

BLACK DIAMOND OIL INCORPORATED

Scale 1:240 Imperial

Well Name: KS BRAND #1
Surface Location: SW NW SE NW Sec. 22 - 5S - 21W
Bottom Location:
API: 15-137-20731
License Number: 7076
Spud Date: 5/12/2015 Time: 12:00 AM
Region: NORTON COUNTY KANSAS
Drilling Completed: 5/15/2015 Time: 3:50 PM
Surface Coordinates: 1700' FNL & 1340' FWL
Bottom Hole Coordinates:
Ground Elevation: 2144.00ft
K.B. Elevation: 2149.00ft
Logged Interval: 3050.00ft To: 3583.00ft
Total Depth: 3583.00ft
Formation: GORHAM SAND
Drilling Fluid Type: FRESH WATER / CHEMICAL GEL

OPERATOR

Company: BLACK DIAMOND OIL, INC.
Address: PO BOX 641
HAYS, KS 67601

Contact Geologist: KENNETH VEHIGE
Contact Phone Nbr: (785) 625 - 5891
Well Name: KS BRAND #1
Location: SW NW SE NW Sec. 22 - 5S - 21W
API: 15-137-20731
Pool:
State: KANSAS

Field: RAY WEST
Country: USA

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: -99.6789584
Latitude: 39.6053204
N/S Co-ord: 1700' FNL
E/W Co-ord: 1340' FWL

LOGGED BY



Company: BIG CREEK CONSULTING, INC.
Address: 1909 MAPLE
ELLIS, KS 67627

Phone Nbr: (785) 259-3737
 Logged By: Geologist

Name: JEFF LAWLER

CONTRACTOR

Contractor: WW DRILLING, LLC
 Rig #: 6
 Rig Type: MUD ROTARY
 Spud Date: 5/12/2015
 TD Date: 5/15/2015
 Rig Release:
 Time: 12:00 AM
 Time: 3:50 PM
 Time:

ELEVATIONS

K.B. Elevation: 2149.00ft
 K.B. to Ground: 5.00ft
 Ground Elevation: 2144.00ft

NOTES


DUE TO ECONOMICAL RECOVERY ON DST #1 5 1/2" PRODUCTION PIPE WAS RAN TO FURTHER EVALUATE THE GORHAM SAND.

RESPECTFULLY SUBMITTED,
 JEFF LAWLER

WELL COMPARISON SHEET

FORMATION	KS BRAND #1				P&A 1-85				R				BLACK DIAMOND OIL, INC.							
	KEMPER A #1				KEMPER A #1				KEMPER #1				GLENNEMEIER A #1							
	NE SW SW NE 22-5-21				SW NE SW 22-5-21				SW NW SW 22-5-21				W2 SE SW 21-5-21							
	KB	2149	GL	2144	KB	2134	KB	2207	KB	2250	KB	2266								
	LOG TOPS	SAMPLE TOPS			LOG		LOG	SMPL.	LOG		LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.		
	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.
ANHYDRITE TOP	1753	396	1749	400	1731	403	- 7	- 3	1802	405	- 9	- 5	1846	404	- 8	- 4	1864	402	- 6	- 2
BASE	1780	369	1779	370	1755	379	- 10	- 9	1831	376	- 7	- 6	1876	374	- 5	- 4	1892	374	- 5	- 4
TOPEKA	3105	-956			3145	-1011	+ 55		3210	-1003	+ 47		3249	-999	+ 43		3213	-947	- 9	
HEBNER SHALE	3305	-1156	3301	-1152	3288	-1154	- 2	+ 2	3357	-1150	- 6	- 2	3394	-1144	- 12	- 8	3415	-1149	- 7	- 3
TORONTO	3333	-1184	3323	-1174	3314	-1180	- 4	+ 6					3420	-1170	- 14	- 4	3441	-1175	- 9	+ 1
LKC	3350	-1201	3346	-1197	3330	-1196	- 5	- 1	3406	-1199	- 2	+ 2	3438	-1188	- 13	- 9	3461	-1195	- 6	- 2
BKC	3535	-1386	3536	-1387	3518	-1384	- 2	- 3	3587	-1380	- 6	- 7					3646	-1380	- 6	- 7
GORHAM SAND			3582	-1433																
REAGAN					3568	-1434			3635	-1428			3678	-1428			3699	-1433		
TOTAL DEPTH	3583	-1434	3583	-1434	3568	-1434	+ 0	+ 0	3640	-1433	- 1	- 1	3681	-1431	- 3	- 3	3700	-1434	+ 0	+ 0

DST #1 GORHAM SAND 3573' - 3583'

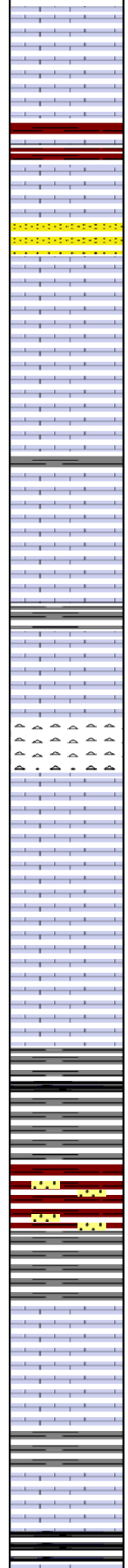
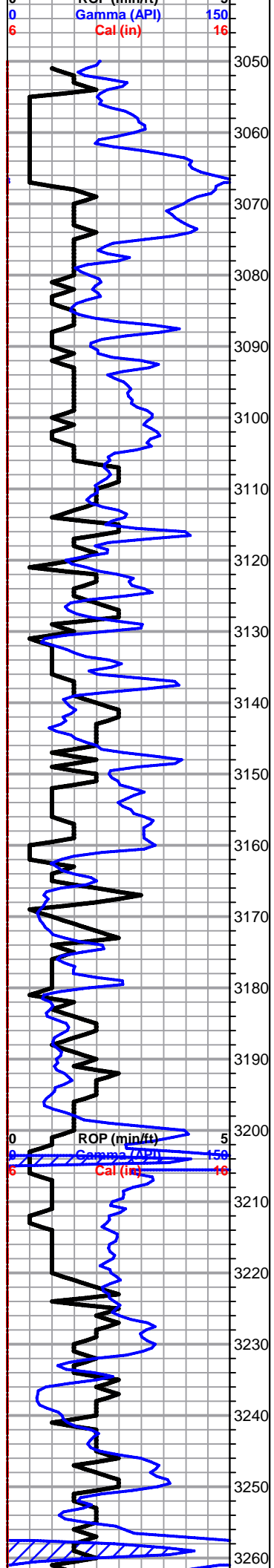
 <p>TRILOBITE TESTING, INC.</p>	<p>DRILL STEM TEST REPORT</p>	
	Black Diamond Oil, Inc. P.O. Box 641 Hays, KS 67601 ATTN: Jeff Lawler	Sec. 22-5s-21w Norton, KS KS Brand #1 Job Ticket: 62469 Test Start: 2015.05.15 @ 22:54:00
<p>GENERAL INFORMATION:</p> Formation: Gorham Sand Deviated: No Whipstock: ft (KB) Time Tool Opened: 02:02:40 Time Test Ended: 06:49:39 Interval: 3573.00 ft (KB) To 3583.00 ft (KB) (TVD) Total Depth: 3583.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Fair Test Type: Conventional Bottom Hole (Initial) Tester: Phillip Gage Unit No: 77 Reference Elevations: 2149.00 ft (KB) 2144.00 ft (CF) KB to GR/CF: 5.00 ft		
Serial #: 8897 Press@RunDepth: 364.36 psig @ 3578.00 ft (KB) Start Date: 2015.05.15 Start Time: 22:54:01	Inside End Date: 2015.05.16 End Time: 06:49:40	Capacity: 8000.00 psig Last Calib.: 2015.05.16 Time On Btm: 2015.05.16 @ 02:02:30 Time Off Btm: 2015.05.16 @ 04:05:20
<p>TEST COMMENT: 30-IF-BOB in 5 mins. 30-ISI-No Return 30-FF-BOB in 9 mins 30-FSI-No Return</p>		
<p>Pressure vs. Time</p>		<p>PRESSURE SUMMARY</p>

1' DRILL TIME THROUGH ANHYDRITE FROM 1730' - 1790'
1' DRILL TIME FROM 3050' - RTD
10' WET/DRY SAMPLES FROM 3100' - RTD

GEOLOGICAL SUPERVISION BY JEFF LAWLER FROM 3050' - RTD

8 5/8" SURFACE PIPE SET @ 217' SURVEY 1/2 dgr.

ANHYDRITE TOP 1749' (+400) E-LOG 1753' (+396)
ANHYDRITE BASE 1779' (+370) E-LOG 1780' (+369)



Lm- Buff Gray, FXLN, high-energy bioclastic w/ fsl fragments, sctrd XLN porosity, much soft calcareous silty & gummy shales

Lm- Gray Buff, Fn Grn, mud supported matrix, loosely cemented, some crumbly, poor vis. porosity

Sh- Maroon, gritty & earthy, much wash & argillaceous clumps

Ss- Fn Grn, rounded to sub-rounded, calcareous cementation, poorly dev., sorted & sl unconsolidated, sctrd intergranular porosity

TOPEAK E-LOG 3105' (-956) Lm- Gray Off White, FXLN, high-energy, bioclastic w/ fsl fragments, trashy, some fusulinids, poor XLN porosity, some vry limey & chalky

Lm- Cream Off White, FXLN, dense, semi-granular, fsl, sctrd XLN & intergranular porosity, much soft white chalk, several pcs of cream fsl fresh bedded chert

Sh- Gray Green Maroon, gritty & earthy, much soft white chalk

Lm- White Off White, Fn Grn, loosely cemented, mud supported matrix, vry limey & chalky, min. vis. porosity

Chert- Cream Tan, CryptoXLN, fresh bedded vitreous chert, vry clean, porcelain like w/o vis. porosity

Lm- Cream Off White, FXLN, sl fsl, most well cemented, some loosely cemented & chalky, poor XLN porosity, some sctrd reXLN, much soft white chalk

Lm- Gray Buff, FXLN, dense, well cemented, mostly tight w/ sctrd XLN porosity

Lm- Tan, FXLN, dense, well cemented, dense reXLN & XLN porosity

Sh- Black, fissile & carbonaceous

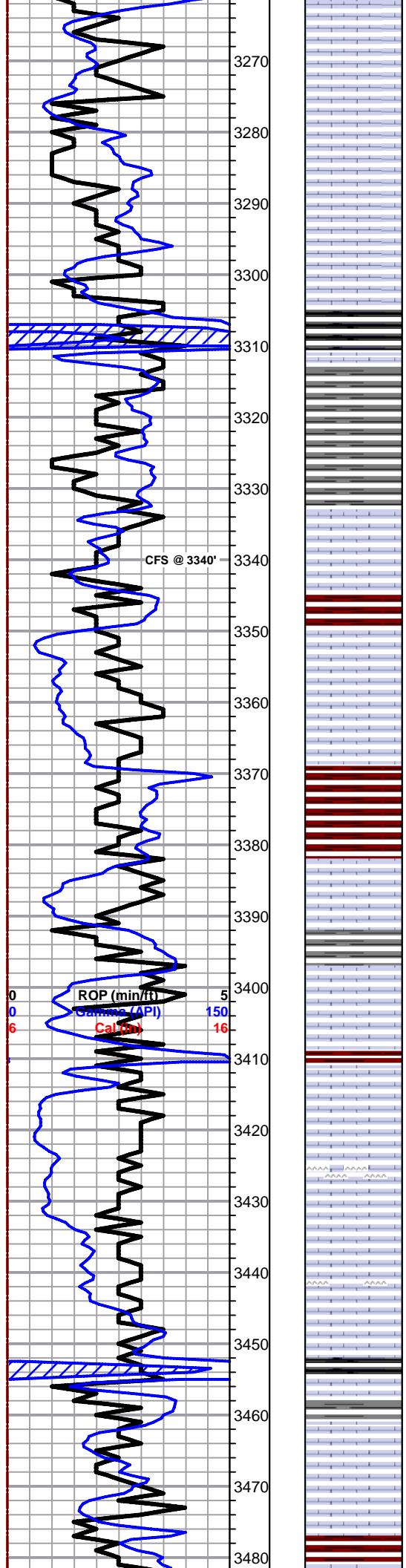
Sh- Gray/White, abundant gummy arenaceous clumps

Sh- Maroon Gray Green, gummy clumps, gritty & earthy, dense & waxy

Lm- Cream Buff, FXLN, dense, well cemented, some chalky in part, poor vis. porosity, barren

Lm- A/A w/ fsl cream FXLN, sctrd XLN porosity, some gummy gray & green lime

Lm- Cream Off White, FXLN, dense, well cemented, sctrd. mod. dev., sl oolitic & fsl, w/ sctrd vry fn inter oolite porosity, some w/ crs reXLN & good interXLN porosity, SCTRDRK STN, TR LIVELY FO, FR ODR, some gritty sl dolomitic & some dense & sl cherty



Lm- Cream Buff, VF-FXLN, dense, well cemented, mostly tight, some w/ scstrd dense XLN porosity, barren, much gummy white chalk

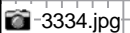
Lm- Cream Off White, FXLN, fsl & sl oolitic, poorly dev. w/ scstrd to dense XLN porosity, barren, soft white chalk

Lm- A/A w/ several pcs of dense tight VFXLN dolomite/dolomitic Ls w/ poor vis. porosity & some loosely cemented chalky Ls, all barren

HEEBNER 3301' (-1152) E-LOG 3305' (-1156) Sh- Black, fissile, soft & carbonaceous

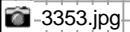
Sh- Gray Maroon, silty & sandy, gummy argillaceous clumps, gritty & earthy

TORONTO 3323' (-1174) E-LOG 3333' (-1184) Chert/Dolomite/Lm- Cream Lt Salmon mix of fresh bedded vitreous chert, gritty & grainy dolomitic chert, well cemented & tight VFXLN dolomite, fsl & sl oolitic mod. dev. Lm w/ scstrd vry fn to fn inter oolite porosity, LT SCTRD STN, TR FO W/ GSY BUBBLES UPON CRUSH, WK ODR



Sh- Maroon, gummy argillaceous clumps

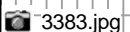
LKC 3346' (-1197) E-LOG 3350' (-1201) Lm- Cream Tan, FXLN, mod dev. & oolitic w/ scstrd ppt inter oolite porosity, SCTRD DRK STN, SCTRD FR OIL, WK ODR



Lm- Cream Off White, VF-FXLN, dense, well cemented, sl fsl, scstrd micro XLN & XLN porosity, soft white chalk, vry clean & barren

Sh- Maroon Lm Green, gritty & earthy, gummy wash

Lm- Cream Off White, FXLN, oolitic, poorly dev., few pcs w/ scstrd inter oolite ppt porosity, most w/ scstrd XLN porosity, 4-5 PCS W/ WK SCTRD STN, NSFO, NO ODR, several pcs of salmon & tan fresh bedded chert



Lm- Cream Off White, VF-FXLN, dense mix of loosely cemented & chalky to well cemented & tight w/ min. vis. porosity

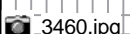
Lm- Cream Tan, VF-FXLN, densely packed small oolites, poorly dev. w/ min porosity, several w/ clear replacement cementation, scstrd micro XLN porosity, barren

Lm- Cream Off White, VF-FXLN, dense mix, some loosely cemented & chalky, some well cemented & mostly tight w/ scstrd XLN porosity, vitreous fresh bedded chert w/ vis. porosity, all barren

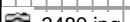
Lm- chert A/A w/ Tan VFXLN, dense, tight w/ min. vis porosity, barren

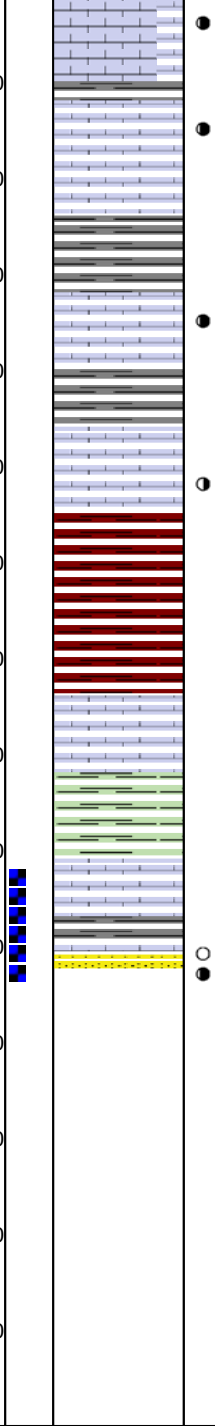
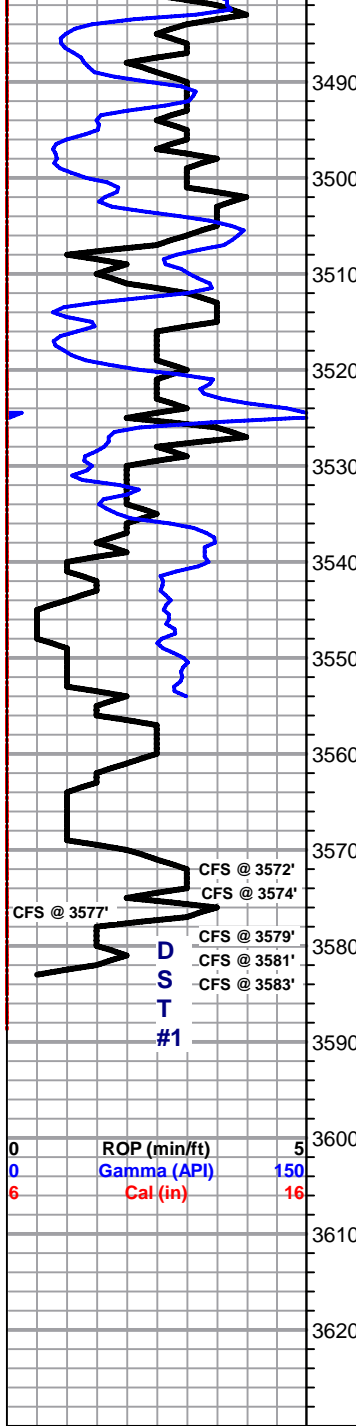
Sh- Black Maroon Gray, fissile & carbonaceous, gritty & earthy, silty & micaceous

LKC 3460' (-1200) E-LOG 3465' (-1205) Lm- Cream Off White, FXLN, mod. well dev. w/ mostly consistent fn ppt porosity throughout, LT SCTRD STN, NSFO, WK ODR



Lm- Gray Buff, VFXLN, dense, well cemented, mostly tight w/ min. vis. porosity, barren





Lm- White Off White, VF-FXLN, sl fsl, sctrd dev. w/ sctrd vry fn ppt porosity, SCTRD DRK STN, NSFO, NO ODR

Lm- Cream Tan, FXLN, oolitic, well dev. w/ consistent fn ppt interoolite porosity, LT STN, NSFO, FR-STRNG ODR

Lm- Cream Off White, FXLN, loosely cemented, well dev. w/ consistent inter oolite fn ppt porosity throughout, LT FLAKEY STN, NSFO, FR ODR

Lm- Cream Off White, FXLN, loosely cemented & crumbly, unconsolidated w/ maroon & yellow oolites, some fusulinids, XLN porosity, barren, several pcs of MED-CRS XLN, fsl w/ fusulinids, sctrd ppt to sub-vugular porosity, SCTRD DRK STN, STRINGY OIL, WK-FR ODR

BKC 3536' (-1387) E-LOG 3535' (-1386) Sh- Maroon, gummy argillaceous clumps

Sh- Maroon, gritty & earthy, much arenaceous shale/shaley Ss

Lm- White Off White, FXLN, dense, well cemented, dense XLN porosity, vry clean, barren

Sh- Lm Green, dense & waxy

3574' CFS- Lm- White, loosely cemented vry friable, unconsolidated w/ sub-rounded fn grn qtz. inclusions, limey, poor vis. intergranular porosity, barren, 2-3 fn grn. rounded yellow Ss clusters, loosely cemented & friable, good intergranular porosity, barren

3577' CFS- Sh- Gray Maroon, unconsolidated & striated, waxy & dense, gritty & earthy

3579' CFS - Sh- Gray Maroon, waxy & crumbly, gummy wash

3581' CFS - GORHAM SAND 3582' (-1433) Lm- White Cream, vry well cemented angular clear qtz. inclusions, no vis. matrix, few pcs w/ TR BLK TARRY STN, NSFO, TR ODR

3583' CFS - Ss- Clear to Semi-Frosted, Fn-Crs Grn, consolidated & mod. sorted, both Ca & Dolomite cementation, angular to sub-angular, friable w/ mostly consistent intergranular porosity, SCTRD TO SUB-SAT DRK STN, FR OIL UPON CRUSH, FR-GD ODR

RTD 3583' (-1434) LTD 3583' (-1434) @ 15:50 5/15/2015

-3480.jpg

-3495.jpg

-3512.jpg

-3530.jpg

-3583.jpg

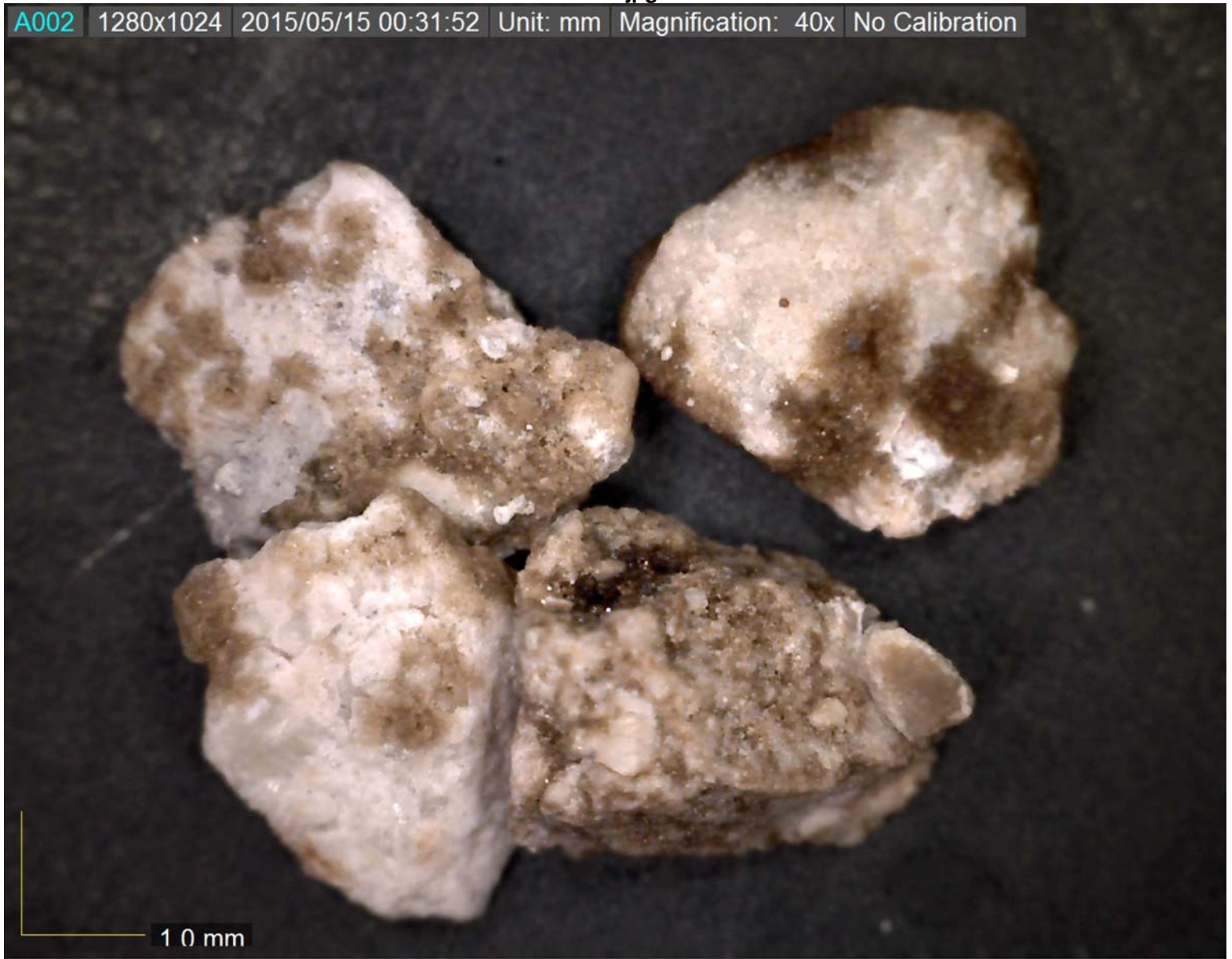
SHORT TRIP STRAP -0.07' SURVEY 1 dgr.

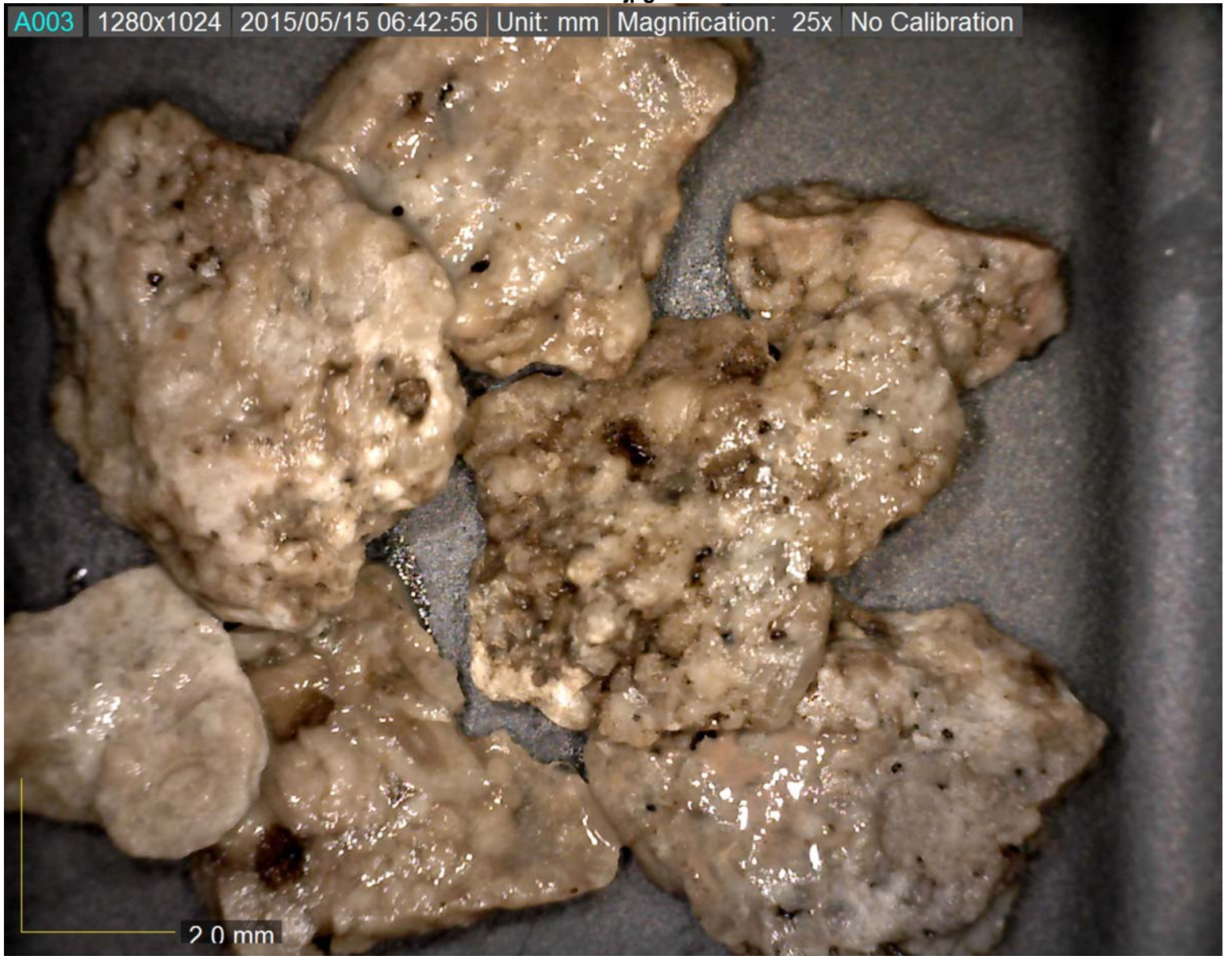
DST #1 GORHAM SAND 3573' - 3583' 30-30-30-30

945' SGCO (10%G, 9%O)

SIP: 1019-1007#









1.0 mm

3383' x 30





10 mm

3480' x 30





1.0 mm

34512' x 30



1.0 mm

3530' x 30



1.0 mm

3583 ' x30