

WF

GEOLOGIST'S REPORT

DRILLING TIME & SAMPLE LOG

COMPANY Beren Corporation
 LEASE Louis "D" NO. 11
 LOCATION 2310' FNL + 481' FEL
 SEC. 9 TWP. 35S RNG. 12W
 COUNTY Barber, STATE Kansas
 FIELD Hardtner

ELEVATIONS
 KB 1405
 DF 1403
 GL 1393
 MEASUREMENTS ARE ALL FROM KB

CONTRACTOR Beredco Dalg Rig #1
 COMM. 9-9-2013 COMP. 9-19-2013
 RTD 5150 LTD 5026

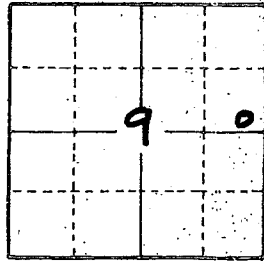
CASING RECORD
13 3/8 at 300 w/ 3 1/2 SX.
 at w/ SX.
 at w/ SX.
 at w/ SX.
 EL. LOG A.R. IND. SP. 6
DEN-NEUT. GR. C.L.I.
ML

No. of DST'S None No. of CORES None

SAMPLES SAVED FROM 4500 TO TD
 DRILLING TIME KEPT FROM 4400 TO TD
 SAMPLES EXAMINED FROM 4500 TO TD
 GEOLOGICAL SUPERVISION FROM 4400 TO TD
 GEOLOGIST ON WELL Edwin H. Grieves

FORMATION TOPS

FORMATION	SAMPLE	LOG	SUBSEA
<u>Mississippi</u>	<u>4904</u>	<u>4804</u>	<u>-3399</u>
<u>RTD</u>	<u>5150</u>	<u>5026</u>	



REMARKS Earth-Tech had an unmanned gas detection trailer on this well from 4400 ft to total depth.

Samples were extremely poor on this well.
Geol-log 126 feet low to E-log depths.

Edwin H. Grieves
 Thank you to Gary
 Edwin H. Grieves
 Geologist

LITHOLOGY

SANDSTONE
 LIMESTONE
 SHALE
 CHERT
 SLTSTONE
 DOLOWITE
 GRANITE WASH
 SANDY & GYP

CHROMATOGRAPH

HOT WIRE BY
 TOTAL GAS VOLUME

C1 = METHANE
 C2 = ETHANE
 C3 = PROPANE
 C4 = ISOBUTANE
 C5 = BUTANE
 C6 = ISOPENTANE
 C7 = PENTANE

DRILL TIME SCALE

SAMPLE DESCRIPTION

5 10 15

10 100 1000



No Samples Till Below
4500

Sh. v. drk. gray to black - carb

Interbedded Limestones & Shales
① Finer. Dalg. lms. tan, crypto. to v.v. fu. xln; w. / hvy. has med to coarse wht. calc. xls. & fragm.; sub-calc, sub-succo. to succo; dul. H. to H. yel. fluor.; No Cat; abn. PR; Se. to gal. & Tks excel. micro. pp to interxln por & prob. interxln. por

② Slower Dalg. lms. tan, grayish IP's crypto. to v.v. fu. xln; sub-calc sub-succo. & packstr; dul. H. to H. yel. fluor.; No Cat; No Vis Por

③ Prob. thin scattered Shales med. to v. drk gray, calc IP's

Prob. Sh. med. to v. drk gray - calc. to v. drk. gray. To black - carb.

Interbedded Limestones & Shales
Similar 4515-4621

Sh. v. drk. gray to black - carb

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Interbedded Limestones & Shales
① Lms. tan, grayish IP's; crypto. to v.v. fu. xln; sub-calc; sub-succo to Tks, succo & packstr; has ph. xln to m. oolitic to Tks oolitic; dul. yel. to yel. & dul. H. yel to H. yel. fluor.; No Cat
No Vis Por

② Lms. grayish tan to H. gray - sh. to P. Lms. to v.v. fu. xln;

4500
4515
4530
4545
4560
4575
4590
4605

4500

4600

4700

4515
4530
4545
4560
4575
4590
4605

4615
4630
4645
4660
4675
4690
4705

4615
4630
4645
4660
4675
4690
4705

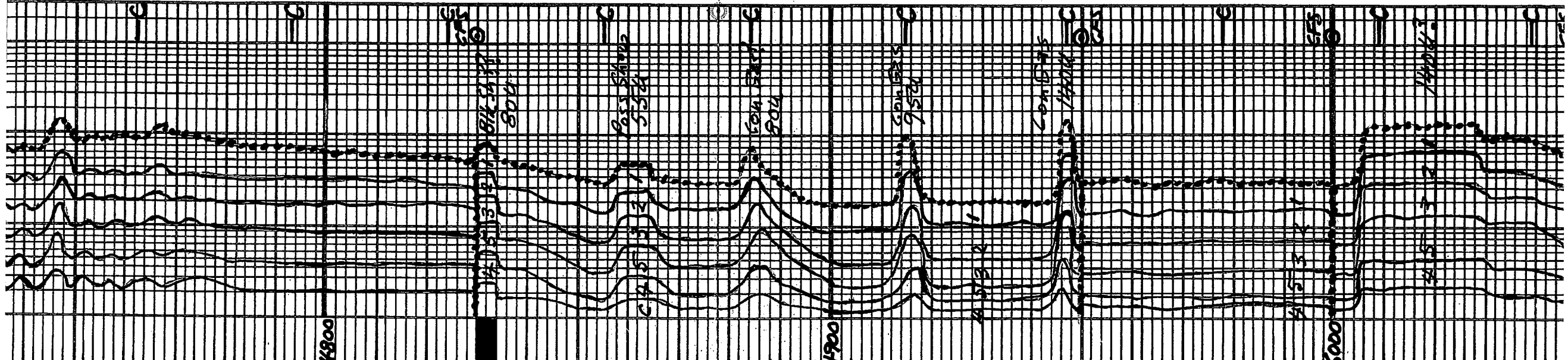
4615
4630
4645
4660
4675
4690
4705

40 Lms. gray sh. to 10 11. gray
 traly. shaly crypto. to v. tu. xln.
 sub-chalk or sh. trs. sub-succo
 + peckston. dul. to yel. to dub
 yel. fluor. 10% No cuts, No vis por.
 Sh. med to v. d. to gray - sl. to
 extra. calc 10%
 Sh. dark gray. to black-carb.

Note: 4790-4800 ft Sample
 There were trs. siltstn.
 H. gray. to brown from oil stn.
 v. dul. yel. fluor. w/ fr. stemming
 cuts; No vis por. and
 4800-4810 Sample few
 piece Qtz siltstn. tan. v. fine
 fr. w/ trs. med to coarse gr.
 ang. fr. to gd. sort; silt. frs
 chlorite; some clay + silt
 filling. dul. gldn. yel. fluor.
 No cuts; good to excellent
 p.p. micro-por + intergr.

Chert, Limestones, Dolomites
 Limestones to Lmy. Dolomites
 Chert abn. fresh, wh. to
 off. wht, grayish. 10% transl.
 to opaque + sl. to traly
 weathered chert w/ sptd to
 trs even. Tan, brown to black
 oil stn. i. dul. gldn. yel. fluor. 10%
 w/ flush to gd. stemming. cuts;
 hy trs w/ pr. to fr. + siltstn. w/
 good micro-p.p. por.

Trs. to 2 by Lmy. Dolomites
 and Lmy. Dolomites
 tan crypto. to v. tu. xln.
 sub-chalk sub-succo. to suano
 + packstn. 10% hy. trs. w/
 drk. tan to brown oil stn
 spotted w/ trs even stn
 w/ dul. yel. fluor. w/ fr. to
 gd. stemming cuts; trs por. to fr.
 micro-p.p. por. + poss.
 intergr. por. 10%



Sh. med. to v. drk. gray. j
splintery IP₃

5100

CAS-B-21

TR 5150

7 7/8 in bits in out
#1 New Smith F 129 990 5150 TD
Dev. Sudw. the ones I could find
1. 2900 3/4 3. 4059 3/4
2. 3398 1/4 4. 4978 1/4
5. 5150 3/4 TD

Circ Points:
1. 4830 3. 5000 5. 5075
2. 4950 4. 5050 6. 5150 TP

DST's None
Daily Drilling Progress:

- 4090 AT 7AM 9-16-13
- 4400 AT 4:50PM 9-16-13
- 4742 AT 7:00AM 9-17-13
- 5075 AT 7:00AM 9-18-13
- 5150 AT 7:00AM 9-19-13

Mud Info:

DATE	9-15 10:30A	9-16 6:30A	9-17 11:30A	9-17 5:55P	9-18 10:00A	9-19 10:30A
Depth	3244	4059	4814	4855	5089	5150
WT	9.0	9.5	9.9	9.5	9.4	9.4
VIS	44	39	36	40	45	41
PV	10	10	12	13	10	8
YP	14	12	13	14	15	12
GS	17/36	10/36	11/38	11/43	17/42	14/44
WL	12.0	15.0	13.8	12.4	9.7	10.8
Cake	1/32	2/32	1/32	1/32	1/32	1/32
PH	9.5	8.0	10.0	9.5	10.5	9.0
CHL	1200	1400	1200	900	800	700
Ca	120	160	120	160	80	100
LCM	0	0	0	1	6	5

OPERATOR Beren Corporation

LEASE Louis "D"

ELEVATION 1405 KB

LOCATION 2310' FNL + 481' FEL

SEC. 9

TWP. 35 S

ANG. 12 W

COUNTY Barber

STATE

KAUSAS