



Scale 1:240 Imperial

Well Name: KS BRAND #5
Surface Location: NW NW NE SE Sec. 22, T5S, R21W
Bottom Location:
API: 15-137-20752
License Number: 34916
Spud Date: 11/12/2019 Time: 9:00 AM
Region: NORTON COUNTY
Drilling Completed: Time:
Surface Coordinates: 2550' FSL & 1515' FWL
Bottom Hole Coordinates:
Ground Elevation: 2163.00ft
K.B. Elevation: 2171.00ft
Logged Interval: 0.00ft To: 0.00ft
Total Depth: 0.00ft
Formation: REAGAN SAND
Drilling Fluid Type: CHEMICAL

OPERATOR

Company: FOURWINDS OIL CORPORTATION
Address: 1414 W 45TH

Contact Geologist: DAN WINDHOLZ
Contact Phone Nbr: (785) 259-8403
Well Name: KS BRAND #5
Location: NW NW NE SE Sec. 22, T5S, R21W
API: 15-137-20752
Pool: Field: RAY WEST
State: KS Country:

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: -99.67881
Latitude: 39.60323
N/S Co-ord: 2550' FSL
E/W Co-ord: 1515' FWL

LOGGED BY

Company:
Address: 2717 HICKORY
HAYS, KS 67601
Phone Nbr: (785) 639-0721
Logged By: Geologist Name: CAMERON BRIN

CONTRACTOR

Contractor: DISCOVERY DRILLING INC.
Rig #: 2
Rig Type: MUD ROTARY
Spud Date: 11/12/2019 Time: 9:00 AM
TD Date: Time:
Rig Release: Time:

ELEVATIONS

NOTES

ANHYDRITE



TOPS COMPARISON

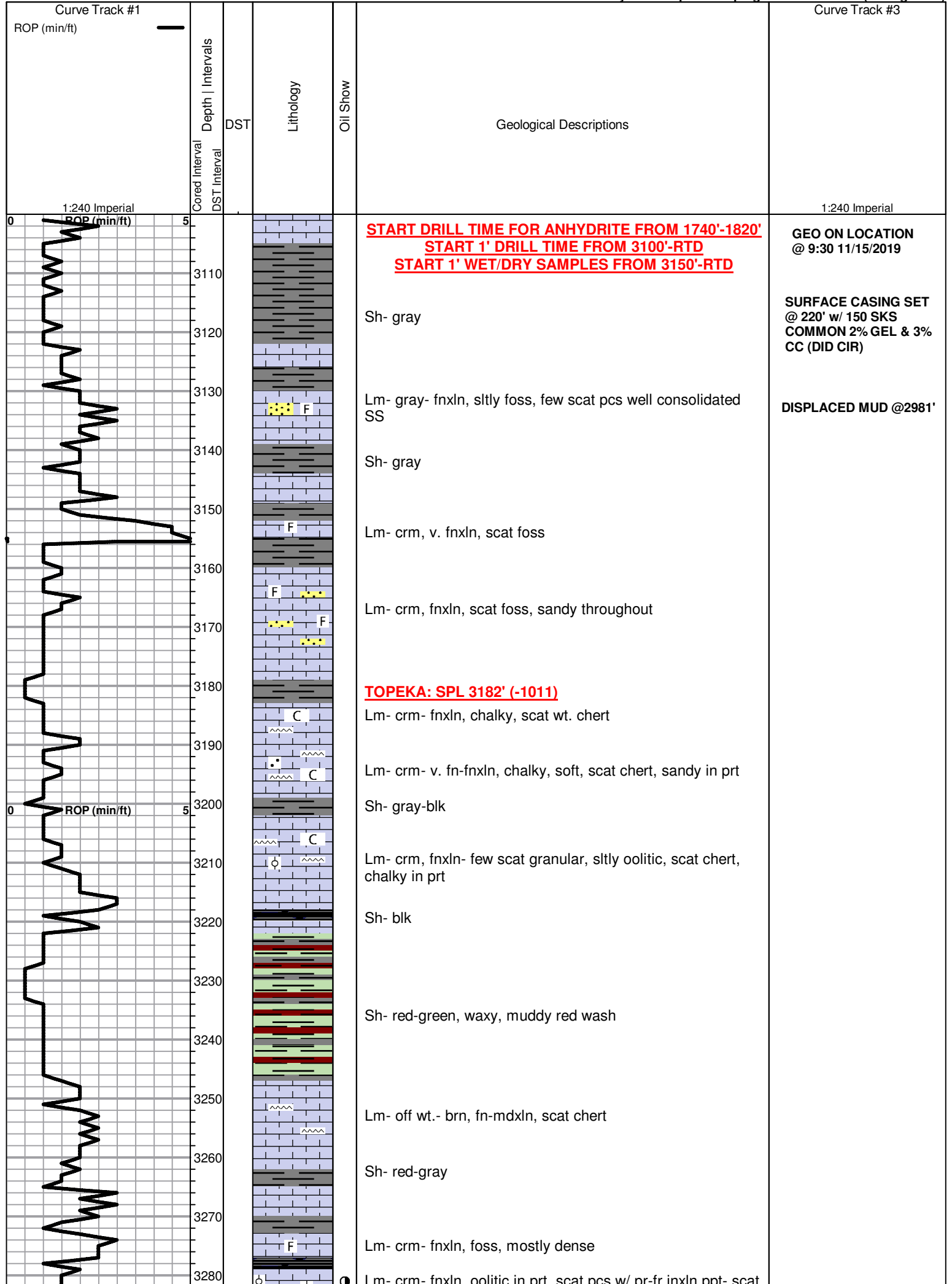
FORMATION	KS BRAND #5				BLACK DIAMOND OIL INC			BLACK DIAMOND OIL INC			P&A 1/4/1985				SWD				
	KB 2171		GL 2163		KS BRAND #1			KEMPER A #1			A. SCOTT RITCHIE				BLACK DIAMOND OIL INC				
	SW NW SE NW, Sec. 22, T5S, R21W				NE SW SW NE, Sec. 22, T5S, R21W			KEMPER A #1				SW NE SW, Sec. 22, T5S, R21W				SE NW NE NW, Sec. 22, T5S, R21W			
	LOG TOPS		SAMPLE TOPS		LOG			LOG			LOGS				LOG				
DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	LOG CORR.	SMPL. CORR.	DEPTH	DATUM	LOG CORR.	SMPL. CORR.	DEPTH	DATUM	LOG CORR.	SMPL. CORR.	DEPTH	DATUM	LOG CORR.	SMPL. CORR.
ANHYDRITE TOP		1767	404	1753	396		+ 8	1731	403		+ 1	1802	405		- 1	1751	403		+ 1
BASE		1796	375	1780	369		+ 6	1755	379		- 4	1851	376		- 1	1780	374		+ 1
TOPEKA		3182	-1011	3161	-1012		+ 1	3145	-1011		+ 0	3210	-1003		- 8	3172	-1018		+ 7
HEEBNER SHALE		3323	-1152	3305	-1156		+ 4	3288	-1154		+ 2	3357	-1150		- 2	3307	-1153		+ 1
TORONTO		3350	-1179	3333	-1184		+ 5	3314	-1180		+ 1	3386	-1179		+ 0	3334	-1180		+ 1
LKC				3350	-1201			3330	-1196			3402	-1195			3349	-1195		
BKC				3535	-1386			3518	-1384			3587	-1380			3536	-1382		
REAGAN SAND				3585	-1436			3568	-1434			3598	-1331			3594	-1440		
GRANITE																3648	-1494		
TOTAL DEPTH				3583	-1434			3568	-1434			3636	-1429			3720	-1566		

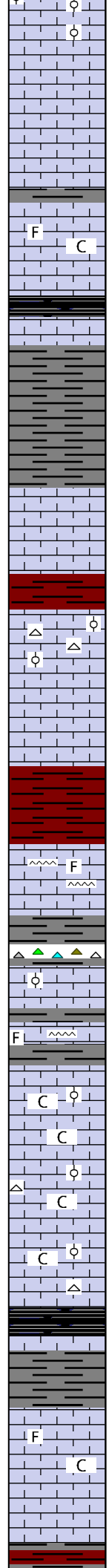
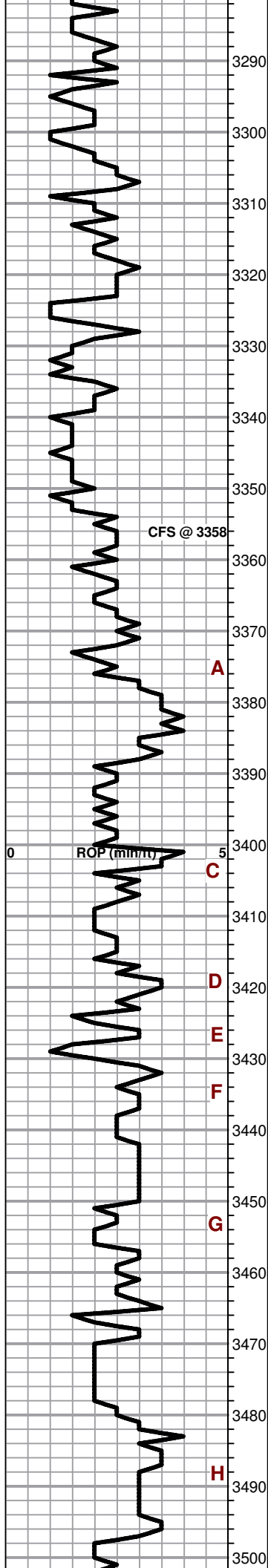
ROCK TYPES

- Cht vari
- shale, grn
- Carbon Sh
- shale, red
- Lmst fw7>
- shale, gry

ACCESSORIES

- | | | | |
|----------------|-----------------|-----------------|----------------|
| MINERAL | FOSSIL | STRINGER | TEXTURE |
| •• Sandy | F Fossils < 20% | ~~~~ Chert | C Chalky |
| △ Chert White | φ Oolite | ⊗ Conglomerate | |
| | | ••• Sandstone | |





Lm- crm- fnxln, oolitic in prt, scat pcs w/ pr inxln ppt. scat vuggy por, pr-fr brn stn, fr SFO sheen in cup on on rocks, fr-gd odor, fr-gd streaming dry cut, dull purple flour

3290

3300 Lm- crm- fnxln, mostly clean and dnse, few pcs w/ same show as above, most likely came from above

3310 F C Lm- crm- fnxln, mostly dnse, slightly chalky, slightly foss

3320 **HEEBNER: SPL 3323' (-1152)**
Sh- blk, carb

3330

3340 Sh- blk- gray- red

3350 **TORONTO: SPL 3350' (-1179)**

3360 Lm- crm- fnxln, mostly dense and fairly barren, cherty, 4-5 pc w/ pr ppt por, pr brn stn, v, slight sheen FO on top of cup, 1 chip FO droplets upon crush, no odor

3370 **LKC: SPL 3366' (-1195)**
Lm- crm-fnxln, oolitic, scat fr inxln- inoolitic por, fr brn stn in por, slight sheen FO in cup, slight odor

3380 A Lm- crm- v. fnxln, dense, clean, barren

3390 Sh- red

3400 ROP (min/m) 5 C Lm- crm- fnxln, foss, scat chert, few scat pcs w/ pr inxln- infoss por, pr brn stn, NSFO, pr odor

3410 Sh- gray
Chert- blue-orange

3420 D Lm- crm- fnxln, oolitic in prt, few scat pcs w/ pr inxln por, pr brn stn, 1 pc FO droplets upon crush, no odor

3430 E F Lm- crm- fnxln, mostly barren, slightly foss, scat chert, slightly chalky, 1pc fr oolitic por, pr-fr brn stn, NSFO, no odor

3440 F C Lm- crm- fnxln, oolitic, chalky in prt, few scat pcs pr inxln- inoolitic por, pr brn stn, NSFO, no odor

3450 G Lm- crm- fnxln, oolitic, chalky, slightly cherty, few pcs w/ pr inxln por, NSO

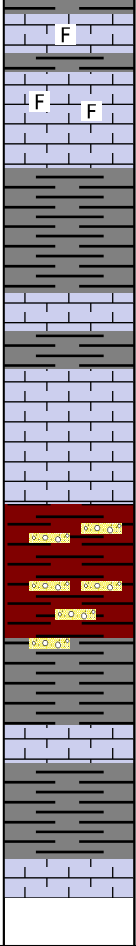
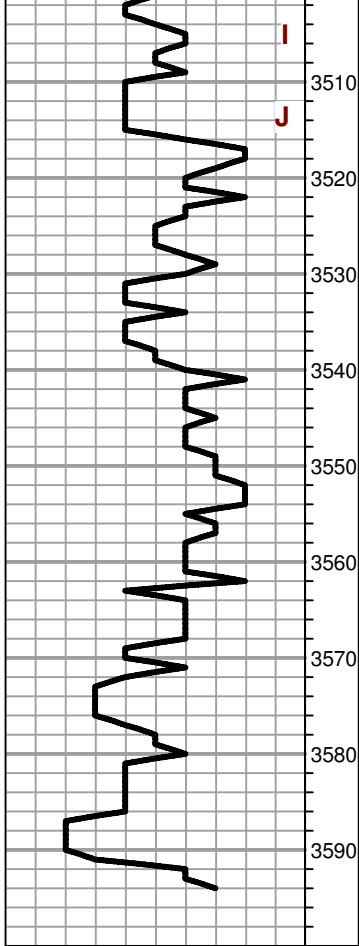
3460 C Lm- crm- v. fn-fnxln, chalky, scat chert, oolitic in prt

3470 Sh- brn- gray-blk

3480 H Lm- crm- fnxln, foss in prt, slightly chalky in prt, consistent pr w/ a some fr inxln por, consistent pr-fr lt brn stn, slight FO sheen in cup, fr odor, fr streaming dry cut, fr yellow flour

3490

3500 Sh- gray- red



① Lm- crm- fnxln, foss, fairly tight, fairly consistent pr inxln-
 infoss por, fairly consistent pr-fr lt brn stn, NSFO, no odor,
 fr streaming dry cut

② Lm- crm- v. fn-fnxln, foss, fairly tight, scat pr inxln-infoss
 por, scat pr lt brn stn, slt FO sheen in cup, pr odor

Sh- red- gray

③ Lm- crm- fnxln, foss, consistent pr-fr infoss por, consistent
 fr blk stn, slt FO sheen on cup, no odor

④ Lm- crm-gray, fnxln, foss, slightly chalky, few pcs w/ pr
 infoss por, fr blk stn, no SFO no odor

BKC: SPL 3554' (-3554)

Sh- red

Lm-cong- brn-red, granular, foss throught