PDP Hedging Program

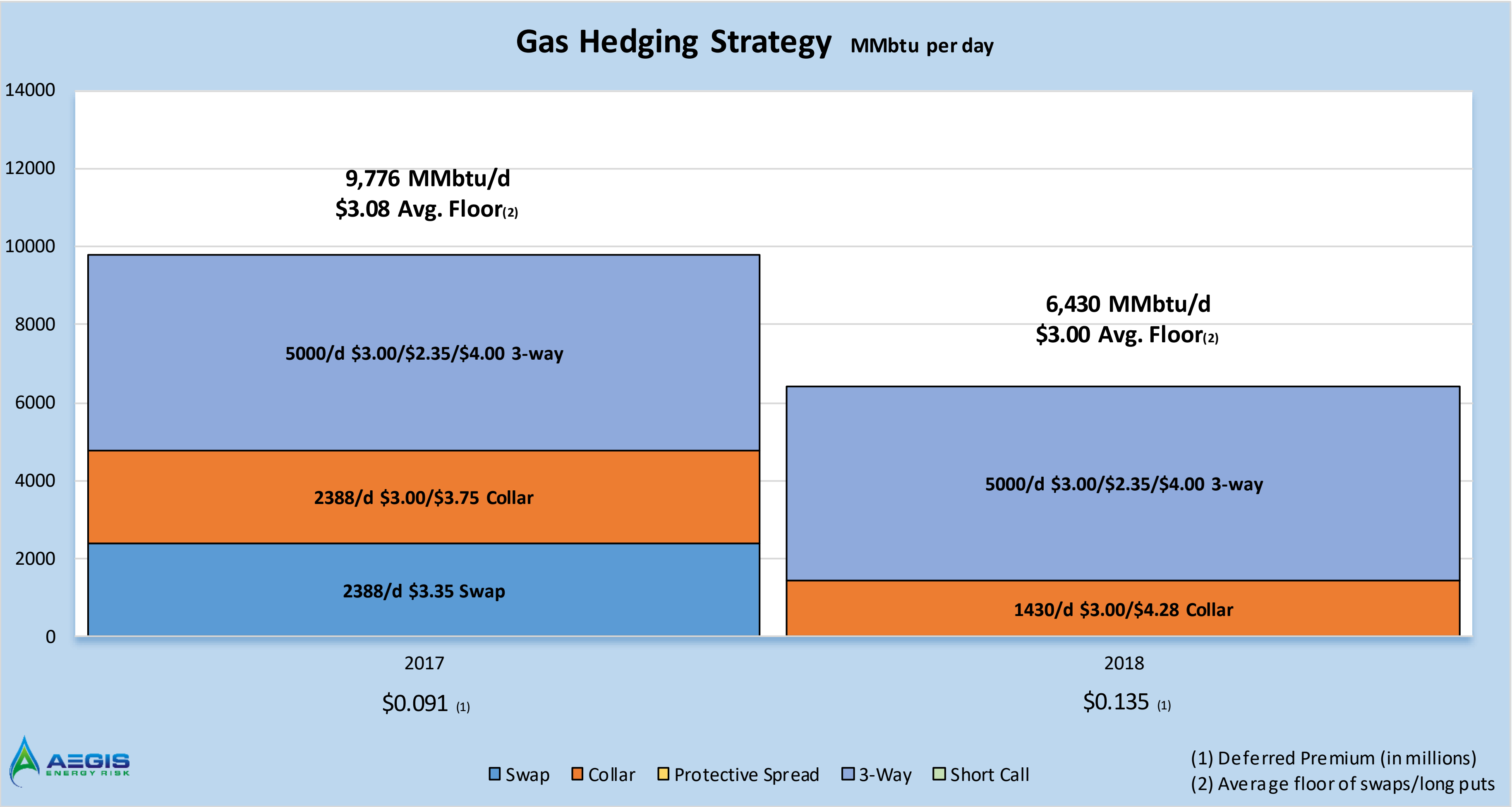
Natural Gas

Begin Period	End Period	Derivative Instrument	Daily Volume	Balance of Year Average	Total of Notional Volume	Base Fixed Price	Floor (Long)	Short Put	Call (Long)	Ceiling (Short)
2017										
May-17	Dec-17	3-Way	5,000	5,000	1,225,000		$ 3.00	$ 2.35		$ 4.00
May-17	Jun-17	Swaps	2,200	548	134,200	$ 3.25				
Jul-17	Sep-17	Swaps	2,300	864	211,600	$ 3.34				
Oct-17	Dec-17	Swaps	2,600	976	239,200	$ 3.40				
May-17	Jun-17	Collar	2,200	548	134,200		$ 3.00			$ 3.54
Jul-17	Sep-17	Collar	2,300	864	211,600		$ 3.00			$ 3.73
Oct-17	Dec-17	Collar	2,600	976	239,200		$ 3.00			$ 3.89
2018										
Jan-18	Dec-18	3-Way	5,000	5,000	1,825,000		$ 3.00	$ 2.35		$ 4.00
Jan-18	Mar-18	Collar	5,800	1,430	522,000		$ 3.00			$ 4.28

NOTE : Hedges as of 4/26/2017

PDP Hedging Program

Natural Gas



NOTE : Hedges as of 4/26/2017

PDP Hedging Program

Crude Oil 2017

Begin Period	End Period	Derivative Instrument	Daily Volume	Balance of Year Average	Total of Notional Volume	Base Fixed Price	Floor (Long)	Short Put	Call (Long)	Ceiling (Short)
2017										
Apr-17	Dec-17	3-way	280	280	77,000		$ 80.00	$ 65.00		$ 97.25
Apr-17	Sep-17	3-way	250	166	45,750		$ 80.00	$ 60.00		$ 98.70
Oct-17	Oct-17	3-way	200	44	12,200		$ 80.00	$ 60.00		$ 98.70
Nov-17	Nov-17	3-way	250	27	7,500		$ 80.00	$ 60.00		$ 98.70
Dec-17	Dec-17	3-way	200	44	12,200		$ 80.00	$ 60.00		$ 98.70
Apr-17	Dec-17	Put Spread	500	500	137,500		$ 82.00	$ 62.00		
Apr-17	Jun-17	Swaps	975	323	88,725	$ 54.50				
Jul-17	Dec-17	Swaps	400	268	73,600	$ 54.50				
May-17	Jun-17	Swaps	300	67	18,300	$ 53.10				
Jul-17	Sep-17	Swaps	150	50	13,800	$ 53.55				
Oct-17	Dec-17	Swaps	150	50	13,800	$ 53.80				

NOTE : Hedges as of 4/26/2017

PDP Hedging Program

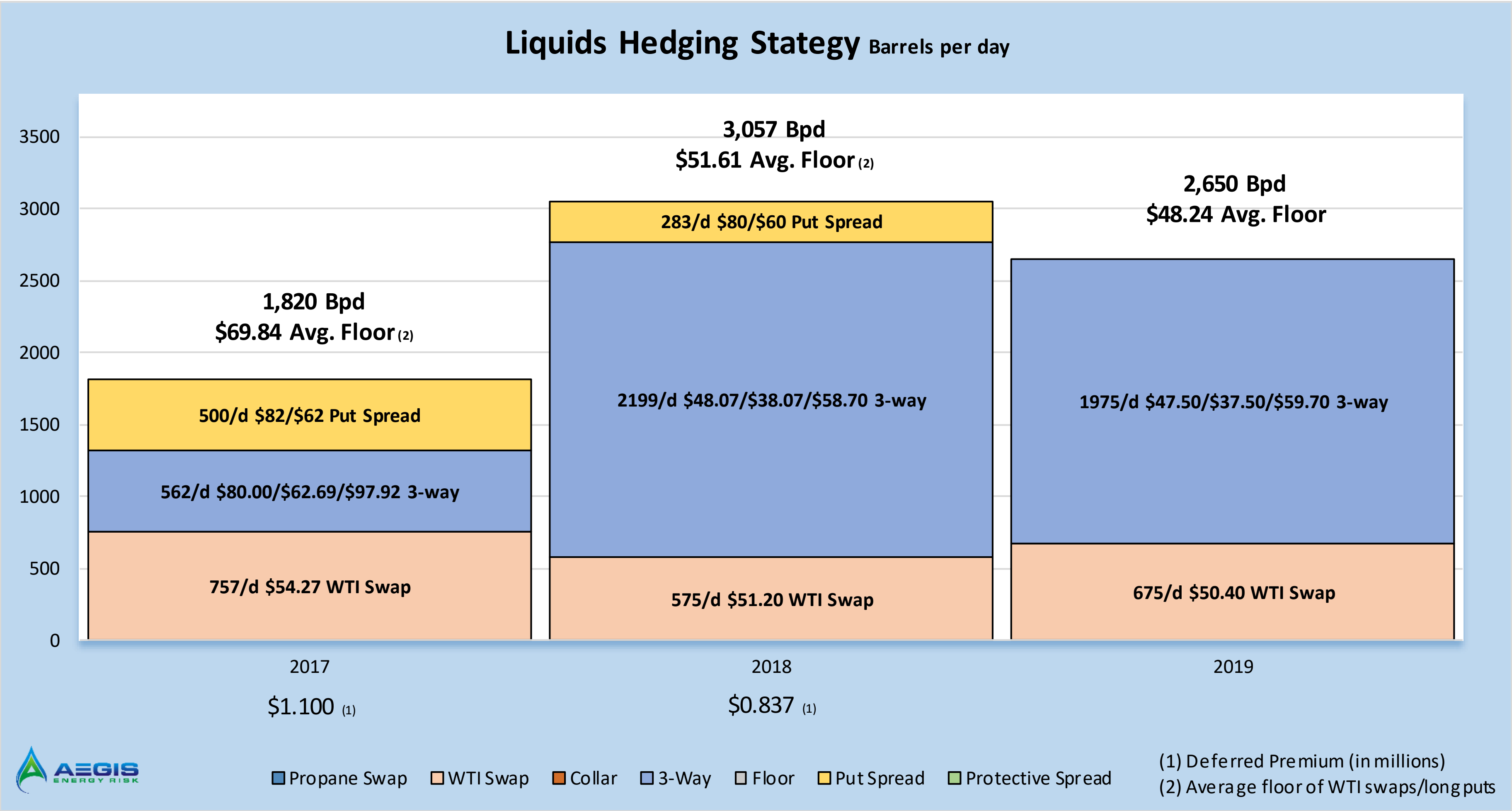
Crude Oil 2018-19

Begin Period	End Period	Derivative Instrument	Daily Volume	Balance of Year Average	Total of Notional Volume	Base Fixed Price	Floor (Long)	Short Put	Call (Long)	Ceiling (Short)
2018										
Jan-18	Aug-18	Put Spread	425	283	103,275		$ 80.00	$ 60.00		
Jan-18	Dec-18	3-way	500	500	182,500		$ 50.00	$ 40.00		$ 61.60
Jan-18	Jun-18	Swaps	600	298	108,600	$ 51.20				
Jul-18	Sep-18	Swaps	500	126	46,000	$ 51.20				
Oct-18	Dec-18	Swaps	600	151	55,200	$ 51.20				
Jan-18	Mar-18	3-way	1,800	444	162,000		$ 47.50	$ 37.50		$ 57.85
Apr-18	Jun-18	3-way	1,700	424	154,700		$ 47.50	$ 37.50		$ 57.85
Jul-18	Sep-18	3-way	1,600	403	147,200		$ 47.50	$ 37.50		$ 57.85
Oct-18	Dec-18	3-way	1,700	428	156,400		$ 47.50	$ 37.50		$ 57.85
2019										
Jan-19	Sep-19	Swaps	700	524	191,100	$ 50.40				
Oct-19	Dec-19	Swaps	600	151	55,200	$ 50.40				
Jan-19	Sep-19	3-way	2,000	1,496	546,000		$ 47.50	$ 37.50		$ 59.70
Oct-19	Dec-19	3-way	1,900	479	174,800		$ 47.50	$ 37.50		$ 59.70

NOTE : Hedges as of 4/26/2017

PDP Hedging Program

Crude Oil and NGL



NOTE : Hedges as of 4/26/2017

PDP Hedging Program

Hedge Percentages – 12/31/2016 Reserve Report

Upside Hedge Percentages (PDP)			
	Crude	NatGas	NGL Lights
2017	51%	100+%	
2018	100+%	90%	
2019	100+%		
Downside Hedge Percentages (PDP)			
	Crude	NatGas	NGL Lights
2017	71%	100+%	
2018	100+%	90%	
2019	100+%		

**includes WTI for NGL proxy hedges and 30% of NGL PDP

NOTE : Hedges as of 4/26/2017