

**OPERATOR**

Company: Mike Kelso Oil, Inc.  
 Address: P.O. Box 467  
 Chase, KS 67524-0467

Contact Geologist: Mike Kelso  
 Contact Phone Nbr: (620)-938-2943  
 Well Name: Swartz #3-20  
 Location: Section 10-17S-21W  
 API: 15-135-26049-00-00  
 Pool: Oil  
 State: Kansas  
 Field: Wildcat  
 Country: USA

**Scale 1:240 Imperial**

Well Name: Swartz #3-20  
 Surface Location: Section 10-17S-21W  
 Bottom Location: 1208' FSL 3642' FEL  
 API: 15-135-26049-00-00  
 License Number: 31528  
 Spud Date: 3/12/2019 Time: 1:30 PM  
 Region: Ness, County  
 Drilling Completed: 3/21/2019 Time: 5:35 PM  
 Surface Coordinates: 1208' FSL & 3642' FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2313.00ft  
 K.B. Elevation: 2220.00ft  
 Logged Interval: 0.00ft To: 0.00ft  
 Total Depth: 4270.00ft  
 Formation: Cherokee  
 Drilling Fluid Type: Chemical/ Polymer

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude:  
 Latitude:  
 N/S Co-ord: 1208' FSL  
 E/W Co-ord: 3642' FEL

**LOGGED BY**

Company:  
 Address: 1407 N. Stratford Ln.  
 Wichita, KS 67206  
 Phone Nbr: (316)-619-5574  
 Logged By: Geologist Name: Patrick J Denihan

**CONTRACTOR**

Contractor: Sky Top.  
 Rig #: 1  
 Rig Type: mud rotary  
 Spud Date: 3/12/2019 Time: 1:30 PM  
 TD Date: 3/21/2019 Time: 5:35 PM  
 Rig Release: 3/22/2019 Time: 5:30 AM

**ELEVATIONS**

K.B. Elevation: 2220.00ft Ground Elevation: 2313.00ft  
 K.B. to Ground: 7.00ft

**NOTES**

Surface Casing: 8-5/8" at 282'  
 Production Casing: 4.5" @ 4270'

Daily Penetration:  
 03/11/19 Spud well @ 1:30 PM

03/11/19	Spud well @ 1:50 PM	
03/12/19	282'	
03/13/19	920'	
03/14/19	1631'	
03/15/19	2275'	
03/16/19	2800'	
13/17/19	3382'	****
03/18/19	3737'	****
03/19/19	4017'	****
03/20/19	4088'	****
03/21/19	4165'	****

### DRILL STEM TESTS

DST #1 (4064'-4089) Ft. Scott 30" - 30" - 10" - Flushed Tool (Pulled Test)  
 IF; Built to 2.25" FF: few Bubbles, Died  
 REC: 50' Mud- Few Oil Spots In Tool.

FIF: 17#/32#      SIF: 38#/44#      ISIP: 478#      No Final S.I.P.  
 IHP: 2071#      FHP: 2065#

### GEOLOGICAL TOPS

Formation	Sample Top	Datum	Log	Datum	Comparison*
Anhydrite	1503'	+ 719	1501'	+ 721	-3
Base/Anh	1536'	+ 686	1533'	+ 689	Flat
Heebner	3627'	-1405	3626'	-1404	-1
Toronto	3647'	-1425	3644'	-1422	+2
Lansing	3669'	-1447	3668'	-1446	Flat
B/KC	3936'	-1714	3933'	-1711	Flat
Pawnee	4016'	-1794	4016'	-1794	-3
Ft. Scott	4105'	-1883	4107'	-1881	+4
Cher. Sh.	4121'	-1890	4120'	-1889	+3
Conglom.					

Comparison well: Downing-Nelson Oil Co., Inc.'s Swartz # 1-10. Located Sec:10-T17S-R21W of Ness Co., Ks.  
 Spot Location: 1510FSL & 1910 FWL.

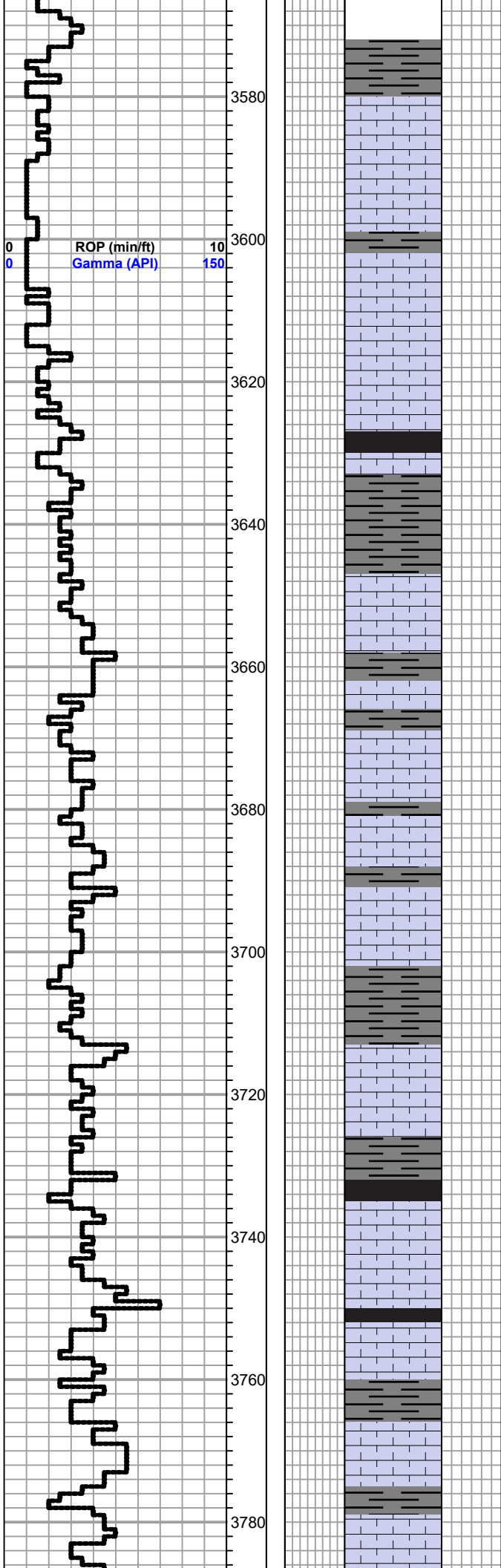

### ROCK TYPES

 Anhy vert	 Coal	 Chtcongl	 shale, gry
 Cht	 Congl	 Lmst fw7>	 Ss

### OTHER SYMBOLS

<b>POROSITY TYPE</b>	<b>SORTING</b>	<b>ROUNDING</b>	<b>OIL SHOWS</b>	<b>INTERVALS</b>
x Intercrystalline	W Well	vA Very Angular	● Even Stn	■ Core
φ Interoolitic	mW Medium Well	A Angular	● Spotted Stn 50 - 75 %	· DST
V Vuggy	m Medium	a Subangular	● Spotted Stn 25 - 50 %	
P Pinpoint	P Poor	R Rounded	○ Spotted Stn 1 - 25 %	
∩ Moldic	vP Very Poor	r Subrounded	○ Questionable Stn	
O Organic		wR Well Rounded	D Dead Oil Stn	
F Fracture			■ Fluorescence	
e Earthy				





**Heebner 3626 (-1404)**

Ls., Tan Dense Micro-xln. NoShow  
 Sh., Gry., to Dk-Gry

**Toronto 3645 (-1423)**

Ls., Crm., Tan., Lt-Gry., P-Fn-xln.  
 Sh., Gry-Dk-Gry., Argil.

**Lansing 3668 (-1446)**

Ls., Crm., Tan. Fn-xln., trc. of P-Fssl. No Show.  
 Sh., Gry, Grn., Brn. Argil.  
 Ls., Crm., Tan., Micro.to Fn-xln., Chalky in part No show.  
 Sh., Dk-Gry. Carb. to Fissile., Brn., Grn. Argil.  
 Ls., Crm., Tan., Gry., Micro. to Fn-xln. tight Ool. por., No show.  
 Sh., Vari-Color. Argil.

Ls., Crm., Micri. to Fn-xln. Sli-Fssl. No show.

Sh., Brn., Gry., Grn., Aril.

Black ali-Carb. and Aril.

Ls., Wht., Crm., Dense Fn-xln. to chalky. No Show.

Vis:49; Wt:8.8 WL:10 LCM:1#

Sh., Dk-Gry. to Black. Argil.

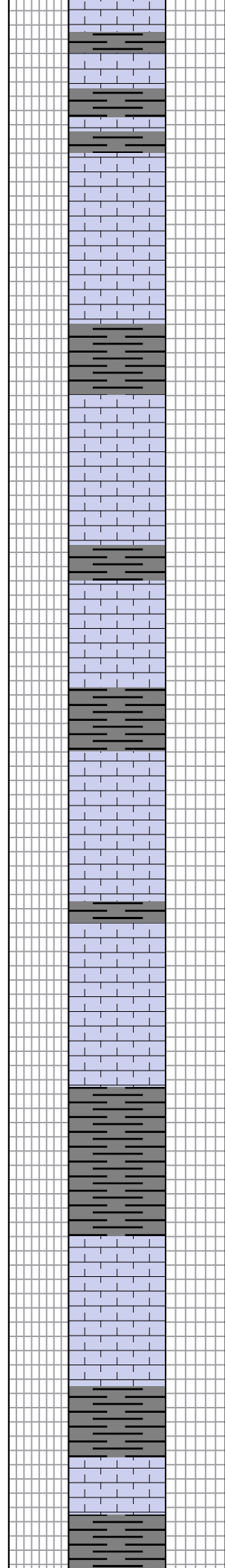
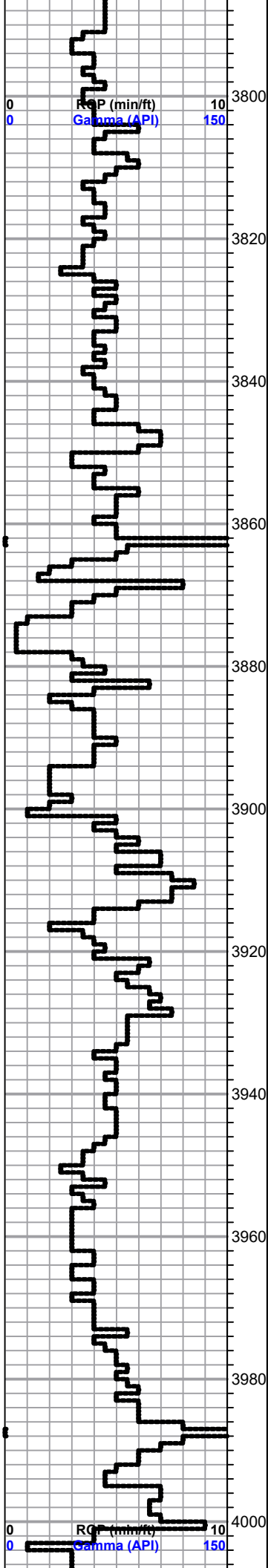
Ls., Crm., Lt.-Gry P-Fssl., Cherty wht., Fresh. No show.

Sh., Gry to Dk-Gry. Argil.

Ls., Lt-Gry., Tan. Tan Dense Fin-xln. Ool to Ooc in Part., Sub Chalky.  
 P-inter-Gran. to shallow vug. Porosity. No show

Sh., Gry., Brn. Argil.

Ls., Crm., Tan., Lt-Gry. Fn-xln. Dense No show.



Ls., as/above with Fresh Opaque White and Gry. Chert. No show  
Sh., Dk-Gry., Brn Aril.

Sh., Gry., Dk-Gry., Grn., Brn. Aril

Ls., Wht., Tan Dense Micro xln. No show.

Sh., Vari-Color

Ls., Crm., Tan., Micro. to Fn-xln., No show

Sh., Dk-Gry. Aril

Ls., Crm. to Lt Gry., sli- Fssl with G-Ooc and P-Ool porosity. No show.

Sh., Gry., Dk-Gry., Brn., Argil

Ls., Gry., Dense Micro-xln., No show.

Sh., Blk., to Dk-Gry., Fissle and Argil.

Ls., Gry

Ls., Tan., Brn., Gry., Fn-xln., Mott/Sing. Sli Cherty. No Show.

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**BKC 3933 (-1711)**

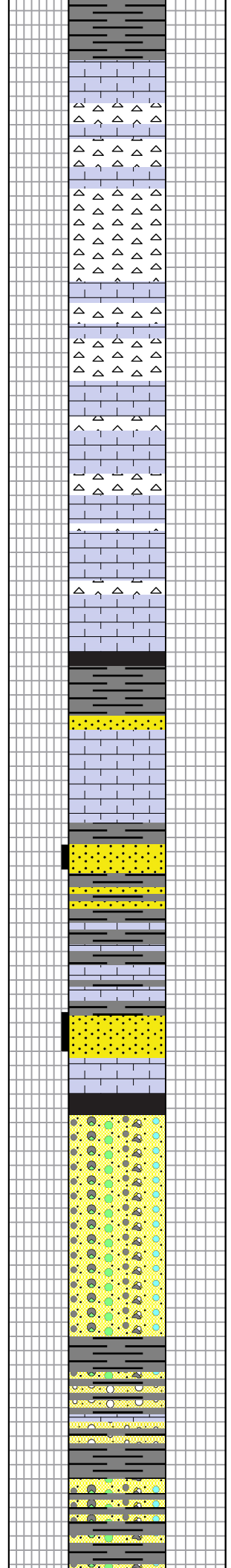
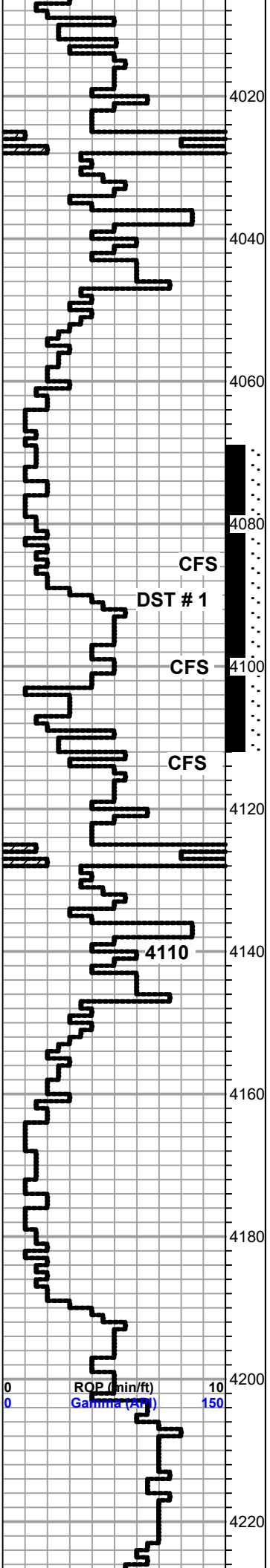
Sh., Dk-Gry., Blk., Brn. Argil.

Ls., Crm., Fn.-xln., Trc of P-Fssl., No show

Sh., Gry., Dk-Gry., Brn., Argil.

Ls., Gry. Dense Mico--xln with Lt.-Gry Fresh Translucent Chert. No Show

Sh., Gry., Brn., Blk, Grn., Maroon., Argil to Silty.



**Pawnee 4014 (1792)**

Ls., Wht., Crm., Lt-Gry. Micro-xln., Sli-Dolomitic and clear Translucent Chert. No show.

Ls., Wht., Crm., Micro-xln. Abundant Wht. and Tan Translucent Chert. No show.

**Chert. Wht., Fresh Sharp to V-SLI-Weathered Lt-Gry., Gry Translucent to Opaque. No Vis. Por, No show.**

Vis: 53; Wt: 9.1; WL: 10.4 LCM: 1#

**Lm., and Chert as/above.**

**Ls., Lt-Gry to Gry., Micro-xln. trc of Chert. No show.**

**Sh., Blk. Carb**

**Ft. Scott 4107 (-1885)**

SS., Fn to Med. Well-Rd grns. Rare Clusters Carry sli -to Gd show of Light Brn., Live Free Oil. F-Fluor No Odor.

Ls., Wht., Crm., Fn-xln Cherty No show.

**Cher. Sh. 4120 (-1898)**

**Cherokee A Sand**

SS., Micro-Grn., Well-Rd., Sli-Fluor., No Odor. No Show of Live oil.

SS. as/above Shaley

Sh., Vari-Color inter-bedded With Crm., Lt-Gry., & Gry Dense Fn-xln., No show

Vis: 55; WT:9.2; WL:8; LCM:2.5#

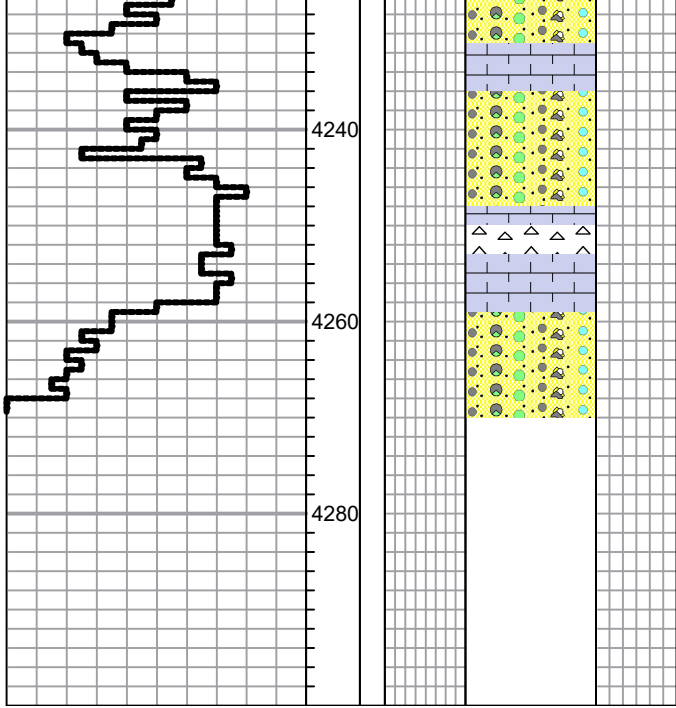
**Cherokee B Sand**

SS., Fn., Grn., Sorted to Well sorted Well-RD. No Free Oil., No Odor \. Sli-Fluor.

Sh., Black Carb

Conl., Abund Vari-Color. Chert & Shale (Fresh) SS., Clear Sub-Rd. to Sub Angular. No show

Sh., Gry., to Vari- Color., Maroon., Gry., Grn. Yellow Brn and Orange)



Cong., Interbedded with Dense Micro-xln Lm., Sh., and Chert. No show.

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TOTAL 4270 (-2050) E-log  
T.D. Reached Approx.5:35 P.M On 3-21-19