

2020 Oct 01

WELL INFORMATION REPORT



Well PID: 197860

Location: SW14-10-7E

UTMX:676554.3 UTM Y:5522496.6 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:266 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: CANWHITE SANDS LTD. / HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BH 10-17

Date Completed: 2018 May 15

Well Use: OBSERVATION

WATER USE: Other

Well Status: ACTIVE Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:000606; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.

AIR LIFTING. WELL COMPLETED OPEN HOLE UP TO 179 FEET. SANDSTONE

BOREHOLE WOULD NOT STAY OPEN. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	15	BROWN TILL
15.0	23	GREY TILL
23.0	40	GREY TILL
40.0	55	GREY SAND & GRAVEL
55.0	97	GREY SANDY TILL
97.0	112	GREY TILL
112.0	177	BROWN LIMESTONE
177.0	190	PURPLE / PINK SHALE
190.0	263	WHITE SANDSTONE WITH SHALE LAYERS AT 255 FEET
263.0	335	MULTI COLOURED SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	115.0	CASING	8.0	8.6		WELDED	STEEL
115.0	179.0	OPEN HOLE		7.0			

Top of Casing: 2.0 ft above ground

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WELL INFORMATION REPORT



Well PID: 197858

Location: NE15-10-7E

UTMX:676346.3 UTM Y:5523705 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:263 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: CANWHITE SANDS LTD. / HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BH 14-17

Date Completed: 2018 Jun 07

Well Use: MONITORING

WATER USE: Other

Well Status: ACTIVE Aquifer: LIMESTONE OR DOLOMITE

REMARKS:

WITN:000605; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.
FOR MONITORING AND MINERAL EXPLORATION, NO PUMPING TEST. AIR
LIFTING. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	15	BROWN TILL
15.0	87	GREY TILL
87.0	101	GREY SAND & GRAVEL
101.0	158	BROWN LIMESTONE WITH SHALE LAYERS AT 150 FEET - 158 FEET
158.0	173	PINK / PURPLE SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	103.0	CASING	8.0	8.6		WELDED	STEEL
103.0	173.0	OPEN HOLE	7.0				

Top of Casing: 2.0 ft above ground

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WELL INFORMATION REPORT



Well PID: 199966

Location: SW15-7-8E

UTMX:686352.2 UTM Y:5493625.7 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:243 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: CANWHITE SANDS LTD. / HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN 243-1/BH 15-18/DEN GRP 12

Date Completed: 2018 Oct 03

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:002454; #2650, 645 - 7TH AVENUE SW, CALGARY MB, T2P 4G8.

TEST WELL: MINERAL EXPLORATION / SAMPLING. WELL WAS SEALED AFTER SAMPLING USING ALTERNATING LAYERS OF BENTONITE HOLE PLUG AND WASHED GRAVEL. WELL CASING WAS PULLED OUT. MOC:OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	6	BROWN SAND
6.0	115	GREY TILL
115.0	164	GREY TILL WITH SOME SAND LAYERS
164.0	190	PURPLE LIMESTONE
190.0	195	RED SHALE
195.0	256	WHITE SANDSTONE
256.0	270	WHITE, GREEN SANDSTONE WITH SHALE LAYERS
270.0	275	GREEN SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	156.0	CASING	8.0	8.6		WELDED	STEEL
156.0	275.0	OPEN HOLE		6.0			
Top of Casing: 0.0 ft above ground							

WELL SEALED

Sealed Date: 2018-Oct-03

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

From	To(ft)	Outside Dia.(in)	Sealed Material
0.0	75.0		BENTONITE
75.0	100.0		PEA GRAVEL

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100.0	190.0	BENTONITE
190.0	215.0	PEA GRAVEL
215.0	275.0	BENTONITE

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Well PID: 203690

Location: SW33-7-8E

UTMX:684491.6 UTM Y:5497731.1 XY Accuracy:1 EXACT [<5M] [GPS]

Owner: CANWHITE / HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN 304

Date Completed: 2020 Jul 28

Well Use: MONITORING

WATER USE: DOMESTIC

Well Status: ACTIVE Aquifer: SANDSTONE

REMARKS:

WITN:004278; WELL MUST BE VENTED. NO ER#.MOC:DROT;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	4	SAND AND GRAVEL
4.0	7	WHITE TILL
7.0	10	BROWN TILL
10.0	85	GREY TILL
85.0	125	GREY CLAY
125.0	134	PURPLE COARSE GRAVEL
134.0	185	LIMESTONE
185.0	190	RED SHALE
190.0	218	SANDSTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	136.0	BOREHOLE		7.6			
0.0	136.0	CASING	5.0	5.5		INSERT	PVC
136.0	218.0	OPEN HOLE		4.8			
130.0	190.0	LINER	2.0	2.5		INSERT	PVC
190.0	210.0	WELL SCREEN	2.0	2.5		INSERT	PVC
0.0	136.0	SURFACE SEAL					BENTONITE
130.0	130.0	ATTACHMENT					K PACKER
185.0	185.0	ATTACHMENT					SHALE TRAP
190.0	190.0	ATTACHMENT					SHALE TRAP

Top of Casing: 2.0 ft above ground

PUMPING TEST

Date : 2020 Jul 28 Pumping 50.0 Imp. gallons/minute

Water level before test : 15.0 ft below ground

Water level at end of test : 60.0 ft below ground

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Test duration: 01:00:00

Test Zone: from 190.0 ft to 210.0 ft

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WELL INFORMATION REPORT



Well PID: 203674

Location: NW29-8-8E

UTMX:682472.5 UTM Y:5507475 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:282 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: CANWHITE/ HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU-154-2 BH 07-20

Date Completed: 2020 Jul 20

Well Use: MONITORING

WATER USE: DOMESTIC

Well Status: ACTIVE Aquifer: SANDSTONE

REMARKS:

WITN:003736; WELL MUST BE VENTED. NO ER#. MOC:DROT;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	12	BROWN SAND AND GRAVEL
12.0	72	GREY TILL
72.0	86	GREY SANDY TILL
86.0	100	GREY TILL
100.0	124	GREY SANDY TILL
124.0	180	PURPLE LIMESTONE
180.0	188	RED/GREEN SHALE
188.0	217	WHITE SANDSTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	134.0	BOREHOLE		7.6			
0.0	134.0	CASING	5.0	5.5		INSERT	PVC
134.0	217.0	OPEN HOLE		4.8			
119.0	188.0	LINER	2.0	2.5		INSERT	PVC
188.0	208.0	WELL SCREEN	2.0	2.5		INSERT	PVC
40.0	134.0	ANNULAR FILL					CEMENT
0.0	40.0	SURFACE SEAL					BENTONITE

Top of Casing: 2.0 ft above ground

PUMPING TEST

Date : 2020 Jul 20 Pumping 50.0 Imp. gallons/minute

Water level before test : 11.0 ft below ground

Water level at end of test : 115.0 ft below ground

Test duration: 01:00:00

Test Zone: from 134.0 ft to 217.0 ft

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Manitoba



Well PID: 197923

Location: SW7-10-8E

UTMX:679729.3 UTM Y:5521213.8 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:275 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: CANWHITE SANDS LTD. / HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BH2-17

Date Completed: 2018 May 11

Well Use: OTHER

WATER USE: Other

Well Status: SEALED Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:000565; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.

AIR LIFTING. BOREHOLE CAVED IN FROM 185 TO 338 FT AFTER DRILLING.

TO BE ABANDONED. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	16	BROWN GRAVELY TILL
16.0	60	BROWN GRAVEL, SOME COBBLES & SAND
60.0	71	GREY TILL
71.0	100	GREY GRAVELY, SOME SAND LAYERS
100.0	175	PINK / PURPLE LIMESTONE
175.0	186	RED / GREEN SHALE
186.0	261	WHITE SANDSTONE, SHALE LAYERS AT 253 - 261
261.0	332	MULTI COLOURED SHALE
332.0	337	WHITE SANDSTONE
337.0	338	BLACK / WHITE GRANITE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	103.0	CASING	8.0	8.6			STEEL
103.0	185.0	OPEN HOLE	7.0				
185.0	338.0	OPEN HOLE	5.0				
Top of Casing:		1.5 ft above ground					

WELL SEALED

Sealed Date: 2018-May-17

Sealed By: FRIESEN DRILLERS LTD.

Sealed Type: CONTRACTOR - DRILLER

Sealer Remarks: WELL CAVED IN. CASING CUT OFF AT 4 FT BGS.

Outside Sealed

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From	To (ft)	Dia. (in)	Material
175.0	185.0		BENTONITE
105.0	175.0		PEA GRAVEL
92.0	105.0		BENTONITE
13.0	92.0		PEA GRAVEL
0.0	13.0		CEMENT

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WELL INFORMATION REPORT



Well PID: 197862

Location: SW18-10-8E

UTMX:680113.3 UTM Y:5522306.1 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:274 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: CANWHITE SANDS LTD. / HD MINERALS LTD.

Driller: Friesen Drillers Ltd.

Well Name: BH3-17

Date Completed: 2018 May 19

Well Use: MONITORING

WATER USE: Other

Well Status: SEALED Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:000601; #2650 - 645 7TH AVENUE S.W, CALGARY AB, T2P 4G8.

AIR LIFTING. FOR MONITORING PURPOSES. NO PUMPING TEST DATA. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	20	BROWN GRAVEL WITH SAND
20.0	114	BROWN COARSE SAND WITH SHALE LAYERS
114.0	155	PINKISH PURPLE LIMESTONE
155.0	169	PINKISH PURPLE LIMESTONE WITH SHALE LAYERS
169.0	178	RED & GREEN SHALE
178.0	237	WHITE SANDSTONE
237.0	250	WHITE & GREEN SANDSTONE AND SHALE LAYERS
250.0	277	GREEN SHALE
277.0	281	YELLOW & WHITE SANDSTONE
281.0	300	RED & GREEN SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	116.0	CASING	8.0	8.6		WELDED	STEEL
116.0	141.0	OPEN HOLE		7.0			
141.0	300.0	OPEN HOLE		5.0			
0.0	220.0	LINER	2.0	2.5		INSERT	PVC
168.0	178.0	LINER		5.0			SHALE TRAP
0.0	116.0	SURFACE SEAL				HOLEPLUG	BENTONITE
172.0	172.0	ATTACHMENT					SHALE TRAP
173.0	173.0	ATTACHMENT					SHALE TRAP
174.0	174.0	ATTACHMENT					SHALE TRAP
Top of Casing:		2.0 ft above ground					

WELL SEALED

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Manitoba



Sealed Date: 2020-Jun-18

Sealed By: FRIESEN DRILLERS LTD.

Sealed Type: CONTRACTOR - DRILLER

Sealer Remarks: CASING CUT OFF 2 FT BGS. 0-220FT BENTONITE HOLEPLUG (INSIDE 2 INCH LINER).

		Outside	Sealed
From	To(ft)	Dia.(in)	Material
0.0	40.0		BENTONITE
40.0	65.0		PEA GRAVEL
65.0	70.0		BENTONITE
70.0	85.0		PEA GRAVEL
85.0	90.0		BENTONITE
90.0	105.0		PEA GRAVEL
105.0	155.0		BENTONITE
0.0	220.0		BENTONITE

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WELL INFORMATION REPORT



Well PID: 200818

Location: SW19-10-8E

UTMX:679908.3 UTM Y:5524068.7 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:277 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS/ CANWHITE SANDS

Driller: Friesen Drillers Ltd.

Well Name: SITE 1 82-9

Date Completed: 2019 May 01

Well Use: MONITORING

WATER USE: COMM/INDUST

Well Status: ACTIVE Aquifer: SANDSTONE

REMARKS:

WITN:002534; 2650-645 7TH AVE SW, CALGARY AB, T2P 4G8. NESTED
MONITORING WELL 5 INCH WELL COMPLETED IN CARBONATE (2534 CARBONATE).
2 INCH WELL COMPLETED IN SANDSTONE (2534 SANDSTONE). MOC:ROTM;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	1	ORGANICS
1.0	15	BROWN TILL
15.0	88	GREY TILL
88.0	170	LIMESTONE
170.0	176	RED/ GREEN SHALE
176.0	195	WHITE SANDSTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	89.0	BOREHOLE		7.9			
0.0	89.0	CASING	5.0	5.5		INSERT	PVC
0.0	176.0	CASING	2.0	2.5		INSERT	PVC
176.0	186.0	WELL SCREEN	2.0	2.5		INSERT	PVC
176.0	176.0	SHALE TRAP					
170.0	176.0	ANNULAR FILL					BENTONITE
0.0	89.0	SURFACE SEAL				HOLEPLUG	BENTONITE
Top of Casing: 3.0 ft above ground							

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WELL INFORMATION REPORT

Manitoba



Well PID: 204171

Location: SW14-10-7E

UTMX:676636.6 UTMZ:5522358 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:266 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: CANWHITE SANDS LTD. / HD MINERALS LTD.

Driller: Friesen Drillers Ltd.

Well Name: BH 10B-17

Date Completed: 2018 May 19

Well Use: MONITORING

WATER USE: Other

Well Status: ACTIVE

Aquifer: SANDSTONE

REMARKS:

WITN:000703; WELL ORIGINALLY CONSTRUCTED ON 2017-12-08, OLD PID 196242. FOR MONITORING PURPOSES, NO PUMPING TEST DATA, WATER USE:MINERAL EXPLORATION, 3 SHALE TRAP BETWEEN 182 TO 192 FT - NO DEPTHS PROVIDED INPUTTED THE 3 SHALE TRAPS IN MIDDLE OF THIS SECTION. MOC: ROTM.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	12	BROWN TILL
12.0	22	BROWN GRAVEL
22.0	122	GREY LIMESTONE
122.0	182	BROWN SHALE
182.0	192	RED & GREEN SHALE
192.0	238	WHITE SANDSTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	122.0	BOREHOLE		7.9			
122.0	238.0	BOREHOLE		5.0			
0.0	122.0	CASING	5.0	5.5		INSERT	PVC
0.0	220.0	LINER	2.0	2.5		INSERT	PVC
182.0	192.0	LINER		5.0			PVC
0.0	122.0	ANNULAR FILL					BENTONITE
186.0	186.0	ATTACHMENT					SHALE TRAP
187.0	187.0	ATTACHMENT					SHALE TRAP
188.0	188.0	ATTACHMENT					SHALE TRAP

Top of Casing: 2.0 ft above ground

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WELL INFORMATION REPORT



Well PID: 204173

Location: SW19-10-8E

UTMX:680025.3 UTM Y:5523969.1 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:277 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: CANWHITE SANDS LTD / HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BH 9B-17

Date Completed: 2018 Jun 06

Well Use: MONITORING

Well Status: ACTIVE Aquifer: SANDSTONE

REMARKS:

WITN:000702; WELL ORIGINALLY CONSTRUCTED ON 2017-12-07, OLD PID 196243. WELL FOR MONITORING AND EXPLORATION, NO PUMP TEST DATA, 3 SHALE TRAP BETWEEN 170 TO 180 FT - NO DEPTHS PROVIDED INPUTTED THE SHALE TRAPS IN MIDDLE OF THIS SECTION. MOC:ROTM.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	18	BROWN TILL
18.0	84	GREY TILL
84.0	170	BROWN LIMESTONE
170.0	180	RED & GREEN SHALE
180.0	238	WHITE SANDSTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	122.0	BOREHOLE		7.9			
0.0	122.0	CASING	5.0	5.5		INSERT	PVC
122.0	238.0	OPEN HOLE		4.8			
0.0	122.0	ANNULAR FILL					BENTONITE
0.0	225.0	LINER	2.0	2.5		INSERT	PVC
174.0	174.0	ATTACHMENT					SHALE TRAP
175.0	175.0	ATTACHMENT					SHALE TRAP
176.0	176.0	ATTACHMENT					SHALE TRAP

Top of Casing: 2.0 ft above ground

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WELL INFORMATION REPORT



Well PID: 203688

Location: SW19-10-8E

UTMX:679808 UTMX:5524033.1 XY Accuracy:1 EXACT [<5M] [GPS]

Owner: CANWHITE / HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 82-11 BH 17-19

Date Completed: 2019 Aug 16

Well Use: TEST WELL

WATER USE: COMM/INDUST, Other

Well Status: SEALED Aquifer: SANDSTONE

REMARKS:

WITN:003263; SEALING REMARKS: A CEMENT PLUG OF 12 FT WAS PLACE
INSIDE THE CASING TO PERMANENTLY PREVENT VERTICAL MOVEMENT WITH
A TREMIE LINE AS PER DRILLING REGULATION 1992 SPECIFICATION SECTION
7B. SEALING AT 173 FT-MECHANICAL PLUG MOC:DROT;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	1	ORGANICS
1.0	19	BROWN FILL
19.0	89	GREY TILL
89.0	91	LIMESTONE RUBBLE
91.0	168	LIMESTONE
168.0	174	SHALE
174.0	178	SANDSTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	178.0	CASING	10.0	10.6		WELDED	STEEL
0.0	92.0	CASING	16.0	16.6		WELDED	STEEL
0.0	160.0	BOREHOLE		15.6			
0.0	160.0	SURFACE SEAL					CEMENT

Top of Casing: 3.0 ft above ground

WELL SEALED

Sealed Date: 2020-Aug-21

Sealed By: CANWHITE SANDS CORP

Sealed Type:

Sealer Remarks: CASING CUT OFF AT 3 FT BGS. SEE REMARKS FOR MORE SEALING REMARKS.

From	To(ft)	Outside Dia.(in)	Sealed Material
0.0	4.0		CEMENT

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0.0	4.0	GRAVEL
0.0	4.0	BACKFILL
4.0	9.0	BENTONITE
9.0	82.0	PEA GRAVEL
82.0	85.0	BENTONITE
85.0	151.0	PEA GRAVEL
151.0	156.0	BENTONITE
156.0	168.0	CEMENT
168.0	173.0	BENTONITE
173.0	173.0	OTHER

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WELL INFORMATION REPORT



Well PID: 199982

Location: SW19-10-8E

UTMX:679941.8 UTMY:5524035.4 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:277 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: CANWHITE SANDS LTD. / HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 82-5 / BH 6-18

Date Completed: 2018 Sep 28

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: SANDSTONE

REMARKS:

WITN:002472; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.

PRODUCTION AND OTHER: MINERAL EXPLORATION / SAMPLING. AIR LIFTING.

PUMPING TEST AT HIGHER DISCHARGE RATES TO BE COMPLETED. MOC:DROT.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	18	BROWN TILL
18.0	83	GREY TILL
83.0	167	BROWN LIMESTONE
167.0	177	RED, GREEN SHALE
177.0	244	WHITE SANDSTONE
244.0	250	RED SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	85.0	CASING	23.5	24.0		WELDED	STEEL
85.0	158.0	OPEN HOLE	23.0				
0.0	180.0	LINER	19.5	20.0		WELDED	STEEL
0.0	190.0	LINER	15.5	16.0		WELDED	STEEL
190.0	250.0	LINER	15.5	16.0		WELDED	STEEL
0.0	85.0	SURFACE SEAL	20.0	23.5		HOLEPLUG	BENTONITE
0.0	170.0	SURFACE SEAL	16.0	19.5		HOLEPLUG	BENTONITE

Top of Casing: 0.0 ft above ground

WELL SEALED

Sealed Date: 2020-Jun-18

Sealed By: FRIESEN DRILLERS LTD.

Sealed Type: CONTRACTOR - DRILLER

Sealer Remarks: CASING CUT OFF AT 2 FT BGS.

Outside Sealed

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From	To(ft)	Dia.(in)	Material
0.0	40.0		BENTONITE
40.0	65.0		PEA GRAVEL
65.0	70.0		BENTONITE
70.0	85.0		PEA GRAVEL
85.0	90.0		BENTONITE
90.0	105.0		PEA GRAVEL
105.0	150.0		BENTONITE
150.0	175.0		PEA GRAVEL
175.0	190.0		BENTONITE
190.0	230.0		PEA GRAVEL
230.0	250.0		BENTONITE

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WELL INFORMATION REPORT



Well PID: 197859

Location: SW19-10-8E

UTMX:679884.9 UTM Y:5524057.9 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:277 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: CANWHITE SANDS LTD. / HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU9

Date Completed: 2018 Jun 05

Well Use: OTHER

WATER USE: Other

Well Status: SEALED Aquifer: OTHER

REMARKS:

WITN:000712; #2650 - 645 7TH AVENUE S.W., CALGARY AB, T2P 5G8.

PUMP TEST DONE AFTER DRILLING TO 160 FT. MOC:DROT;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	25	BROWN TILL
25.0	84	GREY TILL
84.0	166	BROWN LIMESTONE
166.0	171	RED SHALE
171.0	242	WHITE SANDSTONE
242.0	247	WHITE HARD SANDSTONE LAYERS
247.0	250	GREEN SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	87.0	CASING	12.0	12.5		WELDED	STEEL
87.0	160.0	OPEN HOLE	12.0				
0.0	187.0	CASING	8.0	8.6		WELDED	STEEL
0.0	217.0	LINER	6.0	6.6		WELDED	STEEL
217.0	238.0	LINER	6.0	6.6		WELDED	STEEL
238.0	250.0	OPEN HOLE		4.0			
165.0	170.0	ANNULAR FILL	6.6	8.0			CEMENT

Top of Casing: 2.0 ft above ground

PUMPING TEST

Date : 2018 Jun 05 Pumping 360.0 Imp. gallons/minute

Water level before test : 15.9 ft below ground

Water level at end of test : 27.2 ft below ground

Test duration: 1:00:00

Test Zone: from 87.0 ft to 250.0 ft

2020 Oct 01

WELL INFORMATION REPORT



WELL SEALED

Sealed Date: 2020-Jun-17

Sealed By: FRIESEN DRILLERS LTD.

Sealed Type: CONTRACTOR - DRILLER

Sealer Remarks: CASING CUT OFF AT 2 FT BGS

		Outside	Sealed
From	To(ft)	Dia.(in)	Material
0.0	40.0		BENTONITE
40.0	65.0		PEA GRAVEL
60.0	70.0		BENTONITE
70.0	85.0		PEA GRAVEL
85.0	90.0		BENTONITE
90.0	105.0		PEA GRAVEL
105.0	150.0		BENTONITE
150.0	175.0		PEA GRAVEL
175.0	190.0		BENTONITE
190.0	230.0		PEA GRAVEL
230.0	250.0		BENTONITE

2020 Oct 01
WELL INFORMATION REPORT



Well PID: 197863

Location: SW19-10-8E

UTMX:679884.9 UTMY:5524057.9 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:277 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: CANWHITE SANDS LTD. / HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BH9-17

Date Completed: 2018 Jun 13

Well Use: OTHER

WATER USE: Other

Well Status: ACTIVE Aquifer: SANDSTONE

REMARKS:

WITN:000564; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.

FOR MINERAL EXPLORATION, AIR LIFTING, CONSTRUCTION REPORT INDICATED

SHALE TRAPS BETWEEN 176-170FT

MOC:DROT,OTHR:RC;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	12	BROWN TILL
12.0	20	BROWN SANDY TILL
20.0	83	GREY TILL
83.0	164	PINKISH PURPLE LIMESTONE
164.0	250	MULTI SHALE
250.0	257	MULTI SANDSTONE WITH SHALE LAYERS (252-257 FT)
257.0	315	WHITE SHALE
315.0	325	BLACK SANDSTONE
325.0	326	GRANITE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	86.0	CASING	8.0	8.6		WELDED	STEEL
86.0	170.0	OPEN HOLE		7.0			
170.0	326.0	OPEN HOLE		5.0			
0.0	176.0	LINER	4.0			WELDED	STEEL
160.0	170.0	ANNULAR FILL					CEMENT
80.0	160.0	ANNULAR FILL					PEAGRAVEL
0.0	80.0	SURFACE SEAL					CEMENT
173.0	173.0	ATTACHMENT					SHALE TRAP
174.0	174.0	ATTACHMENT					SHALE TRAP

Top of Casing: 2.0 ft above ground

2020 Oct 01

WELL INFORMATION REPORT



Well PID: 203678

Location: SW19-10-8E

UTMX:679843.9 UTMX:5524056.6 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:277 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: CANWHITE SANDS/ HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 82-14 BH 17-19

Date Completed: 2019 Aug 26

Well Use: OTHER

WATER USE: Other

Well Status: SEALED Aquifer: SANDSTONE

REMARKS:

WITN:003227; WELL USE & WATER USE:MINERAL EXPLORATION. SEALING
 REMARKS: A CEMENT PLUG OG 10 FT WAS PLACED INSIDE THE CASING
 TO PERMANENTLY PREVENT VERTICAL MOVEMENT WITH A TREMIE LINE AS
 PER DRILLING REGULATION 1992 SPECIFICATION SECTION 7B. MOC:ROTM
 DROT;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	30	BROWN TILL
30.0	85	GREY TILL
85.0	162	BROWN LIMESTONE
162.0	169	GREEN AND RED SHALE
169.0	218	WHITE SANDSTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	155.0	BOREHOLE	14.8				
0.0	197.0	CASING	10.0	10.6		WELDED	STEEL
0.0	155.0	SURFACE SEAL					CEMENT
0.0	155.0	SURFACE SEAL					GRAVEL
197.0	218.0	OPEN HOLE	8.8				

Top of Casing: 2.0 ft above ground

WELL SEALED

Sealed Date: 2020-Aug-20

Sealed By: CANWHITE SANDS CORP

Sealed Type:

Sealer Remarks: CASING CUT OFF AT 3 FT BGS. SEE REMARKS FOR MORE SEALING REMARKS.

Outside Sealed

From	To(ft)	Dia.(in)	Material
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WELL INFORMATION REPORT



0.0	4.0	CEMENT
0.0	4.0	GRAVEL
0.0	4.0	OTHER
4.0	9.0	BENTONITE
9.0	76.0	PEA GRAVEL
76.0	90.0	GRAVEL
90.0	154.0	PEA GRAVEL
154.0	159.0	BENTONITE
159.0	169.0	CEMENT
169.0	172.0	BENTONITE
172.0	172.0	OTHER

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WELL INFORMATION REPORT



Well PID: 203699

Location: NW19-11-8E

UTMX:679454.5 UTM Y:5535132.4 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:260 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: CANWHITE / HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 82-10 BH 17-19

Date Completed: 2019 Aug 09

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: UNKNOWN

REMARKS:

WITN:003264; LAT AND LONG INTERSECT ON HIGHWAY 302, GPS IS INBETWEEN LEGALS. SEALING REMARKS: A CEMENT PLUG OF 13 FT WAS PLACED INSIDE THE CASING TO PERMANENTLY PREVENT VERTICAL MOVEMENT WITH A TREMIE LINE AS PER DRILLING REGULATION 1992 SPECIFICATION SECTION 7B.

MOC:DROT;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	1	ORGANICS
1.0	19	BROWN TILL
19.0	85	GREY TILL
85.0	91	LIMESTONE RUBBLE
91.0	168	PURPLE LIMESTONE
168.0	177	RED AND GREEN SHALE
177.0	182	WHITE SANDSTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	182.0	BOREHOLE		7.6			
0.0	91.0	CASING	12.0	12.6		WELDED	STEEL
0.0	182.0	CASING	10.0	10.6		WELDED	STEEL
0.0	91.0	SURFACE SEAL					CEMENT

Top of Casing: 3.0 ft above ground

WELL SEALED

Sealed Date: 2020-Aug-23

Sealed By: CANWHITE SANDS CORP

Sealed Type:

Sealer Remarks: CASING CUT OFF AT 3 FT BGS. SEE REMARKS FOR MORE SEALING REMARKS.

Outside Sealed

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WELL INFORMATION REPORT

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From	To (ft)	Dia. (in)	Material
0.0	4.0		CEMENT
0.0	4.0		GRAVEL
0.0	4.0		OTHER
4.0	9.0		BENTONITE
9.0	83.0		PEA GRAVEL
83.0	90.0		BENTONITE
90.0	148.0		PEA GRAVEL
148.0	152.0		BENTONITE
152.0	165.0		CEMENT
165.0	175.0		BENTONITE
175.0	175.0		OTHER

2020 Oct 01
WELL INFORMATION REPORT



Well PID: 199983

Location: SW13-5-6E

UTMX:669253.6 UTMY:5473500.5 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:291 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN 57-1/BH 12-18/ DEN GRP 5

Date Completed: 2018 Sep 27

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: SHALE

REMARKS:

WITN:002452; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.
MINERAL EXPLORATION / SAMPLING. WELL WAS SEALED AFTER SAMPLING
USING ALTERNATING LAYERS OF BENTONITE HOLE PLUG AND WASHED PEA
GRAVEL. WELL CASING WAS PULLED OUT AS PART OF WELL SEALING. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	25	BROWN GRAVEL WITH SOME SAND
25.0	194	GREY TILL
194.0	205	BROWN TILL
205.0	320	BROWN LIMESTONE
320.0	325	RED, GREEN SHALE
325.0	405	WHITE SANDSTONE
405.0	415	GREEN SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	207.0	CASING	8.0	8.6		WELDED	STEEL
207.0	322.0	OPEN HOLE		7.9			
322.0	415.0	OPEN HOLE		6.0			

Top of Casing: 0.0 ft above ground

WELL SEALED

Sealed Date: 2018-Sep-27

Sealed By: FREISEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

From	To(ft)	Outside Dia.(in)	Sealed Material
0.0	50.0		BENTONITE
50.0	75.0		PEA GRAVEL

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75.0	150.0	BENTONITE
150.0	175.0	PEA GRAVEL
175.0	415.0	BENTONITE

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WELL INFORMATION REPORT



Well PID: 199976

Location: SW13-6-6E

UTMX:669149 UTM Y:5483394.3 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:278 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN 84-1/BH 25-18/DEN GRP 8

Date Completed: 2019 Feb 06

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:002465; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.

MINERAL EXPLORATION. WELL WAS SEALED AFTER SAMPLING USING ALTERNATING LAYERS OF BENTONITE HOLE PLUG AND WASHED PEA GRAVEL. WELL CASING WAS PULLED OUT AS PART OF WELL SEALING. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	1	ORGANICS
1.0	155	GREY TILL
155.0	165	BROWN TILL
165.0	271	LIMESTONE
271.0	295	RED / GREEN SHALE
295.0	350	YELLOW SANDSTONE
350.0	355	RED SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	165.0	CASING	8.0	8.5		WELDED	STEEL
165.0	271.0	OPEN HOLE	7.9				
271.0	355.0	OPEN HOLE	6.0				

Top of Casing: 3.0 ft above ground

WELL SEALED

Sealed Date: 2019-Feb-06

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

Sealer Remarks: JONATHAN BRELLIS / GREG HARDER.

From	To(ft)	Outside Dia.(in)	Sealed Material
0.0	75.0		BENTONITE

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75.0	100.0	PEA GRAVEL
100.0	200.0	BENTONITE
200.0	225.0	PEA GRAVEL
225.0	355.0	BENTONITE

2020 Oct 01
WELL INFORMATION REPORT



Well PID: 200824

Location: SE14-6-6E

UTMX:668787.6 UTM Y:5483383.1 XY Accuracy:2 VERY ACCURATE [<50M] [ORTHO MAPPED]

UTMZ:274 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN 209-1/BH 26-18/DEN GRP 14

Date Completed: 2019 Feb 18

Well Use: TEST WELL

WATER USE: Other

Well Status: ACTIVE Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

2650-645 7TH AVE SW, CALGARY AB, T2P 4G8. WELL CAPPED TO PREVENT FLOWING CONDITIONS. TO BE ABANDONED/SEALED. USAGE IS MINERAL EXPLORATION, REPORT INDICATES THIS TEST WELL IS SEALED HOWEVER NO SEALING INFORMATION HAS BEEN PROVIDED - WELL REMAINS WITH AN ACTIVE STATUS. MOC:DROT,OTHR:RC;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	2	ORGANICS
2.0	10	BROWN SAND
10.0	22	GREY CLAY
22.0	64	GREY SAND
64.0	74	GREY CLAY
74.0	90	GREY SAND
90.0	110	GREY CLAY
110.0	131	GREY TILL
131.0	140	GREY TILL
140.0	176	LIMESTONE
176.0	199	RED/ GREEN SHALE
199.0	239	SANDSTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	195.0	CASING	8.0	8.5		WELDED	STEEL
195.0	239.0	OPEN HOLE	7.9				

Top of Casing: 3.0 ft above ground

PUMPING TEST

Date : 2019 Feb 18 Pumping Imp. gallons/minute

Water level before test : 3.0 ft below ground

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Water level at end of test : 3.0 ft above ground

Test duration:

Test Zone: from 195.0 ft to 239.0 ft

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WELL INFORMATION REPORT



Well PID: 199985

Location: SE34-4-7E

UTMX:677550.4 UTM Y:5468705.9 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:301 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN GROUP 3/DEN 109-1/BH 14-18

Date Completed: 2019 Feb 04

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:002470; #2650, 645 - 7TH AVENUE S.W, CALGARY AB, T2P 4G8.
MINERAL EXPLORATION / SAMPLING. WELL WAS SEALED AFTER SAMPLING
USING ALTERNATING LAYERS OF BENTONITE HOLE PLUG AND WASHED PEA
GRAVEL. WELL CASING WAS PULLED OUT AS PART OF WELL SEALING. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	9	BROWN SAND & GRAVEL
9.0	14	GREY CLAY
14.0	17	GRAVEL
17.0	190	GREY TILL
190.0	199	BROWN TILL
199.0	250	LIMESTONE
250.0	256	RED / GREEN SHALE
256.0	347	WHITE SANDSTONE
347.0	349	RED SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	199.0	CASING	8.0	8.5		WELDED	STEEL
199.0	246.0	OPEN HOLE	7.9				
246.0	349.0	OPEN HOLE	6.0				

Top of Casing: 0.0 ft above ground

WELL SEALED

Sealed Date: 2019-Feb-04

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

Outside Sealed

From	To(ft)	Dia.(in)	Material
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0.0	75.0	BENTONITE
75.0	100.0	PEA GRAVEL
100.0	175.0	BENTONITE
175.0	200.0	PEA GRAVEL
200.0	349.0	BENTONITE

2020 Oct 01
WELL INFORMATION REPORT



Well PID: 199969

Location: NW16-5-7E

UTMX:674197.4 UTMY:5474306.5 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:297 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN 115-1/BH 28-18/DEN GRP 6

Date Completed: 2018 Oct 28

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:002459; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.

TEST WELL: MINERAL EXPLORATION. WELL WAS SEALED AFTER SAMPLING USING ALTERNATING LAYERS OF BENTONITE HOLE PLUG AND WASHED PEA GRAVEL. WELL CASING WAS PULLED OUT AS PART OF WELL SEALING. MOC:OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	68	GREY TILL
68.0	76	SAND AND GRAVEL
76.0	150	GREY TILL
150.0	165	GREY TILL WITH SOME GRAVEL
165.0	195	SAND AND GRAVEL
195.0	202	LIMESTONE RUBBLE
202.0	296	LIMESTONE
296.0	308	REDDISH GREEN SHALE
308.0	395	SANDSTONE
395.0	396	SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	203.0	CASING	8.0	8.6		WELDED	STEEL
203.0	296.0	OPEN HOLE		7.9			
296.0	395.0	OPEN HOLE		6.0			
Top of Casing:		0.0 ft above ground					

WELL SEALED

Sealed Date: 2018-Oct-28

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

Outside Sealed

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WELL INFORMATION REPORT

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From	To(ft)	Dia.(in)	Material
0.0	50.0		BENTONITE
50.0	75.0		PEA GRAVEL
75.0	210.0		BENTONITE
210.0	235.0		PEA GRAVEL
235.0	396.0		BENTONITE

2020 Oct 01
WELL INFORMATION REPORT

Manitoba



Well PID: 199975

Location: NE20-5-7E

UTMX:674034.3 UTMX:5476190.7 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:294 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN 130-1/BH 17-18/DEN GRP 7

Date Completed: 2018 Oct 19

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:002458; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.
MINERAL EXPLORATION / SAMPLING. WELL WAS SEALED AFTER SAMPLING
USING ALTERNATING LAYERS OF BENTONITE HOLE PLUG AND WASHED PEA
GRAVEL, WELL CASING WAS PULLED OUT AS PART OF WELL SEALING. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	50	BROWNISH GREY FINE SAND
50.0	100	GREY TILL
100.0	166	GREY FINE SAND
166.0	187	GREY TILL
187.0	201	BROWN SAND AND GRAVEL
201.0	295	BROWN LIMESTONE
295.0	297	RED SHALE
297.0	385	WHITE SANDSTONE
385.0	390	GREEN SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	202.0	CASING	8.0	8.6		WELDED	STEEL
202.0	295.0	OPEN HOLE		7.9			
295.0	390.0	OPEN HOLE		6.0			

Top of Casing: 0.0 ft above ground

WELL SEALED

Sealed Date: 2018-Oct-19

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

Outside Sealed

From	To(ft)	Dia.(in)	Material
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WELL INFORMATION REPORT



0.0	50.0	BENTONITE
50.0	75.0	PEA GRAVEL
75.0	150.0	BENTONITE
150.0	175.0	PEA GRAVEL
175.0	390.0	BENTONITE

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WELL INFORMATION REPORT



Well PID: 199978

Location: SW24-5-7E

UTMX:679682.5 UTM Y:5474851.1 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:300 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN 134-1/BH 18-18/DEN GRP 9

Date Completed: 2019 Feb 07

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:002469; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.

MINERAL EXPLORATION. WELL WAS SEALED AFTER SAMPLING USING ALTERNATING LAYERS OF BENTONITE HOLE PLUG AND WASHED PEA GRAVEL. WELL CASING WAS PULLED OUT AS PART OF WELL SEALING. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	2	ORGANICS
2.0	15	BROWN TILL
15.0	38	GREY TILL
38.0	42	SAND
42.0	118	GREY TILL
118.0	135	SAND
135.0	150	GRAVEL
150.0	160	SAND
160.0	180	GREY TILL
180.0	258	LIMESTONE
258.0	263	RED / GREEN SHALE
263.0	361	BROWN SANDSTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	180.0	CASING	8.0	8.5		WELDED	STEEL
180.0	258.0	OPEN HOLE	7.9				
258.0	361.0	OPEN HOLE	6.0				

Top of Casing: 3.0 ft above ground

WELL SEALED

Sealed Date: 2019-Feb-07

Sealed By: FRIESEN DRILLERS LTD

2020 Oct 01

WELL INFORMATION REPORT



Sealed Type:	CONTRACTOR - DRILLER		
	Outside	Sealed	
From	To(ft)	Dia.(in)	Material
0.0	75.0		BENTONITE
75.0	100.0		PEA GRAVEL
100.0	200.0		BENTONITE
200.0	225.0		PEA GRAVEL
225.0	361.0		BENTONITE

2020 Oct 01

WELL INFORMATION REPORT



Well PID: 199973

Location: SW11-8-7E

UTMX:677457.2 UTM Y:5501171.2 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:278 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN 143-1/BH 19-18/DEN GRP 10

Date Completed: 2018 Nov 01

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:002460; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.

COORDINATES AND LEGAL ON REPORT DO NOT MATCH, USED GPS COORDINATES

IN GWDRILL, WELL REPORTED TO BE IN LEGAL NE-35-5-7E. MINERAL

EXPLORATION / SAMPLING. WELL WAS SEALED AFTER SAMPLING USING

ALTERNATING LAYERS OF BENTONITE HOLE PLUG AND WASHED PEA GRAVEL.

WELL CASING WAS PULLED OUT AS PART OF WELL SEALING. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	10	BROWN TILL
10.0	63	GREY TILL
63.0	110	SAND
110.0	115	GRAVEL
115.0	166	SAND
166.0	185	TILL
185.0	250	LIMESTONE
250.0	253	REDDISH GREEN SHALE
253.0	331	SANDSTONE
331.0	334	GREEN SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	185.0	CASING	8.0	8.6		WELDED	STEEL
185.0	251.0	OPEN HOLE		7.9			
251.0	334.0	OPEN HOLE		6.0			

Top of Casing: 0.0 ft above ground

WELL SEALED

Sealed Date: 2018-Nov-01

Sealed By: FRIESEN DRILLERS LTD

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WELL INFORMATION REPORT



Sealed Type: CONTRACTOR - DRILLER

	Outside	Sealed	
From	To (ft)	Dia. (in)	Material
0.0	50.0		BENTONITE
50.0	75.0		PEA GRAVEL
75.0	200.0		BENTONITE
200.0	225.0		PEA GRAVEL
225.0	334.0		BENTONITE

2020 Oct 01

WELL INFORMATION REPORT



Well PID: 199984

Location: NE28-10-7E

UTMX:674603.1 UTM Y:5526390.2 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:265 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 28-1/BH 29-18/BRU GRP 1

Date Completed: 2019 Jan 19

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:002464; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.

MINERAL EXPLORATION. WELL WAS SEALED AFTER SAMPLING USING ALTERNATING LAYERS OF BENTONITE HOLE PLUG AND WASHED PEA GRAVEL. WELL CASING WAS PULLED OUT AS PART OF WELL SEALING. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	2	ORGANICS
2.0	16	GRAVEL
16.0	24	SAND
24.0	49	GRAVEL
49.0	63	GREY TILL
63.0	72	BROWN GRAVEL
72.0	180	LIMESTONE
180.0	192	BROWN / GREEN SHALE
192.0	267	WHITE SANDSTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	98.0	CASING	8.0	8.5		WELDED	STEEL
98.0	192.0	OPEN HOLE	7.9				
192.0	267.0	OPEN HOLE	6.0				

Top of Casing: 0.0 ft above ground

WELL SEALED

Sealed Date: 2019-Jan-19

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

Outside Sealed

From	To(ft)	Dia.(in)	Material
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0.0	75.0	BENTONITE
75.0	100.0	PEA GRAVEL
100.0	175.0	BENTONITE
175.0	190.0	PEA GRAVEL
190.0	267.0	BENTONITE

2020 Oct 01

WELL INFORMATION REPORT



Well PID: 199971

Location: NW10-4-8E

UTMX:686332.1 UTM Y:5463497.8 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:310 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN 166-1/DEN GRP 1/BH 31-18

Date Completed: 2018 Nov 21

Well Use: TEST HOLE

WATER USE: Other

Well Status: SEALED Aquifer: NO AQUIFER

REMARKS:

WITN:002462; #2650 - 645 7TH AVENUE S.W, CALGARY AB, T2P 4G8.
MINERAL EXPLORATION. TEST HOLE WAS SEALED WITH BENTONITE GROUT
AFTER DRILLING. MOC:ROTM.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	28	FINE SAND
28.0	61	GREY CLAY
61.0	102	GREY SANDY TILL
102.0	121	GREY CLAY
121.0	218	GREY SANDY TILL
218.0	295	GREY SANDY TILL WITH CLAY LAYERS
0.0	295	BLUE SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	295.0	BOREHOLE	7.9				
Top of Casing: 0.0 ft above ground							

WELL SEALED

Sealed Date: 2018-Nov-21

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

Sealer Remarks: JAY ST. GODARD / STANLEY FLEAR

From	To(ft)	Outside Dia.(in)	Sealed Material
0.0	295.0		BENTONITE

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WELL INFORMATION REPORT

Manitoba



Well PID: 199981

Location: NW30-4-8E

UTMX:680992.1 UTMY:5468225.3 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:306 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN 178-1/DEN GRP 2/ BH 13-18

Date Completed: 2019 Feb 01

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: SANDSTONE

REMARKS:

WITN:002471; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.
MINERAL EXPLORATION. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	10	ORGANICS
10.0	156	GREY TILL
156.0	180	GREY SAND
180.0	198	GREY TILL
198.0	226	RED / GREEN SHALE
226.0	302	WHITE SANDSTONE
302.0	302	GREEN SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	198.0	CASING	8.0	8.5		WELDED	STEEL
198.0	219.0	OPEN HOLE	7.9				
219.0	302.0	OPEN HOLE	6.0				

Top of Casing: 2.6 ft above ground

WELL SEALED

Sealed Date: 2019-Feb-01

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

From	To(ft)	Outside Dia.(in)	Sealed Material
0.0	50.0		BENTONITE
50.0	80.0		PEA GRAVEL
80.0	185.0		BENTONITE
185.0	220.0		PEA GRAVEL

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220.0 302.0

BENTONITE



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WELL INFORMATION REPORT



Well PID: 199979

Location: NW17-5-8E

UTMX:683088.8 UTMY:5474866.1 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:302 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN 189-1/BH 27-18/DEN GRP 4

Date Completed: 2019 Feb 05

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED

Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:002468; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.

MINERAL EXPLORATION. WELL WAS SEALED AFTER SAMPLING USING ALTERNATING
 LAYERS OF BENTONITE HOLE PLUG AND WASHED PEA GRAVEL. WELL CASING
 WAS PULLED OUT AS PART OF WELL SEALING. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	2	ORGANICS
2.0	15	BROWN TILL
15.0	45	GREY TILL
45.0	85	GREY SAND
85.0	185	GREY TILL
185.0	187	GREY SAND
187.0	238	LIMESTONE
238.0	243	RED / GREEN SHALE
243.0	320	WHITE SANDSTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	189.0	CASING	8.0	8.5		WELDED	STEEL
170.0	238.0	OPEN HOLE	7.9				
238.0	320.0	OPEN HOLE	6.0				
Top of Casing: 0.0 ft above ground							

WELL SEALED

Sealed Date: 2019-Feb-05

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

From	To(ft)	Dia.(in)	Material
			Outside Sealed

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0.0	125.0	BENTONITE
125.0	150.0	PEA GRAVEL
150.0	215.0	BENTONITE
215.0	240.0	PEA GRAVEL
240.0	320.0	BENTONITE

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WELL INFORMATION REPORT



Well PID: 201054

Location: NE17-6-8E

UTMX:682773.9 UTM Y:5484468 XY Accuracy:2 VERY ACCURATE [<50M] [ORTHO MAPPED]

UTMZ:286 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN 216-1/ BH 16-18/DEN GRP 11

Date Completed: 2019 Jan 24

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: SHALE

REMARKS:

WITN:002467; 2650-645 7TH AVE SW, CALGARY AB, T2P 4G8. MINERAL EXPLORATION. WELL SEALED AFTER SAMPLING WITH WASHED PEA GRAVEL AND BENTONITE LAYERS. WELL CASING WAS PULLED OUT. MOC:DROT,RC;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	1	ORGANICS
1.0	3	SAND
3.0	35	GREY CLAY
35.0	109	GREY TILL
109.0	116	LIMESTONE RUBBLE AND GRAVEL
116.0	139	BROWN TILL
139.0	208	LIMESTONE RUBBLE
208.0	217	RED/ GREEN SHALE
217.0	309	WHITE SANDSTONE
309.0	313	SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	170.0	CASING	8.0	8.5		WELDED	STEEL
170.0	208.0	OPEN HOLE	7.9				
208.0	313.0	OPEN HOLE	6.0				

Top of Casing: 0.0 ft above ground

WELL SEALED

Sealed Date: 2019-Jan-24

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

Sealer Remarks: SEALED AFTER SAMPLING USING ALTERNATING LAYERS OF BENTONITE AND WASHED GRAVEL. CASING WAS PULLED.

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		Outside	Sealed
From	To (ft)	Dia. (in)	Material
0.0	75.0		BENTONITE
75.0	100.0		PEA GRAVEL
100.0	175.0		BENTONITE
175.0	200.0		PEA GRAVEL
200.0	313.0		BENTONITE

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WELL INFORMATION REPORT

Manitoba



Well PID: 199968

Location: NW26-6-8E

UTMX:687208.9 UTMX:5487865.8 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:295 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: DEN 223-1/BH 20-18/DEN GRP 13

Date Completed: 2018 Nov 12

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: SHALE

REMARKS:

WITN:002461; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.

TEST WELL: MINERAL EXPLORATION SAMPLING. WELL WAS SEALED AFTER SAMPLING USING ALTERNATING LAYERS OF BENTONITE LAYERS OF BENTONITE HOLE PLUG AND WASHED PEA GRAVEL. WELL CASING WAS PULLED OUT AS PART OF WELL SEALING. MOC:OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	1	ORGANICS
1.0	18	BROWN TILL
18.0	120	GREY TILL
120.0	141	BROWN TILL
141.0	191	LIMESTONE
191.0	193	RED/GREEN SHALE
193.0	250	SANDSTONE
250.0	254	RED/GREEN SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	142.0	CASING	8.0	8.6		WELDED	STEEL
142.0	191.0	OPEN HOLE		7.9			
191.0	254.0	OPEN HOLE		6.0			
Top of Casing: 0.0 ft above ground							

WELL SEALED

Sealed Date: 2018-Nov-12

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

From	To(ft)	Dia.(in)	Material
			Outside Sealed

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0.0	50.0	BENTONITE
50.0	75.0	PEA GRAVEL
75.0	150.0	BENTONITE
150.0	175.0	PEA GRAVEL
175.0	254.0	BENTONITE

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WELL INFORMATION REPORT



Well PID: 199974

Location: SE2-9-8E

UTMX:687663.9 UTMY:5509379.7 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:277 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 101-1/BH 21-18/BRU GRP 9

Date Completed: 2018 Oct 05

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: SAND AND GRAVEL

REMARKS:

WITN:002455; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.

MINERAL EXPLORATION / SAMPLING. WELL WAS SEALED AFTER SAMPLING USING ALTERNATING LAYERS OF BENTONITE HOLE PLUG AND WASHED PEA GRAVEL. WELL CASING TO BE PULLED OUT. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	8	BROWN GRAVEL
8.0	60	BROWN TILL
60.0	73	BROWN SAND AND GRAVEL
73.0	120	GREY TILL WITH SOME SAND LAYERS
120.0	196	GREY SAND WITH SOME GRAVEL LAYERS (SILTY)

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	180.0	CASING	8.0	8.6		WELDED	STEEL
180.0	196.0	OPEN HOLE		6.0			

Top of Casing: 0.0 ft above ground

WELL SEALED

Sealed Date: 2018-Oct-05

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

Outside Sealed

From	To(ft)	Dia.(in)	Material
0.0	50.0		BENTONITE
50.0	75.0		PEA GRAVEL
75.0	95.0		BENTONITE
95.0	115.0		PEA GRAVEL
115.0	196.0		BENTONITE

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WELL INFORMATION REPORT



Well PID: 199965

Location: NW18-9-8E

UTMX:680608.9 UTMY:5513231.6 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:272 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 117-1/BRU GRP 7/BH 22-18

Date Completed: 2018 Oct 15

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:002457; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.

TEST WELL: MINERAL EXPLORATION / SAMPLING. WELL WAS SEALED AFTER SAMPLING USING ALTERNATING LAYERS OF BENTONITE HOLE PLUG AND WASHED PEA GRAVEL. WELL CASING WAS PULLED OUT AS PART OF WELL SEALING. MOC:OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	34	BROWN SAND AND GRAVEL
34.0	53	GREY TILL
53.0	91	BROWN TILL WITH SOME GRAVEL LAYERS
91.0	99	BROWN BROKEN LIMESTONE
99.0	173	BROWN LIMESTONE
173.0	182	GREEN, RED SHALE
182.0	239	WHITE SANDSTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	102.0	CASING	8.0	8.6		WELDED	STEEL
102.0	173.0	OPEN HOLE		7.9			
173.0	239.0	OPEN HOLE		6.0			
Top of Casing: 0.0 ft above ground							

WELL SEALED

Sealed Date: 2018-Oct-15

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

From	To(ft)	Outside Dia.(in)	Sealed Material
0.0	70.0		BENTONITE

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70.0	90.0	PEA GRAVEL
90.0	145.0	BENTONITE
145.0	170.0	PEA GRAVEL
170.0	239.0	BENTONITE

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WELL INFORMATION REPORT

Manitoba



Well PID: 200861

Location: NW22-9-8E

UTMX:685310.5 UTMY:5515834.8 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:274 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 121-1/ BH 30-18/ BRU GRP10

Date Completed: 2019 Feb 19

Well Use: TEST WELL

WATER USE: Other

Well Status: ACTIVE Aquifer: SHALE

REMARKS:

2650-645 7TH AVE SW, CALGARY AB, T2P 4G8. WELL CAPPED TO PREVENT FLOWING CONDITIONS. TO BE ABANDONED/ SEALED. USAGE IS MINERAL EXPLORATION, REPORT INDICATES THIS TEST WELL IS SEALED HOWEVER NO SEALING INFORMATION HAS BEEN PROVIDED - WELL REMAINS WITH AN ACTIVE STATUS. MOC:DROT,OTHR:RC;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	2	ORGANICS
2.0	6	CLAY
6.0	15	BROWN TILL
15.0	71	GREY TILL
71.0	73	LIMESTONE RUBBLE
73.0	115	LIMESTONE
115.0	127	SHALE
127.0	196	SANDSTONE
196.0	199	SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	120.0	CASING	8.0	8.5		WASHED	STEEL
120.0	199.0	OPEN HOLE	7.9				
Top of Casing: 3.0 ft above ground							

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WELL INFORMATION REPORT

Manitoba



Well PID: 199972

Location: NW30-9-8E

UTMX:680047.8 UTMY:5517258.2 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:278 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 126-1/BH 11-18/BRU GRP 6

Date Completed: 2018 Sep 29

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:002453; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.
 MINERAL EXPLORATION / SAMPLING. WELL WAS SEALED AFTER SAMPLING
 USING ALTERNATING LAYERS OF BENTONITE HOLE PLUG AND WASHED PEA
 GRAVEL. WELL CASING WAS PULLED OUT AS PART OF WELL SEALING. MOV:OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	19	BROWN FINE SAND
19.0	23	BROWN TILL
23.0	65	GREY TILL
65.0	76	BROWN GRAVEL
76.0	110	GREY TILL
110.0	140	GREY SAND WITH SOME GRAVEL
140.0	177	BROWN LIMESTONE
177.0	187	GREEN SHALE
187.0	247	WHITE SANDSTONE
247.0	252	WHITE, GREEN SANDSTONE WITH SHALE LAYERS
252.0	259	GREEN SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	141.0	CASING	8.0	8.6		WELDED	STEEL
141.0	178.0	OPEN HOLE		7.9			
178.0	259.0	OPEN HOLE		6.0			

Top of Casing: 0.0 ft above ground

WELL SEALED

Sealed Date: 2018-Sep-29

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

2020 Oct 01

WELL INFORMATION REPORT



		Outside	Sealed
From	To (ft)	Dia. (in)	Material
0.0	60.0		BENTONITE
60.0	85.0		PEA GRAVEL
85.0	150.0		BENTONITE
150.0	175.0		PEA GRAVEL
175.0	259.0		BENTONITE

2020 Oct 01
WELL INFORMATION REPORT



Well PID: 199980

Location: NW9-10-8E

UTMX:683247.3 UTMX:5522328.3 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:268 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 73-1/BH 10-18/ BRU GRP 3

Date Completed: 2018 Oct 11

Well Use: TEST WELL

WATER USE: Other

Well Status: SEALED Aquifer: LIMESTONE AND SANDSTONE

REMARKS:

WITN:002456; #2650, 645 - 7TH AVENUE SW, CALGARY AB, T2P 4G8.
MINERAL EXPLORATION / SAMPLING. WELL WAS SEALED AFTER SAMPLING
USING ALTERNATING LAYERS OF BENTONITE HOLE PLUG AND WASHED PEA
GRAVEL. WELL CASING WAS PULLED OUT AS PART OF WELL SEALING. MOC:DROT,OTHR:RC.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	2	BLACK TOP SOIL
2.0	20	BROWN TILL
20.0	87	GREY TILL
87.0	129	PURPLE LIMESTONE
129.0	135	RED SHALE
135.0	192	WHITE SANDSTONE
192.0	205	WHITE, GREEN SANDSTONE WITH SHALE LAYERS
205.0	210	GREEN, RED SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	90.0	CASING	8.0	8.6		WELDED	STEEL
90.0	130.0	OPEN HOLE		7.9			
130.0	210.0	OPEN HOLE		6.0			

Top of Casing: 0.0 ft above ground

WELL SEALED

Sealed Date: 2018-Oct-11

Sealed By: FRIESEN DRILLERS LTD

Sealed Type: CONTRACTOR - DRILLER

Outside Sealed

From	To(ft)	Dia.(in)	Material
0.0	25.0		BENTONITE

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25.0	55.0	PEA GRAVEL
55.0	105.0	BENTONITE
105.0	130.0	PEA GRAVEL
130.0	210.0	BENTONITE

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WELL INFORMATION REPORT

Manitoba



Well PID: 203682

Location: SW19-10-8E

UTMX:679946.3 UTM Y:5524073.3 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:277 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 82-8 BH 47-18

Date Completed: 2018 Dec 15

Well Use: OTHER

WATER USE: Other

Well Status: SEALED Aquifer: SANDSTONE

REMARKS:

WITN:002410; WELL USE & WATER USE:MINERAL EXPLORATION. SEALING

REMARKS: A CEMENT PLUG OF 11 FT(@146-157FT) WAS PLACED INSIDE

THE CASING TO PERMANENTLY PREVENT VERTICAL MOVEMENT WITH A TREMIE

LINE AS PER DRILLING REGULATION 1992 SPECIFICATION SECTION 7B.SEALING

AT 164 FT-MECHANICAL PLUG MOC: ROTM

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	85	BROWN TILL
85.0	161	LIMESTONE
161.0	171	SHALE
171.0	245	SANDSTONE
245.0	263	SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	85.0	CASING	20.0			WELDED	STEEL
0.0	115.0	CASING	16.0			WELDED	STEEL
0.0	115.0	ANNULAR FILL					CEMENT
0.0	170.0	ANNULAR FILL					CEMENT
0.0	204.0	CASING	10.0			WELDED	
85.0	263.0	OPEN HOLE	19.0				
204.0	245.0	WELL SCREEN	10.0			SL. PIPE	STEEL
170.0	170.0	ATTACHMENT					SHALE TRAP

Top of Casing: 2.0 ft above ground

WELL SEALED

Sealed Date: 2020-Aug-23

Sealed By: CANWHITE SANDS CORP

Sealed Type:

2020 Oct 01

WELL INFORMATION REPORT



Sealer Remarks: CASING CUT OFF AT 3 FT BGS. SEE REMARKS FOR MORE SEALING REMARKS.

	Outside	Sealed	
From	To(ft)	Dia.(in)	Material
0.0	4.0		CEMENT
0.0	4.0		GRAVEL
0.0	4.0		BACKFILL
4.0	9.0		BENTONITE
9.0	75.0		PEA GRAVEL
75.0	80.0		BENTONITE
80.0	141.0		PEA GRAVEL
141.0	146.0		BENTONITE
146.0	157.0		CEMENT
157.0	164.0		BENTONITE
164.0	164.0		OTHER

2020 Oct 01

WELL INFORMATION REPORT

Manitoba



Well PID: 203691

Location: SW19-10-8E

UTMX:679936.2 UTMX:5524073 XY Accuracy:1 EXACT [<5M] [GPS]

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 82-6 BH 47-18

Date Completed: 2018 Nov 14

Well Use: OTHER

WATER USE: Other

Well Status: SEALED Aquifer: SANDSTONE

REMARKS:

WITN:002476; PUMPING TEST AT HIGHER DISCHARGE RATES TO BE COMPLETED, WATER USE: PRODUCTION/SOURCE & MINERAL EXPLORATION, WATER USE: MINERAL EXPLORATION. MOC:DROT;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	25	BROWN TILL
25.0	88	GREY TILL WITH SOME GRAVEL AT 80 FEET
88.0	161	BROWN LIMESTONE
161.0	170	RED/GREEN SHALE
170.0	245	WHITE SANDSTONE
245.0	253	GREEN SHALE WITH SOME SANDSTONE LAYERS

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	98.0	CASING	15.5	16.0		WELDED	STEEL
98.0	161.0	OPEN HOLE	15.0				
0.0	174.0	LINER	12.0	12.8		WELDED	STEEL
161.0	253.0	BOREHOLE	12.0				
160.0	165.0	WELL SCREEN	10.0	10.6		WELDED	STEEL
165.0	245.0	WELL SCREEN	10.0	10.6			
0.0	161.0	SURFACE SEAL					CEMENT
163.0	164.0	ATTACHMENT					K PACKER

Top of Casing: 0.0 ft above ground

WELL SEALED

Sealed Date: 2020-Jun-23

Sealed By: FRIESEN DRILLERS LTD.

Sealed Type: CONTRACTOR - DRILLER

Sealer Remarks: CASING CUT OFF AT 2 FT BGS.

Outside Sealed

2020 Oct 01

WELL INFORMATION REPORT



From	To(ft)	Dia.(in)	Material
0.0	40.0		BENTONITE
40.0	65.0		PEA GRAVEL
65.0	70.0		BENTONITE
70.0	85.0		PEA GRAVEL
85.0	90.0		BENTONITE
90.0	105.0		PEA GRAVEL
105.0	150.0		BENTONITE
150.0	175.0		PEA GRAVEL
175.0	190.0		BENTONITE
190.0	230.0		PEA GRAVEL
230.0	253.0		BENTONITE

2020 Oct 01

WELL INFORMATION REPORT

Manitoba



Well PID: 201401

Location: SE32-10-8E

UTMX:682214.9 UTMY:5527623 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:276 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 95-3 / BH 7-19

Date Completed: 2019 Jun 28

Well Use: RECHARGE/RETURN

WATER USE: Other

Well Status: SEALED Aquifer: SANDSTONE

REMARKS:

WITN:002447; #2650, 645 - 7TH AVE SW, CALGARY, AB, T2P 4G8. WATER USE:MINERAL EXPLORATION. SEALING REMARKS: A CEMENT PLUG OF 14 FT WAS PLACED INSIDE THE CASING TO PERMANENTLY PREVENT VERTICAL MOVEMENT WITH A TREMIE LINE AS PER DRILLING REGULATION 1992 SPECIFICATION SECTION 7B. MOC:ROTM,DROT;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	8	BLACK FILL AND PEAT MOSS
8.0	32	GREY FINE SAND
32.0	75	GREY TILL
75.0	122	GREY TILL WITH GRAVEL AND BOULDERS
122.0	151	PINK LIMESTONE
151.0	159	RED SHALE
159.0	217	WHITE SANDSTONE
217.0	226	GREEN/WHITE SHALE WITH SANDSTONE LAYERS
226.0	230	GREEN SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	126.0	CASING	12.0	12.8		WELDED	STEEL
0.0	178.0	CASING	8.0	8.6		WELDED	STEEL
0.0	152.0	ANNULAR FILL	8.6	12.0			CEMENT
122.0	230.0	OPEN HOLE	11.8				
178.0	220.0	WELL SCREEN	8.0	8.6		WELDED	STEEL
152.0	152.0	SHALE TRAP					
157.0	157.0	SHALE TRAP					
Top of Casing:		2.0 ft above ground					

WELL SEALED

2020 Oct 01

WELL INFORMATION REPORT



Sealed Date: 2020-Aug-26

Sealed By: CANWHITE SANDS CORP

Sealed Type:

Sealer Remarks: CASING CUT OFF AT 3 FT BGS. SEE REMARKS FOR MORE SEALING REMARKS.

		Outside	Sealed
From	To(ft)	Dia.(in)	Material
0.0	4.0		CEMENT
0.0	4.0		GRAVEL
0.0	4.0		OTHER
4.0	9.0		BENTONITE
9.0	110.0		PEA GRAVEL
110.0	124.0		BENTONITE
124.0	138.0		CEMENT
138.0	146.0		BENTONITE
146.0	146.0		PEA GRAVEL

2020 Oct 01

WELL INFORMATION REPORT

Manitoba



Well PID: 201400

Location: SE32-10-8E

UTMX:682236.3 UTM Y:5527605.9 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:276 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 95-2 / BH 7-19

Date Completed: 2019 Jun 16

Well Use: RECHARGE/RETURN

Well Status: SEALED Aquifer: SANDSTONE

REMARKS:

WITN:002445; #2650, 645 - 7TH AVENUE SW, CALGARY, AB, T2P 4G8.

SEALING REMARKS: A CEMENT PLUG OF 17 FT WAS PLACED INSIDE THE CASING TO PERMANENTLY PREVENT VERTICAL MOVEMENT WITH A TREMIE LINE AS PER DRILLING REGULATION 1992 SPECIFICATION SECTION 7B.

MOC:ROTM,DROT;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	5	BLACK FILL AND PEAT MOSS
5.0	27	GREY FINE SAND
27.0	85	GREY TILL
85.0	117	GREY TILL WITH GRAVEL AND BOULDERS
117.0	148	PINK LIMESTONE
148.0	158	RED SHALE
158.0	218	WHITE SANDSTONE
218.0	226	GREEN/WHITE SHALE WITH SANDSTONE LAYERS
226.0	230	GREEN SHALE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	122.0	CASING	8.0	8.6		WELDED	STEEL
0.0	178.0	CASING	6.0	6.6		WELDED	STEEL
0.0	150.0	ANNULAR FILL	6.6	8.6			CEMENT
178.0	220.0	WELL SCREEN	6.0	6.6		WELDED	STEEL
122.0	230.0	OPEN HOLE	7.9				
150.0	150.0	SHALE TRAP					
155.0	155.0	SHALE TRAP					
Top of Casing: 2.5 ft above ground							

WELL SEALED

Sealed Date: 2020-Aug-26

2020 Oct 01

WELL INFORMATION REPORT



Sealed By: CANWHITE SANDS CORP

Sealed Type:

Sealer Remarks: CASING CUT OFF AT 3 FT BGS. SEE REMARKS FOR MORE SEALING REMARKS.

	Outside	Sealed	
From	To(ft)	Dia.(in)	Material
0.0	4.0		CEMENT
0.0	4.0		GRAVEL
0.0	4.0		OTHER
4.0	9.0		BENTONITE
9.0	102.0		PEA GRAVEL
102.0	126.0		BENTONITE
126.0	143.0		CEMENT
143.0	149.0		BENTONITE
149.0	149.0		OTHER

2020 Oct 01

WELL INFORMATION REPORT



Well PID: 201399

Location: SE32-10-8E

UTMX:682230.4 UTM Y:5527609.1 XY Accuracy:No Accuracy

UTMZ:276 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 95-1 / BH 7-19

Date Completed: 2019 Jun 07

Well Use: OTHER

WATER USE: Other

Well Status: SEALED Aquifer: SANDSTONE

REMARKS:

WITN:002446; #2650, 645 - 7TH AVE SW. WATER USE OTHER MINERAL EXPLORATION. SEALING REMARKS: A CEMENT PLUG OF 16 FT WAS PLACED INSIDE THE CASING TO PERMANENTLY PREVENT VERTICAL MOVEMENT WITH A TREMIE LINE AS PER DRILLING REGULATION 1992 SPECIFICATION SECTION 7B. MOC:ROTM,DROT;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	5	BLACK FILL AND PEAT
5.0	28	BLACK FINE SAND
28.0	90	GREY TILL
90.0	118	GREY TILL WITH BOULDERS
118.0	148	BROWN LIMESTONE
148.0	153	RED SHALE
153.0	218	WHITE SANDSTONE
218.0	228	GREEN SHALE WITH SANDSTONE LAYERS

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia. (in)	Outside Dia. (in)	Slot Size(in)	Type	Material
0.0	122.0	CASING	15.3	16.0		WELDED	STEEL
0.0	175.0	CASING	12.0	12.8		WELDED	STEEL
0.0	151.0	SURFACE SEAL					CEMENT
122.0	238.0	OPEN HOLE	15.0				
175.0	178.0	LINER	12.0	12.8			
178.0	218.0	WELL SCREEN	12.0	12.8		WELDED	STEEL
151.0	151.0	SHALE TRAP					
156.0	156.0	SHALE TRAP					
Top of Casing:		2.5 ft above ground					

WELL SEALED

2020 Oct 01

WELL INFORMATION REPORT



Sealed Date: 2020-Aug-26

Sealed By: CANWHITE SANDS CORP

Sealed Type:

Sealer Remarks: CASING WAS CUT OFF AT 3 FT BGS. SEE REMARKS FOR MORE SEALING
REMARKS.

		Outside	Sealed
From	To(ft)	Dia.(in)	Material
0.0	4.0		CEMENT
0.0	4.0		GRAVEL
0.0	4.0		OTHER
4.0	9.0		BENTONITE
9.0	110.0		PEA GRAVEL
110.0	120.0		BENTONITE
120.0	125.0		PEA GRAVEL
125.0	127.0		BENTONITE
127.0	142.0		CEMENT
143.0	149.0		BENTONITE
149.0	149.0		OTHER

2020 Oct 01

WELL INFORMATION REPORT

Manitoba



Well PID: 201159

Location: SE32-10-8E

UTMX:682231.3 UTMX:5527624.7 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:276 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name:

Date Completed: 2019 Jul 02

Well Use: RECHARGE/RETURN

WATER USE: Other

Well Status: ACTIVE Aquifer: SANDSTONE

REMARKS:

WITN:002521; 2650, 645 - 7TH AVE SW, CALGARY, AB, T2P 4G8. WATER
USE OTHER - MINERAL EXPLORATION. MOC:ROTM;

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	5	BLACK FILL AND PEAT
5.0	22	SAND
22.0	81	GREY TILL
81.0	128	SAND AND BOULDERS
128.0	148	LIMESTONE
148.0	162	RED SHALE
162.0	178	WHITE SANDSTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	120.0	BOREHOLE		7.9			
0.0	120.0	CASING	5.0	5.5		INSERT	PVC
0.0	120.0	SURFACE SEAL	5.5	7.9			BENTONITE
0.0	162.0	LINER	2.0	2.4		INSERT	PVC
120.0	148.0	OPEN HOLE		4.8			
162.0	172.0	WELL SCREEN	2.0	2.4			STAINLESS STEEL

Top of Casing: 2.0 ft above ground

PUMPING TEST

Date : 2019 Jul 02 Pumping Imp. gallons/minute

Water level before test : 23.0 ft below ground

Water level at end of test :

Test duration:

Date : 2019 Jul 02 Pumping Imp. gallons/minute

Water level before test : 27.0 ft below ground

2020 Oct 01

WELL INFORMATION REPORT



Water level at end of test :

Test duration:

2020 Oct 01

WELL INFORMATION REPORT



Well PID: 201398

Location: SE32-10-8E

UTMX:682210.3 UTM Y:5527629.5 XY Accuracy:1 EXACT [<5M] [GPS]

UTMZ:276 Z Accuracy:4 FAIR - Shuttle at Centroid

Owner: HD MINERALS

Driller: Friesen Drillers Ltd.

Well Name: BRU 95-5

Date Completed: 2019 Jun 26

Well Use: PRODUCTION/SOURCE

WATER USE: COMM/INDUST

Well Status: ACTIVE

Aquifer: LIMESTONE OR DOLOMITE

REMARKS:

WITN:002444; #2650, 645 - 7TH AVE SW, CALGARY, AB, T2P 4G8. MOC:ROTM;

Q: 60 IGPM PI: 90 FT.

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	5	BLACK FILL AND PEAT MOSS
5.0	20	GREY FINE SAND
20.0	42	GREY CLAY
42.0	75	GREY TILL
75.0	119	PINK TILL WITH GRAVEL AND BOULDERS
119.0	138	RED LIMESTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	121.0	BOREHOLE		7.9			
0.0	121.0	CASING	5.0	5.5		INSERT	PVC
0.0	120.0	SURFACE SEAL	5.5	8.0			BENTONITE
0.0	12.0	CASING	8.0	8.6		WELDED	STEEL
121.0	138.0	OPEN HOLE		4.8			

Top of Casing: 2.5 ft above ground

PUMPING TEST

Date : 2019 Jun 26 Pumping 23.0 Imp. gallons/minute

Water level before test : 40.0 ft below ground

Water level at end of test : 60.0 ft below ground

Test duration: 1:00:00

Test Zone: from 121.0 ft to 138.0 ft