

Order Flow Dynamics

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Module 2 : Market Internals

Disclaimer

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The problem with looking only at price.

Price moves in relation to itself. Price is used to measure change and as a result is one-dimensional. Price changes are thought to be the cause of market conditions, but price movements are the result of market conditions. Price movement in relation to itself has no meaning. Price always changes, that is why it is difficult to interpret.

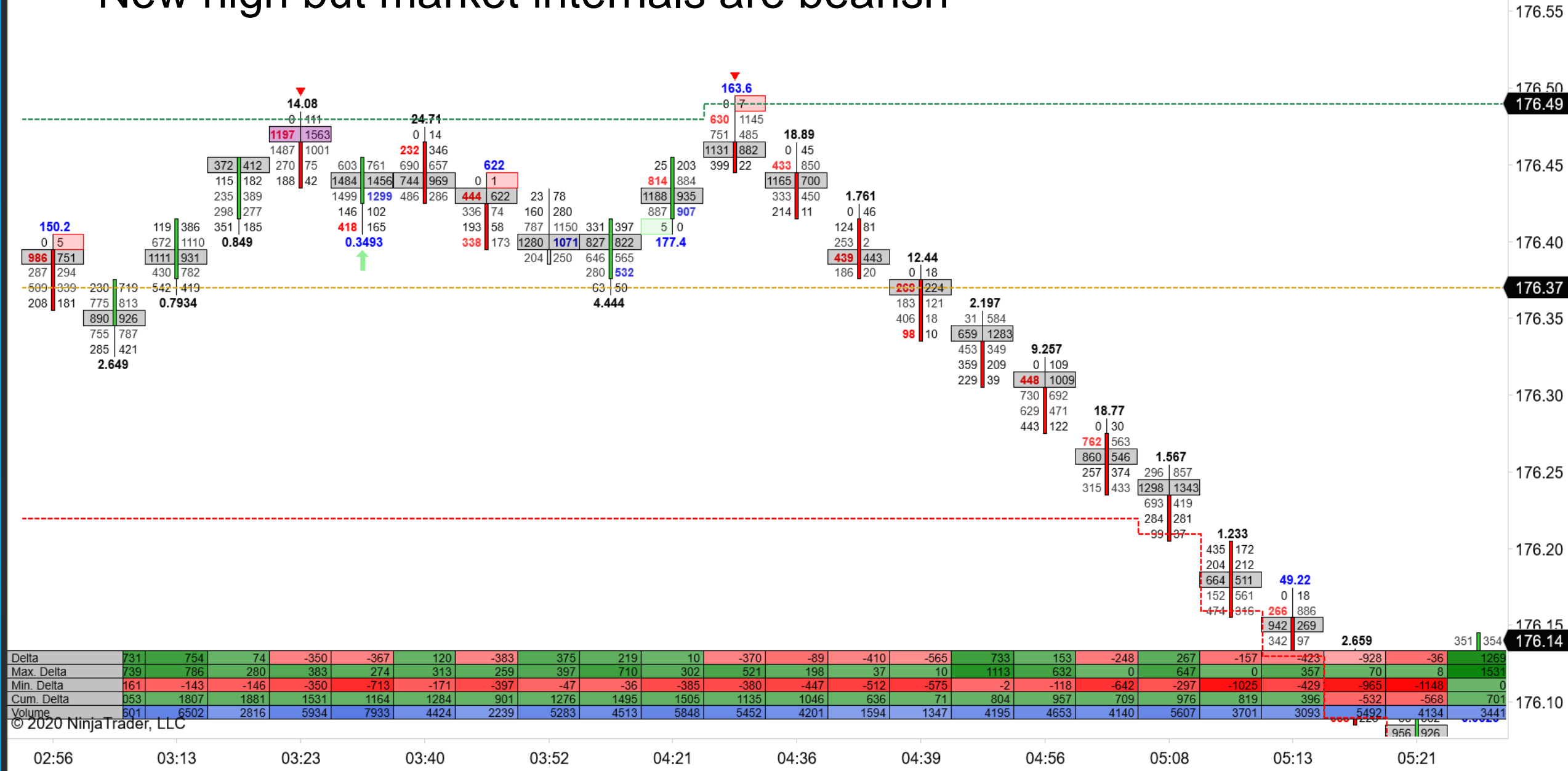
Focus instead on market conditions because it is the change in market conditions which cause the changes in price.

The problem with price.

Price can move based on external factors. Delta-One desks. As a trader you don't know what other traders are dealing against. But if you focus on the internals of the market you can better trade because you know what is happening in this market.

7/13/2020 02:56:42.400 - 7/13/2020 05:23:30.686

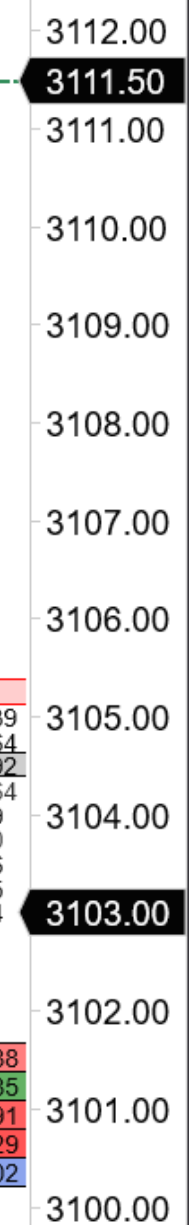
New high but market internals are bearish



A common misconception about volume is that unusually heavy volume is bullish. When a market has been trending down it can be. But when a market is at a high and there is unusually heavy volume, it is often a sign that the top is forming.

→

Top
Strong
Volume



35
01 - 3101.00

7/6/2020 08:56:00 - 7/6/2020 09:14:00

IEEE 754 single-precision

32-bit floating-point number

1-bit sign (S)

8-bit exponent (E)

23-bit mantissa (M)

3-bit integer (I)

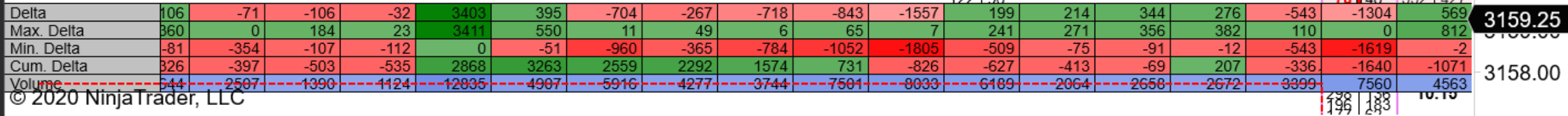
10-bit fractional (F)

10-bit trailing (T)

1 10000001 00000000000000000000000

0 0 0

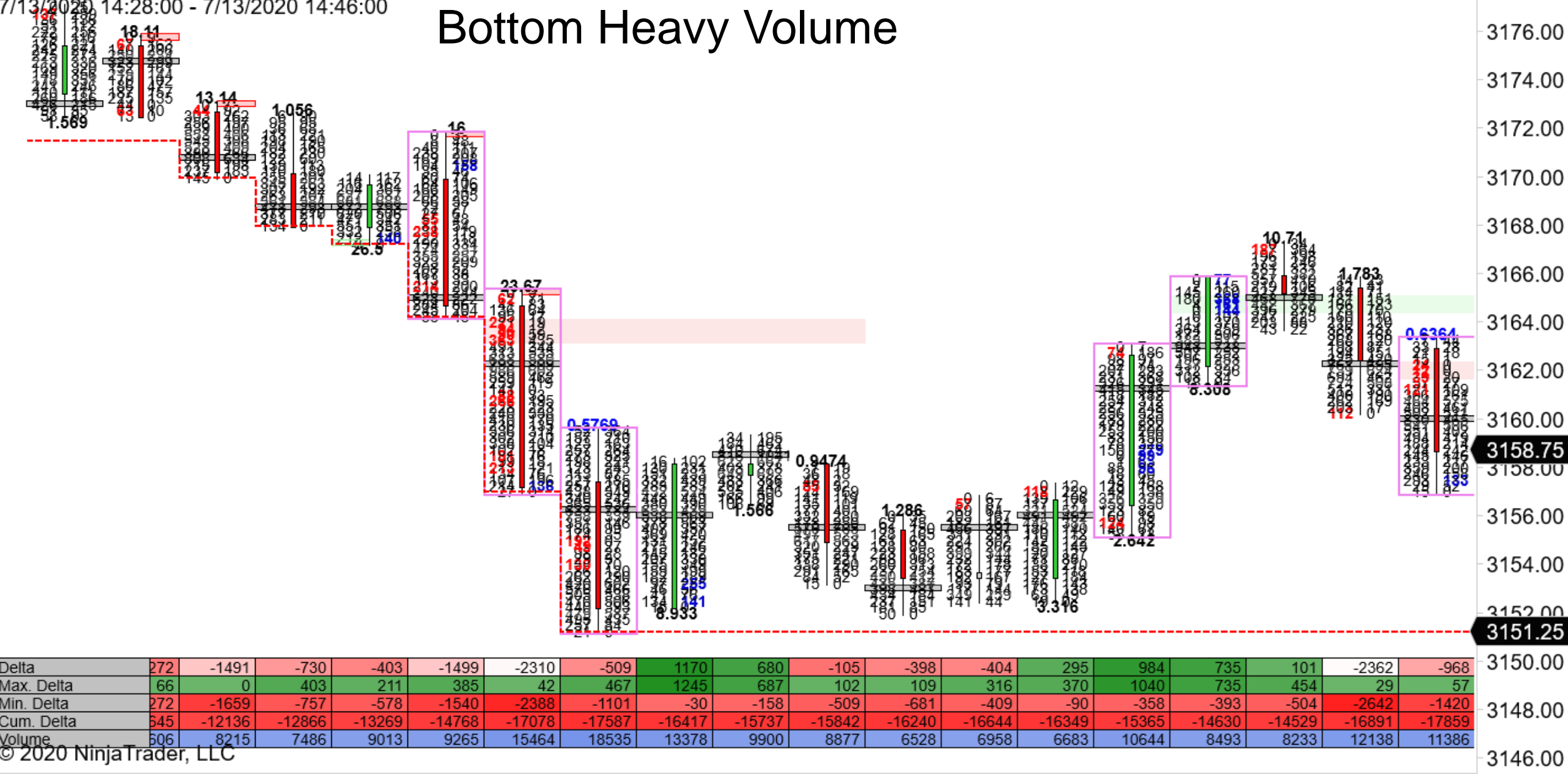
-INF



Order Flows Trader(ES 09-20 (1 Minute)), Current day OHL(ES 09-20 (1 Minute))

7/13/2020 14:28:00 - 7/13/2020 14:46:00

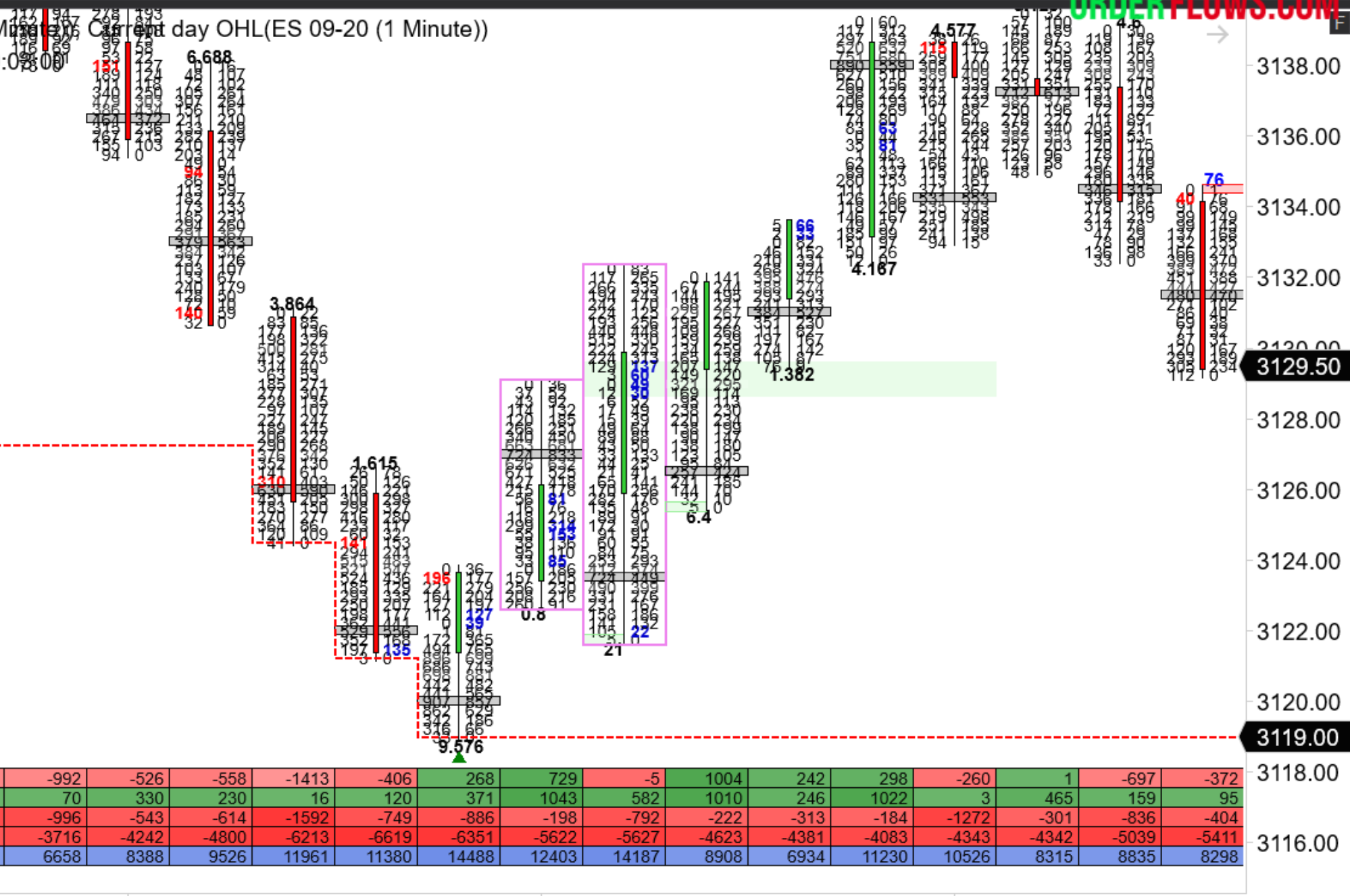
Bottom Heavy Volume



Delta	272	-1491	-730	-403	-1499	-2310	-509	1170	680	-105	-398	-404	295	984	735	101	-2362	-968
Max. Delta	66	0	403	211	385	42	467	1245	687	102	109	316	370	1040	735	454	29	57
Min. Delta	272	-1659	-757	-578	-1540	-2388	-1101	-30	-158	-509	-681	-409	-90	-358	-393	-504	-2642	-1420
Cum. Delta	245	-12136	-12866	-13269	-14768	-17078	-17587	-16417	-15737	-15842	-16240	-16644	-16349	-15365	-14630	-14529	-16891	-17859
Volume	606	8215	7486	9013	9265	15464	18535	13378	9900	8877	6528	6958	6683	10644	8493	8233	12138	11386

Order Flows Trader(ES 09-20 (1 Minute))
 7/14/2020 08:45:00 - 7/14/2020 09:09:00

Bottom
Heavy
Volume



Delta	549	-351	-959	-992	-526	-558	-1413	-406	268	729	-5	1004	242	298	-260	1	-697	-372
Max. Delta	146	8	0	70	330	230	16	120	371	1043	582	1010	246	1022	3	465	159	95
Min. Delta	573	-383	-1010	-996	-543	-614	-1592	-749	-886	-198	-792	-222	-313	-184	-1272	-301	-836	-404
Cum. Delta	414	-1765	-2724	-3716	-4242	-4800	-6213	-6619	-6351	-5622	-5627	-4623	-4381	-4083	-4343	-4342	-5039	-5411
Volume	567	4445	6545	6658	8388	9526	11961	11380	14488	12403	14187	8908	6934	11230	10526	8315	8835	8298

If a move is strong, it will most likely strengthen with solid volume behind it.

When there are large volume swings in a bar, something is afoot.

On moves DOWN look for heavy volume on bid side of red bars.
Bar must close BELOW the heavy volume bid sides.

Order Flows Trader(ES 09-20 (5 Minute))

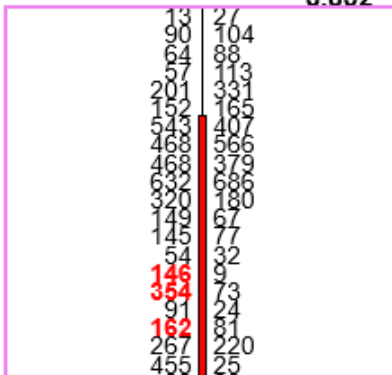
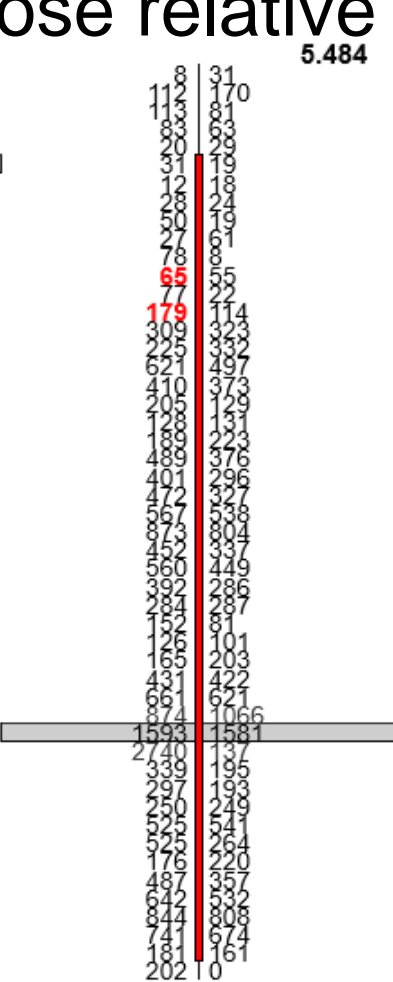
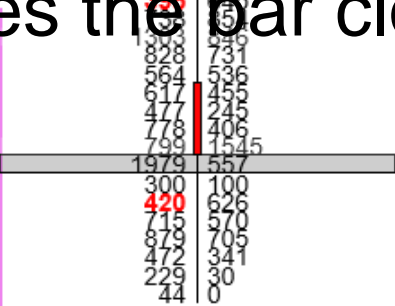
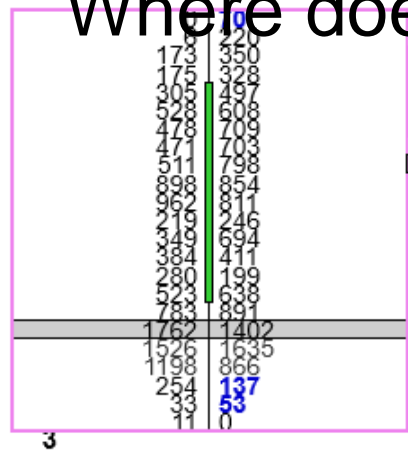
7/13/2020 13:55:00 - 7/13/2020 14:20:00

21.5

5.484

3.852

Where does the bar close relative to the heavy volume?



Heavy volume into new high ground is an effort on the market's part to go higher. BUT, there must be follow through in the order flow. You need to see aggressive buying in the new high areas.

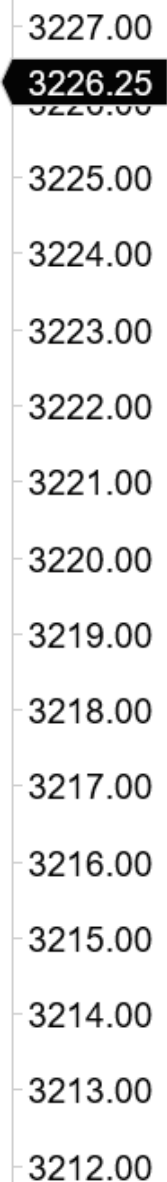
When you start to see passive selling, big offers at highs, the market could be topping out.

Current day OHL(ES 09-20 (1 Minute))
7/13/2020 11:16:00 - 7/13/2020 13:45:00

Volume?



Where are the bars closing relative to volume



0	11
138	423
246	387
173	154
238	421
	14993
	17324
	-2331
	625
	-2999
	3993
	32317
228	855
553	279
618	841

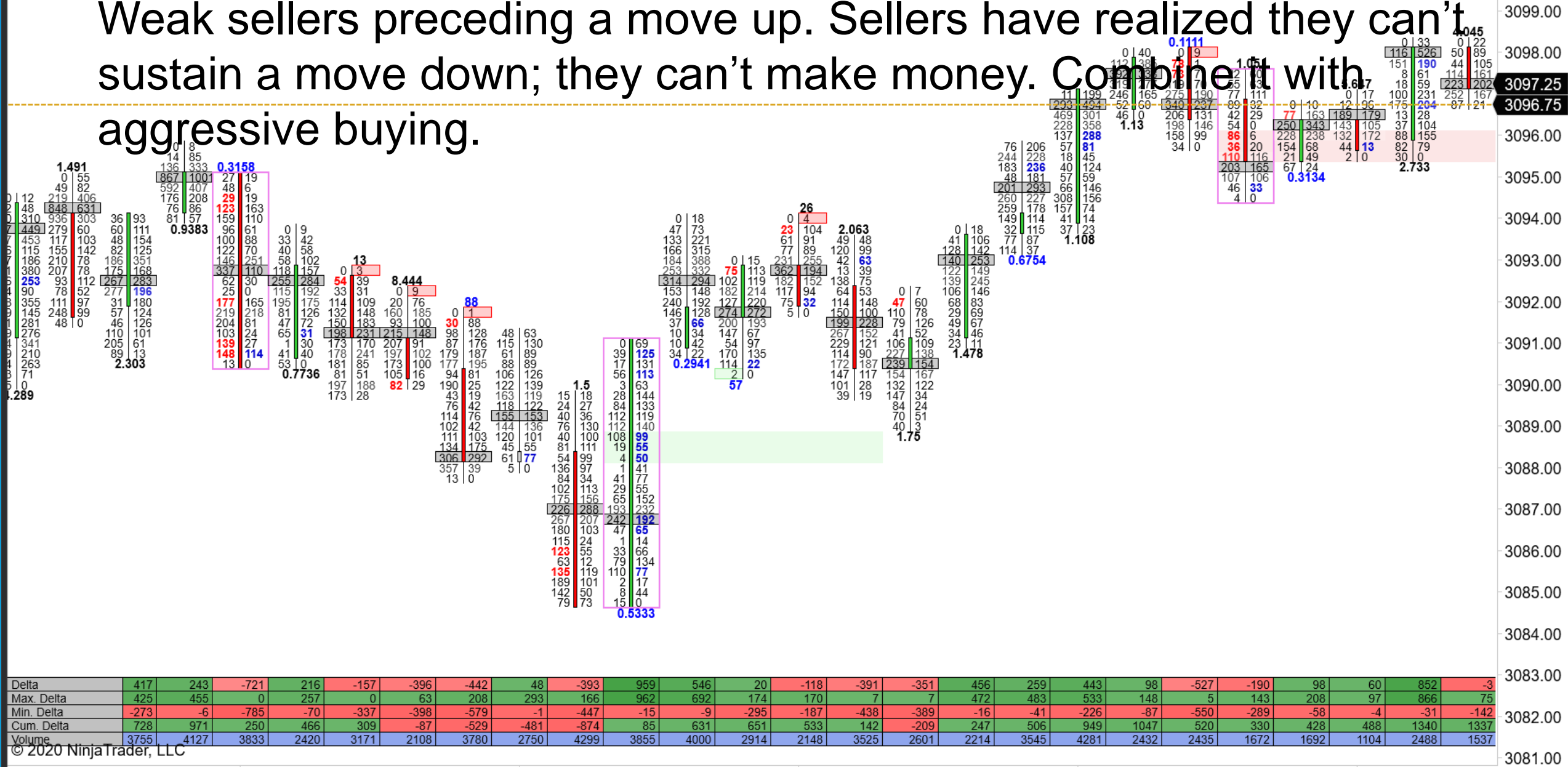
Understanding excessive volume – volume is made up of both buying and selling volume. When you are at a high and you see excessive volume, it is easy to get excited and think the market is going higher, but what is happening is supply is coming into the market.

You have to look to the left. Is this high (low) fresh territory or an area we have spent some time in? Fresh territory with heavy volume is good, but an area we have been before with heavy volume and the market is struggling to go higher signals supply coming in to potentially halt the move higher.

Weak buyers and sellers. Most of the time we are focused on where the majority of the volume trades. But we must train ourselves to look at areas where thin counter trade occurred as this often clues us into areas where weakness is taking place. For example, a market makes a new high, but instead of continued buying there is weaker buying on the offer as the market hangs around the high.

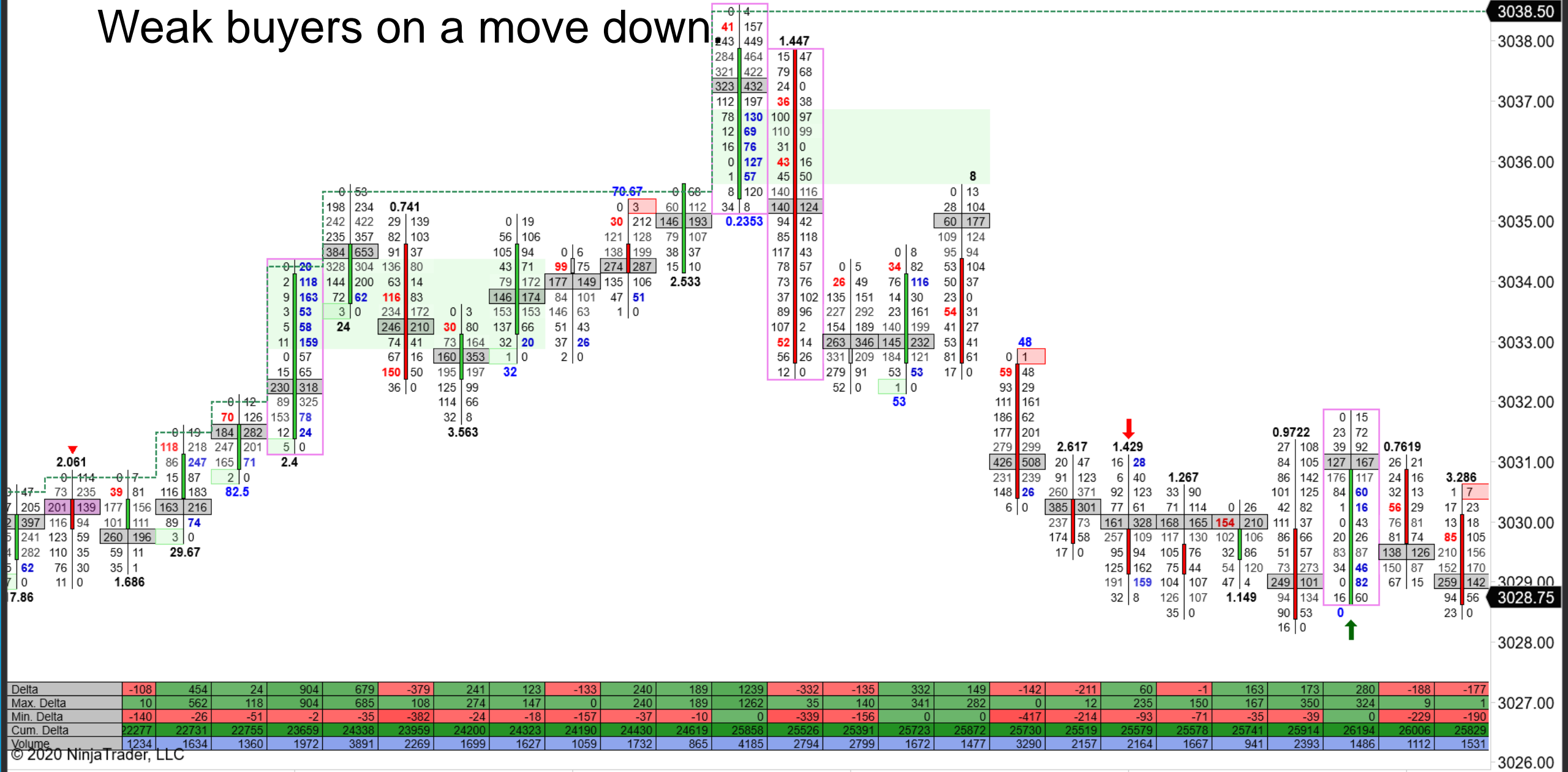
6/19/2020 11:31:00 - 6/19/2020 11:57:00

Weak sellers preceding a move up. Sellers have realized they can't sustain a move down; they can't make money. Combine it with aggressive buying.



Order Flows Trader(ES 09-20 (1 Minute)), Current day OHL(ES 09-20 (1 Minute))
6/15/2020 12:05:00 - 6/15/2020 12:31:00

Weak buyers on a move down



Unfair highs and lows are where volume comes out of the market.

What this means is at an unfair high, buyers start thinking they can't make any money on a move higher, so they stop buying, sellers start coming in.

At an unfair low, sellers realize they can't make any more money selling the market lower because they think the market isn't going to go any lower.

Not a lot of activity and not a lot of volume.

When selling decreases on moves down, selling pressure is no longer present, the market has the tendency to rally. This is the path of least resistance. Selling pressure needs to be strong and consistent to keep the market moving down.

Market always look for the path of least resistance.

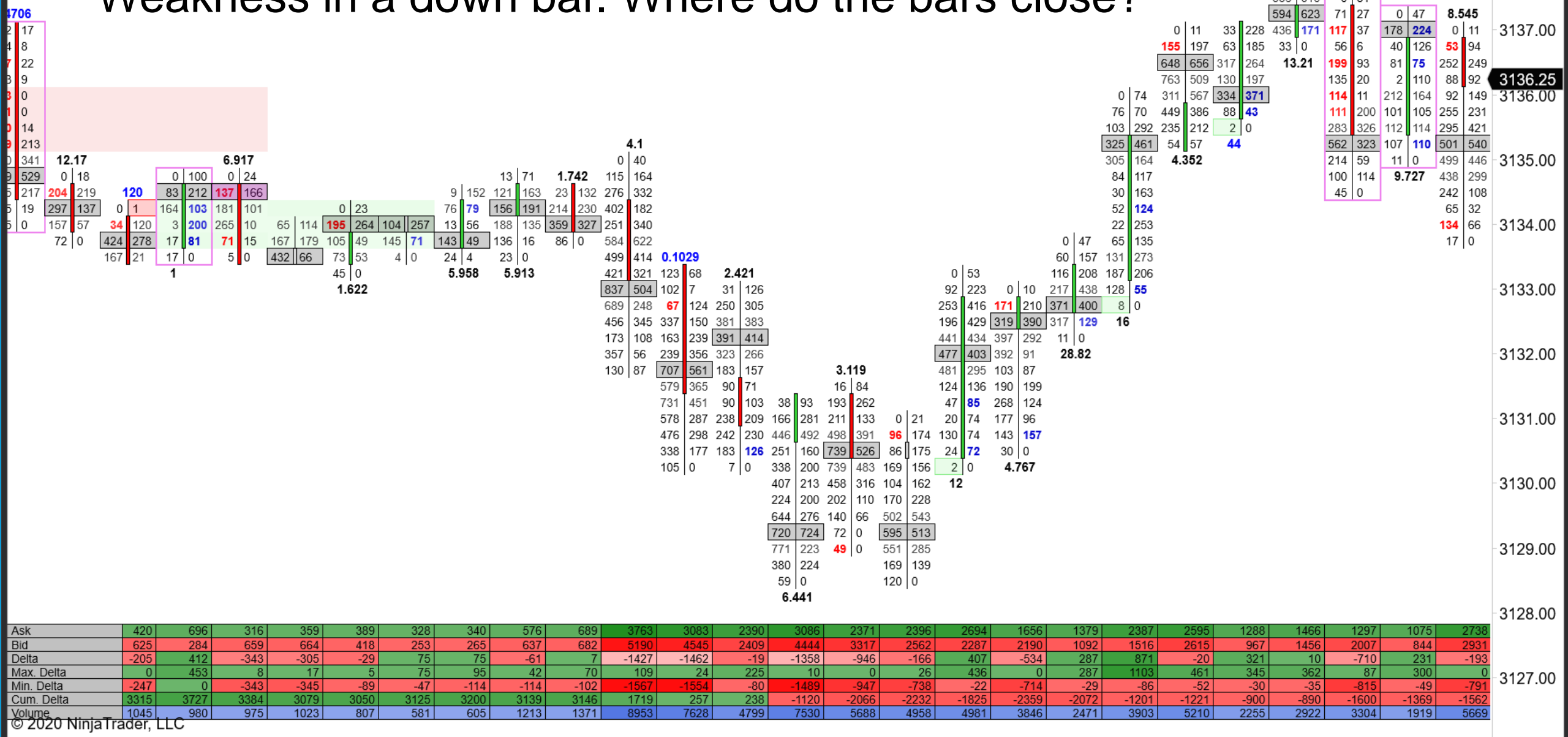
In up moves, for the move to continue, there needs to be consistent buying present. Demand needs to be present.

Weakness is an up bar – as a market is making highs and the bar does not close near the bar's high and instead closes below the mid-point it could be bearish. It warrants further investigation into the volume. How is the volume in the bar over all and on the bid/offer?

Weakness in a down bar - as a market is making lows and the bar does not close near the bar's low and instead above below the mid-point it could be bullish. It warrants further investigation into the volume. How is the volume in the bar over all and on the bid/offer?

Order Flows Trader(ES 09-20 (1 Minute)), Current day OHL(ES 09-20 (1 Minute))
6/23/2020 08:20:00 - 6/23/2020 08:46:00

Weakness in a down bar. Where do the bars close?



Now, lets take it a step further, beyond simple volume. Let's look at the order flow Max Delta and Min Delta.

Delta is the net difference between aggressive buyers and aggressive sellers in a bar. It is the headline number so to speak.

However there are two other delta numbers a trade can look at and use in their analysis – Max Delta and Min Delta.

Max Delta is the strongest aggressive buying was at one point in a bar.

Min Delta is the strongest aggressive selling was at one point in a bar.

Think of it like this...in most sport they have what is called slop time. In basketball, it is the 3rd quarter and you are up by 32 points, so the coach decides to take out the stars and send in the second team to get some playing time and you end winning by only 6 points. The game was never in doubt but the final score difference was just 6 points, people will look at the headline number and think it was a close game. In reality, it was never close.

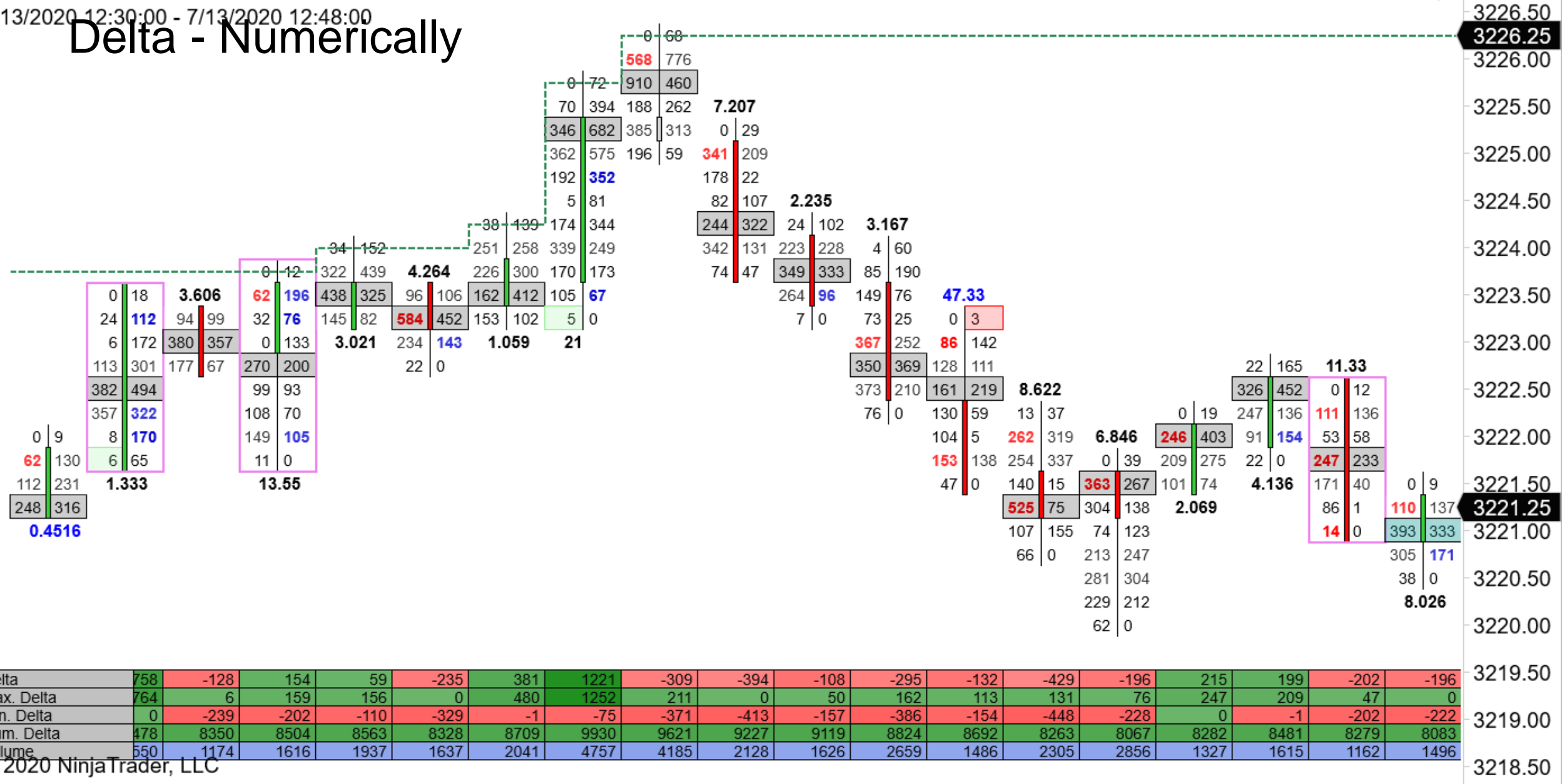
There are two ways to view Max Delta and Min Delta.

1. Numerically – along the bottom in numbers.
2. Visually – along the bottom in candlestick form.

Order Flows Trader(ES 09-20 (1 Minute)), Current day OHL(ES 09-20 (1 Minute))

7/13/2020 12:30:00 - 7/13/2020 12:48:00

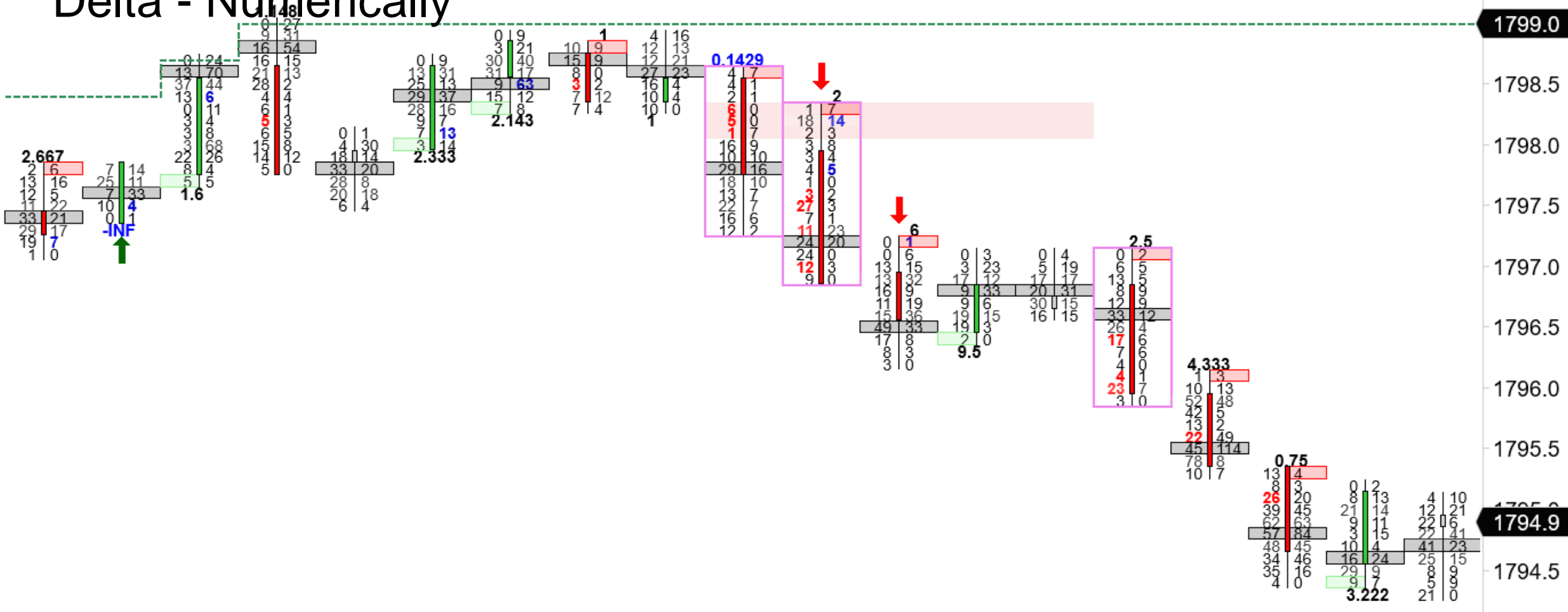
Delta - Numerically



Order Flows Trader(GC 08-20 (1 Minute)), Current day OHL(GC 08-20 (1 Minute))

7/6/2020 08:42:00 - 7/6/2020 09:00:00

Delta - Numerically



Delta	14	163	30	-14	26	75	-14	-10	-75	-56	17	17	13	-90	-24	0	-6	-26
Max. Delta	27	185	97	9	34	85	0	0	3	17	23	17	19	3	2	28	2	2
Min. Delta	0	-1	0	-16	0	-19	-22	-32	-75	-56	-25	-25	-19	-92	-82	-67	-17	-45
Cum. Delta	1705	1868	1898	1884	1910	1985	1971	1961	1886	1830	1847	1864	1877	1787	1763	1763	1757	1731
Volume	112	377	320	204	254	265	86	172	241	242	307	173	189	222	522	652	204	294

Delta - Numerically

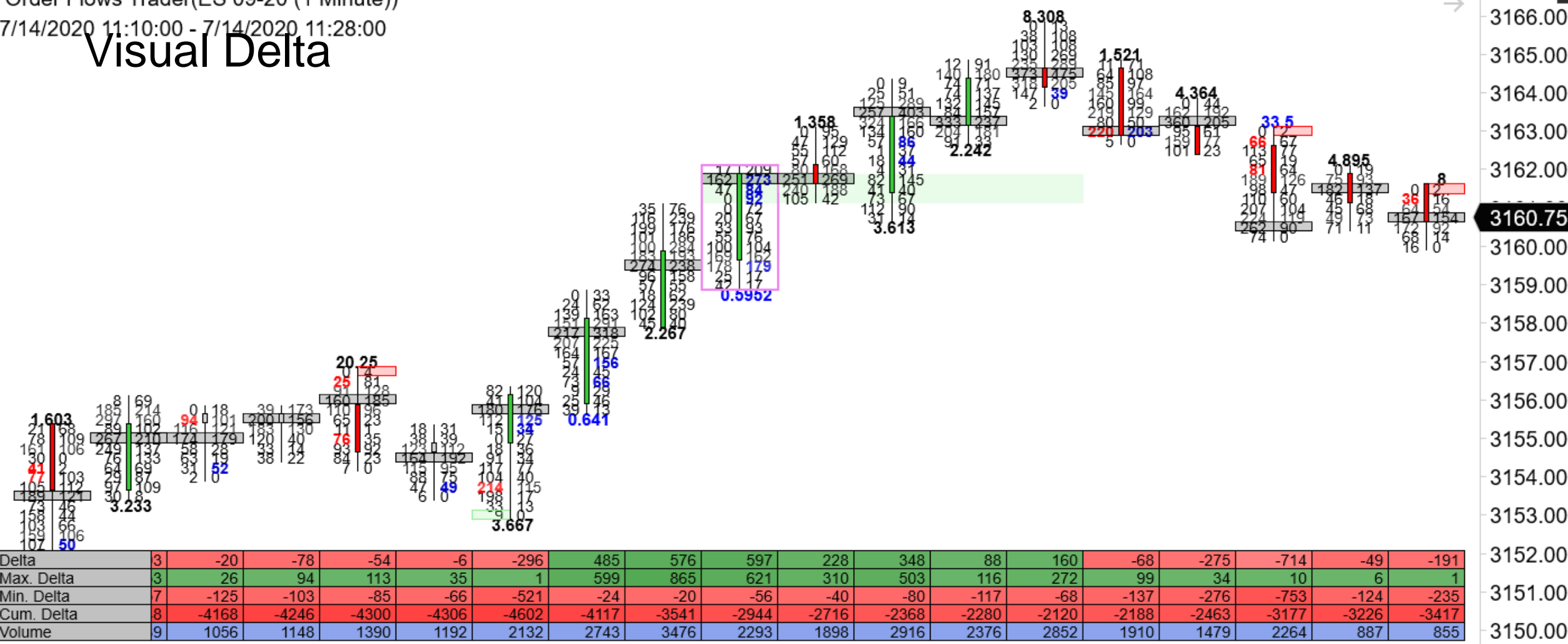


3216.50
3216.00
3215.50

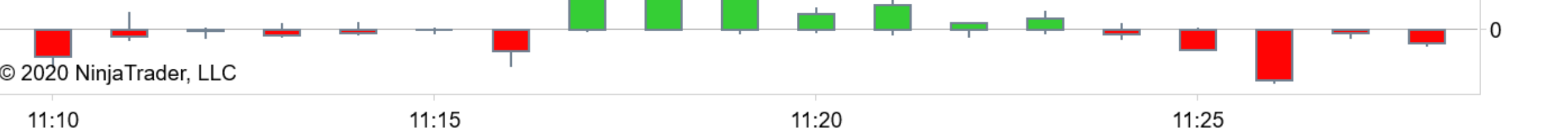
Order Flows Trader(ES 09-20 (1 Minute))

7/14/2020 11:10:00 - 7/14/2020 11:28:00

Visual Delta



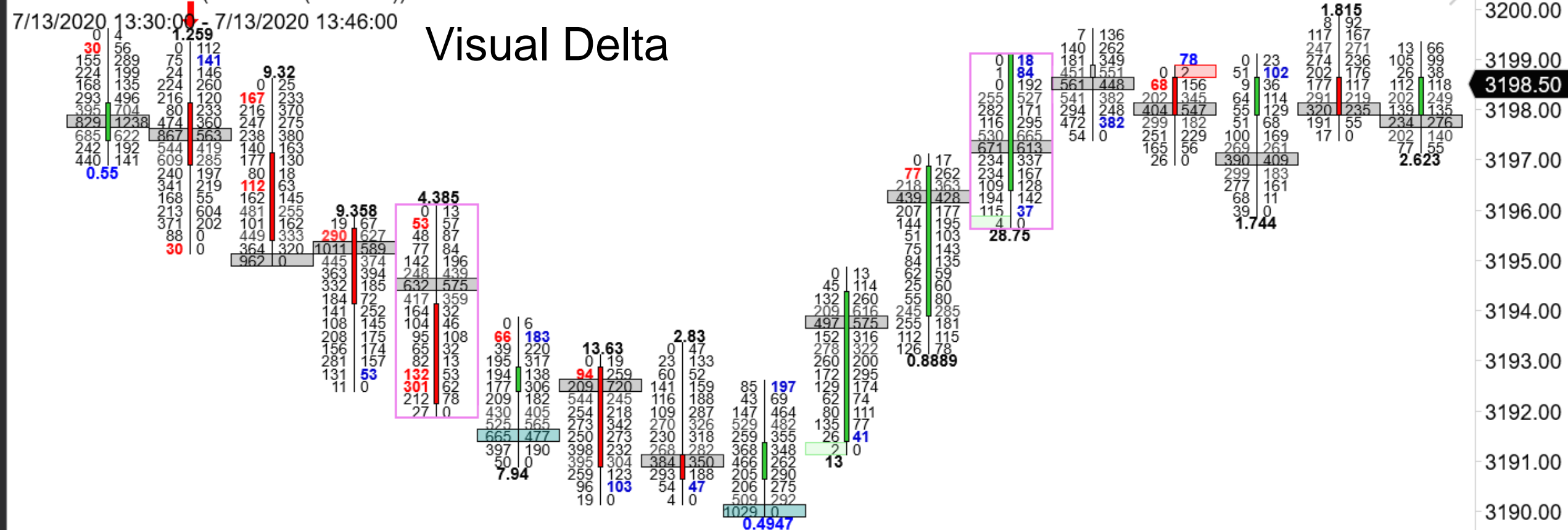
Delta Candles(ES 09-20 (1 Minute))



Order Flows Trader(ES 09-20 (1 Minute))

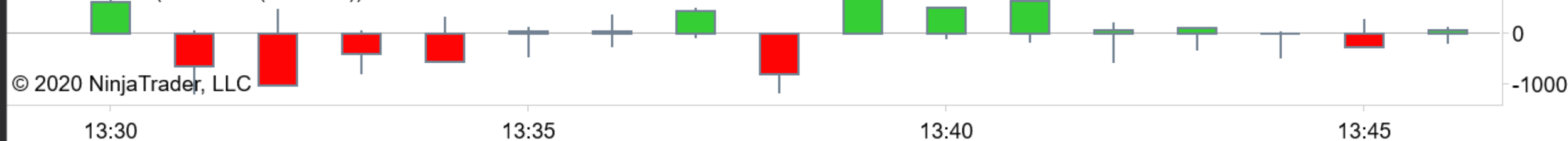
7/13/2020 13:30:00 - 7/13/2020 13:46:00

Visual Delta



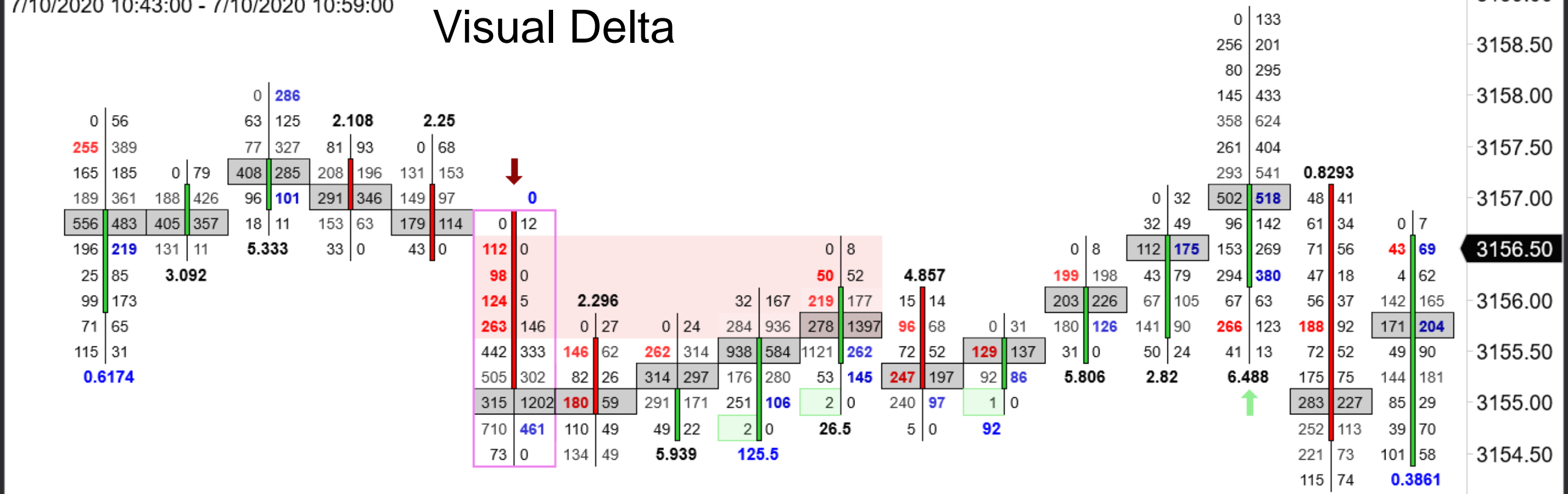
Delta	-648	-1024	-416	-565	42	47	425	-812	1009	506	631	57	102	-6	-276	66
Max. Delta	67	478	52	323	127	365	510	10	1074	506	631	213	135	34	271	117
Min. Delta	-1200	-1058	-807	-577	-480	-276	-92	-1178	-9	-126	-181	-582	-337	-496	-294	-201
Cum. Delta	526	-498	-914	-1479	-1437	-1390	-965	-1777	-768	-262	369	426	528	522	246	312
Volume	8480	6768	6944	5033	5936	5629	4329	6880	5367	4856	6121	5459	2932	3338	3412	2286

Delta Candles(ES 09-20 (1 Minute))

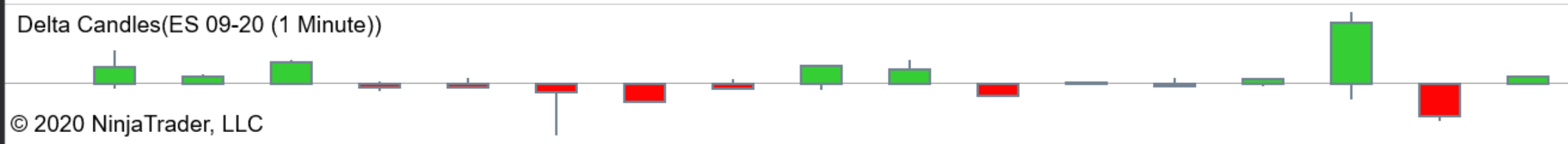


Order Flows Trader(ES 09-20 (1 Minute))
7/10/2020 10:43:00 - 7/10/2020 10:59:00

Visual Delta



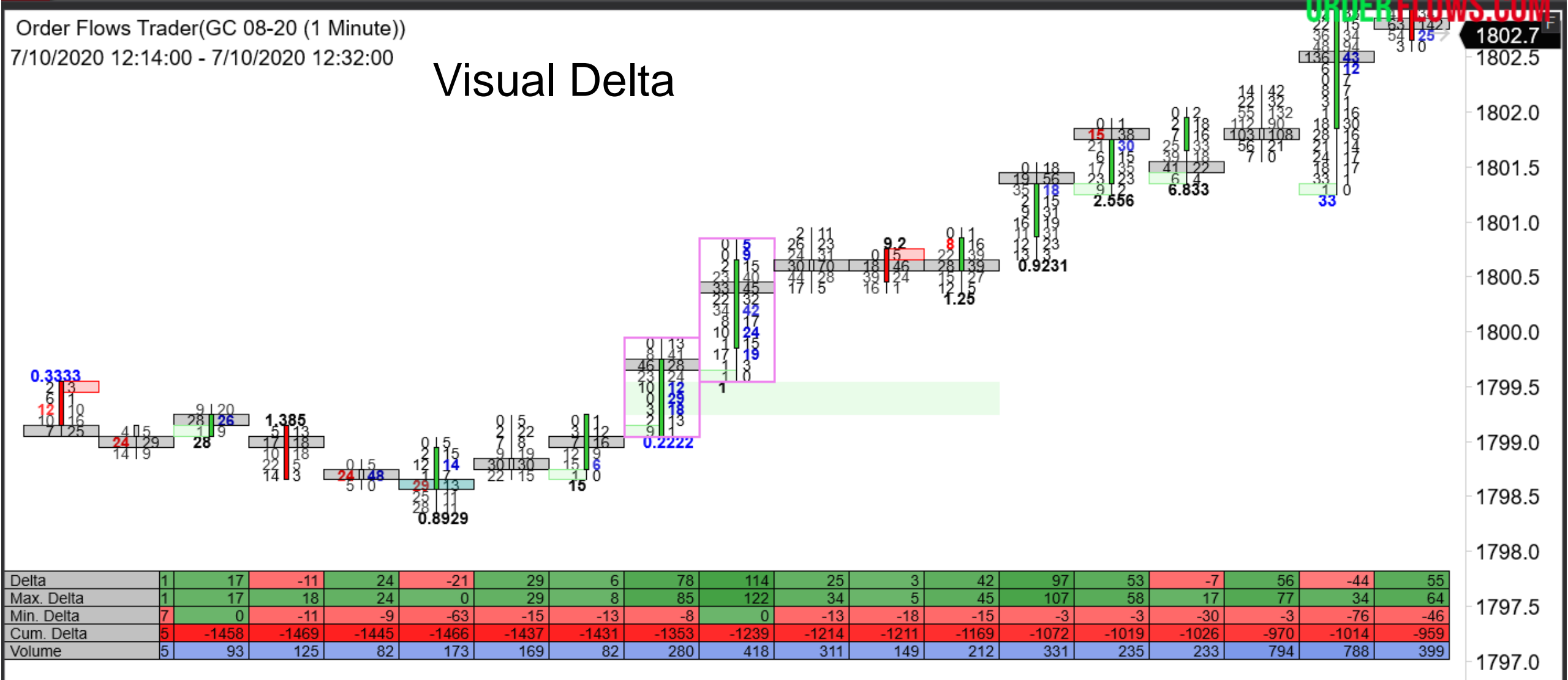
Delta	149	473	-68	-70	-181	-380	-88	390	318	-247	32	-55	109	1327	-697	157
Max. Delta	202	531	65	122	10	1	116	390	510	0	61	137	144	1543	11	167
Min. Delta	-26	0	-155	-74	-1095	-415	-89	-114	-27	-274	-12	-56	-40	-327	-788	-30
Cum. Delta	2991	3464	3396	3326	3145	2765	2677	3067	3385	3138	3170	3115	3224	4551	3854	4011
Volume	1597	1797	1464	934	5103	924	1744	3756	3764	1103	476	1171	999	6951	2481	1713



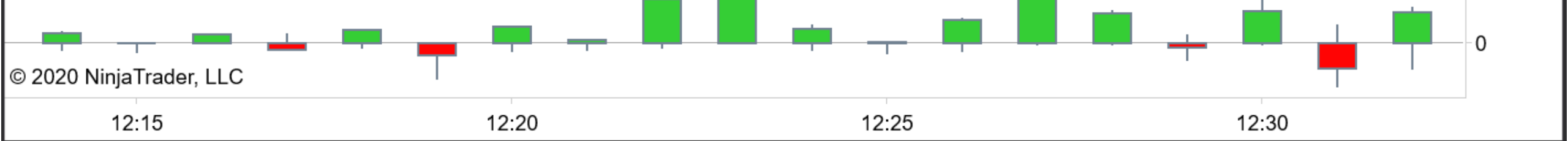
Order Flows Trader(GC 08-20 (1 Minute))

7/10/2020 12:14:00 - 7/10/2020 12:32:00

Visual Delta



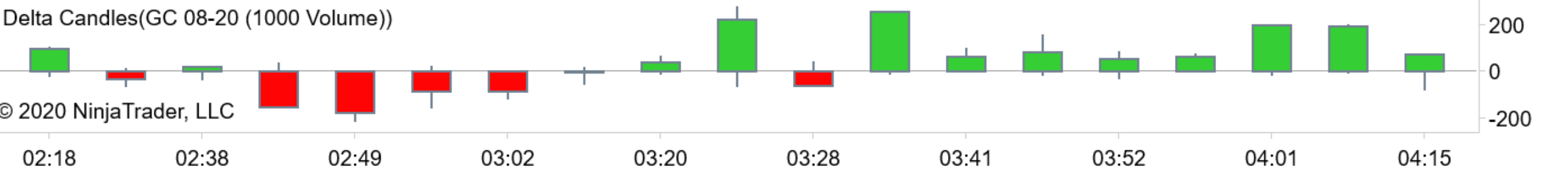
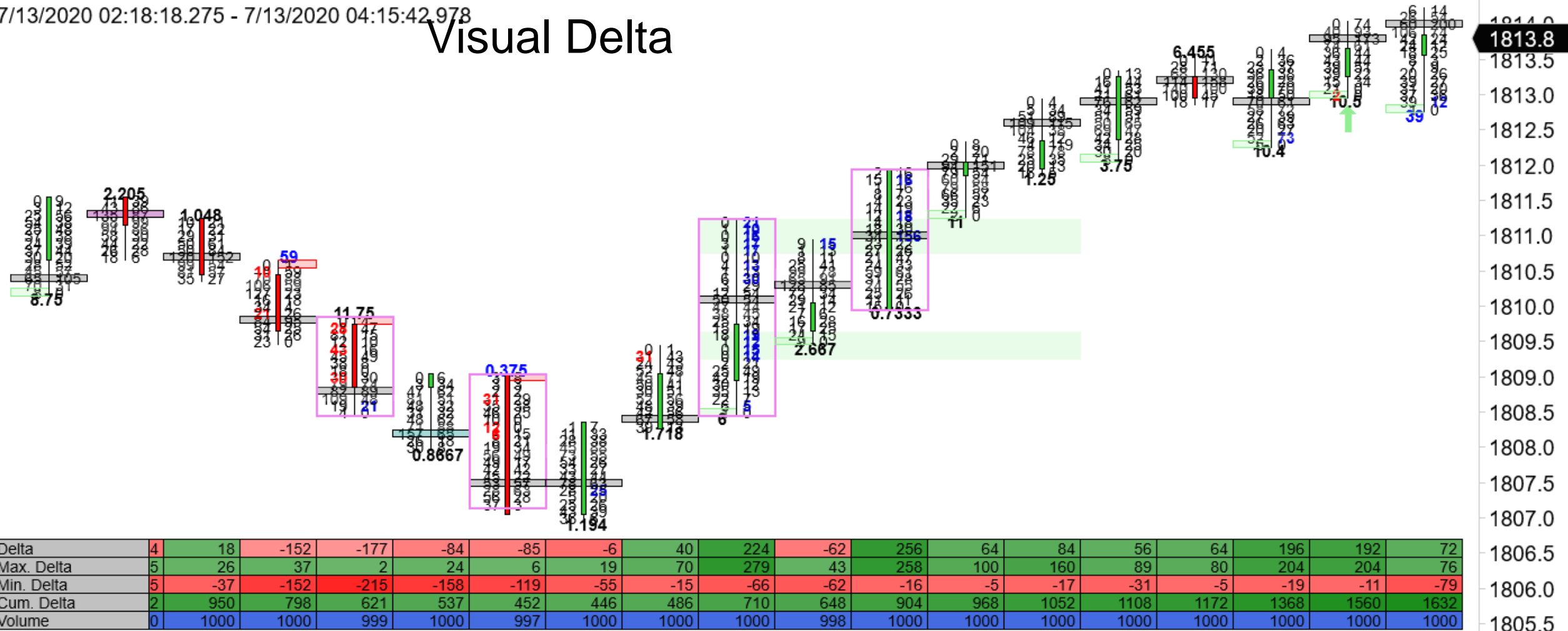
Delta Candles(GC 08-20 (1 Minute))



Order Flows Trader(GC 08-20 (1000 Volume))

7/13/2020 02:18:18.275 - 7/13/2020 04:15:42.978

Visual Delta



This concludes Module 2. In Module 3 we will discuss cumulative delta.