

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY <u>RANGE OIL COMPANY</u> LEASE <u>SNYDER #1</u> FIELD _____ LOCATION <u>2300' FNL + 2380' FEL, NE/4</u> SEC <u>28</u> TWP <u>32 S</u> RGE <u>5e</u> COUNTY <u>COMBLEY</u> STATE <u>K5</u> CONTRACTOR <u>SUMMIT DRLG CO</u> SPUD <u>3/12/14</u> COMP <u>3/25/14</u> RTD <u>3350'</u> LTD <u>3340'</u> MUD UP <u>1800'</u> TYPE MUD <u>CHEM</u>	ELEVATIONS KB <u>1268'</u> DF _____ GL <u>1258'</u> Measurements Are All From <u>K. B.</u> CASING SURFACE <u>8 5/8" @ 233'</u> PRODUCTION <u>NONE</u> ELECTRICAL SURVEYS <u>DI/GR / Dual Pcr</u>																																								
SAMPLES SAVED FROM <u>1800'</u> TO <u>RTD</u> DRILLING TIME KEPT FROM <u>1800'</u> TO <u>RTD</u> SAMPLES EXAMINED FROM <u>1800'</u> TO <u>RTD</u> GEOLOGICAL SUPERVISION FROM <u>1900'</u> TO <u>RTD</u> GEOLOGIST ON WELL <u>KEN WALLACE</u>	FORMATION TOPS LOG SAMPLES <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">TATAN</td> <td style="width: 30%;">1903 (-635)</td> <td style="width: 30%;">1911 (-643)</td> <td style="width: 10%;"></td> </tr> <tr> <td>STALNAKER</td> <td>1948 (-680)</td> <td>1951 (-683)</td> <td></td> </tr> <tr> <td>LAYTON</td> <td>2378 (-1110)</td> <td>2386 (-1118)</td> <td></td> </tr> <tr> <td>KANSAS CITY</td> <td>2518 (-1250)</td> <td>2525 (-1257)</td> <td></td> </tr> <tr> <td>B/KC</td> <td>2649 (-1381)</td> <td>2658 (-1390)</td> <td></td> </tr> <tr> <td>ALTA MOUNT</td> <td>2726 (-1458)</td> <td>2736 (-1468)</td> <td></td> </tr> <tr> <td>CHEKOKEE</td> <td>2846 (-1578)</td> <td>2855 (-1587)</td> <td></td> </tr> <tr> <td>MISS A</td> <td>3108 (-1846)</td> <td>3110 (-1842)</td> <td style="text-align: center;">28°</td> </tr> <tr> <td>MISS LS</td> <td>3137 (-1869)</td> <td>3144 (-1876)</td> <td></td> </tr> <tr> <td>RTD</td> <td>3340 (-2672)</td> <td>3350 (-2002)</td> <td></td> </tr> </table>	TATAN	1903 (-635)	1911 (-643)		STALNAKER	1948 (-680)	1951 (-683)		LAYTON	2378 (-1110)	2386 (-1118)		KANSAS CITY	2518 (-1250)	2525 (-1257)		B/KC	2649 (-1381)	2658 (-1390)		ALTA MOUNT	2726 (-1458)	2736 (-1468)		CHEKOKEE	2846 (-1578)	2855 (-1587)		MISS A	3108 (-1846)	3110 (-1842)	28°	MISS LS	3137 (-1869)	3144 (-1876)		RTD	3340 (-2672)	3350 (-2002)	
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REMARKS SNYDER #1 RAN LOW TO KEY WELL WITH NEGATIVE DST RESULTS & WAS P&A.

Ken Wallace

3-12-14 MIRT 3-13-14 Drlg @ 63' 3-14-14 PTD 238'; 3/4" @ 238' 3-15-14 Drlg @ 721'; 3/4" @ 605' 3-16-14 Drlg @ 1170'; 1/4" @ 1170'; BT @ 880' 3-17-14 Drlg @ 1485'; 1/2" @ 1485'; Repair MUD PUMP 3-18-14 Drlg @ 1862'; 3/4" @ 1861' 3-19-14 Drlg @ 2265'; BT @ 1893' 3-20-14 Drlg @ 2531'; 1" @ 2364' 3-21-14 Drlg @ 2737'; BT @ 2578'; 1/4" @ 2578' 3-22-14 Drlg @ 3084'; 1 1/4" @ 3127' 3-23-14 PTD 3132'; Running DST #2 3-24-14 Drlg @ 3243' 3-25-14 RTD 3350' / LTD 3340'

LEGEND

Anhydrite	Salt	Sandstone	Shale	Carb sh	Limestone	Ool. Lims	Chert	Dolomite

SCALE " = 100'

DEPTH	DST #	DRILLING TIME - Minutes Per Foot Rate of Penetration Decreases	SAMPLE DESCRIPTIONS	REMARKS
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1800

20

40

60

80

1900

20

40

60

80

2000

20



SH, GY, SM BRN, SLTY

AA, SM VFG SS

SH, GY, MIC, SLTY

LS, BRN, FXLN-SUCRO, CKY, 4ty

SH, GY, MIC, PYR, SDY

SS, LT GY, VFG, WSOR/ROD,
NS, NO, NF

AA

SH, GY w/ BL LAM

SS, MLKY WH, MGR, WSOR/
ROD, NS, NO, NF

AA

IATAN

1911 (-643)

STALNAKER

1951 (-683)

Fud Mud: 1972'
V40, wt. 9.3, LCMZ

40
60
80
2100
20
40
60
80
2200
20
40



SH, GY

AA

LS, DK BR, FXL, CKY, NS

SS, LTGY, VFG, ARG, PSOR/
ROD, NS, NO, NF

AA, HARD

SS, AA

SH, GY

AA

PERRY LS

2125 (-857)

PERRY SS

2136 (-868)

Fud Mud: 2212'
V 42, wt. 9.3, LCM 4

60

80

2300

20

40

60

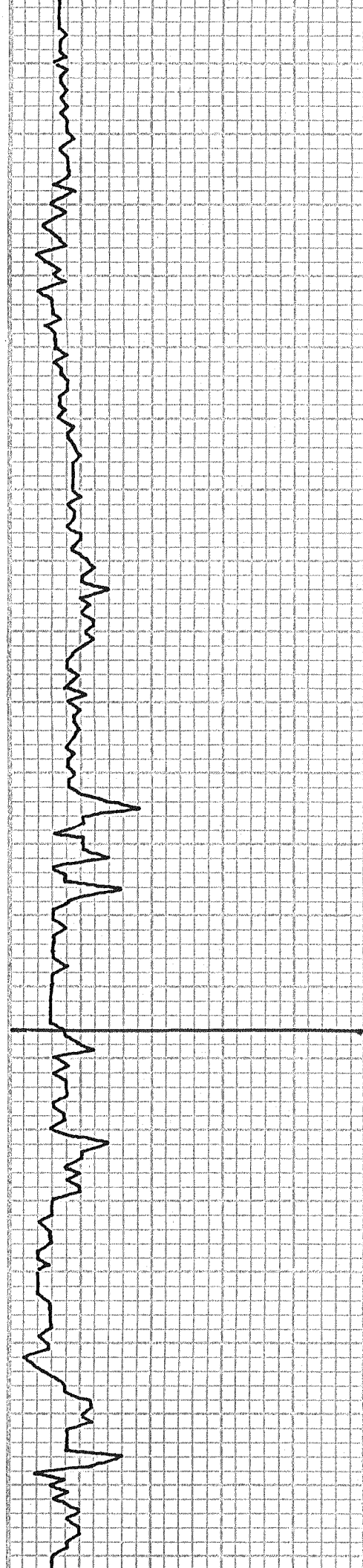
80

2400

20

40

60



AA

SS, DKG, ARG, PSOR/ROD,
SL FOSS, NS, NO, NF

SH, GY, MIC, SLTY

LAYTON

SS, LTGY, FGD, P-FSOR/PROD,
FIGØ, NS, NO, NF

2386 (-1118)

SHLY

SS, CL, VFG, WSOR/ROD,
S&P TEX, NS, NO, NF

AA, SM DKG, SH

SS, AA

80

SH, GY, SM BRN

2500

AA

Fud Mud: 2516'
V 45, wt. 9.3, LCM 4

20

KANSAS CITY

LS, DKG, BRN, CXLN, FOSS,

2525 (-1257)

LS, TAN, OOL, FOSS, NS, NO, NF

40

SH, BL

LS, BRN-TAN, FXLN, SL OOL, FOSS, CKY, NS, NO, NF

60

SH, GY

80

LS, TAN, FXLN, FOSS, NS, NO, NF

2600

SH, BL

LS, TAN, FXLN-CKY, TR PPO, TR OOL, SL FL, TR SED

(SSD)

20

LS, CRM, OOL, FOSS, NS, NO, NF

40

LS, BRN, FXLN-DSE, SL CKY, NS, NO, NF

SH, BL-DKG

60

LS, CRM, FOSS, FXLN, CKY

BKC

SS, GRN, VFG, GLAU, PSDR/ PROD, NS, NO, NF

2658 (-1390)

80

SH, BRN, SLTY, SM GY

2700

AA; SM SS, VFG, NS, NO, NF

SH, GRN, SDY

Fud Mud: 2712'
V49, wt. 9.4, LCM4

20

AA

ALTAMONT

40

LS, TAN, FXLN, CKY, NS, NO, NF

2736 (-1468)

60

LS, AA

80

LS, TAN-BRN, FXLN, CKY, NS, NO, NF

SH, BL

2800

LS, BRN-TAN, FXLN, CKY, NS, NO, NF

LS, CRM, VF OOL, CKY, FOSS, NS, NO, NF

20

SH, BL

LS, TAN, FXLN, SL FOSS, CKY, NS, NO, NF

40

AA, CKY

SH, BL

CHEROKEE

60

SH, BL

2855 (-1587)

80

SH, GY, SLTY

2900

SH, GY

20
46
66
80
3000
20
40
60
80
3100
20



50

50

AA, PYR

SH/COAL, BL

SS, CL-MILKY, FG, PSOR/PROB,
1% FL, PIGG, SSFO, NO

AA, SL FL, NSFO, NO

SH, BL

SH, GY, SM LTGRN, SLTY

AA

SH, DK GY

SS, to SDY LS, BL ORG INCL,
NS, NO, NF

SH, GY, SLTY

SH, VC

Δ, WH, DPA, GRN, GLAU, 70% FR, NS,
NO, NF

Δ, WH, 60% TRIP, 40% FR, GSO W/STN
80% TRIP Δ, BRIT FL, FO IN TRAY

CATTLEMAN

2951(-1685)

SHORT TRIP @ 3057'

Fnd Mud: 3074
V 46, wt. 9.5, LCM2

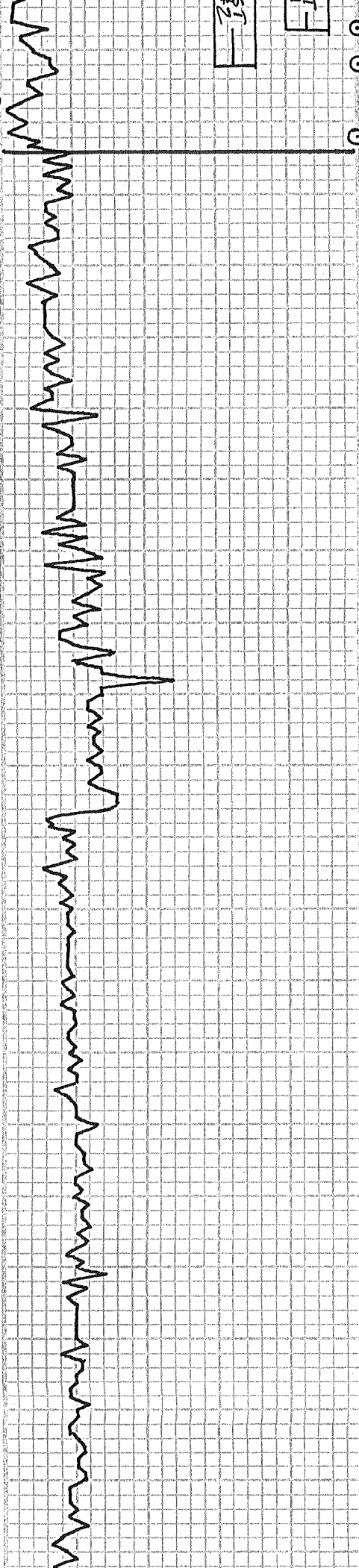
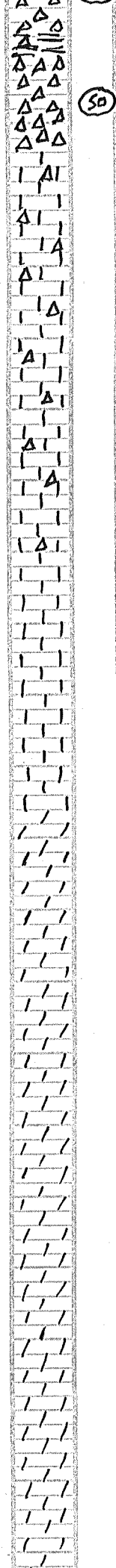
MISS CT

3110(-1842)

#D

#D

40
60
80
3200
20
40
60
80
3300
20
40



GD ODOR, GB, GD CUT
 VLSH w/ AAA
 A, WH, 90% TRIP, 10% FR, SSFO/
 FL 80% of A, STN, FODOR, GD CUT
 LS TAN, SMLTGY, FXLN, GLAU,
 w/ AAA & SO/FL, NO CUT IN LS
 LS, TAN, OOL, SL GLAU, PUBP, SL
 FOSS, SL STN & FL, NUIS FO, FOD
 PCUT, AAA w/ SO AA
 LS, DK BRN, FOSS, CKY, PPPP, NFO,
 NSTN, NF, SL ODOR, 5% TRIP A
 w/ SSFO/FL, NO CUT IN LS
 LS, AA, A (GY/WH), NSFO INLS,
 NODOR, NF, FAIR CUT LS
 LS, AA, sm DK BRN A, NSO, NF,
 NO, FAIR CUT
 LS, AA, SI FOSS, GLAU, NODOR, NS,
 NF, NO CUT, SL A
 LS, AA, SL CUT
 LS, AA, GD CUT
 Dol, DK BRN-TAN (MTLD),
 SUCR, FOSS, CKY, NS, NF, NO,
 GD CUT
 Dol, AB, GD CUT
 AA, GD CUT, SL GLAU
 AA, GD CUT
 AA, GD CUT
 AA, sm Lt Brn/Brn LAME
 GD CUT
 Dol, DR BRN, SUCR, NS, NFO,
 NO, GD CUT
 AA, GD CUT
 AA, POOR CUT
 AA, POOR CUT

MISS LS
 3144 (-1876)

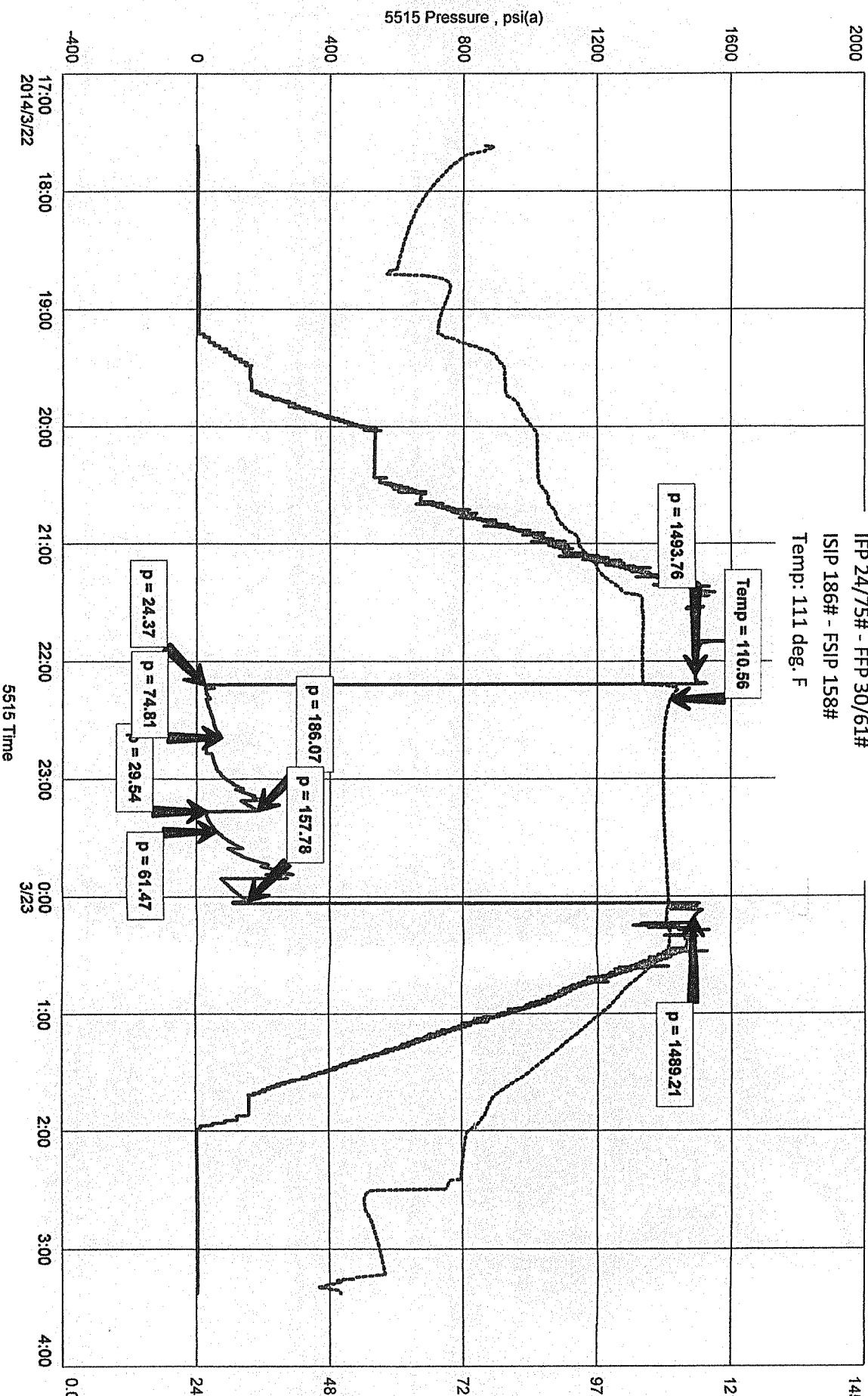
Fud Mud: 3132'
 V45, wt. 9.3, LCM 2

Fud Mud: 3251'
 V46, wt. 9.5, LCM 2

Range Oil Co
 Dst 1 Mississippi (3117-3127)
 Start Test Date: 2014/03/22
 Final Test Date: 2014/03/23

DST #1 3117-3127 (Miss Ct)
 Hit Bridge TH, Tool Opened (Misrun)
 30-30-10-30
 IF 1/2" blow died in 15" - FF No Blow
 Rec: 28' Mud

SNYC
 Formation: Dst 1 Mississippi (3117-3
 Pool: Poo
 Job Number: RF

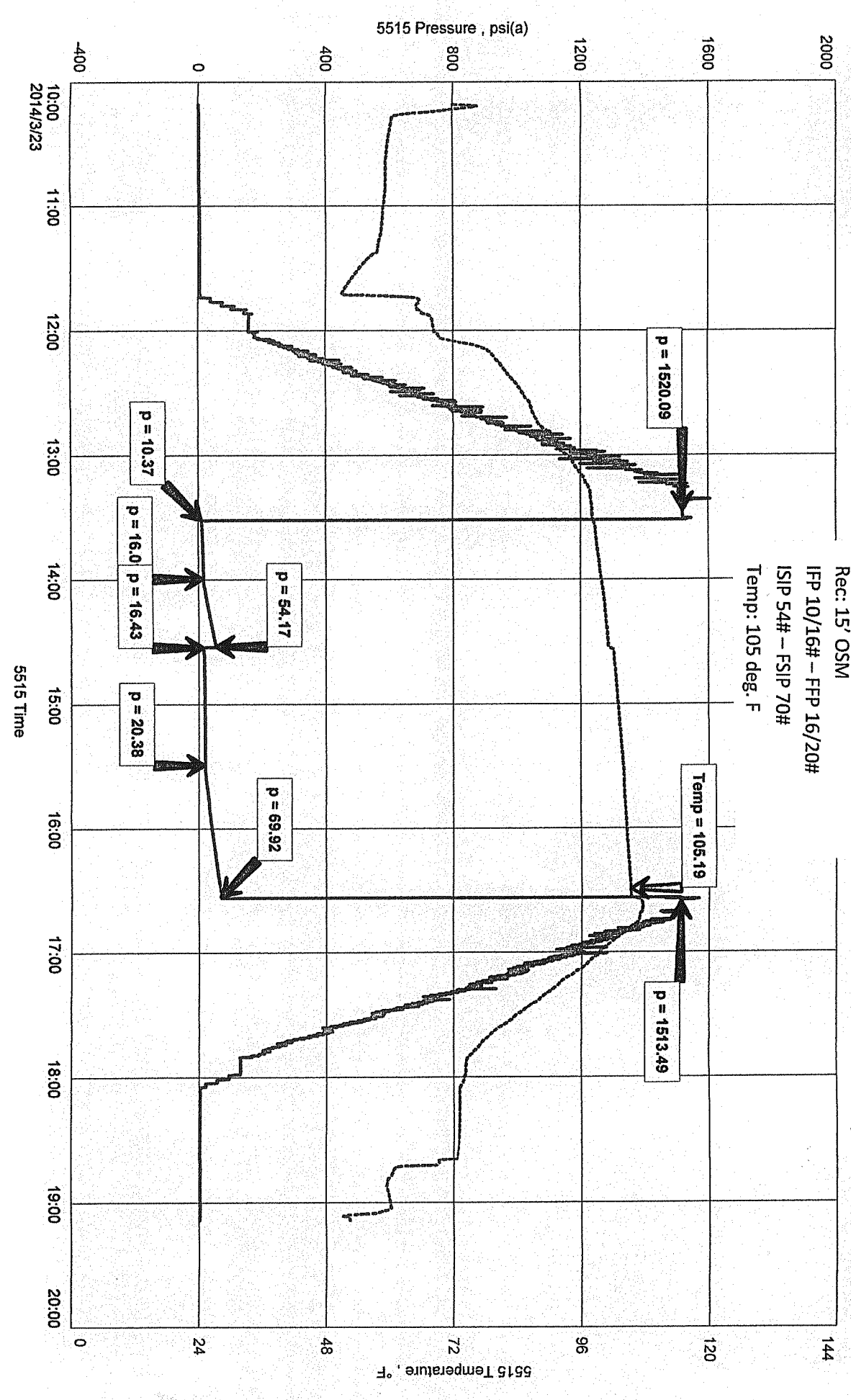


AA, GD cut

Range Oil Co
 Dst 2 Mississippi (3117-3132)
 Start Test Date: 2014/03/23
 Final Test Date: 2014/03/23

DST #2 3117-3132 (Miss Ct)
 30-30-60-60
 IF ½" blow built to 1" in 30"
 FF ¾" blow built to 11/4" in 60"
 Rec: 15' OSM
 IFP 10/16# - FFP 16/20#
 ISIP 54# - FSIP 70#
 Temp: 105 deg. F

Snyder 1
 Formation: Dst 2 Mississippi (3117-3132)
 Pool: Pool Ext
 Job Number: RR013



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