

5 questions

with David Chernicky

David Chernicky is chairman of New Dominion LLC, a Tulsa-based producer known for recovering untapped oil and gas from existing fields. A native Oklahoman and longtime geologist, Chernicky formed New Dominion in 1998 with two other partners. He took full ownership of the company four years later.

1 New Dominion is known for its specific "de-watering" technique in recovering oil. Can you tell us how it works?

De-watering is a process that produces all the in-place saltwater and the liquid and gaseous hydrocarbons within a targeted production zone. It's also one that requires a lot of infrastructure before you produce any oil and gas.

Our process represents a paradigm shift in thinking in oil and gas production because it recovers vast amounts of hydrocarbons left behind by earlier conventional producers due to the amount of saltwater present.

Economies of scale matter. I remember the first wedding I attended as a young teenager. No one would pour me a fresh glass of champagne, given my age. But I had a great time drinking all of the leftover, half-empty glasses even though the champagne was a bit warm and flat. Eureka! One person's trash is another's treasure.

2 Your company is a supporter of Energy Libraries Online, an effort to digitalize old well logs and other early industry production data previously found only on paper. How is the process going?

Unfortunately, the effort has been hampered by a lack of funding because of depressed economic times and perhaps some shortsightedness within our industry. But this data must be saved now, or it will be lost forever. The consolidation and conversion to a more permanent medium of these vast amounts of historic scientific data is of paramount importance for future generations of petroleum producers.

Interview conducted by Rod Walton, World staff writer.



3 Horizontal drilling has opened up vast new fields for natural gas producers. Can you elaborate on this technique?

Without a doubt, horizontal drilling is the most important innovation in oil and gas exploration during the past 50 years because it effectively represents the evolution of man-made technology to emulate nature.

Visualize an oil and gas reserve underground. It isn't packaged in a barrel-like basin. Instead, it typically is a heterogeneous reservoir of hydrocarbon-producing rock that covers a large area and, conceptually speaking, could be considered as the single leaf of a tree.

A conventionally drilled vertical well just punches a hole in that reservoir, only recovering a small percentage of its resources. On the other hand, an accurately drilled horizontal well functions like a leaf's vascular system for that reserve, because it runs longitudinally across and through it, providing a maximum bidirectional flow.

4 New Dominion had some exposure to SemGroup prior to that company's bankruptcy. How has the experience changed the way companies handle their risk management issues?

The collapses of SemGroup, AIG, Lehman Brothers and the entire world economy were the results of a larger endeavor. I'd suggest that your readers closely watch the congressional hearings investigating this matter.

With respects to risk management, it has forced the entire industry to reduce its exploration expenditures because of a lack of market capital. This brings to the forefront the importance of our counterparties on all transactions — not just hedging — and of understanding the financial strengths and commitments of our bank groups, financial investors and purchasers.

5 Exxon Mobil recently made a big move into natural gas with its \$31 billion buy of XTO Energy Inc. Do you see other majors pushing their

Horizontal drilling is the most important innovation in oil and gas exploration during the past 50 years.

way into unconventional drilling, and what impact will that have?

I don't foresee other majors making such a large entrance, but I do see and predict more investment by foreign and state-owned companies, similar to the strategic alliance announced in November between Norway's StatoilHydro and Chesapeake Energy to produce natural gas from the Marcellus Shale. They're taking a long-term view here.

But the major impact of these investments by mega-companies will, I fear, have a negative impact on other independents, smaller companies and consumers because it will drive the already-inflated cost of services through the roof, decreasing profitability for all producers without a significant increase in total production.

A Boeing 767 tanker (top) refuels another plane in this artist's rendering. Boeing says it plans to offer a military version of its 767 passenger jet for a fleet of 179 new tanker jets wanted by the Air Force. BOEING CO./Bloomberg



Boeing Co. says it will bid on long-delayed tanker jet

BY STEPHEN MANNING
Associated Press

WASHINGTON — Defense contractor Boeing Co. said Thursday that it will bid for the Air Force's troubled \$35 billion refueling plane contract, leaving rival Northrop Grumman Corp. to decide if it will make its own attempt to build the long-delayed jets.

Boeing said it plans to offer a military version of its 767 passenger jet for a fleet of 179 new planes. The contract is expected to be the first of several to replace many of the Air Force's current planes that date back to the 1950s. Boeing said it will submit its formal bid by May 10.

It remains to be seen if Boeing's bitter contest with Northrop will be renewed

after two failed Pentagon attempts to pick a winner earlier in the decade.

Northrop has warned that it may not bid on the project, saying the Air Force's guidelines appear to favor Boeing's smaller plane. The Northrop variant would likely be based on the larger Airbus A-330 airframe under a partnership Northrop has with Airbus parent EADS.

Randy Belote, a spokesman for Northrop, said the company is still analyzing the Air Force's request for proposals and will announce its decision when that process is finished.

The Air Force badly needs to replace some of its refueling planes, which gas up fighter jets and other military planes mid-flight, allowing them to fly for longer distances without landing.

But past failed attempts to build the plane became symbolic of problems with the way that the Pentagon hands out billions of dollars worth of arms contracts.

The two companies, among the nation's largest defense contractors, closely contested the contract, backed up by their respective allies in Congress.

A top defense official went to jail for favoring Boeing. A contract award in 2008 to Northrop was later overturned after the Government Accountability Officer deemed it was unfairly given to that company.

If it wins the contract, Boeing is expected to build the Air Force planes at plants in Washington state and Kansas. Northrop would assemble its planes at a newly built factory near Mobile, Ala.

Mold in your house can come from several places

Dear Action Line: What can be done about mold in houses in winter? — S.J.R., Tulsa.

Without exception, mold grows in houses only where there is enough moisture for it to live and reproduce. Excess moisture arrives from many sources, but all can be remedied.

Natural gas vapor: Natural gas furnaces, floor furnaces and unvented gas logs put out a lot of water vapor. Unvented gas logs put the moisture right into the inside air, while the vented furnaces send the exhaust to the outside. By-products of natural gas combustion are water vapor, carbon dioxide and carbon monoxide. Too much water vapor would also show up on your windows as condensation. The burning of natural gas produces 1.5 gallons of liquid water for every 100,00 Btu of natural gas burned.

Crimped or missing furnace flues: As we are in the "hail belt," we keep hundreds of roofing companies in business, and some are not as careful or conscientious as others. It's typical here for careless roofers to pull out the steel furnace flues to replace the roof pass-through flashings during roofing jobs and then just shove the flue stacks back in the hole afterwards — just enough to look right from the ground but not be reconnected to the top of the furnace.



Phil Mulkins
ACTION LINE
phil.mulkins@tulsaworld.com
699-8888

This causes water vapor from burning gas to spew into the attic or living areas whenever the heat comes on. Storms can also bring down limbs onto the roof that bend or crimp furnace flues, causing the exhaust to back up into the home.

Bathroom vent: Most older homes have powered vents in their bathroom ceilings, but these are rarely connected to steel ducts that deliver their exhaust through the roof and out — they simply deliver exhaust into the attic. There its humidity condenses on cold surfaces — roof decking, rafters, cross-bracing — from which it drips into ceiling insulation or runs down the rafters onto the top plates of exterior walls.

This is harmful to the decking and structural wood as the condensation feeds "dry rot" in the wood fibers, paint-adhesion failure in wooden siding and mold in wallboard ceilings and walls. Tulsa's mechanical code prohibits such attic venting and requires specific venting systems to be installed by licensed mechanical con-

tractors to meet the code. A permit and inspection (minimum \$52 fee) are required on the work. Retrofitting a structure with a new electrical circuit and wall switch for the fan, an exhaust-fan, duct-work through the new hole in your roof, a back-draft damper, a roof-pass-through vent flashing, and a debris- and vermin-proof vent cap run over \$500.

Roof and attic: The most serious mold problems originate in the roof and from inadequate attic ventilation. See a primer on roofing in the National Roofing Contractors Association's treatise at tulsaworld.com/NRCRoofing101. Read about "perfect attic ventilation" in the May 11, 2008, Action Line column at tulsaworld.com/Action051108.

Other sources: Water can get into your crawl space when your home is at the bottom of a hill. Excessive rain pooling around your home can saturate the ground and fill your in-slab heating and air ducts. Both require drainage contractors to fix. Faulty roof flashing can admit water around standpipes, showing up as mold on the walls behind tubs and toilets. Shower pads can crack and leak under the carpeting.

Submit Action Line questions by calling 699-8888 or by e-mailing phil.mulkins@TulsaWorld.com or by mailing them to Tulsa World Action Line, PO Box 1770, Tulsa OK 74102-1770.

FOREIGN EXCHANGE

The dollar edged higher against other major world currencies. Stronger U.S. retail sales and a positive weekly report on initial jobless claims contrasted with Europe's ongoing debt woes.

MAJORS	CLOSE	CHG.	%CHG.	6MO. AGO	1YR. AGO
USD per British Pound	1.5029	-0.067	-4.5%	1.6397	1.4156
Canadian Dollar	1.0312	-0.001	-0.1%	1.0862	1.2737
USD per Euro	1.3576	-0.124	-9.1%	1.4309	1.2639
Japanese Yen	89.10	+7.0	+7.9%	93.02	99.22
Mexican Peso	12.7190	+0.0320	+2.5%	13.3815	15.1935

EUROPE/AFRICA/MIDDLE EAST	CLOSE	CHG.	%CHG.	6MO. AGO	1YR. AGO
Israeli Shekel	3.7836	+0.196	+5.2%	3.7460	4.2040
Norwegian Krone	5.9336	+0.0562	+0.9%	6.0125	7.0444
South African Rand	7.4625	-0.375	-5.0%	7.5902	10.3142
Swedish Krona	7.1685	+0.205	+2.9%	7.1633	9.0334
Swiss Franc	1.0775	+0.0097	+0.9%	1.0605	1.1715

ASIA/PACIFIC	CLOSE	CHG.	%CHG.	6MO. AGO	1YR. AGO
Australian Dollar	1.1108	+0.062	+5.6%	1.1743	1.5325
Chinese Yuan	6.8273	+0.004	+0.1%	6.8308	6.8444
Hong Kong Dollar	7.7629	-0.000	-0.0%	7.7504	7.7602
Indian Rupee	45.790	+0.090	+0.2%	48.776	51.488
Singapore Dollar	1.4005	+0.013	+0.9%	1.4379	1.5442
South Korean Won	1142.00	-6.50	-0.5%	1246.50	1546.40
Taiwan Dollar	31.97	-1.2	-3.8%	32.88	35.09

ENERGY FUTURES

EXP.	OPEN	HIGH	LOW	SETTLE	CHG
HEATING OIL (NYMX) 42,000 gal. cents per gal					
Apr 10	207.15	209.70	206.05	206.87	-2.50
May 10	208.33	210.57	207.30	208.14	-2.23
Jun 10	209.60	211.57	208.65	209.46	-2.00
Jul 10	211.45	213.08	210.60	211.35	-1.76
Est. sales 89,180. Wed's sales 107,768 Wed's open int. 308,631, +8,120					
LIGHT SWEET CRUDE (NYMX) 1,000 bbl. dollars per bbl.					
Apr 10	80.20	81.09	79.66	80.21	-6.6
May 10	80.62	81.47	80.12	80.63	-6.3
Jun 10	81.08	81.81	80.60	81.10	-5.4
Jul 10	81.57	82.16	81.05	81.54	-4.6
Est. sales 534,945. Wed's sales 588,682 Wed's open int. 1,307,002, +9,567					
NATURAL GAS (NYMX) 10,000 mm btu's, \$ per mm btu					
Apr 10	4.584	4.787	4.556	4.575	-1.82
May 10	4.639	4.847	4.623	4.643	-1.78
Jun 10	4.727	4.919	4.695	4.717	-1.75
Jul 10	4.812	4.989	4.777	4.806	-1.71
Est. sales 204,368. Wed's sales 146,181 Wed's open int. 624,086, +3,777					
NY HARBOR GAS BLEND (NYMX) 42,000 gallons- dollars per gallon					
Apr 10	2.2353	2.2506	2.2170	2.2337	-0.139
May 10	2.2383	2.2519	2.2205	2.2360	-0.134
Jun 10	2.2320	2.2453	2.2150	2.2296	-0.138
Jul 10	2.2233	2.2380	2.2129	2.2211	-0.141
Est. sales 84,487. Wed's sales 128,833 Wed's open int. 278,577, +10,255					

AGRICULTURE FUTURES

EXP.	OPEN	HIGH	LOW	SETTLE	CHG
CORN (CBOT) 5,000 bu minimum- cents per bushel					
Mar 10	370	376.25	369.25	372	-3.75
May 10	381	387.25	380.25	383	-3.75
Jul 10	392	397.50	391	394	-3.75
Sep 10	399.75	405	399	401.50	-4.25
Est. sales 320,114. Wed's sales 182,981 Wed's open int. 1,115,709, +3,581					
COTTON 2 (ICE) 50,000 lbs.- cents per lb.					
Mar 10	82.68	82.85	82.12	82.12	-1.07
May 10	82.17	82.83	81.53	81.82	-1.15
Jul 10	82.27	82.80	81.73	82.13	-9.2
Oct 10	76.70	76.89	76.00	76.00	-6.5
Est. sales 10,130. Wed's sales 15,474 Wed's open int. 181,662, +1,485					
OATS (CBOT) 5,000 bu minimum- cents per bushel					
Mar 10	220	221.75	219	219	-2.75
May 10	226	239	225	226.50	-3.75
Jul 10	236.75	239	235.25	235.25	-3.75
Sep 10	246.75	246.75	243	243	-3.75
Est. sales 669. Wed's sales 452 Wed's open int. 14,193, +64					
SOYBEAN MEAL (CBOT) 100 tons- dollars per ton					
Mar 10	263.00	266.90	257.90	257.90	-8.60
May 10	258.40	267.10	257.50	257.90	-9.40
Jul 10	259.10	267.10	258.80	258.80	-8.70
Aug 10	258.70	264.90	258.10	258.10	-7.80
Est. sales 154,985. Wed's sales 50,700 Wed's open int. 195,844, -1,418					

EXP.	OPEN	HIGH	LOW	SETTLE	CHG
SOYBEAN OIL (CBOT) 60,000 lbs.- cents per lb					
Mar 10	39.38	39.98	39.33	39.63	-3.9
May 10	40.10	40.46	39.63	40.00	-4.0
Jul 10	40.21	40.88	40.09	40.43	-4.0
Aug 10	40.37	41.00	40.30	40.59	-4.0
Est. sales 116,002. Wed's sales 45,777 Wed's open int. 281,888, +2,839					
SOYBEANS (CBOT) 5,000 bu minimum- cents per bushel					
Mar 10	929.50	952	928	932.50	-2.2
May 10	938	963	937.25	942	-21.50
Jul 10	946.25	970.25	945.50	950.50	-20.50
Aug 10	944	966.75	943	948	-18.75
Est. sales 297,244. Wed's sales 115,715 Wed's open int. 425,128, -1,226					
WHEAT (CBOT) 5,000 bu minimum- cents per bushel					
Mar 10	490.75	502.25	488	490.50	-13
May 10	500	515.25	499.50	502.25	-13.50
Jul 10	514.50	527.50	512	514.50	-13.75
Sep 10	528.75	542.25	526.25	529	-13.25
Est. sales 97,768. Wed's sales 49,631 Wed's open int. 417,639, -1,319					
WINTER WHEAT (KCBT) 5,000 bu minimum- cents per bushel					
Mar 10	511	511	505	507.75	-9.50
May 10	520	521	518	518.50	-10.50
Jul 10	520	521	518	518.50	-10.50
Sep 10	530	530	520	520	-10.25
Est. sales 117,342. Wed's sales 11,342 Wed's open int. 137,620, +1,671					

EXP.	OPEN	HIGH	LOW	SETTLE	CHG
CATTLE (CME) 40,000 lbs.- cents per lb.					
Apr 10	93.12	93.20	92.60	93.02	+1.2
Jun 10	91.67	91.77	91.20	91.67	+2.0
Aug 10	90.02	90.25	89.77	90.20	+1.3
Oct 10	92.55	92.85	92.40	92.82	+2.5
Est. sales 16,495. Wed's sales 40,009 Wed's open int. 320,859, +653					
FEEDER CATTLE (CME) 40,000 lbs.- cents per lb.					
Mar 10	102.50	102.70	102.05	102.52	+0.2
Apr 10	105.27	105.42	104.65	105.12	+3.7
May 10	105.90	106.22	105.65	106.10	+4.3
Aug 10	107.85	108.17	107.70	108.12	+4.5
Est. sales 3,406. Wed's sales 6,906 Wed's open int. 37,606, +43					
HOGS-Lean (CME) 40,000 lbs.- cents per lb.					
Mar 10	73.50	74.15	73.20	73.57	+1.17
Apr 10	78.90	78.95	78.45	78.95	+0.5
May 10	82.20	82.40	81.75	82.00	-3.0
Jul 10	81.90	82.27	81.75	82.22	-1.3
Est. sales 9,824. Wed's sales 37,671 Wed's open int. 192,926, +3,647					
PORK BELLIES (CME) 40,000 lbs.- cents per lb.					
Mar 10	93.50	93.50	93.50	93.50	-1.00
May 10	94.5				