

APPENDIX B

Borehole Logs



LOG NO: EW-01

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 9/30/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ () _____

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4								0.4		
0.6								0.6		
0.8								0.8		
1.0								1.0		
1.2								1.2		
1.4								1.4		
1.6								1.6		
1.8								1.8		
2.0								2.0		
2.2								2.2		
2.4								2.4		
2.6								2.6		
2.8								2.8		
3.0					61	1-1-1			3.0	
3.2									3.2	
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party. ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-02

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 9/30/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ () _____

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-03

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 9/30/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ () _____

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-04

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 9/30/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ () _____

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-05

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 9/30/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ () _____

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-06

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 9/30/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ () _____

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-07

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 9/30/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ ()

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs ()

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-08

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 10/1/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ () _____

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-10

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 10/2/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ () _____

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-15

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 10/2/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ ()

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs ()

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4								0.4		
0.6								0.6		
0.8								0.8		
1.0								1.0		
1.2								1.2		
1.4								1.4		
1.6								1.6		
1.8								1.8		
2.0								2.0		
2.2								2.2		
2.4								2.4		
2.6								2.6		
2.8								2.8		
3.0								3.0		
3.2								3.2		
3.4								3.4		
3.6								3.6		
3.8								3.8		

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-16

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____


DRILL DATE 10/2/16

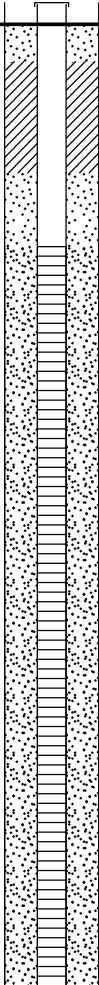
GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL  () _____

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION  mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2						3-3-4				3.2
3.4										3.4
3.6										3.6
3.8										3.8

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

 Auger Cuttings
 Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-17

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 10/2/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ () _____

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-18

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 10/2/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ () _____

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-19

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 10/3/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ ()

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs ()

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-20

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 10/3/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ () _____

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-21

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 10/3/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ ()

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs ()

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0				X		3-2-3				3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-22

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 10/2/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ ()

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs ()

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-23

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 10/3/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ ()

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs ()

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-24

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 10/2/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ () _____

HOLE DIAMETER 6 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2										0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4									3.4	
3.6									3.6	
3.8									3.8	

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-25

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000
 PROJECT NAME Cold Lake CFB
 DRILLING CONTRACTOR Tundra
 DRILLING METHOD Hollow Stem
 DRILL DATE 3/10/17
 LOGGED BY Ben Laird CHECKED BY _____
 HOLE DIAMETER 12 " WELL DIAMETER 3 "

CLIENT PWGSC
 PROJECT LOCATION Cold Lake, AB
 PROJECTION _____
 NORTHING _____ EASTING _____
 GROUND ELEVATION _____ TOC ELEVATION _____
 GROUND WATER LEVEL ▼ () _____
 GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)	
0.2		SAND, trace gravel, brown, fine grained, loose, dry								0.2	
0.4										0.4	
0.6										0.6	
0.8										0.8	
1.0									1.0		
1.2									1.2		
1.4									1.4		
1.6		SAND, brown, fine grained, loose, dry 1.52							1.6		
1.8									1.8		
2.0									2.0		
2.2									2.2		
2.4									2.4		
2.6									2.6		
2.8									2.8		
3.0		SAND, grey, fine grained, loose, wet, hydrocarbon odour 2.90							3.0		
3.2		CLAY, trace sand, grey, soft, moist 3.05							3.2		
3.4						3-4-24-24				3.4	
3.6										3.6	
3.8											3.8
End of Borehole at 3.96meters			3.96								

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party. ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-26

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000
 PROJECT NAME Cold Lake CFB
 DRILLING CONTRACTOR Tundra
 DRILLING METHOD Hollow Stem
 DRILL DATE 3/10/17
 LOGGED BY Ben Laird CHECKED BY _____
 HOLE DIAMETER 12 " WELL DIAMETER 3 "

CLIENT PWGSC
 PROJECT LOCATION Cold Lake, AB
 PROJECTION _____
 NORTHING _____ EASTING _____
 GROUND ELEVATION _____ TOC ELEVATION _____
 GROUND WATER LEVEL ▼ () _____
 GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2		SAND , trace gravel, brown, fine grained, loose, dry								0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0									1.0	
1.2									1.2	
1.4									1.4	
1.6		SAND , brown, fine grained, loose, dry 1.52		X		3-5-3-3			1.6	
1.8									1.8	
2.0									2.0	
2.2									2.2	
2.4									2.4	
2.6									2.6	
2.8									2.8	
3.0		SAND , grey, fine grained, loose, wet, hydrocarbon odour 2.90							3.0	
3.2		CLAY , trace sand, grey, soft, moist 3.05		X		3-5-5-5			3.2	
3.4									3.4	
3.6									3.6	
3.8									3.8	
End of Borehole at 3.96meters			3.96							

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party. ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-27

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Tundra

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 3/10/17

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ () _____

HOLE DIAMETER 12 " WELL DIAMETER 3 "

GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)	
0.2		SAND , trace gravel, brown, fine grained, loose, dry, hydrocarbon odour								0.2	
1.83		SAND , grey, fine grained, loose, wet, hydrocarbon odour		X		1-3-2-3				1.83	
3.35		CLAY , trace sand, grey, soft, moist, hydrocarbon odour		X		1-2-2-5				3.35	
		End of Borehole at 3.96meters	3.96								3.8

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party. ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: EW-28

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Tundra

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____


DRILL DATE 3/10/17


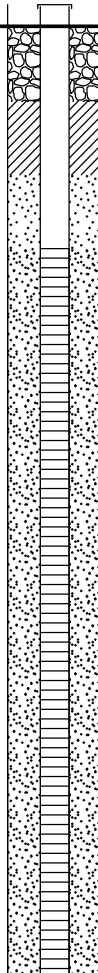
















GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL  ()

HOLE DIAMETER 12 " WELL DIAMETER 3 "

GROUND WATER ELEVATION  mbgs ()

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2		SAND, trace gravel, brown, fine grained, loose, dry								0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6		SAND, grey, fine grained, loose, wet, hydrocarbon odour 1.52								1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4										2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2		CLAY, trace sand, grey, soft, hydrocarbon odour 3.05								3.2
3.4						3-5-4-6				3.4
3.6										3.6
3.8										3.8
End of Borehole at 3.96meters			3.96							

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party. ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: MW-7-73

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION

DRILLING METHOD Hollow Stem

NORTHING EASTING

DRILL DATE 9/28/16

GROUND ELEVATION TOC ELEVATION

LOGGED BY Ben Laird CHECKED BY

GROUND WATER LEVEL 3.20 mbtoc (9/28/2016)

HOLE DIAMETER 6 " WELL DIAMETER 2 "

GROUND WATER ELEVATION mbgs (9/28/2016)

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2		ORGANICS, with fine sand, trace gravel, brown, loose, dry								0.2
0.4		SAND, trace gravel, brown, fine grained, loose, dry						0.4		
0.6								0.6		
0.8								0.8		
1.0				X	50	3-6-7			1.0	
1.2									1.2	
1.4									1.4	
1.6		SAND, white, fine grained, dry, hydrocarbon odour								1.6
1.8				X	44	2-5-5		1.8		
2.0								2.0		
2.2								2.2		
2.4		Wet							2.4	
2.6		SAND, grey, fine grained, loose, wet, hydrocarbon odour								2.6
2.8				X	56	3-4-3		2.8		
3.0								3.0		
3.2								3.2		
3.4		CLAY, trace fine sand, trace fine gravel, grey, soft, wet								3.4
3.6				X	56	3-3-4		3.6		
3.8								3.8		
4.0								4.0		
4.2										4.2
4.4						2-4-7		4.4		

End of Borehole at 4.42meters 4.42

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: MW-7-74

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000
 PROJECT NAME Cold Lake CFB
 DRILLING CONTRACTOR Core Drilling
 DRILLING METHOD Hollow Stem
 DRILL DATE 9/28/16
 LOGGED BY Ben Laird CHECKED BY _____
 HOLE DIAMETER 6 " WELL DIAMETER 2 "

CLIENT PWGSC
 PROJECT LOCATION Cold Lake, AB
 PROJECTION _____
 NORTHING _____ EASTING _____
 GROUND ELEVATION _____ TOC ELEVATION _____
 GROUND WATER LEVEL ▼ 3.51 mbtoc (9/28/2016)
 GROUND WATER ELEVATION ▼ mbgs (9/28/2016)

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2		ORGANICS , with fine sand, trace gravel, brown, loose, dry SAND , trace gravel, brown, fine grained, loose, dry								0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0									1.0	
1.2									1.2	
1.4									1.4	
1.6		SAND , white, fine grained, loose, dry, hydrocarbon odour								1.6
1.8				44	3-4-7			1.8		
2.0								2.0		
2.2								2.2		
2.4		SAND , grey, fine grained, loose, dry, no odour							2.4	
2.6		Wet							2.6	
2.8									2.8	
3.0									3.0	
3.2		CLAY , trace fine sand, trace fine gravel, grey, soft, wet								3.2
3.4				50	3-6-6			3.4		
3.6								3.6		
3.8								3.8		
End of Borehole at 3.96meters										3.96

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: MW-7-75

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000
 PROJECT NAME Cold Lake CFB
 DRILLING CONTRACTOR Core Drilling
 DRILLING METHOD Hollow Stem
 DRILL DATE 9/28/16
 LOGGED BY Ben Laird CHECKED BY _____
 HOLE DIAMETER 6 " WELL DIAMETER 2 "

CLIENT PWGSC
 PROJECT LOCATION Cold Lake, AB
 PROJECTION _____
 NORTHING _____ EASTING _____
 GROUND ELEVATION _____ TOC ELEVATION _____
 GROUND WATER LEVEL ▼ 3.05 mbtoc (9/28/2016)
 GROUND WATER ELEVATION ▼ mbgs (9/28/2016)

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2		ORGANICS , with fine sand, trace gravel, brown, loose, dry 0.05								0.2
0.4		SAND , trace gravel, brown, fine grained, loose, dry								0.4
0.6										0.6
0.8				X	44	4-6-8				0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6		SAND , white, fine grained, loose, dry 1.58		X	39	5-6-8				1.6
1.8										1.8
2.0										2.0
2.2		Wet 2.13								2.2
2.4		CLAY , with fine sand, trace gravel, grey, wet 2.29		X	50	0-3-6				2.4
2.6										2.6
2.8		CLAY , trace fine sand, trace fine gravel, grey, soft, wet 2.74								2.8
3.0										3.0
3.2				X		3-4-3				3.2
3.4										3.4
3.6										3.6
3.8										3.8
End of Borehole at 3.96meters			3.96							

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: MW-7-76

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000
 PROJECT NAME Cold Lake CFB
 DRILLING CONTRACTOR Core Drilling
 DRILLING METHOD Hollow Stem
 DRILL DATE 9/29/16
 LOGGED BY Ben Laird CHECKED BY _____
 HOLE DIAMETER 6" WELL DIAMETER 2"

CLIENT PWGSC
 PROJECT LOCATION Cold Lake, AB
 PROJECTION _____
 NORTHING _____ EASTING _____
 GROUND ELEVATION _____ TOC ELEVATION _____
 GROUND WATER LEVEL ▼ 1.37 mbtoc ()
 GROUND WATER ELEVATION ▼ mbgs ()

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.00		ORGANICS , with fine sand, trace gravel, brown, loose, dry								0.00
0.2		SAND , trace gravel, brown, fine grained, loose, dry								0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6		SAND , white, fine grained, wet, weak hydrocarbon odour								1.6
1.8					50	5-6-6				1.8
2.0						6				2.0
2.2										2.2
2.4		SAND , grey, fine grained, loose, wet, no odour								2.4
2.6										2.6
2.8										2.8
3.0										3.0
3.2										3.2
3.4		CLAY , trace fine sand, trace fine gravel, grey, soft, wet								3.4
3.6										3.6
3.8										3.8
End of Borehole at 3.96meters										3.96

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: MW-7-77

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000
 PROJECT NAME Cold Lake CFB
 DRILLING CONTRACTOR Core Drilling
 DRILLING METHOD Hollow Stem
 DRILL DATE 9/29/16
 LOGGED BY Ben Laird CHECKED BY _____
 HOLE DIAMETER 6 " WELL DIAMETER 2 "

CLIENT PWGSC
 PROJECT LOCATION Cold Lake, AB
 PROJECTION _____
 NORTHING _____ EASTING _____
 GROUND ELEVATION _____ TOC ELEVATION _____
 GROUND WATER LEVEL ▼ 2.90 mbtoc (9/29/2016)
 GROUND WATER ELEVATION ▼ mbgs (9/29/2016)

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2		ORGANICS , with fine sand, trace gravel, brown, loose, dry								0.2
0.4		SAND , trace gravel, brown, fine grained, loose, dry								0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6										1.6
1.8										1.8
2.0			Wet 1.98							2.0
2.2		SAND , grey, fine grained, loose, wet 2.13						2.2		
2.4								2.4		
2.6								2.6		
2.8		CLAY , trace fine sand, trace fine gravel, grey, soft, wet 2.74						2.8		
3.0								3.0		
3.2				X	50	3-3-4			3.2	
3.4									3.4	
3.6									3.6	
3.8									3.8	
End of Borehole at 3.96meters			3.96							

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: MW-7-78

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000
 PROJECT NAME Cold Lake CFB
 DRILLING CONTRACTOR Core Drilling
 DRILLING METHOD Hollow Stem
 DRILL DATE 9/29/16
 LOGGED BY Ben Laird CHECKED BY _____
 HOLE DIAMETER 6 " WELL DIAMETER 2 "

CLIENT PWGSC
 PROJECT LOCATION Cold Lake, AB
 PROJECTION _____
 NORTHING _____ EASTING _____
 GROUND ELEVATION _____ TOC ELEVATION _____
 GROUND WATER LEVEL ▼ 2.74 mbtoc (9/29/2016)
 GROUND WATER ELEVATION ▼ mbgs (9/29/2016)

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2		ORGANICS , with fine sand, trace gravel, brown, loose, dry SAND , trace gravel, brown, fine grained, loose, dry								0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0				X	39	5-5-7				1.0
1.2										1.2
1.4										1.4
1.6		SAND , white, fine grained, dry, hydrocarbon odour								1.6
1.8		Wet								1.8
2.0				X	11	4-5-6				2.0
2.2										2.2
2.4										2.4
2.6		CLAY , trace fine sand, trace fine gravel, grey, soft, wet								2.6
2.8				X	72	0-1-1				2.8
3.0										3.0
3.2										3.2
3.4				X	78	3-3-3				3.4
3.6										3.6
3.8										3.8
End of Borehole at 3.96meters			3.96							

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: MW-7-79

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000

CLIENT PWGSC

PROJECT NAME Cold Lake CFB

PROJECT LOCATION Cold Lake, AB

DRILLING CONTRACTOR Core Drilling

PROJECTION _____

DRILLING METHOD Hollow Stem

NORTHING _____ EASTING _____

DRILL DATE 9/29/16

GROUND ELEVATION _____ TOC ELEVATION _____

LOGGED BY Ben Laird CHECKED BY _____

GROUND WATER LEVEL ▼ () _____

HOLE DIAMETER 6 " WELL DIAMETER 2 "

GROUND WATER ELEVATION ▼ mbgs () _____

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2		ORGANICS , with fine sand, trace gravel, brown, loose, dry 0.08								0.2
0.4		SAND , white, fine grained, dry								0.4
0.6				39	5-5-5					0.6
0.8										0.8
1.0									1.0	
1.2									1.2	
1.4									1.4	
1.6									1.6	
1.8				44	4-3-3				1.8	
2.0									2.0	
2.2									2.2	
2.4				44	3-2-3				2.4	
2.6									2.6	
2.8									2.8	
3.0									3.0	
3.2									3.2	
3.4				61	4-1-1				3.4	
3.6		CLAY , trace fine sand, trace fine gravel, grey, soft, wet 3.35								3.4
3.8										3.6
										3.8
End of Borehole at 3.96meters			3.96							

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: MW-7-80

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000
PROJECT NAME Cold Lake CFB
DRILLING CONTRACTOR Core Drilling
DRILLING METHOD Hollow Stem
DRILL DATE 29/9/16
LOGGED BY Ben Laird **CHECKED BY**
HOLE DIAMETER 6" **WELL DIAMETER** 2"

CLIENT PWGSC
PROJECT LOCATION Cold Lake, AB
PROJECTION
NORTHING **EASTING**
GROUND ELEVATION **TOC ELEVATION**
GROUND WATER LEVEL ▼ 3.20 mbtgc (28/09/2016)
GROUND WATER ELEVATION ▼ mbgs (28/09/2016)

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2		ORGANICS , with fine sand, trace gravel, brown, loose, dry SAND , trace gravel, brown, fine grained, loose, dry								0.2
0.4										0.4
0.6										0.6
0.8										0.8
1.0										1.0
1.2										1.2
1.4										1.4
1.6		SAND , white, fine grained, dry, hydrocarbon odour 1.52								1.6
1.8										1.8
2.0										2.0
2.2										2.2
2.4		Wet 2.29								2.4
2.6		SAND , grey, fine grained, loose, wet, hydrocarbon odour 2.44								2.6
2.8										2.8
3.0										3.0
3.2		CLAY , trace fine sand, trace fine gravel, grey, soft, wet 3.05								3.2
3.4										3.4
3.6										3.6
3.8										3.8
End of Borehole at 3.96meters			3.96							

NOTES:

masl = Meters Above Sea Level
mbgs = Meters Below Ground Surface
toc = Top of Casing
ppm = Parts Per Million
LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
I = Inorganics F2 = PHC F2-F4
V = VOC's PCB = PCB's
B = BTEX Pes = Pesticides
P = PAH L/H = LEPH/HEPH
G = GLYCOL VPH = VPH

SAMPLE TYPE:

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party. ARCADIS accepts no liability for third party decisions/actions made based on this log.



ARCADIS Canada
308-1080 Mainland Street
Vancouver, BC, V6B 2T4
Telephone: 604-632-9941
Fax: 604-632-9942

LOG NO: MW-7-81

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000
 PROJECT NAME Cold Lake CFB
 DRILLING CONTRACTOR Core Drilling
 DRILLING METHOD Hollow Stem
 DRILL DATE 9/28/16
 LOGGED BY Ben Laird CHECKED BY _____
 HOLE DIAMETER 6 " WELL DIAMETER 2 "

CLIENT PWGSC
 PROJECT LOCATION Cold Lake, AB
 PROJECTION _____
 NORTHING _____ EASTING _____
 GROUND ELEVATION _____ TOC ELEVATION _____
 GROUND WATER LEVEL ▼ 3.05 mbtoc (9/28/2016)
 GROUND WATER ELEVATION ▼ mbgs (9/28/2016)

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2		ORGANICS , with fine sand, trace gravel, brown, loose, dry 0.03								0.2
0.4		SAND , trace gravel, brown, fine grained, loose, dry								0.4
0.6										0.6
1.6		SAND , white, fine grained, loose, dry 1.52							1.6	
2.0					44	4-5-7			2.0	
2.2		Wet 2.13							2.2	
3.0		CLAY , trace fine sand, trace fine gravel, grey, soft, wet 2.90							3.0	
3.2					50	3-4-5			3.2	
3.4									3.4	
3.6									3.6	
3.8									3.8	
End of Borehole at 3.96meters			3.96							

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party. ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942

LOG NO: MW-7-82

BOREHOLE LOG

PAGE 1 OF 1

PROJECT NUMBER 702584-000
 PROJECT NAME Cold Lake CFB
 DRILLING CONTRACTOR Core Drilling
 DRILLING METHOD Hollow Stem
 DRILL DATE 9/29/16
 LOGGED BY Ben Laird CHECKED BY _____
 HOLE DIAMETER 6 " WELL DIAMETER 2 "

CLIENT PWGSC
 PROJECT LOCATION Cold Lake, AB
 PROJECTION _____
 NORTHING _____ EASTING _____
 GROUND ELEVATION _____ TOC ELEVATION _____
 GROUND WATER LEVEL ▼ 3.05 mbtoc (9/29/2016)
 GROUND WATER ELEVATION ▼ mbgs (9/29/2016)

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY %	BLOW COUNTS	VAPOUR READINGS	LAB ANALYSIS	WELL DIAGRAM	DEPTH (m)
0.2		ORGANICS , with fine sand, trace gravel, brown, loose, dry SAND , trace gravel, brown, fine grained, loose, dry								0.2
1.6		SAND , white, fine grained, dry, hydrocarbon odour			44	3				1.6
2.2		Wet								2.2
3.0		CLAY , trace fine sand, trace fine gravel, grey, soft, wet								3.0
3.2					67	4-3-3				3.2
		End of Borehole at 3.96meters	3.96							

NOTES:

masl = Meters Above Sea Level
 mbgs = Meters Below Ground Surface
 toc = Top of Casing
 ppm = Parts Per Million
 LEL = Lower Explosive Limit

LAB ANALYSIS:

M = Metals F1 = PHC F1
 I = Inorganics F2 = PHC F2-F4
 V = VOC's PCB = PCB's
 B = BTEX Pes = Pesticides
 P = PAH L/H = LEPH/HEPH
 G = GLYCOL VPH = VPH

SAMPLE TYPE:

Split Spoon

Note: Any decisions/actions made by a third party based on this log are the sole responsibility of the third party.
 ARCADIS accepts no liability for third party decisions/actions made based on this log.



Arcadis
 308-1080 Mainland Street
 V6B 2T4
 Telephone: 604-632-9941
 Fax: 604-632-9942