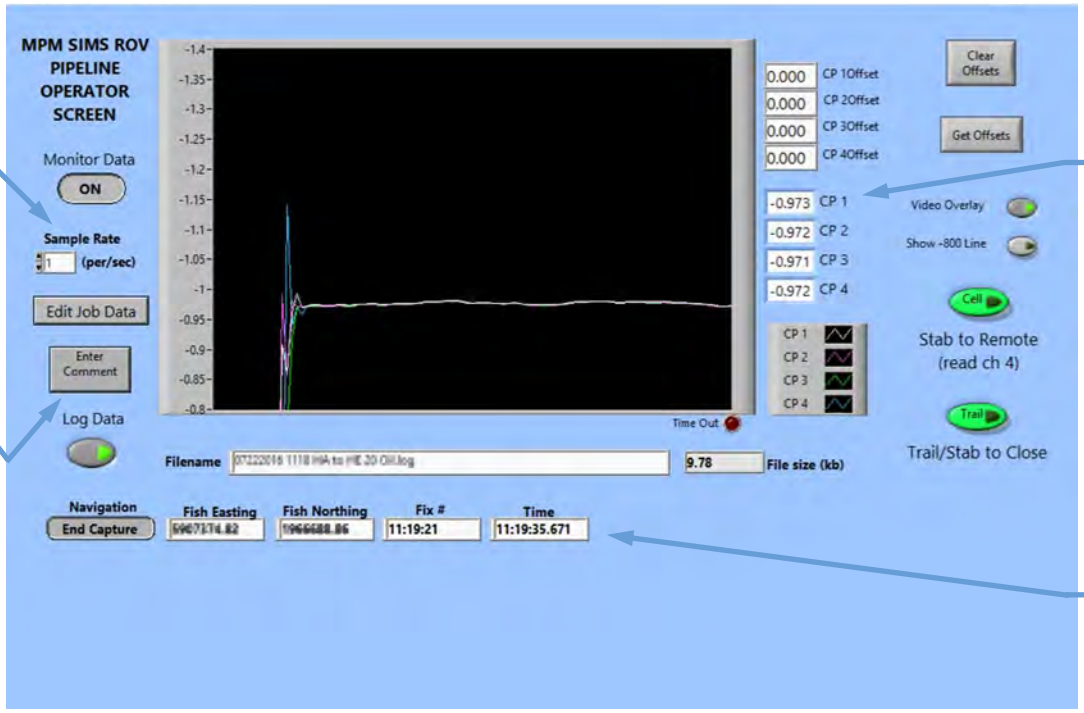
SIMS OPERATOR'S SCREEN
ROV or Towed Fish: Pipeline Surveys



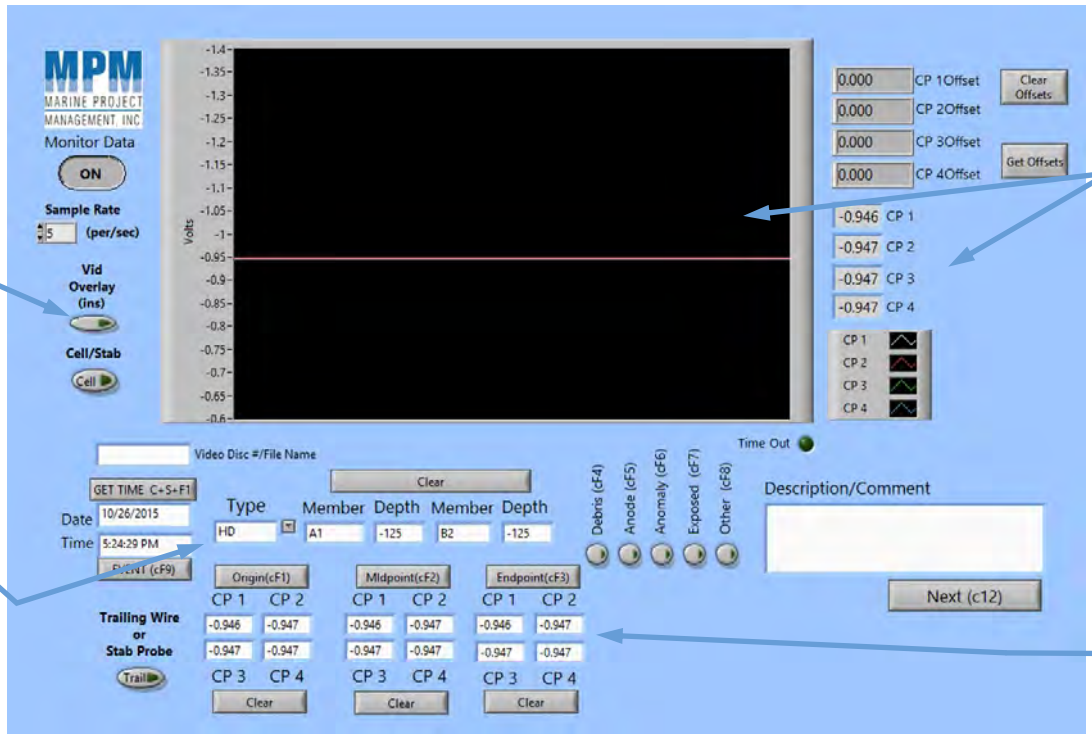
Selectable sample rate

Comments are added to log based on exact time when button is pushed

Evaluates multiple cells: suitable for EFG surveys

Interface and log 3rd party navigation

SIMS OPERATOR'S SCREEN
ROV: Platform or Structural Surveys



Overlay data onto ROV video

(SDI, HDMI, Component, Composite)

Pre-defined survey types ensure data continuity

Real-time data display

Evaluates multiple cells: suitable for EFG surveys

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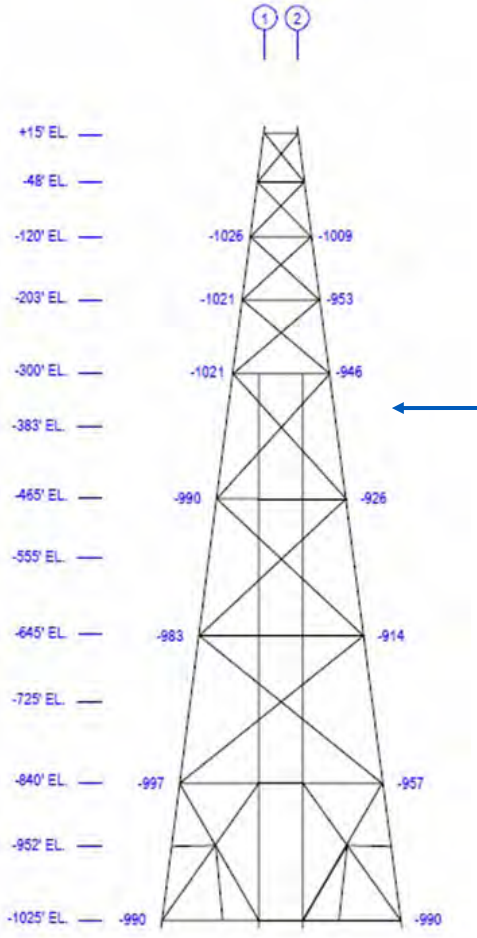
UWI/UWILD AT A LOWER COST

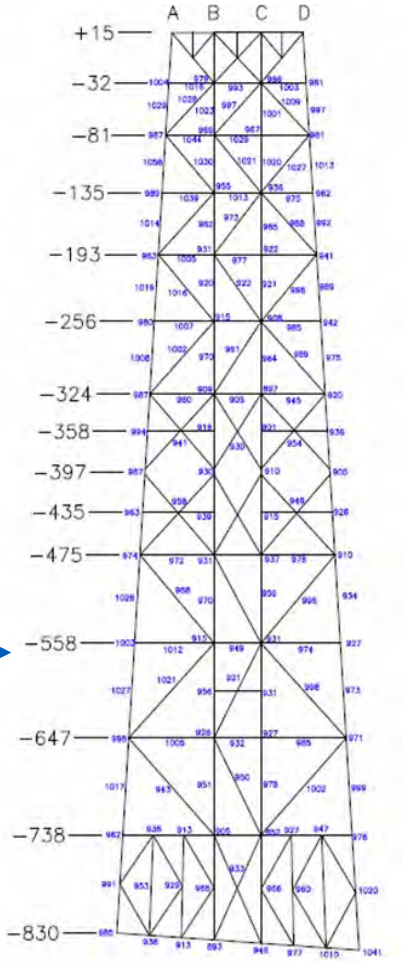
How does SIMS cost less? — When conducting a jacket survey utilizing the stab/ground technique, the ROV must stop the general fly-by inspection every time a CP reading is taken. This results in spread delay approaching 10-minutes per stab location. Assuming a typical spread cost of ~$60k per day, the resulting cost can be greater than $400 per CP reading . . . SIMS data is collected without interruption of the general fly-by inspection work by utilizing a surface ground wire to the structure. The CP data is collected electronically and is overlaid on the ROV video in real time.



Typical CP Data (Single Face)

Stab Probe Survey:
Primary Nodes Only
14 CP readings

SIMS Survey:
All Major Members,
Ends and Midpoints
157 CP readings



SIMS ROV enhancements include two CP survey reference electrode pairs designed to collect proximity and electric field gradient (EFG) data using techniques including stab, remote reference, or trailing wire during the same operation. The software and hardware are configured to allow performance of each technique *without surfacing the ROV for re-configuration. The redundant electrodes provide the additional benefit of real time accuracy testing and virtually eliminates the need to recover the ROV for failed electrode change-out.*

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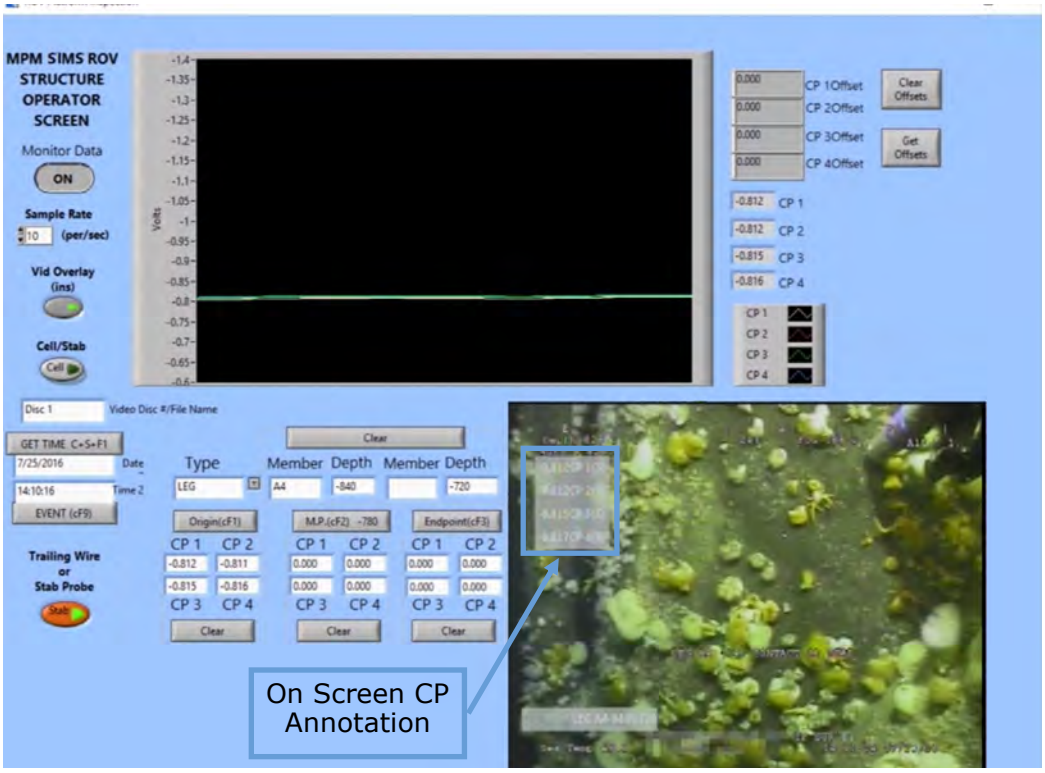
ADVANTAGES OF USING MPM: LEVEL 2-4 API RP 2SIM UWI's INTEGRITY AT A LOWER COST

√ **Qualified Personnel** - MPM project planning and onsite personnel are not simply "data recorders". Our personnel are extremely familiar with facility construction, repair, and inspection operations.

√ **Comprehensive** - Rather than using a canned database, MPM tailors its inspection and reporting system to match the individual facility and associated scope of work.

√ **Inspection Optimization** - Our pre-project set up can and should include review of previous UWI data vs the proposed scope of work. Review of accessibility/interferences, flooding plan & previously identified flooded members vs proposed FMD, repairs, etc. ensures that proposed inspection locations will deliver valuable data without wasted spread time or wasted onshore personnel resources.

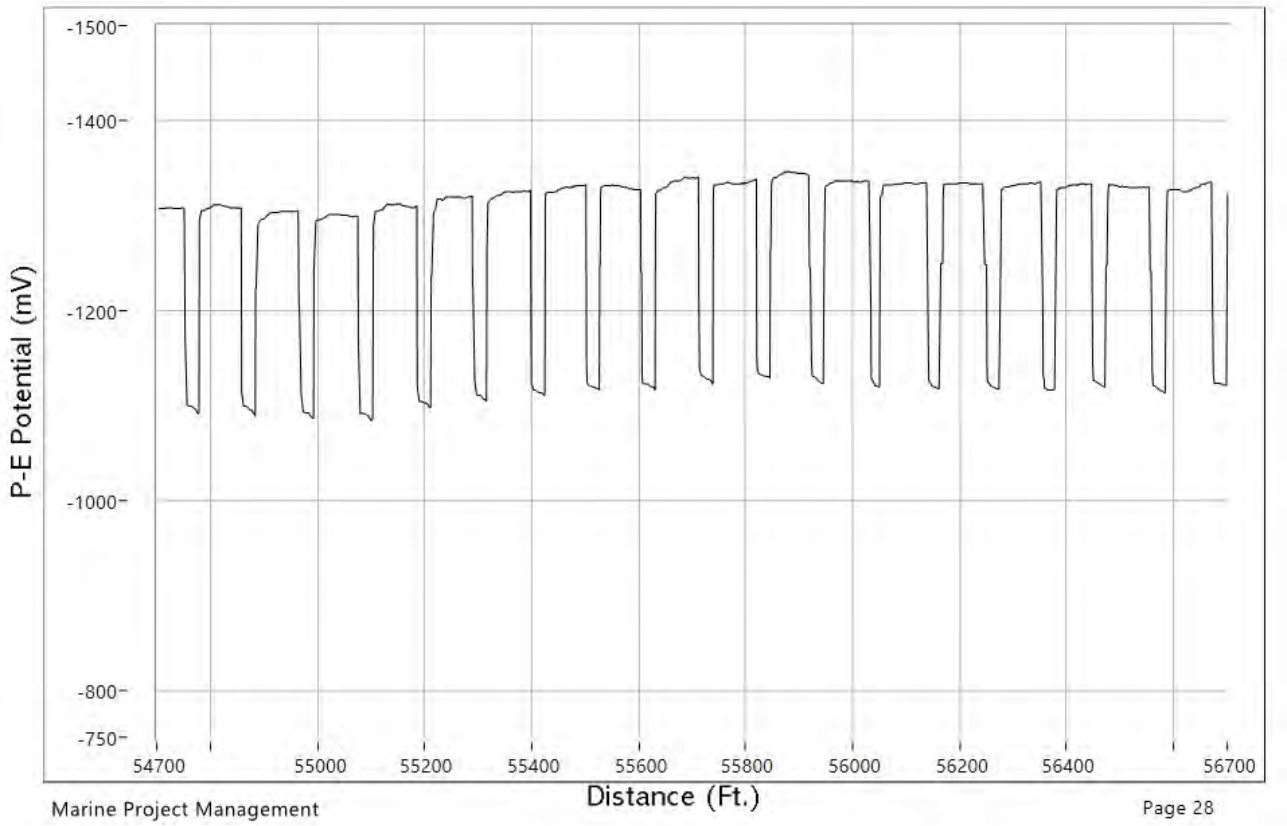
√ **Cathodic Protection Data** - Data is collected throughout the flyby inspection without spread delay and is automatically annotated on the video recording. Potentials are collected at each end (node) and the middle of each member inspected which allows assessment of the cathodic protection system's remaining life.



√ **Results** - Utilizing our system and our experienced personnel will result in cost effective field operations, and accurate, detailed reporting.

PIPELINE CLOSE INTERVAL CP SURVEYS
SIMS TOWED FISH
PIPELINE INTEGRITY AT A LOWER COST

MPM'S SIMS is used in a towed-fish configuration to perform close interval pipeline surveys at speeds up to 5-knots utilizing the trialing wire technique. CP sample rates are typically set at 5 samples per second, which at 5-knots provides cathodic protection values every 1.6-ft along the pipeline. SIMS simultaneously records CP values from 2 reference electrodes along with navigation coordinates, depth, date, time, and time stamped MPM operator comments.



- √ Towed-fish survey speed is typically 5-times faster than an ROV survey.
- √ The towed-fish system can be deployed with a much smaller and more economical support spread than required for ROV operations.
- √ Inland/Shallow surveys can be conducted from an inflatable or air boat with our weather resistant system.

SIMS FEATURES

- √ SIMS can log/record 25-samples per second; however, 5-samples per second are preferable and typically adequate.
- √ SIMS logs potentials from up to four (4) reference electrodes with ±5 mV accuracy (two proximity / stab, and two EFG), and is capable of constant and or event based data logging.
- √ All data is time stamped aiding in post processing and reporting.
- √ Comments (disc number, physical location, anode, riser, debris, start/end span, etc.) are recorded on an event basis, and are automatically logged to the time the comment entry feature is activated
- √ In pipeline mode (ROV, diver, or towed fish) SIMS receives and logs x-y-z coordinates as applicable from third party navigation systems via serial string.
- √ In ROV or diver mode, CP data can be automatically overlaid on the inspection video in real time. We are capable of placing the CP overlay anywhere on the video screen, thereby avoiding interference with onscreen pilot aids. SIMS video overlay is compatible with all current video formats including PAL, NTSC video composite, and HD via HDMI.

SIMS REQUIREMENTS WITH MPM AS PRIME CONTRACTOR

- √ Marine Project Management, Inc. has decades of successful marine construction, inspection, and cathodic protection project experience and is uniquely qualified to serve as prime contractor for underwater and topside facility inspections and CP retrofits. MPM provides added value by ensuring coordination and functional interfaces between all support services and facility personnel from planning through implementation and reporting. As prime contractor, MPM requires: a scope of work; facility schedule; facility drawings (preferably updated as-built); an anomaly list and previous reports if available; logistics and operations contact data; and a client project advocate.

SIMS REQUIREMENTS AS A SUPPORT SERVICE

- √ **Towed Fish Survey** - The operator or prime contractor will need to provide the scope of work, navigation pre-plots, DGPS surface navigation equipment and personnel, serial navigation coordinate output in NEMA183 format, a suitable survey vessel and crew, along with logistics and mobilization support.
- √ **ROV Pipeline Survey** - The operator or prime contractor will need to provide all items listed in the Towed Fish requirements along with subsurface navigation, ROV spread, and ROV access for the SIMS system. The SIMS ROV interface requires a continuous isolated ground along with RS 485 from the ROV van to an accessible external connector on the ROV, an accessible external power connector on the ROV supplying either 18-75VDC at 24W or 100-115VAC 50/60-Hz at 700-mA, payload and space capacity of 6.8-lbs x 8-in D x 17-in L, and live video feed between the system and the topside recorders. Video overlay standards including PAL, NTSC video composite, or HD via HDMI are available via SIMS to overlay potentials and ROV location coordinates provided we have access to a video connection in the control van.
- √ **ROV Structural Survey** - The operator or prime contractor will need to provide all items listed above including the navigation spread if required.

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MPM Experience

MPM has successfully completed inspection of over 5,000 miles of underwater pipeline in the towed fish configuration, and over 3,000 miles of pipeline in the ROV configuration, along with several hundred in-service facility surveys.

In addition to performing cathodic protection surveys, MPM manages marine construction projects including cathodic protection retrofits utilizing MPM's GEN IV ICCP Systems.

MPM HSEQ

MPM has a **100% accident free** safety record, and has extensive experience in successfully planning and implementing projects in the environmentally sensitive waters of Alaska, California, and the Gulf of Mexico.

MPM Safety Statistics

MPM Founded: 1996
Years of Business: 21 years
Total Hours Worked: Over 1,913,920 hours
Accidents or Incidents: 0

MPM Recognition

MPM has received an audited "A" contractor rating from Chevron and Freeport, and a "Project Excellence" Award from Plains Exploration and Production (PXP).

Method

MPM places the highest priority on completing all operations safely. To ensure that all operations are completed without accident or incident, we have developed and implemented an active behavioral based health, safety, and environmental (HSE) program.

Quality Policy

As a Project Management and Cathodic Protection Services Company we are committed to satisfying our clients by providing them with quality products and services. Our quality objectives are met by continuous employment of internal and external system improvement. Activities are carefully planned, managed, executed and controlled to exceed minimum contractual requirements. We learn from our experiences and from each other. We document these lessons and use them to continuously improve our systems.

ISO 9001:2015

The Marine Project Management, Inc. Quality Management System is registered as compliant with the of International Standard Organization ISO 9001:2015. To meet this standard, we have adopted a process approach to develop, implement, and improve the effectiveness of our Quality Management System to consistently provide services that meet our Mission Statement.

WCS ISO 9001 REGISTERED UKAS MANAGEMENT SYSTEMS 0060
CERTIFICATE NO. 7625

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