

### Terry McLeod

Consulting Geologist  
 P.O. Box 503  
 Wichita, Kansas 67201  
 316-265-6431

#### GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

OPERATOR RITCHIE EXPLORATION, INC.  
 LEASE Smith-Rebein WELL NO. 1  
 FIELD WILDCAT  
 LOCATION 2010' ESL & 2620' FEL  
 SEC. 3 TWP. 25S RGE. 24W  
 COUNTY FORD STATE Kansas

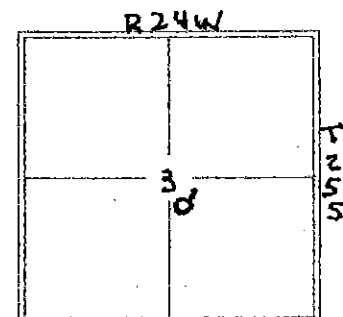
ELEVATION  
 KB. 2388'  
 DF \_\_\_\_\_  
 GL. 2377'  
 Measurements Are All  
 From KB.

CONTRACTOR Duke Drilling Co. Rio 10  
 COMM. 5-25-12 COMP. 6-6-12  
 RTD. 5460' LOG TO 5463  
 SAMPLES SAVED FROM 3600' TO RTD  
 DRILLING TIME KEPT FROM 3500' TO RTD  
 SAMPLES EXAMINED FROM 3600' TO RTD  
 GEOLOGICAL SUPERVISION FROM 3890' TO RTD  
 MUD UP 3600' TYPE MUD chemical

CASING RECORD  
 SURFACE 8 5/8" @ 380' w/  
230 SX  
 PRODUCTION 5 1/2" @ 4863'

ELECTRICAL SURVEYS  
 Superior Well Service  
 dual induction - one-wire

FORMATION	LOG		SAMPLE		STRUCT. COMP.
	TOP	DATUM	TOP	DATUM	
STOTLER	3843	-955	N/A		+10
Hebner	3842	-1554	3840	-1552	flat
Lansing	4040	-1652	4039	-1651	+2
BKC	4411	-2023	4414	-2026	+2
Marmaton	4425	-2037	4437	-2049	+11
PAWNEE	4498	-2111	4497	-2109	+14
Cherokee sh.	4586	-2198	4584	-2196	+12
HUCK ZONE	4668	-2280	4669	-2281	+18
Morrow	4680	-2292	4679	-2291	+22
Mississippi	4704	-2316	4701	-2413	+46
Vicks	5302	-2914	5308	-2915	N/A
no simp or Arb.					
Granite Wash	5394	-3006	5399	-3011	N/A



REFERENCE WELL FOR STRUCTURAL COMPARISON Kenneth Rupp No. 1 Boyce  
Sw Sw Se 34-24S-24W, 2470' KB.

DATE	DEPTH	NO	SIZE	NAME	TYPE	DEPTH OUT	FEET	HOURS
5-25-12	MIRT	A	12 1/4	Varel	RR	355	355	3 1/4
5-26-12	272 set surface	1	7 1/8	JZ	QX20	4755	4400	
5-27-12	870 drlg	2	7 1/8	JZ		5401	1001'	
5-28-12	2305 drlg	3	7 1/8	JZ	RR	5460	59'	
5-29-12	2975 drlg							
5-30-12	3605 drlg on loc							
5-31-12	4120 drlg							
6-1-12	4452 drlg	3)		Surveys	355'	3/4		
6-2-12	4705 drlg	4)			1224'	1/4		
6-3-12	4755 drlg 2-3	5)			1695'	1/2	Board	4731. 46
6-4-12	4840 drlg	6)			3856'	1/2	strap	4730. 48
6-5-12	5255 drlg	7)			4354'	1/2	diff	985.
6-6-12	5460 Elev. run pipe	8)			4705'	1 1/4		

FORMATION	INTERVAL	DESCRIPTION OF SHOW	LOG ANALYSIS C SW
Cher. Muck Zn	4678-86	Limestone, tan, tan-Wh, with 8 pieces w dead oil stain on edges. No free oil faint odor, No flour, No gas kick	dar 1
Marrow Corr.	4691-4700	Shales - varicolored, cherts varicolored fr. weath. 3 pieces w / dark stain greasy. No free oil, No odor 10+ U.K.	dst 1
Mississippi	4724-4730	dal. wh, SUC, w/ 3-4 pc's with partial str + VSSFO in poor suc-φ. faint odor	dst 2-3
MISSISSIPPI	4740-4743	1st dal 15. Com. suc. str. tight ex. 2 pc's w/ partial str, pass from above	dst 2-3
(NO OTHER SHOWS)			

DRILL STEM TESTS							
No.	Interval	FFP/Time	FSP/Time	FFP/Time	FSP/Time	FPH-FHH	RECOVERY
1	4632-4705	23-52 30"	778 30"	26-56 30"	582 30"	2225 2280	15' mud
2	4687-4755	-	-	-	-	-	Packer failure
3	4724-4755	23-57 30"	1436 45"	45-81 45"	1420 60"	2257 2322	100' C.O 46° 90' 0+ w.c.m. 5% oil - 48% w 190' 50% m. chl 125K

REMARKS AND RECOMMENDATIONS *with the success of dst NO 3, production will be set to further evaluate.*

*Repeat fully*

*Jorge M. Lopez*  
6-6-12

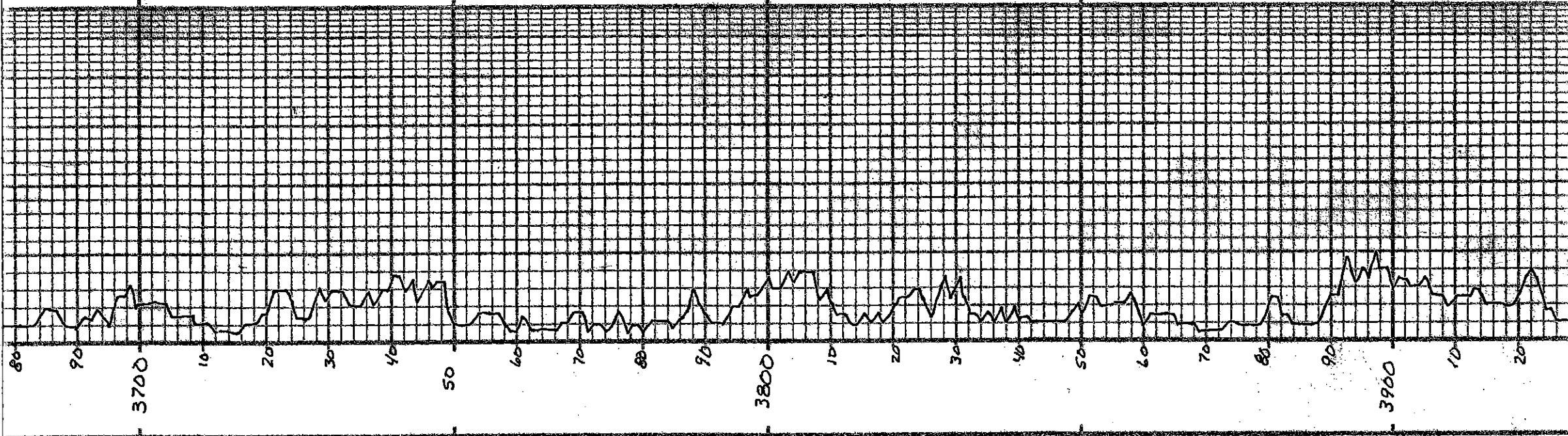
LEGEND

-  Anhydrite
-  Salt
-  Sandstone
-  Shale
-  Carb sh
-  Limestone
-  Ool-Lime
-  Chert
-  Dolomite

SCALE 1" = 100'

DEPTH	DRILLING TIME IN MINUTES PER FOOT Rate of Penetration increases	LITHOLOGY	SAMPLE DESCRIPTIONS	REMARKS
3500	5" 10" 15" 20" 25" ▲ TI STARTED	[Wavy lines]	[Vertical lines]	
10				
20				
30				
40				
50				
60				
70				
80				
90				
3600	20" 30" 40" 50" 60" 70" ▲ SAMPLES START ▲ Making up			No. kicks 3600 - 3700
10			pear sample shales grey red mud	
20			ls. Crm. H. Tan. sh. 100 foss. 3500 p. 1055. Sil. Crng	
30			ls. Crm. H. Tan. sh. 100 foss. 3500 p. 1055. Sil. Crng	
40			ls. Crm. H. Tan. sh. 100 foss. 3500 p. 1055. Sil. Crng	
50			ls. Crm. H. Tan. sh. 100 foss. 3500 p. 1055. Sil. Crng	
60			ls. Crm. H. Tan. sh. 100 foss. 3500 p. 1055. Sil. Crng	
70			ls. Crm. H. Tan. sh. 100 foss. 3500 p. 1055. Sil. Crng	

McLeod



Ls. top - H. box - fa-xln +  
 fass - wj - st - qd - p - N.S.

Ls. Com - fa-xln + fass w/  
 fad fass b. fgs wj do wjm  
 fad edge NFB No adar  
 No kick

Ls. 9/8 - qd fass b. N.S.  
 Sh. G.V.

Ls. Com - H. box - fa-xln + st.  
 fass - fippt N.S. shky

Ls. Com - wj - fa-xln + fass  
 wj - fad fass of Chky - N.S.

Ls. Com - wj - fa-xln + fass  
 qd fass of shky, tr A

Ls. Com - d. top - fa-xln + fass

Ls. Com - H. box - fa-xln - fippt  
 sh. fass - wj - N.S. Chky

Ls. Com - fa-xln - fass w/  
 fad fass of shky - N.S.

Sh. qy - mar - black

Ls. fa-xln - fass + sh qy  
 - mar - N.S. sh blk.

Ls. Com - H. box - fa-xln -  
 wj - wj - fgs wj do wjm  
 fad wj blk st - wj qd  
 fass of NFB - No kick  
 No color - No kick

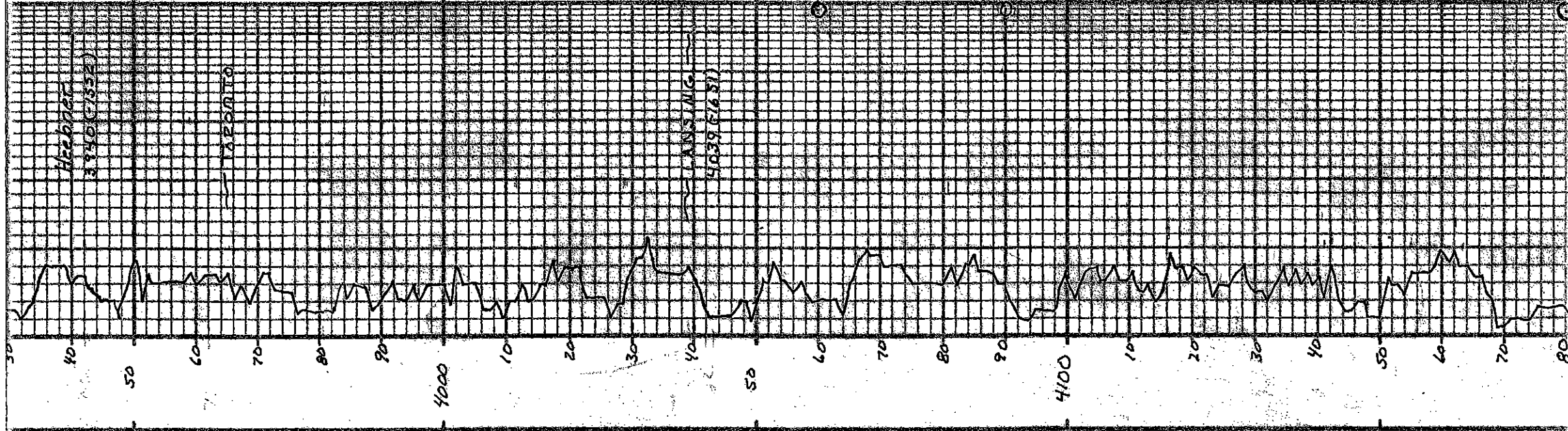
Ls. Com - fa-xln - wj - fass  
 N.S. f. p.

Sh. blk.

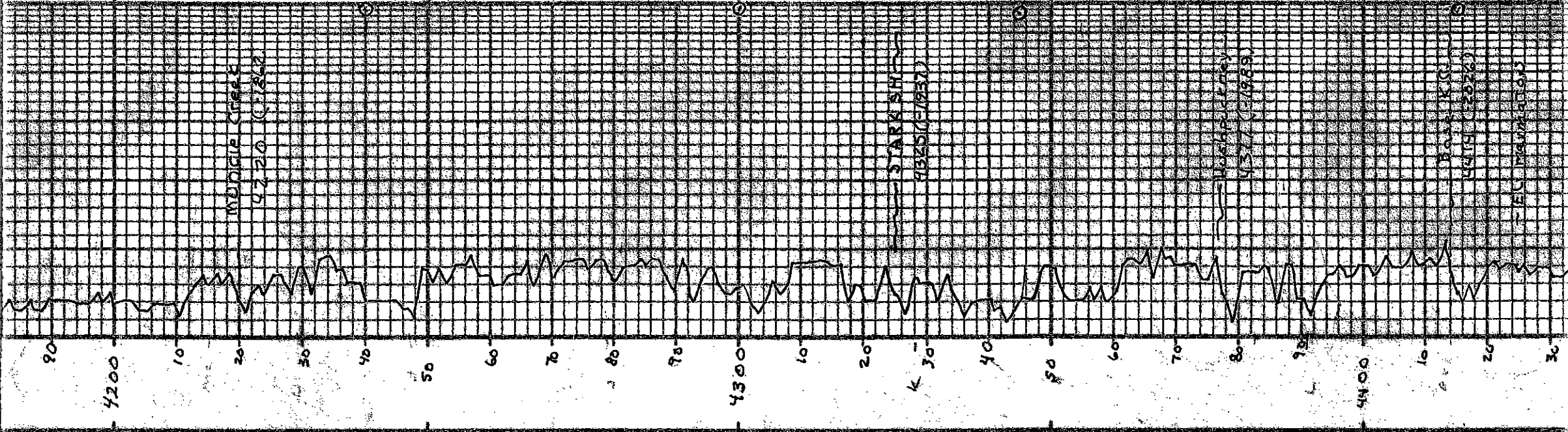
Ls. Com - H. box - fa-xln -  
 wj - fippt - wj - wj - N.S.  
 wj - wj - wj - blk

Ls. shky

Ls. Com - fa-xln - fass w/  
 qd fass of N.S. shky



<p>10 UNIT KICK</p>	<p>SH BIL Cork. Ls. tan. fr. xld. fass. N.S. SH. GRY-MAR</p>	<p>[Blacked out]</p>
	<p>Ls. tan. fr. xld. fass. w/ some thin fass. pl. GRY-MAR</p>	
	<p>SH. GRY-MAR Ls. tan. fr. xld. fass. N.S.</p>	
	<p>SH. GRY-MAR Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	
	<p>Ls. tan. fr. xld. fass. N.S.</p>	



ls. thin. sec - coal w/ glauc  
 col. gr. V. clay N.S.

ls. thin. sec - coal w/ glauc  
 - col. gr. V. clay N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

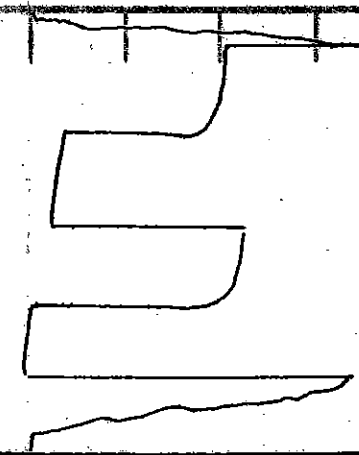
ls. thin. sec - tan to xln  
 thin. N.S. No. black  
 sh. blk. Carb. N.S.

OK



SIP: 1436-1420  
FP: 2357\* + 48\* 81  
MP: 22574-2322\*

Chart dist 3



0.6m x 0.6m - 20' Elev.

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

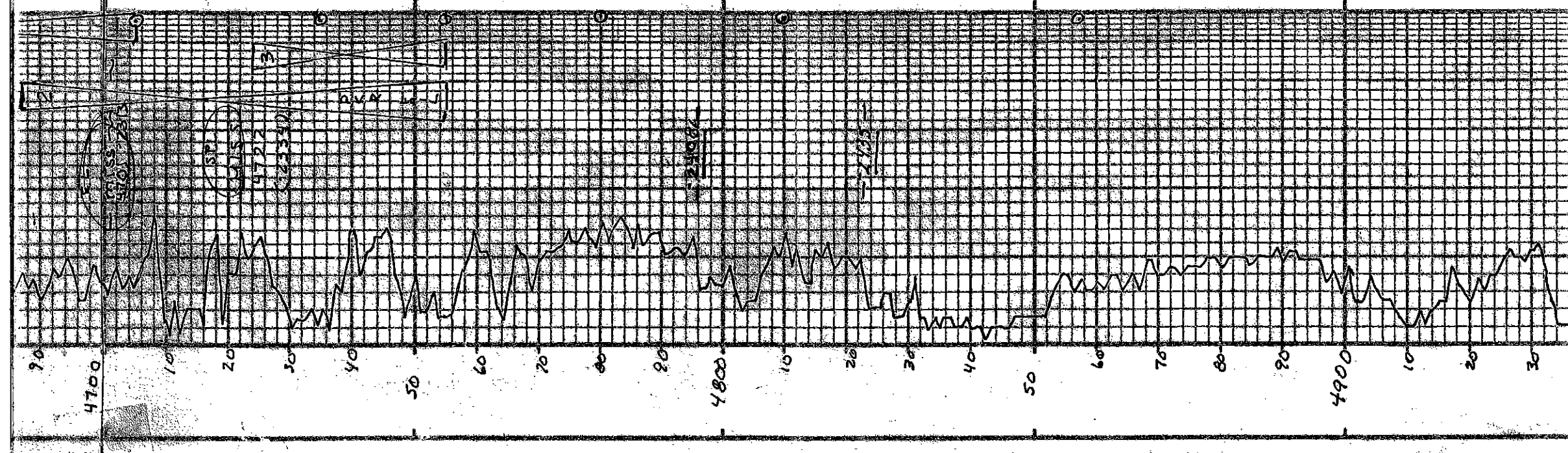
1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

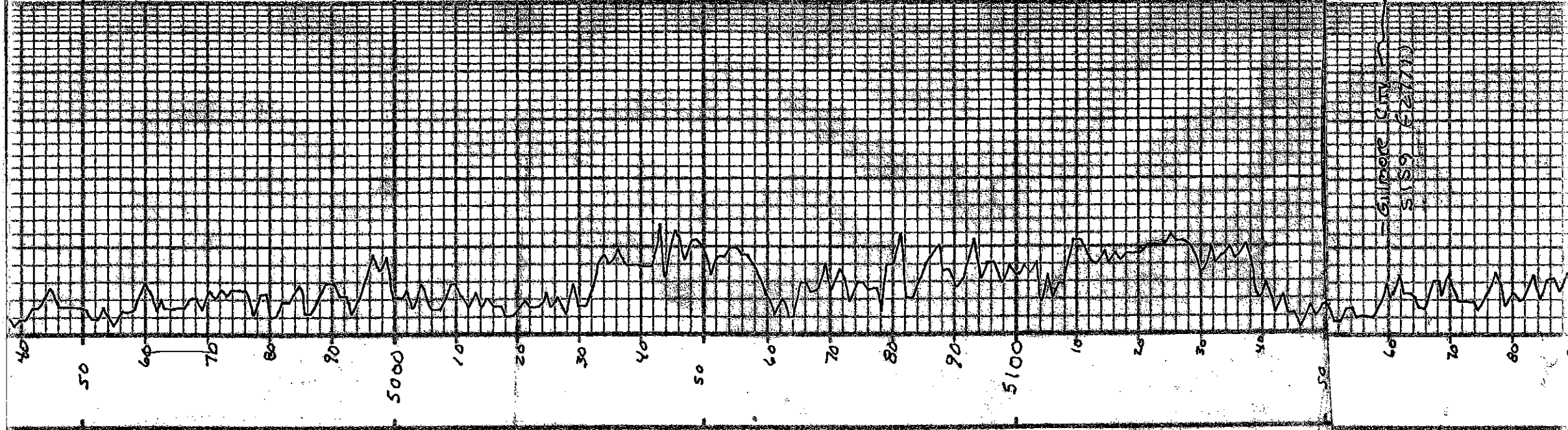
1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS

1.5m - 20' Elev. - 10' AS  
N.S. - 10' Elev. - 10' AS



Vertical axis labels: 70, 4700, 100, 20, 30, 40, 50, 60, 70, 80, 90, 4800, 10, 20, 30, 40, 50, 60, 70, 80, 90, 4900, 10, 20, 30.  
Horizontal axis labels: 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000.  
Handwritten notes: SIP, 4700, 2357\* + 48\* 81, 22574-2322\*, 1436-1420, 20' Elev., 10' AS, N.S., 1.5m, 0.6m x 0.6m, 20' Elev., 10' AS, 1.5m - 20' Elev. - 10' AS, N.S. - 10' Elev. - 10' AS.

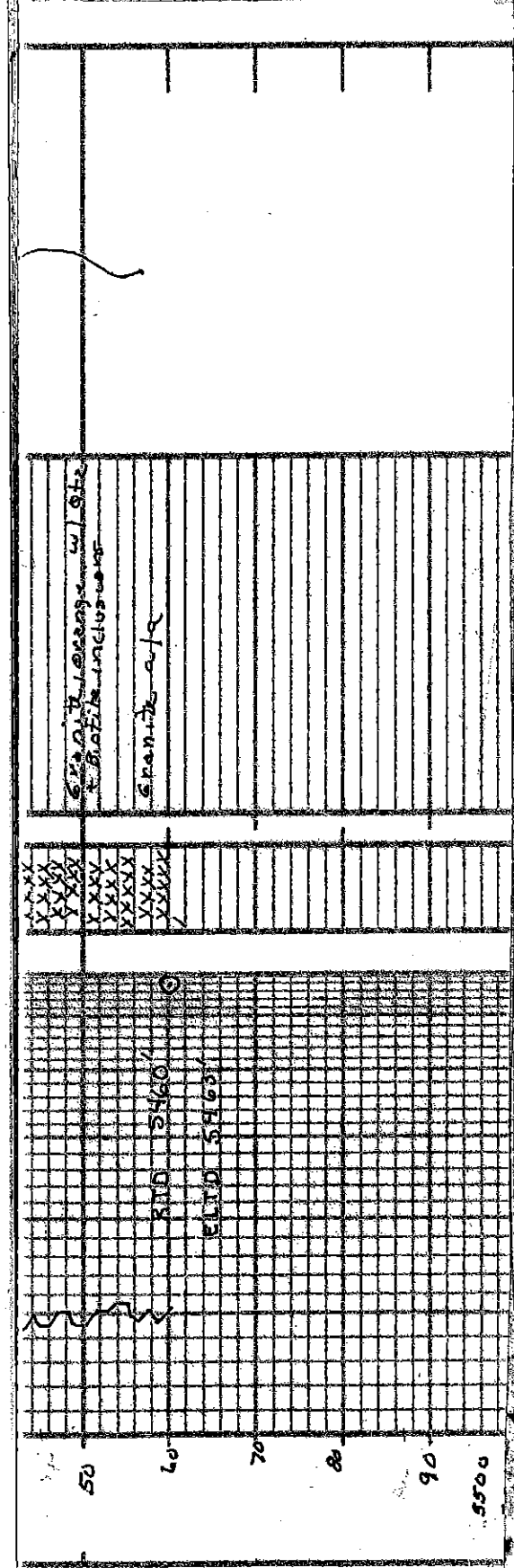




sl. shaly	Ls. tan - grey, 10-x10 + fossils w/ fr. fossils. N.S., sil. shaly
	Ls. tan - grey, 10-x10 + fossils w/ small fossils. N.S.
	Ls. tan - 14 tan, 10-x10 + fossils. N.S., sil. shaly
	Ls. tan - 17 tan, 10-x10 + fossils. shaly + sil. shaly. N.S.
	Ls. 1/2 with ss. sil. and fossils. N.S. glauc.
	SS. sub-cl. sil. shaly, clusters of calc. congl. of calc. congl. N.S. glauc. sh. sil. shaly
	SS. 1/2, 10-12, clusters w/ calc. congl. + glauc.
	sh. + SS 1/2, 10-12, fossils. N.S. + SS, glauc. N.S.
	SS. cl. clusters, 12-14, w/ glauc. - calc. congl. N.S.
	SS. sh. sil. shaly, clusters of calc. congl. Calc. congl. glauc. N.S. sh. sil. shaly
	Ls. tan, 10-x10 - sil. shaly - N.S. sh. sil. shaly
	Ls. + sh. tan - 10-12, sil. shaly - N.S.
	Bel. 1000' sec. w/ fr. fossils. N.S., shaly, sil. shaly
	Dol. congl. of tan, sil. shaly - fr. sil. shaly - N.S. sh. shaly - N.S.
	Dol. congl. - 17 tan, sil. shaly - fr. shaly - sil. shaly - N.S.

No. sheets or kicks





Granite w/ quartz  
inclusions  
granite etc

XXXXXX  
XXXXXX  
XXXXXX  
XXXXXX  
XXXXXX

DEPTH	DRILLING TIME Minutes/Feet	LITHOLOGY	SAMPLE DESCRIPTIONS	REMARKS
50	5	XXXXXX	Granite w/ quartz inclusions	
40	10	XXXXXX	granite etc	
30	15	XXXXXX		
20	20	XXXXXX		
10	25	XXXXXX		
5				
5500				

COMPANY RECON'S EXPLORATION, INC. ELEVATION: 2388 K.B.

LEASE Sm. 14 - Babin Unit No 1

LOCATION 2010' 31" E 2630' FEL SEC 3 TWP 25S RNG 24W.

COUNTY Ford STATE Kansas.