

Let's address the storage report to start. the EIA delivered a report on Thursday that was out of left field. The pull of 98 Bcf, roughly 40 Bcf lighter than the market, was nowhere near reality. This was the 2nd wild report from the EIA this week. This crude report on Wednesday's stated a massive 21+ MB build, while the market was looking for a small crude draw, around 2-3 MB.

So what do we make of this report? Hard to understand the South Central storage numbers which showed net-zero storage activity (Salt +9, Non-salt -9). We were estimating a total draw of 142 Bcf, which puts our number off by an average of 6.3 Bcf/d.

On Thursday Platts wrote that "The extent of the disconnect between the EIA and the market is possibly the largest it's ever been in the shale era, likely because of the compounding uncertainties related to the recovery of both production and demand in the wake of the mid-February cold front that brought massive volatility to the US gas market...."

Seems like they have no idea either.

I received a note from a contact at the EIA on Thursday evening.

"We survey 100% of all volume in the Pac and 97% of everything else. Every week. We are having no issues with respondents. Everyone else sees at best about 60% of what we see ... We are counting and others are estimating and sometimes guessing"

My partner at enelyst.com, John Sodergreen, com also got a note from the EIA on Thursday and got the following response from Rob Merriam. [FYI -WPSR is Weekly Petroleum Status Report and WNGSR is Weekly NatGas Storage Report]

"Response rate was again quite good, even higher than the WPSR yet again this week. (You do the math!) While we don't collect or report all the same supply/disposition elements to support our WNGSR storage data to have the same quantitative puzzle elements we have for WPSR, we do carefully assess both the reported data along with the key factors that could drive our weekly gas working storage estimate. And like crude oil, those key elements all supported a much smaller withdrawal than the prior week, compared to what we reported with the two-week-ago freezing weather in Texas and the Mid-West. This past week, temperatures and population-weighted HDD moderated across the Lower 48. Our intel sources showed declines in use across every sector: residential, commercial, industrial, and electric utility; and as noted above, our intel showed an uptick in drilling activity, all of which support a much smaller draw on inventories. As with our crude oil review, we would have noticed errant reporting by a few respondents large enough to have driven us to grossly misstate the U.S. totals this week, which implies that we likely saw many respondents showing the same trends in their data, and which therefore gives us much higher confidence in the accuracy of our estimate.

Last, as you know, if there were to be any revisions to this week's natural gas data, we'd apply them per our revision policy that you can review from our WNGSR website."

Market Report

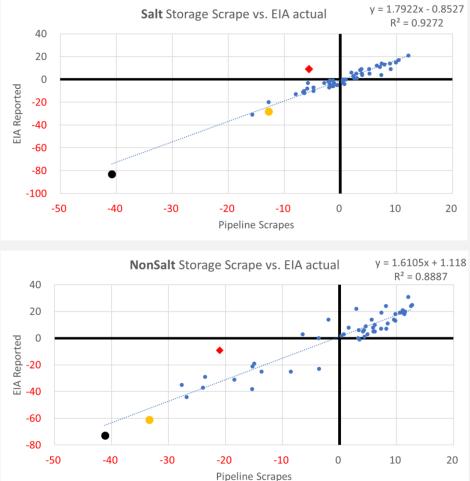
So no clear reason why we all missed. But we got to take the EIA at their word. I've questioned them in the past and they have consistently communicated that they receive a near-complete dataset each week. They are confident in their assessment and so we got to believe it.

I dived into the South Central storage data (of what we can see) to show how wrong this number feels. The following charts show the Salt and NonSalt storage scrapes vs. EIA reported numbers. We do not have a very clear view of pipeline receipt and delivery activity in Texas (which is part of this big mess), but in general the pipeline flow model has a good fit.

x-axis = pipeline scrape data (what we can see daily/weekly from the pipeline data) y-axis = EIA reported data

RED Diamond = Week Ending Feb 26th (Last week)
BLACK Dot = Week Ending Feb 19th (F'ing cold week)
Yellow Dot = Week Ending Feb 12th (Week before the tundra met Texas – normal week)
[Note: the same graphics for all the other regions are a couple of pages down]

It's pretty clear that RED Diamonds do not fit



Market Report

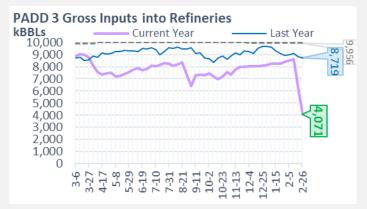
There is clearly something wrong in the South Central numbers this week. I have not read anything insightful on this number yet, other than the EIA is wrong. Here are my theories. I believe it would have to be a combination of some of these events to get to a 6.3 Bcf/d miss:

1) storage operators report incorrectly the week prior and had some make numbers in the report. The black dots above show that both the salt and nonsalt were over-reporting a draw.

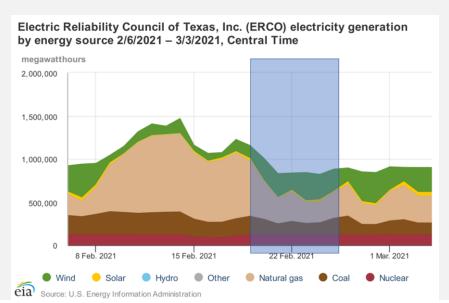
2) production was stronger than anticipated due to ethane rejection. The hefty premium in cash/balmo premium could have pushed producers to push ethane into the gas stream.

3) A burst of production after a major freeze-off event as the gathering lines open up. The longer the freeze-off even the more pressures build up underground; hence last week was like uncorking event. Note that we saw a massive crude build this past week as well: +21 mmbbls

4) Nat gas usage was lower than expected. Padd3 Refinery utilization was off by a further 22% week-on-week to only 41%.

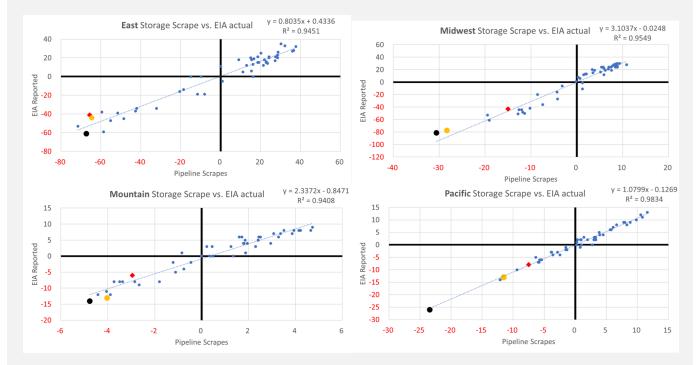


5) wind roared back, while natgas backed off.



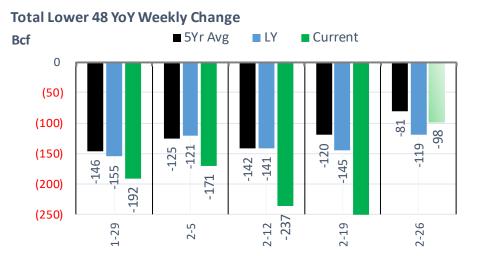
Here are the rest of the regions:

ENERGY

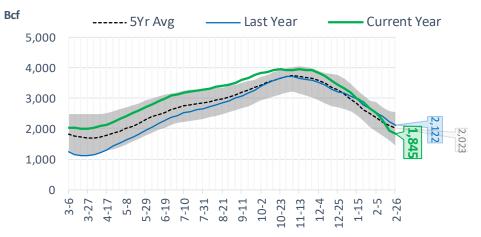


Market Report

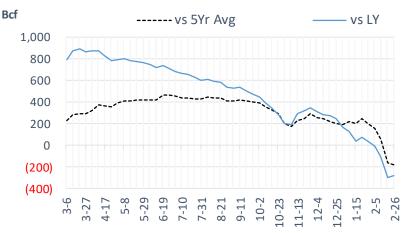
EIA Storage Report



Total Lower 48 Storage Levels



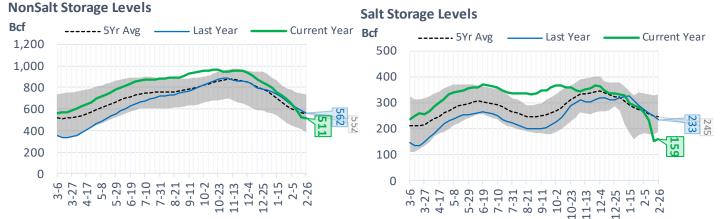
Total Lower 48 LY Surplus/Deficit



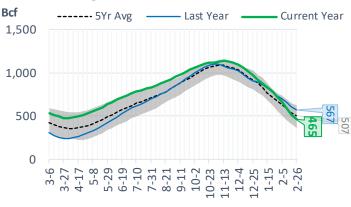
Natural Gas Storage Stats - Last 5 Weeks

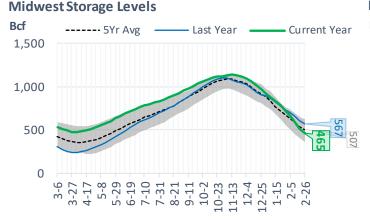
	Current	Week - 1	Week - 2	Week - 3	Week - 4	Week - 5
Week Ending	26-Feb	19-Feb	12-Feb	5-Feb	29-Jan	22-Jan
Total Lower 48 Storage Level	1845	1943	2281	2518	2689	2881
Weekly Change	-98	-338	-237	-171	-192	-128
vs LY	-277	-298	-105	-9	+41	+78
vs 5Yr Avg	-178	-161	+57	+152	+198	+244
S. Central Salt Storage Level	159	150	233	261	281	288
Weekly Change	+9	-83	-28	-20	-7	-8
vs LY	-74	-98	-27	-11	-5	-18
vs 5Yr Avg	-86	-99	-25	-8	+9	+8
S. Central NonSalt Storage Level	511	520	593	654	689	726
Weekly Change	-9	-73	-61	-35	-37	-29
vs LY	-51	-66	-20	+13	+18	+17
vs 5Yr Avg	-41	-42	+14	+50	+60	+64
Midwest Storage Level	465	508	589	666	719	780
Weekly Change	-43	-81	-77	-53	-61	-48
vs LY	-102	-97	-66	-37	-16	+4
vs 5Yr Avg	-42	-29	+11	+40	+49	+62
East Storage Level	383	424	485	529	582	641
Weekly Change	-41	-61	-44	-53	-59	-38
vs LY	-77	-72	-54	-48	-27	-14
vs 5Yr Avg	-32	-16	+3	+4	+20	+36
Mountain Storage Level	117	123	137	150	158	170
Weekly Change	-6	-14	-13	-8	-12	-6
vs LY	+14	+12	+17	+21	+20	+25
vs 5Yr Avg	+4	+4	+12	+18	+18	+22
Pacific Storage Level	210	218	244	257	261	275
Weekly Change	-8	-26	-13	-4	-14	0
vs LY	+13	+21	+45	+53	+51	+62
vs 5Yr Avg	+19	+21	+41	+48	+43	+50



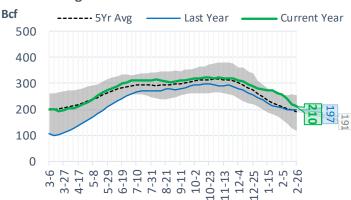


Midwest Storage Levels





Pacific Storage Levels



The risk of trading futures and options and other derivatives involves a substantial risk of loss and is not suitable for all persons. Each person must consider whether a particular trade, combination of trades, or strategy is suitable for that person's financial means and objectives. Past results are not necessarily indicative of future results. This communication may contain links to third party websites which are not under the control of and are not maintained by ION Energy Group, and ION Energy Group is not responsible for their content.

7

EIA Storage Week Balances

	29-Jan	5-Feb	12-Feb	19-Feb	26-Feb	5-Mar	WoW	vs. 4W
Lower 48 Dry Production	91.2	91.2	90.6	76.9	85.0	92.3	7.3	6.4
Canadian Imports	6.4	6.3	6.3	7.8	6.2	4.9	T -1.4	▼-1.8
L48 Power	28.7	28.9	28.8	30.2	25.3	26.2	A 0.9	▼ -2.1
L48 Residential & Commercial	47.5	46.7	52.4	59.8	41.8	35.1	▼ -6.7	▼-15.1
L48 Industrial	24.4	22.4	24.3	24.2	23.3	22.9	▼ -0.4	▼ -0.7
L48 Lease and Plant Fuel	5.0	5.0	5.0	4.2	4.7	5.1	0 .4	a 0.4
L48 Pipeline Distribution	3.5	3.4	3.7	4.1	3.0	2.9	▼ -0.2	▼ -0.7
L48 Regional Gas Consumption	109.1	106.4	114.2	122.5	98.1	92.2	T -5.9	▼-18.1
Net LNG Exports	10.0	10.7	10.7	4.9	7.8	10.1	2.2	1.5
Total Mexican Exports	6.6	6.2	6.4	4.9	5.6	6.1	0.5	0.3
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	-28.1 -27.4 -0.6	-25.7 -24.4 -1.3	-34.3 -33.9 -0.4	-47.7 -48.3 0.6	-20.3 -14.0 -6.3	-11.2	9.1	

96%

95%

Monthly Balances

Monthly Balances	2Vr Ago	LY					MTD		
	2Yr Ago Mar-19	Mar-20	Jan-18	Feb-18	Jan-21	Feb-21	Mar-21	МоМ	vs. LY
Lower 48 Dry Production	88.7	93.7	77.0	78.7	91.1	86.1	91.8	▲ 5.7	▲13.1
Canadian Imports	5.1	4.1	5.9	5.2	6.3	6.4	5.4	▼ -1.0	▲ 0.2
L48 Power	25.7	28.3	25.3	24.5	28.7	27.9	27.6	- 0.3	3.2
L48 Residential & Commercial	35.7	27.4	48.9	39.3	44.4	48.5	36.9	▼-11.6	▼ -2.4
L48 Industrial	23.0	22.2	23.8	22.6	22.8	22.0	19.5	- 2.5	▼ -3.1
L48 Lease and Plant Fuel	4.9	5.2	4.3	4.4	5.0	4.7	5.1	A 0.3	0.6
L48 Pipeline Distribution	2.9	2.6	3.2	2.8	3.3	3.4	3.1	▼ -0.4	0.2
L48 Regional Gas Consumption	92.3	85.7	105.5	93.6	104.3	106.6	92.2	▼-14.4	▼-1.4
Net LNG Exports	4.8	8.5	2.2	3.0	10.5	8.4	10.5	2.1	7.5
Total Mexican Exports	4.9	5.4	4.2	4.1	6.2	5.7	6.5	0.8	▲ 2.4
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	-8.1	-1.9	-29.1	-16.9	-23.5	-28.2	-12.1		

Source: Bloomberg, analytix.ai

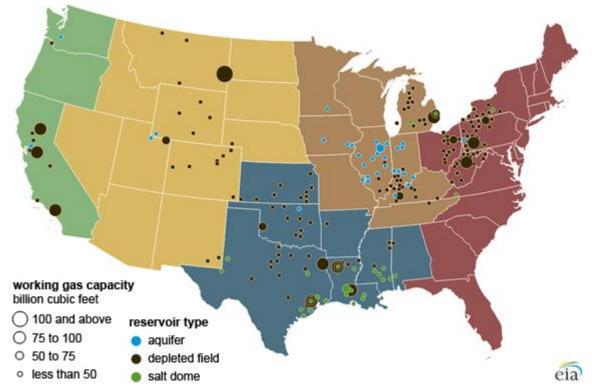


Regional S/D Models Storage Projection

Week Ending	5-Mar			
			Daily	
			Average	Weekly
		Daily	Storage	Adjusted
	Daily Raw	Adjustment	Activity	Storage
	Storage	Factor	(Adjusted) *	Activity
1.40	10.0	0.4	7.0	- 4
L48	-10.6	3.4	-7.2	-51
East	-6.7	3.4	-3.3	-23
Midwest	-4.2	-0.1	-4.4	-31
Mountain	2.9	-2.5	0.4	3
South Central	-2.2	3.1	0.9	6
Pacific	-0.4	-0.4	-0.8	-6

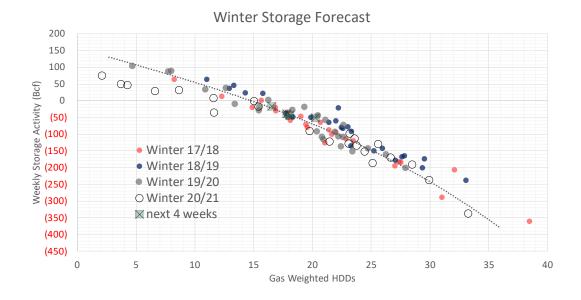
*Adjustment Factor is calcuated based on historical regional deltas

U.S. underground natural gas storage facilities by type (July 2015)



Weather Model Storage Projection

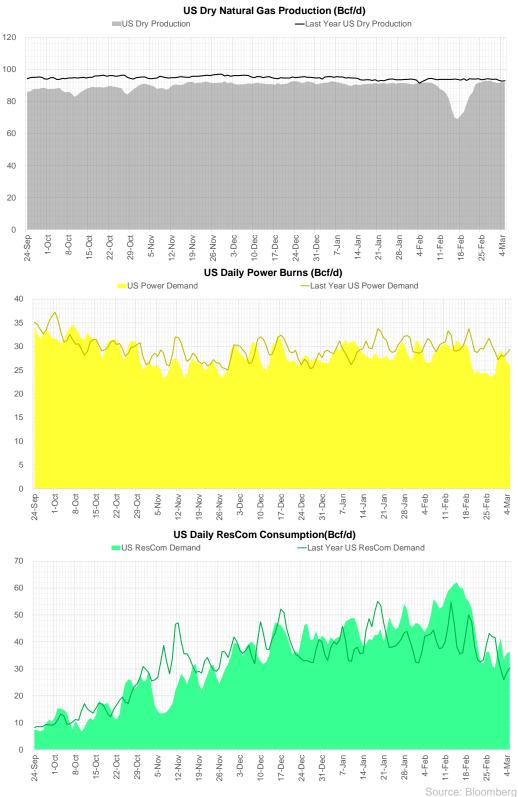
Next report and beyond		
		Week Storage
Week Ending	Temp	Projection
12-Mar	17.8	-38
19-Mar	18.1	-43
26-Mar	16.5	-17



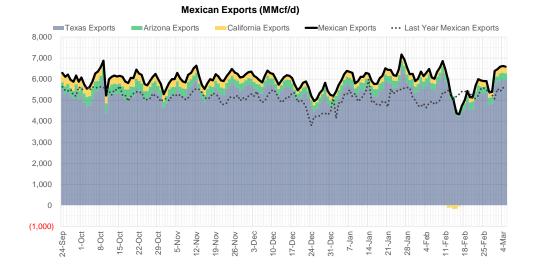
Note: this is not our official end of season forecast. This chart signifies where storage levels end with 10-year normal weather and current market tightness relative to last year

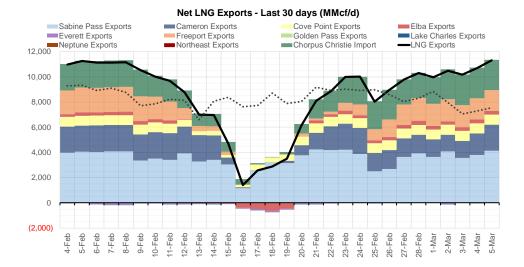


Supply – Demand Trends









Source: Bloomberg



Nat Gas Options Volume and Open Interest

CME, ICE and Nasdaq Combined

CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
4	2021	С	3.00	12788	4	2021	С	3.00	67257
4	2022	С	2.50	8960	4	2021	С	4.00	53198
4	2021	Р	2.50	6628	4	2021	С	3.25	44237
4	2021	Р	2.60	6443	10	2021	С	4.00	42619
4	2021	С	3.25	4573	4	2021	Р	2.50	42595
11	2021	С	4.00	4400	8	2021	С	4.00	32135
5	2021	Р	2.50	4393	7	2021	С	4.00	30723
4	2021	Р	2.75	4243	6	2021	С	4.00	28130
6	2021	Р	2.50	3289	4	2021	Р	2.00	28088
4	2021	Р	2.70	3252	10	2021	С	3.25	28080
4	2021	Р	2.65	3163	5	2021	С	3.00	28037
4	2021	С	2.85	3079	10	2021	С	5.00	24814
4	2021	P	2.40	2733	5	2021	С	4.00	24706
8	2021	C	3.25	2220	5	2021	Р	2.50	24610
11	2021	C	3.50	2000	4	2021	С	2.75	24474
5	2021	C	3.25	1983	8	2021	С	3.50	24447
5	2021	C	3.50	1938	4	2021	С	3.50	24374
4	2021	C	2.90	1931	4	2021	Р	2.75	23257
4	2021	C	2.75	1918	5	2021	С	3.50	22473
4	2021	c	2.95	1901	4	2021	Р	2.25	22181
4	2021	C	3.10	1575	4	2021	Р	2.60	21853
5	2021	c	3.00	1386	4	2021	С	5.00	20483
5	2021	P	2.25	1351	6	2021	Р	2.50	20192
10	2021	C	3.50	1280	5	2021	С	3.25	20117
6	2021	c	3.50	1200	10	2021	С	3.50	20096
5	2021	P	2.75	1220	8	2021	Р	2.25	19933
4	2021	P	2.45	1220	9	2021	Р	2.00	18546
6	2021	P	2.45	1204	7	2021	С	3.50	18496
10	2021	P	2.75	1000	5	2021	Р	2.00	18135
3	2022	P	2.00	1000	10	2021	Р	2.00	17957
4	2022	C	2.00	982	4	2022	С	3.00	17808
4	2021	c	2.60 3.15	905	6	2021	С	3.50	17478
5	2021	P	2.00	863	10	2021	Р	2.50	17152
6	2021	P	2.60	751	12	2021	С	4.00	16932
		P P			10	2021	С	3.00	16908
5 4	2021	P	2.60	725 722	5	2021	Р	2.25	16681
4	2021		2.80		6	2021	Р	2.00	16401
	2021	С	3.50	700	11	2021	С	4.00	16025
10	2021	P	2.50	700	6	2021	С	3.00	15737
4	2021	С	3.35	623	6	2021	С	3.25	15537
7	2021	С	3.50	601	9	2021	С	3.50	15252
9	2021	С	3.50	601	4	2021	С	2.50	15252
10	2021	С	3.25	575	7	2021	Р	2.00	15127
4	2021	С	3.30	530	4	2021	С	3.75	15049
5	2021	P	2.45	505	8	2021	Р	2.00	15008
5	2021	С	3.35	503	6	2021	Р	2.25	14786
6	2021	С	3.10	501	8	2021	С	3.25	14320
4	2021	Р	2.35	500	9	2021	С	3.25	13889
6	2021	С	3.35	500	7	2021	Р	2.50	13836
6	2021	С	4.00	500	9	2021	С	4	13780

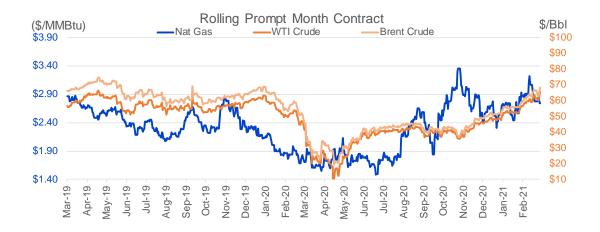
Source: CME, Nasdaq, ICE

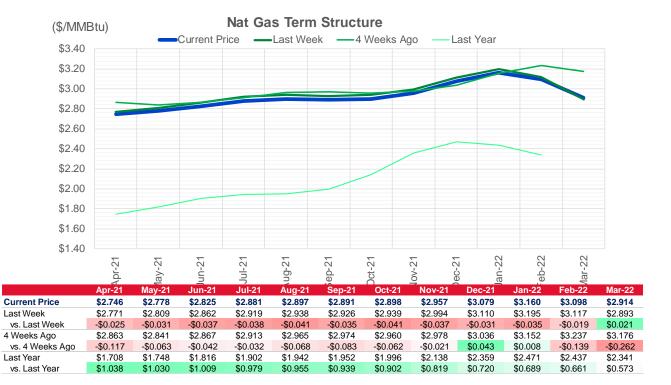


Nat Gas Futures Open Interest CME, ICE and Nasdaq Combined

CME Henry Hu	ub Futures	(10,000 MMBtu)		ICE Henry Hu	b Futures Co	ontract Equiva	lent (10,000 MN
	Current	Prior	Daily Change	FOR JUNE 26	Current	Prior	Daily Change
APR 21	163302	172283	-8981	APR 21	102569	102393	176
MAY 21	216197	215828	369	MAY 21	93698	94285	-587
JUN 21	78859	77428	1431	JUN 21	70749	70265	484
JUL 21	73546	72097	1449	JUL 21	74940	74791	149
AUG 21	47582	45479	2103	AUG 21	77079	76891	188
SEP 21	96108	94590	1518	SEP 21	70337	70525	-189
OCT 21	126529	126690	-161	OCT 21	91033	91032	1
NOV 21	59989	58253	1736	NOV 21	56073	55925	148
DEC 21	46641	46555	86	DEC 21	57235	56920	315
JAN 22	60288	63612	-3324	JAN 22	57638	57482	156
FEB 22	21777	21680	97	FEB 22	40786	40668	119
MAR 22	40278	40967	-689	MAR 22	45523	45689	-167
APR 22	38678	38451	227	APR 22	43835	44010	-176
MAY 22	17878	17712	166	MAY 22	36432	36410	23
JUN 22	12309	12367	-58	JUN 22	34903	34970	-68
JUL 22	7199	7247	-48	JUL 22	35107	35046	60
AUG 22	8104	8095	9	AUG 22	34134	34211	-77
SEP 22	9236	8970	266	SEP 22	34917	34990	-74
OCT 22	19848	20478	-630	OCT 22	41085	41178	-93
NOV 22	8562	8488	74	NOV 22	32311	32412	-101
DEC 22	8837	8936	-99	DEC 22	37521	37382	139
JAN 23	6101	6382	-281	JAN 23	20406	20283	123
FEB 23	2175	2164	11	FEB 23	18689	18611	78
MAR 23	4188	4190	-2	MAR 23	20402	20187	215
APR 23	5550	5541	9	APR 23	16790	16715	75
MAY 23	2888	2880	8	MAY 23	16053	15983	70
JUN 23	996	991	5	JUN 23	15491	15409	82
JUL 23	993	987	6	JUL 23	14965	14881	84
AUG 23	753	746	7	AUG 23	15280	15218	62
SEP 23	602	562	40	SEP 23	14765	14683	82

Source: CME, ICE





				vs. 4 Weeks	
	Units	Current Price	vs. Last Week	Ago	vs. Last Year
NatGas Jan21/Apr21	\$/MMBtu	0.279	-0.025	-0.095	a 0.628
NatGas Mar21/Apr21	\$/MMBtu	-0.108	-0.025	- 0.130	-0.327
NatGas Oct21/Nov21	\$/MMBtu	0.059	a 0.004	a 0.001	-0.009
NatGas Apr21/Oct21	\$/MMBtu	0.152	a 0.624	a 0.663	-0.087
WTICrude	\$/Bbl	65.32	a 3.820	a 8.470	2 4.040
Brent Crude	\$/Bbl	68.48	a 2.350	a 9.140	a 23.210
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18	0.000	a 0.000	▲ 0.000
Heating Oil	cents/Gallon	193.30	A 7.650	a 21.930	5 4.780
Propane, Mt. Bel	cents/Gallon	0.97	a 0.061	a 0.111	a 0.608
Ethane, Mt. Bel	cents/Gallon	0.21	-0.054	-0.055	a 0.072
Coal, PRB	\$/MTon	12.30	a 0.000	a 0.000	▲ 0.000
Coal, PRB	\$/MMBtu	0.70			

Source: CME, Bloomberg

Baker Hughes Rig Counts

	Baker	Baker Hughes ≽			
U.S. Breakout Information	t Information This Week +/- Last Week				Year Ago
Oil	310	1	309	-372	682
Gas	92	0	92	-17	109
Miscellaneous	1	0	1	-1	2
Directional	16	-2	18	-35	51
Horizontal	362	-2	359	-346	708
Vertical	25	0	25	-340 -9	708 34
Venucai	25	U	25	-9	54
Canada Breakout	This Week	+/-	Last Week	+/-	Year Ago
Oil	80	-12	92	-54	134
Gas	61	-10	71	-8	69
Major Basin Variances	This Week	+/-	Last Week	+/-	Year Ago
Ardmore Woodford	0	0	0	-4	4
Arkoma Woodford	0	0	0	-1	1
Barnett	1	0	1	0	1
Cana Woodford	9	0	9	-9	18
DJ-Niobrara	7	0	7	-13	20
Eagle Ford	29	0	29	-39	68
Granite Wash	0	0	0	-2	2
Haynesville	46	0	46	3	43
Marcellus	31	0	31	-6	37
Mississippian	0	0	0	-2	2
Permian	211	3	208	-204	415
Utica	7	0	7	-4	11
Williston	13	-1	14	-39	52