

Lab #: 824751 Job #: 50647 IS-65777 Co. Job#:  
Sample Name: NDCS-MPC-WS-1 Co. Lab#:  
Company: University of North Dakota - Energy & Environm  
API/Well:  
Container: 1 Liter Plastic Bottle  
Field/Site Name: North Dakota CarbonSafe (NDCS)  
Location: Center, ND  
Formation/Depth:  
Sampling Point:  
Date Sampled: 3/30/2022 8:00 Date Received: 4/07/2022 Date Reported: 5/19/2022

$\delta D$  of water ----- -116.4 ‰ relative to VSMOW  
 $\delta^{18}O$  of water ----- -14.39 ‰ relative to VSMOW  
Tritium content of water -----  $2.82 \pm 0.23$  TU  
 $\delta^{13}C$  of DIC ----- -11.4 ‰ relative to VPDB  
 $^{14}C$  content of DIC -----  $65.3 \pm 0.2$  percent modern carbon  
 $\delta^{15}N$  of nitrate ----- na  
 $\delta^{18}O$  of nitrate ----- na  
 $\delta^{34}S$  of sulfate ----- na  
 $\delta^{18}O$  of sulfate ----- na  
Vacuum Distilled? \* ----- No

Remarks:

nd = not detected. na = not analyzed.

\*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water

Lab #: 824752 Job #: 50647 IS-65777 Co. Job#:  
Sample Name: NDCS-MPC-WS-2 Co. Lab#:  
Company: University of North Dakota - Energy & Environm  
API/Well:  
Container: 1 Liter Plastic Bottle  
Field/Site Name: North Dakota CarbonSafe (NDCS)  
Location: Center, ND  
Formation/Depth:  
Sampling Point:  
Date Sampled: 3/30/2022 9:30 Date Received: 4/07/2022 Date Reported: 5/19/2022

$\delta D$  of water ----- -121.9 ‰ relative to VSMOW  
 $\delta^{18}O$  of water ----- -15.32 ‰ relative to VSMOW  
Tritium content of water -----  $3.42 \pm 0.18$  TU  
 $\delta^{13}C$  of DIC ----- -10.2 ‰ relative to VPDB  
 $^{14}C$  content of DIC -----  $54.7 \pm 0.2$  percent modern carbon  
 $\delta^{15}N$  of nitrate ----- na  
 $\delta^{18}O$  of nitrate ----- na  
 $\delta^{34}S$  of sulfate ----- na  
 $\delta^{18}O$  of sulfate ----- na  
Vacuum Distilled? \* ----- No

Remarks:

nd = not detected. na = not analyzed.

\*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water

Lab #: 824753 Job #: 50647 IS-65777 Co. Job#:  
Sample Name: NDCS-W395 Co. Lab#:  
Company: University of North Dakota - Energy & Environm  
API/Well:  
Container: 1 Liter Plastic Bottle  
Field/Site Name: North Dakota CarbonSafe (NDCS)  
Location: Center, ND  
Formation/Depth:  
Sampling Point:  
Date Sampled: 3/30/2022 12:00 Date Received: 4/07/2022 Date Reported: 5/19/2022

$\delta$ D of water ----- -117.4 ‰ relative to VSMOW  
 $\delta^{18}$ O of water ----- -14.99 ‰ relative to VSMOW  
Tritium content of water ----- < 0.57 TU  
 $\delta^{13}$ C of DIC ----- -8.8 ‰ relative to VPDB  
 $^{14}$ C content of DIC -----  $0.8 \pm 0.1$  percent modern carbon  
 $\delta^{15}$ N of nitrate ----- na  
 $\delta^{18}$ O of nitrate ----- na  
 $\delta^{34}$ S of sulfate ----- na  
 $\delta^{18}$ O of sulfate ----- na  
Vacuum Distilled? \* ----- No

Remarks:

nd = not detected. na = not analyzed.

\*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water

Lab #: 824754 Job #: 50647 IS-65777 Co. Job#:  
Sample Name: NDCS-W269 Co. Lab#:  
Company: University of North Dakota - Energy & Environm  
API/Well:  
Container: 1 Liter Plastic Bottle  
Field/Site Name: North Dakota CarbonSafe (NDCS)  
Location: Center, ND  
Formation/Depth:  
Sampling Point:  
Date Sampled: 3/30/2022 13:00 Date Received: 4/07/2022 Date Reported: 5/19/2022

$\delta$ D of water ----- -123.1 ‰ relative to VSMOW  
 $\delta^{18}$ O of water ----- -16.16 ‰ relative to VSMOW  
Tritium content of water -----  $2.29 \pm 0.23$  TU  
 $\delta^{13}$ C of DIC ----- -10.8 ‰ relative to VPDB  
 $^{14}$ C content of DIC -----  $64.1 \pm 0.2$  percent modern carbon  
 $\delta^{15}$ N of nitrate ----- na  
 $\delta^{18}$ O of nitrate ----- na  
 $\delta^{34}$ S of sulfate ----- na  
 $\delta^{18}$ O of sulfate ----- na  
Vacuum Distilled? \* ----- No

Remarks:

nd = not detected. na = not analyzed.

\*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water

Lab #: 824755 Job #: 50647 IS-65777 Co. Job#:  
Sample Name: NDCS-W217 Co. Lab#:  
Company: University of North Dakota - Energy & Environm  
API/Well:  
Container: 1 Liter Plastic Bottle  
Field/Site Name: North Dakota CarbonSafe (NDCS)  
Location: Center, ND  
Formation/Depth:  
Sampling Point:  
Date Sampled: 3/30/2022 14:30 Date Received: 4/07/2022 Date Reported: 5/19/2022

$\delta D$  of water ----- -117.0 ‰ relative to VSMOW  
 $\delta^{18}O$  of water ----- -14.80 ‰ relative to VSMOW  
Tritium content of water ----- < 0.83 TU  
 $\delta^{13}C$  of DIC ----- -10.2 ‰ relative to VPDB  
 $^{14}C$  content of DIC -----  $1.6 \pm 0.1$  percent modern carbon  
 $\delta^{15}N$  of nitrate ----- na  
 $\delta^{18}O$  of nitrate ----- na  
 $\delta^{34}S$  of sulfate ----- na  
 $\delta^{18}O$  of sulfate ----- na  
Vacuum Distilled? \* ----- No

Remarks:

nd = not detected. na = not analyzed.

\*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water

Lab #: 824756 Job #: 50647 IS-65777 Co. Job#:  
Sample Name: NDCS-W1686 Co. Lab#:  
Company: University of North Dakota - Energy & Environm  
API/Well:  
Container: 1 Liter Plastic Bottle  
Field/Site Name: North Dakota CarbonSafe (NDCS)  
Location: Center, ND  
Formation/Depth:  
Sampling Point:  
Date Sampled: 3/30/2022 15:30 Date Received: 4/07/2022 Date Reported: 5/19/2022

$\delta D$  of water ----- -119.8 ‰ relative to VSMOW  
 $\delta^{18}O$  of water ----- -15.98 ‰ relative to VSMOW  
Tritium content of water -----  $3.54 \pm 0.22$  TU  
 $\delta^{13}C$  of DIC ----- -11.9 ‰ relative to VPDB  
 $^{14}C$  content of DIC -----  $54.6 \pm 0.2$  percent modern carbon  
 $\delta^{15}N$  of nitrate ----- na  
 $\delta^{18}O$  of nitrate ----- na  
 $\delta^{34}S$  of sulfate ----- na  
 $\delta^{18}O$  of sulfate ----- na  
Vacuum Distilled? \* ----- No

Remarks:

nd = not detected. na = not analyzed.

\*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water

Lab #: 824757 Job #: 50647 IS-65777 Co. Job#:  
Sample Name: NDCS-W510 Co. Lab#:  
Company: University of North Dakota - Energy & Environm  
API/Well:  
Container: 1 Liter Plastic Bottle  
Field/Site Name: North Dakota CarbonSafe (NDCS)  
Location: Center, ND  
Formation/Depth:  
Sampling Point:  
Date Sampled: 3/31/2022 8:00 Date Received: 4/07/2022 Date Reported: 5/19/2022

$\delta$ D of water ----- -129.0 ‰ relative to VSMOW  
 $\delta^{18}$ O of water ----- -16.62 ‰ relative to VSMOW  
Tritium content of water ----- < 0.69 TU  
 $\delta^{13}$ C of DIC ----- -15.6 ‰ relative to VPDB  
 $^{14}$ C content of DIC -----  $1.9 \pm 0.1$  percent modern carbon  
 $\delta^{15}$ N of nitrate ----- na  
 $\delta^{18}$ O of nitrate ----- na  
 $\delta^{34}$ S of sulfate ----- na  
 $\delta^{18}$ O of sulfate ----- na  
Vacuum Distilled? \* ----- No

Remarks:

nd = not detected. na = not analyzed.

\*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water

Lab #: 824758 Job #: 50647 IS-65777 Co. Job#:  
Sample Name: NDCS-W478 Co. Lab#:  
Company: University of North Dakota - Energy & Environm  
API/Well:  
Container: 1 Liter Plastic Bottle  
Field/Site Name: North Dakota CarbonSafe (NDCS)  
Location: Center, ND  
Formation/Depth:  
Sampling Point:  
Date Sampled: 3/31/2022 10:00 Date Received: 4/07/2022 Date Reported: 5/19/2022

$\delta D$  of water ----- -128.5 ‰ relative to VSMOW  
 $\delta^{18}O$  of water ----- -16.80 ‰ relative to VSMOW  
Tritium content of water ----- < 0.76 TU  
 $\delta^{13}C$  of DIC ----- -8.7 ‰ relative to VPDB  
 $^{14}C$  content of DIC -----  $0.5 \pm 0.1$  percent modern carbon  
 $\delta^{15}N$  of nitrate ----- na  
 $\delta^{18}O$  of nitrate ----- na  
 $\delta^{34}S$  of sulfate ----- na  
 $\delta^{18}O$  of sulfate ----- na  
Vacuum Distilled? \* ----- No

Remarks:

nd = not detected. na = not analyzed.

\*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water



Lab #: 824759 Job #: 50647 IS-65777 Co. Job#:  
Sample Name: NDCS-W468 Co. Lab#:  
Company: University of North Dakota - Energy & Environm  
API/Well:  
Container: 1 Liter Plastic Bottle  
Field/Site Name: North Dakota CarbonSafe (NDCS)  
Location: Center, ND  
Formation/Depth:  
Sampling Point:  
Date Sampled: 3/31/2022 11:00 Date Received: 4/07/2022 Date Reported: 5/19/2022

$\delta$ D of water ----- -140.6 ‰ relative to VSMOW  
 $\delta^{18}$ O of water ----- -18.77 ‰ relative to VSMOW  
Tritium content of water ----- < 0.52 TU  
 $\delta^{13}$ C of DIC ----- -4.3 ‰ relative to VPDB  
 $^{14}$ C content of DIC -----  $10.2 \pm 0.1$  percent modern carbon  
 $\delta^{15}$ N of nitrate ----- na  
 $\delta^{18}$ O of nitrate ----- na  
 $\delta^{34}$ S of sulfate ----- na  
 $\delta^{18}$ O of sulfate ----- na  
Vacuum Distilled? \* ----- No

Remarks:

nd = not detected. na = not analyzed.

\*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water

Lab #: 824760 Job #: 50647 IS-65777 Co. Job#:  
Sample Name: NDCS-W424 Co. Lab#:  
Company: University of North Dakota - Energy & Environm  
API/Well:  
Container: 1 Liter Plastic Bottle  
Field/Site Name: North Dakota CarbonSafe (NDCS)  
Location: Center, ND  
Formation/Depth:  
Sampling Point:  
Date Sampled: 3/31/2022 12:00 Date Received: 4/07/2022 Date Reported: 5/19/2022

$\delta$ D of water ----- -119.8 ‰ relative to VSMOW

$\delta^{18}\text{O}$  of water ----- -15.45 ‰ relative to VSMOW

Tritium content of water ----- < 0.79 TU

$\delta^{13}\text{C}$  of DIC ----- -14.9 ‰ relative to VPDB

$^{14}\text{C}$  content of DIC ----- < 0.4 percent modern carbon

$\delta^{15}\text{N}$  of nitrate ----- na

$\delta^{18}\text{O}$  of nitrate ----- na

$\delta^{34}\text{S}$  of sulfate ----- na

$\delta^{18}\text{O}$  of sulfate ----- na

Vacuum Distilled? \* ----- No

Remarks:

nd = not detected. na = not analyzed.

\*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water

Lab #: 824761 Job #: 50647 IS-65777 Co. Job#:  
Sample Name: NDCS-W471 Co. Lab#:  
Company: University of North Dakota - Energy & Environm  
API/Well:  
Container: 1 Liter Plastic Bottle  
Field/Site Name: North Dakota CarbonSafe (NDCS)  
Location: Center, ND  
Formation/Depth:  
Sampling Point:  
Date Sampled: 3/31/2022 13:00 Date Received: 4/07/2022 Date Reported: 5/19/2022

$\delta$ D of water ----- -120.1 ‰ relative to VSMOW  
 $\delta^{18}$ O of water ----- -15.30 ‰ relative to VSMOW  
Tritium content of water ----- < 0.52 TU  
 $\delta^{13}$ C of DIC ----- -12.3 ‰ relative to VPDB  
 $^{14}$ C content of DIC -----  $1.1 \pm 0.1$  percent modern carbon  
 $\delta^{15}$ N of nitrate ----- na  
 $\delta^{18}$ O of nitrate ----- na  
 $\delta^{34}$ S of sulfate ----- na  
 $\delta^{18}$ O of sulfate ----- na  
Vacuum Distilled? \* ----- No

Remarks:

nd = not detected. na = not analyzed.

\*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water