You are warmly and most cordially invited: 2015 M-OSRP Annual Technical Review, June 4-5, at the UH Hilton----please RSVP by May 26....Thanks, Art

Dear M-OSRP Sponsors and Special Invited Guests,

I hope this note finds you very well.

All receiving this note (and those you might designate) are most cordially invited to attend the 2015 M-OSRP Technical review.

Attached please find the ***updated*** agenda of our Technical Review on June 4, 5, 2015 at the UH Hilton.

Please be kind enough to let us know by the end of the day Tuesday, May 26 the names of those in your company who plan to attend. Thank you.

The two day schedule is separated as follows: on the first day are Green's theorem methods for: (1) wave separation and (2) wave field prediction. This year, the former, **for wave field separation**, provides an advance for on-shore preprocessing for predicting and **separating the reference wave (including ground roll) from reflection data**, without damaging the reflection data.

The Green's theorem for **wave field prediction** provides **a fundamentally new approach and method for RTM**, with superior structural imaging and amplitude analysis capability compared to the current leading-edge methods for RTM employed in industry today. This new method for imaging in a volume with two way propagating waves, **also provides a definitive and unequivocal conclusion to the role of primaries and multiples in migration and inversion**.

On the second day of our technical review, we describe the outstanding open issues and pressing challenges in offshore and on-shore **multiple removal** and our strategy, progress and plans- and our schedule of delivery of the next generation of required higher effectiveness and capability.
We also describe progress on the **inverse scattering series depth imaging** and the plan to add a documented code to the seismic imaging toolbox this year (2015). **The direct inversion for parameter estimation** from the inverse scattering series is reviewed, and a first clear and useful comparison with iterative linear inversion is described and analyzed. Our project on 4D applications will be a central part of our plans going forward.

The **main focus for M-OSRP** will be to **deliver the next level of multiple removal capability**, internal multiple elimination, and spurious event removal, for circumstances where: (1) there is a plethora of multiple generators, and/or (2) primaries and multiples are proximal and interfering, and **without damaging primaries**. This next generation of required effectiveness is designed specifically for the most complex and daunting off-shore and on-shore plays. That goal will be reached, and that capability will be delivered, **directly and without needing or requiring any subsurface information.**

M-OSRP is uniquely qualified, by its history and experience, to deliver that next level of effectiveness - and **thereby to improve the drilling success rate in exploration, appraisal and development and to**

open E&P opportunities and plays that are currently precluded as off-limits or unreasonable high risks in the most difficult and forbidding off-shore and on-shore arenas.

We look forward to greeting you at our technical review June 4, 5 at the UH Hilton.

Best regards,
Art

Executive summary video: the M-OSRP delivered added value and documented E&P impact, March 9, 2015

http://mosrp.uh.edu/news/mar-9-exec-summary-video

Key –note address , **Abu Dhabi,** March 31st , 2015 presented at the SEG **FWI,** Workshop Filling the gaps in **Abu-Dhabi**

http://mosrp.uh.edu/news/mar-30-apr-1-fwi-workshop-abu-dhabi

Key-note address , **Kuwait Oil Company** SEG Workshop , December 3, 2014, "**Multiples: signal or noise**?"

http://mosrp.uh.edu/news/a-b-weglein-nov-2014-m-osrp-executive-summary-and-2-video-for-kuwait-oil-company-seg-workshop-december-1-3-2014

Dear Sponsors and stakeholders;

I hope this note finds you very well. Below please find a link to the **SEG Abstracts submitted by M-OSRP**, and a list of authors and titles arranged by general seismic processing topic and objective.
Below the Abstracts, please find several **videos** from recent **KOC** and **Abu Dhabi** SEG workshop key note addresses and an executive summary,
that I thought might be of interest .
Finally, you are very warmly and most cordially invited to attend the 2015 M-OSRP Annual Technical Review and Meeting onJune 4, 5 at the UH Hilton.
Best regards,
Art

SEG ABSTRACTS

http://mosrp.uh.edu/news/seg-abstracts-submitted-from-m-osrp

On-shore preprocessing to remove ground role without damaging reflection data

Jing Wu and Arthur B. Weglein, “Preprocessing in displacement space for on-shore seismic processing: removing ground roll and ghosts without damaging the reflection data”

Jing Wu and Arthur B. Weglein, “Preprocessing in the PS space for on-shore seismic processing: removing ground roll and ghosts without damaging the reflection data”

Algorithms to enhance the effectiveness of free surface multiple elimination and internal multiple attenuation

Jinlong Yang and Arthur B. Weglein, “The impact of accommodating the source radiation pattern on the inverse scattering series free-surface multiple elimination algorithm”

Jinlong Yang and Arthur B. Weglein, “Accommodating the source wavelet and radiation pattern in the internal multiple attenuation algorithm: Theory and initial example that demonstrates impact”

Xinglu Lin and Arthur B. Weglein, “The significance of incorporating a 3-D point source in the inverse scattering series internal multiple attenuator for a 1-D subsurface”

Beyond internal multiple attenuation: algorithms for eliminating internal multiples and spurious events, providing added value when there are numerous generators and interfering and proximal primaries and multiples

Chao Ma and Arthur B. Weglein, “A new Inverse Scattering Series (ISS) internal-multiple-attenuation algorithm that predicts the accurate time and approximate amplitude of the first-order internal multiples and addresses spurious events: Analysis and Tests in 2D”

Yanglei Zou and Arthur B. Weglein, “An internal-multiple elimination algorithm for all first-order internal multiples for a 1D earth”

Imaging: (1) direct depth imaging without a velocity model, the Marmousi model tests, and (2) a definitive result on comparing two leading migration imaging conditions, (3) use of multiples to enhance imaging; providing an approximate image of an unrecorded primary

Fang Liu and Arthur B. Weglein, “Direct depth imaging without a velocity model: update and Marmousi model tests”

Yanglei Zou and Arthur B. Weglein, “A 1D pre-stack example examining the differences in two important imaging conditions: the space-time coincidence of up and down waves and the predicted coincident source and receiver experiment at depth at time zero”

Arthur B. Weglein, “Multiples can be useful (at times) to enhance imaging, by providing an approximate image of an unrecorded primary, but it’s always primaries that are migrated or imaged”

Chao Ma and Arthur B. Weglein, “A clear example of using multiples to enhance and improve imaging”

Amplitude analysis : Direct inverse solutions and a direct comparison with iterative linear inverse (behind current AVO/FWI)

Arthur B. Weglein, “A direct inverse solution for AVO/FWI parameter estimation objectives”

Jinlong Yang and Arthur B. Weglein, “A first comparison of the inverse scattering series non-linear inversion and the iterative linear inversion for parameter estimation”

Multiples: the effective removal of all multiples remains an open issue and challenge- a strategy, plan and steps towards the next and necessary level of effectiveness and capability

Arthur B. Weglein, “Multiple removal: open issues, pressing challenges and recent progress towards providing the next and higher level of required capability”

VIDEOS (Executive summary and key-note addresses)

Executive summary video: the M-OSRP delivered added value and documented E&P impact

http://mosrp.uh.edu/news/mar-9-exec-summary-video

Key –note address , **Abu Dhabi,** March 31st , 2015 presented at the SEG **FWI,** Workshop Filling the gaps in **Abu-Dhabi**

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http://mosrp.uh.edu/news/a-b-weglein-nov-2014-m-osrp-executive-summary-and-2-video-for-kuwait-oil-company-seg-workshop-december-1-3-2014

Invited presentation 2014 Recent Advances and the Road Special Session

http://mosrp.uh.edu/events/event-news/weglein-multiples-signal-or-noise-submitted-paper-and-2014-seg-rara-video

Again, we look forward to seeing you at our 2015 Annual Meeting on June 4-5 at the UH Hilton.
Best regards,
Art