

U.S. Patent No. 8,505,332
Claim 5
Monell 120 CO2Flex[®] Plant
(Sweetwater County, Wyoming)

Claim 5	Monell 120 Processing Plant (Sweetwater County, Wyoming) Ex. 2070, Monell 120 CO2Flex [®] Plant, Process Flow Diagram, Project No. 14154 (July 31, 2015 – Issued Final)
Claim 5 [5.1] The method of claim 1, wherein the sweet NGL rich stream comprises from 20 molar percent to 40 molar percent of the C3+ hydrocarbons from the carbon dioxide recycle stream, and	The composition for the Stream No. 1 “Carbon Dioxide Recycle Stream” is shown in EX2070 (“Monell 120 CO2Flex[®] Plant, Process Flow Diagram”) at Page 10. The composition for the Stream No. 49 “Sweet NGL Rich Stream” is also shown in EX2070 at Page 10. The calculations on the attached spreadsheet confirm that the Stream No. 49 “Sweet NGL Rich Stream” has 59.7 molar percent of the C3+ hydrocarbons from the Stream No. 1 “Carbon Dioxide Recycle Stream,” above the limit of the 20-40 molar percent range specified in this Claim 5. (See O8, which is 1-G8, and G8 is the sum of E8:E15 divided C8:C15.)

Claim 5	Monell 120 Processing Plant (Sweetwater County, Wyoming) Ex. 2070, Monell 120 CO2Flex[®] Plant, Process Flow Diagram, Project No. 14154 (July 31, 2015 – Issued Final)
[5.2] wherein the purified carbon dioxide recycle stream comprises at least 94 molar percent of the carbon dioxide,	The composition for the Stream No. 3 “Purified Carbon Dioxide Recycle Stream” is shown in EX2070 at Page 10. The calculations on the attached spreadsheet confirm that the Stream No. No. 3 “Purified Carbon Dioxide Recycle Stream” has 99.6 molar percent of the carbon dioxide from the Stream No. 1 “Carbon Dioxide Recycle Stream,” which is within the at least 94 molar percent specified in this Claim 5. (See F5, which is E5 divided by C5.)
[5.3] at least 94 molar percent of the methane, and	The calculations on the attached spreadsheet confirm that the Stream No. No. 3 “Purified Carbon Dioxide Recycle Stream” has 99.9 molar percent of the methane from the Stream No. 1 “Carbon Dioxide Recycle Stream,” which is within the at least 94 molar percent specified in this Claim 5. (See F6, which is E6 divided by C6.)
[5.4] at least 93 molar percent of the ethane from the carbon dioxide recycle stream.	The calculations on the attached spreadsheet confirm that the Stream No. No. 3 “Purified Carbon Dioxide Recycle Stream” has 99.6 molar percent of the ethane from the Stream No. 1 “Carbon Dioxide Recycle Stream,” which is within the at least 93 molar percent specified in this Claim 5. (See F7, which is E7 divided C7.)

Monell 120 CO2Flex® Plant
(Sweetwater County, Wyoming)

	A	B	C	D	E	F	G
1	EX2070	NGL Fractionator Inlet Stream No. 1		Purified CO2 Recycle Stream 3			
2		Std Vapor Vol. Flow = 120.81 MMSCFD		Std Vapor Vol. Flow = 118.87 MMSCFD			C3-C8
3		Mole Frac.	MSCFD	Mole Frac.	MSCFD		Disregarded
4	N2	0.001055	13	0.001072	13	99.8%	
5	CO2	0.898212	10,851	0.910073	10,803	99.6%	
6	C1	0.063979	773	0.065021	772	99.9%	
7	C2	0.014454	175	0.014652	174	99.6%	
8	C3	0.008508	103	0.007177	85	82.9%	40.3%
9	i-C4	0.002111	26	0.001040	12	48.4%	
10	n-C4	0.002954	36	0.000786	9	26.1%	
11	i-C5	0.001339	16	0.000018	0	1.3%	
12	n-C5	0.001139	14	0.000004	0	0.3%	
13	n-C6	0.002999	36	0.000000	0	0.0%	
14	n-C7	0.001921	23	0.000000	0	0.0%	
15	n-C8	0.001059	13	0.000000	0	0.0%	
16	H2O	0.000109	1	0.000000	0	0.0%	
17	H2S	0.000161	2	0.000156	2	0.0%	
18		1.000		0.999843			

Monell 120 CO2Flex® Plant
(Sweetwater County, Wyoming)

	A	H	I	J	K	L	M	N	O
1	EX2070	Sour NGL Rich Stream 8			Sweet NGL Rich Stream 49				
2		Std Vapor Vol. Flow = ?.?? MMSCFD			Std Vapor Vol. Flow = ?.?? MMSCFD				C3-C8
3		Mole Frac.	MSCFD	%	C3-C8	Mole Frac.	MSCFD	%	Recovered
4	N2	0.000000	?	#VALUE!		0.000000	?	#VALUE!	
5	CO2	0.169962	?	#VALUE!		0.000000	?	#VALUE!	
6	C1	0.000001	?	#VALUE!		0.000001	?	#VALUE!	
7	C2	0.002286	?	#VALUE!		0.002774	?	#VALUE!	
8	C3	0.090246	?	17.1%	59.7%	0.109506	?	#VALUE!	59.7%
9	i-C4	0.067871	?	#VALUE!		0.082357	?	#VALUE!	
10	n-C4	0.136026	?	#VALUE!		0.165058	?	#VALUE!	
11	i-C5	0.082446	?	#VALUE!		0.100042	?	#VALUE!	
12	n-C5	0.070861	?	#VALUE!		0.085985	?	#VALUE!	
13	n-C6	0.187126	?	#VALUE!		0.227064	?	#VALUE!	
14	n-C7	0.119857	?	#VALUE!		0.145438	?	#VALUE!	
15	n-C8	0.066089	?	0.0%		0.080195	?	#VALUE!	
16	H2O	0.006769	?	0.0%		0.001580	?	#VALUE!	
17	H2S	0.000460	?	0.0%		0.000000	?	#VALUE!	
18		1.000000				1.000000			

Monell 120 CO2Flex® Plant
(Sweetwater County, Wyoming)

	A	P	Q	R
1	EX2070	Acid Gas Stream 38		
2		Std Vapor Vol. Flow = 0.37 MMSCFD		
3		Mole Frac.	MSCFD	%
4	N2	0.0000	0	0.0%
5	CO2	0.9164	34	0.3%
6	C1	0.0000	0	0.0%
7	C2	0.0002	0	0.0%
8	C3	0.0017	0	0.1%
9	i-C4	0.0002	0	0.0%
10	n-C4	0.0008	0	0.1%
11	i-C5	0.0001	0	0.0%
12	n-C5	0.0001	0	0.0%
13	n-C6	0.0001	0	0.0%
14	n-C7	0.0000	0	0.0%
15	n-C8	0.0000	0	0.0%
16	H2O	0.0779	3	0.0%
17	H2S	0.0025	0	0.0%
18		1.0000		