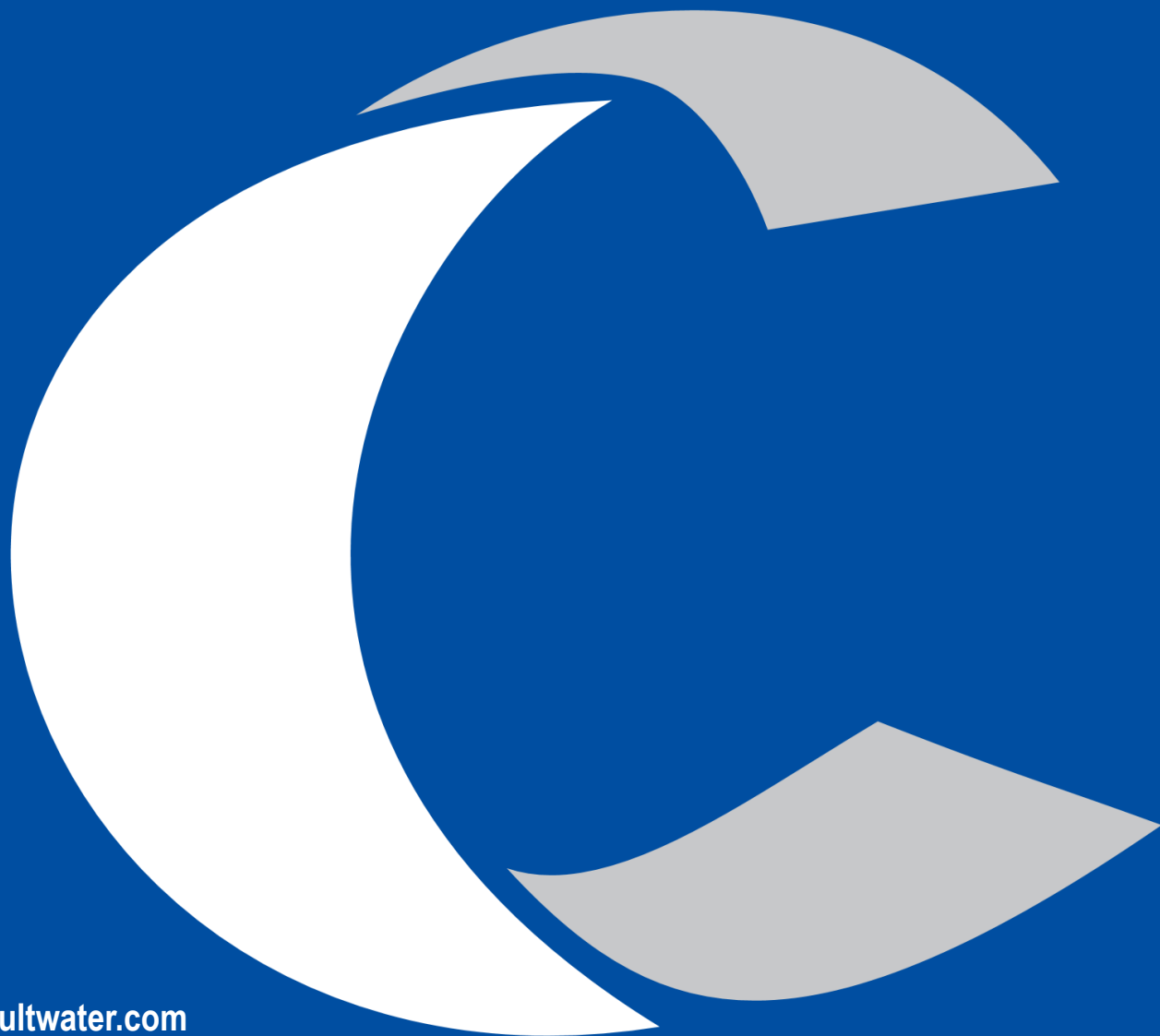


# Catapult Water Intelligence

Disposal Across the Montney Duvernay

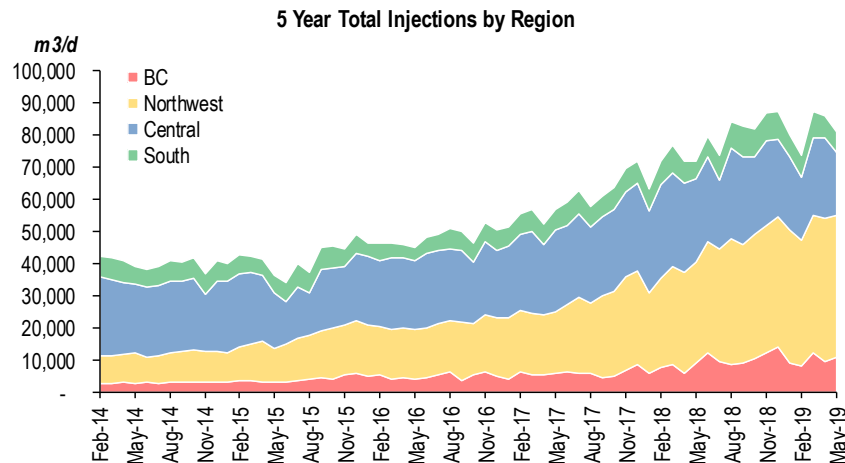




# Disposal Across the Montney Duvernay

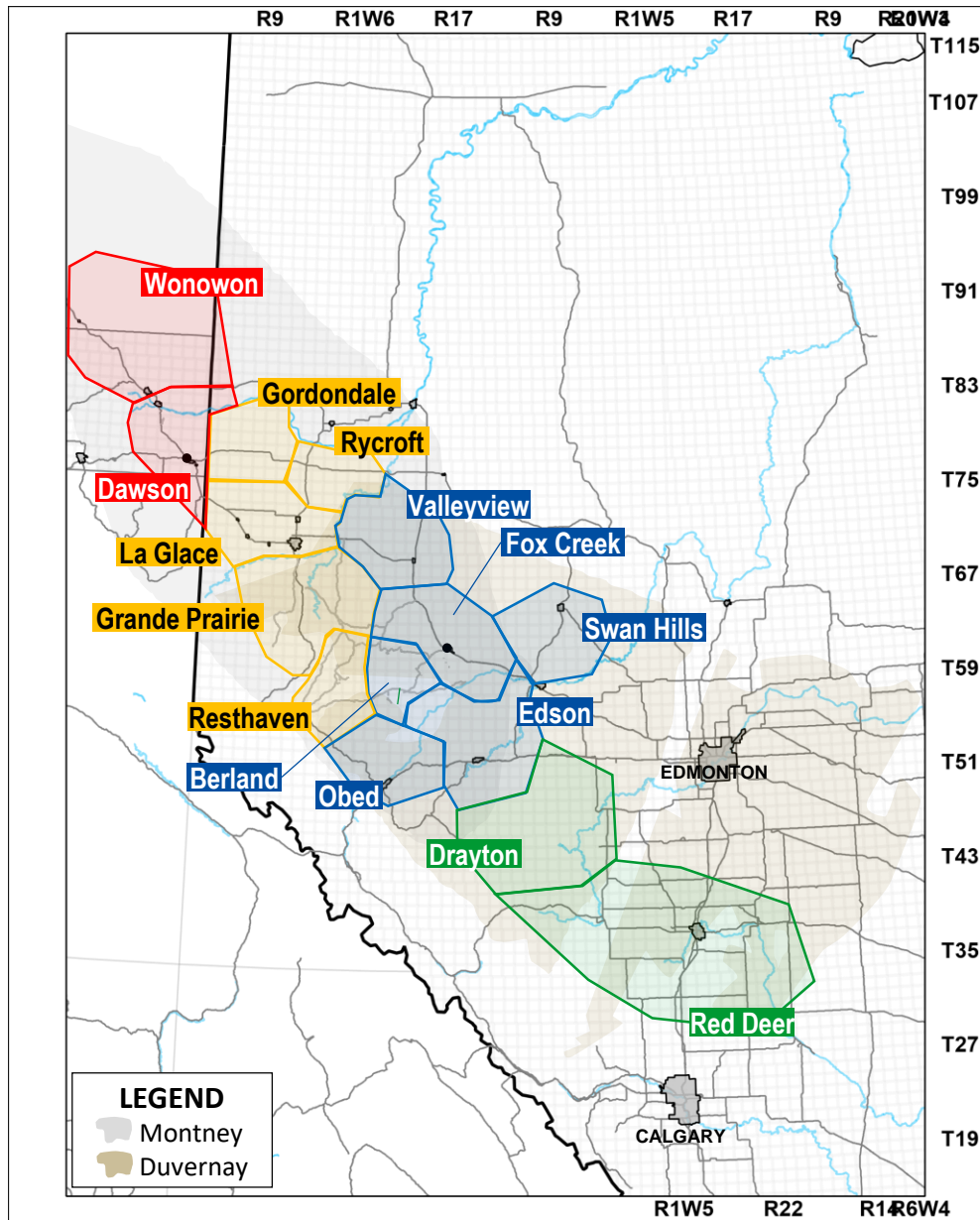
## Injection Report June 2019

*Updated with data from May*



In May, total injections dropped 5,910m<sup>3</sup> (6.8%) from prior month as the industry gets set to move into the summer drilling season. While rig counts are close to revisiting 2016 lows due to the soft price environment overall water injected remains high. The Grande Prairie region remains the largest contributor to water disposed across the Montney Duvernay fairway making up roughly 54% of the total. Gold Creek alone now comprises 33% of all water disposed exceeding Fox Creek, the second largest area, by approximately 15,000m<sup>3</sup>/d. 7Gens 9-10 disposal tops the list with 3,792 m<sup>3</sup>/d making it the largest injector by a single disposal facility. Hammerhead has begun injecting to their newly completed 2-12, 8-12 and 14-12 wells bringing the total to nine active injectors disposing a total of 1,711m<sup>3</sup>/d for the month.





**METHODOLOGY:**

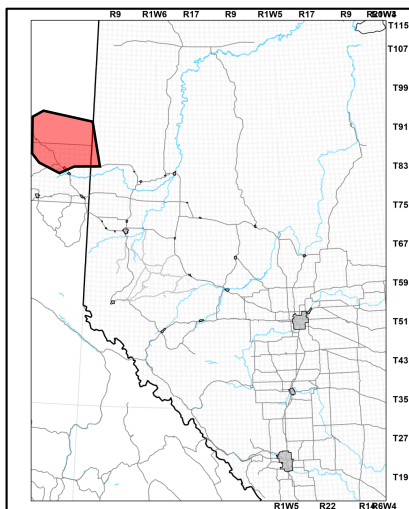
Areas were divided into four main regions: BC (RED), West (GOLD), Central (BLUE), and South (GREEN). Each region was further subdivided into areas taking into account market, facility location, and road access. Wells that are considered part of an Enhanced Oil Recovery scheme are excluded from this analysis.

**DEFINITIONS:**

'1<sup>st</sup> Party' volume refers to injections by facilities owned and operated by the producers themselves, whereas '3<sup>rd</sup> Party' refers to volume from facilities owned and operated by independent disposal/waste companies. 'Facilities' listed in the following charts are either batteries or waste plants that may be tied to more than one disposal well.



## WONOWON



### Top 5 Wonowon Facilities by Monthly Volume

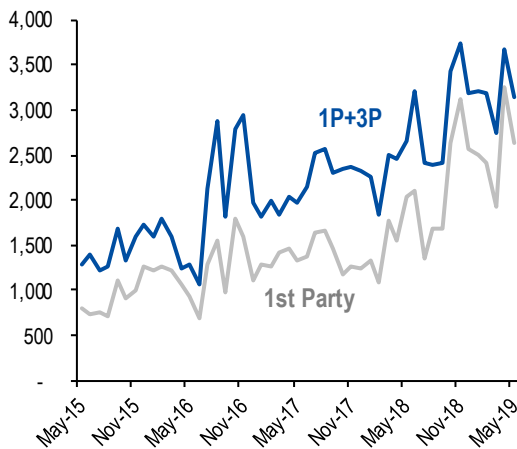
Name	Company	Volume (m3)
Whitecap Boundary Lake (8-2) Disp	Whitecap	18,149
Canbriam B-024-H/094-B-08 Disp	Canbriam	14,592
Progress A-032-K/094-G-02	Progress	14,348
Tervita Mile 103	Tervita	11,181
Kelt LNG C-093-I/094-A-12	Kelt	10,979

### Top 5 Wonowon Wells by Monthly Volume

LSD	Formation	Company	Volume (m3)
202/B-085-H/094-B-08/2	Baldonnel	Canbriam	14,592
200/C-032-K/094-G-02	Debolt	Kelt	14,348
102/D-096-K/094-A-12/0	Upper Debolt	Tervita	11,181
200/C-093-I/094-A-12/4	Debolt	Kelt	10,979
100/01-02-085-14W6/2	Cadomin	Whitecap	9,971

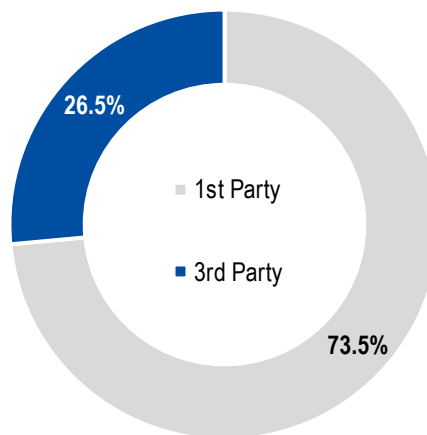
### 1<sup>st</sup> Party/3<sup>rd</sup> Party Injections over last Four Years

Monthly Injections in m3/d



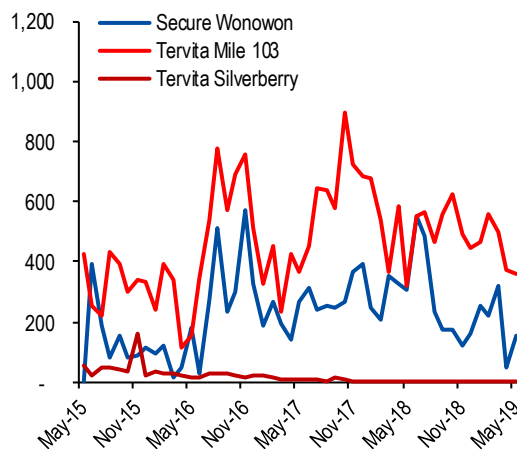
### First Party vs Third Party

Rolling Three Month Average



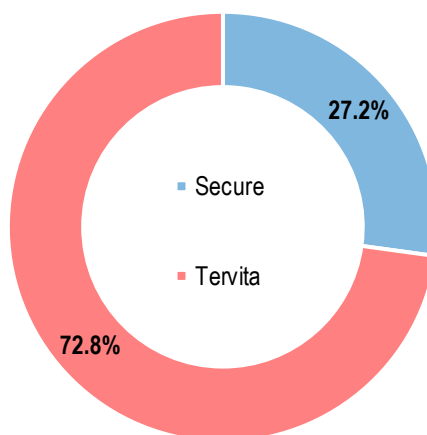
### 3<sup>rd</sup> Party Facility Injections over last Four Years

Monthly injections in m3/d

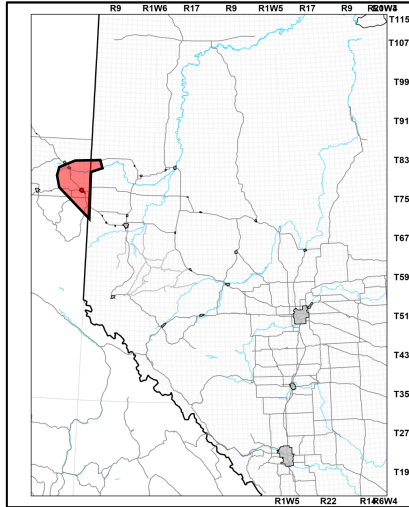


### Market Share by Company

Rolling Three Month Average



## DAWSON



### Top 5 Dawson Facilities by Monthly Volume

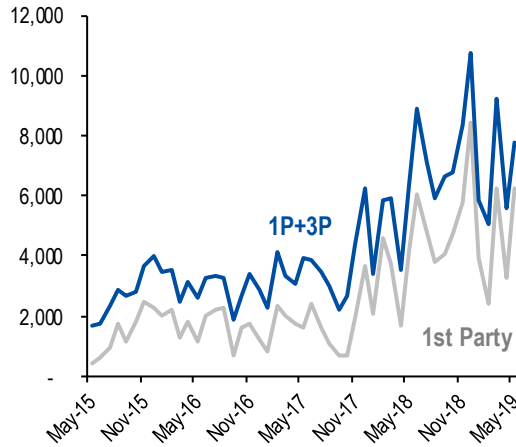
Name	Company	Volume (m3)
ECA Sunrise (14-35) Disp	Encana	44,934
ECA Sunrise (13-33) Disp	Encana	32,097
ECA Tower (16-06) Disp	Encana	31,576
ECA Tower (05-11) Disp	Encana	24,357
ECA Sunrise (01-27) Disp	Encana	23,983

### Top 5 Dawson Wells by Monthly Volume

LSD	Formation	Company	Volume (m3)
100/14-35-078-17W6/4	Paddy/Cadotte	Encana	44,934
100/15-32-078-17W6	Paddy/Cadotte	Encana	32,097
102/06-05-081-17W6	Cadomin	Encana	31,576
100/08-11-081-18W6	Cadomin	Encana	24,357
100/14-28-078-17W6/0	Cadotte	Encana	23,983

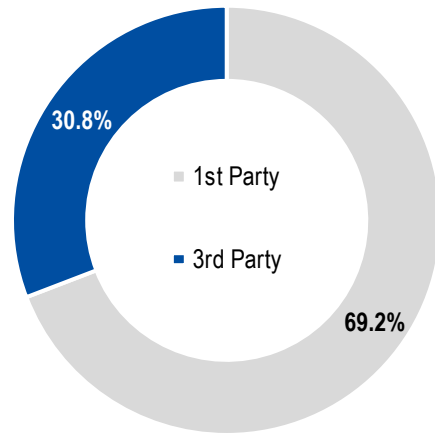
### 1<sup>st</sup> Party/3<sup>rd</sup> Party Injections over last Four Years

Monthly Injections in m3/d



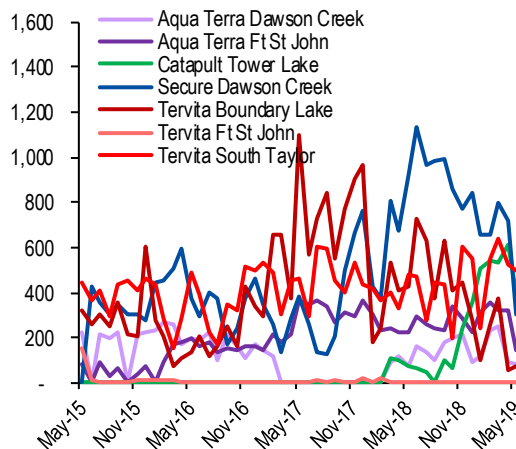
### First Party vs Third Party

Rolling Three Month Average



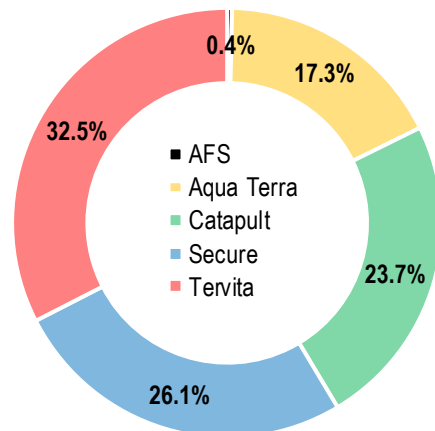
### 3<sup>rd</sup> Party Facility Injections over last Four Years

Monthly injections in m3/d

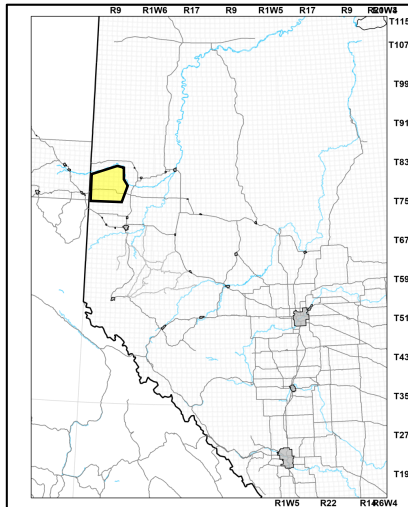


### Market Share by Company

Rolling Three Month Average



## GORDONDALE



### Top 5 Gordondale Facilities by Monthly Volume

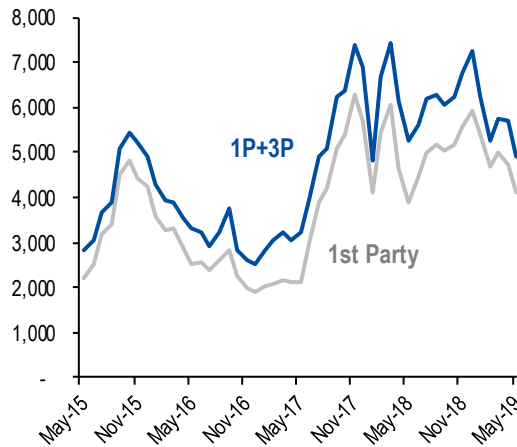
Name	Company	Volume (m3)
Tourmaline 15-13 Disp	Tourmaline	42,414
Tourmaline 12-6 Disp	Tourmaline	28,643
Birchcliff 3-22 Disp	Birchcliff	17,569
Birchcliff 5-27 Disp	Birchcliff	13,694
Kelt 6-19 Disp	Kelt	10,042

### Top 5 Gordondale Wells by Monthly Volume

LSD	Formation	Company	Volume (m3)
102-12-13-082-09W6/0	Belloy	Tourmaline	23,514
102/07-13-082-09W6/4	Belloy	Tourmaline	18,899
100/15-31-080-07W6/0	Belloy	Tourmaline	14,571
103/07-06-079-11W6/0	Paddy-Cadotte	Birchcliff	13,694
100/13-15-081-08W6/2	Belloy	Tourmaline	13,208

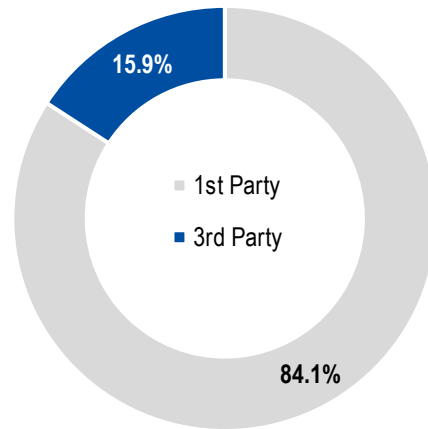
### 1<sup>st</sup> Party/3<sup>rd</sup> Party Injections over last Four Years

Monthly Injections in m3/d



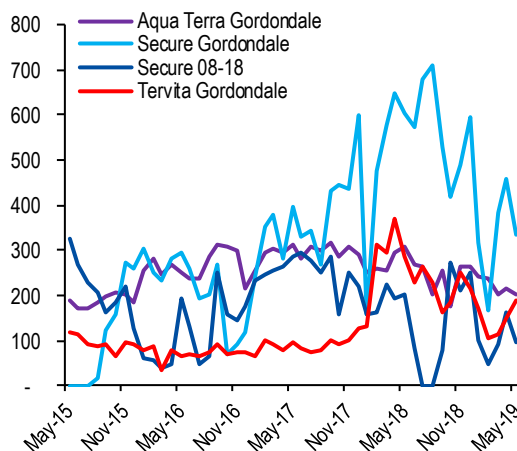
### First Party vs Third Party

Rolling Three Month Average



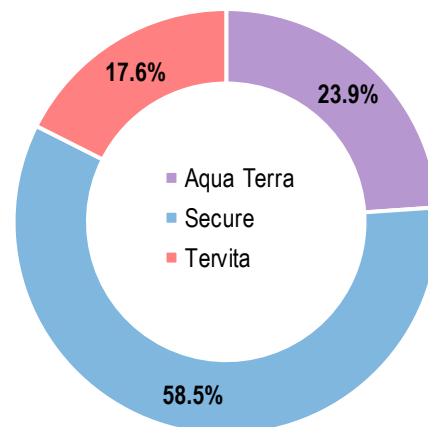
### 3<sup>rd</sup> Party Facility Injections over last Four Years

Monthly injections in m3/d

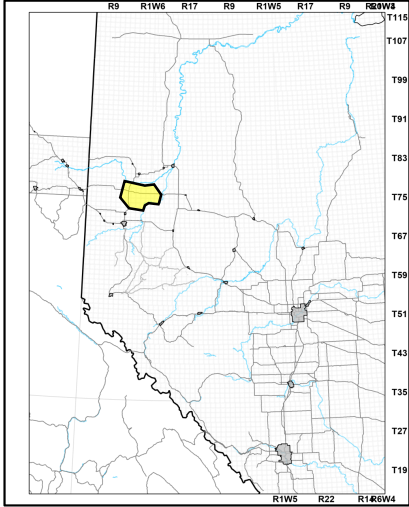


### Market Share by Company

Rolling Three Month Average



## RYCROFT



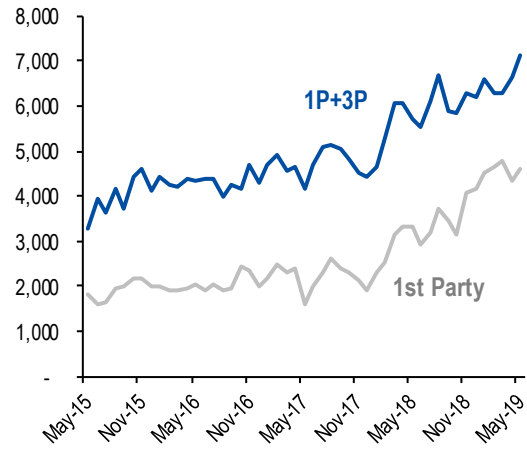
**Top 5 Rycroft Facilities by Monthly Volume**

Name	Company	Volume (m3)
Tourmaline Spirit River Inj	Tourmaline	142,963
Voda Rycroft	Voda	39,876
Secure Rycroft	Secure	36,240
Tervita Spirit River	Tervita	35,767

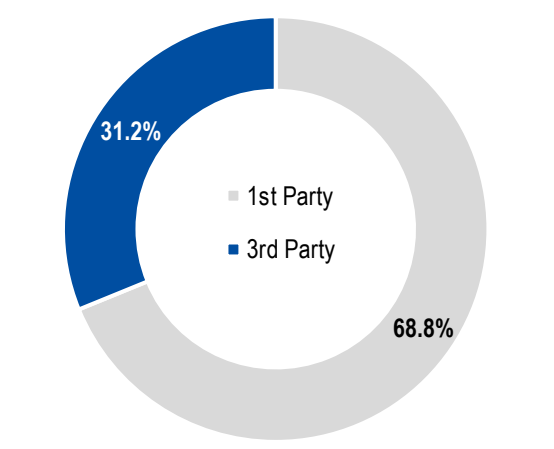
**Top 5 Rycroft Wells by Monthly Volume**

LSD	Formation	Company	Volume (m3)
100/09-01-078-07W6/0	Belloy	Tourmaline	40,481
100/14-22-077-07W6/4	Belloy	Tourmaline	31,607
100/01-31-077-05W6/2	Cadomin	Tervita	27,193
100/03-07-078-04W6/2	Gething	Secure	19,748
102/09-16-078-07W6/0	Belloy	Tourmaline	17,818

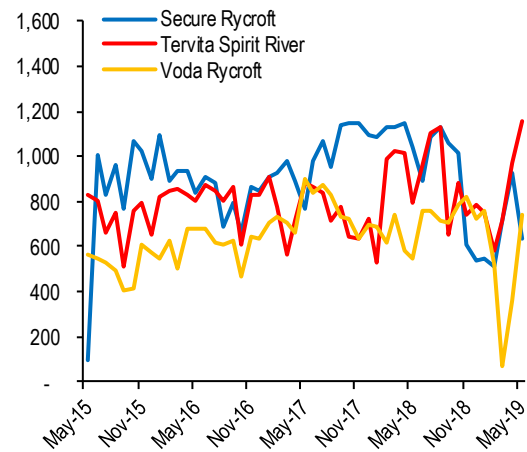
**1<sup>st</sup> Party/3<sup>rd</sup> Party Injections over last Four Years**  
Monthly Injections in m3/d



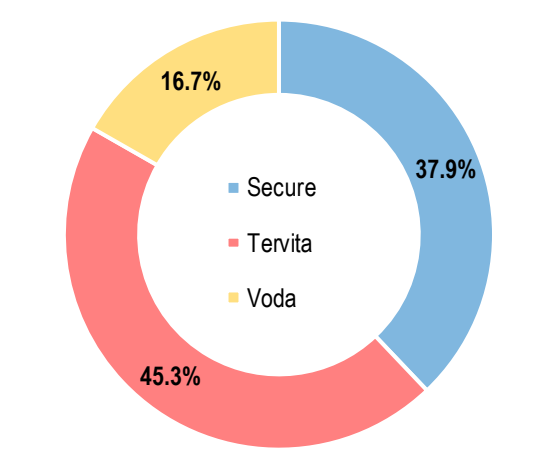
**First Party vs Third Party**  
Rolling Three Month Average



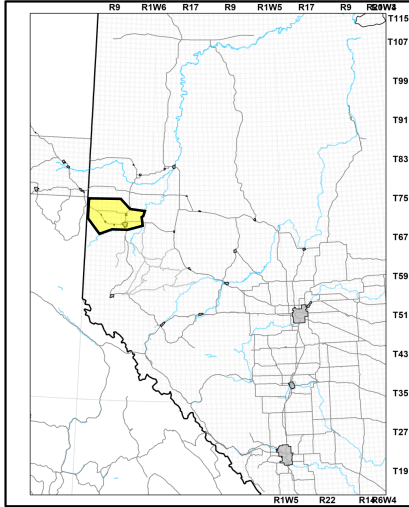
**3<sup>rd</sup> Party Facility Injections over last Four Years**  
Monthly injections in m3/d



**Market Share by Company**  
Rolling Three Month Average



## LA GLACE



### Top 5 La Glace Facilities by Monthly Volume

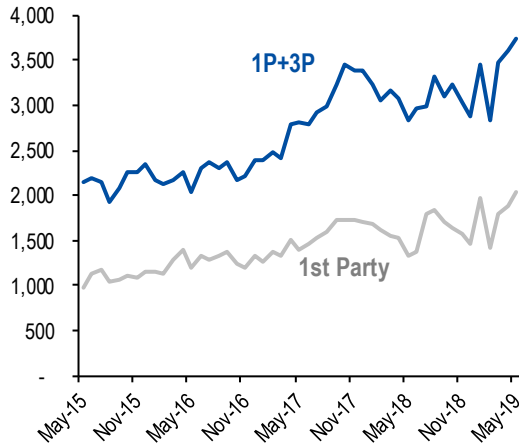
Name	Company	Volume (m3)
Tervita La Glace	Tervita	37,948
Encana Saddle Hills GP	Encana	22,210
CNRL 14-34 Disp	CNRL	12,322
Advantage Glacier GP	Advantage	11,701
Secure Emerson	Secure	9,501

### Top 5 La Glace Wells by Monthly Volume

LSD	Formation	Company	Volume (m3)
100/06-17-075-07W6/2	Montney	Encana	22,210
100/13-36-072-09W6/0	Paddy	Tervita	16,104
100/08-09-072-08W6/0	Paddy	Tervita	13,426
100/04-34-075-12W6/0	Baldonnel	Advantage	11,701
100/05-09-073-07W6/2	Halfway	Secure	9,501

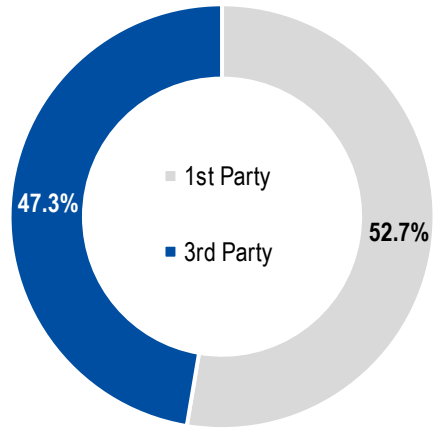
### 1<sup>st</sup> Party/3<sup>rd</sup> Party Injections over last Four Years

Monthly Injections in m3/d



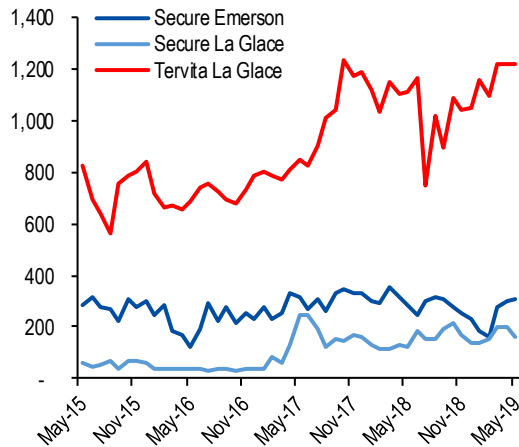
### First Party vs Third Party

Rolling Three Month Average



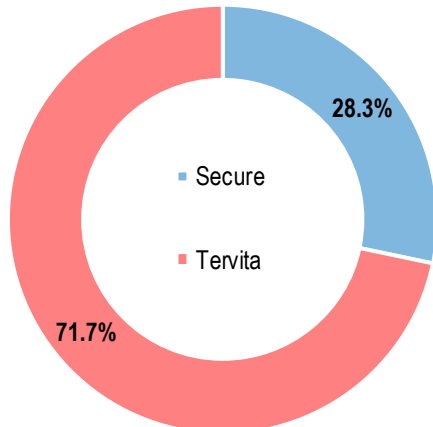
### 3<sup>rd</sup> Party Facility Injections over last Four Years

Monthly injections in m3/d



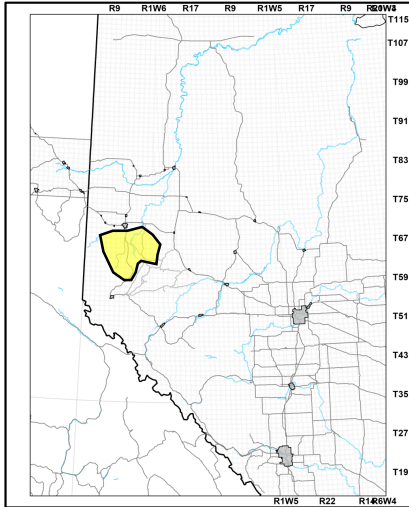
### Market Share by Company

Rolling Three Month Average





## GOLD CREEK



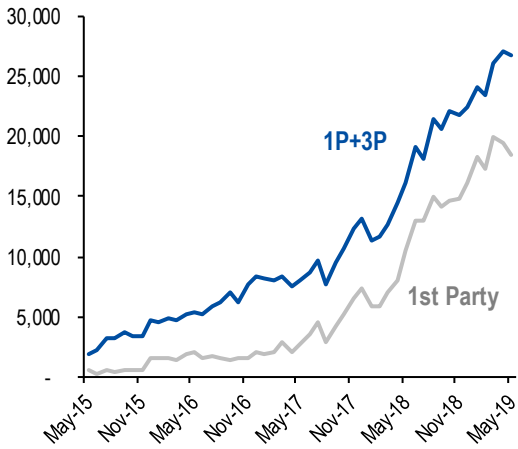
**Top 5 Gold Creek Facilities by Monthly Volume**

Name	Company	Volume (m3)
7Gens 9-10 Disp (Karr)	7Gens	117,556
7Gens 16-17 Disp (Karr)	7Gens	97,554
Hammerhead GGS (9-3)	Hammerhead	53,046
SEMCAMS 11-2 Dehy	Velvet	49,035
SEMCAMS 11-5 Dehy	Velvet	43,266

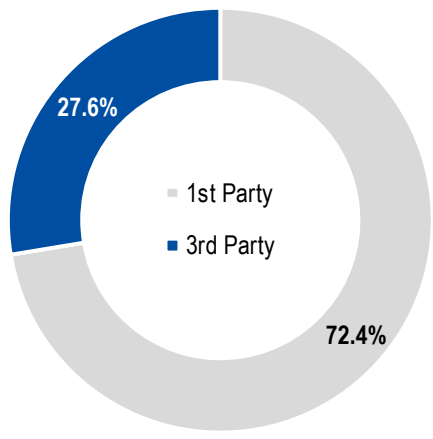
**Top 5 Gold Creek Wells by Monthly Volume**

LSD	Formation	Company	Volume (m3)
100/12-11-064-04W6/0	Winterburn	7Gens	117,556
100/05-21-064-04W6/0	Winterburn	7Gens	97,554
100/14-19-066-04W6/0	Beaverhill Lake	Paramount	26,414
100/12-04-069-02W6/2	Cadotte	SEMCAMS	36,956
1W0/05-02-064-04W6/2	Winterburn	Pembina	35,527

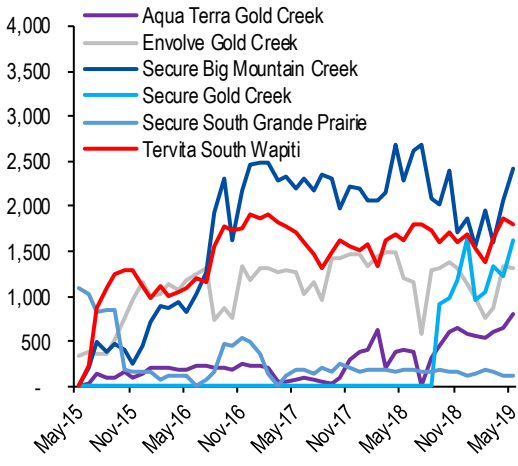
**1<sup>st</sup> Party/3<sup>rd</sup> Party Injections over last Four Years**  
Monthly Injections in m3/d



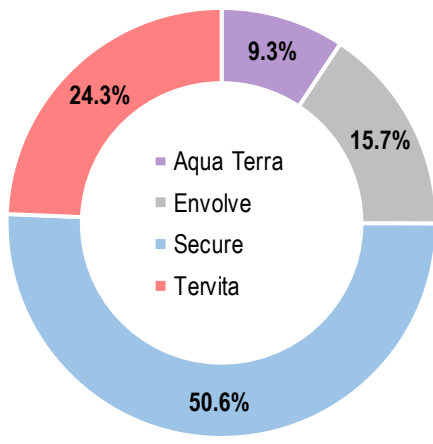
**First Party vs Third Party**  
Rolling Three Month Average



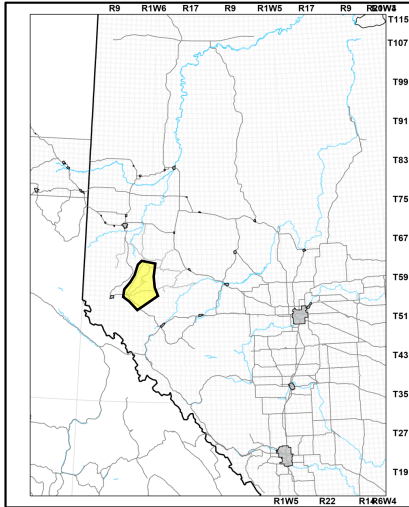
**3<sup>rd</sup> Party Facility Injections over last Four Years**  
Monthly injections in m3/d



**Market Share by Company**  
Rolling Three Month Average



## RESTHAVEN



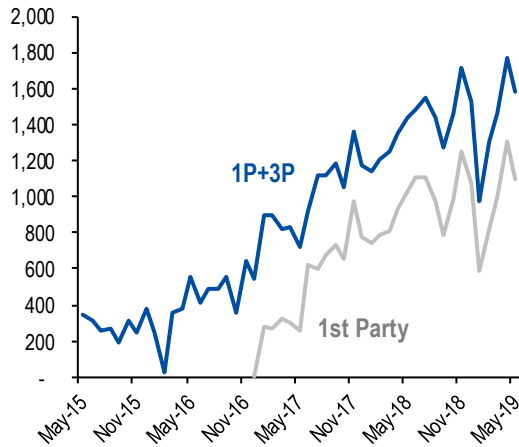
**Top 5 Resthaven Facilities by Monthly Volume**

Name	Company	Volume (m3)
Strath Jayar 06-08-062-03W6	Strath	27,718
Voda Grande Cache	Voda	15,229
Cequence 100/04-23-061-27W5/0	Cequence	2,870
XTO Resthaven 2-10-060-01W6	XTO	2,010
Cequence 100/02-21-061-26W5/2	Cequence	1,427

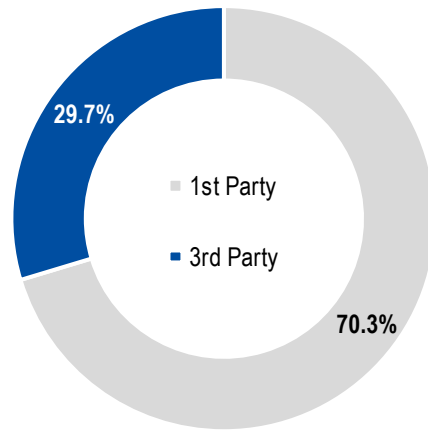
**Top 5 Resthaven Wells by Monthly Volume**

LSD	Formation	Company	Volume (m3)
100/10-07-062-03W6/0	Leduc	Strath	27,718
100/11-26-057-06W6/2	Doig/Montney	Voda	14,400
100/04-23-061-27W5/2	Paddy Cadotte	Cequence	2,870
100/11-03-060-01W6/0	Belloy	XTO	2,010
100/02-21-061-26W5/2	Cadotte	Cequence	1,427

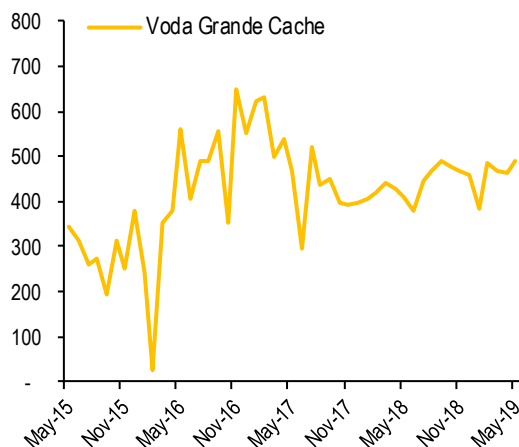
**1st Party/3rd Party Injections over last Four Years**  
Monthly Injections in m3/d



**First Party vs Third Party**  
Rolling Three Month Average



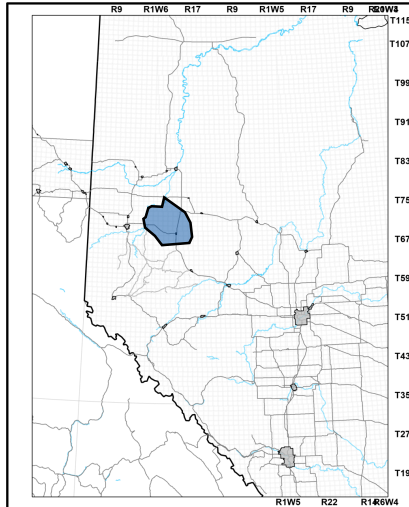
**3rd Party Facility Injections over last Four Years**  
Monthly injections in m3/d



**Market Share by Company**  
Rolling Three Month Average



## VALLEYVIEW



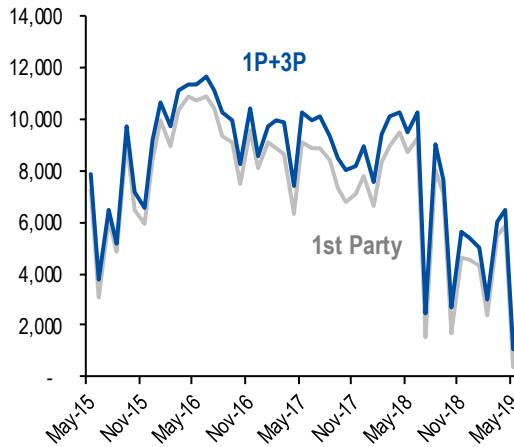
**Top 5 Valleyview Facilities by Monthly Volume**

Name	Company	Volume (m3)
Tervita Valleyview	Tervita	16,610
Long Run Snipe Lake Disp	Long Run	10,492
Tervita Valleyview (N)	Tervita	4,234
Surge 6-22 Disp	Surge	532

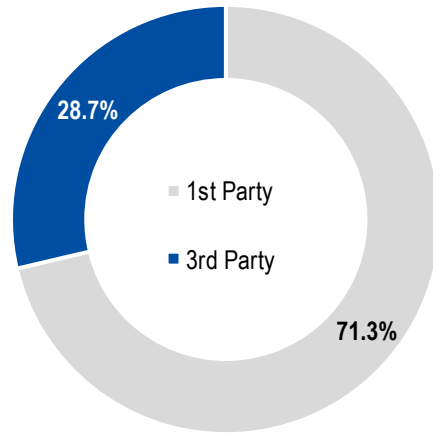
**Top 5 Valleyview Wells by Monthly Volume**

LSD	Formation	Company	Volume (m3)
100/09-16-069-22W5/0	Leduc	Tervita	14,194
100/04-10-071-18W5/2	Debolt	Long Run	6,743
100/10-04-071-18W5/2	Debolt	Long Run	3,749
100/04-21-069-22W5/0	Leduc	Tervita	3,552
100/09-16-069-22W5/0	Leduc	Tervita	2,416

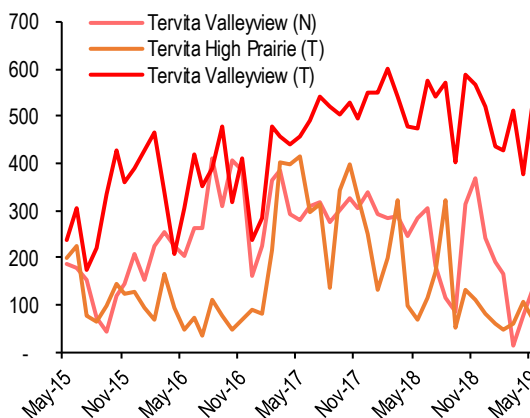
**1<sup>st</sup> Party/3<sup>rd</sup> Party Injections over last Four Years**  
Monthly Injections in m3/d



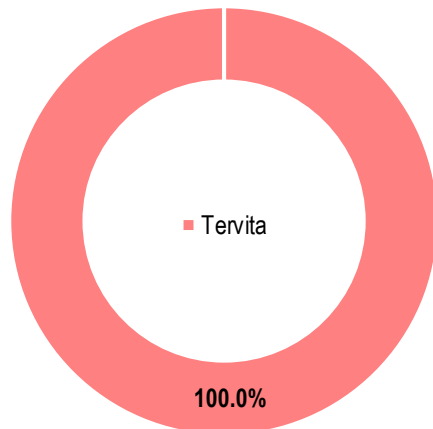
**First Party vs Third Party**  
Rolling Three Month Average



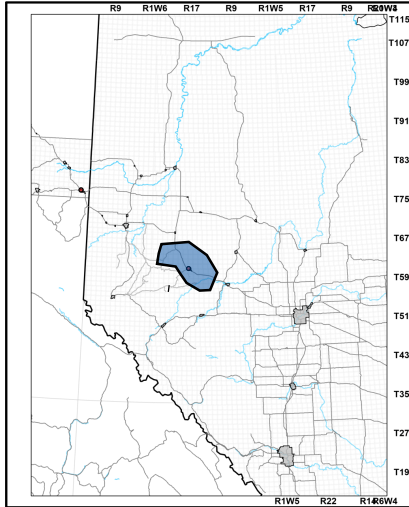
**3<sup>rd</sup> Party Facility Injections over last Four Years**  
Monthly injections in m3/d



**Market Share by Company**  
Rolling Three Month Average



## FOX CREEK



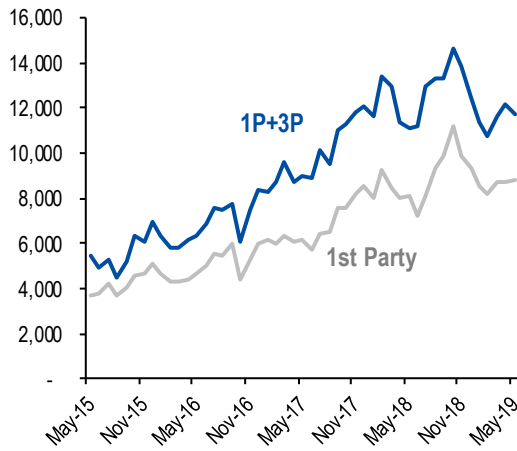
**Top 5 Fox Creek Facilities by Monthly Volume**

Name	Company	Volume (m3)
Paramount 16-7 Injection	Paramount	49,691
SEMCAMS KA	SEMCAMS	48,116
Shell 5-33 Dehy	Shell	38,742
Encana 15-31 Gas Plant	Encana	28,533
Secure Kaybob	Secure	27,215

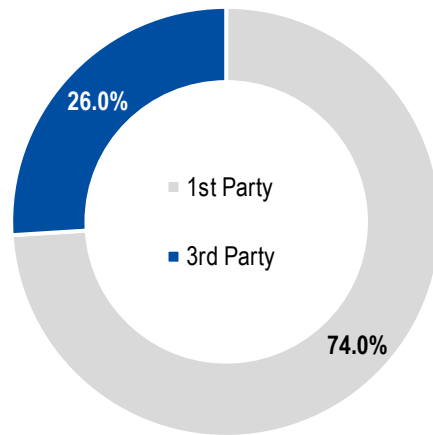
**Top 5 Fox Creek Wells by Monthly Volume**

LSD	Formation	Company	Volume (m3)
100/04-20-064-18W5/0	Debolt	Paramount	49,691
100/10-05-064-20W5/2	Debolt	Shell	38,742
100/14-06-062-19W5/0	Swan Hills	SEMCAMS	30,926
100/08-05-063-21W5/0	Debolt	Encana	28,533
100/04-09-058-17W5/0	Leduc	SEMCAMS	21,813

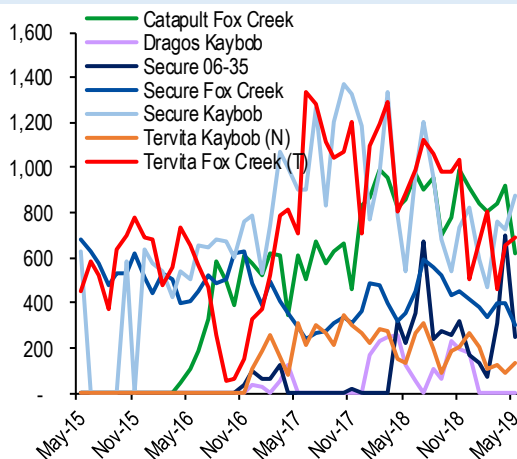
**1<sup>st</sup> Party/3<sup>rd</sup> Party Injections over last Four Years**  
Monthly Injections in m3/d



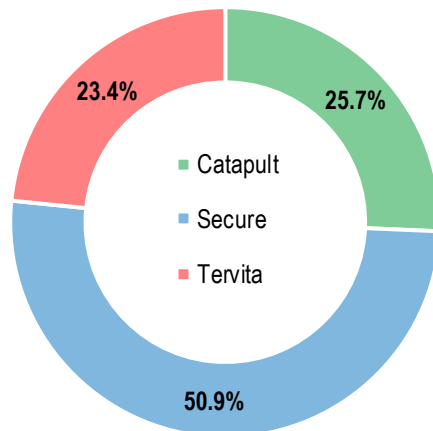
**First Party vs Third Party**  
Rolling Three Month Average



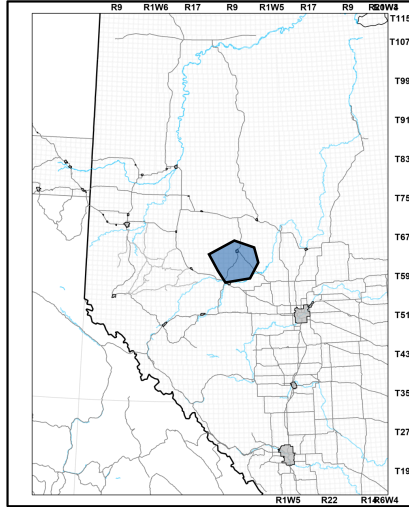
**3<sup>rd</sup> Party Facility Injections over last Four Years**  
Monthly injections in m3/d



**Market Share by Company**  
Rolling Three Month Average



## SWAN HILLS



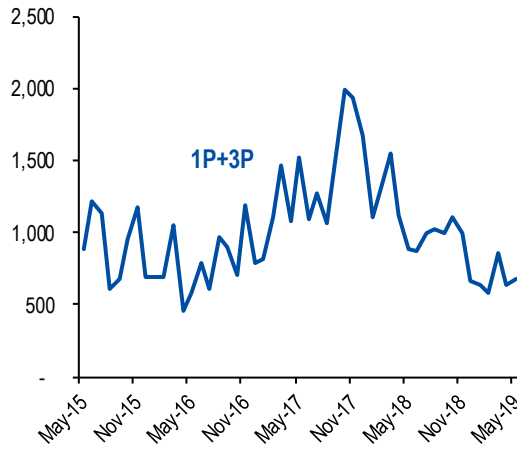
**Top 5 Swan Hills Facilities by Monthly Volume**

Name	Company	Volume (m3)
Tervita Greencourt (N)	Newalta	7,419
Secure Judy Creek	Secure	4,481
Tervita Swan Hills	Tervita	3,368
Tervita Judy Creek	Tervita	3,539
Voda Mayerthorpe	Voda	3,140

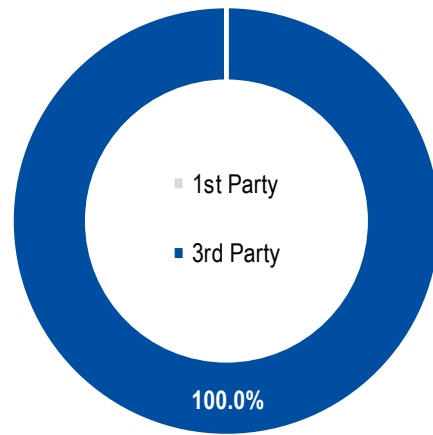
**Top 5 Swan Hills Wells**

LSD	Formation	Company	Volume (m3)
102/06-31-058-09W5/0	Pekisko	Tervita	6,587
100/06-29-063-09W5/2	Wabamun	Secure	3,496
102/06-30-063-10W5/0	Wabamun	Tervita	3,368
100/16-31-056-08W5/0	Pekisko	Voda	2,308
100/02-06-063-11W5/2	Nisku	Tervita	2,169

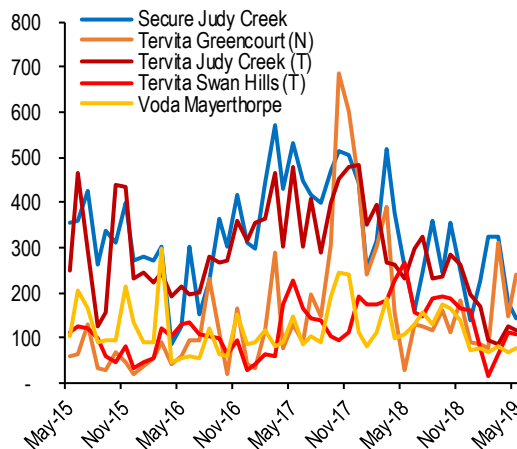
**1<sup>st</sup> Party/3<sup>rd</sup> Party Injections over last Four Years**  
Monthly Injections in m3/d



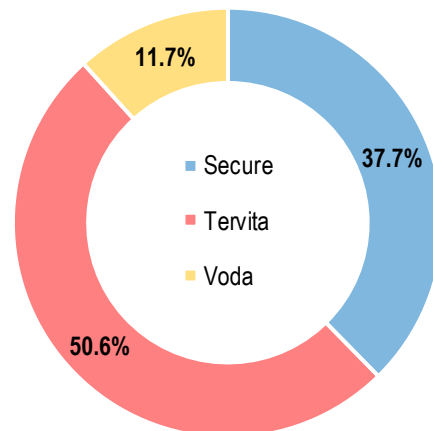
**First Party vs Third Party**  
Rolling Three Month Average



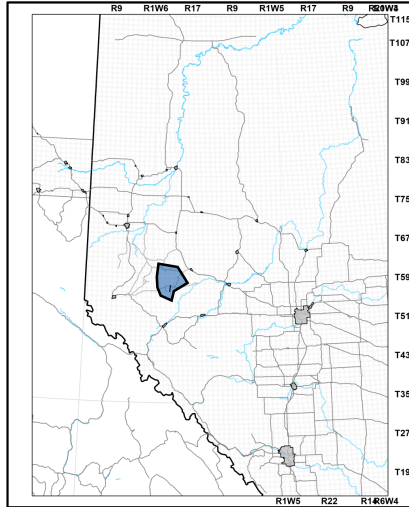
**3<sup>rd</sup> Party Facility Injections over last Four Years**  
Monthly injections in m3/d



**Market Share by Company**  
Rolling Three Month Average



## BERLAND



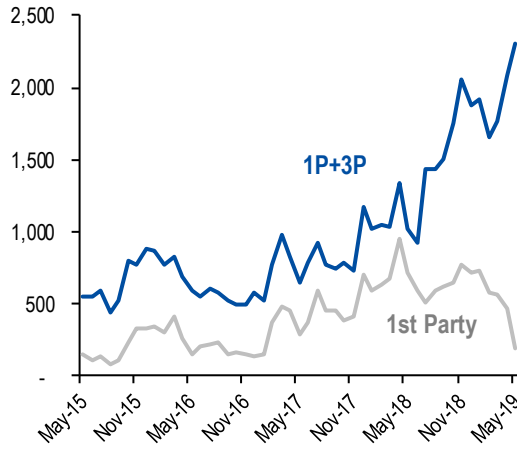
### Top 5 Berland Facilities by Monthly Volume

Name	Company	Volume (m3)
Secure Tony Creek	Secure	27,751
Catapult Berland	Catapult	26,461
Secure Wild River	Secure	11,619
CNRL Wild River (4-3 Plant)	CNRL	2,592
Delphi 16-34	Delphi	2,454

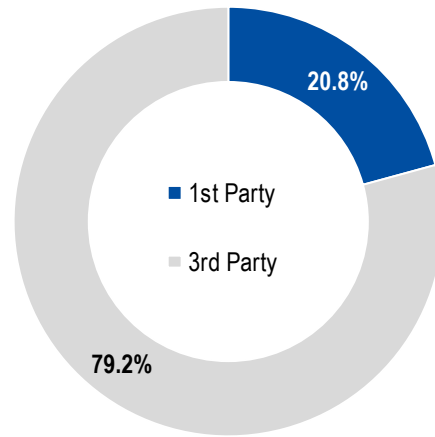
### Top 5 Berland Wells by Monthly Volume

LSD	Formation	Company	Volume (m3)
100/06-21-062-22W5/0	Blueridge	Secure	27,751
100/01-19-059-23W5/0	Leduc	Catapult	26,461
100/06-09-057-22W5/0	Nisku	Secure	11,619
100/12-29-056-22W5/0	Montney	CNRL	2,592
100/16-34-059-21W5/0	Leduc	Delphi	2,454

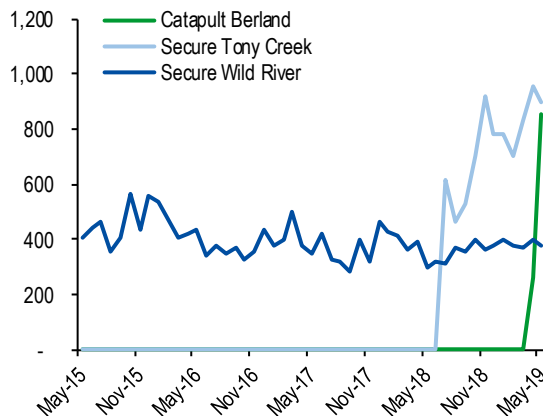
### 1<sup>st</sup> Party/3<sup>rd</sup> Party Injections over last Four Years Monthly Injections in m3/d



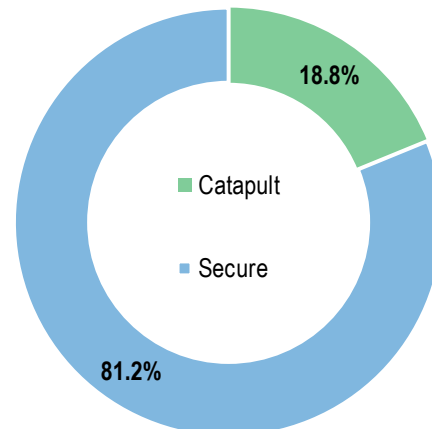
### First Party vs Third Party Rolling Three Month Average



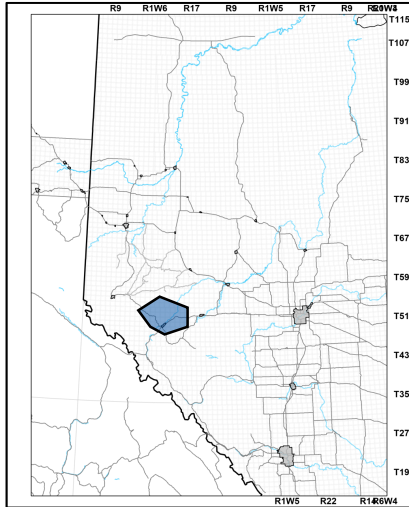
### 3<sup>rd</sup> Party Facility Injections over last Four Years Monthly injections in m3/d



### Market Share by Company Rolling Three Month Average



**OBED**



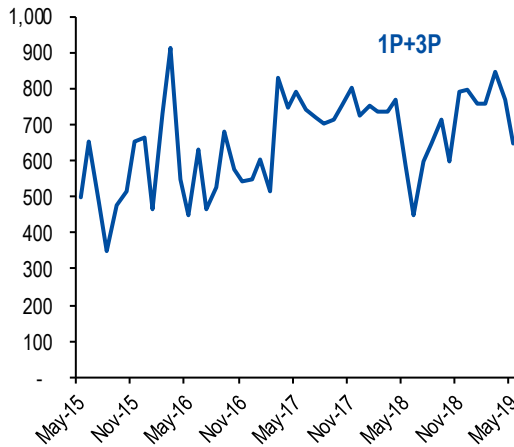
**Top 5 Obed Facilities by Monthly Volume**

Name	Company	Volume (m3)
Secure Obed (Lambert)	Secure	8,201
Secure Obed (Dalehurst)	Secure	6,953
Secure Eccles (Sundance)	Secure	4,957

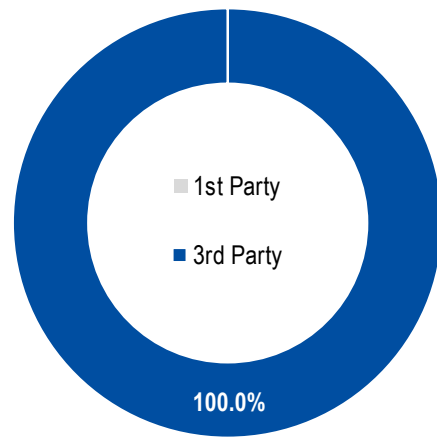
**Top 5 Obed Wells by Monthly Volume**

LSD	Formation	Company	Volume (m3)
100/09-30-052-22W5/2	Leduc	Secure	8,201
100/04-26-052-23W5/3	Leduc	Secure	6,953
100/06-24-054-23W5/0	Leduc	Secure	4,957

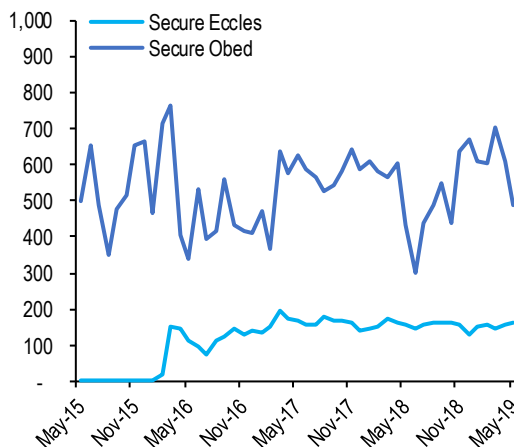
**1<sup>st</sup> Party/3<sup>rd</sup> Party Injections over last Four Years**  
Monthly Injections in m3/d



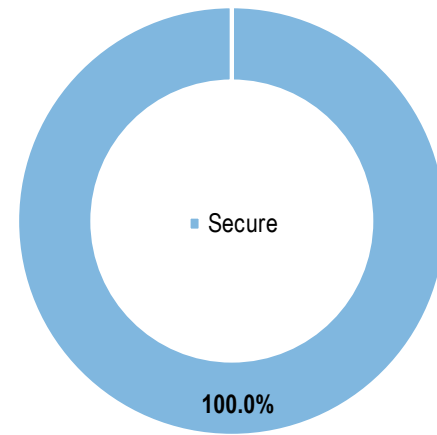
**First Party vs Third Party**  
Rolling Three Month Average



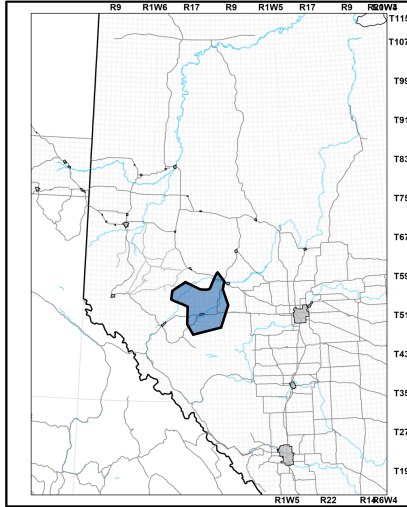
**3<sup>rd</sup> Party Facility Injections over last Four Years**  
Monthly injections in m3/d



**Market Share by Company**  
Rolling Three Month Average



## EDSON



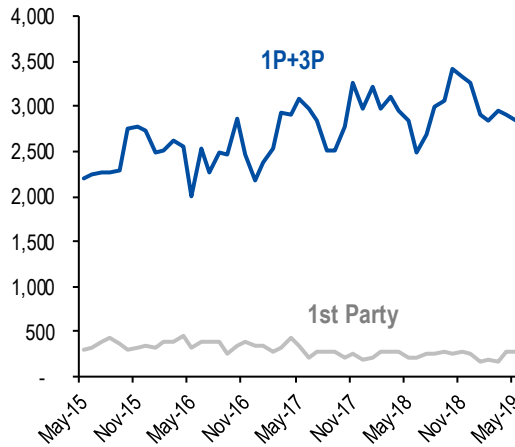
**Top 5 Edson Facilities by Monthly Volume**

Name	Company	Volume (m3)
Secure Pine Creek	Secure	24,061
Secure Nosehill	Secure	18,620
Tervita West Edson	Tervita	16,815
Tervita Moose Creek	Tervita	11,253
Tervita Niton Junction (N)	Newalta	8,856

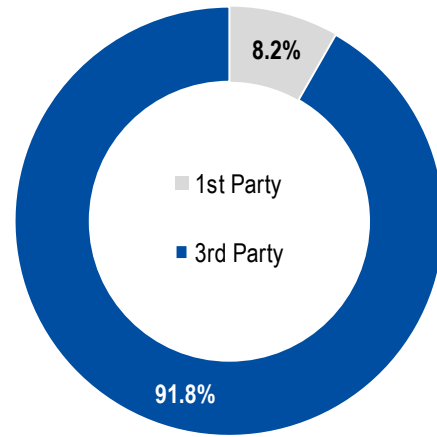
**Top 5 Edson Wells by Monthly Volume**

LSD	Formation	Company	Volume (m3)
100/08-01-055-18W5/0	Leduc	Secure	24,061
100/09-31-055-20W5/2	Leduc	Secure	18,620
100/15-16-053-19W5/0	Elkton	Tervita	14,952
100/11-19-054-17W5/0	Leduc	Repsol	7,987
100/06-13-052-16W5/2	Swan Hills	Tervita	6,778

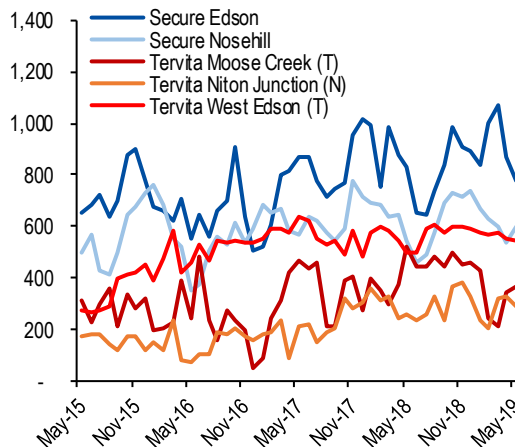
**1<sup>st</sup> Party/3<sup>rd</sup> Party Injections over last Four Years**  
Monthly Injections in m3/d



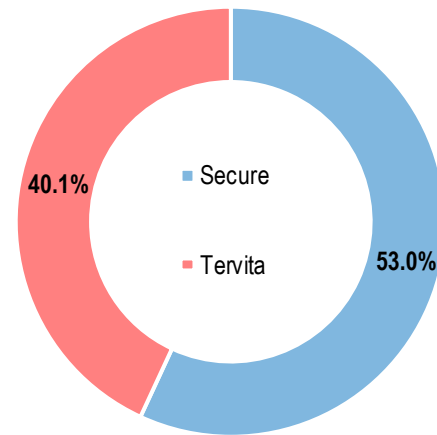
**First Party vs Third Party**  
Rolling Three Month Average



**3<sup>rd</sup> Party Facility Injections over last Four Years**  
Monthly injections in m3/d

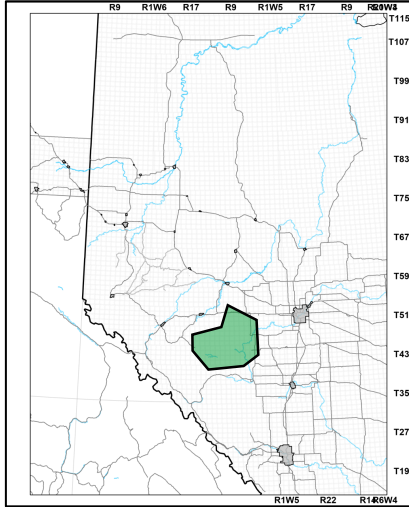


**Market Share by Company**  
Rolling Three Month Average





## DRAYTON



### Top 5 Drayton Facilities by Monthly Volume

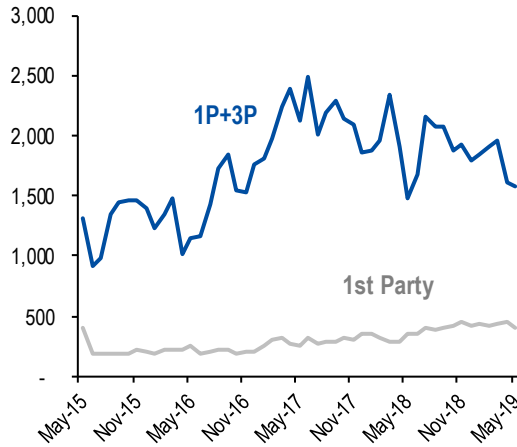
Name	Company	Volume (m3)
Secure Brazeau	Secure	17,986
Tervita Brazeau	Tervita	5,950
Secure Drayton	Secure	4,747
Journey 2-1 Inj	Journey	4,405
Westbrick 4-6 Disp	Westbrick	2,629

### Top 5 Drayton Wells by Monthly Volume

LSD	Formation	Company	Volume (m3)
100/09-26-047-11W5/2	Nisku	Secure	10,935
100/10-13-047-11W5/2	Nisku	Tervita	4,735
104/12-32-048-06W5/0	Nordegg	Secure	4,597
1W0/13-08-047-10W5/4	Nisku	Secure	4,440
100/15-01-046-04W5/0	Viking	Journey	4,405

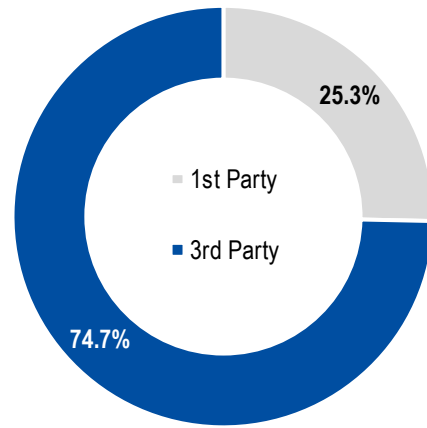
### 1st Party/3rd Party Injections over last Four Years

Monthly Injections in m3/d



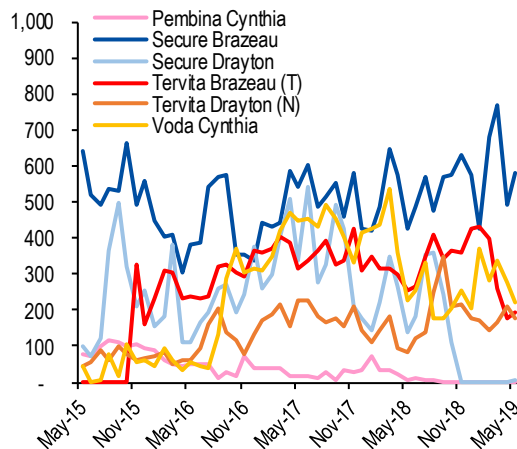
### First Party vs Third Party

Rolling Three Month Average



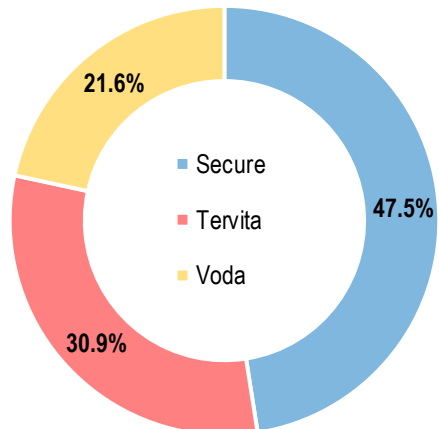
### 3rd Party Facility Injections over last Four Years

Monthly injections in m3/d

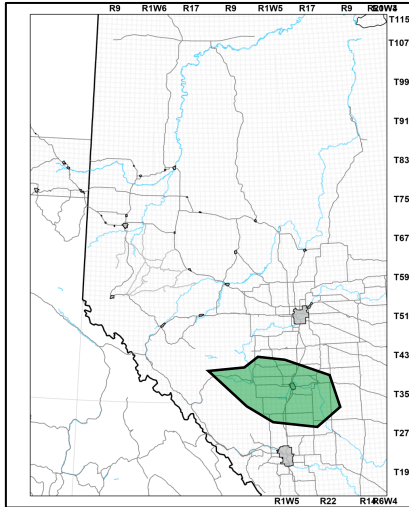


### Market Share by Company

Rolling Three Month Average



## RED DEER



### Top 5 Red Deer Facilities by Monthly Volume

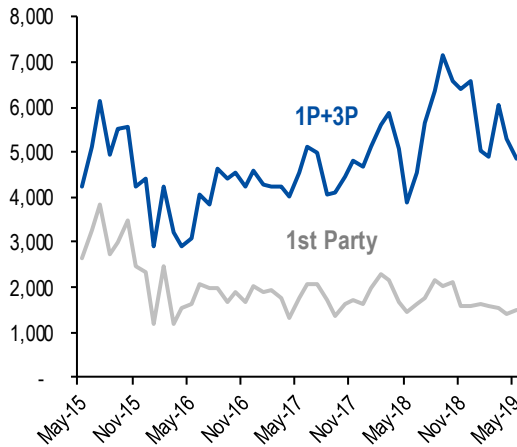
Name	Company	Volume (m3)
MROR Eckville	MROR	50,218
Secure Rocky Mountain House	Secure	31,350
Shell Caroline GP (3-30)	Shell	14,173
Tervita Eckville (N)	Tervita	12,712
Altagas Harmattan GP 9-27	Altagas	5,613

### Top 5 Red Deer Wells by Monthly Volume

LSD	Formation	Company	Volume (m3)
100/08-34-039-03W5/2	Leduc	MROR	19,991
103/04-04-040-08W5/0	Nisku	Secure	19,924
102/14-28-039-03W5/0	Leduc	MROR	16,674
102/06-29-034-05W5/2	Leduc	Shell	13,744
103/08-16-039-03W5/2	Leduc	MROR	13,552

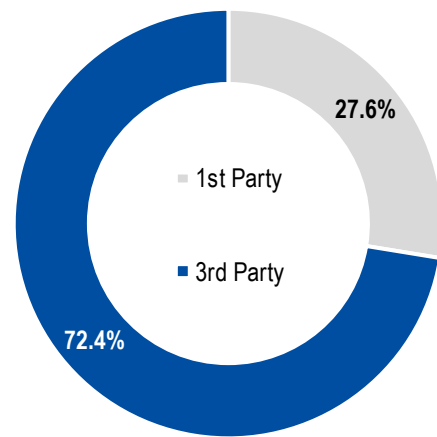
### 1st Party/3rd Party Injections over last Four Years

Monthly Injections in m3/d



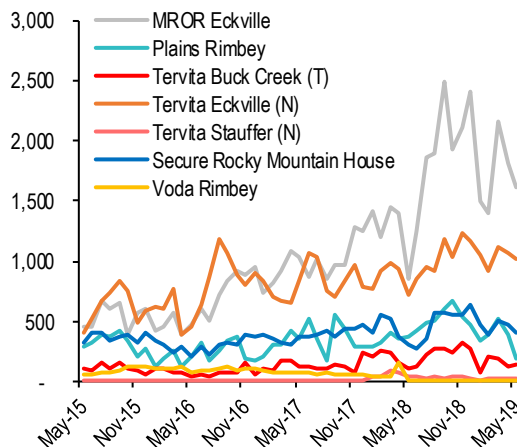
### First Party vs Third Party

Rolling Three Month Average



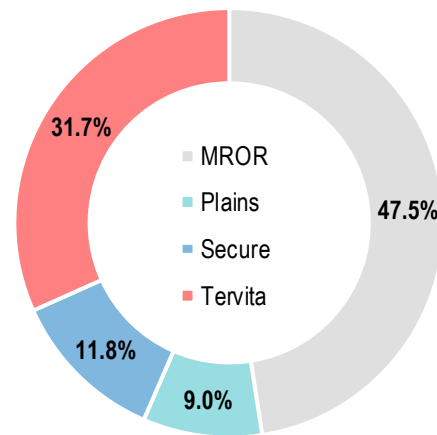
### 3rd Party Facility Injections over last Four Years

Monthly injections in m3/d



### Market Share by Company

Rolling Three Month Average



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