



The option classes listed below will begin trading on the MIAX Emerald Exchange at the start of trading on **Monday, April 8, 2019**. All option classes on MIAX Emerald have an allocation style of Pro-Rata and billing style of Maker-Taker.

Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
A	Agilent Technologies, Inc.	A	Yes	NYSE	4:00	Wolverine Trading, LLC	1
AAP	Advance Auto Parts, Inc.	AAP	No	NYSE	4:00	Wolverine Trading, LLC	1
AAXJ	iShares MSCI All Country Asia Ex Japan ETF	AAXJ	No	NASDAQ	4:00	Wolverine Trading, LLC	1
AAXN	Axon Enterprise, Inc.	AAXN	No	NASDAQ	4:00	IMC Financial Markets	1
AB	AllianceBernstein Holding L.P.	AB	No	NYSE	4:00	Citadel Securities, LLC	1
ABB	ABB Ltd	ABB	No	NYSE	4:00	Morgan Stanley	1
ABC	AmerisourceBergen Corporation	ABC	No	NYSE	4:00	IMC Financial Markets	1
ABEV	Ambev S.A.	ABEV	No	NYSE	4:00	Morgan Stanley	1
ABMD	ABIOMED, Inc.	ABMD	No	NASDAQ	4:00	Wolverine Trading, LLC	1
ACB	Aurora Cannabis Inc.	ACB	No	NYSE	4:00	Citadel Securities, LLC	1
ACIA	Acacia Communications, Inc.	ACIA	No	NASDAQ	4:00	Wolverine Trading, LLC	1
ACOR	Acorda Therapeutics, Inc.	ACOR	No	NASDAQ	4:00	Citadel Securities, LLC	1
ACWI	iShares MSCI ACWI Index Fund	ACWI	No	NASDAQ	4:00	Citadel Securities, LLC	1
ADMP	Adamis Pharmaceuticals Corporation	ADMP	No	NASDAQ	4:00	Citadel Securities, LLC	1
ADMS	Adamas Pharmaceuticals, Inc.	ADMS	No	NASDAQ	4:00	Susquehanna Securities	1
ADNT	Adient Plc	ADNT	No	NYSE	4:00	Citadel Securities, LLC	1
ADT	ADT Inc.	ADT	No	NYSE	4:00	Morgan Stanley	1
AEO	American Eagle Outfitters, Inc.	AEO	No	NYSE	4:00	Citadel Securities, LLC	1



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AEP	American Electric Power Company, Inc.	AEP	No	NYSE	4:00	IMC Financial Markets	1
AES	The AES Corporation	AES	No	NYSE	4:00	Morgan Stanley	1
AFMD	Affimed N.V.	AFMD	No	NASDAQ	4:00	Citadel Securities, LLC	1
AGEN	Agenus Inc.	AGEN	No	NASDAQ	4:00	Citadel Securities, LLC	1
AGG	iShares Core U.S. Aggregate Bond ETF	AGG	No	NYSE Arca	4:00	Wolverine Trading, LLC	1
AGO	Assured Guaranty Ltd.	AGO	Yes	NYSE	4:00	IMC Financial Markets	1
AIZ	Assurant, Inc.	AIZ	No	NYSE	4:00	Morgan Stanley	1
ALK	Alaska Air Group, Inc.	ALK	No	NYSE	4:00	Wolverine Trading, LLC	1
ALKS	Alkermes plc	ALKS	No	NASDAQ	4:00	Citadel Securities, LLC	1
ALLY	Ally Financial Inc.	ALLY	No	NYSE	4:00	Susquehanna Securities	1
ALNY	Alnylam Pharmaceuticals, Inc.	ALNY	No	NASDAQ	4:00	Morgan Stanley	1
ALRM	Alarm.Com Holdings, Inc.	ALRM	No	NASDAQ	4:00	Citadel Securities, LLC	1
AMAG	AMAG Pharmaceuticals, Inc.	AMAG	No	NASDAQ	4:00	Susquehanna Securities	1
AMBC	Ambac Financial Group, Inc.	AMBC	No	NASDAQ	4:00	Morgan Stanley	1
AMCX	AMC Networks Inc.	AMCX	No	NASDAQ	4:00	IMC Financial Markets	1
AME	AMETEK, Inc.	AME	No	NYSE	4:00	Wolverine Trading, LLC	1
AMED	Amedisys, Inc.	AMED	Yes	NASDAQ	4:00	Wolverine Trading, LLC	1
AMG	Affiliated Managers Group, Inc.	AMG	No	NYSE	4:00	Wolverine Trading, LLC	1
AMN	AMN Healthcare Services, Inc.	AMN	No	NYSE	4:00	Morgan Stanley	1
AMP	Ameriprise Financial, Inc.	AMP	No	NYSE	4:00	Wolverine Trading, LLC	1
AMRS	Amyris, Inc.	AMRS	No	NASDAQ	4:00	Citadel Securities, LLC	1
AMRX	Amneal Pharmaceuticals, Inc.	AMRX	No	NYSE	4:00	Susquehanna Securities	1
AMX	America Movil S.A.B de C.V.	AMX	No	NYSE	4:00	Morgan Stanley	1
ANAB	AnaptysBio, Inc.	ANAB	No	NASDAQ	4:00	Citadel Securities, LLC	1
ANTM	Anthem, Inc.	ANTM	Yes	NYSE	4:00	Citadel Securities, LLC	1



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AOBC	American Outdoor Brands Corporation	AOBC	No	NASDAQ	4:00	Morgan Stanley	1
APHA	Aphria Inc.	APHA	No	NYSE	4:00	Two Sigma Securities, LLC	1
APO	Apollo Global Management, LLC	APO	No	NYSE	4:00	Citadel Securities, LLC	1
APRN	Blue Apron Holdings, Inc.	APRN	No	NYSE	4:00	IMC Financial Markets	1
APTV	Aptiv PLC	APTV	No	NYSE	4:00	Wolverine Trading, LLC	1
ARAY	Accuray Incorporated	ARAY	No	NASDAQ	4:00	Citadel Securities, LLC	1
ARLP	Alliance Resource Partners, L.P.	ARLP	No	NASDAQ	4:00	Citadel Securities, LLC	1
ARMK	Aramark	ARMK	No	NYSE	4:00	Citadel Securities, LLC	1
ARNA	Arena Pharmaceuticals, Inc.	ARNA	Yes	NASDAQ	4:00	Morgan Stanley	1
ARQL	ArQule, Inc.	ARQL	No	NASDAQ	4:00	Citadel Securities, LLC	1
ARRY	Array Biopharma Inc.	ARRY	No	NASDAQ	4:00	Citadel Securities, LLC	1
ARWR	Arrowhead Pharmaceuticals, Inc.	ARWR	No	NASDAQ	4:00	Citadel Securities, LLC	1
ASGN	ASGN Incorporated	ASGN	No	NYSE	4:00	Morgan Stanley	1
ASML	ASML Holding N.V.	ASML	No	NASDAQ	4:00	Susquehanna Securities	1
ASNA	Ascena Retail Group, Inc.	ASNA	No	NASDAQ	4:00	Morgan Stanley	1
ATH	Athene Holding Ltd.	ATH	No	NYSE	4:00	Wolverine Trading, LLC	1
ATHM	Autohome Inc.	ATHM	No	NYSE	4:00	Wolverine Trading, LLC	1
ATHX	Athersys, Inc.	ATHX	No	NASDAQ	4:00	Morgan Stanley	1
ATI	Allegheny Technologies Incorporated	ATI	No	NYSE	4:00	Morgan Stanley	1
ATRS	Antares Pharma, Inc.	ATRS	No	NASDAQ	4:00	Citadel Securities, LLC	1
ATUS	Altice USA, Inc.	ATUS	No	NYSE	4:00	Susquehanna Securities	1



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AVAV	AeroVironment, Inc.	AVAV	No	NASDAQ	4:00	Citadel Securities, LLC	1
AVB	AvalonBay Communities, Inc.	AVB	No	NYSE	4:00	Wolverine Trading, LLC	1
AVP	Avon Products, Inc.	AVP	No	NYSE	4:00	IMC Financial Markets	1
AXDX	Accelerate Diagnostics, Inc.	AXDX	No	NASDAQ	4:00	Citadel Securities, LLC	1
AXTI	AXT, Inc.	AXTI	No	NASDAQ	4:00	Citadel Securities, LLC	1
AYI	Acuity Brands, Inc.	AYI	No	NYSE	4:00	Morgan Stanley	1
AYX	Alteryx, Inc.	AYX	No	NYSE	4:00	Citadel Securities, LLC	1
BANC	Banc Of California, Inc.	BANC	No	NYSE	4:00	Citadel Securities, LLC	2
BBL	BHP Group	BBL	No	NYSE	4:00	Citadel Securities, LLC	2
BBVA	Banco Bilbao Vizcaya Argentaria, S.A.	BBVA	No	NYSE	4:00	Citadel Securities, LLC	2
BCO	The Brink's Company	BCO	No	NYSE	4:00	Wolverine Trading, LLC	2
BDSI	BioDelivery Sciences International, Inc.	BDSI	No	NASDAQ	4:00	Citadel Securities, LLC	2
BDX	Becton, Dickinson And Company	BDX	No	NYSE	4:00	Citadel Securities, LLC	2
BEAT	BioTelemetry, Inc.	BEAT	No	NASDAQ	4:00	Susquehanna Securities	2
BEN	Franklin Resources, Inc.	BEN	No	NYSE	4:00	Wolverine Trading, LLC	2
BERY	Berry Global Group, Inc.	BERY	No	NYSE	4:00	Morgan Stanley	2
BGFV	Big 5 Sporting Goods Corporation	BGFV	No	NASDAQ	4:00	Citadel Securities, LLC	2
BGS	B&G Foods, Inc.	BGS	No	NYSE	4:00	Citadel Securities, LLC	2
BHF	Brighthouse Financial, Inc.	BHF	No	NASDAQ	4:00	Morgan Stanley	2
BID	Sotheby's	BID	No	NYSE	4:00	IMC Financial Markets	2
BIG	Big Lots, Inc.	BIG	No	NYSE	4:00	Morgan Stanley	2
BILI	Bilibili Inc.	BILI	No	NASDAQ	4:00	Susquehanna Securities	2



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BJ	BJ's Wholesale Club Holdings, Inc.	BJ	No	NYSE	4:00	Wolverine Trading, LLC	2
BKD	Brookdale Senior Living Inc.	BKD	No	NYSE	4:00	Citadel Securities, LLC	2
BLD	TopBuild Corp.	BLD	No	NYSE	4:00	Wolverine Trading, LLC	2
BLDR	Builders FirstSource, Inc.	BLDR	No	NASDAQ	4:00	Citadel Securities, LLC	2
BLL	Ball Corporation	BLL	No	NYSE	4:00	IMC Financial Markets	2
BLMN	Bloomin Brands, Inc.	BLMN	No	NASDAQ	4:00	Wolverine Trading, LLC	2
BLUE	bluebird bio, Inc.	BLUE	No	NASDAQ	4:00	Citadel Securities, LLC	2
BMA	Banco Macro S.A.	BMA	No	NYSE	4:00	Citadel Securities, LLC	2
BMRN	BioMarin Pharmaceutical Inc.	BMRN	No	NASDAQ	4:00	Citadel Securities, LLC	2
BOIL	ProShares Ultra Bloomberg Natural Gas	BOIL	No	NYSE Arca	4:00	Susquehanna Securities	2
BOOT	Boot Barn Holdings, Inc.	BOOT	No	NYSE	4:00	Citadel Securities, LLC	2
BPL	Buckeye Partners, L.P.	BPL	No	NYSE	4:00	IMC Financial Markets	2
BPMC	Blueprint Medicines Corporation	BPMC	No	NASDAQ	4:00	Citadel Securities, LLC	2
BPT	BP Prudhoe Bay Royalty Trust	BPT	No	NYSE	4:00	Susquehanna Securities	2
BPY	Brookfield Property Partners L.P.	BPY	No	NASDAQ	4:00	Citadel Securities, LLC	2
BRKS	Brooks Automation, Inc.	BRKS	No	NASDAQ	4:00	Wolverine Trading, LLC	2
BTG	B2Gold Corp.	BTG	No	AMEX	4:00	Citadel Securities, LLC	2
BTI	British American Tobacco p.l.c.	BTI	No	NYSE	4:00	Wolverine Trading, LLC	2
BTU	Peabody Energy Corporation	BTU	No	NYSE	4:00	Citadel Securities, LLC	2
BURL	Burlington Stores, Inc.	BURL	No	NYSE	4:00	Wolverine Trading, LLC	2
BVN	Compania de Minas Buenaventura S.A.A.	BVN	No	NYSE	4:00	Susquehanna Securities	2
BWA	BorgWarner Inc.	BWA	No	NYSE	4:00	Wolverine Trading, LLC	2



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BZH	Beazer Homes USA, Inc.	BZH	No	NYSE	4:00	Susquehanna Securities	2
CAKE	The Cheesecake Factory Incorporated	CAKE	No	NASDAQ	4:00	IMC Financial Markets	2
CARA	Cara Therapeutics, Inc.	CARA	No	NASDAQ	4:00	Citadel Securities, LLC	2
CARG	CarGurus, Inc.	CARG	No	NASDAQ	4:00	Citadel Securities, LLC	2
CARS	Cars.Com Inc.	CARS	No	NYSE	4:00	Two Sigma Securities, LLC	2
CASA	Casa Systems, Inc.	CASA	No	NASDAQ	4:00	Citadel Securities, LLC	2
CATM	Cardtronics plc	CATM	No	NASDAQ	4:00	Citadel Securities, LLC	2
CB	Chubb Limited	CB	No	NYSE	4:00	Wolverine Trading, LLC	2
CBOE	Cboe Global Markets, Inc.	CBOE	No	BATS	4:00	Morgan Stanley	2
CBRL	Cracker Barrel Old Country Store, Inc.	CBRL	No	NASDAQ	4:00	Wolverine Trading, LLC	2
CCI	Crown Castle International Corp.	CCI	No	NYSE	4:00	Wolverine Trading, LLC	2
CDE	Coeur Mining, Inc.	CDE	No	NYSE	4:00	Citadel Securities, LLC	2
CDEV	Centennial Resource Development, Inc.	CDEV	No	NASDAQ	4:00	Citadel Securities, LLC	2
CDNS	Cadence Design Systems, Inc.	CDNS	No	NASDAQ	4:00	Susquehanna Securities	2
CDW	CDW Corporation	CDW	No	NASDAQ	4:00	Wolverine Trading, LLC	2
CE	Celanese Corporation	CE	No	NYSE	4:00	Morgan Stanley	2
CERN	Cerner Corporation	CERN	No	NASDAQ	4:00	Susquehanna Securities	2
CFG	Citizens Financial Group, Inc.	CFG	No	NYSE	4:00	Morgan Stanley	2
CFX	Colfax Corporation	CFX	No	NYSE	4:00	IMC Financial Markets	2
CG	The Carlyle Group L.P.	CG	No	NASDAQ	4:00	Wolverine Trading, LLC	2
CHD	Church & Dwight Co., Inc.	CHD	No	NYSE	4:00	Wolverine Trading, LLC	2
CHGG	Chegg, Inc.	CHGG	No	NYSE	4:00	Morgan Stanley	2



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CHKP	Check Point Software Technologies Ltd.	CHKP	No	NASDAQ	4:00	Morgan Stanley	2
CHL	China Mobile Limited	CHL	No	NYSE	4:00	Wolverine Trading, LLC	2
CHRW	C.H. Robinson Worldwide, Inc.	CHRW	No	NASDAQ	4:00	Morgan Stanley	2
CHTR	Charter Communications, Inc.	CHTR	No	NASDAQ	4:00	Citadel Securities, LLC	2
CIG	Companhia Energetica de Minas Gerais	CIG	No	NYSE	4:00	Morgan Stanley	2
CIM	Chimera Investment Corporation	CIM	No	NYSE	4:00	Citadel Securities, LLC	2
CIT	CIT Group Inc.	CIT	Yes	NYSE	4:00	IMC Financial Markets	2
CLMT	Calumet Specialty Products Partners, L.P.	CLMT	No	NASDAQ	4:00	Citadel Securities, LLC	2
CLNY	Colony Capital, Inc.	CLNY	No	NYSE	4:00	Wolverine Trading, LLC	2
CMA	Comerica Incorporated	CMA	Yes	NYSE	4:00	IMC Financial Markets	2
CMP	Compass Minerals International, Inc.	CMP	No	NYSE	4:00	Morgan Stanley	2
CNAT	Conatus Pharmaceuticals Inc.	CNAT	No	NASDAQ	4:00	Citadel Securities, LLC	2
CNC	Centene Corporation	CNC	No	NYSE	4:00	Wolverine Trading, LLC	2
CNI	Canadian National Railway Company	CNI	No	NYSE	4:00	IMC Financial Markets	2
CNP	CenterPoint Energy, Inc.	CNP	No	NYSE	4:00	Morgan Stanley	2
CNQ	Canadian Natural Resources Limited	CNQ	No	NYSE	4:00	IMC Financial Markets	2
CNSL	Consolidated Communications Holdings, Inc.	CNSL	No	NASDAQ	4:00	Wolverine Trading, LLC	2
CNX	CNX Resources Corporation	CNX	Yes	NYSE	4:00	IMC Financial Markets	2
COHR	Coherent, Inc.	COHR	No	NASDAQ	4:00	Citadel Securities, LLC	2
CONN	Conn's, Inc.	CONN	No	NASDAQ	4:00	Morgan Stanley	2



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CORT	Corcept Therapeutics Incorporated	CORT	No	NASDAQ	4:00	Citadel Securities, LLC	2
COUP	Coupa Software Incorporated	COUP	No	NASDAQ	4:00	Susquehanna Securities	2
CP	Canadian Pacific Railway Limited	CP	No	NYSE	4:00	Wolverine Trading, LLC	2
CPA	Copa Holdings, S.A.	CPA	No	NYSE	4:00	Wolverine Trading, LLC	2
CPRT	Copart, Inc.	CPRT	No	NASDAQ	4:00	IMC Financial Markets	2
CRBP	Corbus Pharmaceuticals Holdings, Inc.	CRBP	No	NASDAQ	4:00	Citadel Securities, LLC	2
CRMD	CorMedix, Inc.	CRMD	No	AMEX	4:00	Susquehanna Securities	2
CROX	Crocs, Inc.	CROX	No	NASDAQ	4:00	Citadel Securities, LLC	2
CRSP	CRISPR Therapeutics AG	CRSP	No	NASDAQ	4:00	Citadel Securities, LLC	2
CRUS	Cirrus Logic, Inc.	CRUS	No	NASDAQ	4:00	Morgan Stanley	2
CRZO	Carrizo Oil & Gas, Inc.	CRZO	No	NASDAQ	4:00	IMC Financial Markets	2
CSTM	Constellium N.V	CSTM	No	NYSE	4:00	Morgan Stanley	2
CTB	Cooper Tire & Rubber Company	CTB	No	NYSE	4:00	Citadel Securities, LLC	2
CTXS	Citrix Systems, Inc.	CTXS	No	NASDAQ	4:00	Susquehanna Securities	2
CVI	CVR Energy, Inc.	CVI	No	NYSE	4:00	Wolverine Trading, LLC	2
CXO	Concho Resources Inc.	CXO	No	NYSE	4:00	Susquehanna Securities	2
CYBR	CyberArk Software Ltd.	CYBR	No	NASDAQ	4:00	Citadel Securities, LLC	2
CYH	Community Health Systems, Inc.	CYH	No	NYSE	4:00	Citadel Securities, LLC	2
DAN	Dana Incorporated	DAN	No	NYSE	4:00	Citadel Securities, LLC	3
DBA	Invesco DB Agriculture	DBA	No	NYSE Arca	4:15	Morgan Stanley	3
DBD	Diebold Nixdorf, Incorporated	DBD	No	NYSE	4:00	Morgan Stanley	3
DBI	Designer Brands Inc.	DBI	No	NYSE	4:00	Citadel Securities, LLC	3





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DDS	Dillard's, Inc.	DDS	No	NYSE	4:00	Wolverine Trading, LLC	3
DEO	Diageo plc	DEO	No	NYSE	4:00	Wolverine Trading, LLC	3
DERM	Dermira, Inc.	DERM	No	NASDAQ	4:00	Citadel Securities, LLC	3
DF	Dean Foods Company	DF	No	NYSE	4:00	Citadel Securities, LLC	3
DFS	Discover Financial Services	DFS	No	NYSE	4:00	Susquehanna Securities	3
DHR	Danaher Corporation	DHR	No	NYSE	4:00	Wolverine Trading, LLC	3
DIN	Dine Brands Global, Inc.	DIN	No	NYSE	4:00	Citadel Securities, LLC	3
DISCK	Discovery, Inc.	DISCK	No	NASDAQ	4:00	Morgan Stanley	3
DK	Delek US Holdings, Inc.	DK	No	NYSE	4:00	Citadel Securities, LLC	3
DLPH	Delphi Technologies PLC	DLPH	No	NYSE	4:00	Morgan Stanley	3
DLR	Digital Realty Trust, Inc.	DLR	No	NYSE	4:00	Wolverine Trading, LLC	3
DNKN	Dunkin' Brands Group, Inc.	DNKN	No	NASDAQ	4:00	Wolverine Trading, LLC	3
DO	Diamond Offshore Drilling, Inc.	DO	Yes	NYSE	4:00	Susquehanna Securities	3
DOV	Dover Corporation	DOV	No	NYSE	4:00	Wolverine Trading, LLC	3
DPZ	Domino's Pizza, Inc.	DPZ	No	NYSE	4:00	IMC Financial Markets	3
DRI	Darden Restaurants, Inc.	DRI	No	NYSE	4:00	IMC Financial Markets	3
DRIP	Direxion Dly S&P Oil&Gs Ex&Prd Br 3X ETF	DRIP	No	NYSE Arca	4:00	Citadel Securities, LLC	3
DVAX	Dynavax Technologies Corporation	DVAX	No	NASDAQ	4:00	Citadel Securities, LLC	3
DXCM	DexCom, Inc.	DXCM	No	NASDAQ	4:00	IMC Financial Markets	3
EAF	GrafTech International Ltd.	EAF	No	NYSE	4:00	Citadel Securities, LLC	3
EAT	Brinker International, Inc.	EAT	No	NYSE	4:00	IMC Financial Markets	3
EBIX	Ebix, Inc.	EBIX	No	NASDAQ	4:00	Wolverine Trading, LLC	3
EC	Ecopetrol S.A.	EC	No	NYSE	4:00	Susquehanna Securities	3
ECHO	Echo Global Logistics, Inc.	ECHO	No	NASDAQ	4:00	Susquehanna Securities	3



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ECL	Ecolab Inc.	ECL	No	NYSE	4:00	Wolverine Trading, LLC	3
ED	Consolidated Edison, Inc.	ED	No	NYSE	4:00	Wolverine Trading, LLC	3
EDIT	Editas Medicine, Inc.	EDIT	No	NASDAQ	4:00	Morgan Stanley	3
EFX	Equifax Inc.	EFX	No	NYSE	4:00	Wolverine Trading, LLC	3
EIX	Edison International	EIX	No	NYSE	4:00	Wolverine Trading, LLC	3
EL	The Estée Lauder Companies Inc.	EL	No	NYSE	4:00	Morgan Stanley	3
ELLI	Ellie Mae, Inc.	ELLI	No	NYSE	4:00	IMC Financial Markets	3
EMES	Emerge Energy Services LP	EMES	No	NYSE	4:00	Morgan Stanley	3
EMN	Eastman Chemical Company	EMN	No	NYSE	4:00	IMC Financial Markets	3
ENB	Enbridge Inc.	ENB	No	NYSE	4:00	Wolverine Trading, LLC	3
ENPH	Enphase Energy, Inc.	ENPH	No	NASDAQ	4:00	Citadel Securities, LLC	3
ENT	Global Eagle Entertainment Inc.	ENT	No	NASDAQ	4:00	Susquehanna Securities	3
EPC	Edgewell Personal Care Company	EPC	No	NYSE	4:00	Wolverine Trading, LLC	3
EPI	WisdomTree India Earnings ETF	EPI	No	NYSE Arca	4:00	Morgan Stanley	3
EQM	EQM Midstream Partners, LP	EQM	No	NYSE	4:00	Wolverine Trading, LLC	3
ERI	Eldorado Resorts, Inc.	ERI	No	NASDAQ	4:00	Citadel Securities, LLC	3
EROS	Eros International Plc	EROS	No	NYSE	4:00	Citadel Securities, LLC	3
ESI	Element Solutions Inc.	ESI	No	NYSE	4:00	Susquehanna Securities	3
ETM	Entercom Communications Corp.	ETM	No	NYSE	4:00	Morgan Stanley	3
ETR	Entergy Corporation	ETR	No	NYSE	4:00	Citadel Securities, LLC	3
EUFN	iShares MSCI Europe Financials ETF	EUFN	No	NASDAQ	4:00	Citadel Securities, LLC	3
EUO	Proshares UltraShort Euro	EUO	No	NYSE Arca	4:00	Wolverine Trading, LLC	3



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EVRI	Everi Holdings Inc.	EVRI	No	NYSE	4:00	Citadel Securities, LLC	3
EWA	iShares MSCI Australia ETF	EWA	No	NYSE Arca	4:00	Susquehanna Securities	3
EWC	iShares MSCI Canada ETF	EWC	No	NYSE Arca	4:00	Wolverine Trading, LLC	3
EWG	iShares MSCI Germany ETF	EWG	No	NYSE Arca	4:00	Susquehanna Securities	3
EWH	iShares MSCI Hong Kong ETF	EWH	No	NYSE Arca	4:00	Morgan Stanley	3
EWI	iShares MSCI Italy Capped ETF	EWI	No	NYSE Arca	4:00	Morgan Stanley	3
EWT	iShares MSCI Taiwan Capped ETF	EWT	Yes	NYSE Arca	4:00	IMC Financial Markets	3
EWY	iShares MSCI South Korea Capped ETF	EWY	Yes	NYSE Arca	4:00	Wolverine Trading, LLC	3
EXP	Eagle Materials Inc.	EXP	No	NYSE	4:00	Wolverine Trading, LLC	3
EXPR	Express, Inc.	EXPR	No	NYSE	4:00	Morgan Stanley	3
EXR	Extra Space Storage Inc.	EXR	No	NYSE	4:00	Morgan Stanley	3
EXTR	Extreme Networks, Inc.	EXTR	No	NASDAQ	4:00	Morgan Stanley	3
EYPT	EyePoint Pharmaceuticals, Inc.	EYPT	No	NASDAQ	4:00	Susquehanna Securities	3
EZA	iShares MSCI South Africa ETF	EZA	No	NYSE Arca	4:00	Wolverine Trading, LLC	3
FBP	First BanCorp.	FBP	No	NYSE	4:00	Citadel Securities, LLC	3
FCG	First Trust Natural Gas ETF	FCG	No	NYSE Arca	4:00	Citadel Securities, LLC	3
FE	FirstEnergy Corp.	FE	No	NYSE	4:00	Morgan Stanley	3
FFIV	F5 Networks, Inc.	FFIV	Yes	NASDAQ	4:00	Wolverine Trading, LLC	3
FGEN	FibroGen, Inc.	FGEN	No	NASDAQ	4:00	Citadel Securities, LLC	3
FIS	Fidelity National Information Services, Inc.	FIS	Yes	NYSE	4:00	Wolverine Trading, LLC	3
FLR	Fluor Corporation	FLR	No	NYSE	4:00	Wolverine Trading, LLC	3
FLT	FleetCor Technologies, Inc.	FLT	No	NYSE	4:00	Wolverine Trading, LLC	3
FLXN	Flexion Therapeutics, Inc.	FLXN	No	NASDAQ	4:00	Citadel Securities, LLC	3



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FMC	FMC Corporation	FMC	No	NYSE	4:00	Morgan Stanley	3
FND	Floor & Decor Holdings, Inc.	FND	No	NYSE	4:00	Susquehanna Securities	3
FNV	Franco-Nevada Corporation	FNV	No	NYSE	4:00	Morgan Stanley	3
FOE	Ferro Corporation	FOE	No	NYSE	4:00	Susquehanna Securities	3
FOLD	Amicus Therapeutics, Inc.	FOLD	No	NASDAQ	4:00	Morgan Stanley	3
FOMX	Foamix Pharmaceuticals Ltd.	FOMX	No	NASDAQ	4:00	Citadel Securities, LLC	3
FOSL	Fossil Group, Inc.	FOSL	No	NASDAQ	4:00	Susquehanna Securities	3
FRAN	Francesca's Holding Corporation	FRAN	No	NASDAQ	4:00	Morgan Stanley	3
FRED	Fred's, Inc.	FRED	No	NASDAQ	4:00	Susquehanna Securities	3
FRO	Frontline Ltd.	FRO	No	NYSE	4:00	Susquehanna Securities	3
FTI	TechnipFMC plc	FTI	No	NYSE	4:00	Morgan Stanley	3
FXA	Invesco CcyShrs Australian Dllr Trust	FXA	No	NYSE Arca	4:00	Wolverine Trading, LLC	3
FXH	First Trust Health Care AlphaDEX ETF	FXH	No	NYSE Arca	4:00	Citadel Securities, LLC	3
FXY	Invesco CurrencyShares Japanese Yen	FXY	No	NYSE Arca	4:00	IMC Financial Markets	3
GALT	Galectin Therapeutics, Inc.	GALT	No	NASDAQ	4:00	Morgan Stanley	4
GCAP	GAIN Capital Holdings, Inc.	GCAP	No	NYSE	4:00	Wolverine Trading, LLC	4
GD	General Dynamics Corporation	GD	No	NYSE	4:00	Wolverine Trading, LLC	4
GDDY	GoDaddy Inc.	GDDY	No	NYSE	4:00	Morgan Stanley	4
GDOT	Green Dot Corporation	GDOT	No	NYSE	4:00	Susquehanna Securities	4
GDS	GDS Holdings Limited	GDS	No	NASDAQ	4:00	Citadel Securities, LLC	4
GES	Guess?, Inc.	GES	No	NYSE	4:00	Susquehanna Securities	4
GFI	Gold Fields Limited	GFI	Yes	NYSE	4:00	Susquehanna Securities	4
GGAL	Grupo Financiero Galicia S.A.	GGAL	No	NASDAQ	4:00	Citadel Securities, LLC	4



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
GIII	G-III Apparel Group, Ltd.	GIII	No	NASDAQ	4:00	Morgan Stanley	4
GLOG	GasLog Ltd.	GLOG	No	NYSE	4:00	Wolverine Trading, LLC	4
GLPI	Gaming and Leisure Properties, Inc.	GLPI	No	NASDAQ	4:00	Wolverine Trading, LLC	4
GMLP	Golar LNG Partners LP	GMLP	No	NASDAQ	4:00	Citadel Securities, LLC	4
GNC	GNC Holdings, Inc.	GNC	No	NYSE	4:00	IMC Financial Markets	4
GNRC	Generac Holdings Inc.	GNRC	No	NYSE	4:00	Morgan Stanley	4
GNTX	Gentex Corporation	GNTX	No	NASDAQ	4:00	Wolverine Trading, LLC	4
GNW	Genworth Financial, Inc.	GNW	Yes	NYSE	4:00	Susquehanna Securities	4
GOLD	Barrick Gold Corporation	GOLD	Yes	NYSE	4:00	Susquehanna Securities	4
GPC	Genuine Parts Company	GPC	No	NYSE	4:00	Citadel Securities, LLC	4
GPRE	Green Plains Inc.	GPRE	No	NASDAQ	4:00	Morgan Stanley	4
GRA	W.R. Grace & Co.	GRA	No	NYSE	4:00	Susquehanna Securities	4
GRMN	Garmin Ltd.	GRMN	Yes	NASDAQ	4:00	Wolverine Trading, LLC	4
GSKY	GreenSky, Inc.	GSKY	No	NASDAQ	4:00	Morgan Stanley	4
GTT	GTT Communications, Inc.	GTT	No	NYSE	4:00	Citadel Securities, LLC	4
GUSH	Direxion Dly S&P Oil&Gs Ex&Prd BI 3x ETF	GUSH	No	NYSE Arca	4:00	Susquehanna Securities	4
GWPH	GW Pharmaceuticals plc	GWPH	No	NASDAQ	4:00	Citadel Securities, LLC	4
GWW	W.W. Grainger, Inc.	GWW	No	NYSE	4:00	IMC Financial Markets	4
HAIN	The Hain Celestial Group, Inc.	HAIN	No	NASDAQ	4:00	Susquehanna Securities	4
HBAN	Huntington Bancshares Incorporated	HBAN	Yes	NASDAQ	4:00	IMC Financial Markets	4
HCA	HCA Healthcare, Inc.	HCA	No	NYSE	4:00	Wolverine Trading, LLC	4
HCP	HCP, Inc.	HCP	No	NYSE	4:00	IMC Financial Markets	4
HFC	HollyFrontier Corporation	HFC	No	NYSE	4:00	Susquehanna Securities	4



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
HIBB	Hibbett Sports, Inc.	HIBB	No	NASDAQ	4:00	Morgan Stanley	4
HIG	The Hartford Financial Services Group, Inc.	HIG	Yes	NYSE	4:00	Susquehanna Securities	4
HIIQ	Health Insurance Innovations, Inc.	HIIQ	No	NASDAQ	4:00	Susquehanna Securities	4
HL	Hecla Mining Company	HL	Yes	NYSE	4:00	Citadel Securities, LLC	4
HMY	Harmony Gold Mining Company Limited	HMY	No	NYSE	4:00	Susquehanna Securities	4
HOME	At Home Group Inc.	HOME	No	NYSE	4:00	Citadel Securities, LLC	4
HP	Helmerich & Payne, Inc.	HP	No	NYSE	4:00	Wolverine Trading, LLC	4
HPR	HighPoint Resources Corporation	HPR	No	NYSE	4:00	Morgan Stanley	4
HRB	H&R Block, Inc.	HRB	No	NYSE	4:00	Morgan Stanley	4
HRL	Hormel Foods Corporation	HRL	No	NYSE	4:00	Morgan Stanley	4
HSIC	Henry Schein, Inc.	HSIC	No	NASDAQ	4:00	Citadel Securities, LLC	4
HSY	The Hershey Company	HSY	Yes	NYSE	4:00	Citadel Securities, LLC	4
HTHT	Huazhu Group Limited	HTHT	No	NASDAQ	4:00	Citadel Securities, LLC	4
HUBG	Hub Group, Inc.	HUBG	No	NASDAQ	4:00	Wolverine Trading, LLC	4
HUBS	HubSpot, Inc.	HUBS	No	NYSE	4:00	Susquehanna Securities	4
HUM	Humana, Inc.	HUM	No	NYSE	4:00	Wolverine Trading, LLC	4
HZNP	Horizon Pharma plc	HZNP	No	NASDAQ	4:00	Citadel Securities, LLC	4
IAC	IAC/InterActiveCorp	IAC	No	NASDAQ	4:00	Wolverine Trading, LLC	5
IAG	IAMGOLD Corporation	IAG	No	NYSE	4:00	Citadel Securities, LLC	5
IAU	iShares Gold Trust	IAU	No	NYSE Arca	4:00	Citadel Securities, LLC	5
IBKR	Interactive Brokers Group, Inc.	IBKR	No	Investor's Exchange, LLC	4:00	Morgan Stanley	5



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
ICE	Intercontinental Exchange, Inc.	ICE	No	NYSE	4:00	Wolverine Trading, LLC	5
ICHR	Ichor Holdings, Ltd.	ICHR	No	NASDAQ	4:00	Susquehanna Securities	5
ICPT	Intercept Pharmaceuticals, Inc.	ICPT	No	NASDAQ	4:00	Citadel Securities, LLC	5
IDCC	InterDigital, Inc.	IDCC	No	NASDAQ	4:00	IMC Financial Markets	5
IDXX	IDEXX Laboratories, Inc.	IDXX	No	NASDAQ	4:00	Citadel Securities, LLC	5
IGV	Ishares North American Tech-Software	IGV	No	BATS	4:00	Wolverine Trading, LLC	5
IMGN	ImmunoGen, Inc.	IMGN	No	NASDAQ	4:00	Morgan Stanley	5
INCY	Incyte Corporation	INCY	No	NASDAQ	4:00	Susquehanna Securities	5
INDA	iShares MSCI India ETF	INDA	No	BATS	4:00	Citadel Securities, LLC	5
INFO	IHS Markit Ltd.	INFO	No	NASDAQ	4:00	Wolverine Trading, LLC	5
INFY	Infosys Limited	INFY	No	NYSE	4:00	Morgan Stanley	5
ING	ING Groep N.V.	ING	No	NYSE	4:00	Citadel Securities, LLC	5
INO	Inovio Pharmaceuticals, Inc.	INO	No	NASDAQ	4:00	Morgan Stanley	5
INSG	Inseego Corp.	INSG	No	NASDAQ	4:00	Susquehanna Securities	5
INSM	Insmed Incorporated	INSM	No	NASDAQ	4:00	Citadel Securities, LLC	5
INTU	Intuit Inc.	INTU	No	NASDAQ	4:00	Wolverine Trading, LLC	5
INVA	Innoviva, Inc.	INVA	No	NASDAQ	4:00	Citadel Securities, LLC	5
IONS	Ionis Pharmaceuticals, Inc.	IONS	No	NASDAQ	4:00	Citadel Securities, LLC	5
IPG	The Interpublic Group Of Companies, Inc.	IPG	No	NYSE	4:00	Morgan Stanley	5
IQV	IQVIA Holdings Inc.	IQV	No	NYSE	4:00	Citadel Securities, LLC	5
IR	Ingersoll-Rand Plc	IR	No	NYSE	4:00	Wolverine Trading, LLC	5
IRDM	Iridium Communications Inc.	IRDM	No	NASDAQ	4:00	Susquehanna Securities	5
IRM	Iron Mountain Incorporated	IRM	No	NYSE	4:00	Citadel Securities, LLC	5
IT	Gartner, Inc.	IT	No	NYSE	4:00	Morgan Stanley	5



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
ITCI	Intra-Cellular Therapies, Inc.	ITCI	No	NASDAQ	4:00	Citadel Securities, LLC	5
ITT	ITT Inc.	ITT	No	NYSE	4:00	Morgan Stanley	5
ITW	Illinois Tool Works Inc.	ITW	No	NYSE	4:00	Wolverine Trading, LLC	5
IVV	iShares Core S&P 500 ETF	IVV	No	NYSE Arca	4:00	Wolverine Trading, LLC	5
IVW	iShares S&P 500 Growth ETF	IVW	No	NYSE Arca	4:00	Wolverine Trading, LLC	5
IWF	iShares Russell 1000 Growth ETF	IWF	No	NYSE Arca	4:00	Susquehanna Securities	5
IYT	iShares Dow Jones Transportation Average	IYT	No	BATS	4:00	Wolverine Trading, LLC	5
JACK	Jack In The Box Inc	JACK	No	NASDAQ	4:00	IMC Financial Markets	5
JAZZ	Jazz Pharmaceuticals plc	JAZZ	No	NASDAQ	4:00	Citadel Securities, LLC	5
JBL	Jabil Inc.	JBL	No	NYSE	4:00	IMC Financial Markets	5
JDST	Direxion Daily Jr Gld Mnrs Bear 3x ETF	JDST	No	NYSE Arca	4:00	Citadel Securities, LLC	5
JEC	Jacobs Engineering Group Inc.	JEC	No	NYSE	4:00	Citadel Securities, LLC	5
JEF	Jefferies Financial Group Inc.	JEF	No	NYSE	4:00	Wolverine Trading, LLC	5
JKS	JinkoSolar Holding Co., Ltd.	JKS	No	NYSE	4:00	Citadel Securities, LLC	5
KDP	Keurig Dr Pepper Inc.	KDP	No	NYSE	4:00	Wolverine Trading, LLC	5
KEX	Kirby Corporation	KEX	No	NYSE	4:00	Morgan Stanley	5
KEYS	Keysight Technologies, Inc.	KEYS	No	NYSE	4:00	Citadel Securities, LLC	5
KIM	Kimco Realty Corporation	KIM	No	NYSE	4:00	Susquehanna Securities	5
KL	Kirkland Lake Gold Ltd.	KL	No	NYSE	4:00	Susquehanna Securities	5
KLAC	KLA-Tencor Corporation	KLAC	No	NASDAQ	4:00	Citadel Securities, LLC	5
KN	Knowles Corporation	KN	No	NYSE	4:00	Morgan Stanley	5
KNDI	Kandi Technologies Group, Inc.	KNDI	No	NASDAQ	4:00	Citadel Securities, LLC	5
KODK	Eastman Kodak Company	KODK	No	NYSE	4:00	Morgan Stanley	5





Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
KOS	Kosmos Energy Ltd.	KOS	No	NYSE	4:00	Citadel Securities, LLC	5
KSU	Kansas City Southern	KSU	No	NYSE	4:00	Wolverine Trading, LLC	5
KTOS	Kratos Defense & Security Solutions, Inc.	KTOS	No	NASDAQ	4:00	Wolverine Trading, LLC	5
LABD	Direxion Daily S&P Biotech Bear 3x ETF	LABD	No	NYSE Arca	4:00	Susquehanna Securities	5
LBTYK	Liberty Global Plc	LBTYK	No	NASDAQ	4:00	Morgan Stanley	5
LC	LendingClub Corporation	LC	No	NYSE	4:00	IMC Financial Markets	5
LCI	Lannett Company, Inc.	LCI	No	NYSE	4:00	Morgan Stanley	5
LDOS	Leidos Holdings, Inc.	LDOS	No	NYSE	4:00	Wolverine Trading, LLC	5
LE	Lands' End, Inc.	LE	No	NASDAQ	4:00	Citadel Securities, LLC	5
LEA	Lear Corporation	LEA	No	NYSE	4:00	Wolverine Trading, LLC	5
LGCY	Legacy Reserves Inc.	LGCY	No	NASDAQ	4:00	Morgan Stanley	5
LGIH	LGI Homes, Inc.	LGIH	No	NASDAQ	4:00	Wolverine Trading, LLC	5
LGND	Ligand Pharmaceuticals Incorporated	LGND	No	NASDAQ	4:00	Citadel Securities, LLC	5
LIN	Linde plc	LIN	No	NYSE	4:00	Citadel Securities, LLC	5
LIVN	LivaNova PLC	LIVN	No	NASDAQ	4:00	Citadel Securities, LLC	5
LKQ	LKQ Corporation	LKQ	No	NASDAQ	4:00	Morgan Stanley	5
LNC	Lincoln National Corporation	LNC	Yes	NYSE	4:00	Citadel Securities, LLC	5
LOCO	El Pollo Loco Holdings, Inc.	LOCO	No	NASDAQ	4:00	Wolverine Trading, LLC	5
LPI	Laredo Petroleum, Inc.	LPI	No	NYSE	4:00	Citadel Securities, LLC	5
LPX	Louisiana-Pacific Corporation	LPX	No	NYSE	4:00	Morgan Stanley	5
LYV	Live Nation Entertainment, Inc.	LYV	No	NYSE	4:00	IMC Financial Markets	5
MAC	Macerich Company	MAC	No	NYSE	4:00	Wolverine Trading, LLC	6
MAS	Masco Corporation	MAS	No	NYSE	4:00	Wolverine Trading, LLC	6



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
MBI	MBIA Inc.	MBI	Yes	NYSE	4:00	Susquehanna Securities	6
MBT	Mobile Tele Systems	MBT	No	NYSE	4:00	Morgan Stanley	6
MCHI	iShares MSCI China ETF	MCHI	No	NASDAQ	4:00	Wolverine Trading, LLC	6
MCHP	Microchip Technology Incorporated	MCHP	No	NASDAQ	4:00	IMC Financial Markets	6
MCK	McKesson Corporation	MCK	No	NYSE	4:00	Morgan Stanley	6
MCO	Moody's Corporation	MCO	Yes	NYSE	4:00	Wolverine Trading, LLC	6
MDB	MongoDB, Inc.	MDB	No	NASDAQ	4:00	Citadel Securities, LLC	6
MDCO	The Medicines Company	MDCO	No	NASDAQ	4:00	Susquehanna Securities	6
MDY	SPDR S&P MidCap 400 ETF	MDY	No	NYSE Arca	4:15	Wolverine Trading, LLC	6
MEET	The Meet Group, Inc.	MEET	No	NASDAQ	4:00	Citadel Securities, LLC	6
MEOH	Methanex Corporation	MEOH	No	NASDAQ	4:00	Morgan Stanley	6
MFC	Manulife Financial Corporation	MFC	No	NYSE	4:00	Morgan Stanley	6
MFIN	Medallion Financial Corp.	MFIN	No	NASDAQ	4:00	Morgan Stanley	6
MGA	Magna International Inc.	MGA	No	NYSE	4:00	IMC Financial Markets	6
MHK	Mohawk Industries, Inc.	MHK	No	NYSE	4:00	Susquehanna Securities	6
MIC	Macquarie Infrastructure Coporation	MIC	No	NYSE	4:00	Susquehanna Securities	6
MIK	The Michaels Companies, Inc.	MIK	No	NASDAQ	4:00	Citadel Securities, LLC	6
MKC	McCormick & Company, Incorporated	MKC	No	NYSE	4:00	Wolverine Trading, LLC	6
MLM	Martin Marietta Materials, Inc.	MLM	No	NYSE	4:00	Wolverine Trading, LLC	6
MLNX	Mellanox Technologies, Ltd.	MLNX	No	NASDAQ	4:00	Wolverine Trading, LLC	6
MMP	Magellan Midstream Partners, L.P.	MMP	No	NYSE	4:00	Citadel Securities, LLC	6



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
MPLX	MPLX LP	MPLX	No	NYSE	4:00	Morgan Stanley	6
MPWR	Monolithic Power Systems, Inc.	MPWR	No	NASDAQ	4:00	Wolverine Trading, LLC	6
MRNS	Marinus Pharmaceuticals, Inc.	MRNS	No	NASDAQ	4:00	Citadel Securities, LLC	6
MRTX	Mirati Therapeutics, Inc.	MRTX	No	NASDAQ	4:00	Citadel Securities, LLC	6
MSB	Mesabi Trust	MSB	No	NYSE	4:00	Citadel Securities, LLC	6
MTG	MGIC Investment Corporation	MTG	Yes	NYSE	4:00	Citadel Securities, LLC	6
MTZ	Mas Tec, Inc.	MTZ	No	NYSE	4:00	Citadel Securities, LLC	6
MUR	Murphy Oil Corporation	MUR	No	NYSE	4:00	Citadel Securities, LLC	6
MUX	McEwen Mining Inc.	MUX	No	NYSE	4:00	Morgan Stanley	6
MXIM	Maxim Integrated Products, Inc.	MXIM	No	NASDAQ	4:00	Morgan Stanley	6
MXL	MaxLinear, Inc.	MXL	No	NYSE	4:00	Susquehanna Securities	6
MYGN	Myriad Genetics, Inc.	MYGN	No	NASDAQ	4:00	Morgan Stanley	6
NAT	Nordic American Tankers Limited	NAT	No	NYSE	4:00	Susquehanna Securities	6
NAV	Navistar International Corporation	NAV	No	NYSE	4:00	Wolverine Trading, LLC	6
NAVI	Navient Corporation	NAVI	No	NASDAQ	4:00	Morgan Stanley	6
NBEV	New Age Beverages Corporation	NBEV	No	NASDAQ	4:00	Citadel Securities, LLC	6
NBIX	Neurocrine Biosciences, Inc.	NBIX	No	NASDAQ	4:00	Citadel Securities, LLC	6
NCLH	Norwegian Cruise Line Holdings Ltd.	NCLH	No	NYSE	4:00	IMC Financial Markets	6
NCR	NCR Corporation	NCR	No	NYSE	4:00	Morgan Stanley	6
NDAQ	Nasdaq, Inc.	NDAQ	No	NASDAQ	4:00	Morgan Stanley	6
NEE	NextEra Energy, Inc.	NEE	No	NYSE	4:00	Wolverine Trading, LLC	6
NEWR	New Relic, Inc.	NEWR	No	NYSE	4:00	Citadel Securities, LLC	6
NGD	New Gold, Inc.	NGD	No	AMEX	4:00	Morgan Stanley	6



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
NGG	National Grid plc	NGG	No	NYSE	4:00	Citadel Securities, LLC	6
NGL	NGL Energy Partners LP	NGL	No	NYSE	4:00	Citadel Securities, LLC	6
NIO	NIO Inc.	NIO	Yes	NYSE	4:00	Susquehanna Securities	6
NNBR	NN, Inc.	NNBR	No	NASDAQ	4:00	Citadel Securities, LLC	6
NPTN	NeoPhotonics Corporation	NPTN	No	NYSE	4:00	Morgan Stanley	6
NRZ	New Residential Investment Corp.	NRZ	No	NYSE	4:00	Susquehanna Securities	6
NTR	Nutrien Ltd.	NTR	No	NYSE	4:00	Morgan Stanley	6
NUAN	Nuance Communications, Inc.	NUAN	No	NASDAQ	4:00	Morgan Stanley	6
NUS	Nu Skin Enterprises, Inc.	NUS	No	NYSE	4:00	Morgan Stanley	6
NVCR	NovoCure Limited	NVCR	No	NASDAQ	4:00	Citadel Securities, LLC	6
NVLN	Novelion Therapeutics Inc.	NVLN	No	NASDAQ	4:00	Morgan Stanley	6
NVO	Novo Nordisk A/S	NVO	No	NYSE	4:00	Citadel Securities, LLC	6
NVTA	Invitae Corporation	NVTA	No	NYSE	4:00	Citadel Securities, LLC	6
NXST	Nexstar Media Group, Inc.	NXST	No	NASDAQ	4:00	Wolverine Trading, LLC	6
NYCB	New York Community Bancorp, Inc.	NYCB	No	NYSE	4:00	Morgan Stanley	6
NYT	The New York Times Company	NYT	No	NYSE	4:00	Morgan Stanley	6
O	Realty Income Corporation	O	No	NYSE	4:00	Morgan Stanley	7
OC	Owens Corning	OC	No	NYSE	4:00	Susquehanna Securities	7
ODP	Office Depot, Inc.	ODP	Yes	NASDAQ	4:00	Morgan Stanley	7
OHI	Omega Healthcare Investors, Inc.	OHI	No	NYSE	4:00	Wolverine Trading, LLC	7
OKE	ONEOK, Inc.	OKE	No	NYSE	4:00	Susquehanna Securities	7
OLLI	Ollie's Bargain Outlet Holdings, Inc.	OLLI	No	NASDAQ	4:00	Susquehanna Securities	7
OLN	Olin Corporation	OLN	No	NYSE	4:00	Morgan Stanley	7



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
OMER	Omeros Corporation	OMER	No	NASDAQ	4:00	Morgan Stanley	7
OPI	Office Properties Income Trust	OPI	No	NASDAQ	4:00	Susquehanna Securities	7
ORLY	O'Reilly Automotive, Inc.	ORLY	No	NASDAQ	4:00	IMC Financial Markets	7
OZK	Bank OZK	OZK	No	NASDAQ	4:00	Wolverine Trading, LLC	7
PAA	Plains All American Pipeline, L.P.	PAA	No	NYSE	4:00	Morgan Stanley	7
PAAS	Pan American Silver Corporation	PAAS	No	NASDAQ	4:00	Susquehanna Securities	7
PAGP	Plains GP Holdings, L.P.	PAGP	No	NYSE	4:00	Citadel Securities, LLC	7
PAYC	Paycom Software, Inc.	PAYC	No	NYSE	4:00	Morgan Stanley	7
PBF	PBF Energy Inc.	PBF	No	NYSE	4:00	Morgan Stanley	7
PBI	Pitney Bowes Inc.	PBI	No	NYSE	4:00	Citadel Securities, LLC	7
PBYI	Puma Biotechnology, Inc.	PBYI	No	NASDAQ	4:00	Citadel Securities, LLC	7
PCAR	PACCAR Inc	PCAR	No	NASDAQ	4:00	Wolverine Trading, LLC	7
PCRX	Pacira Pharmaceuticals, Inc.	PCRX	No	NASDAQ	4:00	Morgan Stanley	7
PDCE	PDC Energy, Inc.	PDCE	No	NASDAQ	4:00	Morgan Stanley	7
PDD	Pinduoduo Inc.	PDD	No	NASDAQ	4:00	Citadel Securities, LLC	7
PE	Parsley Energy, Inc.	PE	No	NYSE	4:00	Morgan Stanley	7
PEGI	Pattern Energy Group Inc.	PEGI	No	NASDAQ	4:00	Morgan Stanley	7
PEI	Pennsylvania Real Estate Investment Trust	PEI	No	NYSE	4:00	Susquehanna Securities	7
PFF	iShares Preferred&Income Securities ETF	PFF	No	NASDAQ	4:00	Wolverine Trading, LLC	7
PFPT	Proofpoint, Inc.	PFPT	No	NASDAQ	4:00	Wolverine Trading, LLC	7
PGNX	Progenics Pharmaceuticals, Inc.	PGNX	No	NASDAQ	4:00	Morgan Stanley	7
PGTI	PGT Innovations, Inc.	PGTI	No	NYSE	4:00	Citadel Securities, LLC	7
PH	Parker-Hannifin Corporation	PH	No	NYSE	4:00	Morgan Stanley	7



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
PHG	Koninklijke Philips N.V	PHG	No	NYSE	4:00	Morgan Stanley	7
PII	Polaris Industries, Inc.	PII	No	NYSE	4:00	Morgan Stanley	7
PKG	Packaging Corporation of America	PKG	No	NYSE	4:00	Wolverine Trading, LLC	7
PLAY	Dave & Buster's Entertainment, Inc.	PLAY	No	NASDAQ	4:00	Morgan Stanley	7
PLCE	The Children's Place, Inc.	PLCE	No	NASDAQ	4:00	Wolverine Trading, LLC	7
PLNT	Planet Fitness, Inc.	PLNT	No	NYSE	4:00	Citadel Securities, LLC	7
PLUG	Plug Power Inc.	PLUG	Yes	NASDAQ	4:00	Susquehanna Securities	7
POST	Post Holdings, Inc.	POST	No	NYSE	4:00	Wolverine Trading, LLC	7
PPC	Pilgrims Pride Corporation	PPC	No	NASDAQ	4:00	Morgan Stanley	7
PPG	PPG Industries, Inc.	PPG	No	NYSE	4:00	Citadel Securities, LLC	7
PRGO	Perrigo Company plc	PRGO	No	NYSE	4:00	IMC Financial Markets	7
PRTK	Paratek Pharmaceuticals, Inc.	PRTK	No	NASDAQ	4:00	Susquehanna Securities	7
PRTY	Party City Holdco Inc.	PRTY	No	NYSE	4:00	Susquehanna Securities	7
PSA	Public Storage	PSA	No	NYSE	4:00	Wolverine Trading, LLC	7
PTC	PTC Inc.	PTC	No	NASDAQ	4:00	Morgan Stanley	7
PTCT	PTC Therapeutics, Inc.	PTCT	No	NASDAQ	4:00	Morgan Stanley	7
PTE	PolarityTE, Inc.	PTE	No	NASDAQ	4:00	Citadel Securities, LLC	7
PTEN	Patterson-UTI Energy, Inc.	PTEN	No	NASDAQ	4:00	Morgan Stanley	7
PTI	Proteostasis Therapeutics, Inc.	PTI	No	NASDAQ	4:00	Citadel Securities, LLC	7
PTLA	Portola Pharmaceuticals, Inc.	PTLA	No	NASDAQ	4:00	Citadel Securities, LLC	7
PUMP	ProPetro Holding Corp.	PUMP	No	NYSE	4:00	Citadel Securities, LLC	7
PVH	PVH Corp.	PVH	No	NYSE	4:00	Wolverine Trading, LLC	7
PWR	Quanta Services, Inc.	PWR	No	NYSE	4:00	Morgan Stanley	7
PYX	Pyxus International, Inc.	PYX	No	NYSE	4:00	Citadel Securities, LLC	7
QD	Qudian, Inc.	QD	No	NYSE	4:00	Citadel Securities, LLC	7
QID	ProShares UltraShort QQQ	QID	Yes	NYSE Arca	4:00	Wolverine Trading, LLC	7



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
QIWI	Qawi plc	QIWI	No	NASDAQ	4:00	Morgan Stanley	7
QLD	ProShares Ultra QQQ	QLD	Yes	NYSE Arca	4:00	Wolverine Trading, LLC	7
QLYS	Qualys, Inc.	QLYS	No	NASDAQ	4:00	Morgan Stanley	7
QRVO	Qorvo, Inc.	QRVO	No	NASDAQ	4:00	Wolverine Trading, LLC	7
QSR	Restaurant Brands International Inc.	QSR	No	NYSE	4:00	Wolverine Trading, LLC	7
RACE	Ferrari N.V.	RACE	No	NYSE	4:00	Citadel Securities, LLC	7
RBS	The Royal Bank Of Scotland Group plc	RBS	No	NYSE	4:00	Citadel Securities, LLC	7
RCII	Rent-A-Center, Inc.	RCII	No	NASDAQ	4:00	Susquehanna Securities	7
RDFN	Redfin Corporation	RDFN	No	NASDAQ	4:00	Citadel Securities, LLC	7
RDNT	RadNet, Inc.	RDNT	No	NASDAQ	4:00	Citadel Securities, LLC	7
RDSB	Royal Dutch Shell plc	RDSB	No	NYSE	4:00	Wolverine Trading, LLC	7
RDUS	Radius Health, Inc.	RDUS	No	NASDAQ	4:00	Morgan Stanley	7
RESI	Front Yard Residential Corporation	RESI	No	NYSE	4:00	Wolverine Trading, LLC	7
REV	Revlon, Inc.	REV	No	NYSE	4:00	Morgan Stanley	7
RGLD	Royal Gold, Inc.	RGLD	No	NASDAQ	4:00	Susquehanna Securities	7
RGNX	REGENXBIO Inc.	RGNX	No	NASDAQ	4:00	Susquehanna Securities	7
RIGL	Rigel Pharmaceuticals, Inc.	RIGL	No	NASDAQ	4:00	Morgan Stanley	7
RJF	Raymond James Financial, Inc.	RJF	No	NYSE	4:00	Wolverine Trading, LLC	7
RMD	ResMed Inc.	RMD	No	NYSE	4:00	Susquehanna Securities	7
RNG	RingCentral, Inc.	RNG	No	NYSE	4:00	Morgan Stanley	7
ROK	Rockwell Automation, Inc.	ROK	No	NYSE	4:00	Wolverine Trading, LLC	7
ROST	Ross Stores, Inc.	ROST	No	NASDAQ	4:00	Wolverine Trading, LLC	7
ROYT	Pacific Coast Oil Trust	ROYT	No	NYSE	4:00	Citadel Securities, LLC	7
RRD	R.R. Donnelley & Sons Company	RRD	No	NYSE	4:00	Morgan Stanley	7
RRGB	Red Robin Gourmet Burgers, Inc.	RRGB	No	NASDAQ	4:00	Morgan Stanley	7
RRR	Red Rock Resorts, Inc.	RRR	No	NASDAQ	4:00	Morgan Stanley	7
RUN	Sunrun Inc.	RUN	No	NASDAQ	4:00	Susquehanna Securities	7



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
SA	Seabridge Gold Inc.	SA	No	NYSE	4:00	Susquehanna Securities	8
SABR	Sabre Corporation	SABR	No	NASDAQ	4:00	Morgan Stanley	8
SAGE	Sage Therapeutics, Inc.	SAGE	No	NASDAQ	4:00	IMC Financial Markets	8
SAN	Banco Santander, S.A.	SAN	No	NYSE	4:00	Citadel Securities, LLC	8
SAND	Sandstorm Gold Ltd.	SAND	No	AMEX	4:00	Morgan Stanley	8
SAP	SAP SE	SAP	No	NYSE	4:00	Morgan Stanley	8
SBAC	SBA Communications Corporation	SBAC	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SBGI	Sinclair Broadcasting Group, Inc.	SBGI	No	NASDAQ	4:00	Susquehanna Securities	8
SBGL	Sibanye Gold Limited	SBGL	No	NYSE	4:00	Citadel Securities, LLC	8
SCCO	Southern Copper Corporation	SCCO	No	NYSE	4:00	IMC Financial Markets	8
SCI	Service Corporation International	SCI	No	NYSE	4:00	Wolverine Trading, LLC	8
SCO	ProShares UltraShort Bloomberg Crude Oil	SCO	No	NYSE Arca	4:00	Susquehanna Securities	8
SCS	Steelcase Inc.	SCS	No	NYSE	4:00	Morgan Stanley	8
SCVL	Shoe Carnival, Inc.	SCVL	No	NASDAQ	4:00	Citadel Securities, LLC	8
SE	Sea Limited	SE	No	NYSE	4:00	Susquehanna Securities	8
SEDG	SolarEdge Technologies, Inc.	SEDG	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SEE	Sealed Air Corporation	SEE	No	NYSE	4:00	IMC Financial Markets	8
SFLY	Shutterfly, Inc.	SFLY	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SFM	Sprouts Farmers Market, Inc.	SFM	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SH	ProShares Short S&P500	SH	No	NYSE Arca	4:00	Wolverine Trading, LLC	8
SHAK	Shake Shack Inc.	SHAK	No	NYSE	4:00	IMC Financial Markets	8
SHW	The Sherwin-Williams Company	SHW	No	NYSE	4:00	Wolverine Trading, LLC	8
SHY	iShares 1-3 Year Treasury Bond ETF	SHY	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SIEN	Sientra, Inc.	SIEN	No	NASDAQ	4:00	Susquehanna Securities	8
SIG	Signet Jewelers Limited	SIG	No	NYSE	4:00	Wolverine Trading, LLC	8
SIL	Global X Silver Miners ETF	SIL	No	NYSE Arca	4:00	Wolverine Trading, LLC	8





Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
SINA	SINA Corporation	SINA	Yes	NASDAQ	4:00	Susquehanna Securities	8
SIX	Six Flags Entertainment Corporation	SIX	No	NYSE	4:00	Morgan Stanley	8
SJM	The J. M. Smucker Company	SJM	No	NYSE	4:00	Wolverine Trading, LLC	8
SKT	Tanger Factory Outlet Centers, Inc.	SKT	No	NYSE	4:00	Citadel Securities, LLC	8
SLM	SLM Corporation	SLM	Yes	NASDAQ	4:00	Morgan Stanley	8
SM	SM Energy Company	SM	No	NYSE	4:00	Morgan Stanley	8
SMG	The Scotts Miracle-Gro Company	SMG	No	NYSE	4:00	Wolverine Trading, LLC	8
SNBR	Sleep Number Corporation	SNBR	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SNPS	Synopsys, Inc.	SNPS	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SNX	SYNNEX Corporation	SNX	No	NYSE	4:00	Susquehanna Securities	8
SNY	Sanofi	SNY	No	NASDAQ	4:00	Morgan Stanley	8
SOGO	Sogou Inc.	SOGO	No	NYSE	4:00	Susquehanna Securities	8
SOHU	Sohu.Com Limited	SOHU	No	NASDAQ	4:00	Morgan Stanley	8
SOXL	Direxion Daily Semiconductor Bull 3x Shares	SOXL	No	NYSE Arca	4:00	Wolverine Trading, LLC	8
SOXS	Direxion Daily Semiconductor Bear 3x Shares	SOXS	No	NYSE Arca	4:00	Citadel Securities, LLC	8
SOXX	iShares PHLX Semiconductor ETF	SOXX	No	NASDAQ	4:00	Citadel Securities, LLC	8
SPG	Simon Property Group, Inc.	SPG	Yes	NYSE	4:00	Wolverine Trading, LLC	8
SPPI	Spectrum Pharmaceuticals, Inc.	SPPI	No	NASDAQ	4:00	Morgan Stanley	8
SPR	Spirit Aerosystems Holdings, Inc.	SPR	No	NYSE	4:00	Susquehanna Securities	8
SRCI	SRC Energy Inc.	SRCI	No	AMEX	4:00	Morgan Stanley	8
SRE	Sempra Energy	SRE	No	NYSE	4:00	Wolverine Trading, LLC	8
SRG	Seritage Growth Properties	SRG	No	NYSE	4:00	Citadel Securities, LLC	8
SRNE	Sorrento Therapeutics, Inc.	SRNE	No	NASDAQ	4:00	Morgan Stanley	8
SSNC	SS&C Technologies Holdings, Inc.	SSNC	No	NASDAQ	4:00	Wolverine Trading, LLC	8



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
SSP	The E.W. Scripps Company	SSP	No	NASDAQ	4:00	Citadel Securities, LLC	8
SSRM	SSR Mining Inc.	SSRM	No	NASDAQ	4:00	Morgan Stanley	8
SSW	Seaspan Corporation	SSW	No	NYSE	4:00	Morgan Stanley	8
SSYS	Stratasys Ltd.	SSYS	No	NASDAQ	4:00	IMC Financial Markets	8
STAA	STAAR Surgical Company	STAA	No	NASDAQ	4:00	Citadel Securities, LLC	8
STLD	Steel Dynamics, Inc.	STLD	No	NASDAQ	4:00	IMC Financial Markets	8
STMP	Stamps.com, Inc.	STMP	No	NASDAQ	4:00	Wolverine Trading, LLC	8
STNG	Scorpio Tankers Inc.	STNG	No	NYSE	4:00	Citadel Securities, LLC	8
STT	State Street Corporation	STT	Yes	NYSE	4:00	Wolverine Trading, LLC	8
SUM	Summit Materials, Inc.	SUM	No	NYSE	4:00	Citadel Securities, LLC	8
SUN	Sunoco LP	SUN	No	NYSE	4:00	IMC Financial Markets	8
SYK	Stryker Corporation	SYK	No	NYSE	4:00	Wolverine Trading, LLC	8
SYNA	Synaptics Incorporated	SYNA	No	NASDAQ	4:00	Wolverine Trading, LLC	8
SYZ	Sysco Corporation	SYZ	No	NYSE	4:00	Wolverine Trading, LLC	8
TBF	Proshares Short 20+ Year Treasury	TBF	No	NYSE Arca	4:00	Wolverine Trading, LLC	8
TD	The Toronto Dominion Bank	TD	No	NYSE	4:00	Wolverine Trading, LLC	8
TDC	Teradata Corporation	TDC	No	NYSE	4:00	Morgan Stanley	8
TEAM	Atlassian Corporation Plc	TEAM	No	NASDAQ	4:00	Two Sigma Securities, LLC	8
TECS	Direxion Daily Technology Bear 3x Shares	TECS	No	NYSE Arca	4:00	Susquehanna Securities	8
TEL	TE Connectivity Ltd.	TEL	No	NYSE	4:00	Wolverine Trading, LLC	8
TELL	Tellurian Inc.	TELL	No	NASDAQ	4:00	Citadel Securities, LLC	8
TER	Teradyne, Inc.	TER	No	NASDAQ	4:00	Morgan Stanley	8
TEX	Terex Corporation	TEX	No	NYSE	4:00	Morgan Stanley	8
TGP	Teekay LNG Partners L.P.	TGP	No	NYSE	4:00	Wolverine Trading, LLC	8
THO	Thor Industries, Inc.	THO	No	NYSE	4:00	Citadel Securities, LLC	8
THS	TreeHouse Foods, Inc.	THS	No	NYSE	4:00	Citadel Securities, LLC	8
TIVO	TiVo Corporation	TIVO	No	NASDAQ	4:00	Susquehanna Securities	8
TK	Teekay Corporation	TK	No	NYSE	4:00	Morgan Stanley	8
TLRD	Tailored Brands, Inc.	TLRD	No	NYSE	4:00	Wolverine Trading, LLC	8



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
TMF	Direxion Daily 20+ Year Treasury Bull 3X Shares	TMF	No	NYSE Arca	4:00	Wolverine Trading, LLC	8
TMO	Thermo Fisher Scientific Inc.	TMO	No	NYSE	4:00	Wolverine Trading, LLC	8
TOT	TOTAL S.A.	TOT	No	NYSE	4:00	Wolverine Trading, LLC	8
TRCO	Tribune Media Company	TRCO	No	NYSE	4:00	Susquehanna Securities	8
TREE	LendingTree, Inc.	TREE	No	NASDAQ	4:00	Wolverine Trading, LLC	8
TREX	Trex Company, Inc.	TREX	No	NYSE	4:00	Wolverine Trading, LLC	8
TRGP	Targa Resources Corp.	TRGP	No	NYSE	4:00	Wolverine Trading, LLC	8
TROW	T. Rowe Price Group, Inc.	TROW	No	NASDAQ	4:00	Wolverine Trading, LLC	8
TRQ	Turquoise Hill Resources Ltd.	TRQ	No	NYSE	4:00	Morgan Stanley	8
TRTN	Triton International Limited	TRTN	No	NYSE	4:00	Susquehanna Securities	8
TRU	TransUnion	TRU	No	NYSE	4:00	Wolverine Trading, LLC	8
TRUP	Trupanion, Inc.	TRUP	No	NASDAQ	4:00	Morgan Stanley	8
TRV	The Travelers Companies, Inc.	TRV	No	NYSE	4:00	Susquehanna Securities	8
TRVG	trivago N.V.	TRVG	No	NASDAQ	4:00	Susquehanna Securities	8
TSCO	Tractor Supply Company	TSCO	No	NASDAQ	4:00	Wolverine Trading, LLC	8
TSG	The Stars Group Inc.	TSG	No	NASDAQ	4:00	Citadel Securities, LLC	8
TSS	Total System Services, Inc.	TSS	No	NYSE	4:00	Wolverine Trading, LLC	8
TTOO	T2 Biosystems, Inc.	TTOO	No	NASDAQ	4:00	Citadel Securities, LLC	8
TTPH	Tetraphase Pharmaceuticals, Inc.	TTPH	No	NASDAQ	4:00	Morgan Stanley	8
TWM	Proshares UltraShort Russell 2000	TWM	No	NYSE Arca	4:00	Wolverine Trading, LLC	8
TXT	Textron Inc.	TXT	Yes	NYSE	4:00	Morgan Stanley	8
UBNT	Ubiquiti Networks, Inc.	UBNT	No	NASDAQ	4:00	Wolverine Trading, LLC	9
UBS	UBS Group AG	UBS	No	NYSE	4:00	Citadel Securities, LLC	9
UDOW	ProShares UltraPro Dow30	UDOW	No	NYSE Arca	4:00	Susquehanna Securities	9
UEC	Uranium Energy Corp.	UEC	No	AMEX	4:00	Citadel Securities, LLC	9
UEPS	Net 1 UEPS Technologies, Inc.	UEPS	No	NASDAQ	4:00	Citadel Securities, LLC	9
UIS	Unisys Corporation	UIS	No	NYSE	4:00	Morgan Stanley	9
UL	Unilever PLC	UL	No	NYSE	4:00	Wolverine Trading, LLC	9



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
ULTI	The Ultimate Software Group, Inc.	ULTI	No	NASDAQ	4:00	Wolverine Trading, LLC	9
UN	Unilever N.V.	UN	No	NYSE	4:00	Wolverine Trading, LLC	9
UNFI	United Natural Foods, Inc.	UNFI	No	NYSE	4:00	Citadel Securities, LLC	9
UPL	Ultra Petroleum Corp.	UPL	No	NASDAQ	4:00	Susquehanna Securities	9
USAT	USA Technologies, Inc.	USAT	No	NASDAQ	4:00	Susquehanna Securities	9
USCR	U.S. Concrete, Inc.	USCR	No	NASDAQ	4:00	Wolverine Trading, LLC	9
UXIN	Uxin Limited	UXIN	No	NASDAQ	4:00	Citadel Securities, LLC	9
VAC	Marriott Vacations Worldwide Corporation	VAC	No	NYSE	4:00	Wolverine Trading, LLC	9
VC	Visteon Corporation	VC	No	NASDAQ	4:00	Wolverine Trading, LLC	9
VGK	Vanguard FTSE Europe Index Fund ETF Shares	VGK	No	NYSE Arca	4:00	Citadel Securities, LLC	9
VGR	Vector Group Ltd.	VGR	No	NYSE	4:00	Citadel Securities, LLC	9
VHC	VirnetX Holding Corp	VHC	No	AMEX	4:00	Susquehanna Securities	9
VIAV	Viavi Solutions Inc.	VIAV	Yes	NASDAQ	4:00	Morgan Stanley	9
VICR	Vicor Corporation	VICR	No	NASDAQ	4:00	Citadel Securities, LLC	9
VIRT	Virtu Financial, Inc.	VIRT	No	NASDAQ	4:00	Morgan Stanley	9
VIXY	ProShares VIX Short-Term Futures ETF	VIXY	No	NYSE Arca	4:15	Susquehanna Securities	9
VLV	Valley National Bancorp	VLV	No	NASDAQ	4:00	Susquehanna Securities	9
VMC	Vulcan Materials Company	VMC	No	NYSE	4:00	Wolverine Trading, LLC	9
VNET	21Vianet Group, Inc.	VNET	No	NASDAQ	4:00	Morgan Stanley	9
VNOM	Viper Energy Partners LP	VNOM	No	NASDAQ	4:00	Citadel Securities, LLC	9
VOO	Vanguard S&P 500 ETF	VOO	No	NYSE Arca	4:00	Citadel Securities, LLC	9
VRSN	VeriSign, Inc.	VRSN	Yes	NASDAQ	4:00	Wolverine Trading, LLC	9
VRTX	Vertex Pharmaceuticals Incorporated	VRTX	No	NASDAQ	4:00	IMC Financial Markets	9
VSAT	Viasat, Inc.	VSAT	No	NASDAQ	4:00	Wolverine Trading, LLC	9
VSH	Vishay Intertechnology, Inc.	VSH	No	NYSE	4:00	Morgan Stanley	9
VSTM	Verastem, Inc.	VSTM	No	NASDAQ	4:00	Citadel Securities, LLC	9
VTL	Vital Therapies, Inc.	VTL	No	NASDAQ	4:00	Citadel Securities, LLC	9



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
VTR	Ventas, Inc.	VTR	No	NYSE	4:00	Morgan Stanley	9
VUZI	Vuzix Corporation	VUZI	No	NASDAQ	4:00	Susquehanna Securities	9
VXXB	iPath Series B S&P 500 VIX Short-Term Futures ETN	VXXB	Yes	BATS	4:15	Susquehanna Securities	9
WAB	Wabtec Corporation	WAB	No	NYSE	4:00	Wolverine Trading, LLC	10
WATT	Energous Corporation	WATT	No	NASDAQ	4:00	Citadel Securities, LLC	10
WELL	Welltower Inc.	WELL	No	NYSE	4:00	IMC Financial Markets	10
WEN	The Wendy's Company	WEN	No	NASDAQ	4:00	Morgan Stanley	10
WES	Western Midstream Partners, LP	WES	No	NYSE	4:00	Morgan Stanley	10
WGO	Winnebago Industries, Inc.	WGO	No	NYSE	4:00	Citadel Securities, LLC	10
WING	Wingstop Inc.	WING	No	NASDAQ	4:00	Citadel Securities, LLC	10
WIX	Wix.Com Ltd.	WIX	No	NASDAQ	4:00	Citadel Securities, LLC	10
WLK	Westlake Chemical Corporation	WLK	No	NYSE	4:00	Morgan Stanley	10
WLTW	Willis Towers Watson Public Limited Company	WLTW	No	NASDAQ	4:00	Wolverine Trading, LLC	10
WM	Waste Management, Inc.	WM	No	NYSE	4:00	Wolverine Trading, LLC	10
WP	Worldpay, Inc.	WP	No	NYSE	4:00	Wolverine Trading, LLC	10
WPG	Washington Prime Group Inc.	WPG	No	NYSE	4:00	Morgan Stanley	10
WRK	WestRock Company	WRK	No	NYSE	4:00	Wolverine Trading, LLC	10
WTI	W&T Offshore, Inc.	WTI	No	NYSE	4:00	Morgan Stanley	10
WU	The Western Union Company	WU	No	NYSE	4:00	Morgan Stanley	10
WUBA	58.com Inc.	WUBA	No	NYSE	4:00	Wolverine Trading, LLC	10
WWW	Wolverine World Wide, Inc.	WWW	No	NYSE	4:00	Wolverine Trading, LLC	10
XEC	Cimarex Energy Co.	XEC	No	NYSE	4:00	IMC Financial Markets	10
XLC	Communication Services Select Sector SPDR Fund	XLC	No	NYSE Arca	4:00	Wolverine Trading, LLC	10
XLRE	The Real Estate Select Sector SPDR Fund	XLRE	No	NYSE Arca	4:00	IMC Financial Markets	10
XON	Intrexon Corporation	XON	No	NASDAQ	4:00	Citadel Securities, LLC	10
XRAY	DENTSPLY SIRONA Inc.	XRAY	No	NASDAQ	4:00	Morgan Stanley	10
XXII	22nd Century Group, Inc.	XXII	No	AMEX	4:00	Susquehanna Securities	10



Security Symbol	Security Name	Option Class	Penny Pilot	Exchange for Opening	Closing Time	PLMM	Cloud
YEXT	Yext, Inc.	YEXT	No	NYSE	4:00	Citadel Securities, LLC	10
YINN	Direxion Daily FTSE China Bull 3X Shares	YINN	No	NYSE Arca	4:00	Susquehanna Securities	10
YRCW	YRC Worldwide Inc.	YRCW	Yes	NASDAQ	4:00	Morgan Stanley	10
YRD	Yirendai Ltd.	YRD	No	NYSE	4:00	Morgan Stanley	10
YUMC	Yum China Holdings, Inc.	YUMC	No	NYSE	4:00	IMC Financial Markets	10
ZAYO	Zayo Group Holdings, Inc.	ZAYO	No	NYSE	4:00	Wolverine Trading, LLC	11
ZEN	Zendesk, Inc.	ZEN	No	NYSE	4:00	Susquehanna Securities	11
ZG	Zillow Group, Inc.	ZG	No	NASDAQ	4:00	Morgan Stanley	11
ZGNX	Zogenix, Inc.	ZGNX	No	NASDAQ	4:00	Citadel Securities, LLC	11
ZIOP	ZIOPHARM Oncology, Inc.	ZIOP	No	NASDAQ	4:00	Citadel Securities, LLC	11
ZN	Zion Oil & Gas, Inc.	ZN	No	NASDAQ	4:00	Morgan Stanley	11
ZTS	Zoetis Inc.	ZTS	No	NYSE	4:00	Susquehanna Securities	11
ZUO	Zuora, Inc.	ZUO	No	NYSE	4:00	Citadel Securities, LLC	11

Please contact MIAX Options Listings with any questions.

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