County Hunter News

January 1, 2013
Volume 9, Issue 1

Welcome to the On-Line County Hunter News, a monthly publication for those interested in ham radio county hunting, with an orientation toward CW operation**.**

Contributions of articles, stories, letters, and pictures to the editor are welcomed, and may be included in future issues at the editor's discretion.

The County Hunter News will provide you with interesting, thought provoking articles, articles of county hunting history, or about county hunters or events, ham radio or electronics history, general ham radio interest, and provide news of upcoming operating events.

We hope you will enjoy the County Hunter News. Feel free to forward, or provide links. Permission is given for copying or quoting in part or all provided credit is given to the CHNews and to the author of article.

CW County Hunter Nets run on 14.0565, 10.122.5, and 7056.5, with activity occasionally on 3556.5 KHz. Also, there is SSB activity now is on 'friendly net' 7188/7185 KHz. The cw folks are now pioneering 17M operation on 18.0915. (21.0565, 24.9155, and 28.0565 when sunspots better). Look around 18136 or for occasional 17M SSB runs usually after the run on 20M SSB. (21.336 and 28.336)

You can see live spots of county hunter activity at ch.W6RK.com

For information on county hunting, check out the following resources:

The USACA award is sponsored by CQ Magazine. Rules and information are here:

http://countyhunter.com/cq.htm

For general information FAQ on County Hunting, check out:

http://countyhunter.com/whatis.htm

MARAC sponsors an award program for many other county hunting awards. You can find information on these awards and the rules at:

http://countyhunter.com/marac_information_package.htm

The CW net procedure is written up at:

http://www.wd3p.net/ch/netproc/netproc.htm

There is a lot more information at www.countyhunter.com . Please check it out.

Back issues of the County Hunter News are available at www.CHNewsonline.com

Want county lines on your Garmin GPS?

http://pages.suddenlink.net/w4ydy/hamlinks.html#County

Download the file to a flash card that fits in your GPS unit, turn it on, and the county lines should appear!

De N4CD, Editor (email: telegraphy@verizon.net)

Notes from the Editor

1) **It's winter!** The snow is flying across the north half of the USA, with major storms out west and in the center of the country. Mobile county hunter trips have declined as the holiday season's activities and the less than ideal weather keep mobile ops off the road. The chill has set in but a few folks are traveling and putting out the counties. As in years past, a few truckers and those traveling for the jobs provide some activity to keep things going. Only a few awards were issued this month as those northern counties aren't getting run this winter season.

Toward the end of the month, snow was flying over northern California and the western USA. A winter snow storm clobbered the area from OK going east right around the peak holiday travel season and only a few county hunter mobiles ventured out and far. There was an inch of snow in Dallas and six inches to the north of the city with near zero windchill factor. The blizzard conditions headed east and the south had over 19 tornadoes on December 25th. Worse, this is just the beginning of winter!

Henry, OH3JF, sent me an email from Finland – it was 12 below zero at this QTH with a foot of snow. Brrrr.....

Radio conditions have been decent most days as the sun slowly works it's way toward the sunspot peak expected late next year. It hasn't been following the predicted path for the most part. Ten meters has been good for DX, but not so much for county hunting. There's not much county hunter activity on 6m, and from what I've heard, that band is suffering from lack of winter E-skip. That could all change.

So we end another year of the County Hunter News and start the year 2013 with this issue. No need to worry about the Mayan Calendar as the world didn't end at the Winter Solstice time so county hunting continues as usual. It's time to hang up the new 2013 Calendar on your wall.

Folks are now beginning to make travel plans for the coming year. We've got the National Convention in Deadwood South Dakota coming up in July. Should be a good one. Ed, K8ZZ, has announced the MI mini will be held again this year, and I'm sure they'll be a county hunter get together at Dayton Hamvention Time. Some will probably meet and greet at the "Hamcation" in Orlando, FL in February.

The price of gas has stabilized, and with newer cars getting better mileage, the cost of driving per mile is probably as good as it has ever been in recent history. Folks still plan to travel.

2) Old Radios Part N +2

I was goofing off watching the Wednesday night programs – one of them is American Restoration where the folks out there take old cruddy junk and turn it into 'good as made today' restorations. Everything like bikes to Coke machines to gas pumps are stripped to the bone, cleaned, fixed, repainted to appear just like new. Mechanisms are fixed – that may not have worked in 20-30-50-60 years.

Anyway..... at one of the breaks, Rick comments that one of the things they restore is old radios. Lots of them. He's showing the chassis out of a 1930s vintage console radio. He asks the following question:

Which is the component that goes bad and needs fixing the most in old radios

Is it?

A) Tubes?

B) Capacitors?

C) Resistors?

D) Knobs and dials?

Well, readers of the CH News should have had no problems answering that question!

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On a re-run of the American Pickers, in the episode, they 'pick' an old coin operated old hotel/motel radio. It's a Dalhberg – one of the two radios made in the Dallas area. Didn't even realize that before.

Dahlberg 1955 vintage coin operated radio (on Ebay)

If you stayed at hotels and motels, they'd have these mounted on the headboard. Notice the dial is 'upside down' – but if you are lying on the bed, looking up at it, it's 'right side up'! This thing is pretty big – about 18 inches across! This one took one to five dimes. Lots of areas still didn't have TV coverage – especially away from the big cities.

Sometimes watching re-runs you pick up things you never noticed the first time. This a 50s vintage radio that hung on the top of the backboard. You had a small 'pillow speaker' you put under your pillow so you didn't bother the folks in adjoining rooms. Coradio also made co-op radios back then as likely did other makers.

Some models were set to take tokens. That way they could vary the price easily or maybe even give you a 'free' token to start you wanting to listen more. Or maybe the hospital would

give you two 'free' ones and sell you additional ones during your stay.

Dalhberg Radio Token

Well, that was 'way before my time' as a county hunter. Didn't even have a ham license back then, and I'm sure the 'transistor radio' which appeared in the 1950s, plus of course TV sets (and the first of those in motel rooms were coin operated) put the 'pay to listen' radios quickly out of business! Maybe your grandparents remember these?

3) County Sign Database

Gary, K4EXT, has been working hard to add more and more counties to the County Data Base at the link listed below. He's up to over 640 pictures of county lines in states around the country. Can you help him add even more? Send him pictures of county lines on your travels. With smart phones with built in cameras, it shouldn't be too hard to get this over 1000 or more in the next year! If you travel with a friend/spouse/kids or whatever, have them take a pic of you by the sign- that's even interesting.

WY0A, WQ7A, K0PVW, KB0MHH all contributed new pics to the database this month

http://www.charchive.com/cntys.asp

Shari, KB0MHH, becomes the first to send in pictures of every county line in a state! She sent in all three counties in Delaware.

New Castle, DE - pic by Shari KB0MHH
The 'first' county created in the USA

Who will be next to finish off the database for a state? Rhode Island only has a handful! Same for CT. I've sent in a lot for TX...but golly, there's 254 county signs in TX! It's going to take a while.

Gary's got a backlog to work down....should get him up to over 700 counties by the time he's done (and some of the pics have two counties in them).

4) Antique Wireless Radio Association Newsletter

The latest issue of the Gateway Magazine on line is available for reading. If you are interested in olde tyme radio and wireless, this may be of interest.

http://www.antiquewireless.org/gateway.htm

they also list many of the local 'antique radio and wireless' clubs if you would find them interesting..

Mobile Activity this reporting period:

Kerry, **W4SIG**, was busy putting them out, including a few late night trips with 80M operation. He's been here. He's been there. On a recent trip, he commented on the K3IMC forum:

W4SIG:"It's Certified, we're nuts!

If there's any doubt that county hunters are a little off, just thought I'd let y'all know that at 11:45 PM CST last night (that's 12:45 AM for you easterners) I was still working 10-12 stations per county that I ran. This includes NT2A and KA4RRU who were literally burning the midnight oil. And this was for mostly interstate counties!! Yep, there's the evidence...Thanks to all those who rode along last night. Good company and good quiet conditions on the bands. "

Kerry was on 30M the whole way home.

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Bob,, **K7TM,** ran a few in WA state.

Duane, **WV2B,** ran a few in NC. Here's a pic of this mobile from the County Line of Stanley and Carabbus, NC:

Stanley/Carabbus, NC – WV2B Mobile

Jim, **ND9M**, was on from FL and GA.

Ron, **KB6UF** took a two day trip up to the north half of CA. Ran into some snow up there. When he saw the snow plows going the same way he was toward the mountain roads and passes, he decided he was far enough north and headed back down south. Later he put out some in southern CA. At the end of the month he headed back to LA.

Seth, **N3MRA**, was on many days – SSB.

K0MAF self spotted and ran a bunch for the folks.

NX0X, Brian and Shari, **KB0MHH** were active in TX putting out the counties on SSB for a few days.

Bob, **KC1NA** put out a few in ME on SSB. It's good to hear him back on mobile. Here's a county line picture he took:

Waldo/Somerset Maine -on I95

Jerry, **W0GXQ**, ran over to NE, and put out 3 days worth of counties there with Mike, **NF0N**, plus ran a few in WY, too.

Gary, **K4EXT,** and **KG4VBK** headed over to Hawkins County, TN, a 'reserved' LC for WBOW for first time for Gary. Ran on SSB and CW. Here's a pic of the C/L

K4EXT/KG4VBK – LC WBOW for USACA

Bob, **K0PVW,** took a picture of his 'home' county – Butler KS with his mobile in the picture:

K0PVW, Bob, Butler KS ("home" county)

He sent in a handful of pictures for the County Line database being compiled by Gary, K4EXT.

N0ZDZ was spotted on SSB on many days around the country.

N9CJH, Max, were spotted out running counties many days on SSB. He runs Kenwood radio, with an Ameritron Amp and MFJ controller for his screwdriver antenna on the truck he drives.

K6JN, Cliff, and Nelda, **W6XJN**, were out and about in GA during the month then headed west.

Van, **WC5D,** showed up in Maui, HI.

AC0HW spotted on SSB around the country. .

Jim, **N9JF**, was running counties in many states.

KC7YE noted in Island and Skamania, WA on cw.

Jerry, **K1SO**, spotted out in VA.

Jim, **N4JT**, ran a few in NC and VA and up in WV.

Dan, **KM9X,** took a two day trip around IN putting them out.

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K8QWY, Ed, headed over to KY to run a bunch. He had some problems as his post on the K3IMC indicates:

"Well it was an enjoyable County Run but I guess next time I won't listen to the GPS. It had me turn too Quick into a Down Hill Alley and it was Dark didn't see a Low Tree Limb which flipped my 4 Magnet mag mount. The 17 meter resonator went thru the back hatch window. Put a big hole in the window and broke the 17 mtr resonator but the tie down kept it on the roof.

K8QWY Mobile – 'after'

Think I am going to get Mr Breedlove to make me a couple Hubs where the resonators are more at 45 degrees instead of 90 think it will save a window. Really slow travel and it takes lots of time - more than I had figured. Seems also in the Mountains when it gets dark it really gets dark and that slowed me down really bad getting the my booked motels. All in all it was totally fun - just need to take littler bits next as some of the runs and multi bands and modes made for very slow movement. Hit the Interstate to get home before any rain - left Pulaski County at Noon and got home at 920p worn out - hate Interstates especially in big cities. K8QWY Ed"

He also noted via an email about his thoughts on running counties in eastern KY:

When it was Planned out of Paper at home off the Maps it didn't turn out that way on the road. The counties I dropped from my list was the ones I ran completely thru with no place to pull off. I just don't run anymore in motion. Not one county was I able to run anywhere near the County Line sign most were just in the Middle or almost out of the County.

I am also looking for a different GPS (one without the annoying GPS lady) I had tried to get the route set up so I could make the motels by daylight that never worked for either stop overs and as you know its kinda hard to find any motels so I booked them in advanced that was probably another mistake.

I had my Trac Fone with me but forgot the charger so late Saturday it died.

Stats: 973 miles some good meals when I found a real eating place (hate fast food)

589 Contacts only 9 Counties in Kentucky plus two in Ohio (SSB only)

One broken window which started out as a 6 to 10 inch Hole and by the time I got home there was no glass left.

Guess next time I will take smaller amount of counties to run or less bands and modes.

the King of runs was BREATHITT with 36 contacts on 20 cw and a 18 min run wow!

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Mark, **W9OP**, showed up in HI on SSB.

Bob, **N8KIE**, put out his 'winter home' county in HI

Rick, **W5QP** has been busy putting them out in AR and ran the southeast corner of OK

Don, **AE3Z**, spotted out in NY state.

Don, **K3IMC**, headed from GA to OH running them om SSB and CW. Later he headed up to IN for the holidays running them on 20/40SSB and 30M CW. Then over to IL and back home.

Scottie, **N4AAT** headed out on an unplanned trip to WI -

NU0Q, Bill, took a short trip for the holidays in IA and KS.

Silver, **N9QS**, took a short trip down to TN to attend the funeral of his brother, Lloyd, **K0GEN,** who became a Silent Key(SK) in December.

Gene, **WB4KZW**, headed over to AL from FL for the holidays

N5KGY, Jerry, was out in AL and GA on SSB.

N9AC, Jerry**,** started in WI and headed on south.

Peak Oil #1

On Nov. 12, the International Energy Agency's annual World Energy Outlook report caused quite a stir by asserting that by 2020, the United States would overtake Saudi Arabia as the world's top oil producer. Mainstream journalists eagerly repeated this claim.

But the truth is that it relied on a very loose definition of "oil." Saying that the United States will surpass Saudi Arabia in oil production is a bit like saying that a 12-ounce latte contains more caffeine than 12 ounces of espresso. It might make for an exciting headline and be useful as political fodder, but it's simply not true.

In 2011, U.S. production of actual crude oil plus condensates (natural gas liquids produced along with the crude) was 5.644 million barrels per day (mb/d). In addition to this, IEA counts 2.2 mb/d of natural gas plant liquids—liquids that are separated from "dry" methane gas at natural gas processing plants—as oil. In 2011, the U.S. produced a total of 7.8 mb/d under this definition.

By 2020, IEA forecasts an additional 2.2 mb/d in "tight oil" production from fracking shale formations like the Bakken in North Dakota and the Eagle Ford in Texas, plus another 1 mb/d of natural gas liquids, for a total of 11.1 mb/d.

By comparing this total to their forecast of 10.6 mb/d for Saudi Arabia, they could say that the United States would surpass the former in oil production by 2020.

However, the comparison isn't really accurate.

Natural gas liquids, or NGLs, have a variety of uses, but only isobutene, pentane, and "pentanes plus" (also known as "natural gasoline") are typically used in the making of gasoline. That makes just 30 percent of a barrel of NGLs useful for this purpose. Further, NGLs have only about two-thirds of the energy content ("heating value") of crude oil. Considering only the NGLs that are usable in gasoline production, and discounting for their energy content, only about 19 percent of a barrel of NGLs should really be counted as vehicular fuel. Basically, then, of the current 2.2 mb/d of U.S. NGL production, only about 0.4 mb/d is actually useful as vehicular fuel.

The meaning of "oil" can be stretched even further. Most journalists cite the "Total Oil Supply" figure published by the U.S. Energy Information Administration (EIA), which was 10.128 mb/d for the United States in 2011. That number includes 1.191 mb/d of "other liquids" (mainly corn ethanol, which also has about two-thirds the energy content of crude) and 1.076 mb/d of "refinery processing gains." The latter mainly reflects the fact that when crude is refined into lighter products like gasoline, it expands in volume; it doesn't actually amount to additional energy.

By contrast, EIA's Total Oil Supply for Saudi Arabia in 2011 was 11.153 mb/d, of which 9.456 mb/d was crude and condensates.

From this we can calculate that only 56 percent of the U.S. total "oil" supply in 2011 was actually crude and condensates—the good stuff. Whereas Saudi Arabia's supply was 85 percent crude and condensates.

To be sure, U.S. tight-oil production from fracking has been a remarkable phenomenon. It has added more than 1 mb/d to domestic oil output, and it is still increasing. However, even after adding the IEA's anticipated 2.2 mb/d increase in U.S. tight oil by 2020, the U.S. crude plus condensate total would still be only 8.425 mb/d—less than Saudi Arabia's current production. The IEA forecasts that Saudi Arabia's production will be roughly the same in 2025 as it is today, so the United States will not overtake it in actual oil production by 2020 … or ever.

This write up can be expanded to the world production scale.

In the monthly Petroleum Report by the IEA, the figure of world oil production is what they call "all liquids" and includes NGL.

The impression that this gives is world oil production has been increasing.

For example they give a figure for production in 2010 of 86.5 million barrels a day, and for Q3 2012 they have production at 90.5 million a day.

The impression is that crude oil production has gone up 4 million a day in just 2 years, where the truth is crude is up slightly and the rest is NGL, bio fuels, refineries gains. Since NGLs have only 70% of the energy content of a barrel of oil, you are falling behind in 'energy content'. Worse, NGLs cannot be used to make gasoline and diesel fuels.

WY0A Goes for LC WBOW

WY0A, Rory, went to get the LC WBOW for Hollis, KC3X – Eighth time. Here's a pic he posted on Facebook at the County Line.

WY0A mobile

He added: The screwdriver is made by Scorpion Antennas (NI7J) out of Phoenix, AZ. This particular one is the SA-680 and covers 1Ø-8Ø meters.. I have owned a High Sierra screwdriver in the past and I just like this one so much better.. Had a few problems with the High Sierra, but so far have had not a problem one with the Scorpion.. It's mounted on an angle plate that rests on the top of the bed railing in the corner.

Toyota Battery Technology

Toyota offers hope of battery 'that could bring down the cost of electric cars and make them more efficient'

A battery that is cheaper and more efficient than those in current use could soon help bring down the cost of electric and hybrid cars. Researchers at Toyota believe they are on their way to developing a power source that will also improve the range of the vehicles.

The cars currently use lithium-ion batteries. And while they are light and powerful and provide ample acceleration and reasonable range and life, lithium is expensive. For example the battery pack of the Nissan Leaf costs around $12,000 - and its range is still limited to around 138 miles; two factors that put many people off buying the vehicles.

But now the engineers at the Japanese car giant say they are making steady progress in developing a battery that uses magnesium instead of lithium, and which could someday offer a cheaper and more energy-dense alternative, reports technologyreview.com. Earlier this month, researchers at the Toyota Research Institute of North America (TRINA) in Michigan published a paper in the journal Chemical Communications that describes experiments involving a magnesium-ion battery with a new kind of anode, made of tin, and the same type of electrolytes used in lithium-ion batteries.

The tests showed promising performance and open the path for further research, reported Nikhilendra Singh, the lead author of the paper. 'The potential is definitely there,' said Singh. 'There are some improvements we need to make to its performance, which we've addressed in the paper as well. But overall, we're very excited.' Magnesium is the third most abundant element dissolved in seawater, and so is easily obtainable.

And batteries made from the element should also have a higher storage capacity than lithium-ion ones because magnesium ions have a positive charge of two, rather than one for lithium ions.

Thus a magnesium-ion battery would be able to store more charge per gram, and that would translate into a longer driving range in a car or running time for consumer electronics. However, the current obstacle is that the chemistry involved in making a magnesium-ion battery work efficiently has yet to be perfected.

There are two primary routes of exploration, says Yuyan Shao, a senior scientist at the Pacific

Northwest National Laboratory, the piece on technologyreview.com continues. One is focused on making batteries with a magnesium metal anode - which charges efficiently but is incompatible with conventional electrolytes. So the search is now on for electrolytes that do work with magnesium.

Another potential solution the say is to use a different type of anode, one that works with familiar, conventional electrolytes. This approach has also had limited success previously, but Toyota's paper outlines how the results suggest further research would be worthwhile

Source: UK Daily Mail

Looking Back at 2012

Wow – in looking back at what happened in 2012, it seemed to be a pretty good year. The mobiles were out and running. The N4CD mobile made it to over 41different states on trips headed east, west, south and north including lots of interesting places. I finished up running all of the lower 48 for the second time which so far has taken 10 years. Now just AK and HI to go. Then I can start again – maybe.

There were trips to hamfests, to the National Convention way out in the Northwest of the country, the big Dayton Hamvention, trips back to run Dukes and Nantucket islands, plus some good conventions on subjects including vintage radio, peak oil studies, and the accordion. The car wracked up almost 30K miles along the way with only a few episodes of minor problems. Others didn't fair as well as the deer took a toll on county hunter cars. Tree limbs got a few county hunter antennas, too.

There were lots of museums to see- from the ones out by the National – with lots of vintage airplanes, to the radio museum in Virginia City, NV to the one on Cape Cod. Maybe you caught some that you and your wife or other are county hunting buddy enjoy – whether radio related or not. Or other activities like Geo-caching or hiking.

County Hunters made major trips to all the HI islands including the rare Kalawao to help get folks done. There were dozens and dozens of awards earned last year – a pretty good year for finishing folks off.

I enjoyed reading the trip reports from the various county hunters. If you've 'been there and done that' you can understand what they are going through when they find it slow going in eastern KY or in the mountains of WV – or when they are in Sweetwater, WY and say the next

county is 3 hours away (at 80 mph). If you've been an active county hunter for a decade or more, you probably know how to pronounce counties like Piscatiquis, ME, Shawano, WI, or Bosque, TX as you travel around. The newcomers often stumble over them but are quickly helped. So even vicariously you can track and travel along with the mobiles – especially when they are following a detailed trip plan.

Last year was also good for QSO Parties – just about every state had one or was part of a big regional effort.

For 2013, we're headed into the sunspot peak. 20M is working well most days and there is a bunch of 17M activity to help out. 40M still hangs in there for much of the day, but the lack of mobiles is allowing others to 'move on in' on the SSB net frequency. We could use more activity in 2013 there.

2013 should bring about the normal list of state QSO parties. The National Convention will be toward the center of the country, so hopefully quite a few folks will head on out and make it. It should be a good year. I'll see you on the road!

On the Road with N4CD I

The annual Association for the Study of Peak Oil (ASPO) convention was coming up in Austin, TX. It's held in a different city every year. I'd skipped the last two, so it was time to go and get an update on the current world and US situation in the oil/gas field. Top researchers, industry experts in the oil and gas industry, and other investors/company retirees and interested folks would be there. In past years, presenters have included T. Boone Pickens, Matt Simmons, the ex-head of Saudi Aramco, retirees from just about every oil company worldwide, and a whole list of industry and academic experts.

I paid my registration fee(quite a few bucks) and reserved the Days Inn in downtown Austin. Those on an expense account stay at the big fancy hotels ($200/night) but the days Inn is "only" $85/night there and still close by. The convention was being held at the conference center on the campus of the University of Texas in Austin – so I knew that parking was going to be hard to find, and likely in a low clearance garage. The two day event started early Friday and ran through late Saturday afternoon.

My big antenna system wasn't going to fit in any low clearance places, it's not quick to disassemble, and the schedule required parking the car wherever possible for the last day before I headed home and not at the motel. It's also a very crowded area right in downtown Austin.

Those limitations made me decide to just take the short 20m four foot mast with a single 20M resonator mounted horizontally on it for the 4 hour trip down– all of it on four and six and 8 lane interstate highway I-35. It took me about 10 minutes to tweak the SSB tuned antenna down to the CW frequencies. Jerry, W0GXQ would be in NE on his big county putting out trip with Mike, NF0N, and I'd be able to snag them in a few counties on the way down, maybe some on the way back before it got dark. I headed out about 10 am in the morning after rush hour and all went well as I got through downtown Dallas, and then was zipping on down I-35 for the first 2 1/2 hours....putting out each new county I hit.

and then.....and then.....Murphy struck. I had to adjust the resonator four or five times to get it down to the cw band. First time it didn't seem to move much. So next time it was too far. Each time I had to pull it over and adjust it, check the power out, then tweak it again. Apparently during that process, I must have loosened the resonator mounting screw a bit. This was a Hustler resonator. So somewhere along I-35 in McLennan County TX lies the remains of a resonator – I heard a clunk as it hit the roof – and somewhere it probably hit the pavement and who knows what happened after that. With 3 lanes of traffic moving at 70 mph or 75 (the speed limit is 65/70 for half the route, and 75 for at least 100 miles of it, there was no way to circle back and look for it. Worse, traffic moves 5 to 8 miles over the posted limit, so you wouldn't even want to try and recover it from the roadway. You'd wind up roadkill.

I wasn't carrying a spare, and worse, I left by 'goody bag' with the MFJ analyzer and most tools at home. I did have a 'new' hamstick, but it had never been tuned. I traveled light - Not even an allen wrench to adjust the hamstick.

So I got to run a few counties before the glitch occurred but missed transmitting the last 3. And missed Jerry in a few I might have needed.

The reason why no backups and spares was I didn't want to have anything more in the car than necessary while parked in downtown Austin. Dang...no more mobile operation for the rest of the trip.

The last part of the trip went fast and I pulled into the Days inn in downtown Austin. Where my room was located had 7'8" clearance – had to take off the mag mount and mast and stow in the back seat. The next day it was over to the conference center – parking in a five level garage with 7 foot clearance. ($$$$) Whew...the UTA campus is gigantic. There are tens of thousands of students there. Well, over 50,000 students and 24,000 faculty, advisers and staff. You can see the Texas capital building 400 feet away from the edge of 'campus'.

So the decision not to take the big antenna system was a good one. Now I'll have to spring for

another 20M Hustler resonator or dig through the hamfest stuff to see if there is a good one in there.

After a half mile hike from the garage to the nice conference center, past the university football stadium, one of the seven museums there, and a half dozen gigantic buildings, it was time to enjoy the program at the Etter-Hardin alumni conference center. . About 250 attendees were there from all over the country and some from overseas. (there's an international conference in Europe each year too).

The convention was great – separate report follows. On Saturday I headed out late in the afternoon for the 3.5 to 4 hour trip home. It seemed strange to be without the radio, but the traffic was heavy at times, moving 75 to 80 mph for the first half, then 65 to 70 for the last part. 220 miles home at about 34 mpg. Arrived home at 7pm after the sun had set.

Radio Girls – Part II

Last month we covered the Radio Girls Series – the 4 books and a review of the first book – The Radio Girls at Roselawn.

The third book in the Radio Girls series – The Radio Girls on Station Island – just happened to come flying in the door- well, a few bucks, just a few, and a click on Amazon dot com brought it dropped in the mailbox shortly the last month's issue went out. After reading it once, it likely will be up for bid at the next Vintage Radio society silent auction. Cheaper than a paper back book today, but few seem to even know they exist, and 'collect' them. Worth 5 bucks to read it.

It's really interesting to see how un-PC folks were back then. You could never write this book today. Some of the characters in the book lived on the 'wrong side of the tracks'. Not to worry, they were called 'urchins' and described in detail as such along with some imagined typical pranks of 'people of that character' . What liberals today would probably call 'income deprived' and now be living on food stamps, Section 8 housing, aid for dependent kids, cash 'tax rebates', health care via Medicaid, with free Obama-phones. They didn't have all of that back then. In fat, they had none of it! No welfare weenies and queenies. Folks actually worked to get by, imagine that.

Anyway, it starts out with the two Radio Girls, who happen to be teenagers of well to do parents - both lawyers in NYC – continuing their adventures with a radio. Let's see – just a typical middle class family who can afford a month away every summer, have servants to do the cooking and the laundry, run errands, go off and prepare the 'summer quarters', etc. Just your run of the mill 1922 family – NOT. Then again, your typical 'middle class' family is going to struggle to buy a radio, no less have a 20-30 year old steam powered coal burning yacht in the family. Boats with gas engines in 1922? Maybe new ones, but the older ones had steam engines in them! The Radio Boys and the Radio Girls seemed to have few problems with 'having things'.

So it is off to the summer vacation for the girls. The servants have been sent ahead to prepare the place.

They bring along one of the kids from the 'wrong side of town' (Dogtown), who happens to be related to the girl they 'rescued' in the first book. She claims to have 'inherited' the middle part of Station Island through distant relatives. It's called Station Island since there is a big wireless station at one end of the island. Few believe her. She's got almost nothing to her name – other than a few changes of clothing - hand me downs.

Most of the story takes place on 'Station Island' which appears to be a mythical island off the coast of Long Island. The two girls and their family (dad stays behind most of the time and works) rent a 'bungalow' for a month during the summer. Let's see- that's a 14 room bungalow on the island, just your regular 'summer cottage'. It takes two days to get there on the coal burning steam yacht. They girls bring their 'radio' along. It's a crystal detector with a two step(stage) amplifier and horn speaker.

A typical 'two step' or 2 stage amp

To get reception, they set up the same antenna – a couple hundred feet of wire up 30 feet, a 'lightning switch' and a ground wire/rod. It doesn't work so well that 'far away' from the broadcast stations. A two-step amp was two audio stages – an input audio transformer, a 01A type tube, another audio interstage transformer, another 01A tube – which then drove a high impedance horn speaker with a few milliwatts of power. You had rheostats to vary the gain of each or both audio tubes together by controlling the filament voltage. You needed a healthy 6v power supply (about half an amp) plus a B battery of 67v to 135v, and a C battery of 4.5 to 75v.

They discuss getting a better receiver – maybe a 'super regenerative' detector. (they were pushed by one promoter – actual super regens at the Broadcast band – wide as a barn door). They get one delivered just before they go on their adventure at sea. You never know if it worked.

During one day of the vacation, they visit the wireless station and watch the operators send and receive messages to ships. Spark gap transmitter flashing away with every dit and dah. The girls haven't learned Morse Code but one of them is determined to learn a bit of it. She's got a book on it. They yak with the operators (young men) for a while, then head back home. Back then, commercial wireless was on 500 KHz more or less, but with spectrum out 300 KHz each side, at least. Broadcast was on two channels higher up.

The real adventure starts when about 10 of them decide to take the coal powered steam engine yacht on a multi-day trip to Boston and back. It's an old yacht, but the two older boys have

fixed it up after lots of work. They load on a good pile of coal and head on out. The yacht has a wireless sending and receiving set up but it's not working. The boys never could get it to work.

Well, a day later a big storm comes up. (no weather radar or forecasting back then). The ship is doing OK ….until one of the girls discovers smoke. It turns out something down below is burning and it takes the captain (you didn't think the boys sailed it, did you? Remember, this is folks with money – hi hi) spends a lot of time pouring water down below with the fire hoses, but it fills up the bilges and bottom part of the boat. Then they discover there is sea water coming in through leaks faster than the pumps, which take most of the power of the steam engines to run, can't keep up with. It gets worse and worse. The storm is raging, they can't keep the boat into the wind, they have to manually operate the pumps to allow the steam engine to head the boat into the wind/waves and they are getting further and further from the shore. It's not looking good. The yacht is slowly sinking.

The Radio Girls spend hours and hours fixing the transmitter. Something is missing and finally they locate the missing part of the spark transmitter(you'll have to guess as they never told you what was missing). They figure out how to send SOS and their position. It's picked up by the wireless station at Station Island.....and many hours later they are rescued by the father who gets to the island, rents a big tug boat, and sails on out to tow them to safety not long before the boat might have sunk. So that's the synopsis. 2-3 hours to read. Almost no technical detail. Oh, and the 'urchin' from Dogtown (wrong side of the tracks) does win in court with the help of the one of the Radio Girls' father and inherits the island, minus the big hotel and the wireless station. So the Radio Girls will spend all their summer vacations there as special guests.

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So...if you accidentally went back in time to 1920.....if you were stranded on a sinking boat with a spark transmitter, could you get it working? Could you even draw a schematic of a 50w spark transmitter and antenna system? Could you identify and find the 'missing part'/ Good question to think about, right?

- - -

oh, wow....I found the second book in the series, the Radio Girls on the Program, in the series available on line as a G-book - costs all of $2.99. It's not a E-book, but a giant (like 48 megabyte) PDF file.

http://store.g-books.com/index.php?main_page=product_info&products_id=217

Didn't even know there were G-books! You can download it (Free) after paying your $2.99 (plus tax), or you can get six G books on a CD sent to you for $8. After you buy each one for

$2.99

Free Radio Boys E-books here

http://www.gutenberg.org/ebooks/search/

If you are going to read one, read the ones by Chapman. Skip the others.

W0GXQ/NF0N Trip Report

RAN ALL (State) (RAS) Counties Award
W0GXQ

In late October while perusing my copy of Magellan's U.S.A. Counties Map Book, or "Coloring Book", I noticed that I needed to run 22 counties in Nebraska to finish off the state. It had been three months since my last mobile outing, so I called Mike, NF0N to see if he would be interested in a three day trip. My plan called for running 52-54 counties in Nebraska and two in Wyoming that the Platinum folks needed.

I headed out at 6am on Thursday the 29th of November from Hubbard county to Woodbury County Iowa (freebee overnight stay with my brother). The trip which is normally around 370 miles, turned out to be 621 miles, because there were some LC needs in ND and SD that I agreed to get. Except for some antenna icing problems for a few hours in the Dakotas, this leg of the trip went well.

Thursday Stats: 21 counties, 882 contacts (mostly CW), 7 LC's.

Friday morning, Mike and I hit the road at 1330z with pretty good band conditions and a favorable weather forecast. Of course we started running behind schedule right off the bat, due to the amount of activity encountered on 40/30/20/17 CW and 20/40 SSB. Our days usually end up 10 to 12 hours on the road. It was getting pretty late after we ran the C/L of Gosper and Furnas, and we were discussing whether or not to skip Frontier when we hit a deer about four miles prior to our turn. Well, that settled it because she wiped out the right headlamp. No personal injuries, but damage estimate - $2,789.

The deer took out the right front headlight. The hood was damaged and the front fender will take some repair. The deer was propelled around and caved in the rear passenger door, which has to be replaced because the collision bar weld was compromised

We then decided not to run Red Willow (our first overnight) until Saturday.

Friday Stats: 17 counties, 716 CW contacts + the SSB contacts which will be transcribed from tape, 8 LC's.

Goshen, WY line

Saturday the word went out that we may have to alter our trip in order to complete the day before it got dark. An added incentive to this driver was the fact that Mike had to be in front of a TV set for the Nebraska/Wisconsin game! Morrill County would have to wait until Sunday morning. By the way, the four or five counties in the Northwest area of Nebraska are really beautiful . . . I had never been there.

Stats: 17 counties, 726 CW contacts, 9 LC's.

W0GXQ/NF0N Garfield, NE

On Sunday, we were up bright and early to run the Box Butte/Morrill C/L and then headed East for Sheridan/Garden. We blew right by our turn and ended up taking an "oil

road" near Bingham on route 2. I thought the county sign was interesting.

W0GXQ at the Sheridan Line

Here's the sign

Stats: 19 counties, 604 CW contacts, 18 LC's.

Monday morning I headed back to MN via the shortest route. Stats: 14 counties, 404

Q’s, and 1 LC. AS stated earlier, the main reason for making this trip was to finish transmitting from all of the Nebraska counties. Around the time of the “deer strike”, I failed to realize Frontier was one of the 22 I needed to run, and I did not remember until we were in Hitchcock the next day. So, I *still* have not finished NE! ☹

W0GXQ/NF0N Banner, NE line

Seventeen was good - 224 Q's, and 60 Q's above that which were most all on 15. (not incl SSB)
DX Q's totaled 75 (not incl SSB)

This was my 10th trip with Mike, and another that we thoroughly enjoyed. Thanks for keeping us busy.

De W0GXQ

10M Contest Report

The ARRL Ten Meter Contest comes around early in December and the folks are hoping this is the year of near sunspot max where 10m will do well. Friday evening there's some E-skip with FL, GA, AL, NY, OH coming into TX with good signals. Not a whole lot of them, but at least some to work! On the weather map there's a big cold front headed south – and really warm moist air to the south. That can often result in E-Skip from the wind shear along the front.

I snag about a dozen stations Friday evening late and others around the east half of the country are spotting away. The 'good times' last for about 2 hours – probably E-skip that dies out usually as the evening progresses – as as folks head to bed and the winds die down. It's the same on 6 and 2m when the band opens – often it is open and everyone is asleep! .

Saturday resulted in a fair amount of DX but not much joy here for US counties.. In TX, South America was in with a dozen countries and half a dozen contacts in the Caribbean(KP4, VP5, PJ2, etc). The east and west coasts could work each other but not much from the middle of the country. Skip just too long to snag counties – regular skip on 10M – not E-skip.

Ed, K8QWY, worked 38 on 10M on Saturday but not many new counties – same folks as every year – and the same folks in just about every contest! K8MFO was on. Paul, WB2ABD worked 291 Qs on cw.

Sunday resulted in some E-skip again with IL, OH, PA, NJ, MI, IN NY, and most of the far away Canadian provinces coming in (VY2, VE9, VE7 and VE6), along with more Caribbean and South Americans. Half a dozen EU stations were heard here and I'm sure the stations with beams and back east were working them by the dozens. Hawaii (KH7Y) was booming in for half an hour Sunday afternoon. Then later in the day, the E-skip re appeared – AZ, LA, AL, GA, FL, TN, GA, IL in the log. Then some longer skip with NY, heard RI. Also WA, ID, CA, UT, NV made it in the log. Others spotted KL2R in 4th AK - but NIL here. It was fun with over 100 stations in the log in the 2 days(GMT) of contest, with half of them DX and Canada.

Mark, KM6HB, was working 'em on both CW and SSB. Ed, K8QWY was having fun too. Both spotted for the rest of the folks. Worked N4PN, and I know W0GXQ worked a few.

So it wasn't a complete bust, but sure could have been better given that were are 'near' the sunspot peak for Cycle 24. Caught a half dozen new ones – since I started over in mid year.

Some of the DX stations made over 3000 QSOs! They were zipping along and the numbers

were over 3100 for some, and many DX stations up in the 2000 plus range.

Hope you managed to get on and give out a few contacts to keep things lively and maybe snag a few new band counties or counties toward your next time.

Here's some comments from the 3830 reflector:

N6MU – CA -254 cw

Virtually all S&P. LP to a lousy vertical in marginal conditions doesn't allow successful CQing, hi. It was really apparent as I listened to the loud HP and beam locals (K7JA, N6HC and AA6PW) running guys I couldn't even hear. Oh well.

Only made 18 Qs Friday night. 17 were with locals but the 18th was the only TX station (N5ZC) I heard all weekend. Funny how that works as he was loud but the only one.

Saturday and Sunday were better. I did manage to work all the W1-4 and 8-9 mults except VT (my SS nemesis), DE and WI(?). Also snagged LA and MS Saturday and 7 CO and 3 AZ Saturday night. Sunday afternoon brought OK (K5KC) and, again, he was loud but the only one from the region. Only worked 3 XE mults. Heard more but they couldn't hear me. Typical.

My highlight was V51YJ. I called him on and off for hours before success.

I'm always amazed by the many loud stations who CQed in my face while many of the weak ones heard me no problem. Good old 10 meters! 73...

KX7C – NV 300 cw 167 SSB

" K3 & 4ele 10M Yagi @ 30'. Band was all over the place from totally shutdown, barely open with heavy QRN, sorta open and Mod QRN, to fairly open with limited success to the northern paths. Fri Nite was mainly local Tropo with a small opening to CX, Sat was open sorta then one wild hour of wide open to East Coast, then back to sorta open and no JA, Sunday was fairly open all day with some good runs mixed with a lot of variable conditions. With 2 hours left the first JA's were worked along with a soul YB2. A mixed result for very mixed conditions. Never worked a single W0, few W5's, W7's never heard on BS, and only 2 Qs with W9! WB9Z was barely audible!!!! A very strange weekend on 10M to be sure"

AA8R – MI 120 cw

Wish I could copy code like the rest of you guys. Thanks for the Q's.

N4PN – GA 605 cw 541 SSB

Had 263 Q's Friday night....with 37 in MA and 30 in MN...only had
38 Q's first night last year...

As everyone knows, not much from these parts into Europe...only
5 EU first day and 4 AF, but one was a real surprise - FH8PL!

Sunday was a real winner....within 21 minutes (LP) worked XV1X,
BD7LMD, BA7IO, BU2AV, VR2XMT, JH6AUS. Also, LP, 9V1YC and A45XR.
Total of 21 EU on Sunday and 15 AF, mostly ZS's, except for EA8's
and V51YJ plus D4C.

Sunday evening the last four hours was a blast....never touched
the rotator or changed frequency....rate meter was 207, 204, 197,
and 192...on CW.

Missed WY, MB and ND on both modes....t

73, Paul, N4PN

N8II – WV – 700 CW 1007 SSB QSO!

All in all, one of my favorite 10M contests of all, I have not missed too many,
Hi! After so many tries, I think I have the strategies worked out pretty well
by now; the runs were some of the best ever into the west coast. The black hole
in the Midwest was a little bit brighter from my perspective with lots of
sporadic E openings especially Friday and Saturday evenings to liven things up
considerably.

Saturday was a dig them out type of morning with first F2 QSO a loud JH3 long
path, I did not work anything else LP south despite many CQ's/S&P. EU was very
marginal with EI, EA, EA6, F, and I being logged in very small numbers. My
first QSO was that N9 guy in MT with a little antenna hardware at 1456, but the
band did not open well until around 1645 or so when WA and VE6/7 stations

started booming in. A45 was worked LP around 1620. The opening gradually expanded farther south to include CA, NV, and AZ, but AZ propagation was poor at times despite working a total of 75 AZ Q's.

Sunday was nearly crazy good, except EU was worse than Saturday except for a late ES to F2 opening to SW EU. Conditions were great to Asia LP which started around 1245 with about 4 quick JA Q's on CW followed by no more. A BD7 was logged at 1302, BV1 called at 1308, XV found at 1405, HS0 called at 1414 all CW, HS0 called on phone at 1506, and 9V1 on CW at 1538. I had a great CW backscatter run in the 14Z hour (97 Q's) followed by some nice scatter on phone with needed states calling in. Trying to run the west was slow despite some good signals until about 1715 when I started a very long run of mainly CA, OR, and WA on phone, even the weak ones were easily workable on completely clear to nearly clear frequencies. Conditions were substantially better than Saturday with day 2 Q's of 951, day 1 of 750. When the west coast died out around 2240, I S&P a few minutes to find loud KP4's and deep SA's. I actually had about 15 minute run of SA stations nearly one after the other. Then around 2315 the Es spread to the SE USA where I had made very few Q's, last hour was 85 Q's! Nations as close as NC were worked on Es and SC called in for the last mult of the lower 48 on both modes. I made WAS on CW, missed only AK on phone, but did get two VE8's there. I never heard VO1/2 or VE4, worked only 1 loud VE5 and only one ND (moved for mults on other mode).

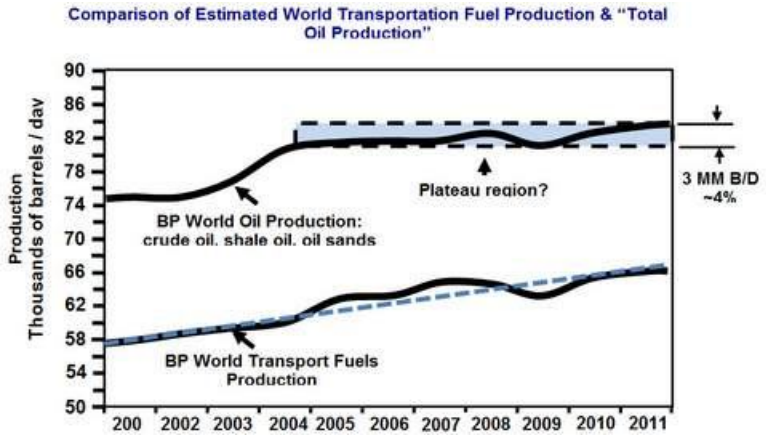
Despite some Saturday struggles, this WAS fun! See you again next year. If I improve my station, I could be dangerous.

Peak Oil Conference Report

by By Kjell Aleklett, President of ASPO International

Bob Hirsch was the opening speaker when the conference began on Friday. Among other things he discussed the indicators that are important to study in connection with Peak Oil. Bob and I began this discussion about a month ago when he was preparing for the conference. The overwhelming majority of oil used is for production of various fuels and my suggestion was

that an important parameter to study was how production of these fuels would change over time. Bob presented a preliminary analysis at the conference and it was somewhat surprising to see that production of fuel has been increasing despite oil production itself holding constant within a 4% fluctuation band. The conclusion one can draw from this is that the proportion of oil production used in the transport sector is increasing and that fuel is being made from increasingly heavy forms of crude oil. Therefore, we have not yet reached Peak (for transport fuels).



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De N4CD

Here's the slides from his presentation – worth a look

http://aspousa.org/wp-content/uploads/2012/12/Hirsch_Austin-2012.pdf

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back to the article...

My presentation was a run-through of my analysis of the IEA's World Energy Outlook 2012 report. That analysis has convinced me that, in future, we cannot simply consider all forms of oil production together in one bundle. Instead, we will need to study in more detail the production that we can expect from each of the different oil reserve types. To assist this discussion we can divide oil production into four quarters according to the illustration presented below.

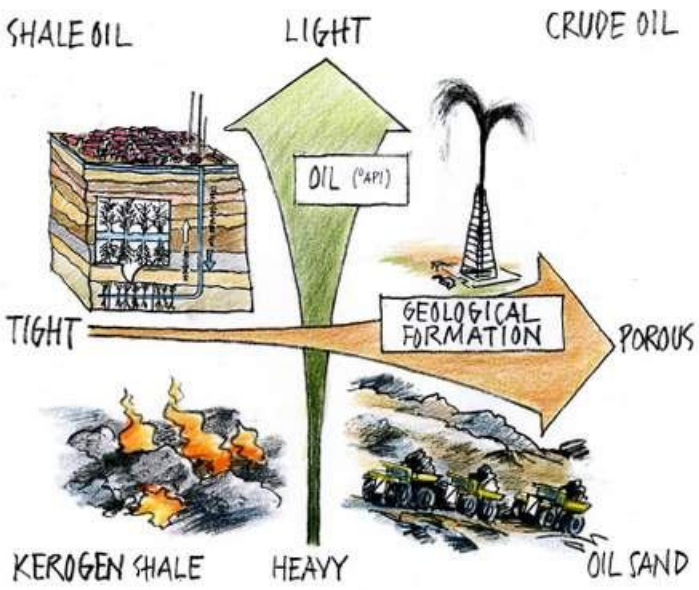


Figure: On the X-axis we have the reserves' porosity and on the Y-axis the unit °API that has a value of 10 when oil is too thick (heavy) to float on water and over 50 for thin (light) oil. Crude oil is symbolised by the famous discovery at Spindletop in Texas in 1901. Production from Spindletop has been estimated to have been over 100,000 barrels per day. Shale oil is illustrated by one of the thousands of horizontal boreholes used for "fracking" in Texas a century later. Canada's oil sands are represented by huge dumper trucks that carry the oil sands out of open cut mines. Farthest down to the left is what is known as "kerogen shale" or "oil shale" (not to be confused with "shale oil"). This, for example, is burned directly in power stations in Estonia to generate electricity. Olle Qvennerstedt has drawn these illustrations.

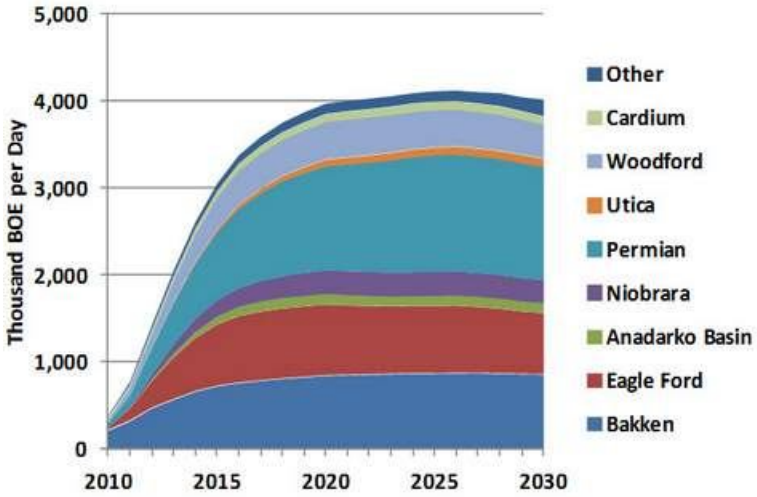
Here's the slides to the presentation

http://aspousa.org/wp-content/uploads/2012/12/Aleklett_austin-2012.pdf

The conference's first session dealt with unconventional oil production in the USA. The three panelists and the presenters were all from Texas.

Among those optimistic about future production of shale oil was Laura Atkins, the Director of

Petroleum Research at Hart Energy in Houston. I had heard Laura Atkins earlier in autumn at a conference in China and I suggested that she should participate in the ASPO-USA conference. She has made an optimistic estimate of future production of shale oil in the USA and arrived at an increase in production to 4 Mb/d by 2020 followed by stable production at this level until 2030. However, this will require an enormous increase in the number of wells drilled. Everyone agrees that production from the world's currently producing fields will decrease by 4 Mb/d each year into the future. It is this decline that should be kept in mind when considering the significance of a future 4 Mb/d rate of production of shale oil in the USA.



Her presentation slides here:

http://aspousa.org/wp-content/uploads/2012/12/Atkins_Austin-2012.pdf

I first met Scott Tinker, Texas State Geologist and Director of the Bureau of Economic Geology at the University of Texas, in Aberdeen several years ago. I had been invited to present on Peak Oil and he was there to record a documentary film. They even recorded a discussion between Scott and myself but I do not know what became of it. At that time he was an opponent of Peak Oil and he did not present a different view this time. His views on future shale oil production were the same as those of Laura Atkins.

http://aspousa.org/wp-content/uploads/2012/12/Tinker_Austin-2012.pdf

The last person to discuss unconventional oil production in the USA was Arthur Berman, Consulting Geologist and Principal at Labyrinth Consulting Services in Houston. Arthur has

made a detailed analysis of individual oil wells in the USA and the title of his presentation was "Oil-Prone Shale Plays -The Illusion of Energy Independence". Arthur showed what he called the "Bakken Shale Static Decline Profile". In the graph we see the total number of drilled wells (2,500) and the total production (300,000 barrels per day) up to January 2011. If they had stopped drilling wells at that moment then total shale oil production would have fallen by 33% within a year. A giant conventional crude oilfield with an equivalent rate of oil production would commonly show a production decline of around 10% or lower over the same period.

http://aspousa.org/wp-content/uploads/2012/12/Berman-ASPO-USA-2012-Conference-Oil-Presentation-29-Nov-2012.pdf

The session concluded with questions from the delegates and the moderator was Tadeusz Patzek, Chair in the Department of Petroleum and Geosystems Engineering at the University of Texas. Despite all the different opinions on future volumes of production of shale oil in the USA everyone was agreed that the USA would continue to be dependent on oil imports.

http://aspousa.org/wp-content/uploads/2012/12/ASPO11302012Patzek.pdf

David Hughes, a geoscientist from Canada, presented his studies on US shale gas production. The field that delivers the most gas is Haynesville and it was interesting to note that this field had an overall decline rate of 52%. The largest Russian gas fields have decline rates of around 5%. This shows that future US natural gas production will be very sensitive to drilling rates. The presentations on crude oil addressed mainly future consumption demand in Saudi Arabia and the Middle East. There is no doubt that the area will produce large quantities of oil in future but the question is whether the OECD nations will get access to it. The Canadian oil sands as well as Kerogen shale were not discussed by any panel.

http://aspousa.org/wp-content/uploads/2012/12/HUGHES_Austin-2012.pdf

On 26 October the International Monetary Fund (IMF) Research Department released its report titled, "Oil and the World Economy – some possible futures". The remarkable thing about this report was that they had included Peak Oil in their calculations. The Peak Oil model used was the Hubbert model. In the report the IMF gave the following summary,

"This paper, using a six-region DSGE model of the world economy, assesses the GDP and current account implications of permanent oil supply shocks hitting the world economy at an unspecified future date. For modest-sized shocks and conventional production technologies the effects are modest. But for larger shocks, for elasticities of substitution that decline as oil usage is reduced to a minimum, and for production functions in which oil acts as a critical enabler of technologies, GDP growth could drop significantly. Also, oil prices could become so high that

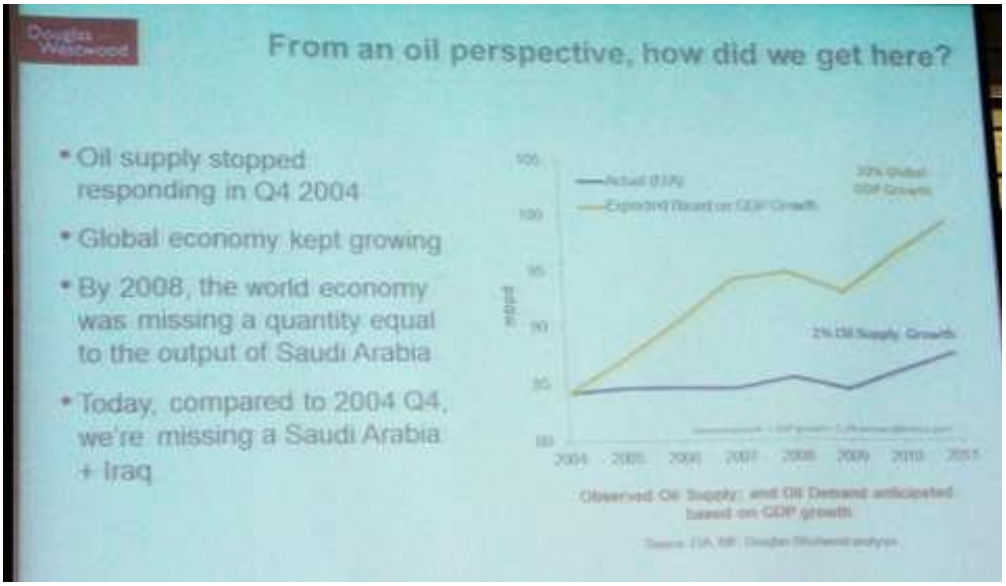
smooth adjustment, as assumed in the model, may become very difficult."

Michael Kumhof, Deputy Division Chief of the Modeling Division, was responsible for these calculations. His presentation on the work was very interesting. I encourage you to watch the recording of his presentation when it becomes available.

http://aspousa.org/wp-content/uploads/2012/12/Kumhof_Austin-2012.pdf

Mark Lewis sat on the same panel as Michael Kumhof. Mark is Managing Director for Commodities Research and Head of Energy Research, Deutsche Bank. In his presentation titled, "The Outlook for OPEC Demand and Implications for Global Exports" he showed that future predictions of the price of oil have always been too low. In WEO-2012 the price of oil holds at $125 per barrel until 2035. Compared with past trends this is too low. He warned that the domestic oil consumption of the OPEC nations and Russia would reduce the amount of oil available to the OECD nations. This is the same conclusion that I arrived at in my book "Peeking at Peak Oil". An interesting end to his presentation was a graph titled, "Budget Breakeven Estimates" about the oil exporting nations. We could note that Saudi Arabia needs $78.30 per barrel while Russia needs all of $115.90 per barrel according to Deutsche Bank.

http://aspousa.org/wp-content/uploads/2012/12/Lewis_Austin-2012.pdf

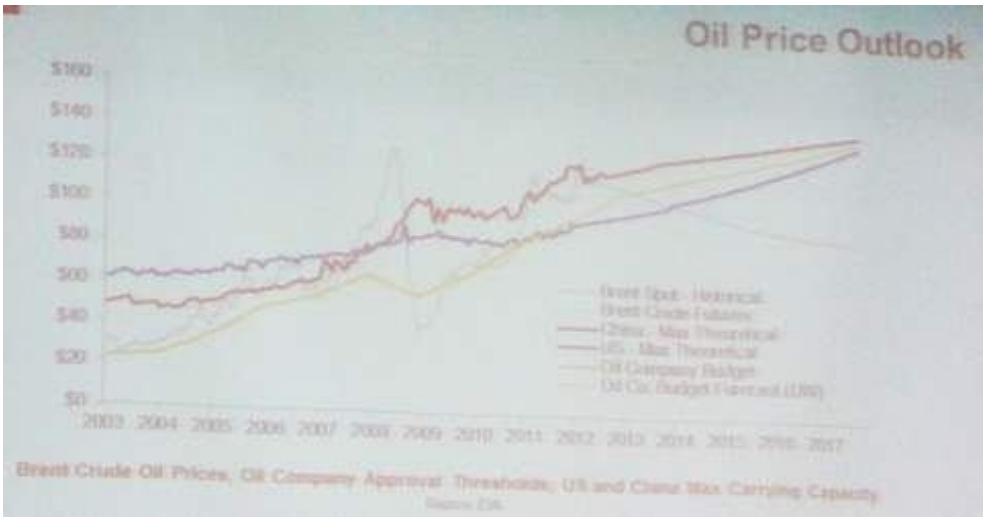


Saturday's concluding discussion was begun by Steven Kopits, Managing Director at Douglas-Westwood. He has for some time used data from the Global Energy System group at Uppsala

University. I will discuss two of his presentation slides. The first shows the actual world oil production from 2004 to 2011 and the production of oil that would have been required during the same period by GDP-growth if the price of oil had been stable. GDP grew by 30% while oil production grew by only 2% during 8 years. His conclusion was that, “Today, compared to 2004 Q4, we’re missing a Saudi Arabia + Iraq”. There is no doubt that a shortage of oil has driven up the price.

http://aspousa.org/wp-content/uploads/2012/12/Kopits_Austin-2012.pdf

Another very interesting study that has been done by Douglas Westwood is an analysis of the sensitivity of the oil companies, China and the USA to the price of oil for the period 2003 to 2017. In 2003 the oil companies were willing to go ahead with oil production projects if the price of oil was higher than $22 per barrel. China’s economy was estimated to have an oil price carrying capacity of $50 per barrel while the USA could carry $60 per barrel. In July 2007, immediately before the price of oil crashed, oil companies were willing to go ahead with projects if the barrel price was above $50. China’s economy had become strong enough to tolerate an oil price equal to that of the USA at approximately $70 per barrel. By the beginning of 2012 the Chinese economy had grown such that it could cope with a price of $110 per barrel while the US economy could not cope with $80 per barrel. The fact that domestic oil production is increasing in the USA means that the gap between the USA and China is expected to become smaller in the period to 2017 but during the coming 5 years it is China that will determine the pace of economic growth



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Some of the presentations are now on line - definitely worth a look.

Here's an earlier one by Art Berman titled The Oil Prone Shales – The Illusion of Energy Independence – given before in October but repeated for this conference.

http://www.sipeshouston.org/Presentations.sh.sem.10.2012/8%20Oil%20Shale.pdf

MARAC Awards

Dave, KE3VV, wrote an article in the latest MARAC Road Runner. Here's a bit of it.

"The CCH (Concerned County Hunter) who contacted me observes that the MP (Master Platinum) Award cannot be earned by all county hunters because it requires that each applicant put out 500 counties as a mobile. This is true.

The CCH points out that it is not possible for all county hunters to operate mobile or, in some cases, can only operate within a limited area that does not encompass 500 different counties.

Others may just lack the resources to undertake that extensive a mobile operation. These are both accurate and valid points.

The issue is clearly stated - because some (maybe even a lot) of county hunters will not (or cannot) pursue the Master Platinum Award, should MARAC eliminate the MP Award?

Another way of stating this in a broader context is "should all county hunters (who want to) be able to earn every MARAC award?" or perhaps "Is it fair to have MARAC awards that everyone cannot achieve?"

end KE3VV quote.

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Dave then goes on to discuss whether it is 'fair' and 'legal' to have an award that not all can obtain. He notes there is no requirement in the bylaws that every award be able to be earned by every county hunter. He also notes that awards have always been there to ENCOURAGE mobile operation since it is the **MOBILE** AWARDS RADIO CLUB from the start.

Not everyone is created 'equal'. Nearly all the awards that MARAC issued initially were only available to mobiles! It was only much later that MARC offered Nth time, took over the Bingo Award, the Master's Gold award, and others that were started by other individuals, groups or entities such as the B&B Shop.

Do you think that SSB only stations are going to earn the USA-CW award? I doubt it. Or cw stations are going to get the "ALL SSB" endorsement? Or that folks without computers are going to earn the Digital Awards? Or those with cw only rigs not able to get on 'data modes'?

Do we do away with those awards since 'some' can't get them? How about anything over 10th time? How many can get that with their wire antennas and barefoot rigs who work 60 hours a week just paying the bills? And live in a condo with 'no radio' provisions?

He notes there are quite a few awards that cannot be earned by those who never go mobile, including the DX mobile Award, the Mobile to Mobile Award, Master Platinum, Mobile Diamond, Ran all (State), Ran All USA, LC Awards and multiple thereof, Mobile of the Year Award, etc.

On the other hand, a mobile isn't likely to win Net Control of the Year, or get credit for hours of service as net or assistant net control for the Master Gold award, either. Maybe they don't have the skills to 'host' a convention or live in a place with no convention meeting facilities and can't get 'points' toward the Master's Gold Award? Or maybe they don't have the skills, energy, or ability to serve on the MARAC board or write the newsletter?

Maybe the mobile has no fixed location to operate from. The mobile likely is not going to get several awards either that are much easier to earn at home. Someone who is mobile all the time is less likely to have 10th Time award, or call combos or prefixes worked as they often require decent fixed stations antennas and high power to work. Or the Big Rig award. Heck, how many Big Rigs are on cw these days? And if you are mobile, you're the last to get through most pile ups and maybe the mobile is 'out of the county' by the time you get through.

It's strange there's some folks out there that instantly pounce on a new mobile, never get around to spotting the mobile, never help with relays, then think the mobiles are out there just to give them new counties day in and day out and nothing else. Then want an 'alternative' way to get awards designed, well, specifically to encourage mobile operation!

Of course, if you want mobiles to work...you need to give them incentives to go run counties. When Master Platinum was created, folks had to go out and run 500 separate counties to

qualify for that award. That's roughly 1/6th of all the counties in the USA.. That meant that fixed stations now had the opportunity to catch each and every one working on Master Platinum in at least those 500 counties. The fact that 20 people, as of December 2012 have accomplished that means that is not 'impossible' to do.

Just look to Ron, N5MLP, who has logged thousands and thousands of miles driving, trying to complete the 500 counties for MP. All over TX, all over LA, OK, up to KS,over to NM, up in WA state last summer, and many other trips. Just Texas (254 counties) and OK (77) don't even get you there – and that's at least 5000 miles of driving. You need to add in a few more states and another few thousand miles of driving! You don't have to do it all in one year either. It's taken some over 30 years to earn USACA. If you run just 50 new counties a year, that could mean you finish up in 10 years. Heck, most people driving to and from the National Convention will likely pass through 100 counties each year.

With 20 Master Platinum Awards now issued, that is over 10,000 counties that have been run by the people who have earned it. Just those 20 people alone! Add in another 3 or 4 'getting close' and you add another 2000 to that total! Did the Master Platinum Award spur travel and 'county putting out'? You betcha. A lot of those counties would have never likely been put out in such thorough form. Do you really want to complain? Would they have run all those counties without the MP? Probably not. Would they have spent the money on extra trips and nights away from home? Likely not.

Then we start on the Mobile Diamond Award. Anyone with Master Platinum now has to 'start over' and put out another 500 counties. Starting from Zero. Now, no one yet has achieved the Mobile Diamond award but some are now about 50 away and closing in. If you look at N4AAT, N4CD, KB6UF, KM9X, WQ&A, N8KIE, N5UZW, N9STL, K5GE - that group alone has put out at least 5000 counties toward Mobile Diamond. That means they've 'had' to make at least 30,000 contacts (3 per band, 2 bands), and the total is likely well over 300,000 contacts since no one stops at 3 QSOs on a run. Maybe even over a million contacts by the time you total them up. Just for the Mobile Diamond award!

That award is even tougher – since you must put those counties out on at least two bands and make at least 3 contacts on each of 2 bands to be able to count that county. That means that fixed stations have an excellent chance of propagation on at least one band to the mobile. Now – at least 3040 of the 3077 counties have been run by mobiles seeking the Mobile Diamond award. Do you really want to complain? And that in just the last few years.

Yes, there is no alternative way to get these awards. They are 'mobile' awards for those willing to take the TIME, spend the MONEY on likely 10,000 miles of driving, putting out those 500 plus counties and getting them on the air. There's no way to bypass it.

In a few years, they'll be even more folks running counties for Master Platinum and Mobile

Diamond. More counties for fixed stations to work, day after day. It's not exactly like there are 20 'on the list' every day and mobiles are fighting for a frequency to run on since it's so busy these days. Other than convention time, there's seldom 2 or 3 mobiles out there.

Yes, we need the incentive to get folks MOBILE. That is why Master Platinum and Mobile Diamond were created. Hopefully MARAC is cooking up the next award since the first Mobile Diamond award is likely to be issued next year. You do want the energetic mobiles to keep running, right?

Meanwhile, if fixed stations don't want to join the crowd working on these awards by going mobile, they have a WHOLE raft of awards to work on. Mobile YL, YL/OM teams, Prefixes, Digital, CW only, Call Combos, Big Rig, Five Band, Natural Bingo, Single Band, Nth time Around....MARAC has 100 different awards to earn. No one is going to get them all. NO one has got the Natural Bingo award – when will that happen. Is it 'too hard'?

160M Contest

Several county hunters get on the for 160M contest each year. It's another way to get band counties for the W6RK County Challenge and of course, counties count no matter what band.....for next time around, prefixes, call combos, natural bingos and whatever else comes along.

N4CD was out of town that weekend, so no report and no contacts to report. Other county hunters were on for the event.

From the 3830 reflector:

KN4Y (FL) – 100 cw

"Got my goal off 100 QSO's before departing to bowl in the Florida International seniors tournament in Polk County."

K5NA (South TX) 1307 cw – 80 ARRL Sections 25 countries

The ARRL 160M Contest has always been my favorite contest. This year is the 43th running of it and it is my 38th year to participate. If anyone has been in more of them, let me know.

This year was one of those rare times when I was unable to do a single-op or operate on my own. So a multi-op seemed to be the thing to do. W5TA, W5MJ, and AB5K came over to join Susan (K5DU) and me (K5NA) to have some fun.

The team did a great job and I was very proud of their effort. I was very pleased when we broke the 300K mark. It looks like we might make the multi-op top ten. That is the only goal we typically have for this contest.

Conditions didn't seem as good as last year, but I am not sure of that as I wasn't on at all hours.

Super Computer News I

While doing some checking on the UTA (University of Texas at Austin) I stumbled across the following. Time to update super computer news. Right up the road from Austin is Round Rock, the home of Dell Computers. Dell is trying to move into the giant computer arena.

Here's some info on the High Performance Computers as part of UTA Texas Advanced Computer Center (TACC) from their website:

"TACC operates many of the most powerful and capable high performance computing systems in the world, which are used by thousands of scientists and engineers each year to perform research in all domains of science, including the humanities, digital media, and the arts. At nearly 10 petaflops, Stampede will be fully deployed on January 7, 2013, and is expected to be one of the world's most comprehensive systems for the open science community as part of the National Science Foundation's (NSF) XSEDE (formerly NSF TeraGrid) program.

After five years of stellar performance and contributions to open science, Ranger will retire on February 4, 2013. At 579.4 trillion teraflops, Ranger was the most powerful and capable HPC

system in the NSF TeraGrid when it was deployed in February 2008. Additionally, Lonestar 4, which went online in February 2011, clocks in at more than 302 teraflops and offers nearly 200 million computing hours per year to researchers. “

The new machine on the block is called Stampede- it's a Dell delivered system. It's rated at 10 peta-flops. That's 10 quadrillion floating point operations PER SECOND!

“Stampede, scheduled to begin production in early January 2013, will be one of the largest computing systems in the world for open science research. As an NSF Track2 HPC acquisition, this system provides unprecedented computational capabilities to the national research community enabling breakthrough science that has never before been possible. The scale of Stampede delivers opportunities in computational science and technology research, from highly parallel algorithms to high-throughput computing, from scalable visualization to next generation programming languages.

Stampede system components are connected via a fat-tree, FDR InfiniBand interconnect. One hundred and sixty compute racks house compute nodes with dual, eight-core sockets, and feature the new Intel Xeon Phi coprocessors. Additional racks house login, I/O, big-memory, and general hardware management nodes. Each compute node is provisioned with local storage. A global, high-speed file system, running across 72 I/O servers uses the Lustre file system. Stampede also contains 16 large memory nodes each with 1 TB of RAM and 32 cores, and 128 standard compute nodes each with an NVIDIA Kepler2 GPU, giving users access to large shared-memory computing and remote visualization capabilities, respectively. Users will interact with the system via multiple dedicated login servers, and a suite of high-speed data servers. The cluster resource manager for job submission and scheduling will either be the Oracle Grid Engine or SLURM (Simple Linux Utility for Resource Management), depending upon the outcome of an ongoing evaluation

Any researcher at a U.S. institution can submit a proposal to request an allocation of cycles on the system. The request must describe the research, justify the need for such a powerful system to achieve new scientific discoveries, and demonstrate that the proposer's team has the expertise to utilize the resource effectively.

- 90% of the system is dedicated to XSEDE
- 10% of the system will be allocated at the discretion of the TACC Director in support of open science projects, including support of:
    - Researchers at Texas Higher Education institutions; and
    - Members of TACC's Science & Technology Affiliates for Research (STAR) Program.

- - - -

It's got 96,000+ processing cores, 205 Terabytes of memory and 14 Petabytes of disk storage.

Whew!

Here's the web site and some pics

http://www.tacc.utexas.edu/resources/hpc

PS...It was 'oil money' that built most of the Texas University System. Tens of billions of dollars from state oil revenues and donations from rich alumni. Good old fossil fuels. So it was appropriate for ASPO to have this years convention at UT Austin!

On the Road with N4CD II

On December 21, I had to head on down to Richardson to meet with a non ham friend for one of my other club's activities. After a couple hour meeting over lunch at the Luby's Cafeteria, I headed on back home. I needed to buy some small springs for holding dial cords on od radios. True Value Hardware supposedly had them and there was supposed to be one off route 75. I never did find it with all the traffic out – seemed mobs were out shopping. It must have been buried behind some other stores.

So it was off to plan B to stop by the local radio store – Texas Towers – in that neck of the woods. I looked at the few items they had on the 'used' table. Nothing interesting. They don't have a lot of new equipment on display – 98% of their business or more is over the phone. We have to pay an 8.25% sales tax – so even Texans order from Ham Radio Outlet by mail to save the tax dollars. On a thousand dollar radio - $82.50 in sales tax vs maybe $20 for an out of state company to ship it to your door – easy decision.

They have the different ham magazines and a good collection of ARRL, RSBG, and other books. I spied the new 2013 ARRL Handbook. They don't change much from year to year, but I buy them to support the ARRL as well, so the one shelf in the closet has a lot of them on it that grows year after year. Texas Towers also have a decent selection of mobile antennas – and I needed another 20M resonator after the last disaster trip to Austin where one decided to leave me part way down the interstate (Fell off) . There were two or three folks taking phone orders and one other customer in the store.

As part of the check out process, the folks at the counter ask for your call to enter it in the computer. OK..that's N 4 Charlie Delta. Pay with the credit card and wander toward the door. Then a voice asks “Are you N-4-C-D?” So I answer yes...and he introduces himself.

So why is this in the County Hunting News ? Turns out that other customer in the store was Pete, N6HH – the big rig driver! USACA # 1185. He had just purchased a tower at the store. He was browsing the books , killing some time. We yakked for 20 minutes in the store, and then wandered out to his big rig parked 200 feet down the street. He had a day to kill before his next load headed back home for the holidays so he took a detour to hit Texas Towers.. He's on the road 50 out of the 52 weeks of the year, and the next two were going to be 'vacation time' for him once he got home.

Pete mainly runs 30M CW these days. His current truck tractor is a Volvo and has 1,000,000 miles on it. That's ONE MLLION MILES. He's got a screwdriver antenna on the driver side that covers 80-17 as set up (short mast with top hat) which he uses while driving. His other side antenna is in for repairs. He's got a nice rig on the passenger seat including a half KW amp. He noted the current truck is getting noisier and nosier as the miles add up so he mainly puts out and chases counties on 30M while moving – and not too ofen , and chases DX while stopped at night with a bigger stinger setup he puts on while stopped. He mentioned it's mighty empty these days on 30M, sometimes with no one listening or coming back to his calls. Or maybe one. Seems we don't have too many monitoring 10.1225 like in the past. Most county hunters don't switch a radio to 30M until the spot appears.

He was wondering what had happened to the big spurt of activity on 30M. Seems not to long ago, W0QE, W0GXQ and half a dozen others were always listening on 30M. Now it's slim pickings and he's roamed around a lot out in OR, ID, WA, and not been able to raise anyone on 30M lately.

He's about to get a new truck – and is hoping it will be quieter than the current truck while heading on down the road. This one has been getting more noisy with more miles on it.

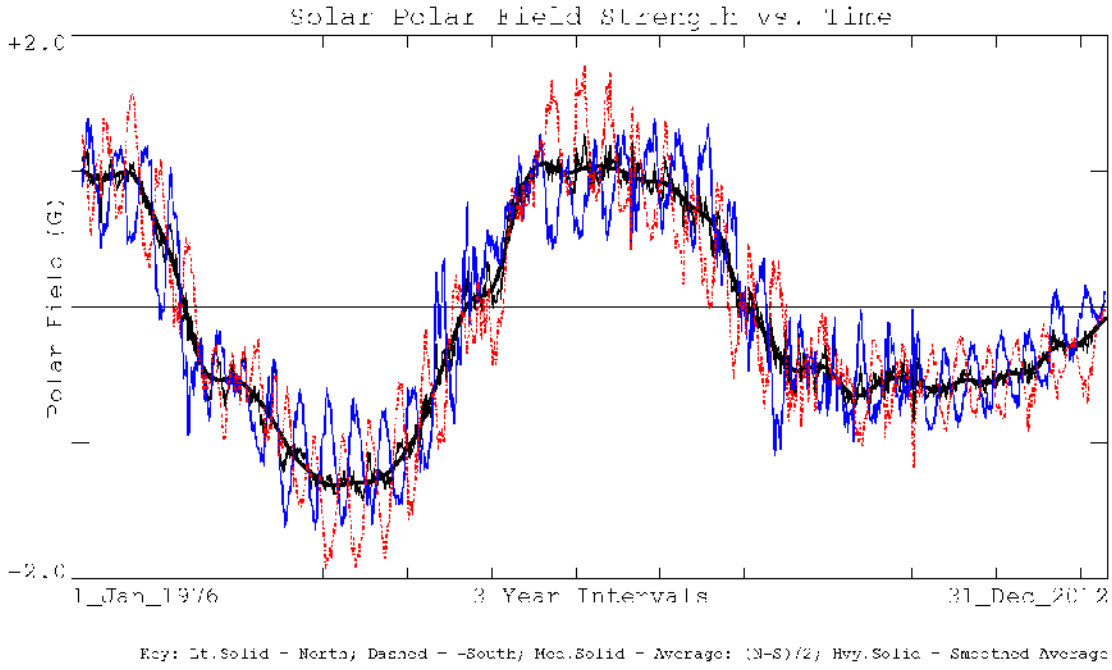
He showed me his log books. Looks like he's already put out over 1000 counties – he's keeping track – only 3 to go in IL and 3 in ID to finish them off. He's doing pretty good on 30M – working the counties - where he hangs out most of the time. Still has lots to go to finish up there.

Unfortunately, my camera was sitting on the counter at home since this wasn't a 'trip'. My old clunky el cheapo cellphone doesn't take pictures either...so folks...sorry no pictures.

So on a day with nary a CW county hunter contact, it was nice to run into Pete and have a long in person chat session. Maybe he'll be stopping by in your neck of the woods?

Has Cycle 24 Peaked?

Here's an interesting plot from Stanford University showing the solar magnetic polarity. Each time the polarity shifts it signals the end/beginning of the next cycle. Draw your own conclusions:



It looks like we are getting close to the point where polarity shifts. Raw data at the link below:

http://wso.stanford.edu/Polar.html

Source of graph:

http://wso.stanford.edu/gifs/Polar.gif

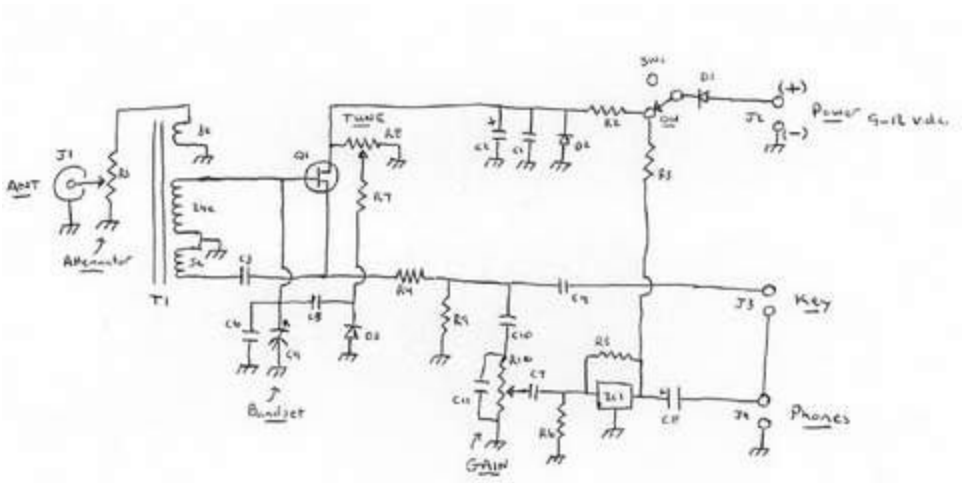
On the Trail of Regens

40M Regen Kit

This month I saw a link to a nice little regen kit for the 40M band. It's offered by Breadboard Radio dot com for 25 bucks including postage.

http://www.breadboardradio.com/breadboardradio/Products.html

Here's a pic of the unit and the schematic.



It's a simple FET rf stage with 'fixed' regen, for about 70 KHz tuning range of the bottom end of 40m. It drives headphones off a 9-12v power supply. It uses a toroid for the coil.

Nifty. They call it the 'sawdust' kits because you get a small wood base (unfinished) and you get to finish it – stain it or paint it. Then the PC board mounts on that for the finished product. The whole unit is under 3 x 3 inches – teeny And the parts are equally teeny!

They also offer a nice little QRP transceiver kit.

Here's a YouTube video of the small receiver in operation

http://www.youtube.com/watch?v=qa5L98S3gXs&feature=youtu.be

Homebrew VLF Regen Receiver

Then on Ebay another 'Homebrew VLF' receiver showed up. It has 3 tubes inside and one is likely a rectifier tube – plus a knob on the front panel marked 'reg' for regen. Many of the VLF receivers – which could tune down to 20 Khz or so, were regens. It's hard to downconvert to an IF, or cover the band when your IF is in your range of interest!

It uses plug in coils – a set of 7. Here's a pic of the insides plus the set of plug in coils. Advertised for $139 on Ebay (way way too high) or 'best offer'. The coils plug in right next to the speaker (bad - pick up the field from the magnet – bad layout! Then again, it might work. Seller said 'he has no way to test it but it 'lights up'.

Here's a closer up picture of the coils. Note how they were oriented and made.

It's a real 'pig in the poke'. I'll watch it and see if it sells. Nice coils. Then again, there is not to listen to from 15 KHz to 550 KHz these days other than navigation beacons, a few broadcast stations in Europe that use a band below 500 KHz, and maybe – just maybe- a new ham band near 485 KHz.

Educational Electronic Kit – two tube kit

This is something I've never seen before – it's made by Educational Electronics out of Chicago, IL. Showed up on Ebay

Sky Chief "Loudspeaker Radio"

The box notes it's a 2 tube radio – drives a speaker- and comes with a 'hand rubbed' mahogany cabinet. No soldering 'required'. I'd estimate it's a 1950s or early 60s kit and to get the gain,

it's a regen detector and audio amp stage.

Smoke and Mirrors – Peak Oil

Why the Oil Industry Doesn't Want You to Remember the Last 14 Years

What were the prices of oil and gasoline in 1998? Do you remember? Without looking them up (or looking below this line), make your best guess.

I've been taking an informal poll to find out what people remember about oil and gasoline prices in that year. So far, only one person has correctly characterized prices back then. Most guesses have clustered around $2.50 to $3 a gallon for gasoline (in the United States). Only one person could come up with a crude oil price which she guessed was around $55 a barrel. The answers show a vague recollection that oil and gasoline were cheaper than they are today. But just how much cheaper has been lost down the memory hole.

Okay, I know the suspense is killing you. Here's how gasoline and oil fared in 1998. The nationwide average price of a gallon of gasoline in the United States in December of that year was 95 cents. The closing price for a barrel of crude oil sold on the New York Mercantile Exchange on December 31 was $12.05. Just three weeks earlier the price of oil had hit its nadir for the year at $10.72. Oil had started the year above $17 and steadily slid as the Asian financial crisis slowed the world economy and reduced oil demand. Gasoline prices dropped only a little during the year starting from the January average of $1.09 a gallon.

Why does the oil industry want you to forget this? Because after a 10-fold increase in the price of crude oil and a fourfold increase in the price of gasoline, the industry is once again trying to sell the same story of continued abundance that they were selling back in the late 1990s. But the manyfold increase in oil prices ought to make everyone doubt an industry which has repeatedly told us that huge supplies are just around the corner, and prices are headed for a crash.

Perhaps the best example of the oil industry's "Wrong Way Corrigans" is industry mouthpiece Daniel Yergin, head of Cambridge Energy Research Associates (CERA), a prominent energy consulting firm. For a long time Yergin has been a frequent guest on prominent television news programs and a source for many print journalists. He is a darling of the media on energy issues, a media which is too polite to confront him with his abysmal record of predictions in the oil

market. He was wrong in his public pronouncements every step of the way from the 1998 low in oil prices right up to the all-time highs of 2008, frequently predicting a large buildup of new supply and crashing prices. (One wonders why clients of CERA continue to buy the company's research when it has been so wrong for so long. But that's a story for another time.) Only at the end of 2008 did oil prices finally crash and then only because the world economy was headed into the worst economic decline since the Great Depression. But as soon as the economy revived even tepidly, prices rose back to $80 a barrel and then above $100 which is about where they are today.

The reason for high prices is actually quite obvious. Crude oil production worldwide has been stuck between 71 and 76 million barrels per day since 2005 (calculated on a monthly basis). Oil volumes have been tracing out a troubling bumpy plateau that many fear will mark the all-time peak in world production. These numbers are reported by the U.S. Energy Information Administration, the statistical arm of the U.S. Department of Energy, and are widely considered to be the most reliable available. They reflect total production of "crude oil including lease condensate" (which is the definition of crude oil) from all sources worldwide.

Oil production has stalled despite the huge incentive that record high prices are providing for oil exploration and development. And, despite enormous spending by oil companies on exploration and drilling worldwide, we have only just kept production on a plateau for the last seven years. These high prices and enormous capital spending were the reasons given by Daniel Yergin for the expected buildup of production volumes. So what went wrong?

The simple answer is that we've exhausted the easy-to-get oil and are now left with mostly the hard-to-get oil. It only makes sense that the early oil pioneers harvested the easy oil first. Why go after the hard stuff at that point? We've since learned how to extract oil that is much harder to develop. This includes deposits far offshore and deep below the seabed as well as those locked in the Canadian Tar Sands, deposits that must undergo expensive and energy-intensive processing to convert what is really bitumen, a goopy, thick hydrocarbon, into what we call oil.

And, this leads me to a crucial concept which I find myself repeating over and over again in response to all the foolish Daniel Yergins of the world: The critical factor in the oil markets and a global economy dependent on large, continuous supplies of oil is the rate of production. The rate is the key, not the size of the world's reserves. It is the size of the tap, not the size of the tank that matters.

Let me offer another analogy to help explain. If you inherit a million dollars with the stipulation that you can only withdraw $500 a month, you may be a millionaire, but you will never live like one. That is increasingly the situation we face with oil. There may be huge resources of tight oil (often mistakenly referred to as shale oil) and of oil-like substances such as tar sands. But the expense, the necessary energy and increasingly, the amount of water required to extract and process them is so great that we have been unable to lift the worldwide rate of production significantly above its current plateau for a sustained period during the last

seven years. Even with all our vaunted new technology, we have only just barely been able to replace the capacity lost each year to the inexorable decline in the rate of production from existing oil fields.

Recently, the head of a company well placed to judge trends in the worldwide rate of oil production said he believes that the all-time peak is in. Core Laboratories CEO Dave Demshur told attendees at the Denver Oil & Gas Conference last month that "[t]he maximum yearly oil production of the planet is taking place now." Core provides well analysis and reservoir management to oil and gas companies in practically every major oil region of the world. Demshur's statement is an unusual admission from an industry insider with access to information that spans the entire industry.

The truth is we won't know for sure that we've passed the peak in world oil production until long after it occurs. It may be a decade after the event before oil production turns down definitively and the peak becomes obvious for all to see.

Just to clarify, here's what peak oil does NOT mean:

Peak oil does not mean we are running out of oil. This is a canard used by the oil industry to confuse the public. Nobody who understands world peak oil production ever says that it means we are running out. In fact, we won't run out of oil for a very, very long time. At the peak the rate of production will cease to rise, probably trace a plateau for a time, and finally begin a possibly slow and bumpy decline. That means we'll have less and less oil available each year. As oil becomes more and more expensive, we will use less, and we will ultimately reserve it for critical purposes for which we cannot find good oil substitutes.

Peak oil does not mean that we won't find any more oil. We are finding oil every day. We're just not finding enough and putting it into production fast enough to grow production in the face of declining flows from existing fields.

Peak oil does not mean the immediate collapse of modern civilization. However, if we stand still and do little to address oil depletion, peak oil will likely result in immense difficulties.

The industry and its paid spokespersons try to dazzle the public with talking points that include the notion that we have more oil reserves than we've ever had. That is questionable, and I'll explore that claim in a later piece. But again, I emphasize that reserves are not the salient point. It is and always will be the rate of production that matters more. If oil production stopped for a sufficiently long period–enough to drain all aboveground supplies–modern civilization as we know it would collapse. The amount of reserves would not matter since the rate of production would have dropped to zero.

What matters is how much we can produce for continuous input into the world economy. As you might intuit, we've built a financial system and physical infrastructure premised on

continuous and rising levels of oil consumption. That's why peak oil matters so much, and why flat oil production has been a large contributing factor to the unstable world economy in recent years.

To further illustrate the importance of rate, consider the following: Half of all oil consumed since the beginning of the oil age has been consumed since 1985. We consumed exponentially larger amounts nearly every year until 2005 when a number of factors conspired to constrain supplies. We frequently hear about multi-billion barrel discoveries and think (wrongly) that oil must surely be plentiful as a result. So, here's another question to ponder: How long does one billion barrels of oil last the world at current rates of consumption? If you guessed something close to 12 days, you have a sense of the enormous challenges humans face in extracting finite resources at ever higher rates. Just multiply those multi-billion barrel discoveries by 12 to find out how many days the oil age might be extended by each discovery. You'll find the answer is, "not many."

Perhaps it will seem puzzling that experts inside the industry–with a few notable exceptions–cannot grasp that the rate of production is the central issue. The best explanation I can offer is to quote author Upton Sinclair: "It is difficult to get a man to understand something, when his salary depends upon his not understanding it!"

And, here is where we get to the motivations behind the sunny optimism of the oil industry. If the public understood that oil supplies might be nearing an irreversible decline, it would demand the deployment of alternative fuels and efficiency measures to soften the blow in order to give us time for a transition to a society based on something other than oil. That would ultimately reduce demand for oil products and eventually end our dependence on oil. Oil companies might get stuck with significant inventories in the ground that they cannot sell, at least not at the prices or in the quantities they would like.

The more immediate problem for oil company executives is that their companies may soon find it impossible to replace all their oil reserves. Oil companies strive to replace at least 100 percent of what they produce so that their reserves don't fall. If investors come to believe that a failure to replace reserves will be ongoing year after year, they will mark down oil company share prices significantly. In fact, it's already happened, and it's likely to happen with more frequency as more companies struggle to reach 100 percent replacement. Such share price declines would, of course, make a lot of oil executives significantly poorer as the value of their stock and stock options plummet. Essentially, oil companies would be recognized as self-liquidating businesses.

All of this the oil industry wants you to ignore as it undertakes yet another public relations campaign to convince the world that supplies will only grow from here. Naturally, with prices near $100 a barrel, the public needs reassurance. The campaign is designed to lull both the public and policymakers into a somnolent surrender to a business-as-usual future that will leave us unprepared for the momentous challenges ahead.

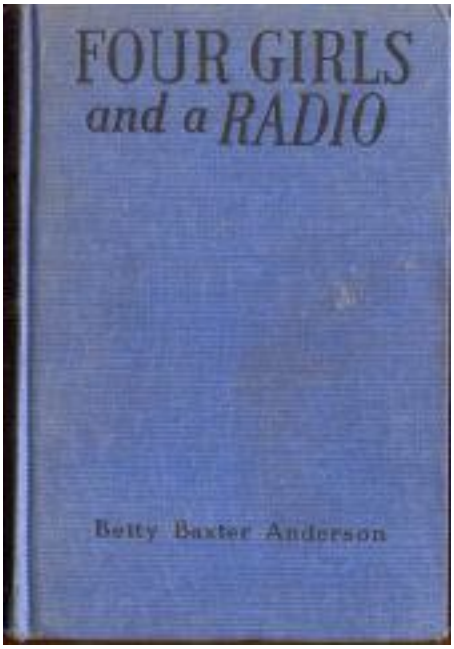
Oil is the central commodity of the modern age. As of 2011 it provided one-third of the world's energy and the basis for countless petrochemicals necessary to the functioning of modern society. Oil's role in transportation remains critical; 80 percent of the world's road, rail, air and sea transportation fuel is derived from petroleum, and in the United States the number is 93 percent. Good substitutes for oil in transportation are still hard to come by.

No one can know exactly when world oil production will peak–not me, not the world's oil companies, not any government agency. The dangers we face if we are unprepared are potentially quite severe. With worldwide oil production essentially flat for the last seven years, the sensible thing to do would be to get ready now as quickly as we can.

Given what's at stake for oil company managements, it should be obvious why they are telling us not to worry. Given the publicly available production data, the persistently high price of oil, and the failure of oil companies to expand worldwide production even after enormous expenditures and effort, it should also be obvious why we shouldn't fall for the industry's beguiling but wildly misleading tale.

Four Girls and a Radio

While twiddling my thumbs waiting for some cw mobile activity – it's been mighty slow some days, I stumbled across another radio adventure book. This is from the 1944 time period during WW2 and is the story of, well, four high school age girls and a 'radio'. For a few bucks and a click on the internet, the book arrived in my mailbox a few days later. It's another that will be up for sale at the silent auction of the next Vintage Radio Club event. Hi hi



It's really light on radio content, but is interesting to 'go back' to the WW2 era. That's before television and before personal computers and the internet. Way back. The story starts out with two girls looking for an apartment in River City, IA. The war is going on (WW2 for you newbies – gosh, more than half the people in this country now born after 1984 now). Their families live 15 miles outside of town, and the school buses will no longer be running – they are needed to transport workers to the new plant built outside the town. The government has built a giant 'shell loading plant' there, and hundreds of workers have flooded in and finding an apartment is hard.

Eventually they come up with an arrangement with two other girls, and as part of the deal they have to 'take care' of a British refugee high schooler whose parents have sent her to America to escape the blitz and other happenings in the home country. So four girls wind up renting an apartment over a garage on a large estate owned by an old lady.

The girl from Britain has a 'short wave radio'. She is a fanatic about listening to the 'news' broadcasts from the BBC, Germany and other countries. She also plays the accordion, and winds up 'starring' in several musical events.

About 90% of the way through the book, after you learn about WW2 rationing for sugar and other things, the 'adventure' starts when the British girl, Rosemary, finally breaks the 'code' of the shortwave broadcasts. Seems that in River City, there was an explosion at the ammo plant that killed 12 people. It was written off as an accident. Later there was a man who 'went berserk' and took out revenge against his company allegedly– that took out one of the locks on the river – destroying it and causing a million dollars in damage and stopping shipping for six months. Finally she realized that these events occurred after a sequence of news

announcements, such as 'news' of Russian going nuts and blowing up the ship he was on in a lock in a Russian River. Or 10 people being blown up mysteriously at an ammo plant. Later in those same days of the 'news' announcement, certain other things were 'switched' on the program and occurred at exactly the time of the previous events.

She realized that at 10pm that night, the saboteurs were going to blow up the big critically important bridge over the river just as the ammo train was headed across it. So she quickly recruited a band of friends who a) dived into the river and cut the wires to the dynamite – after they spied the saboteurs leaving the bridge support column b) called the FBI c) found the get away car and let the air out of the tires and d) where there when the police and FBI arrested the four saboteurs.

That's about all the 'radio' that was in the book. But for a few bucks, it was a decent 3 hour read. You never even learned what the 'shortwave radio' was or any other detail.

As far as I know, it is the only book that the author wrote about 'radio'. (and likely ghost written by a syndicate firm).

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Update:

Saturday December 8th the Vintage Radio Club had it's annual holiday dinner. The three books bought on the net were put up for sale at the silent auction – and are now officially 'passed on' to the next reader at about the price I paid for them. The fun of reading them continues! However, another vintage book followed me home, so they'll be something to report on next month!

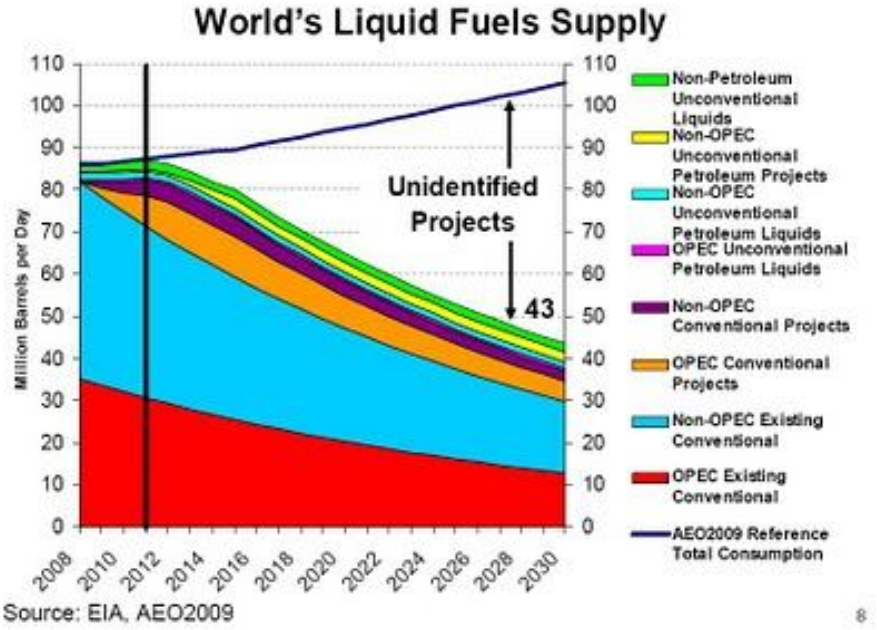
Oil's Future – a Graph

The one chart about oil's future everyone should see
by Kurt Cobb

When people read about a long-term forecast of world oil supply--say, out to 2030--they often believe that the forecasters are merely incorporating our knowledge of existing fields and figuring out how much oil can be extracted from them over the forecast period. Nothing could be further from the truth. Much of the forecast supply has not yet been discovered or has no demonstrated technology which can extract or produce it economically. In other words, such

forecasts are merely guesses based on the slimmest of evidence.

Perhaps the best ever illustration of this comes from a 2009 presentation made by Glen Sweetnam, a U.S. Energy Information Administration (EIA) official. The EIA is the statistical arm of the U.S. Department of Energy. The following chart from that presentation will upend any notion that we know exactly where all the oil we need to meet expected demand will come from.



The chart shows that by 2030 world output of oil and other liquid fuels from current fields is expected to drop to 43 million barrels per day (mbpd), some 62 million barrels below projected demand of 105 mbpd. (Though prepared in 2009, the chart takes into account known projects expected to be producing by 2012.) This drop is consistent with the observed decline in the worldwide rate of production from existing fields of about 4 percent per year. Certainly, there will be more projects identified in the 18 years ahead. And, many people will say that we already have a large new resource of tight oil (often mistakenly referred to as shale oil) which can be extracted through hydraulic fracturing or fracking. But even if the optimists are correct--and there can be no guarantee that they will be--this source of oil will only add 3 to 4 million barrels of daily production. What Sweetnam's chart tells us is that we must find and bring into production the equivalent of five new Saudi Arabias between now and 2030 in order to meet expected demand even if the volume of tight oil reaches its maximum projected output. (The Saudis currently produce about 11.7 mbpd of oil and other liquids.)

Because Sweetnam's chart is for total worldwide "liquid fuel supply," it's worth noting that in

recent years something called natural gas plant liquids (NGPLs) have been included in world oil supply based on the assumption that these hydrocarbons are 100 percent interchangeable with oil. NGPLs are components of natural gas other than methane such as ethane, propane, butane, and pentane, and their production grew recently with the natural gas drilling boom in the United States. Only a small portion of NGPLs can directly substitute for oil, and ramping up production of that portion independently is impossible since it is mixed in the methane.

But oil proper--defined as crude oil including lease condensate--continues to trace out a plateau in production that began in 2005.This makes the oil situation all the more concerning. It is true that rising and ultimately record high oil prices in the last decade have prompted oil companies to increase capital expenditures including those for exploration and drilling to their highest level ever. But, the vast effort represented by those expenditures has failed to boost true crude oil production definitively above the current bumpy plateau.

Some will point to vast deposits of so-called oil shale in the American West and suggest that production from these can fill the gap in the coming years. But right now commercial production of oil from this source is exactly zero. And, current reserves are also exactly zero since reserves are defined as those underground resources that can be produced profitably at today's prices from known fields using existing technology. (For a more detailed discussion, see my recent piece on unconventional oil resources.)

Perhaps most important is that Sweetnam's chart shows not how much oil we must discover, but the rate of flow we must achieve from any discoveries in order to match supply with projected consumption. Huge discoveries mean little if we cannot extract the oil profitably and at rates that are commensurate with our desired rate of consumption. With conventional oil in decline since 2006 according to the International Energy Agency, a consortium of 28 mostly importing nations, we will now be forced to rely increasingly on sources of unconventional oil such as the tar sands of Canada and the heavy oil of Venezuela, both of which are difficult and costly to extract and refine. So far the flows of unconventional oil have only just offset declines in the rate of production of the cheap, easy-to-get, free-flowing conventional oil which has powered modern civilization to date.

The global economy is entirely dependent on continuous flows of energy and raw materials. Oil is absolutely central because it provides one-third of the world's energy and more than 80 percent of its transportation fuel. Unless oil production rises from here, global economic growth will eventually stall (if it hasn't already).

With the EIA projecting oil production from oil shale of 140,000 barrels per day by 2030, we should not expect to close Sweetnam's deficit of 62 mbpd from this source. Even if the EIA is too pessimistic on oil production from oil shale by a factor of 10, such production would barely put a dent in the anticipated supply gap by 2030.

It should be apparent that energy policy around the world is essentially based on the idea that

Sweetnam's gap will be filled in time and comfortably. And yet, there can be no assurance of this. In fact, the ongoing plateau in the rate of world oil production in the face of record high prices ought to give us pause. If seven years of very high prices can only marginally move the rate of production of all liquids (which includes crude oil, natural gas plant liquids, biofuels, and refinery processing gains) up about 3.15 percent and if crude oil proper can only stay flat during the same period, how can we expect that the next seven years and the next seven after that will be filled with nothing but good news on supply?

If the answer to this question is that technology will unlock new resources and overcome the declines in existing fields, keep this is mind. If that technology is not on the shelf and ready to deploy today, it will make almost no difference in the 18 years between now and 2030. For those who point to hydraulic fracturing as a recent technological breakthrough, they need to do a little research. Hydraulic fracturing was first used in 1947. More than 30 years later in the early 1980s, building on government research, George Mitchell and his company Mitchell Energy and Development began pursuing natural gas in deep shale deposits. It took Mitchell 20 years of experimentation, government help and government incentives to perfect the type of hydraulic fracturing which is now used to release both natural gas and oil from deep shales. It took another 10 years for his methods to be widely deployed by the oil and gas industry.

So, here's the timeline on hydraulic fracturing. It took 60 years from the time the technique was first deployed until it was refined and widely adopted by the industry for the specific purpose of extracting natural gas and oil from deep shale deposits. Don't look for any new miracle technologies to make a significant difference in oil production between now and 2030 unless they are already in the field performing their magic today and have not yet been widely adopted.

The effects of hydraulic fracturing on oil production are already in evidence. And, while the technique has allowed us to recover oil from previously inaccessible deposits, it has not allowed us to grow oil supplies worldwide as declines in production elsewhere have offset increases in production of oil from shale deposits (properly called tight oil).

With high oil prices and the hottest new technique unable to move the needle on worldwide production of crude oil, we should look at Glen Sweetnam's chart with considerable concern. We should ask ourselves whether it is wise to base energy policy on the fantasies of industry and government forecasters. Perhaps we should focus instead on the trends and data we can verify and prepare ourselves and our economies for a world that may not have the copious amounts of oil that the industry is promising.

Source: http://investorvillage.com

Full presentation here:

http://www.eia.gov/conference/2009/session3/Sweetnam.pdf

This month from Ebay Sellers

1) **40M AM Handheld Transceiver** - Here's something you don't see every day. You can buy your own 'handheld' 40 M AM transceiver....from DZ kits. Here's an assembled one up for sale on Ebay

from the seller: “I just built this transceiver last month and I made one contact with it on the single frequency supplied of 7290khz AM. I did my best in the tune up procedure to get the AM to sound right, but it ended up with about 2 watts out and the audio will bounce the power up to about 4 watts peaks. The receiver is spec. @ 8uv, so don't be impressed with the signal sensitivity, kinda poor for my liking. It's a direct conversion receiver. I'm selling it to buy 220 MHz portable, so there you go. “

http://www.youtube.com/watch?v=lEXWkIUCh38

2) **1926 Shortwave Kit -** Here's another thing you and I will likely never see again – A Silver Marshall "Shortwave" Radio Kit, circa 1926, still in the box, never assembled. You probably used a pine board as the chassis and a bakelite type front panel (not supplied.

From the Ebay ad:

"This was a Short Wave Kit made available by Silver Marshall in 1926. The box, although in poor condition, is the original. The description in their ads stated that the kit was factory packed in an attractive display carton This isn't a complete kit, having some of the needed S-M 635 parts and also other S-515M parts.

The original SM 635 Short Wave Kit contained one S-M 117 Coil Set, one S-M 515 Coil Socket, one S-M 340 Midget Capacitor, one S-M 275 RF Choke, and two S-M 317 Variable Capacitor."

What you got in the first kit, sold for $23 then (a lot of money!) was a basic one tube regenerative receiver – minus the tube, the vernier dial mechanism, the 'rheostat' for controlling the gain of the stage, and the front panel.

They sent you a 32 page booklet that showed you multiple circuits you 'could' build. They had an add on kit that included two more tube sockets, two interstage transformers, the needed rheostats, two vernier dials, the grid leak resistor and holder, bypass caps and a 'micalite' front panel drilled and lettered plus a 'subchassis' for the audio parts. That was an additional $63.95 dollars for a total now of $87! (real real money in 1928 when this ad appeared).

Source: Radio Manufacturers of the 1920s by Alan Douglas, p87

Silver Marshall of Chicago, IL, made radios and kits, and sold components. They made up to six and seven tube radios. Their era seems to have been from 1926 up to the early 30s, then they went the way of many companies in the great Depression. After 1929 sales of radios plummeted as the country hit the depression that lasted until WW2 when private industry was once again allowed to prosper. The majority of radio companies failed and were consolidated into the bigger ones if they were lucky.

3) Ebayer Stupidity department – case 1749 or so

"Cool old kit radio from Ked-Rad! Probably 30's or 40's, made in Owensboro, KY
This auction is for parts,repair only. I plugged it in and only one tube lit up.
It made a very loud humming noise and that's all. It will need to be fixed."

4) Philmore CR5-AC 4 band kit set from the 50s

This was a kit radio – somewhat similar to the Heathkit AR-2/3 series that covered the shortwave bands. It was a five tube set for beginners and SWLs (Short Wave Listeners). In the cabinet – sold for $50.

End of Year CW Stats

from Dennis, KK7X:

Once again I am handling the CW Stats for Elwood, KA3MMM.

Please send me your CW Stats as of the end of 2012 shortly after January 1.

You can find the Stats for 2011 by visiting this link

http://www.countyhunter.com/County Hunter_CW_Stats_for_2011.pdf

If you have any question please don't hesitate to contact me.

73, Dennis - KK7X

New Ham Band Sought by ARRL

At the 2012 World Radiocommunication Conference (WRC-12), delegates approved Agenda Item 1.23: a 7-kilohertz-wide secondary allocation between 472-479 kHz for the Amateur Radio Service, with a power limit of 5 W EIRP (or 1 W EIRP, depending on location). Before this portion of spectrum is made available to radio amateurs in the US, the FCC must first approve its use and amend its rules to reflect the change. As such, the ARRL filed a Petition for Rulemaking on November 29, asking the FCC to amend Sections 2 and 97 of its rules and create a domestic Amateur Radio allocation at 472-479 kHz, conforming to the allocation status and limitations set forth in the international Radio Regulations.

“The subject of a low-frequency (LF) allocation, and/or a medium-frequency (MF) allocation in the lower portion of that range for the Amateur Radio Service has a long history at the Commission,” the ARRL pointed out in its Petition. “As yet, however, the Commission has not created either one.” Presently, the lowest domestic frequency allocation for the Amateur Service -- and the only MF allocation -- is at 1800-2000 kHz.

The ARRL also pointed out that there is an Amateur Radio allocation in all other areas of the radio spectrum, providing for experimentation in virtually all types of radio frequency communications. “Technical self-training and furtherance of radiocommunications development in the Amateur Service (which is in essence an experimental radio service) would be greatly enhanced by an LF allocation and an allocation in the lower portion of the medium-frequency (MF) range,” the ARRL maintained. “It is now timely, in response to actions taken at the 2012 World Radiocommunication Conference (WRC) to create a new, domestic MF allocation at 472-479 kHz for the Amateur Radio Service.” The ARRL pointed out that while it is also desirable and timely to have an allocation in the LF portion of the spectrum, that matter was addressed in the Notice of Proposed Rulemaking and Order, just released in ET Docket 12-

338 on November 20.

In October 1998, the ARRL filed a Petition for Rulemaking, seeking LF allocations for the Amateur Radio Service at 135.7-137.8 kHz and 160-190 kHz. The Petition noted, with respect to the 135.7-137.8 kHz band, that radio amateurs in other countries had already been accommodated in that segment, including Belgium, Finland, Norway and the United Kingdom. Other countries at the time permitted Amateur Radio experimentation at LF via special or experimental authority, including Germany, Iceland, Italy, Luxembourg and Australia. Allocations were pending at the time in France and Sweden. A 1997 CEPT recommendation was the basis for the specific interest in the band 135.7-137.8 kHz in Europe. The justification for the proposed allocation of 160-190 kHz in the ARRL's Petition was the fact that numerous radio amateurs and experimenters were already using that band pursuant to Part 15 rules, which allows operation in that band at up to 1 W input power, but with significant antenna size restrictions that severely restricted antenna efficiency and compromising most experimentation in that band.

The FCC issued a Notice of Proposed Rulemaking in May of 2002 in response to the ARRL's Petition. The FCC also specifically found that "…this allocation appeared to be acceptable because the incumbent use of the 135.7-137.8 kHz band appeared to be very light, and thus a secondary Amateur Service allocation in this band would likely raise few interference concerns." It was also noted that the use of LF frequencies generally by unlicensed devices was on an "unprotected, non-interference basis" and that PLC systems are permitted pursuant to Section 15.113 of the FCC's rules to operate in the 9-490 kHz segment. Because of concerns related to potential interaction between PLC systems and amateur stations, the FCC did not propose to allocate the 160-190 kHz band to the Amateur Radio Service, and ultimately, in May 2003, the FCC declined to create the secondary allocation proposed by ARRL in either LF band, citing what the ARRL called in its 2012 Petition "generalized but technically unsubstantiated concerns in comments filed by the United Telecom Council (UTC) and by an IEEE committee about potential interference to PLC facilities." Those issues are also to be revisited in ET Docket 12-338.

472-479 kHz and WRC-12

The ARRL pointed out in its current Petition for Rulemaking that "[n]one of the Commission's past concerns with Amateur Radio interaction with PLC systems operating at 160-190 kHz or 135.7-137.8 kHz -- however valid those concerns might have been at the time -- applies or has applied to the band 450-490 kHz." An international allocation to the Amateur Radio Service at 472-479 kHz was adopted at WRC-12 with of 5 W EIRP for most of the world. The Final Acts of WRC-12 become effective on January 1, 2013.

"The allocation was made in fulfillment of WRC-12 Agenda Item 1.23, considering a secondary allocation to the Amateur Radio Service in the range 415-526.5 kHz," the ARRL

stated. “Studies conducted in support of the Agenda Item considered present and future uses by incumbent services (mobile, including maritime mobile and aeronautical radiolocation). Several frequency ranges for the allocation were considered. Ultimately, WRC-12 concluded that the range 472-479 kHz offered maximum protection to existing and future applications in these services, consisting primarily of broadcast data transmissions in the maritime mobile service and aeronautical non-directional beacons in the aeronautical radiolocation service. Several administrations -- including Germany, Sweden, the Netherlands, New Zealand and Monaco -- have already authorized Amateur Radio Service operation on the 472-479 kHz band beginning on or in advance of the January 1, 2013 implementation date of the WRC-12 Final Acts.”

In the United States, the 472-479 kHz band is part of the larger segment 435-495 kHz that is allocated on a primary basis to the Maritime Mobile Service (federal and non-federal users), and on a secondary basis for federal government aeronautical radionavigation. The ARRL stated in its Petition that it is not aware of any domestic assignments that would conflict with the allocation of the band 472-479 kHz to the Amateur Radio Service, and there is almost no PLC operation in this band segment.

According to a 2002 article in IEEE Transactions on Power Delivery entitled “Evaluation of the Potential for Power Line Carrier (PLC) to Interfere With Use of the Nationwide Differential GPS Network” (Silva, Michael, Senior Member, IEEE and Whitney, Bruce, Member, IEEE), of the 28,816 PLC transmitters that existed in the United States in 1999, only 20 operated anywhere in the band 450-490 kHz. Of the 40 kilohertz-wide segment referred to in the article, only 7 kilohertz is proposed to be allocated to the Amateur Radio Service in the US.

“Therefore, even if any of those 20 PLC transmitters that operated somewhere in the 450-490 kHz in 1999 are still operational,” the ARRL said, “and even if any of those which were operating in 1999 and which are still operational are presently operating in the small segment 472-479 kHz, it would surely be a simple matter indeed to retune those very few PLC transmitters less than 4 kilohertz, which is less than 1 percent of the available operating frequencies for PLC systems at LF and MF. So, very little adjustment would be required, if any would be called for at all, and it would be a simple matter indeed to do so.”

The ARRL maintained that the 5 W EIRP maximum power specification recommended at WRC-12 for this band will not affect the utility of the allocation for radio amateurs: “Given typical antenna efficiencies in this frequency range, Amateur Radio stations operating in this band are likely to fall well within this limit. International footnote 5.80A (Geneva 2012) would impose a 1 W EIRP limit on US radio amateurs only when operating within close proximity to certain countries, including the Russian Federation. As a practical matter, only stations in the western part of Alaska, or certain maritime mobile amateur stations, could be affected by this limit.”

As such, the ARRL, in its Petition, proposes to implement these power limits. “The utilization

of narrow bandwidth emissions has proved satisfactory in extensive experimental operation in the vicinity of 500 kHz in the United States," it said. "With respect to this band, no reports of harmful interference to the primary services (or to PLC systems) from experimental amateur operation have been received. Any likelihood of interaction between amateur stations and PLC systems in this band will be exceptionally low."

The ARRL has sponsored an extensive course of experimentation in the MF spectrum near 500 kHz since 2006. In September 2006, a group of 23 amateur stations -- using call sign WD2XSH -- scattered throughout the US were permitted to operate in the band 505-510 kHz for a course of experimentation with propagation and interference testing. During the course of this experiment, the number of participating amateur stations increased to 42, and includes all geographic areas of the US, including Alaska and Hawaii. The frequency bands utilized were modified to include the entirety of 461-478 kHz and 495-510 kHz. Emissions, at power levels up to 20 W ERP, include 150 HA1A, 62H0J2B, 62H0F1B and 62H0G1D. This experiment is scheduled to continue through the end of the current license term, August 1, 2015. No reports of interference have been received. This is a disciplined program of experimentation with regular reports and analyses of interference potential to other services (including PLC systems) and experimentation with equipment and antennas.

Should, for any reason, PLC systems deem it necessary to continue to utilize this small segment going forward, and to the extent shown to be necessary, the ARRL stated in its Petition that it would be willing to maintain a database of Amateur LF operation at 472-479 kHz and to provide it to the FCC in accordance with the spirit and intent of Footnote US2, the NTIA Manual and the Commission's Part 90 rules; however, the ARRL pointed out that Footnote US2 makes it clear "that PLC systems operating in this band are unprotected, and it would be difficult to imagine why any PLC system would need to continue to operate in this small segment in this area of the spectrum on an ongoing basis. Finally, it is noteworthy that PLC systems are used on transmission systems only, and not on distribution systems. It is unlikely therefore that any will be in close proximity to Amateur stations. PLC systems are obligated by the FCC's rules to 'adhere to industry approved standards designed to enhance the use of power line carrier systems.' This is intended to facilitate additional overlay uses of the same LF or MF spectrum."

The ARRL said that PLC systems are, or can be capable, of this through the "frequency agility of PLC transmitters (either using software-defined radio equipment or by simply notching small segments of the 9-490 kHz band available to them), and more especially by PLC system design in compliance with the immunity standard IEEE-1613. That standard sets a high bar for immunity of PLC systems, and if met, would virtually guarantee that there would be no interaction between amateur stations and PLC systems in this range, even of the latter were operated on a co-channel basis. Compliance with this standard is called for by Section 15.113 of the Commission's rules, and PLC devices sold to utilities and placed within substations since 2002 have been subject to this standard." Also, systems operating pursuant to certain standards utilize polite protocols "which will delay a PLC transmission if the channel on which the PLC

system wishes to transmit senses that the channel is occupied. Given the above factors, and the very small number of PLC systems (if any) that might currently be operating in the narrow range 472-479 kHz, it is suggested that there will be virtually no interaction between the two uses."

The ARRL, in its Petition, offered a proposed change to Section 97.305(c) to permit use of RTTY and data emissions in this new secondary allocation (please see the appendix, located on pages 14-15 of the Petition for Rulemaking); as per the existing Section 97.305(a), radio amateurs would also be permitted to utilize CW emissions in the band. The appendix also proposes to permit General and Amateur Extra Class licensees access to the band. Technician class licensees would not be permitted to utilize the band. The maximum permitted power level for this band proposed in the appendix would be either 1 or 5 W EIRP maximum power, consistent with the international allocation made at WRC-12.

Source: ARRL Newsletter

http://www.arrl.org/news/arrl-files-petition-for-rulemaking-with-fcc-to-create-new-mf-band-at-472-479-khz

de N4CD – PLC or Power Line Control systems use radio (typically up to 100w) over medium and high voltage lines for communications channels and for control over circuits/circuit breakers. The RF is coupled onto the power lines with gigantic RF chokes and gigantic capacitors (think million volt rating) and de-coupled the same way at the far end. In the event of a fault or overload on the line, they can be used automatically to trip out the circuit to prevent damage to other equipment or provide a talk channel for service personnel when other telephone lines are down. The technology goes back six or seven decades.

Super Computer News II

BP said Thursday that it has started construction in Houston on a new facility that will house what's being billed as the world's largest complex of supercomputers for commercial research, which the British oil giant will use for processing and managing massive amounts of geological and seismic data.

The new high-performance computing center, scheduled to open in 2013 at BP's Westlake

Campus, will enable scientists to produce clear images of rock structures deep underground that can be used to identify potential drilling targets for oil and natural gas. The complex is expected to cost more than $100 million during the next five years to get up and running, a company spokesman said.

The new center will be equipped with more than 67,000 CPUs, with a total memory of 536 terabytes, the equivalent of 147,000 Apple iPods with 160 gigabytes of storage. It will give BP scientists the ability to finish an imaging project in a single day that a decade ago would have required four years, the company said.

"This is not just about building a bigger and better computer," Robert Fryar, BP's executive vice president of production, said in a statement. "BP's new high-performance computing center will be as important to our global search for new energy resources as any piece of equipment we employ today, and it once again highlights BP's commitment to applying the best technology to the world's biggest energy challenges.

Those Wind Farms

You've been told all those expensive, expensive wind farms have a life of 25 to 30 years before they are going to need replacing. Guess again. The latest 'inconvenient facts' from the UK and their experience on wind power:

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The Renewable Energy Foundation [1] today published a new study, The Performance of Wind Farms in the United Kingdom and Denmark,[2] showing that the economic life of onshore wind turbines is between 10 and 15 years, not the 20 to 25 years projected by the wind industry itself, and used for government projections.

The work has been conducted by one of the UK's leading energy & environmental economists, Professor Gordon Hughes of the University of Edinburgh[3], and has been anonymously peer-reviewed. This groundbreaking study applies rigorous statistical analysis to years of actual wind farm performance data from wind farms in both the UK and in Denmark.

The results show that after allowing for variations in wind speed and site characteristics the average load factor of wind farms declines substantially as they get older, probably due to wear and tear. By 10 years of age the contribution of an average UK wind farm to meeting electricity demand has declined by a third.

This decline in performance means that it is rarely economic to operate wind farms for more than 12 to 15 years. After this period they must be replaced with new machines, a finding that has profound consequences for investors and government alike.

Specifically, investors expecting a return on their investment over 20-25 years will be disappointed. Policymakers expecting wind farms built before 2010 to be contributing towards CO2 targets in 2020 or later must allow for the likelihood that the total investment required to meet these targets will be much larger than previous forecasts have suggested. As a consequence, the lifetime cost per unit (MWh) of electricity generated by wind power will be considerably higher than official estimates.

Other important findings are:

a. The decline in the performance of Danish offshore wind farms is greater than that of UK onshore wind farms. This has worrying implications for the very large investment being made by the UK in offshore wind.

b. Analysis of site-specific performance reveals that the initial load factor of new UK onshore wind farms, normalized for wind availability and size, declined significantly from 2000 to 2011, especially in Scotland. It seems that progressively worse sites are being developed.

c. Larger wind farms have a systematically worse performance than smaller ones. Since the average size of wind farms has increased, this has reinforced the deterioration in the performance of new wind farms.

The author, Professor Hughes, said: “The study has three important implications for policy towards wind generation in the UK:

1) Some investors will be aware of the decline in performance, but nevertheless continue to invest, suggesting that the subsidies are so generous as to compensate for the fall in output.

2) Therefore this is probably room for further subsidy reductions to cut cost to the consumer. The structure of contracts offered to wind generators under the proposed Electricity Market Reform (EMR) should be modified since few wind farms will operate for more than 12–15 years.

3) Meeting the UK Government’s targets for wind generation will require a much higher level of wind capacity and capital investment than current projections imply.”

source: http://www.thegwpf.org/wear-tear-hits-wind-farm-output-economic-lifetime/

Well, Obama wanted your electricity rates to 'skyrocket'. They might more than skyrocket

when the true cost of wind power is revealed to Americans. Industry has already abandoned over a dozen windfarms. Obsolete.

The good news is that in the USA, more extra megawatt hours of wind will be added this year – more than NG fired plants and more than coal additions – as investors struggle to finish the installations and generate power by Dec 31, 2012 to be eligible for ten years of tax credits toward every KWH produced (2.2c/KWH subsidy). The program ends unless renewed – so likely next year there will be very little ($1/8^{th}$ of what was installed this year) put into service.

Lord Moncton - no Global Warming

Monckton on his smashing the U.N. wall of silence on lack of warming, and censure
Posted on December 7, 2012 by Guest Blogger

UPDATE: The Russian TV channel "RT" aka "TV-Novosti" blames Monckton for the failure of COP18 to fail to reach an agreement:

The 18th Climate Change Summit in Doha is drawing to an end after once again failing to find common consensus on what it calls a major threat to human existence. Failure seemed inevitable after climate skeptic Lord Monckton crashed the event.

From Christopher Monckton of Brenchley in Doha, Qatar

I have been a bad boy. At the U.N. climate conference in Doha, I addressed a plenary session of national negotiating delegates though only accredited as an observer.
One just couldn't resist. There they all were, earnestly outbidding each other to demand that the West should keep them in pampered luxury for the rest of their indolent lives, and all on the pretext of preventing global warming that has now become embarrassingly notorious for its long absence.

No one was allowed to give the alternative – and scientifically correct – viewpoint. The U.N.'s wall of silence was rigidly in place.

The microphone was just in front of me. All I had to do was press the button. I pressed it. The Chair recognized Myanmar (Burmese for Burma). I was on.

On behalf of the Asian Coastal Co-operation Initiative, an outfit I had thought up on the spur of the moment (it sounded just like one of the many dubious taxpayer-funded propaganda groups at the conference), I spoke for less than a minute.

Quietly, politely, authoritatively, I told the delegates three inconvenient truths they would not hear from anyone else:

• There has been no global warming for 16 of the 18 years of these wearisome, self-congratulatory yadayadathons.

• It is at least ten times more cost-effective to see how much global warming happens and then adapt in a focused way to what little harm it may cause than to spend a single red cent futilely attempting to mitigate it today.

• An independent scientific enquiry should establish whether the U.N.'s climate conferences are still heading in the right direction.

As I delivered the last of my three points, there were keening shrieks of rage from the delegates. They had not heard any of this before. They could not believe it. Outrage! Silence him! Free speech? No! This is the U.N.! Gettimoff! Eeeeeeeeeagh!

One of the hundreds of beefy, truncheon-toting U.N. police at the conference approached me as I left the hall and I was soon surrounded by him and a colleague. They took my conference pass, peered at it and murmured into cellphones.

Trouble was, they were having great difficulty keeping a straight face.

Put yourself in their sensible shoes. They have to stand around listening to the tedious, flatulent mendacities of pompous, overpaid, under-educated diplomats day after week after year. Suddenly, at last, someone says "Boo!" and tells the truth.

Frankly, they loved it. They didn't say so, of course, or they'd have burst out laughing and their stony-faced U.N. superiors would not have been pleased.

I was amiably accompanied out into the balmy night, where an impressive indaba of stony-faced U.N. officials were alternately murmuring into cellphones and murmuring into cellphones. Murmuring into cellphones is what they do best.

After a few minutes the head of security – upper lip trembling and chest pulsating as he did his best to keep his laughter to himself – briefly stopped murmuring into his cellphone and bade me a cheerful and courteous goodnight.

The national delegation from Burma, whose microphone I had borrowed while they were out partying somewhere in the souk, snorted an official protest into its cellphone.
An eco-freako journalist, quivering with unrighteous indignation, wrote that I had been "evicted". Well, not really. All they did was to say a cheery toodle-pip at the end of that day's session. They couldn't have been nicer about it.

The journalist mentioned my statement to my fellow-delegates that there had been no global warming for 16 years. What she was careful not to mention was that she had interviewed me at some length earlier in the day. She had sneered that 97% of climate scientists thought I was wrong.

I had explained to her that 100% of climate scientists would agree with me that there had been no global warming for 16 years if they were to check the facts, which is how science (as opposed to U.N. politics) is done.
I had also told her how to check the facts (but she had not checked them):

Step 1. Get the monthly mean global surface temperature anomalies since January 1997 from the Hadley Centre/CRU. The data, freely available online, are the U.N.'s preferred way to measure how much global warming has happened. Or you could use the more reliable satellite data from the University of Alabama at Huntsville or from Remote Sensing Systems Inc.

Step 2. Put the data into Microsoft Excel and use its routine that calculates the least-squares linear-regression trend on the data. Linear regression determines the underlying trend in a dataset over a given period as the slope of the unique straight line through the data that minimizes the sum of the squares of the absolute differences or "residuals" between the points corresponding to each time interval in the data and on the trend-line. Phew! If that is too much like doing real work (though Excel will do it for you at the touch of a button), find a friendly, honest statistician.

Step 3. Look up the measurement uncertainty in the dataset. Since measuring global temperature reliably is quite difficult, properly-collated temperature data are presented as central estimates flanked by upper and lower estimates known as the "error bars".

Step 4. Check whether the warming (which is the difference between the first and last value on the trend-line) is greater or smaller than the measurement uncertainty. If it is smaller, falling within the error-bars, the trend is statistically indistinguishable from zero. There has been no warming – or, to be mathematically nerdy, there has been no statistically-significant warming.
The main point that the shrieking delegates here in Doha don't get is this. It doesn't matter how many profiteering mad scientists say global warming is dangerously accelerating. It isn't. Period. Get over it.

The fact that there has been no global warming for 16 years is just that – a fact. It does not mean there is no such thing as global warming, or there has not been any global warming in the past, or there will be none in future.

In the global instrumental temperature record, which began in 1860, there have been several periods of ten years or more without global warming. However, precisely because these periods occur frequently, they tend to constrain the overall rate of warming.

Ideally, one should study periods of warming that are either multiples of 60 years or centered on a transition year between the warming and cooling (or cooling and warming) phases of the great ocean oscillations. That way, the distortions caused by the naturally-occurring 30-year cooling and 30-year warming phases are minimized.

Let's do it. I have had the pleasure of being on the planet for 60 years. I arrived when it first became theoretically possible for our CO2 emissions to have a detectable effect on global temperature. From 1952 to the present, the planet has warmed at a rate equivalent to 1.2 Celsius degrees per century.

Or we could go back to 1990, the year of the first of the four quinquennial *Assessment Reports* of the Intergovernmental Panel on Climate Change (IPeCaC). It predicted that from 1990-2025 the world would warm at 3.0 Cº/century, giving 1 Cº warming by 2025.

Late in 2001 there was a phase-transition from the warming to the cooling phase of the Pacific Decadal Oscillation, the most influential of the ocean oscillations. From 1990-2001 is 11 years; from 2001-2012 is 11 years. So 1990-2012 is a period centered on a phase-transition: with minimal natural distortion, it will indicate the recent temperature trend.

Since 1990 the world has warmed at 1.4 Cº, century, or a little under 0.3 Cº in all. Note that 1.4 Cº/century is a little greater than the 1.2 Cº/century observed since 1952. However, the period since 1990 is little more than a third of the period since 1952, and shorter periods are liable to exhibit somewhat steeper trends than longer periods.

So the slightly higher warming rate of the more recent period does not necessarily indicate that the warming rate is rising, and it is certainly not rising dangerously.

For the 21st century as a whole, IPeCaC is predicting not 1.2 or 1.4 Cº warming but close to 3 Cº, more than doubling the observed post-1990 warming rate. Or, if you believe the latest scare paper from our old fiends the University of East Anglia, up to 6 Cº, quadrupling it.
That is not at all likely. The maximum warming rate that persisted for at least ten years in the global instrumental record since 1850 has been 0.17 Cº. This rate occurred from 1860-1880; 1910-1940; and 1976-2001.

It is only in the last of these three periods that we could have had any warming influence: yet the rate of warming over that period is the same as in the two previous periods.
All three of these periods of rapidish warming coincided with warming phases of the Pacific Decadal Oscillation. The climate scare got underway about halfway through the 1976-2001 warming phase.

In 1976 there had been an unusually sharp phase-transition from the cooling to the warming phase. By 1988 James Hansen was making his lurid (and now disproven) temperature

predictions before the U.S. Congress, after Al Gore and Sen. Tim Wirth had chosen a very hot June day for the hearing and had deliberately turned off the air-conditioning.

Here is a summary of the measured and predicted warming rates:

Measured warming rate, 1997-2012	**0.0** Cº/century
Measured warming rate, 1952-2012	**1.2** Cº/century
Measured warming rate, 1990-2012	**1.4** Cº/century
Measured warming rate, 1860-1880	**1.7** Cº/century
Measured warming rate, 1910-1940	**1.7** Cº/century
Measured warming rate, 1976-2001	**1.7** Cº/century
Predicted warming rate in IPCC (1990), 1990-2025	**3.0** Cº/century
Predicted warming rate in IPCC (2007), 2000-2100	**3.0** Cº/century
Predicted warming rate by UEA (2012), 2000-2100	**4.0-6.0** Cº/century

But it is virtually impossible to tell the negotiating delegates any of what I have set out here. They would simply not understand it. Even if they did understand it, they would not care.

Objective scientific truth no longer has anything to do with these negotiations. Emotion is all. A particularly sad example of the mawkish emotionalism that may yet destroy the economies of the West was the impassioned statement by the negotiating delegate from the Philippines to the effect that, after the typhoon that has just killed hundreds of his countrymen, the climate negotiations have taken on a new, life-or-death urgency.

As he left the plenary session, the delegates stood either side of the central aisle and showed their sympathy by applauding him. Sympathy for his country was appropriate; sympathy for his argument was not.

After 16 years with no global warming – and, if he reads this posting, he will know how to check that for himself rather than believing the *soi-disant* "consensus" – global warming that has not happened cannot have caused Typhoon Bhopa, any more than it could have caused extra-tropical storm Sandy.

It is possible that illegal mining and logging played no small part in triggering the landslide that killed many of those who lost their lives.

Perhaps the Philippines should join the Asian Coastal Co-Operation Initiative. Our policy is that the international community should assist all nations to increase their resilience in the face of the natural disasters that have been and will probably always be part of life on Earth. That is an objective worthier, more realistic, more affordable, and more achievable than attempting, Canute-like, to halt the allegedly rising seas with a vote to establish a second

“commitment period” under the Kyoto Protocol.

Will someone please tell the delegates? Just press the button and talk. You may not be heard, though. Those who are not partying somewhere in the souk will be murmuring into their cellphones

Source: http://wattsupwiththat.com/2012/12/07/monckton-on-his-smashing-u-n-wall-of-silence-on-lack-of-warming-and-censure/#more-75426

CW Stats to Dennis, KK7X

This year, Dennis, KK7X will be again doing the processing to come up with the CW stats. Please send in your CW total – how many worked toward USACW , or Nth time CW, to Dennis right after the first of the year. Wait till the end of December....this is now the time to do it! Then zip them off to Dennis after the beginning of the year.

If you are using MARAC Logger Click on VIEW/EDIT and then Book Summary. You will find your WORKED statistics under USA-CW, or if you are working on multiple time under USA-CW II etc.

His email is: dennis@kk7x.us

Sunspots and GPS

Scientists are gearing up for fierce solar storms next year by setting up a worldwide chain of monitoring stations to study the so-called 'solar maximum'.

Massive increases in the numbers of sunspots are expected to cause changes in the Earth's ionosphere, the shell of plasma at the top of our atmosphere.

There are fears because the current generation of satellite navigation technology has never experience a 'solar max', and changes in the ionosphere could cause problems with GPS and other signals from space.

During solar maximum, large numbers of sunspots appear and the sun's irradiance output grows by about 0.1 per cent, with the increased energy output thought to affect global climate and weather patterns.

The ionosphere becomes most turbulent as the Sun's warming thickens it, and then again in the evening as cooling leads to turbulence – including the production of 'plasma bubbles'.

The effect on radio systems includes signal delay – a major problem factor for satnav, where ranging is based on timing accurate to a billionth of a second – and signal-scattering 'scintillations' rendering the signal unstable.

To monitor the effects of the solar max on Earth's upper atmosphere and the consequences for satellite navigation and communications, the European Space Agency is setting up a worldwide chain of monitoring stations.

'Monitor stations work by measuring variations in GPS signals with greater accuracy than existing systems.

'We are placing sensor stations around the globe, but the vicinity of the equator is a particular focus of interest,' added Dr Prieto-Cerdeira. 'It exhibits much more dynamic behaviour than the mid-latitudes so we have established stations at Cape Verde off West Africa and Malindi, Kenya, on the other side of the continent.

'In addition, through a deal with French space agency CNES, we will have access to stations hosted by existing tracking sites at Libreville, Gabon and Ascension Island in the mid-Atlantic, the latter site being where the magnetic equator diverts from the geographic equator.

At solar maximum, the Sun's magnetic field lines are the most distorted due to the magnetic field on the solar equator rotating at a slightly faster pace than at the solar poles.

Large solar flares often occur during a maximum. For example, the Solar storm of 1859 struck the Earth with such intensity that the northern lights could be seen as far south as Rome, approximately 42° north of the equator.

Read more: http://www.dailymail.co.uk/sciencetech/article-2248097/Sun-storm-threat-GPS-Space-agency-plans-global-network-study-effects-solar-max-satellite-communications.html#ixzz2F2ZNlymG

The last solar maximum was in 2000. In 2006 NASA initially expected a solar maximum in 2010 or 2011, and thought that it could be the strongest since 1958. However, more recent projections say the maximum should arrive in autumn of 2013 and be the smallest sunspot cycle since 1906.

Those Filter Capacitors

In past issues and this one, we've talked about those electrolytic filter capacitors in 'boat anchor radios'. The best fix is to replace them right off the bat, but some of them can be 'saved'.

The aluminum filter capacitors in older radios consist of two electrodes immersed in a past electrolyte. When voltage is applied, a thin dielectric film if formed between the conductive electrolyte and the anode (Positive electrode). This construction allows packing a lot of capacitance in a small volume.

These old electrolytics have two bad traits. When capacitors sit for a long period without use, the film deteriorates so when you suddenly apply power to a boat anchor radio that has sat for years and years, you are rewarded with a bright flash and then the smell of an overheating power transformer as it tries to deliver current into a dead short. If you are lucky, the fuse, if there is one, blows before the transformer burns out.

The other bad trait of the electrolytics are that they acquire the voltage rating at which they have been working. Where you might have a 300V circuit, where a 450 working volt capacitor was initially installed, after operating years and years at 300v, that becomes the new maximum rating for that capacitor. If you turn it on many years later, it no longer has the higher rating. A surge in line voltage might trigger an instant breakdown where the capacitor self destructs – and maybe taking other valuable components in the power supply with it.

Even nastier, back in the 50s and 60s, line voltage was specified as 117VAC. Today, it is up at 121VAC and many residential areas will run 125 to 127v much of the day. That 10% more voltage might be all it takes to fry those old caps used to working at 110V or 117V line voltage.

Can you fix this situation? Sometimes. The obvious cure is to replace those filter caps with new ones. Even new 'old stock' may have the same problem – having sat for 20 or 25 years on a shelf, so beware.

The next best solution is to reform the capacitors. That will sometimes work. You start by applying about 10% of rating voltage, slowing incrementing the voltage up over time(hours) . Ideally, you monitor the voltage across the capacitor and limit the charge current to no more than 50 ma for a typical power supply cap. You take it up to 'working voltage' if you can. The 'best' way is to do it with an external power supply adjustable from 0-500v with metering. If you get to rated working voltage – and the leakage is less than 5ma – you have success. If more than 5ma leakage – your capacitor is history – done – kaput.

You can, in a transformer powered radio, pull out all the tubes other than the rectifier and any HV regulator tubes. Using a variac, start out at 10% of line voltage, and slowly increment it

up to full voltage over a several hour period. Since you cannot current limit the charge current, stick around while this is happening. If things overheat – shut it off. Better yet, add in a fuse in the primary side of the transformer if one does not exist, and fuse at a low value to protect that transformer. Use your voltmeter on the B+. Without a load, from the other tubes it may be higher than you expect. Better yet, if you replace the rectifier tube with a solid state replacement temporarily (or tack in diodes underneath) the voltage drop across the tube will not be present, and you can take your capacitor higher in voltage towards its 'working voltage rating'. Then you have a safety margin against line surges later on taking out the caps.

You can buy multi-section replacements from several sources, but often the easiest way is to replace a multi-section cap with several single value ones, wiring them under the chassis. Finding NEW replacements for metal can chassis mount ones is expensive these days. You'll see 'NOS" (new old stock) caps advertised for sale on Ebay or at hamfests, but they may be 20-30 years old and not in good shape!

If you are into restoration that looks 'exactly the same' with no modifications, some restorers remove the can capacitor, dig out the old ones inside, replace the with new ones, and refill the cap - with filler – like foam - and remount the capacitor. (For you Collins folks there are exact replacements available for big bucks – like $40 each – already done).

Latest NASA Sunspot Forecast

The current prediction for Sunspot Cycle 24 gives a smoothed sunspot number maximum of about 72 in the Fall of 2013. The smoothed sunspot number (for 2012/02) is already nearly 67 due to the strong peak in late 2011 so the official maximum will be at least this high and this late. We are currently well over three years into Cycle 24. The current predicted and observed size makes this the smallest sunspot cycle since Cycle 14 which had a maximum of 64.2 in February of 1906.

The prediction method has been slightly revised. The previous method found a fit for both the amplitude and the starting time of the cycle along with a weighted estimate of the amplitude from precursor predictions (polar fields and geomagnetic activity near cycle minimum). Recent

work [see Hathaway Solar Physics; 273, 221 (2011)] indicates that the equatorward drift of the sunspot latitudes as seen in the Butterfly Diagram follows a standard path for all cycles provided the dates are taken relative to a starting time determined by fitting the full cycle. Using data for the current sunspot cycle indicates a starting date of May of 2008. Fixing this date and then finding the cycle amplitude that best fits the sunspot number data yields the current (revised) prediction.

Predicting the behavior of a sunspot cycle is fairly reliable once the cycle is well underway (about 3 years after the minimum in sunspot number occurs [see Hathaway, Wilson, and Reichmann Solar Physics; 151, 177 (1994)]). Prior to that time the predictions are less reliable but nonetheless equally as important. Planning for satellite orbits and space missions often require knowledge of solar activity levels years in advance.

A number of techniques are used to predict the amplitude of a cycle during the time near and before sunspot minimum. Relationships have been found between the size of the next cycle maximum and the length of the previous cycle, the level of activity at sunspot minimum, and the size of the previous cycle.

Among the most reliable techniques are those that use the measurements of changes in the Earth's magnetic field at, and before, sunspot minimum. These changes in the Earth's magnetic field are known to be caused by solar storms but the precise connections between them and future solar activity levels is still uncertain.

Of these "geomagnetic precursor" techniques three stand out. The earliest is from Ohl and Ohl [Solar-Terrestrial Predictions Proceedings, Vol. II. 258 (1979)] They found that the value of the geomagnetic aa index at its minimum was related to the sunspot number during the ensuing maximum. The primary disadvantage of this technique is that the minimum in the geomagnetic aa index often occurs slightly after sunspot minimum so the prediction isn't available until the sunspot cycle has started.

An alternative method is due to a process suggested by Joan Feynman. She separates the geomagnetic aa index into two components: one in phase with and proportional to the sunspot number, the other component is then the remaining signal. This remaining signal has, in the past, given good estimates of the sunspot numbers several years in advance. The maximum in this signal occurs near sunspot minimum and is proportional to the sunspot number during the following maximum. This method does allow for a prediction of the next sunspot maximum at the time of sunspot minimum.

A third method is due to Richard Thompson [Solar Physics 148, 383 (1993)]. He found a relationship between the number of days during a sunspot cycle in which the geomagnetic field was "disturbed" and the amplitude of the next sunspot maximum. His method has the advantage of giving a prediction for the size of the next sunspot maximum well before sunspot minimum.

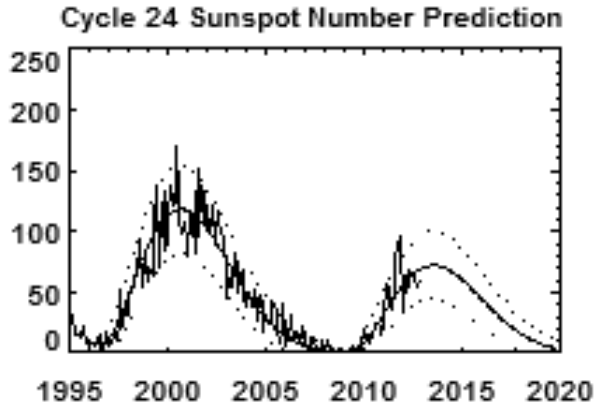
We have suggested using the average of the predictions given by the Feynman-based method and by Thompson's method. However, both of these methods were impacted by the "Halloween Events" of October/November 2003 which were not reflected in the sunspot numbers. Both methods give larger than average amplitude to Cycle 24 while its delayed start and low minimum strongly suggest a much smaller cycle.

The smoothed aa index reached its minimum (a record low) of 8.4 in September of 2009. Using Ohl's method now indicates a maximum sunspot number of 70 ± 18 for cycle 24. We then use the shape of the sunspot cycle as described by Hathaway, Wilson, and Reichmann and determine a starting time and amplitude for the cycle to produce a prediction of the monthly sunspot numbers through the next cycle. We find a maximum of about 72 in the Fall of 2013. The predicted numbers are available in a text file, as a GIF image, and as a pdf-file. As the cycle progresses, the prediction process switches over to giving more weight to the fitting of the monthly values to the cycle shape function. At this phase of cycle 24 we now give 66% weight to the amplitude from curve-fitting technique of Hathaway, Wilson, and Reichmann .

That technique currently gives similar values to those of Ohl's method.

Note: These predictions are for "smoothed" International Sunspot Numbers. The smoothing is usually over time periods of about a year or more so both the daily and the monthly values for the International Sunspot Number should fluctuate about our predicted numbers. The dotted lines on the prediction plots indicate the expected range of the monthly sunspot numbers. Also note that the "Boulder" numbers reported daily at www.spaceweather.com are typically about 35% higher than the International sunspot number.

This flux has been measured daily since 1947. It is an important indicator of solar activity because it tends to follow the changes in the solar ultraviolet that influence the Earth's upper atmosphere and ionosphere. Many models of the upper atmosphere use the 10.7 cm flux (F10.7) as input to determine atmospheric densities and satellite drag. F10.7 has been shown to follow the sunspot number quite closely and similar prediction techniques can be used. Our predictions for F10.7 are available in a text file, as a GIF image, and as a pdf-file. Current values for F10.7 can be found at: http://www.spaceweather.ca/sx-4-eng.php.



Source: http://solarscience.msfc.nasa.gov/predict.shtml

Those Old Magazines from Wayback

Here's a link to a page that has links to many of the old magazines, including 73 magazine (all issues of 40 years now on line), Pop Science (90 years!) , QRP Quarterly, Practical Electronics from the 60s, etc

http://www.ae5x.com/blog/tag/oldpubs/

Good reading for a 'dead band' day with no mobiles out and running!

Global Warming Hoax Tidbits

The U.S. Climate Change Science Program wrote a report titled 'Weather and Climate Extremes in a Changing Climate'. They looked at the last 135 years, and on page 132 they write: "For 1871-2006, the optimal model was AR(4), for which the slope was -.00229, standard error .00089, significant at p=.01. For 1881-2006, the optimal model was AR(4), for which the slope was -.00212, standard error .00100, significant at p=.03. For all other cases, the estimated trend was negative, but not statistically significant."

The report also looked at tornadoes, the vast majority of which occur in the United States. On page 76: "A data set of F2 and stronger tornadoes extending back before the official record (Grazulis, 1993) provides an opportunity to examine longer trends. **This examination of the record from 1921-1995 indicates that the variability between periods was large, without significant long-term trends"**

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Tropical cyclone losses in the USA and the impact of climate change — A trend analysis based on data from a new approach to adjusting storm losses

www.sciencedirect.com/science/article/pii/S0195925509000493

"Economic losses caused by tropical cyclones have increased dramatically....This paper aims to isolate the socio-economic effects and ascertain the potential impact of climate change on this trend....**No trend is found for the period 1950–2005 as a whole...."**

- **Global ACE (accumulated cyclone energy) is near 30-year lows**

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Wallace and Anderson used sediment cores off the coast of Texas to look at the frequency of hurricanes over the past 4000 years. They found that "During warmer, drier periods, hurricanes were less likely to impact the Gulf Coast than during cooler, wetter periods."

However, the pattern for intense hurricanes was different. **The authors write "there has been no notable variation in intense storm impacts across the northwestern Gulf of Mexico coast during this time interval, implying no direct link between these changing climate conditions and annual hurricane impact probability."**

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Here's a 370-year study. Chenoweth and Devine assembled a record of hurricanes in the Lesser Antilles (the eastern Caribbean) since 1638, over 350 years. **The calculated an ACE (accumulated cyclone energy) equivalent and found there was no trend over the period.** They did find a 60-year cycle.

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*According to Dr. Brian Soden, a professor at the University of Miami's Rosentiel School for Marine and Atmospheric Sciences, "**The study provides strong evidence that there has been no systematic change in the number of north Atlantic tropical cyclones during the 20th century.**"*

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Sun et al. looked at the history of tropical cyclones affecting China from 1951 to 2005. **Over the 55 year period the frequency of these storms has decreased, with the lowest frequency in the last ten years. The authors write that the "decrease in the frequency of super typhoons is particularly significant."**

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"New results indicate that the AR4 conclusions regarding global increasing trends in hydrological droughts since the 1970s are no longer supported"

"Recent re-assessments of tropical cyclone data do not support the AR4 conclusions of an increase in the most intense tropical cyclones or an upward trend in the potential destructiveness of all storms since the 1970s."

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Killer storms? Not really. It's just that we build a lot more buildings and infrastructure along the coasts and add a billion or more people to the planet every 15 years, most them living in coastal areas. Then when a storm hits...there is a lot more for the storm to damage.

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Experts Call for End to Climate Mega Summits

www.spiegel.de/international/world/top-researchers-call-for-...

This year, the summit barely avoided collapse by forging a last-minute agreement that the 2015 meeting would be the one at which a global emissions reduction deal would be decided. The conference, said Hans-Joachim Schellnhuber, the long-serving climate advisor to the government in Berlin, can be "counted as a success because a collapse of the arduous United Nations process was avoided."....

The period characterized by "the UN's clever management of expectations" is coming to an end, says Oliver Geden, a climate expert with the German Institute for International and Security Affairs in Berlin...."The dream of a global deal is over," agrees Frank Uekötter, an environmental historian at the Rachel Carson Center for Environment and Society....

"I have never understood how negotiations that don't even work among 20 countries are supposed to work in the UN model with 194 countries participating," Geden says. "The US and China aren't going to be told what to do by Nauru or Tuvalu."....Maximilian Mayer, a political scientist at the University of Bonn, says that the UN climate negotiations are at risk of becoming "a form of technocracy controlled by experts,"

Silke Beck, a climate expert at the Helmholtz Center for Environmental Research, blasts the summits for being little more than "symbolism" .

Today's computer-simulated climate models, the foundation of all UN climate negotiations, represent the "almost complete disregard for reality," says Werner Krauss, from the Helmholtz Geesthacht Center for Materials and Coastal Research.

Latest Awards

USACA #1233	Barry, K2MF	Dec 20, 2012
USACW #132	Gary, K4EXT	Dec 8. 2012
Eight Time #12	Hollis, KC3X	November 28, 2012

Upcoming Events for County Hunters

The following Events are coming up. Put them on your Calendar for 2013 or better yet make your reservations now!

Michigan Mini

MI Mini date - April 25 26 27th, 2013

contact Ed, K8ZZ for more info

Dayton Hamvention

May 17-19 2013

National Convention

The Convention will be July 10 - 13th at the Deadwod Gulch Gaming Resort & Convention Center 304 Cliff Street Deadwood South Dakota.

Room Reservations 1-800-695-1876 the sooner room reservations are made allows individuals to ask for specific rooms.....Some rooms have instant access to the Parking lot...others have a creek view with no instant access to the lot.

http://www.deadwoodgulch.com/

Special Room Rates apply ask for ext. 237 and ask for Eric.

Click here for other pictures of the area.

There will prizes a gift table and other raffles. More information to follow.

Click here for the 2013 National Registration Form.

That's all folks...