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UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY


Plaintiff Securities and Exchange Commission ("Commission"), for its Complaint against Defendant Aleksandr Milrud ("Milrud") (who, upon information and belief, resides at 166 Grenadier Cr., Thornhill, Ontario, 14J7V6, Canada, and at 1000 East Island Blvd., Apt. 306, Aventura, Florida 33160), alleges:

## SUMMARY

1. From at least January 2013 through the present, Milrud perpetrated a lucrative market manipulation scheme using the manipulative trading strategy known as "layering" or "spoofing" (hereinafter layering). In a layering scheme, a trader places multiple orders that the trader does not intend to have executed on one side of the market - for example, to sell a stock while nearly simultaneously placing an order that the trader does intend to have executed on the
opposite side of the market - i.e., to buy the same stock. The purpose of the non-bona fide sell orders is to create a false appearance of sell interest in the security and thus to trick other market participants to execute against the trader's bona fide buy order at an artificially depressed price. Once the bona fide buy order in the above example is executed (in full or in part) at the depressed price created by the non-bona fide sell orders, the trader cancels any open non-bona fide sell orders.
2. After establishing this position, the trader often repeats the manipulation on the opposite side of the market. In the above example, the trader would place multiple non-bona fide buy orders and a bona fide sell order for the same stock that he had just purchased. By placing the non-bona fide buy orders, the trader now creates the false appearance of buy interest and tricks other traders into executing against his bona fide sell order at an artificially inflated price. This second round of the manipulation allows the trader to unload his recently-established position at an advantageous price and reap illegal profits. ${ }^{1}$
3. From at least January 2013 through the present, Milrud led and managed several groups of traders who engaged in layering in the United States securities markets and generated substantial illegal profits.
4. By engaging in the layering scheme, Milrud violated and aided and abetted violations of Sections 17(a)(1) and 17(a)(3) of the Securities Act of 1933 ("Securities Act"), 15 U.S.C. §§ 77q(a)(1), (3), and Sections 9(a)(2) and 10(b) of the Securities Exchange Act of 1934

1 At other times, the trader may reap the illegal profits without engaging in a second round of manipulation, simply by waiting for the market to recover from the trader's initial manipulation. In the above example, once the trader's non-bona fide sell orders are canceled, the stock price may go up again to its pre-manipulation level, allowing the trader to sell the justpurchased stock at a profit without placing additional non-bona fide orders.
("Exchange Act") and Rules 10b-5(a) and 10b-5(c) thereunder, 15 U.S.C. §§ 78i(a)(2), 78j(b), 17 C.F.R. §§ 240.10b-5(a), (c).
5. In addition, Milrud is liable for his traders' violations of Sections 9(a)(2) and 10(b) of the Exchange Act and Rules 10b-5(a) and 10b-5(c) thereunder as a control person pursuant to Section 20(a) of the Exchange Act, 15 U.S.C. § 78t(a). Milrud also violated Section 20(b) of the Exchange Act, which makes it illegal to commit violations of the Exchange Act "through or by means of another person." 15 U.S.C. § 78t(b).

## NATURE OF THE PROCEEDING AND RELIEF SOUGHT

6. The Commission brings this action pursuant to the authority conferred upon it by Sections 15(b), 20(b) and 20(d) of the Securities Act, 15 U.S.C. §§ 77o(b), 77t(b), 77t(d), and Sections 20(a), 20(b), 20(e), 21(d)(1), 21(d)(3) and 21(d)(5) of the Exchange Act, 15 U.S.C. §§ $78 \mathrm{t}(\mathrm{a}), 78 \mathrm{t}(\mathrm{b}), 78 \mathrm{t}(\mathrm{e}), 78 \mathrm{u}(\mathrm{d})(1), 78 \mathrm{u}(\mathrm{d})(3), 78 \mathrm{u}(\mathrm{d})(5)$. The Commission is seeking a final judgment: (a) permanently restraining and enjoining Milrud from engaging in the acts, practices and courses of business alleged herein; (b) requiring Milrud to disgorge ill-gotten gains and to pay prejudgment interest thereon; and (c) imposing civil money penalties on Milrud pursuant to Section 20(d) of the Securities Act, 15 U.S.C. § 77t(d), and Section 21(d)(3) of the Exchange Act, 15 U.S.C. § 78u(d)(3).

## JURISDICTION AND VENUE

7. The Court has jurisdiction over this action pursuant to Sections 20(b) and 22 of the Securities Act, 15 U.S.C. §§ 77t(b) and 77v, and Sections 21(d) and 27 of the Exchange Act, 15 U.S.C. §§ $78 \mathrm{u}(\mathrm{d})$ and 78 aa .
8. Venue lies in this District pursuant to Section 22(a) of the Securities Act, 15 U.S.C. § 77v(a), and Section 27 of the Exchange Act, 15 U.S.C. § 78aa. Some of the acts,
practices, courses of business and transactions constituting the violations alleged herein occurred within the District of New Jersey. For example, certain of the orders and executions used to perpetrate the scheme were placed and executed on exchanges located in the District of New Jersey, including exchanges that had data centers in New Jersey. In addition, on or about September 11, 2014, Milrud directed a transfer of funds to a bank account in the District of New Jersey; the purpose of the transfer was to fund a trading account that would be used in the scheme.
9. Milrud, directly or indirectly, made use of the means or instruments of transportation or communication in interstate commerce, or of the mails, or of a facility of a national securities exchange in connection with the transactions, acts, practices and courses of business alleged herein.

## DEFENDANT

10. Milrud, age 50, is a citizen of Canada and resides in Ontario, Canada. Milrud also owns a residence in Aventura, Florida.

## FACTS

## I. Milrud's Layering Scheme

11. From at least January 2013 through the present, Milrud led and managed multiple groups of traders who engaged in a manipulative trading practice known as layering.
12. Milrud recruited the groups of online traders, based primarily in China and Korea, to engage in layering and provided the traders with access to trading accounts and trading technology that allowed them to carry out the scheme.
13. As alleged above, layering involves placing multiple non-bona fide orders to trick other traders into trading at artificially inflated or depressed prices and then cancelling the non-
bona fide orders before they are executed. To facilitate this fraudulent practice, Milrud worked with a gaming software company to develop "hot keys" that allowed his traders to quickly place and cancel multiple orders via their computers with only a few strokes of their keyboards.
14. In perpetrating this scheme, Milrud and his traders undertook elaborate measures to evade detection.
15. To minimize the possibility that other market participants or regulators would notice the impact of this layering scheme on the stocks that were manipulated, Milrud instructed his traders (a) to trade only small quantities of relatively high-volume securities (generally, stocks with an average daily volume of at least one million shares per day); (b) to manipulate a wide variety of stocks, executing only a small number of trades in any one stock on a given day; and (c) to restrain themselves from inflating or depressing the prices of the stock that they manipulated by more than a few pennies per trade.
16. In an attempt to further reduce the likelihood that his illegal layering scheme would be detected, Milrud met with the owner of an offshore brokerage firm (the "Broker") to explore the possibility of engaging in layering through an account at the Broker's offshore firm.
17. During an August 27, 2014 meeting with the Broker, Milrud explained that each of his traders used at least two accounts. In one account, each trader primarily placed multiple non-bona fide "buy" or "sell" orders in order to create the upward or downward pressure on the stock price. Milrud described this aspect of the scheme as "the dirty work." Milrud further explained that each of his traders also used a second account, in which the trader primarily executed the bona fide or "clean" trades - that is, purchases and sales of stocks at prices affected by the "dirty work" of the first account.
18. To further conceal his scheme, Milrud arranged for each trader's "dirty" and "clean" accounts to be held at different clearing firms, to mask the illicit coordination between the two accounts.
19. In addition, Milrud instructed his traders to access the "dirty" and "clean" accounts using different trader IDs (user names associated with the trading software that the traders utilized) and different computers at different IP addresses.
20. On October 8, 2014, during a meeting with the Broker, Milrud compared his and his traders' tactic of using multiple accounts, trader IDs, computers and IP addresses to shredding documents. Milrud commented that this "shredding" tactic makes it difficult for anyone to uncover the scheme.
21. Milrud also inserted multiple layers of middlemen at various stages of the scheme, to mask the true ownership of funds and the true control of various trading accounts that engaged in this manipulative scheme.
22. Milrud maintained remote access to all of his traders' computers. Milrud monitored the traders' compliance with the prescribed methods for avoiding regulatory scrutiny. If a trader failed to comply with Milrud's directives, the trader would be excluded from the scheme.
23. In exchange for providing traders with access to trading accounts and trading technology and helping them maintain their anonymity and mask their fraudulent trading activity, Milrud received a share of the illicit trading profits.
24. Milrud's layering scheme was very lucrative. In the course of soliciting the Broker's participation in his scheme, Milrud stated that one of his trading groups generated profits of approximately one million dollars per month.
25. Milrud took particular care to avoid having his name associated with any of the trading accounts or funds connected to the scheme, and insisted on routing any funds transfers related to the scheme through multiple middlemen located in multiple countries.
26. In soliciting the Broker's participation in the scheme, Milrud proposed that, in transferring funds related to the scheme, the Broker use the services of the individual who, Milrud explained, brings Milrud suitcases filled with cash after Milrud wires funds to an offshore bank account to which that individual has access.
27. On or about September 11, 2014, Milrud directed a wire transfer of \$5,000 to a bank account located in New Jersey. The purpose of the transfer was to fund a trading account at the Broker's offshore firm so that Milrud's traders could use the account to engage in layering. To obfuscate Milrud's connection to the transfer, Milrud used a China-based bank account in the name of a China-based entity to originate the transfer. Milrud's traders ultimately did not trade through the Broker's offshore firm.

## II. Milrud Explains and Demonstrates the Layering Scheme

28. During Milrud's August 27, 2014 meeting with the Broker, Milrud demonstrated the layering strategy that his traders employed, using a laptop computer to connect remotely to two computers operated by one of Milrud's traders. Switching between the views of the "dirty" and the "clean" accounts, Milrud showed the Broker how his trader used non-bona fide orders to manipulate the prices of multiple stocks and, as Milrud put it, to "trick" other market participants. Milrud explained, referring to the other market participants: "They see the volume, and they see the orders, they are starting to come in ... and basically we trade against [them]. We get them sucked into the stock."
29. One of the layering examples Milrud demonstrated to the Broker on August 27, 2014 involved trading in the common stock of Company A starting at about 10:42 AM. Company A's common stock is listed on the New York Stock Exchange.
30. Exhibit 1 to this Complaint reflects trading in the common stock of Company A by a trader under Milrud's management and control on August 27, 2014 between 10:42:54 AM and 10:44:00 AM.
31. As shown in Exhibit 1.A, the trader whose activity Milrud was demonstrating to the Broker first used a "dirty" trader ID to place many small, non-bona fide sell orders at multiple price levels to artificially depress the price of Company A stock. The trader simultaneously used a "clean" trader ID to place bona fide buy orders and established a long position of 1,807 shares at the artificially depressed price of $\$ 75.25$ per share.
32. The trader then reversed the pattern and used the "dirty" trader ID to place many small, non-bona fide orders to buy Company A stock at multiple price levels to artificially inflate the stock price. The trader simultaneously used the "clean" trader ID to place bona fide sell orders and close out the recently-established long position for a profit at the artificially inflated price of $\$ 27.29$ per share. This second round of manipulation is presented in Exhibit 1.B.
33. An additional example of layering by a trader under Milrud's management and control is presented in Exhibit 2 to this Complaint and involves trading in the American Depositary Shares (ADSs) of Company B on August 29, 2014, between 2:16:06 PM and 2:17:10 PM. Company B is a foreign issuer whose ADSs, each representing a share of common stock, trade on the New York Stock Exchange.
34. Exhibit 2.A shows the first round of manipulation, during which the trader used a "dirty" trader ID to artificially depress the stock price by placing many small, non-bona fide sell
orders at multiple price levels. Simultaneously, the trader used a "clean" trader ID to place larger, bona-fide buy orders and to establish a long position of 2,531 shares purchased at $\$ 22.81$ per share.
35. Exhibit 2.B shows the second round of manipulation, during which the trader used the "dirty" trader ID to artificially inflate the stock price by placing many small, non-bona fide buy orders at multiple price levels, while nearly simultaneously using the "clean" trader ID to place larger, bona-fide sell orders. By the end of this round, the "clean" trader ID had sold its entire 2,531-share position at the average price of $\$ 22.834$ per share - that is, at a profit of 2.4 cents per share.

## FIRST CLAIM FOR RELIEF

 Violations of Sections 17(a)(1) and 17(a)(3) of the Securities Act36. Paragraphs 1 through 35 are incorporated by reference as if set forth fully herein.
37. By virtue of the foregoing, Milrud, directly or indirectly, singly or in concert with others, by use of the means or instruments of transportation or communication in interstate commerce, or of the mails, in the offer or sale of securities, employed devices, schemes, or artifices to defraud and engaged in transactions, practices, or courses of business which operated or would operate as a fraud or deceit upon the purchasers.
38. By virtue of the foregoing, Milrud violated and, unless restrained and enjoined, will continue violating, Sections 17(a)(1) and 17(a)(3) of the Securities Act, 15 U.S.C. §§ $77 q(a)(1), 77 q(a)(3)$.

# SECOND CLAIM FOR RELIEF <br> Aiding and Abetting Violations of Sections <br> 17(a)(1) and 17(a)(3) of the Securities Act 

39. Paragraphs 1 through 35 are incorporated by reference as if set forth fully herein.
40. By virtue of the foregoing, Milrud knowingly or recklessly provided substantial assistance to persons who, directly or indirectly, singly or in concert with others, by use of the means or instruments of transportation or communication in interstate commerce, or of the mails, in the offer or sale of securities, employed devices, schemes, or artifices to defraud and engaged in transactions, practices, or courses of business which operated or would operate as a fraud or deceit upon the purchasers.
41. By virtue of the foregoing, Milrud aided and abetted and, unless restrained and enjoined, will continue aiding and abetting, violations of Sections 17(a)(1) and 17(a)(3) of the Securities Act, 15 U.S.C. $\S \$ 77 \mathrm{q}(\mathrm{a})(1), 77 \mathrm{q}(\mathrm{a})(3)$, in violation of Section 15(b) of the Securities Act, 15 U.S.C. § 77o(b).

## THIRD CLAIM FOR RELIEF

## Violations of Section 10(b) of the Exchange Act and Rules 10b-5(a) and 10b-5(c) Thereunder

42. Paragraphs 1 through 35 are incorporated by reference as if set forth fully herein.
43. By virtue of the foregoing, Milrud, directly or indirectly, singly or in concert with others, in connection with the purchase or sale of a security, with scienter, used the means or instrumentalities of interstate commerce, or of the mails, or of a facility of a national securities exchange to employ devices, schemes, or artifices to defraud and to engage in acts, practices, or courses of business which operated or would operate as a fraud or deceit upon others.
44. By virtue of the foregoing, Milrud violated and, unless restrained and enjoined, will continue violating, Section 10(b) of the Exchange Act, 15 U.S.C. § 78j(b), and Rules 10b5(a) and 10b-5(c) thereunder, 17 C.F.R. §§ 240.10b-5(a), 240.10b-5(c).

## FOURTH CLAIM FOR RELIEF

## Aiding and Abetting Violations of Section 10(b) of the Exchange Act and Rules 10b-5(a) and 10b-5(c) Thereunder

45. Paragraphs 1 through 35 are incorporated by reference as if set forth fully herein.
46. By virtue of the foregoing, Milrud knowingly or recklessly provided substantial assistance to persons who, directly or indirectly, singly or in concert with others, in connection with the purchase or sale of a security, with scienter, used the means or instrumentalities of interstate commerce, or of the mails, or of a facility of a national securities exchange to employ devices, schemes, or artifices to defraud and to engage in acts, practices, or courses of business which operated or would operate as a fraud or deceit upon others.
47. By virtue of the foregoing, Milrud aided and abetted and, unless restrained and enjoined, will continue aiding and abetting, violations of Section 10(b) of the Exchange Act, 15 U.S.C. § 78j(b), and Rules 10b-5(a) and 10b-5(c) thereunder, 17 C.F.R. §§ 240.10b-5(a), 240.10b-5(c), in violation of Section 20(e) of the Exchange Act, 15 U.S.C. § 78t(e).

## FIFTH CLAIM FOR RELIEF

 Violations of Section 9(a)(2) of the Exchange Act48. Paragraphs 1 through 35 are incorporated by reference as if set forth fully herein.
49. By virtue of the foregoing, Milrud, directly or indirectly, by the use of the mails or means or instrumentalities of interstate commerce, or of a facility of a national securities exchange, effected, alone or with one or more other persons, a series of transactions in securities creating actual or apparent active trading in such securities, or raising or depressing the price of such securities, for the purpose of inducing the purchase or sale of such securities by others.
50. By virtue of the foregoing, Milrud violated and, unless restrained and enjoined, will continue violating, Section 9(a)(2) of the Exchange Act, 15 U.S.C. § 78i(a)(2).

## SIXTH CLAIM FOR RELIEF

 Aiding and Abetting Violations of Section 9(a)(2) of the Exchange Act51. Paragraphs 1 through 35 are incorporated by reference as if set forth fully herein.
52. By virtue of the foregoing, Milrud knowingly or recklessly provided substantial assistance to persons who, directly or indirectly, by the use of the mails or means or instrumentalities of interstate commerce, or of a facility of a national securities exchange, effected, alone or with one or more other persons, a series of transactions in securities creating actual or apparent active trading in such securities, or raising or depressing the price of such securities, for the purpose of inducing the purchase or sale of such securities by others.
53. By virtue of the foregoing, Milrud aided and abetted and, unless restrained and enjoined, will continue aiding and abetting, violations of Section 9(a)(2) of the Exchange Act, 15 U.S.C. § 78i(a)(2), in violation of Section 20(e) of the Exchange Act, 15 U.S.C. § 78t(e).

## SEVENTH CLAIM FOR RELIEF

Control Person Liability Under Section 20(a) of the Exchange Act for Violations of Sections 9(a)(2) and 10(b) of the Exchange Act and Rules 10b-5(a) and 10b-5(c) Thereunder
54. Paragraphs 1 through 35 are incorporated by reference as if set forth fully herein.
55. By virtue of the foregoing, certain traders under Milrud's management:
(a) directly or indirectly, by the use of the mails or means or instrumentalities of interstate commerce, or of a facility of a national securities exchange, effected, alone or with one or more other persons, a series of transactions in securities creating actual or apparent active trading in such securities, or raising or depressing the price of such securities, for the purpose of inducing the purchase or sale of such securities by others; and
(b) directly or indirectly, singly or in concert with others, in connection with the purchase or sale of a security, with scienter, used the means or instrumentalities of interstate commerce, or of the mails, or of a facility of a
national securities exchange to employ devices, schemes, or artifices to defraud and to engage in acts, practices, or courses of business which operated or would operate as a fraud or deceit upon others.
56. Milrud was a control person of these traders for the purposes of Section 20(a) of the Exchange Act, 15 U.S.C. § 78t(a).
57. Milrud exercised actual power and control over these traders and directed their strategy, policies and operations.
58. By virtue of the foregoing, as a control person of the traders under his management, pursuant to Section 20(a) of the Exchange Act, 15 U.S.C. § 78t(a), Milrud is liable for these traders' violations of Sections 9(a)(2) and 10(b) of the Exchange Act and Rules 10b5(a) and 10b-5(c) thereunder, 15 U.S.C. §§ 78i(a)(2), 78j(b), 17 C.F.R. §§ 240.10b-5(a), (c).

## EIGHTH CLAIM FOR RELIEF

## Liability Under Section 20(b) of the Exchange Act for

## Violations of Sections 9(a)(2) and 10(b) of the Exchange Act and

 Rules 10b-5(a) and 10b-5(c) Thereunder59. Paragraphs 1 through 35 are incorporated by reference as if set forth fully herein.
60. By virtue of the foregoing, Milrud, directly or indirectly, through or by means of other persons, including traders under Milrud's management, engaged in acts that would have been unlawful for Milrud to do himself under Sections 9(a)(2) and 10(b) of the Exchange Act and Rules 10b-5(a) and 10b-5(c) thereunder, 15 U.S.C. §§ 78i(a)(2), 78j(b), 17 C.F.R. §§ 240.10b-5(a), (c), namely:
(a) directly or indirectly, by the use of the mails or means or instrumentalities of interstate commerce, or of a facility of a national securities exchange, effecting, alone or with one or more other persons, a series of transactions in securities creating actual or apparent active trading in such securities, or raising or depressing the price of such securities, for the purpose of inducing the purchase or sale of such securities by others; and
(b) directly or indirectly, singly or in concert with others, in connection with the purchase or sale of a security, with scienter, using the means or
instrumentalities of interstate commerce, or of the mails, or of a facility of a national securities exchange to employ devices, schemes, or artifices to defraud and to engage in acts, practices, or courses of business which operated or would operate as a fraud or deceit upon others.
61. By virtue of the foregoing, Milrud violated, and, unless restrained and enjoined, will continue violating, Section 20(b) of the Exchange Act, 15 U.S.C. § 78t(b).

## PRAYER FOR RELIEF

WHEREFORE, the Commission respectfully requests that the Court enter a Final Judgment:

## I.

Permanently restraining and enjoining Milrud, and each of his agents, servants, employees, attorneys and other persons in active concert or participation with them who receive actual notice of the injunction by personal service or otherwise from violating Section 17(a) of the Securities Act, 15 U.S.C. § 77q(a), and Sections 9(a)(2), 10(b) and 20(b) of the Exchange Act, 15 U.S.C. §§ 78i(a)(2), 78j(b), 78t(b), and Rule 10b-5 thereunder, 17 C.F.R. § 240.10b-5.

## II.

Ordering Milrud to disgorge ill-gotten gains received as a result of the conduct alleged herein, plus prejudgment interest thereon.

## III.

Ordering Milrud to pay civil money penalties pursuant to Section 20(d) of the Securities Act, 15 U.S.C. § 77t(d), and Section 21(d)(3) of the Exchange Act, 15 U.S.C. § 78u(d)(3).
IV.

Granting such other and further relief as this Court deems just and appropriate.

Dated: January 13, 2015
New York, New York

## SECURITIES AND EXCHANGE COMMISSION

By:<br><br>Co-Deputy Chief, Market Abuse Unit<br>SECURITIES AND EXCHANGE COMMISSION<br>Brookfield Place, 200 Vesey Street<br>New York, New York 10281-1022<br>(212) 336-1023 (Brown)<br>BrownN@sec.gov (Brown)

## Of Counsel:

Daniel M. Hawke
Steven D. Buchholz
Nancy A. Brown
Simona K. Suh
Barry P. O'Connell

## DESIGNATION PURSUANT TO LOCAL CIVIL RULE 101.1(f)

Per the requirements of Local Civil Rule 101.1(f), the undersigned hereby designates the United States Attorney for the District of New Jersey to receive service of all notices or papers in this action at the following address:

Chief, Civil Division
United States Attorney's Office
District of New Jersey
970 Broad Street, Ste. 700
Newark, New Jersey 07102
SECURITIES AND EXCHANGE COMMISSION

By:<br> Co-Deputy Chief, Market Abuse Unit<br>SECURITIES AND EXCHANGE COMMISSION<br>Brookfield Place, 200 Vesey Street<br>New York, New York 10281-1022<br>(212) 336-1023 (Brown)<br>BrownN@sec.gov (Brown)

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## EXHIBIT 1

TRADING IN THE COMMON STOCK OF COMPANY A
AUGUST 27, 2014

## Exhibit 1.A: Establishing a Long Position at $\$ 75.25$

Between 10:42:54 AM and 10:43:19 AM, the "dirty" trader ID placed 51 orders to sell Company A stock, with an average order size of 171 shares, gradually decreasing the order price from $\$ 75.32$ per share to $\$ 75.25$ per share and placing multiple orders at each of the price levels along the way. During this time, the national best offer for Company A stock (that is, the lowest price at which market participants were offering to sell Company A stock) declined from $\$ 75.29$ per share to $\$ 75.25$ per share. Of the total of 8,700 shares that the "dirty" trader ID had offered for sale during this round of manipulation, only 200 shares (that is, approximately $2 \%$ ) were in fact sold, at the average price of $\$ 75.27$ per share; this 200 -share short position was covered with a purchase of 200 shares at $\$ 75.25$ per share (that is, a total gain of $\$ 4$ ) before the trading reversed course at 10:43:30 AM.

While the "dirty" trader ID was placing layered sell orders, at 10:43:09 AM, the "clean" trader ID placed four orders to purchase Company A stock at $\$ 75.25$ per share, each for 1,300 shares. After some of those buy orders were filled and the "clean" trader ID had established a long position of 1,807 shares at $\$ 75.25$ per share, both trader IDs canceled their outstanding orders.

## Exhibit 1.B: Closing Out the Long Position and Establishing a Short Position at $\$ 75.29$

Between 10:43:30 AM and 10:43:55 AM, the "dirty" trader ID placed 60 orders to buy Company A stock, with an average order size of 193 shares, gradually raising its order price from $\$ 75.22$ to $\$ 75.31$ and placing multiple orders at each price level along the way. During this time, the national best bid for Company A stock (that is, the highest price at which market participants were offering to buy Company A stock) increased from $\$ 75.24$ per share to $\$ 75.29$ per share. Of the total of 11,600 shares that the "dirty" trader ID bid to buy during this round of manipulation, only 400 (or approximately $3 \%$ ) were in fact bought, at the average price of $\$ 75.295$ per share; those 400 shares were sold for $\$ 75.29$ per share (or a total loss of $\$ 2$ ) by the end of this round of manipulation at 10:44:00 AM.

While the "dirty" trader ID was placing layered buy orders, at 10:43:39 AM, the "clean" trader ID placed eight orders to sell Company A stock, for a total of 10,000 shares, all priced at $\$ 75.29$ per share. By 10:43:56 AM, the "clean" trader ID had sold 5,427 shares, realizing a profit of four cents per share on the previously established 1,807 -share long position and establishing a short position of 3,620 shares at $\$ 75.29$. At that point, both trader IDs canceled all their outstanding orders.

Milrud's trader continued trading Company A stock until 10:46:40 AM, when the activity in the stock stopped. While the "dirty" trader ID lost approximately $\$ 98$ trading Company A stock that day, the "clean" trader ID realized a profit of approximately $\$ 152$, resulting in total net profit of approximately $\$ 54$.

| ExhibitNBB $=$ National Best BidNBO $=$ National Best Offer |  |  | .A: Establish | g a Long P | sition at \$7 | $5(10: 42$ | $2: 54 \mathrm{AM}-10:$ | :29 AM) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | "Dirty" Trader ID (ID No. XXXX102S) |  |  |  | "Clean" Trader ID (ID No. XXXXXYIGO) |  |  |  |
| Time | NBB | NBO | Event | Side (B/S) | Quantity | Price | Event | Side (B/S) | Quantity | Price |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.32 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.32 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.32 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.32 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.32 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.32 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.32 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.32 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.31 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.31 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.31 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.31 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.30 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.30 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.30 |  |  |  |  |
| 10:42:54 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.30 |  |  |  |  |
| 10:42:55 | \$75.28 | \$75.29 |  |  |  |  |  |  |  |  |
| 10:42:56 | \$75.28 | \$75.29 | NEW ORDER | S | 100 | \$75.29 |  |  |  |  |
| 10:42:56 | \$75.28 | \$75.29 | NEW ORDER | S | 100 | \$75.29 |  |  |  |  |
| 10:42:57 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.29 |  |  |  |  |
| 10:42:57 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.29 |  |  |  |  |
| 10:42:57 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.29 |  |  |  |  |
| 10:42:57 | \$75.28 | \$75.29 | NEW ORDER | S | 200 | \$75.29 |  |  |  |  |
| 10:42:58 | \$75.28 | \$75.29 | NEW ORDER | S | 100 | \$75.28 |  |  |  |  |
| 10:42:58 | \$75.28 | \$75.29 | EXECUTION | S | 1 | \$75.28 |  |  |  |  |
| 10:42:58 | \$75.28 | \$75.29 | EXECUTION | S | 99 | \$75.28 |  |  |  |  |
| 10:42:59 | \$75.27 | \$75.28 | NEW ORDER | S | 100 | \$75.28 |  |  |  |  |
| 10:43:00 | \$75.27 | \$75.28 | NEW ORDER | S | 100 | \$75.28 |  |  |  |  |
| 10:43:01 | \$75.26 | \$75.27 | NEW ORDER | S | 200 | \$75.28 |  |  |  |  |
| 10:43:01 | \$75.26 | \$75.27 | NEW ORDER | S | 200 | \$75.28 |  |  |  |  |
| 10:43:01 | \$75.26 | \$75.27 | NEW ORDER | S | 200 | \$75.28 |  |  |  |  |
| 10:43:01 | \$75.26 | \$75.27 | NEW ORDER | S | 200 | \$75.28 |  |  |  |  |
| 10:43:01 | \$75.26 | \$75.27 | NEW ORDER | S | 100 | \$75.26 |  |  |  |  |
| 10:43:01 | \$75.26 | \$75.27 | EXECUTION | S | 100 | \$75.26 |  |  |  |  |
| 10:43:02 | \$75.25 | \$75.26 |  |  |  |  |  |  |  |  |
| 10:43:03 | \$75.25 | \$75.27 |  |  |  |  |  |  |  |  |
| 10:43:04 | \$75.25 | \$75.27 | NEW ORDER | S | 200 | \$75.28 |  |  |  |  |
| 10:43:04 | \$75.25 | \$75.27 | NEW ORDER | S | 200 | \$75.28 |  |  |  |  |
| 10:43:04 | \$75.25 | \$75.27 | NEW ORDER | S | 200 | \$75.28 |  |  |  |  |
| 10:43:04 | \$75.25 | \$75.27 | NEW ORDER | S | 200 | \$75.28 |  |  |  |  |
| 10:43:05 | \$75.25 | \$75.27 | NEW ORDER | S | 100 | \$75.27 |  |  |  |  |
| 10:43:05 | \$75.25 | \$75.27 | NEW ORDER | S | 100 | \$75.27 |  |  |  |  |
| 10:43:06 | \$75.25 | \$75.27 | NEW ORDER | S | 100 | \$75.27 |  |  |  |  |
| 10:43:07 | \$75.25 | \$75.27 | NEW ORDER | S | 200 | \$75.27 |  |  |  |  |
| 10:43:07 | \$75.25 | \$75.27 | NEW ORDER | S | 200 | \$75.27 |  |  |  |  |
| 10:43:07 | \$75.25 | \$75.27 | NEW ORDER | S | 200 | \$75.27 |  |  |  |  |
| 10:43:07 | \$75.25 | \$75.27 | NEW ORDER | S | 200 | \$75.27 |  |  |  |  |
| 10:43:08 | \$75.25 | \$75.27 | NEW ORDER | S | 100 | \$75.26 |  |  |  |  |
| 10:43:09 | \$75.25 | \$75.26 |  |  |  |  | NEW ORDER | B | 1,300 | \$75.25 |
| 10:43:09 | \$75.25 | \$75.26 |  |  |  |  | NEW ORDER | B | 1,300 | \$75.25 |
| 10:43:09 | \$75.25 | \$75.26 |  |  |  |  | NEW ORDER | B | 1,300 | \$75.25 |
| 10:43:09 | \$75.25 | \$75.26 |  |  |  |  | NEW ORDER | B | 1,300 | \$75.25 |
| 10:43:09 | \$75.25 | \$75.26 |  |  |  |  | EXECUTION | B | 100 | \$75.25 |


|  Exhib <br> NBB $=$ National Best Bid  <br> NBO $=$ National Best Offer  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | NBB | NBO | "Dirty" Trader ID (ID No. XXXX102S) |  |  |  | "Clean" Trader ID (ID No. XXXXXYIGO) |  |  |  |
|  |  |  | Event | Side (B/S) | Quantity | Price | Event | Side (B/S) | Quantity | Price |
| 10:43:10 | \$75.24 | \$75.26 |  |  |  |  | EXECUTION | B | 1,200 | \$75.25 |
| 10:43:10 | \$75.24 | \$75.26 |  |  |  |  | EXECUTION | B | 7 | \$75.25 |
| 10:43:11 | \$75.24 | \$75.26 | NEW ORDER | S | 100 | \$75.26 |  |  |  |  |
| 10:43:12 | \$75.24 | \$75.26 | NEW ORDER | S | 100 | \$75.26 |  |  |  |  |
| 10:43:12 | \$75.24 | \$75.26 | NEW ORDER | S | 200 | \$75.26 |  |  |  |  |
| 10:43:12 | \$75.24 | \$75.26 | NEW ORDER | S | 200 | \$75.26 |  |  |  |  |
| 10:43:12 | \$75.24 | \$75.26 | NEW ORDER | S | 200 | \$75.26 |  |  |  |  |
| 10:43:12 | \$75.24 | \$75.26 | NEW ORDER | S | 200 | \$75.26 |  |  |  |  |
| 10:43:13 | \$75.24 | \$75.26 | NEW ORDER | S | 100 | \$75.25 |  |  |  |  |
| 10:43:13 | \$75.24 | \$75.26 |  |  |  |  | EXECUTION | B | 500 | \$75.25 |
| 10:43:14 | \$75.24 | \$75.25 | NEW ORDER | 5 | 100 | \$75.25 |  |  |  |  |
| 10:43:15 | \$75.24 | \$75.25 |  |  |  |  |  |  |  |  |
| 10:43:16 | \$75.24 | \$75.25 |  |  |  |  |  |  |  |  |
| 10:43:17 | \$75.24 | \$75.25 |  |  |  |  |  |  |  |  |
| 10:43:18 | \$75.24 | \$75.25 |  |  |  |  |  |  |  |  |
| 10:43:19 | \$75.24 | \$75.25 | NEW ORDER | S | 100 | \$75.25 |  |  |  |  |
| 10:43:20 | \$75.24 | \$75.25 |  |  |  |  |  |  |  |  |
| 10:43:21 | \$75.24 | \$75.25 |  |  |  |  |  |  |  |  |
| 10:43:22 | \$75.24 | \$75.25 | CANCEL | S | 100 | \$75.25 |  |  |  |  |
| 10:43:22 | \$75.24 | \$75.25 | CANCEL | S | 100 | \$75.25 |  |  |  |  |
| 10:43:22 | \$75.24 | \$75.25 | CANCEL | S | 100 | \$75.25 |  |  |  |  |
| 10:43:23 | \$75.24 | \$75.25 |  |  |  |  |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | CANCEL | S | 100 | \$75.27 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | CANCEL | S | 100 | \$75.27 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | CANCEL | S | 100 | \$75.27 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | CANCEL | S | 200 | \$75.27 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | CANCEL | S | 200 | \$75.27 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | CANCEL | S | 200 | \$75.27 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | CANCEL | S | 200 | \$75.27 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | CANCEL | S | 100 | \$75.26 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | CANCEL | S | 100 | \$75.26 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | CANCEL | S | 100 | \$75.26 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | CANCEL | S | 200 | \$75.26 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | CANCEL | S | 200 | \$75.26 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | CANCEL | S | 200 | \$75.26 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | CANCEL | S | 200 | \$75.26 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | NEW ORDER | B | 200 | \$75.25 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | EXECUTION | B | 100 | \$75.25 |  |  |  |  |
| 10:43:24 | \$75.24 | \$75.25 | EXECUTION | B | 100 | \$75.25 |  |  |  |  |
| 10:43:25 | \$75.24 | \$75.26 | CANCEL | S | 100 | \$75.28 |  |  |  |  |
| 10:43:25 | \$75.24 | \$75.26 | CANCEL | S | 100 | \$75.28 |  |  |  |  |
| 10:43:25 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.28 |  |  |  |  |
| 10:43:25 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.28 |  |  |  |  |
| 10:43:25 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.28 |  |  |  |  |
| 10:43:25 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.28 |  |  |  |  |
| 10:43:25 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.28 |  |  |  |  |
| 10:43:25 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.28 |  |  |  |  |
| 10:43:25 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.28 |  |  |  |  |
| 10:43:25 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.28 |  |  |  |  |
| 10:43:26 | \$75.24 | \$75.26 |  |  |  |  | CANCEL | B | 793 | \$75.25 |
| 10:43:26 | \$75.24 | \$75.26 |  |  |  |  | CANCEL | B | 1,300 | \$75.25 |
| 10:43:26 | \$75.24 | \$75.26 |  |  |  |  | CANCEL | B | 1,300 | \$75.25 |
| 10:43:27 | \$75.24 | \$75.26 |  |  |  |  |  |  |  |  |
| 10:43:28 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.31 |  |  |  |  |

Exhibit 1.A: Establishing a Long Position at $\$ 75.25$ (10:42:54 AM - 10:43:29 AM)
NBB = National Best Bid
NBO = National Best Offer

| Time | NBB | NBO | "Dirty" Trader ID (ID No. XXXX102S) |  |  |  | "Clean" Trader ID (ID No. XXXXXYIGO) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Event | Side (B/S) | Quantity | Price | Event | Side (B/S) | Quantity | Price |
| 10:43:28 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.31 |  |  |  |  |
| 10:43:28 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.31 |  |  |  |  |
| 10:43:28 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.31 |  |  |  |  |
| 10:43:28 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.30 |  |  |  |  |
| 10:43:28 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.30 |  |  |  |  |
| 10:43:28 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.30 |  |  |  |  |
| 10:43:28 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.30 |  |  |  |  |
| 10:43:28 | \$75.24 | \$75.26 | CANCEL | S | 100 | \$75.29 |  |  |  |  |
| 10:43:28 | \$75.24 | \$75.26 | CANCEL | S | 100 | \$75.29 |  |  |  |  |
| 10:43:28 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.29 |  |  |  |  |
| 10:43:28 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.29 |  |  |  |  |
| 10:43:28 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.29 |  |  |  |  |
| 10:43:28 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.29 |  |  |  |  |
| 10:43:29 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.32 |  |  |  |  |
| 10:43:29 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.32 |  |  |  |  |
| 10:43:29 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.32 |  |  |  |  |
| 10:43:29 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.32 |  |  |  |  |
| 10:43:29 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.32 |  |  |  |  |
| 10:43:29 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.32 |  |  |  |  |
| 10:43:29 | \$75.24 | \$75.26 | CANCEL | S | 200 | \$75.32 |  |  |  |  |
| 10:43:29 | \$75.24 | \$75.26 | CANCEL | 5 | 200 | \$75.32 |  |  |  |  |


| Exhibit 1.B: Closing <br> NBB $=$ National Best Bid <br> NBO = National Best Offer |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | NBB | NBO | "Dirty" Trader ID (ID No. XXXX102S) |  |  |  | "Clean" Trader ID (ID No. XXXXYIGO) |  |  |  |
|  |  |  | Event | Side (B/S) | Quantity | Price | Event | Side (B/S) | Quantity | Price |
| 10:43:30 | \$75.24 | \$75.26 | NEW ORDER | B | 200 | \$75.22 |  |  |  |  |
| 10:43:30 | \$75.24 | \$75.26 | NEW ORDER | B | 200 | \$75.22 |  |  |  |  |
| 10:43:30 | \$75.24 | \$75.26 | NEW ORDER | B | 200 | \$75.22 |  |  |  |  |
| 10:43:30 | \$75.24 | \$75.26 | NEW ORDER | B | 200 | \$75.22 |  |  |  |  |
| 10:43:30 | \$75.24 | \$75.26 | NEW ORDER | B | 200 | \$75.23 |  |  |  |  |
| 10:43:30 | \$75.24 | \$75.26 | NEW ORDER | B | 200 | \$75.23 |  |  |  |  |
| 10:43:30 | \$75.24 | \$75.26 | NEW ORDER | B | 200 | \$75.23 |  |  |  |  |
| 10:43:30 | \$75.24 | \$75.26 | NEW ORDER | B | 200 | \$75.23 |  |  |  |  |
| 10:43:30 | \$75.24 | \$75.26 | NEW ORDER | B | 200 | \$75.23 |  |  |  |  |
| 10:43:30 | \$75.24 | \$75.26 | NEW ORDER | B | 200 | \$75.23 |  |  |  |  |
| 10:43:30 | \$75.24 | \$75.26 | NEW ORDER | B | 200 | \$75.23 |  |  |  |  |
| 10:43:30 | \$75.24 | \$75.26 | NEW ORDER | B | 200 | \$75.23 |  |  |  |  |
| 10:43:31 | \$75.24 | \$75.26 | NEW ORDER | B | 100 | \$75.24 |  |  |  |  |
| 10:43:31 | \$75.24 | \$75.26 | NEW ORDER | B | 500 | \$75.24 |  |  |  |  |
| 10:43:31 | \$75.24 | \$75.26 | NEW ORDER | B | 500 | \$75.24 |  |  |  |  |
| 10:43:31 | \$75.24 | \$75.26 | NEW ORDER | B | 500 | \$75.24 |  |  |  |  |
| 10:43:31 | \$75.24 | \$75.26 | NEW ORDER | B | 500 | \$75.24 |  |  |  |  |
| 10:43:32 | \$75.26 | \$75.28 | NEW ORDER | B | 200 | \$75.25 |  |  |  |  |
| 10:43:32 | \$75.26 | \$75.28 | NEW ORDER | B | 200 | \$75.25 |  |  |  |  |
| 10:43:32 | \$75.26 | \$75.28 | NEW ORDER | B | 200 | \$75.25 |  |  |  |  |
| 10:43:32 | \$75.26 | \$75.28 | NEW ORDER | B | 200 | \$75.25 |  |  |  |  |
| 10:43:33 | \$75.26 | \$75.28 | NEW ORDER | B | 200 | \$75.24 |  |  |  |  |
| 10:43:33 | \$75.26 | \$75.28 | NEW ORDER | B | 200 | \$75.24 |  |  |  |  |
| 10:43:33 | \$75.26 | \$75.28 | NEW ORDER | B | 200 | \$75.24 |  |  |  |  |
| 10:43:33 | \$75.26 | \$75.28 | NEW ORDER | B | 200 | \$75.24 |  |  |  |  |
| 10:43:34 | \$75.26 | \$75.28 | NEW ORDER | B | 100 | \$75.26 |  |  |  |  |
| 10:43:34 | \$75.26 | \$75.28 | NEW ORDER | B | 100 | \$75.26 |  |  |  |  |
| 10:43:35 | \$75.26 | \$75.28 | NEW ORDER | B | 200 | \$75.26 |  |  |  |  |
| 10:43:35 | \$75.26 | \$75.28 | NEW ORDER | B | 200 | \$75.26 |  |  |  |  |
| 10:43:35 | \$75.26 | \$75.28 | NEW ORDER | B | 200 | \$75.26 |  |  |  |  |
| 10:43:35 | \$75.26 | \$75.28 | NEW ORDER | B | 200 | \$75.26 |  |  |  |  |
| 10:43:35 | \$75.26 | \$75.28 | NEW ORDER | B | 100 | \$75.27 |  |  |  |  |
| 10:43:36 | \$75.27 | \$75.29 | NEW ORDER | B | 100 | \$75.27 |  |  |  |  |
| 10:43:36 | \$75.27 | \$75.29 | NEW ORDER | B | 100 | \$75.27 |  |  |  |  |
| 10:43:37 | \$75.27 | \$75.29 | NEW ORDER | B | 100 | \$75.28 |  |  |  |  |
| 10:43:38 | \$75.28 | \$75.29 |  |  |  |  |  |  |  |  |
| 10:43:39 | \$75.28 | \$75.29 |  |  |  |  | NEW ORDER | S | 1,300 | \$75.29 |
| 10:43:39 | \$75.28 | \$75.29 |  |  |  |  | NEW ORDER | S | 1,300 | \$75.29 |
| 10:43:39 | \$75.28 | \$75.29 |  |  |  |  | NEW ORDER | S | 1,200 | \$75.29 |
| 10:43:39 | \$75.28 | \$75.29 |  |  |  |  | NEW ORDER | S | 1,200 | \$75.29 |
| 10:43:39 | \$75.28 | \$75.29 |  |  |  |  | NEW ORDER | S | 1,300 | \$75.29 |
| 10:43:39 | \$75.28 | \$75.29 |  |  |  |  | NEW ORDER | S | 1,300 | \$75.29 |
| 10:43:39 | \$75.28 | \$75.29 |  |  |  |  | NEW ORDER | S | 1,200 | \$75.29 |
| 10:43:39 | \$75.28 | \$75.29 |  |  |  |  | NEW ORDER | S | 1,200 | \$75.29 |
| 10:43:40 | \$75.28 | \$75.29 | NEW ORDER | B | 200 | \$75.28 |  |  |  |  |
| 10:43:40 | \$75.28 | \$75.29 | NEW ORDER | B | 200 | \$75.28 |  |  |  |  |
| 10:43:40 | \$75.28 | \$75.29 | NEW ORDER | B | 200 | \$75.28 |  |  |  |  |
| 10:43:40 | \$75.28 | \$75.29 | NEW ORDER | B | 200 | \$75.28 |  |  |  |  |
| 10:43:40 | \$75.28 | \$75.29 | NEW ORDER | B | 100 | \$75.29 |  |  |  |  |
| 10:43:40 | \$75.28 | \$75.29 | EXECUTION | B | 100 | \$75.29 |  |  |  |  |
| 10:43:41 | \$75.28 | \$75.30 | NEW ORDER | B | 100 | \$75.29 |  |  |  |  |
| 10:43:42 | \$75.29 | \$75.30 | NEW ORDER | B | 100 | \$75.29 |  |  |  |  |


| $\begin{aligned} & \quad \text { Exhibit 1.B: Closing Out } \\ & \text { NBB }=\text { National Best Bid } \\ & \text { NBO }=\text { National Best Offer } \end{aligned}$ |  |  | he Long Position | n and Estab | lishing a | Positio | $n \text { at } \$ 75.29 \text { (1 }$ | $: 43: 30 \text { AM }$ | 10:44:00 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | "Dirty" Trader ID (ID No. XXXX102S) |  |  |  | "Clean" Trader ID (ID No. XXXXYIGO) |  |  |  |
| Time | NBB | NBO | Event | Side (B/S) | Quantity | Price | Event | Side (B/S) | Quantity | Price |
| 10:43:42 | \$75.29 | \$75.30 | NEW ORDER | B | 100 | \$75.29 |  |  |  |  |
| 10:43:43 | \$75.29 | \$75.30 | NEW ORDER | B | 200 | \$75.28 |  |  |  |  |
| 10:43:43 | \$75.29 | \$75.30 | NEW ORDER | B | 200 | \$75.28 |  |  |  |  |
| 10:43:43 | \$75.29 | \$75.30 | NEW ORDER | B | 200 | \$75.28 |  |  |  |  |
| 10:43:43 | \$75.29 | \$75.30 | NEW ORDER | B | 200 | \$75.28 |  |  |  |  |
| 10:43:43 | \$75.29 | \$75.30 | NEW ORDER | B | 200 | \$75.28 |  |  |  |  |
| 10:43:43 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 108 | \$75.29 |
| 10:43:44 | \$75.29 | \$75.30 | NEW ORDER | B | 200 | \$75.27 |  |  |  |  |
| 10:43:44 | \$75.29 | \$75.30 | NEW ORDER | B | 200 | \$75.27 |  |  |  |  |
| 10:43:44 | \$75.29 | \$75.30 | NEW ORDER | B | 200 | \$75.27 |  |  |  |  |
| 10:43:44 | \$75.29 | \$75.30 | NEW ORDER | B | 200 | \$75.27 |  |  |  |  |
| 10:43:44 | \$75.29 | \$75.30 | NEW ORDER | B | 200 | \$75.28 |  |  |  |  |
| 10:43:44 | \$75.29 | \$75.30 | NEW ORDER | B | 200 | \$75.28 |  |  |  |  |
| 10:43:44 | \$75.29 | \$75.30 | NEW ORDER | B | 200 | \$75.28 |  |  |  |  |
| 10:43:44 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 100 | \$75.29 |
| 10:43:45 | \$75.29 | \$75.30 |  |  |  |  |  |  |  |  |
| 10:43:46 | \$75.29 | \$75.30 |  |  |  |  |  |  |  |  |
| 10:43:47 | \$75.29 | \$75.30 | NEW ORDER | B | 100 | \$75.29 |  |  |  |  |
| 10:43:48 | \$75.29 | \$75.30 |  |  |  |  |  |  |  |  |
| 10:43:49 | \$75.29 | \$75.30 | NEW ORDER | B | 100 | \$75.30 |  |  |  |  |
| 10:43:49 | \$75.29 | \$75.30 | EXECUTION | B | 100 | \$75.30 |  |  |  |  |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 500 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 100 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 100 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 286 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 206 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 294 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 185 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 200 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 200 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 100 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 200 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 100 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 100 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 200 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 200 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 200 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 100 | \$75.29 |
| 10:43:49 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 100 | \$75.29 |
| 10:43:50 | \$75.29 | \$75.30 |  |  |  |  |  |  |  |  |
| 10:43:51 | \$75.29 | \$75.30 | EXECUTION | B | 100 | \$75.29 |  |  |  |  |
| 10:43:51 | \$75.29 | \$75.30 | NEW ORDER | B | 100 | \$75.30 |  |  |  |  |
| 10:43:51 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 100 | \$75.29 |
| 10:43:51 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 100 | \$75.29 |
| 10:43:52 | \$75.29 | \$75.30 | NEW ORDER | B | 100 | \$75.29 |  |  |  |  |
| 10:43:53 | \$75.29 | \$75.30 |  |  |  |  |  |  |  |  |
| 10:43:54 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 248 | \$75.29 |
| 10:43:54 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 200 | \$75.29 |
| 10:43:54 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 100 | \$75.29 |
| 10:43:55 | \$75.29 | \$75.30 | EXECUTION | B | 100 | \$75.30 |  |  |  |  |
| 10:43:55 | \$75.29 | \$75.30 | NEW ORDER | B | 100 | \$75.31 |  |  |  |  |
| 10:43:55 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 373 | \$75.29 |
| 10:43:55 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 200 | \$75.29 |


| Exhibit 1.B: Closing <br> NBB $=$ National Best Bid <br> NBO = National Best Offer |  |  | he Long Posit | and Estab | lishing a | Positio | $n \text { at } \$ 75.29$ | 43:30 AM | - 10:44:00 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | "Dirty" Trader ID (ID No. XXXX102S) |  |  |  | "Clean" Trader ID (ID No. XXXXYIGO) |  |  |  |
| Time | NBB | NBO | Event | Side (B/S) | Quantity | Price | Event | Side (B/S) | Quantity | Price |
| 10:43:55 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 100 | \$75.29 |
| 10:43:55 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 27 | \$75.29 |
| 10:43:55 | \$75.29 | \$75.30 |  |  |  |  | EXECUTION | S | 400 | \$75.29 |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 100 | \$75.28 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 200 | \$75.28 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 200 | \$75.28 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 200 | \$75.28 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 200 | \$75.28 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 200 | \$75.28 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 200 | \$75.28 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 200 | \$75.28 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 200 | \$75.28 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 200 | \$75.28 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 200 | \$75.28 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 200 | \$75.28 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 200 | \$75.28 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 100 | \$75.29 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 100 | \$75.29 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 100 | \$75.29 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 100 | \$75.29 |  |  |  |  |
| 10:43:56 | \$75.29 | \$75.30 | CANCEL | B | 100 | \$75.29 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | CANCEL | B | 100 | \$75.26 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | CANCEL | B | 100 | \$75.26 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | CANCEL | B | 200 | \$75.26 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | CANCEL | B | 200 | \$75.26 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | CANCEL | B | 200 | \$75.26 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | CANCEL | B | 200 | \$75.26 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | CANCEL | B | 100 | \$75.27 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | CANCEL | B | 100 | \$75.27 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | CANCEL | B | 100 | \$75.27 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | CANCEL | B | 200 | \$75.27 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | CANCEL | B | 200 | \$75.27 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | CANCEL | B | 200 | \$75.27 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | CANCEL | B | 200 | \$75.27 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | NEW ORDER | S | 400 | \$75.29 |  |  |  |  |
| 10:43:57 | \$75.28 | \$75.30 | EXECUTION | S | 400 | \$75.29 |  |  |  |  |
| 10:43:58 | \$75.28 | \$75.30 | CANCEL | B | 200 | \$75.25 |  |  |  |  |
| 10:43:58 | \$75.28 | \$75.30 | CANCEL | B | 200 | \$75.25 |  |  |  |  |
| 10:43:58 | \$75.28 | \$75.30 | CANCEL | B | 200 | \$75.25 |  |  |  |  |
| 10:43:58 | \$75.28 | \$75.30 | CANCEL | B | 200 | \$75.25 |  |  |  |  |
| 10:43:59 | \$75.28 | \$75.29 |  |  |  |  | CANCEL | S | 873 | \$75.29 |
| 10:43:59 | \$75.28 | \$75.29 |  |  |  |  | CANCEL | S | 1,300 | \$75.29 |
| 10:43:59 | \$75.28 | \$75.29 |  |  |  |  | CANCEL | S | 1,200 | \$75.29 |
| 10:43:59 | \$75.28 | \$75.29 |  |  |  |  | CANCEL | S | 1,200 | \$75.29 |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.22 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.22 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.22 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.22 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.23 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.23 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.23 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.23 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.23 |  |  |  |  |


| $\begin{array}{r} \quad \text { Exh } \\ \text { NBB }=\text { Nati } \\ \text { NBO }=\text { Nat } \end{array}$ | t 1.B: Cl <br> al Best <br> al Best | ng Out | he Long Po | n and Estab | ishing a Sh | t Position | \$75.29 | :43:30 AM | 10:44:00 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | "Dirt | rader ID (ID | No. XXXX |  | "Cl | Trader ID | No. XXX |  |
| Time | NBB | NBO | Event | Side (B/S) | Quantity | Price | Event | Side (B/S) | Quantity | Price |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.23 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.23 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.23 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 100 | \$75.24 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 500 | \$75.24 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 500 | \$75.24 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 500 | \$75.24 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 500 | \$75.24 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.24 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.24 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.24 |  |  |  |  |
| 10:44:00 | \$75.28 | \$75.29 | CANCEL | B | 200 | \$75.24 |  |  |  |  |

## EXHIBIT 2

## TRADING IN THE ADSs OF COMPANY B

AUGUST 29, 2014

## Exhibit 2.A: Establishing a Long Position at $\$ 22.81$

Between 2:16:06 PM and 2:16:30 PM, the "dirty" trader ID placed 64 sell orders, with the average order size of 169 shares, gradually decreasing its order price from $\$ 22.84-\$ 22.86$ per share to $\$ 22.80$ per share. During this time, the national best offer for Company B ADSs declined from $\$ 22.83$ per share to $\$ 22.81$ per share. Of the 10,800 shares that the "dirty" trader ID offered to sell during this round of trading, only 900 shares (or $8.3 \%$ ) were in fact sold, for $\$ 22.80-\$ 22.82$ per share; of those 900 shares, 600 shares were purchased back to cover before the second round of manipulation began.

While the "dirty" trader ID was placing the layered sell orders, at 2:16:12 PM, the "clean" trader ID placed four orders to buy, each for 1,300 shares and priced at $\$ 22.81$ per share. Once the "clean" trader ID began obtaining executions at $\$ 22.81$ per share, both trader IDs began canceling their open orders. By the completion of this round of trading at 2:16:38 PM, the "clean" trader ID had bought 2,531 shares at $\$ 22.81$ per share.

## Exhibit 2.B: Closing Out the Long Position at \$22.834

Between 2:16:40 PM and 2:17:01 PM, the "dirty" trader ID placed 53 buy orders, with the average order size of 243 shares, gradually increasing its order price from $\$ 22.78-\$ 22.80$ per share to $\$ 22.84$ per share. During this time, the national best bid for the ADSs of Company B increased from $\$ 22.82$ per share to $\$ 22.84$ per share. Of the 12,900 shares the "dirty" trader ID bid to buy during this round of manipulation, only 600 (or $4.7 \%$ ) were in fact bought, for $\$ 22.83$ $\$ 22.84$ per share. Of those 600 shares, 300 shares covered the short position remaining from the previous round of manipulation, reflected in Exhibit 2.A, and the remaining 300 shares were sold at 2:17:07 PM for $\$ 22.83$ per share.

While these layered buy orders were being placed by the "dirty" trader ID, the "clean" trader ID placed eight orders to sell a total of 10,000 shares, at $\$ 22.84$ per share. After obtaining sell executions for 900 shares, the "clean" trader ID first canceled its open orders and then placed and obtained an execution for an additional 1,631-share sell order, priced at $\$ 22.83$ per share. The "dirty" trader canceled its open orders by the end of the round at 2:17:10 PM. Overall, by the end of this round of trading, the "clean" trader ID had sold its entire 2,531-share position at the average price of $\$ 22.834$ per share - that is, at a profit of 2.4 cents per share.

The trading shown in Exhibit 2 represents all the activity in the ADSs of Company B by the two trader IDs on that day. Milrud's trader's manipulation of the market for the ADSs of Company B on August 29, 2014 resulted in a loss of approximately $\$ 16$ generated by the "dirty" trader ID and a profit of approximately $\$ 60$ generated by the "clean" trader ID, for the overall net profit of approximately $\$ 44$.

| $\begin{aligned} & \text { NBB }=\text { Nati } \\ & \text { NBO }=\text { Nati } \end{aligned}$ | al Best B <br> nal Best | Exhibit <br> fer | 2.A: Establish | ing a Long P | osition at \$ | $2.81(2: 16$ | $6: 06 \text { PM - 2:16 }$ | :38 PM) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | "Dirty" | rader ID (ID | No. XXXX |  | "Clean" | der ID (ID | o. XXXX |  |
| Time | NBB | NBO | Event | Side (B/S) | Quantity | Price | Event | Side (B/S) | Quantity | Price |
| 14:16:06 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.84 |  |  |  |  |
| 14:16:06 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.84 |  |  |  |  |
| 14:16:06 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.84 |  |  |  |  |
| 14:16:06 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.84 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.85 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.85 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.85 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.85 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.86 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.86 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.86 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.86 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.86 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.86 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.86 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.86 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.86 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.86 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.86 |  |  |  |  |
| 14:16:07 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.86 |  |  |  |  |
| 14:16:08 | \$22.82 | \$22.83 |  |  |  |  |  |  |  |  |
| 14:16:09 | \$22.82 | \$22.83 | NEW ORDER | S | 100 | \$22.83 |  |  |  |  |
| 14:16:09 | \$22.82 | \$22.83 | NEW ORDER | S | 100 | \$22.83 |  |  |  |  |
| 14:16:09 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.84 |  |  |  |  |
| 14:16:09 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.84 |  |  |  |  |
| 14:16:09 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.84 |  |  |  |  |
| 14:16:09 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.84 |  |  |  |  |
| 14:16:10 | \$22.82 | \$22.83 | EXECUTION | S | 100 | \$22.82 |  |  |  |  |
| 14:16:10 | \$22.82 | \$22.83 | NEW ORDER | S | 100 | \$22.82 |  |  |  |  |
| 14:16:10 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.83 |  |  |  |  |
| 14:16:10 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.83 |  |  |  |  |
| 14:16:10 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.83 |  |  |  |  |
| 14:16:10 | \$22.82 | \$22.83 | NEW ORDER | S | 200 | \$22.83 |  |  |  |  |
| 14:16:11 | \$22.81 | \$22.82 |  |  |  |  |  |  |  |  |
| 14:16:12 | \$22.81 | \$22.82 |  |  |  |  | NEW ORDER | B | 1,300 | \$22.81 |
| 14:16:12 | \$22.81 | \$22.82 |  |  |  |  | NEW ORDER | B | 1,300 | \$22.81 |
| 14:16:12 | \$22.81 | \$22.82 |  |  |  |  | NEW ORDER | B | 1,300 | \$22.81 |
| 14:16:12 | \$22.81 | \$22.82 |  |  |  |  | NEW ORDER | B | 1,300 | \$22.81 |
| 14:16:13 | \$22.81 | \$22.82 | NEW ORDER | S | 100 | \$22.82 |  |  |  |  |
| 14:16:13 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.83 |  |  |  |  |
| 14:16:13 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.83 |  |  |  |  |
| 14:16:13 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.83 |  |  |  |  |
| 14:16:13 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.83 |  |  |  |  |
| 14:16:13 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.83 |  |  |  |  |
| 14:16:13 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.83 |  |  |  |  |
| 14:16:13 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.83 |  |  |  |  |
| 14:16:13 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.83 |  |  |  |  |


| NBB $=$ National Best Bid <br> NBO = National Best Offer |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | "Dirty" | rader ID (ID | No. XXXX |  | "Clean | ader ID (ID | No. XXXX |  |
| Time | NBB | NBO | Event | Side (B/S) | Quantity | Price | Event | Side (B/S) | Quantity | Price |
| 14:16:14 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.82 |  |  |  |  |
| 14:16:14 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.82 |  |  |  |  |
| 14:16:14 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.82 |  |  |  |  |
| 14:16:14 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.82 |  |  |  |  |
| 14:16:14 | \$22.81 | \$22.82 | NEW ORDER | S | 100 | \$22.82 |  |  |  |  |
| 14:16:14 | \$22.81 | \$22.82 | NEW ORDER | S | 100 | \$22.82 |  |  |  |  |
| 14:16:15 | \$22.81 | \$22.82 |  |  |  |  | EXECUTION | B | 100 | \$22.81 |
| 14:16:15 | \$22.81 | \$22.82 |  |  |  |  | EXECUTION | B | 100 | \$22.81 |
| 14:16:15 | \$22.81 | \$22.82 |  |  |  |  | EXECUTION | B | 100 | \$22.81 |
| 14:16:15 | \$22.81 | \$22.82 |  |  |  |  | EXECUTION | B | 100 | \$22.81 |
| 14:16:15 | \$22.81 | \$22.82 | EXECUTION | S | 100 | \$22.80 |  |  |  |  |
| 14:16:15 | \$22.81 | \$22.82 | NEW ORDER | S | 100 | \$22.80 |  |  |  |  |
| 14:16:15 | \$22.81 | \$22.82 | EXECUTION | S | 100 | \$22.81 |  |  |  |  |
| 14:16:15 | \$22.81 | \$22.82 | NEW ORDER | S | 100 | \$22.81 |  |  |  |  |
| 14:16:16 | \$22.81 | \$22.82 |  |  |  |  |  |  |  |  |
| 14:16:17 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.82 |  |  |  |  |
| 14:16:17 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.82 |  |  |  |  |
| 14:16:17 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.82 |  |  |  |  |
| 14:16:17 | \$22.81 | \$22.82 | NEW ORDER | S | 200 | \$22.82 |  |  |  |  |
| 14:16:18 | \$22.81 | \$22.82 | EXECUTION | S | 100 | \$22.81 |  |  |  |  |
| 14:16:18 | \$22.81 | \$22.82 | NEW ORDER | S | 100 | \$22.81 |  |  |  |  |
| 14:16:19 | \$22.81 | \$22.82 |  |  |  |  | EXECUTION | B | 100 | \$22.81 |
| 14:16:19 | \$22.81 | \$22.82 | EXECUTION | S | 100 | \$22.81 |  |  |  |  |
| 14:16:19 | \$22.81 | \$22.82 | NEW ORDER | S | 100 | \$22.81 |  |  |  |  |
| 14:16:20 | \$22.80 | \$22.82 |  |  |  |  | EXECUTION | B | 400 | \$22.81 |
| 14:16:20 | \$22.80 | \$22.82 |  |  |  |  | EXECUTION | B | 100 | \$22.81 |
| 14:16:20 | \$22.80 | \$22.82 | NEW ORDER | S | 100 | \$22.81 |  |  |  |  |
| 14:16:21 | \$22.80 | \$22.81 | NEW ORDER | S | 100 | \$22.81 |  |  |  |  |
| 14:16:22 | \$22.80 | \$22.81 | NEW ORDER | S | 100 | \$22.81 |  |  |  |  |
| 14:16:22 | \$22.80 | \$22.81 | NEW ORDER | S | 100 | \$22.81 |  |  |  |  |
| 14:16:23 | \$22.80 | \$22.81 |  |  |  |  | EXECUTION | B | 281 | \$22.81 |
| 14:16:23 | \$22.80 | \$22.81 |  |  |  |  | EXECUTION | B | 100 | \$22.81 |
| 14:16:23 | \$22.80 | \$22.81 |  |  |  |  | EXECUTION | B | 100 | \$22.81 |
| 14:16:23 | \$22.80 | \$22.81 |  |  |  |  | EXECUTION | B | 200 | \$22.81 |
| 14:16:24 | \$22.80 | \$22.81 | NEW ORDER | S | 100 | \$22.81 |  |  |  |  |
| 14:16:25 | \$22.80 | \$22.81 |  |  |  |  |  |  |  |  |
| 14:16:26 | \$22.80 | \$22.81 |  |  |  |  | EXECUTION | B | 100 | \$22.81 |
| 14:16:26 | \$22.80 | \$22.81 |  |  |  |  | EXECUTION | B | 250 | \$22.81 |
| 14:16:26 | \$22.80 | \$22.81 |  |  |  |  | EXECUTION | B | 100 | \$22.81 |
| 14:16:26 | \$22.80 | \$22.81 | EXECUTION | S | 100 | \$22.80 |  |  |  |  |
| 14:16:26 | \$22.80 | \$22.81 | NEW ORDER | S | 100 | \$22.80 |  |  |  |  |
| 14:16:26 | \$22.80 | \$22.81 | EXECUTION | S | 100 | \$22.81 |  |  |  |  |
| 14:16:27 | \$22.80 | \$22.81 |  |  |  |  |  |  |  |  |
| 14:16:28 | \$22.80 | \$22.81 | NEW ORDER | S | 100 | \$22.81 |  |  |  |  |
| 14:16:29 | \$22.80 | \$22.81 | NEW ORDER | S | 100 | \$22.81 |  |  |  |  |
| 14:16:29 | \$22.80 | \$22.81 | NEW ORDER | S | 100 | \$22.81 |  |  |  |  |
| 14:16:30 | \$22.80 | \$22.81 |  |  |  |  | EXECUTION | B | 31 | \$22.81 |
| 14:16:30 | \$22.80 | \$22.81 |  |  |  |  | EXECUTION | B | 69 | \$22.81 |
| 14:16:30 | \$22.80 | \$22.81 |  |  |  |  | EXECUTION | B | 200 | \$22.81 |


| NBB = National Best Bid <br> NBO = National Best Offer |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | "Dirty" | Trader ID (ID | No. XXXX1 |  | "Clean" | rader ID (ID | No. XXXXX | GO) |
| Time | NBB | NBO | Event | Side (B/S) | Quantity | Price | Event | Side (B/S) | Quantity | Price |
| 14:16:30 | \$22.80 | \$22.81 | EXECUTION | S | 100 | \$22.80 |  |  |  |  |
| 14:16:30 | \$22.80 | \$22.81 | NEW ORDER | S | 100 | \$22.80 |  |  |  |  |
| 14:16:31 | \$22.80 | \$22.81 |  |  |  |  | EXECUTION | B | 100 | \$22.81 |
| 14:16:32 | \$22.80 | \$22.81 | EXECUTION | S | 100 | \$22.81 |  |  |  |  |
| 14:16:33 | \$22.80 | \$22.81 | CANCEL | S | 100 | \$22.81 |  |  |  |  |
| 14:16:33 | \$22.80 | \$22.81 | CANCEL | S | 100 | \$22.81 |  |  |  |  |
| 14:16:33 | \$22.80 | \$22.81 | CANCEL | S | 100 | \$22.81 |  |  |  |  |
| 14:16:33 | \$22.80 | \$22.81 | CANCEL | S | 100 | \$22.81 |  |  |  |  |
| 14:16:33 | \$22.80 | \$22.81 | CANCEL | S | 100 | \$22.81 |  |  |  |  |
| 14:16:33 | \$22.80 | \$22.81 | CANCEL | S | 100 | \$22.81 |  |  |  |  |
| 14:16:33 | \$22.80 | \$22.81 | NEW ORDER | B | 900 | \$22.81 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | EXECUTION | B | 100 | \$22.81 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | EXECUTION | B | 100 | \$22.81 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.82 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.82 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.82 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.82 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.82 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.82 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.82 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 100 | \$22.82 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 100 | \$22.82 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 100 | \$22.82 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.82 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.83 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.83 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.83 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.83 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.83 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.83 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.83 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.83 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.83 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.83 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.83 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 200 | \$22.83 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 100 | \$22.83 |  |  |  |  |
| 14:16:34 | \$22.80 | \$22.81 | CANCEL | S | 100 | \$22.83 |  |  |  |  |
| 14:16:35 | \$22.81 | \$22.82 | CANCEL | B | 700 | \$22.81 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | EXECUTION | B | 100 | \$22.82 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | EXECUTION | B | 200 | \$22.82 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | EXECUTION | B | 100 | \$22.82 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | NEW ORDER | B | 700 | \$22.82 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | CANCEL | S | 200 | \$22.84 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | CANCEL | S | 200 | \$22.84 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | CANCEL | S | 200 | \$22.84 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | CANCEL | S | 200 | \$22.84 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | CANCEL | S | 200 | \$22.84 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | CANCEL | S | 200 | \$22.84 |  |  |  |  |

Exhibit 2.A: Establishing a Long Position at \$22.81 (2:16:06 PM - 2:16:38 PM)
NBB $=$ National Best Bid
NBO = National Best Offer

|  |  |  | "Dirty" Trader ID (ID No. XXXX102S) |  |  |  | "Clean" Trader ID (ID No. XXXXXYIGO) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | NBB | NBO | Event | Side (B/S) | Quantity | Price | Event | Side (B/S) | Quantity | Price |
| 14:16:36 | \$22.81 | \$22.82 | CANCEL | S | 200 | \$22.84 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | CANCEL | S | 200 | \$22.84 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | CANCEL | S | 200 | \$22.85 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | CANCEL | S | 200 | \$22.85 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | CANCEL | S | 200 | \$22.85 |  |  |  |  |
| 14:16:36 | \$22.81 | \$22.82 | CANCEL | S | 200 | \$22.85 |  |  |  |  |
| 14:16:37 | \$22.82 | \$22.83 | CANCEL | S | 200 | \$22.86 |  |  |  |  |
| 14:16:37 | \$22.82 | \$22.83 | CANCEL | S | 200 | \$22.86 |  |  |  |  |
| 14:16:37 | \$22.82 | \$22.83 | CANCEL | S | 200 | \$22.86 |  |  |  |  |
| 14:16:37 | \$22.82 | \$22.83 | CANCEL | S | 200 | \$22.86 |  |  |  |  |
| 14:16:37 | \$22.82 | \$22.83 | CANCEL | S | 200 | \$22.86 |  |  |  |  |
| 14:16:37 | \$22.82 | \$22.83 | CANCEL | S | 200 | \$22.86 |  |  |  |  |
| 14:16:37 | \$22.82 | \$22.83 | CANCEL | S | 200 | \$22.86 |  |  |  |  |
| 14:16:37 | \$22.82 | \$22.83 | CANCEL | S | 200 | \$22.86 |  |  |  |  |
| 14:16:37 | \$22.82 | \$22.83 | CANCEL | S | 200 | \$22.86 |  |  |  |  |
| 14:16:37 | \$22.82 | \$22.83 | CANCEL | S | 200 | \$22.86 |  |  |  |  |
| 14:16:37 | \$22.82 | \$22.83 | CANCEL | S | 200 | \$22.86 |  |  |  |  |
| 14:16:37 | \$22.82 | \$22.83 | CANCEL | S | 200 | \$22.86 |  |  |  |  |
| 14:16:37 | \$22.82 | \$22.83 | CANCEL | B | 300 | \$22.82 |  |  |  |  |
| 14:16:38 | \$22.82 | \$22.83 |  |  |  |  | CANCEL | B | 1,269 | \$22.81 |
| 14:16:38 | \$22.82 | \$22.83 |  |  |  |  | CANCEL | B | 1,300 | \$22.81 |
| 14:16:38 | \$22.82 | \$22.83 |  |  |  |  | CANCEL | B | 100 | \$22.81 |


| NBB = National Best Bid <br> NBO = National Best Offer |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | "Dirty" | rader ID (ID | No. XXXX1 |  | "Clean" | rader ID (ID | o. XXXX | O) |
| Time | NBB | NBO | Event | Side (B/S) | Quantity | Price | Event | Side (B/S) | Quantity | Price |
| 14:16:40 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.79 |  |  |  |  |
| 14:16:40 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.80 |  |  |  |  |
| 14:16:40 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.80 |  |  |  |  |
| 14:16:40 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.80 |  |  |  |  |
| 14:16:40 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.80 |  |  |  |  |
| 14:16:40 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.81 |  |  |  |  |
| 14:16:40 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.81 |  |  |  |  |
| 14:16:40 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.81 |  |  |  |  |
| 14:16:40 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.81 |  |  |  |  |
| 14:16:41 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.77 |  |  |  |  |
| 14:16:41 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.77 |  |  |  |  |
| 14:16:41 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.77 |  |  |  |  |
| 14:16:41 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.77 |  |  |  |  |
| 14:16:41 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.78 |  |  |  |  |
| 14:16:41 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.78 |  |  |  |  |
| 14:16:41 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.78 |  |  |  |  |
| 14:16:41 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.78 |  |  |  |  |
| 14:16:41 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.79 |  |  |  |  |
| 14:16:41 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.79 |  |  |  |  |
| 14:16:41 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.79 |  |  |  |  |
| 14:16:42 | \$22.82 | \$22.83 | NEW ORDER | B | 100 | \$22.82 |  |  |  |  |
| 14:16:42 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.82 |  |  |  |  |
| 14:16:42 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.82 |  |  |  |  |
| 14:16:42 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.82 |  |  |  |  |
| 14:16:42 | \$22.82 | \$22.83 | NEW ORDER | B | 200 | \$22.82 |  |  |  |  |
| 14:16:43 | \$22.82 | \$22.83 | EXECUTION | B | 100 | \$22.83 |  |  |  |  |
| 14:16:43 | \$22.82 | \$22.83 | NEW ORDER | B | 100 | \$22.83 |  |  |  |  |
| 14:16:44 | \$22.82 | \$22.84 | NEW ORDER | B | 100 | \$22.83 |  |  |  |  |
| 14:16:45 | \$22.82 | \$22.84 | EXECUTION | B | 100 | \$22.83 |  |  |  |  |
| 14:16:46 | \$22.83 | \$22.84 | NEW ORDER | B | 100 | \$22.83 |  |  |  |  |
| 14:16:47 | \$22.83 | \$22.84 | NEW ORDER | B | 100 | \$22.83 |  |  |  |  |
| 14:16:48 | \$22.83 | \$22.84 | NEW ORDER | B | 100 | \$22.83 |  |  |  |  |
| 14:16:49 | \$22.83 | \$22.84 |  |  |  |  |  |  |  |  |
| 14:16:50 | \$22.83 | \$22.84 |  |  |  |  | NEW ORDER | S | 1,200 | \$22.84 |
| 14:16:50 | \$22.83 | \$22.84 |  |  |  |  | NEW ORDER | S | 1,200 | \$22.84 |
| 14:16:50 | \$22.83 | \$22.84 |  |  |  |  | NEW ORDER | S | 1,300 | \$22.84 |
| 14:16:50 | \$22.83 | \$22.84 |  |  |  |  | NEW ORDER | S | 1,300 | \$22.84 |
| 14:16:51 | \$22.83 | \$22.84 |  |  |  |  | NEW ORDER | S | 1,200 | \$22.84 |
| 14:16:51 | \$22.83 | \$22.84 |  |  |  |  | NEW ORDER | S | 1,200 | \$22.84 |
| 14:16:51 | \$22.83 | \$22.84 |  |  |  |  | NEW ORDER | S | 1,300 | \$22.84 |
| 14:16:51 | \$22.83 | \$22.84 |  |  |  |  | NEW ORDER | S | 1,300 | \$22.84 |
| 14:16:51 | \$22.83 | \$22.84 | NEW ORDER | B | 500 | \$22.81 |  |  |  |  |
| 14:16:51 | \$22.83 | \$22.84 | NEW ORDER | B | 500 | \$22.81 |  |  |  |  |
| 14:16:51 | \$22.83 | \$22.84 | NEW ORDER | B | 500 | \$22.81 |  |  |  |  |
| 14:16:51 | \$22.83 | \$22.84 | NEW ORDER | B | 500 | \$22.81 |  |  |  |  |
| 14:16:51 | \$22.83 | \$22.84 | NEW ORDER | B | 500 | \$22.81 |  |  |  |  |
| 14:16:51 | \$22.83 | \$22.84 | NEW ORDER | B | 500 | \$22.81 |  |  |  |  |
| 14:16:51 | \$22.83 | \$22.84 | NEW ORDER | B | 500 | \$22.81 |  |  |  |  |
| 14:16:51 | \$22.83 | \$22.84 | NEW ORDER | B | 500 | \$22.81 |  |  |  |  |


| NBB = National Best Bid <br> NBO = National Best Offer |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | NBB | NBO | "Dirty" Trader ID (ID No. XXXX102S) |  |  |  | "Clean" Trader ID (ID No. XXXXXYIGO) |  |  |  |
|  |  |  | Event | Side (B/S) | Quantity | Price | Event | Side (B/S) | Quantity | Price |
| 14:16:51 | \$22.83 | \$22.84 | NEW ORDER | B | 500 | \$22.82 |  |  |  |  |
| 14:16:51 | \$22.83 | \$22.84 | NEW ORDER | B | 500 | \$22.82 |  |  |  |  |
| 14:16:51 | \$22.83 | \$22.84 | NEW ORDER | B | 500 | \$22.82 |  |  |  |  |
| 14:16:51 | \$22.83 | \$22.84 | NEW ORDER | B | 500 | \$22.82 |  |  |  |  |
| 14:16:52 | \$22.83 | \$22.84 |  |  |  |  |  |  |  |  |
| 14:16:53 | \$22.83 | \$22.84 | NEW ORDER | B | 200 | \$22.83 |  |  |  |  |
| 14:16:53 | \$22.83 | \$22.84 | NEW ORDER | B | 200 | \$22.83 |  |  |  |  |
| 14:16:53 | \$22.83 | \$22.84 | NEW ORDER | B | 200 | \$22.83 |  |  |  |  |
| 14:16:53 | \$22.83 | \$22.84 | NEW ORDER | B | 200 | \$22.83 |  |  |  |  |
| 14:16:54 | \$22.83 | \$22.84 | NEW ORDER | B | 100 | \$22.83 |  |  |  |  |
| 14:16:54 | \$22.83 | \$22.84 | NEW ORDER | B | 100 | \$22.83 |  |  |  |  |
| 14:16:55 | \$22.83 | \$22.84 |  |  |  |  | EXECUTION | S | 100 | \$22.84 |
| 14:16:55 | \$22.83 | \$22.84 |  |  |  |  | EXECUTION | S | 100 | \$22.84 |
| 14:16:55 | \$22.83 | \$22.84 |  |  |  |  | EXECUTION | S | 100 | \$22.84 |
| 14:16:55 | \$22.83 | \$22.84 |  |  |  |  | EXECUTION | S | 200 | \$22.84 |
| 14:16:55 | \$22.83 | \$22.84 |  |  |  |  | EXECUTION | S | 100 | \$22.84 |
| 14:16:55 | \$22.83 | \$22.84 | EXECUTION | B | 100 | \$22.84 |  |  |  |  |
| 14:16:55 | \$22.83 | \$22.84 | NEW ORDER | B | 100 | \$22.84 |  |  |  |  |
| 14:16:56 | \$22.83 | \$22.85 |  |  |  |  | EXECUTION | S | 100 | \$22.84 |
| 14:16:57 | \$22.83 | \$22.85 |  |  |  |  | EXECUTION | S | 100 | \$22.84 |
| 14:16:57 | \$22.83 | \$22.85 | NEW ORDER | B | 100 | \$22.84 |  |  |  |  |
| 14:16:58 | \$22.84 | \$22.85 |  |  |  |  | EXECUTION | S | 100 | \$22.84 |
| 14:16:58 | \$22.84 | \$22.85 | NEW ORDER | B | 100 | \$22.83 |  |  |  |  |
| 14:16:58 | \$22.84 | \$22.85 | EXECUTION | B | 100 | \$22.84 |  |  |  |  |
| 14:16:58 | \$22.84 | \$22.85 | EXECUTION | B | 100 | \$22.84 |  |  |  |  |
| 14:16:58 | \$22.84 | \$22.85 | NEW ORDER | B | 100 | \$22.84 |  |  |  |  |
| 14:16:59 | \$22.83 | \$22.84 |  |  |  |  |  |  |  |  |
| 14:17:00 | \$22.83 | \$22.84 |  |  |  |  |  |  |  |  |
| 14:17:01 | \$22.83 | \$22.84 | EXECUTION | B | 100 | \$22.84 |  |  |  |  |
| 14:17:01 | \$22.83 | \$22.84 | NEW ORDER | B | 100 | \$22.84 |  |  |  |  |
| 14:17:02 | \$22.83 | \$22.84 | CANCEL | B | 100 | \$22.83 |  |  |  |  |
| 14:17:02 | \$22.83 | \$22.84 | CANCEL | B | 100 | \$22.83 |  |  |  |  |
| 14:17:02 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.83 |  |  |  |  |
| 14:17:02 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.83 |  |  |  |  |
| 14:17:02 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.83 |  |  |  |  |
| 14:17:02 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.83 |  |  |  |  |
| 14:17:02 | \$22.83 | \$22.84 | CANCEL | B | 100 | \$22.83 |  |  |  |  |
| 14:17:02 | \$22.83 | \$22.84 | CANCEL | B | 100 | \$22.83 |  |  |  |  |
| 14:17:02 | \$22.83 | \$22.84 | CANCEL | B | 100 | \$22.83 |  |  |  |  |
| 14:17:02 | \$22.83 | \$22.84 | CANCEL | B | 100 | \$22.83 |  |  |  |  |
| 14:17:03 | \$22.83 | \$22.84 |  |  |  |  |  |  |  |  |
| 14:17:04 | \$22.83 | \$22.84 |  |  |  |  | CANCEL | S | 1,200 | \$22.84 |
| 14:17:04 | \$22.83 | \$22.84 |  |  |  |  | CANCEL | S | 1,200 | \$22.84 |
| 14:17:04 | \$22.83 | \$22.84 |  |  |  |  | CANCEL | S | 1,300 | \$22.84 |
| 14:17:04 | \$22.83 | \$22.84 |  |  |  |  | CANCEL | S | 1,300 | \$22.84 |
| 14:17:04 | \$22.83 | \$22.84 |  |  |  |  | CANCEL | S | 1,200 | \$22.84 |
| 14:17:04 | \$22.83 | \$22.84 |  |  |  |  | CANCEL | S | 1,100 | \$22.84 |
| 14:17:04 | \$22.83 | \$22.84 |  |  |  |  | CANCEL | S | 1,300 | \$22.84 |
| 14:17:04 | \$22.83 | \$22.84 |  |  |  |  | CANCEL | S | 500 | \$22.84 |
| 14:17:05 | \$22.83 | \$22.84 |  |  |  |  | EXECUTION | S | 531 | \$22.83 |
| 14:17:05 | \$22.83 | \$22.84 |  |  |  |  | EXECUTION | S | 1,100 | \$22.83 |


| NBB = National Best Bid <br> NBO = National Best Offer |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | "Dirty" | rader ID (ID | No. XXXX |  | "Clean" | rader ID (ID | No. XXXX | () |
| Time | NBB | NBO | Event | Side (B/S) | Quantity | Price | Event | Side (B/S) | Quantity | Price |
| 14:17:05 | \$22.83 | \$22.84 |  |  |  |  | NEW ORDER | S | 1,631 | \$22.83 |
| 14:17:06 | \$22.83 | \$22.84 |  |  |  |  |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.81 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.81 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.81 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.81 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 500 | \$22.81 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 500 | \$22.81 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 500 | \$22.81 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 500 | \$22.81 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 500 | \$22.81 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 500 | \$22.81 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 500 | \$22.81 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 500 | \$22.81 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 500 | \$22.82 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 100 | \$22.82 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.82 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.82 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.82 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.82 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 500 | \$22.82 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 500 | \$22.82 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | CANCEL | B | 500 | \$22.82 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | EXECUTION | S | 300 | \$22.83 |  |  |  |  |
| 14:17:07 | \$22.83 | \$22.84 | NEW ORDER | S | 300 | \$22.83 |  |  |  |  |
| 14:17:08 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.79 |  |  |  |  |
| 14:17:08 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.79 |  |  |  |  |
| 14:17:08 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.79 |  |  |  |  |
| 14:17:08 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.79 |  |  |  |  |
| 14:17:08 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.80 |  |  |  |  |
| 14:17:08 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.80 |  |  |  |  |
| 14:17:08 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.80 |  |  |  |  |
| 14:17:08 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.80 |  |  |  |  |
| 14:17:09 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.78 |  |  |  |  |
| 14:17:09 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.78 |  |  |  |  |
| 14:17:09 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.78 |  |  |  |  |
| 14:17:09 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.78 |  |  |  |  |
| 14:17:10 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.77 |  |  |  |  |
| 14:17:10 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.77 |  |  |  |  |
| 14:17:10 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.77 |  |  |  |  |
| 14:17:10 | \$22.83 | \$22.84 | CANCEL | B | 200 | \$22.77 |  |  |  |  |

