



Shallow Gas Production Technology Forum May 12, 2004

Total Evaluations 58

1. a) Did this forum meet your objectives?

88% responded yes

14% responded no

b) If no, which objectives were not met?

- Husky needed more details, stats, reasons low production, life, fluid, APA's could be shortened, Vaportech's was excellent, would have liked one other service company present their research products, DHV's was very good, Komex less time, AGAT was waste of time. zed.i efficient presentation, Photon informative could improve presentation and cut length, Centrilift was ok but shorten presentation
- Not specific enough regarding new technologies or projects being done with de-watering/producing shallow gas wells
- Advanced (or other companies like them) could explain all water left technology available and the pros and cons for each
- Getting liquids and fumes from shallow gas wells pumping, soap injection, surfactant injection solar power wind power
- Solar power presentation and downhole camera were very informative, was hoping for more technologies for de-watering shallow gas wells
- No real solutions. Felt more like a bunch of sales pitches. (i.e. rates on some examples were too high cost of equipment to high etc... and equipment not proven for several performance intervals (~ 300m))
- Would like to see presentations on cutting edge technology for dealing with shallow gas wells
- Swabbing vs. tubing vs. plunger lifts
- Economics on wells less than $2 \times 10^3 \text{m}^3$
- Some un-applicable info, was looking for more info in regards to lifting fluids in small flow well bores (4 ½ " casing) older wells with mud issues

2. What unmet needs do you have?

Need

- More deliquification techniques should be discussed
- More suppliers
- Fracture stimulation of tight unconsolidated shallow gas sands
- Low cost technology for measurement – Photon and Zed.i
- Low cost technology for de-watering
- System ramifications after water left i.e. pigging etc...
- Southern Alberta Shallow Gas Producer – water handling/disposal specialized swab innovations
- Lifting of liquids evaluation of fracture effectiveness disposal of liquids, treating liquids to be land spread
- From service company perspective we require more producer participation with producer development
- Shallow Gas: lifting hydrocarbons a.w.a. H₂O
- Several
- Production methods below coil tubing critical rates of 5-6 e³m³/day
- Discussion on frac types, sizes and problems with sand coming back into well bore and surface equipment
- Liquid removal technology (low cost) for wells that also produce sand
- “cheap” de-watering technique
- Improving shallow gas productivity water completion effectiveness
- More info on wells produced to vacuum and surface
- Agree with the idea of a producers workshop to discuss shallow gas wells production and de-watering problems
- Producers offering case histories and what techniques were used!
- More info or producers problems/needs
- Lower cost compression proven case plungers
- An economical way of removing water and mud from shallow wells. These are marginal wells, need to keep costs down. Need surface equipment to handle water
- More of an understanding of exactly what producers want so we can review feasibility
- Tracking technology (swab data combined with well testing)
- New technology re: dewatering/producing wells
- Water disposal
- Getting liquids and fines on/or shallow gas wells
- De-watering shallow gas wells 0.25 bbl/d – 10 bbl/d
- Cheap compression (<\$1000/hp)

Corresponding Technology

- Vortex tools (Premier)
- Downhole gas jet pumps (Kodiak)
- Design consideration; which options are best, which drop off the table
- Several
- Coil tubing plungers?
- Intermittent with coil?
- Completions (perf/frac)
- Pump jack motors are cheap why can't compression come down in price
- Downhole, evaporation, etc...
- Artificial lift, chemical injection, tubing optimizations, well compression

3. What topics or presentations do you suggest be covered at future forums and/or by whom?

Topic/Presentation	Leader/Speaker
GHG Completions	
Downhole gas / water disposal systems	
Surface water disposal innovations	
Low cost gas/water lift systems & reservoir water shut off	Aqueolic Canada
Formation water treatment vs. disposal. Can we make formation H ₂ O into something useful	
Frequent swabbing of shallow gas wells	Clover Resources
Importance of hydrocarbon measurement	Measurement lead in E&P companies
Optical flow gas meter casing pumps	Photon
Shallow gas well fracture stimulation techniques without frac sand influx back into wellbore after cleanup period	
Pipeline technologies liquid stripping	
Lifting fluids	
For shallow gas I don't see any gaps	
Deliquification forum	Industry sharing
Operator session – what works and what doesn't in shallow gas	
Water handling as surface/disposal. How to handle water in pipelines or tanks	
Vortex tools	Premier Productions
Downhole has jet pumps	Kodiak
Fracture stimulation	BJ, Sanjel, Trican
Solar power de-watering	Komex
Testing regulations	EUB
Equipment for water clean out. Cast tubing swab innovations	
Shallow Gas: group metering technology and regulations other cost reduction strategies for shallow gas development	AEUB and a producer like Apache who uses the technology
EGR include re-press	ARC, Beauvert, Paramount, Devon
Intermittent and continuous gas flow by coil or plunger lift	
Coil tubing plungers	Midfield Supply
Completions with or without tubing at the initial completion	
More dewatering, more measurement (inexpensive) wellbore/formation integrity – mid control	
Completions in tight gas	
Top drive pumps PACL Ferguson Beaugrad plunger	
Foamers for water lift damage mechanisms i.e. “skin” and remediation techniques	Baker Petrolite / Sunder in shallow gas wells /
Foamers Hydrates	Baker Petrolite
Free flowing TB plungers – pacemaker, dynaflour	PPS – Premier Production, Advanced NPD
Environmental solutions for CBM production	
Produced water disposal alternatives	
Unconventional / new forms of artificial lift	

4. How do you think future sessions could be improved?

- Make it less of a sales package more technical
- Session was fine
- Faster pace / shorter day. The discussions and the breaks could be compressed to finish earlier
- My compliments to the organizers. Well done!
- Great job by Eryn in handling paperwork etc. and phone reference list for those who attended was an excellent idea, and much appreciated
- More examples of functional applications and problems
- All presentations should be applicable to the topic of the forum
- Bigger room
- Possibly request participation questions prior to forum
- If agenda finalized earlier with a brief abstract of subject matter, might assist in preparing for question and answer
- Make sure all info relates to shallow gas
- Get some more information from the producers – workshop for deliquification
- More case histories
- Perhaps have tables brainstorm individually and compile ideas – usually best ideas develop through conversation
- Perhaps more technical detail on fewer subjects per session
- Bigger room – more open discussion
- Eliminate EUB general comments. Focus on technology not the desire for it.
- The session itself went well. Some topics did not really apply to producing shallow gas wells

5. Please rate (√) the following:

	Very Poor	Poor	Satisfactory	Good	Very Good
Forum Timing		2%	14%	55%	27%
Presentation Content		3%	36%	45%	17%
Presentation Topics		2%	40%	36%	21%
Forum Speakers			34%	50%	14%

6. Are you interested in planning the next forum?

19 % responded yes
74 % responded no

7. Are you interested in partners/sponsorship opportunities for future forums?

21 % responded yes
62 % responded no

8. Are you interested in presenting at a future forum or conference?

19 % responded yes
69 % responded no

9. General comments/suggestions:

- Very good variety of topics and discussion
- Valuable learning tool for a young engineer in the field to familiarize with new technology
- Centrilift presentation was not really geared towards shallow gas, but was interesting
- If we are successful in RFP 2004-01, would want to present on status
- Possibly can present on a dewatering project we recently did, if we get client to release info
- Hyatt is an excellent venue to hold these forums
- Possible presentation
- Definitely more interested in producer workshops
- The networking time is a great idea
- Interesting presentation content. This is a useful tool in understanding the market and potential solutions
- Very informative. Good technology on measurement. Thanks
- I agree with the meeting of producers
- Very professional!
- Your efforts in these seminars is very much appreciated
- More forums on this topic
- Some speakers to too much into details and can get quite dry especially after lunch. I think it would be beneficial for presenters just to give general idea of their technology but if audience wants to know details, they can do that during the Q&A session
- Very informative on new and upcoming technology
- Excellent day – excellent chair person – well scheduled
- Venue to accommodate closer participant seating to presenters (i.e. wider room)
- The conference was a great idea. Anyway to improve water handling or cut capital costs are good
- Excellent forum – most topics very pertinent. I thought the APA presentation was a good one to start with – set up many of the other topics
- For brainstorming would it make sense to “break-out” for 30 minutes and check back with an idea from each group?
- I may have a topic depending on outcome of current project and results of the door prize draw today
- Interesting to hear opinions of operators. Perhaps an open mike for industry to describe challenges so we can continue to provide solutions would be good
- Thanks, enjoyed the forum. I understand there is some form of “inductive style” measurement available. Would be interesting to see demo
- Presentation of the need for producer efforts financially was very important. More follow up with who those producers might be and what they are willing to trial is needed. Almost a separate meeting on the topic should be facilitated. Question: do you have enough executive participation to drive the message for appropriate response to those that heard the message today, will they send that message back to their bosses, boss etc...
- Expecting more technical info not vagueness
- Centrilift presentation / technology seemed to be geared to applications other than shallow gas
- Meeting room is long and narrow. A wider room would be better, and round tables are not the best option for a full day of presentations
- At both PTAC forums I have attended, there have been problems with processing my on-line registration. This time I had a registration confirmation, but I was still not registered. These problems need to be fixed
- Pace could be quicker
- Very useful and informative. Please keep me posted
- Good selection of topical subject
- Feel this forum serves as an excellent opportunity for service and supply companies to present new technology items to the industry / operating companies. Last presentation on “Recirculation Systems” did not really seem to fit in with “Shallow Gas Production” Time filler? Min 5” casing; high water volumes
- Interested in producer case histories workshop
- My expectation was that technologies, projects, ideas would be presented that were implemented / soon to be implemented. I felt there wasn't much new ideas that were presented. Some of the presentations were not applicable to shallow gas
- Cost is a large concern of producers for shallow gas production. Presenters should be giving a few examples outlining costs of their new products
- Good overall forum
- Note suggested future topics in (3)
- As a lawyer / geologist / patent agenda, new to Alberta, this was a good way to become familiar with PTAC, Shallow Gas Issues and participants, and technological developments. Thanks very much!
- Informative
- Interesting receiving copy of presentations from May 4, 2004 RFP session
- This is the first PTAC forum I've attended, so I can't really suggest what other topics should be covered because they have already been discussed recently. However, I recently attended the Williston Basin H2 Well Conference

and there was some good water shut-off technology that was discussed that may be of interest (check it out on the web or give me a call if interested)