

GEOLOGIST'S REPORT

DRILLING TIME & SAMPLE LOG

COMPANY **Berco LLC** ELEVATIONS
 LEASE **Six M Farms A** NO. **572** DF **2980**
 LOCATION **1520'FSL + 1530'FWL** DL **1988**
 SEC. **22** TWP. **22S** STATE RANG. **34W** MEASUREMENTS ARE
 COUNTY **Finney** DIST. **Stark** ALL RIGHTS RESERVED
 FIELD **Amazon Ditch East**
 CONTRACTOR **Berco LLC** BRIS. REC. CO. #
 COMM. **12-8-18** COMP. **1-20-19** OF **1** OF **1**
 RTD. **4850** LTD. **4818** EL. LOG. ACC. NO. **9557**
 NO. OF DST'S. **5** NO. OF CORES. **None** DRILLER **John G. Galt**
 SAMPLES SAVED FROM **3600** TO **TD** METERING

REMARKS **Earth-Tech had a unannounced gas detection unit on this well**
from 3600 feet to total depth.

Note Pipe Straps 1. 8'94' short to base
 2. 11'64' short to base

Thanks to
 John Galt
 Berco LLC

LITHOLOGY **CHROMATOGRAPH**

SANDSTONE **SILTSTONE** **CL. = METHANE**
 LIMESTONE **DOLOMITE** **C3 = ETHANE**
 SHALE **GRANITE MASH** **C4 = PROPANE**
 SLT **GRAY & BLUE** **C5 = ISOBUTANE**
SHERT **C6 = BUTANE**
C7 = PENTANE

DRILL TIME SCALE SAMPLE DESCRIPTION GAS SCALE

3600	Lms. grayish tan to tan, crypt to fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.	10	
3700	Lms. grayish tan to tan, crypt to fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.	100	
3800	Lms. similar 3600-3619 w/ prod scattered thin sh. med to dk gray to v. ark. gray to black	1000	
3900	Lms. similar 3619-3660 w/ interbedded lms. similar 3600-3619		
4000	Sh. med to dk gray to black carb. Lms. grayish tan to tan, crypt to fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
4100	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
4200	Lms. grayish tan to tan, crypt to fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
4300	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
4400	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
4500	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
4600	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
4700	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
4800	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
4900	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
5000	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
5100	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
5200	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
5300	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
5400	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
5500	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
5600	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
5700	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
5800	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
5900	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
6000	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
6100	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
6200	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
6300	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
6400	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
6500	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
6600	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
6700	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
6800	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		
6900	Lms. tan, grayish, crypt to v. fine, sub-succro + packst; chert, no. 10's. No cut. No vis. For.		

TD 4850

Cir Points: 1. 3895 2. 4019 3. 4057 4. 4151 5. 4185 6. 4235 7. 4312 8. 4342 9. 4372 10. 4396 11. 4416 12. 4450 TD

Daily Prog: 1. 3600 12:18 AM 12-19-18 2. 3718 7:00 AM 12-20-18 3. 4057 7:00 AM 12-21-18 4. 4057 7:00 AM 12-22-18 5. 4148 7:00 AM 12-23-18 6. 4185 7:00 AM 12-23-18 7. 4185 7:00 AM 12-23-18 8. 4208 7:00 AM 12-31-18

DST #1 Lansing 15" 4000-4019 10 built to 1/2" blow FO built to 1/2" blow Rec'd 90% Grav. oil 26% BHT 190°F

DST #2 Lansing 15" 4046-4057 10 built to 1/2" blow FO built to 1/2" blow Rec'd 90% Grav. oil 27% BHT 190°F

DST #3 Lansing 15" 4166-4208 10 built to 1/2" blow FO built to 1/2" blow Rec'd 90% Grav. oil 27% BHT 190°F

DST #4 Lansing 15" 4219-4235 10 built to 1/2" blow FO built to 1/2" blow Rec'd 90% Grav. oil 27% BHT 190°F

DST #5 Lansing 15" 4290-4312 10 built to 1/2" blow FO built to 1/2" blow Rec'd 90% Grav. oil 27% BHT 190°F

DST #6 Lansing 15" 4372-4416 10 built to 1/2" blow FO built to 1/2" blow Rec'd 90% Grav. oil 27% BHT 190°F

Date	12-17-18	12-18-18	12-19-18	12-20-18	12-21-18	12-22-18	12-23-18
Depth	3600	3718	3800	3900	4057	4185	4208
WT	8.9	8.9	9.3	8.2	9.1	9.0	9.0
Vis	31	34	31	42	54	45	51
PV	4	14	16	15	16	18	18
YP	8	12	19	15	16	22	22
GS	0.23	0.23	0.23	0.23	0.23	0.23	0.23
NL	N/C	N/C	N/C	6.2	7.2	7.2	7.2
Calc	3.2	3.2	3.2	3.2	3.2	3.2	3.2
pH	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Chl	2000	2000	2000	2000	2000	2000	2000
Ca	1.0	1.0	1.0	1.0	1.0	1.0	1.0
LCM	3.0	6.0	6.0	2.2	4.2	4.2	4.2

Date	12-20-18	12-21-18	12-22-18	12-23-18
Depth	4185	4208	4235	4250
WT	9.0	9.2	9.2	9.1
Vis	12	14	17	16
PV	18	15	19	18
YP	23	15	24	22
GS	0.23	0.23	0.23	0.23
NL	10.4	11.0	11.0	11.0
Calc	3.2	3.2	3.2	3.2
pH	9.0	9.0	9.0	9.0
Chl	9500	9500	9500	9500
Ca	1.0	1.0	1.0	1.0
LCM	1.2	1.2	1.2	1.2

Date	12-24-18
Depth	4416
WT	9.2
Vis	9.5
PV	16
YP	19
GS	0.23
NL	10.4
Calc	3.2
pH	10.0
Chl	9500
Ca	1.0
LCM	3.0

Operator **Berco LLC** LEASE **Six M Farms A** NO. **572** ELEVATION **2950'ASD** RTD **4850** LOCATION **1520'FSL + 1530'FWL** SEC. **22** TWP. **22S** RANG. **34W** COUNTY **Finney** STATE **Kansas**