



PHIL ASKEY
PETROLEUM GEOLOGIST



GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY Mull Drilling Company, Inc

LEASE Harkness Trust #1-5

FIELD Wildcat

LOCATION 950' ENL E 832' FWL

SEC 5 TWP 17 S RGE 23 W

COUNTY Ness STATE Kansas

CONTRACTOR WW Drilling Rig #10

SPUD 6/21/10 COMP 6/27/10

RTD 4640' LTD 4644'

MUD UP 3395' TYPE MUD Chemical - mud-

ELEVATIONS

KB 2494'

DF 2492'

GL 2489'

Measurements Are All
From KB

CASING
SURFACE 8 5/8" @ 224' w/10'
PRODUCTION _____

ELECTRICAL SURVEYS
Superior Well Services:
CWL/COL; OIL; Micro; So;

SAMPLES SAVED FROM 3700' TO RTD

DRILLING TIME KEPT FROM 1700'-1900'; 3700' TO RTD

SAMPLES EXAMINED FROM 3700' TO RTD

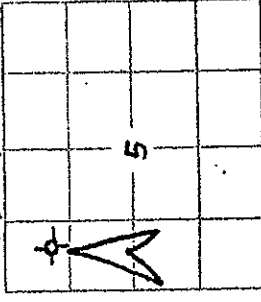
GEOLOGICAL SUPERVISION FROM 4000' TO RTD

GEOLOGIST ON WELL Phil Askey, P. G.

FORMATION TOPS	LOG	SAMPLES
Anhydrite	1830 +66Y	1827
Heelover	3885 -1391	3882
Casing	3929 -1435	3927
B/KC	4220 -1726	4218
Marmaton	4280 -1786	4278
Lawnee	4331 -1837	4328
Fl. Sept	4419 -1925	4415
Cherokee Shale	4442 -1948	4438
Cherokee Sand	4522 -2028	4519
Miss Warsaw	4600 -2106	4596
LTD / RTD	4644 -2150	4640

Reference Well:

Mull Drilling Co
Klitzke #1-6



Mull Drilling
Harkness Trust #1-5

The main target formation the Cherokee sand, contained a good sample show but and was tested with negative results, mainly due to a thinned shale component section, show the sandstone that developed

The other sample shows were tested in DST with negative results.

After review of the e-log, it was decided to plug and abandon the well.

Phil Oakley, P.E.

Well API # 15-135-25079

LEGEND

- Anhydrite
- Salt
- Sandstone
- Shale
- Carb sh
- Limestone
- Ool.Llms
- Chert
- Dolomite

SCALE 1" = 100'

DEPTH	DRILLING TIME IN MINUTES PER FOOT Rate of Penetration Increases	LITHOLOGY	SAMPLE DESCRIPTIONS	REMARKS
1800	Anky 1837 (+667) E-log 1830 (+664)			
50	B/Anky 1860 (+634) E-log 1863 (+631)			
1900				
3700				Samples: 6' wet & dry 3700'-RTD 9nd P.

Samples: 10' wet & dry
3700'-RTD 910d Samples

Rig data

WOB 38K PP 1000 #
RPM 75-80 SAM 60

Bit data

Smith 7 7/8" 224' - RTD
92 hrs

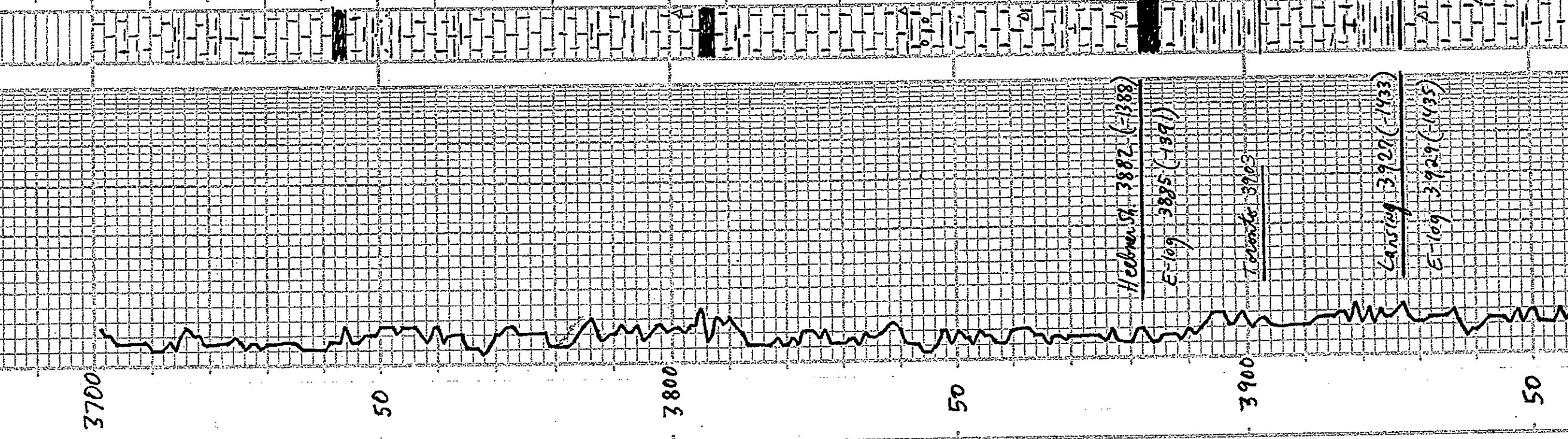
Dev Surveys

3/4° @ 224'
1/4° @ 4450'

DST's: 2 by Trilobite Testing

Mud-co data @ 3814'
WT 9.0 VIS 62 WL 9.6
pH 10.5 @ 5200ppm Com 7#

LS, tan 94-99, fine, some sh, some silty, some clay, some silt, some sand, some gravel, some pebbles, some shells, some roots, some twigs, some leaves, some stems, some seeds, some fruits, some nuts, some berries, some mushrooms, some fungi, some lichens, some mosses, some ferns, some grasses, some sedges, some reeds, some rushes, some palms, some cycads, some conifers, some deciduous trees, some evergreens, some shrubs, some vines, some creepers, some epiphytes, some parasites, some fungi, some bacteria, some viruses, some protozoa, some algae, some cyanobacteria, some diatoms, some radiolarians, some forams, some ostracods, some brachiopods, some bryozoans, some sponges, some cnidarians, some mollusks, some annelids, some arthropods, some insects, some crustaceans, some nematodes, some rotifers, some flatworms, some roundworms, some chordates, some fish, some amphibians, some reptiles, some birds, some mammals, some primates, some humans.



3700

50

3800

50

3900

50

Heedman St 3882 (-1388)

E-109 3885 (-1391)

Towanda 3903

Lansing 3922 (-1433)

E-109 3929 (-1435)

Chor Sand 4596

E-109 4492 (-1948)

E-109 4522 (-2028)

Chor Sand 4599 (-2025)

E-109 4522 (-2028)

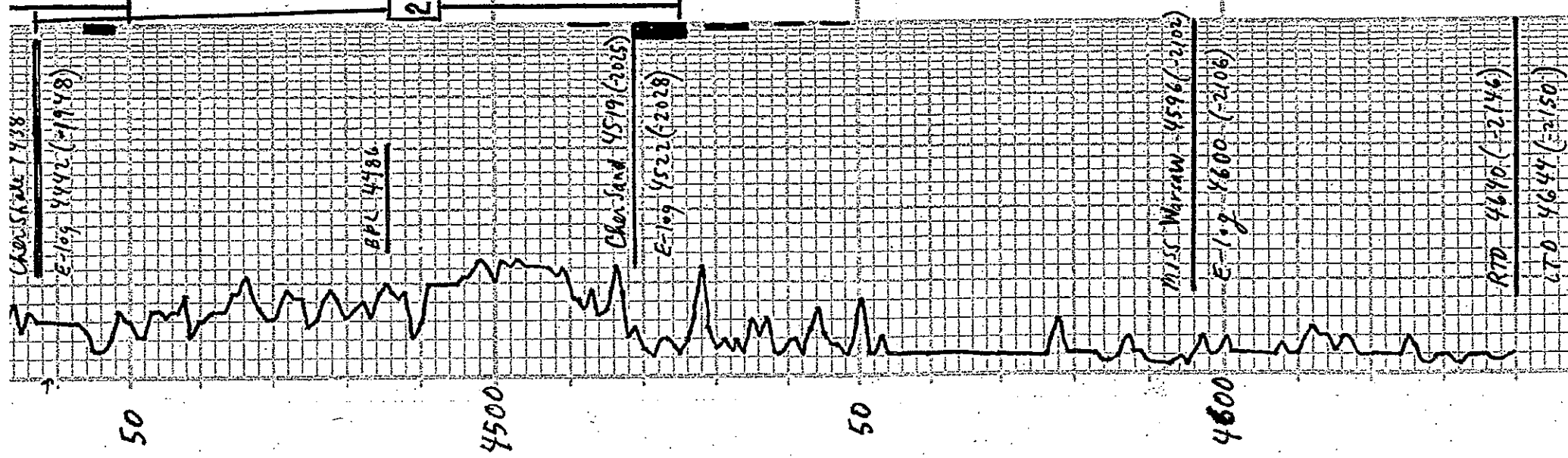
Miss Wircaw 4596 (-2106)

E-109 4600 (-2106)

RTD 4640 (-2146)

CTD 4644 (-2150)

2



Heavy 1/4" galv. flat SH. 1/4" x 1/2" cont.

1/2" galv. flat, 1/4" x 1/2" x 1/4" galv. flat, 1/4" x 1/2" x 1/4" galv. flat, 1/4" x 1/2" x 1/4" galv. flat, 1/4" x 1/2" x 1/4" galv. flat.

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FFP 21-30 # FSP 377 #

BHT 117°F

Shoetryp + 20 stands (pulled v. right)

Mud-co data @ 4450'

WT 9.35 VIS 54 WCL 9.6

pH 9.5 CL 6,000 ppm LCM 10.0

Lost returns 240 bbls

pull 10 stands - added mud + bulk

DST # 2 4437' - 4525'

Times: 5" - 30" - 30" - 60"

1st opens BOB in 1 1/2"

(blow back: surface blow for 5')

2nd opens: BOB in 2"

(blow back: surface blow for 10')

Rec: 90' mud

375' 50% WCM (5% oil 35% w 60% M)

124' new (80% W 20% M)

591' SW (42,000 ppm CL)

30' mud

Total fluid 1210'

IFP 199-295 # FSP 1228 #

FFP 318-628 # FSP 1013 #

BHT 126°F

Mud-co data @ 4584'

WT 8.9 VIS 48 WCL 10.8

pH 9.0 CL 6,300 ppm LCM 3 #