

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM
ACO-1 WELL HISTORY
DESCRIPTION OF WELL AND LEASE

Operator: License # 322.85 **ORIGINAL**

Name: TRIO PETROLEUM INC.

Address 5401 Business Park South, Suite 115

City/State/Zip Bakersfield, CA 93309

Purchaser: _____

Operator Contact Person: C.C. Horace

Phone (805) 324-3911

Contractor: Name: Murfin Drilling Company

License: 30606

Wellsite Geologist: A.L. Thalman

Designate Type of Completion

New Well Re-Entry Workover

Oil SWD SLOW Temp. Abd.

Gas ENHR SIGW

Dry Other (Core, WSW, Expl., Cathodic, etc)

If Workover:

Operator: _____

Well Name: _____

Comp. Date _____ Old Total Depth _____

Deepening Re-perf. Conv. to Inj/SWD

Plug Back PBTB

Commingled Docket No. _____

Dual Completion Docket No. _____

Other (SWD or Inj?) Docket No. _____

3-12-98 3-19-98 P&A 3/20/98
Spud Date Date Reached TD Completion Date

API NO. 15- 071-206840000

County Greeley plugged 3/20/98

W - 1/2 - NW - 4 Sec. 35 Twp. 18S Rge. 43 X X W

800 Feet from S (circle one) Line of Section

600 Feet from E (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:
NE, SE, NW or SW (circle one)

Lease Name Ruth Settles Well # Southport 12X-35

Field Name Wildcat

Producing Formation Dry Hole

Elevation: Ground 3,883' KB 3,893

Total Depth 5,200' PBTB _____

Amount of Surface Pipe Set and Cemented at 628 Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set _____ Feet

If Alternate II completion, cement circulated from _____

feet depth to _____ w/ _____ sx cmt.

Drilling Fluid Management Plan DFA, 6-8-98 U.C.
(Data must be collected from the Reserve Pit)

Chloride content 5000 ppm Fluid volume 200 bbls

Dewatering method used NONE

Location of fluid disposal if hauled offsite: _____

Operator Name _____

Lease Name _____ License No. _____

_____ Quarter Sec. _____ Twp. _____ S Rng. _____ E/W

County _____ Docket No. _____

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature C.C. Horace

Title PRESIDENT Date 4/1/98

Subscribed and sworn to before me this 1st day of April, 19 98.

Notary Public Marica Kundy

Date Commission Expires February 8, 2000

K.C.C. OFFICE USE ONLY		
F	<input type="checkbox"/>	Letter of Confidentiality Attached
C	<input checked="" type="checkbox"/>	Wireline Log Received
C	<input type="checkbox"/>	Geologist Report Received
Distribution		
<input checked="" type="checkbox"/>	KCC	<input type="checkbox"/> SWD/Rep
<input type="checkbox"/>	KGS	<input type="checkbox"/> Plug
<input type="checkbox"/>		<input type="checkbox"/> NGPA
		<input type="checkbox"/> Other
		(Specify)

Form ACO-1 (7-91)



Rec'd 4-9-98

SIDE TWO

Operator Name TRIO PETROLEUM INC.

Lease Name RUTH SETTLES

Well # SOUTHPORT 12X-35

Sec. 35 Twp. 18S Rge. 43

East
 West

County GREELEY

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken (Attach Additional Sheets.) Yes No
 Samples Sent to Geological Survey Yes No
 Cores Taken Yes No
 Electric Log Run (Submit Copy.) Yes No

Log Formation (Top), Depth and Datum Sample
 Name _____ Top _____ Datum _____

SEE MUD LOG

List All E.Logs Run:

DIL/CDL/CNL/MUD LOG

CASING RECORD

New Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs./Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12 1/4	8 5/8	24	628	(see attached report)	225 Lbs.	150 Sks. GOM

ADDITIONAL CEMENTING/SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input checked="" type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone	see attached	cement report		

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used) Depth
	NONE	

TUBING RECORD	Size	Set At	Packer At	Liner Run <input type="checkbox"/> Yes <input type="checkbox"/> No
	NONE			

Date of First, Resumed Production, SWD or Inj.	Producing Method
DRY HOLE	<input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

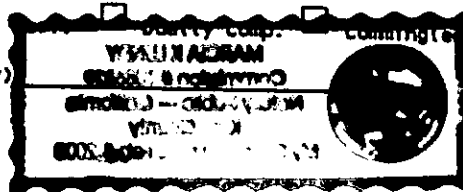
Disposition of Gas:

METHOD OF COMPLETION

Production Interval

Vented Sold Used on Lease
 (If vented, submit ACO-18.)

Open Hole Other (Specify)



ALLIED CEMENTING CO., INC. 9944

ORIGINAL

TO P.O. BOX 31
 RUSSELL, KANSAS 67665

SERVICE POINT: OAKLEY

DATE <u>3-13-98</u>	SEC <u>35</u>	TWP. <u>18S</u>	RANGE <u>49W</u>	CALLED OUT	ON LOCATION <u>12:30 PM</u>	JOB START <u>6:00 AM</u>	JOB FINISH <u>6:45 AM</u>
WELL # <u>12X-35</u>	LOCATION <u>TREBUNT 15W-25-14-30-60-60</u>			COUNTY <u>OSAGE</u>	STATE <u>Ks</u>		
OLD OR (NEW) (Circle one)							

CONTRACTOR MURKIN DRILLING INC # 25 OWNER TREB PETS FMS

TYPE OF JOB SURFACE

HOLE SIZE 12 1/4" T.D. 629'

CASING SIZE 9 5/8" DEPTH 628'

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MBS. LINE SHOE JOINT 44.30

CEMENT LEFT IN CSO. 24.30

PERFS.

DISPLACEMENT 9 7/8 OAL

CEMENT AMOUNT ORDERED 225 SK 15% 38CC 1/2 Flo Seal

150 SK Com 38CC

COMMON <u>150 SK</u>	①	<u>7.55</u>	<u>1132.50</u>
POZMIX	①		
OEL	①		
CHLORIDE <u>13 SK</u>	①	<u>25.00</u>	<u>325.00</u>
<u>15% 225 SK</u>	①	<u>7.55</u>	<u>1586.25</u>
<u>Flo Seal 50#</u>	①	<u>1.55</u>	<u>64.50</u>
	①		
	①		
HANDLING <u>975 SK</u>	①	<u>1.02</u>	<u>393.75</u>
MILEAGE <u>240 PER SK</u>	①		<u>1500.00</u>
TOTAL			<u>5040.00</u>

EQUIPMENT

PUMP TRUCK # 191 CEMENTER TERRY HELPER WYNNE

BULK TRUCK # 303 DRIVER JEFF

BULK TRUCK # 212 DRIVER ROBERT

REMARKS:

SERVICE

CEMENT NEW CEM.

THANK YOU

DEPTH OF JOB <u>628</u>		
PUMP TRUCK CHARGE	①	<u>470.00</u>
EXTRA FOOTAGE <u>320</u>	①	<u>141.43</u>
MILEAGE <u>100 MI</u>	①	<u>283.50</u>
PLUG <u>8 3/8 SURFACE</u>	①	<u>45.67</u>
TOTAL <u>941.00</u>		

CHARGE TO: MURKIN DRILLING CO.

STREET 250 N. WATER #300

CITY WICHITA STATE KANSAS ZIP 67202

FLOAT EQUIPMENT

<u>1-Back Plate</u>	①	<u>135.00</u>
	①	
	①	
	①	
	①	
TOTAL <u>135.00</u>		

To Allied Cementing Co., Inc.
 You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read & understand the "TERMS AND CONDITIONS" listed on the reverse side.

TAX _____

TOTAL CHARGE _____

DISCOUNT _____ IF PAID IN 30 DAYS

SIGNATURE Yves Schwartz

PRINTED NAME

08/05/98

16:41

8316 267 8004

MURFIN DRILLING

002/003

ALLIED CEMENTING CO., INC. 9948

ORIGINAL

PO BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:

DATE <u>3-20-98</u>	SEC <u>35</u>	TWP <u>18S</u>	RANGE <u>4E</u>	CALLED OUT	ON LOCATION <u>CIT</u>	JOB START <u>CIT</u>	JOB FINISH <u>CIT</u>
WELL NAME <u>4417 56415</u>	WELL NO. <u>RY 35</u>	LOCATION <u>TREBUNNIA 15N-25-W-34-40N</u>	COUNTY <u>GRAVELLY</u>	STATE <u>KS</u>			
OLD OR NEW (Circle one)							

CONTRACTOR MURFIN DRILLING OWNER TREBUNNIA
 TYPE OF JOB PTA
 HOLE SIZE 7 7/8 ID. 5200'
 CASING SIZE _____ DEPTH _____
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE 4 1/2" DEPTH 2540'
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT _____
 CEMENT LEFT IN CSO. _____
 PERFS. _____
 DISPLACEMENT _____

CEMENT AMOUNT ORDERED 215.54 Galvanneal 8 1/2"

COMMON	<u>129.54</u>	@	<u>7.55</u>	<u>973.95</u>
POZMIX	<u>86.54</u>	@	<u>3.30</u>	<u>285.27</u>
GEL	<u>11.54</u>	@	<u>9.92</u>	<u>114.48</u>
CHLORIDE		@		
<u>Flow-Swell 50%</u>		@	<u>1.52</u>	<u>62.20</u>
HANDLING	<u>215.54</u>	@	<u>1.98</u>	<u>426.77</u>
MILEAGE	<u>215.54</u>	@	<u>0.12</u>	<u>25.86</u>
TOTAL				<u>25.04</u>

EQUIPMENT
 PUMP TRUCK CEMENTER TRAY
 # 90 HELPER WAYNE
 BULK TRUCK
 # 915 DRIVER ROBERT
 BULK TRUCK
 # DRIVER

REMARKS:
50 SKS AT 2540'
80 SKS AT 1600'
50 SKS AT 660'
10 SKS AT 40'
10 SKS MIRROR HOLE
15 SKS CAT BAK
Thank You

SERVICE
 DEPTH OF JOB 2540'
 PUMP TRUCK CHARGE _____ 590.00
 EXTRA FOOTAGE _____
 MILEAGE 100.00 @ 2.65 265.00
 PLUG _____
 TOTAL 865.00

CHARGE TO: MURFIN DRILLING CO.
 STREET 250 N Water, ST. #300
 CITY Wichita STATE Kan ZIP 67202

FLOAT EQUIPMENT

 TOTAL _____

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TAX _____
 TOTAL CHARGE _____
 DISCOUNT _____ IF PAID IN 30 DAYS

SIGNATURE Yus Schwartz

PRINTED NAME _____

ALLIED CEMENTING CO., INC.

9948

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

ORIGINAL

SERVICE POINT:

OAKLEY

DATE: <u>3-20-98</u>	SEC: <u>35</u>	TWP: <u>18S</u>	RANGE: <u>43</u>	CALLED OUT	ON LOCATION: <u>5:30 PM</u>	JOB START: <u>6:30 AM</u>	JOB FINISH: <u>10:30 AM</u>
LEASE: <u>Ruth Settles</u>	WELL # <u>12X-35</u>	LOCATION: <u>TREHUNE 15W-25-1W-34N EFWB</u>	COUNTY: <u>GARRETT</u>	STATE: <u>KS</u>			

CONTRACTOR MURFIN DRILL RENTERS OWNER TRAY P&T

TYPE OF JOB ATW

HOLE SIZE 7 7/8 T.D. 5200'

CASING SIZE _____ DEPTH _____

TUBING SIZE _____ DEPTH _____

DRILL PIPE 4 1/2" DEPTH 2540'

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. _____

PERFS. _____

DISPLACEMENT _____

CEMENT

AMOUNT ORDERED 215 SKS 60/40 1026 262L 1/2 SEAL

COMMON	<u>129 SKS</u>	@	<u>7.55</u>	<u>973.45</u>
POZMIX	<u>86 SKS</u>	@	<u>3.25</u>	<u>279.50</u>
GEL	<u>11 SKS</u>	@	<u>9.38</u>	<u>104.18</u>
CHLORIDE		@		
<u>Flow-Seal 50%</u>		@	<u>1.15</u>	<u>62.10</u>
		@		
		@		
		@		
		@		
HANDLING	<u>215 SKS</u>	@	<u>1.05</u>	<u>225.75</u>
MILEAGE	<u>040 PER SK MILE</u>			<u>86.00</u>
				TOTAL <u>2505.80</u>

EQUIPMENT

PUMP TRUCK CEMENTER TERRY

300 HELPER WAYNE

BULK TRUCK

315 DRIVER ROBERT

BULK TRUCK

_____ DRIVER _____

REMARKS:

50 SKS AT 2540'

80 SKS AT 1600'

50 SKS AT 660'

10 SKS AT 40'

10 SKS MOUSE HOLE

15 SKS RAT HOLE

THANK YOU

SERVICE

DEPTH OF JOB 2540'

PUMP TRUCK CHARGE _____ 580.00

EXTRA FOOTAGE _____ @ _____

MILEAGE 100 MILE @ 2.85 285.00

PLUG _____ @ _____

TOTAL 865.00

CHARGE TO: MURFIN DRILL CO.

STREET _____

CITY _____ STATE _____ ZIP _____

FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

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You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read & understand the "TERMS AND CONDITIONS" listed on the reverse side.

SIGNATURE Gus Schwartz

TOTAL _____

TAX _____

TOTAL CHARGE _____

DISCOUNT _____ IF PAID IN 30 DAYS

PRINTED NAME

ORIGINAL

TRIO PETROLEUM INCORPORATED
SOUTHPORT 12X-35
SECTION 35, T18S, R43W
GREELEY COUNTY, KANSAS
MARCH, 1998

15-071-20684

Wellsite Geologist:

Peter Debenham
330 Hideaway Circle
Evergreen, CO 80439
303/674-0633

TAPER

1998

www.trioenergy.com
15-071-20684

ORIGINAL

WELL DATA

OPERATOR: Trio Petroleum Incorporated - Bakersfield, CA 805/324-3911
Company Chairman/Geologist: Stanford Eschner
Company Engineer: Charles Horace

CONSULTING GEOLOGIST: Al Thalman - Frisco, Colorado

PROSPECT GEOPHYSICIST: Dan Woods, Southport Exploration, Inc. - Tulsa, OK

WELL NAME: Southport 12X-35, Field - Wildcat

LOCATION: 800'FNL & 600'FWL, Section 35, T18S, R43W, Greeley County,
Kansas - 16 miles West of Tribune

API NO.: 15 - 071 - 206840000

ELEVATION: Ground LEVEL 3883', KELLY BUSHING 3893'

SPUD DATE: 3/12/98

TOTAL DEPTH: 3/19/98, Mississippian Ste. Genieve Formation
Driller 5200', Logger 5200'

CONTRACTOR: Murfin Drilling Company rig No. 24, Type: Double jackknife,
triple stand, Toolpusher Gus Schwartz

SURFACE CASING: 14 joints of new 8 5/8", 24 Lbs/ft set at 628' with 225 sacks
Lite & 150 sacks Common(3%cc, 2%gel). Cement did circulate.
Services by Allied.

WELLSITE GEOLOGIST: Peter Debenham with mudlogging trailer. 330 Hideaway
Circle Road, Evergreen, CO 80439 303/674-0633. Call depth
2000'.

SAMPLES: 30' samples from surface, 20' samples from 3700' and 10' from
4900'. One set dry cut stored with KGS Sample Log Library.

MUD PROGRAM: Service Mud company, Engineer Toney Maestas, Type: Chemical/
Gel - displaced at 3680'.

ELECTRIC LOGS: The Rosel Company - Liberal, KS, Engineer Roger Taylor
Dual Induction, Compensated Neutron/Density

STATUS:

Plugged and abandoned 3/20/98 with 50 sacks cement at 2540', 80 sacks at 1600', 50 sacks at 660', 10 sacks at 40' to surface, and 25 sacks in rathole and mousehole.

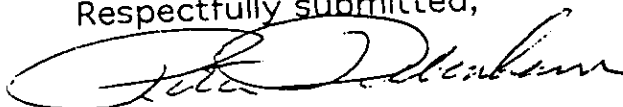
WELL SUMMARY

The Trio Petroleum Inc., Southport 12X-35 was drilled as a wildcat to a total depth of 5200' in the Mississippi. Prospect interpretation was based on Z Scan and on subsurface well control. The Southport 12X-35 ran structurally high to the Trans-Western Petroleum Inc., Moore-Johnson No. 1 - 1 1/2 mile to the NE and to most surrounding wells. Formation tops from the Base of the Ft. Hays to the Heebner ran consistently 41' to 56' high relative to this offset. Some thinning occurred in the Lansing and the Marmaton and the Cherokee and Morrow ran 30' high.

No sand development occurred in the Morrow. The only hydrocarbon show that was documented during the drilling of this test occurred in the lower Atoka and consists of: Limestone - Mottled brown to gray, occasionally black, biomicrite, cryptocrystalline, dense, argillaceous to marly, pyritic, fossiliferous, poor visible porosity, dark mottled bluegreen hydrocarbon fluorescence in 2% of the samples, slow bleeding cut, no stain.

The Southport 12X-35 was plugged and abandoned 3/20/98. Appreciation goes to Gus Schwartz and Murfin Rig 25 hands for their efficient manner of operation during the drilling of this test.

Respectfully submitted,



Peter Debenham

WELL CHRONOLOGY

<u>DATE</u>	<u>MIDNIGHT DEPTH</u>	<u>FOOTAGE</u>	<u>RIG ACTIVITY</u>
3/11			Dig ditches and cellar. Move to location and rig up rotary tools.
3/12	629'	629'	Mix spud mud and drill rathole and mousehole. Spud in 12 1/4" surface hole and drill to 629' and circulate.
3/13	1133'	504'	Short trip and circulate. Drop survey(1/2°) and trip for surface casing. Run 14 joints of 8 5/8", 24Lbs/ft set at

3/13	1133'	404'	Short trip and circulate. Drop survey(1/2 ^o) and trip for surface casing. Cement and wait on cement. Nipple up and pressure test BOP to 750 PSI in 15 minutes. Drill cement and plug(60' of cement) and drill new 7 7/8" hole to 1133'.
3/14	2530'	1397'	Drill to 2530'. Run surveys(3/4 ^o). Adjust brakes and check BOP. Run wireline survey(1/2 ^o).
3/15	3430'	900'	Drill to 3430'. Run surveys(3/4 ^o) and service rig. Rain and snow - catting water trucks in.
3/16	3975'	545'	Drill to 3940'. Drop survey(3/4 ^o) and trip for Bit No. 3. Drill to 3975'. Extend flowline and displace mud system at 3680'.
3/17	4465'	490'	Drill to 4465'. Service rig and jet pits.
3/18	4825'	360'	drill to 4825'. Service rig and jet pits. Intense snow and cold.
3/19	5200'TD	375'	Drill to 5200' TD and circulate. Circulate for samples at 5100' and 5110'. Snowing.
3/20	TD		Circulate and condition mud. Short trip and circulate. Drop survey(1 1/4 ^o) and trip out for Logs. Run E-Logs. Trip to bottom and circulate. Trip out laying down and plug and abandon well. Rig down. Muddy location.

MUD PROPERTIES

<u>DATE</u>	<u>DEPTH</u>	<u>WT</u>	<u>VIS</u>	<u>YP</u>	<u>WL</u>	<u>PH</u>	<u>CL/PPM</u>
3/15	2765'	9.9	30	5	N/C	7.0	98000
3/16	3636'	9.4	29	16	N/C	7.0	67000
3/16	3843'	8.6	41	16	13.6	10.0	7500
3/17	4156'	8.8	40	16	10.4	10.0	5500
3/18	4620'	9.1	42	16	8.8	9.0	6000
3/19	5038'	9.0	63	16	9.6	9.0	5000

BIT RECORD

<u>NO.</u>	<u>MAKE</u>	<u>TYPE</u>	<u>SIZE</u>	<u>OUT</u>	<u>FOOTAGE</u>	<u>HOUR</u>
1	HTC	J2	12 1/4"	629'	629'	8 1/4
2	Varel	ETD-14	7 7/8"	3940'	3311'	67 1/4
3	HTC	ATJ11-C	7 7/8"	5200'	1260'	68 3/4
Total Rotary hours:						144 3/4
Average:						36 ft/hr

DEVIATION RECORD

629' 1/2°, 1164' 1/4°, 1694' 1/2°, 2187' 3/4°, 2688' 3/4°, 3184' 3/4°,
 3689' misrun, 3940' 3/4°, 4474' 1/2°, 5200' 1 1/4°

ELECTIC LOG FORMATION TOPS - KB Elev. 3893'

<u>FORMATION</u>	<u>DEPTH</u>	<u>DATUM</u>
Base of Ft. Hays	624'	+3269'
Greenhorn	990'	+3023'
Bentonite "X" Mkr	990'	+2903'
Dakota	1061'	+2832'
Cheyenne SS	1398'	+2495'
Day Creek	1620'	+2233'
Blaine	1870'	+2023'
Stone Corral	2512'	+1381'
Neva	3245'	+648'
Admire	3320'	+573'
Foraker	3362'	+531'
Penn. Virgil	3556'	+337'
Topeka	3759'	+134'
Heebner	4005'	-112'
Toronto	4035'	-142'
Lansing	4072'	-179'
Stark Shale	4392'	-499'
Marmaton	4511'	-618'
Cherokee	4658'	-765'
Atoka	4828'	-935'
Morrow	5002'	-1109'
Lower Morrow	5100'	-1109'
Mississippi	5157'	-1264'
TD	5200'	-1307'

STRUCTURAL CONSIDERATION - Datum Depths

<u>FORMATION</u>	<u>Southport12X35</u>	<u>*Transwestern</u>	<u>POSITION</u>
Bentonite "X" Mkr	+2903'	+2863'	+40'
Stone Corral	+1381'	+1337'	+44'
Penn. Virgil	+337'	+296'	+41'
Heebner	-112'	-158'	+44'
Marmaton	-618'	-648'	+30'
Cherokee	-765'	-648'	+30'
Morrow	-1109'	-1136'	+30'

*Trans-Western Petroleum Inc., Moore-Johnson No.1, 2310'FWL & 1500'FNL, Section 25, T18S, R43W - 1 1/2 Miles to the NE, KB Elevation 3874'

LITHOLOGY DESCRIPTION

SAMPLES ARE LAGGED
 *INDICATES HYDROCARBON SHOW
 CORRECTED E-LOG FORMATION TOPS

Blaine Section

2000 - 2280' Salt - By drill rate and Chlorides

2280 - 2310' Anhydrite - White, clear, occasionally redbrown, hard, crystalline

2310 - 2460' Shale - Bright red to orangebrown, blocky, earthy, calcareous, anhydritic, silty to sandy and occasionally grading to Siltstone to very fine Sandstone
 - Red to orange, clear, friable, very fine upper to fine lower, well sorted, subround grains, clay and calcareous cement, with abundant unconsolidated Quartz grains, no fluorescence, no stain or cut, with Anhydrite - As above

2460 - 2510' Abundant unconsolidated Quartz grains - Orange, clear, red, very fine lower, well sorted grains, no fluorescence, no stain or cut

Stone Corral 2512'

2510 - 2540' Anhydrite - White, light gray, clear, light brown, hard, crystalline, slightly calcareous

2540 - 2570' Shale - Medium bright orange, redbrown, light graygreen, hard, blocky, calcareous, silty, anhydritic

2570 - 2630' Siltstone - Light to medium brown to gray, graygreen, mottled redbrown, firm, slightly friable, calcareous and clay cement, anhydritic, poor visible porosity - abundant clay infil, no fluorescence, no stain or cut, with Anhydrite - White, clear, gray

2630 - 2810' Shale - Red to orangebrown, blocky, earthy, calcareous, anhydritic, silty to sandy and occasionally grading to Siltstone - Orange to red, tan, slightly friable, poor visible porosity, no show, with Anhydrite

2810 - 2940' Siltstone - Medium redbrown to orange, firm, friable, clay cement, poor visible porosity - abundant clay infill, no fluorescence, no stain or cut

2940 - 3050' Shale - Bright orange to red, blocky, earthy, calcareous, silty, anhydritic in part, occasionally dark gray to black and subfissile

3050 - 3130' Siltstone to very fine Sandstone - Medium red to orange, occasionally gray, friable, clay cement, poor visible porosity, no show, interbedded with Shale - Bright red to orangebrown, blocky, earthy, calcareous, silty to sandy, anhydritic

3130 - 3230' Shale - Bright orange to red, blocky, earthy, calcareous, silty to sandy

3230 - 3260' Limestone - Medium mottle redbrown, occasionally orange, light to medium brown to gray, micrite, cryptocrystalline, hard, dense, marly, silty, poor visible porosity, no show

Neva 3245'

3260 - 3320' Limestone - Light brwn, buff, occasionally pink, micrite, cryptocrystalline, hard, dense, marly, tight, no show, interbedded with Shale - As above

Admire 3320', Foraker 3362'

3320 - 3400' Limestone - Light to medium brown to redbrown, occasionally pink and graygreen, varicolored in part, micrite, cryptocrystalline, hard, dense, anhydritic in part, marly, tight, no show, interbedded with Shale - Red to orangebrown, graygreen, occasionally black, blocky, firm, calcareous, carbonaceous in part, silty to sandy

3400 - 3414' Shale - Bright red to orangebrown, gray, blocky, earthy, calcareous, carbonaceous, silty to sandy in part

3414 - 3432' Limestone - Buff, light to medium brown, micrite, cryptocrystalline, hard, dense, clean to argillaceous, poor visible porosity, no show

3432 - 3452' Shale - As above

3452 - 3475' Limestone - Light brown to gray, microcrystalline, microsucrosic, brittle, clean to argillaceous, sandy with very fine lower, well sorted grains, pyritic, poor visible porosity, no show, occasionally grading to Siltstone to very fine Sandstone - Light brown, friable, calcareous and clay cement, no show

3475 - 3506' Shale - Medium red to orangbrown, medium gray, graygreen, occasionally black, subfissile to blocky, earthy, calcareous, silty, interbedded with Limestone - Brown to gray, micrite, cryptocrystalline, hard, dense, silty, argillaceous, tight, no show

3506 - 3554' Shale - As above

Pennsylvanian Virgil 3556'

3554 - 3564' Limestone - Medium to light mottled brown, buff, occasionally red to orangebrown, micrite, cryptocrystalline, dense, clean, sandy, poor visible porosity, no show

3564 - 3595' Shale - Medium to dark gray to graygreen, occasionally blk, redbrown, subfissile to blocky, calcareous, carboaceous in part, silty to sandy

3595 - 3650' Limestone - Light to medium brown to gray, white, micrite, finely crystalline, dense, clean to argillaceous, silty, tight, no show, interbedded with Shale - Medium redbrown orange, gray to graygreen, occasionally black, blocky, firm, calcareous, silty

Topeka 3759'

3750 - 3680' Limestone - Medium to light brown, buff micrite, cryptocrystalline, hard, dense, clean to argillaceous, silty, poor visible porosity, no fluorescence, no stain or cut, interbedded with Shale - As above

3680 - 3700' Limestone - Brown to gray, buff, occasionally redbrown, micrite, cryptocrystalline, hard, dense, clean to argillaceous in part, silty, poor visible porosity, no fluorescence, no stain or cut

3700 - 3750' Limestone - White, light brown to buff, microcrystalline, microsucrosic, brittle, clean, sandy, trace intercrystalline porosity, mineral fluorescence, no stain or cut, interbedded with Limestone - Medium brown,

cryptocrystalline, dense, siliceous, argillaceous, tight, no show, with Sahle - Medium gray to black, redbrown, subfissile, firm, carbonaceous, calcareous

3750 - 3815' No gas or samples - Displaced mud system

3835 - 3840' Shale - Dark gray, black, redbrown, subfissile, carbonaceous, calcareous, interbedded with Limestone - Light to medium brown, gray, occasionally dark gray, microcrystalline, microsugrosic in part, brittle, clean, trace intercrystalline porosity, orange mineral fluorescence, no stain or cut, with Limestone - dark gray, occasionally redbrown, micrite, cryptocrystalline, hard, dense, siliceous, tight, no show

3840 - 3870' Limestone(Grainstone) - light brown to white, microcrystalline, microsugrosic, brittle, clean, subchalky in part, fossiliferous, sandy, trace intracrystalline porosity, no fluorescence, no stain or cut

3870 - 3910' Shale - Black, dark gray, graygreen, hard, blocky, calcareous, carbonaceous, interbedded with Limestone - Medium mottled brown, micrite, cryptocrystalline, hard, dense, clean to argillaceous, tight, no show, trace Chert

3910 - 3955' Limestone - Mottled brown to gray, biomicrite, finely crystalline, hard, dense, clean, siliceous in part, fossiliferous, sandy, poor visible porosity, no fluorescence, no stain or cut, trace Chert

3910 - 3955' Limestone - Mottled brown, gray, biomicrite, finely crystalline, hard, dense, clean, siliceous in part, fossiliferous, sandy, poor visible porosity, no fluorescence, no stain or cut, occasionally interbedded with Shale - Black, brown to gray, graygreen, hard, subfissile to blocky, calcareous, carbonaceous

3955 - 3992' Limestone - Medium brown, buff, gray, biomicrite, cryptocrystalline, hard, dense, siliceous, clean to argillaceous, poor visible porosity, no fluorescence, no stain or cut, occasionally interbedded with Shale - Dark gray, black, graygreen, hard, blocky, calcareous

3992 - 4002' Limestone - Light to medium brown, buff, microcrystalline, microsugrosic, subchalky, clean, fossiliferous, sandy, trace intercrystalline porosity, no fluorescence, no stain or cut

Toronto 4035'

4002 - 4042' Limestone - Mottled brown, gray, biomicrite, cryptocrystalline, hard, dense, clean, siliceous, tight, no show

4042 - 4055' Shale - Black, firm, fissile, carbonaceous

4055 - 4072' Shale - Dark gray to black, graygreen, hard, fissile, carbonaceous, interbedded with Limestone - Mottled brown, gray, micrite, cryptocrystalline, hard, dense, argillaceous, tight, no show, trace Chert - Milky white to gray

Lansing 4072'

4072 - 4090' Limestone - Light brown, buff, microcrystalline, microsugrosic, brittle, clean, subchalky, trace intercrystalline porosity, mineral fluorescence, no stain or cut

4090 - 4105' Limestone - Light brown, microcrystalline, microsugrosic, brittle, subchalky, clean, fossiliferous, oolitic, oolitic, trace intercrystalline porosity, trace oomoldic porosity, no fluorescence, no stain or cut, interbedded with Shale - Gray to graygreen, hard, blocky

4105 - 4124' Limestone - Light brown to gray, buff, oobiomicrocrystalline, microsugrosic, brittle, clean, sandy, fossiliferous, trace intercrystalline and occasional oomoldic porosity, no fluorescence, no stain or cut

4124 - 4143' Limestone - Light brown to gray, finely crystalline, dense, lean, siliceous in part, poor visible porosity, no fluorescence, no stain or cut

4143 - 4166' Shale - Black, dark gray, hard, subfissile to blocky, calcareous, carbonaceous

4166 - 4188' Limestone - Medium brown, micrite, cryptocrystalline to microcrystalline, microsugrosic in part, clean, fossiliferous, tight to trace intercrystalline porosity, trace oomoldic porosity, no show

4188 - 4212' Limestone - Medium to light mottled brown, biomicrite, cryptocrystalline, dense, siliceous, oolitic, fossiliferous, carbonaceous, poor visible porosity, no fluorescence, no stain or cut, trace Chert - Milky white to gray, hard, crystalline

4212 - 4250' Shale - Dark to medium gray, black, graygreen, hard, subfissile, calcareous, carbonaceous, interbedded with Limestone - Mottled brown to gray, biomicrite, cryptocrystalline, hard, dense, siliceous, tight, no show

4250 - 4280' Limestone - Mottled brown to gray, micrite, cryptocrystalline, dense, siliceous, clean to argillaceous, fossiliferous, carbonaceous, tight, no show, occasionally interbedded with Shale - Dark gray to brown, hard, blocky, calcareous, trace Chert

4280 - 4300' Limestone - Medium brown to gray, micrite, finely crystalline, dense, hard, sandy, clean to argillaceous, tight, no show

4300 - 4316' Shale - Dark gray, black, hard, subfissile, carbonaceous, calcareous, occasionally interbedded with Limestone - As above

4316 - 4340' Limestone - medium brown to gray, mottled, micrite, cryptocrystalline, hard, dense, clean, fossiliferous, sandy, poor visible porosity, no show, trace Chert - Milky white

4340 - 4350' Shale - Black, dark gray, firm, subfissile to blocky, calcareous, carbonaceous, silty

4350 - 4376' Limestone - Light to medium brown biomicrite, cryptocrystalline, hard, dense, clean, carbonaceous in part, poor visible porosity, no fluorescence, no stain or cut

4376 - 4390' Shale - Black, dark gray, firm, subfissile, carbonaceous, calcareous, silty

Stark Shale 4392'

4390 - 4416' Limestone - Medium to light brown to gray, finely crystalline, dense, clean to argillaceous, fossiliferous, carbonaceous in part, poor visible porosity, no show, interbedded with Shale - Gray to brown, medium redbrown, subfissile to blocky, calcareous, silty, trace Chert

4416 - 4444' Limestone - Mottled brown, biomicrite, cryptocrystalline, dense, clean to argillaceous, carbonaceous in part, poor visible porosity, no fluorescence, no stain or cut, occasionally interbedded with Shale - As above

4444 - 4466' Limestone - Light brown, buff, oobiomicrite, microcrystalline, microsugrosic, subchalky in part, clean, very oolitic with excellent oomoldic porosity, trace intercrystalline porosity, no fluorescence, no stain or cut

4466 - 4480' Limestone - Mottled brown to gray, oomicrite, cryptocrystalline, hard, dense, siliceous, tight, no show

4480 - 4492' Shale - Brown to gray, black, hard, blocky, calcareous, fossiliferous, carbonaceous

4492 - 4517' Limestone - Medium mottled brown to gray, biomicrite, cryptocrystalline, dense, clean, tight to occasional trace moldic porosity, no fluorescence, no stain or cut, trace Chert - milky white

Marmaton 4511'

4517 - 4530' Shale - Dark gray to black, hard, blocky, calcareous, silty

4530 - 4566' Limestone - Medium to light mottled brown, gray, biomicrite, finely crystalline, dense, subchalky, clean to argillaceous, silty, fossiliferous, oolitic, poor visible porosity, no show, occasionally interbedded with Shale - As above

4566 - 4606' limestone - Light to medium mottled brown, white, oomicrite, microcrystalline, subchalky, dense to trace intercrystalline porosity, argillaceous to clean, carbonaceous, very oolitic with occasional trace oomoldic porosity, no fluorescence, no stain or cut, interbedded with Shale - Dark gray, black, subfissile to blocky, firm, carbonaceous, calcareous

4606 - 4655' Limestone - Mottled brown to gray, oobiomicrite, cryptocrystalline, dense, subchalky in part, clean to argillaceous, very oolitic and fossiliferous, carbonaceous, tight to trace moldic porosity, no show, interbedded with Shale - Dark gray, black, blocky, hard, calcareous, carbonaceous, silty

Cherokee 4658'

4655 - 4674' Shale - Black, fissile, carbonaceous, calcareous, silty

4674 - 4690' Limestone - Mottled brown to gray, oomicrite, cryptocrystalline, hard, dense, very oolitic, carbonaceous, sandy in part, tight, no show, with trace Chert - Dark brown, black

4690 - 4710' Limestone - Medium to dark mottled brown, light brown, cryptocrystalline, hard, dense, fossiliferous, clean to argillaceous, tight, no show, interbedded with Shale - Black, fissile, firm, carbonaceous, trace Chert

4710 - 4730' Shale - Dark gray, black, hard, subfissile to blocky, calcareous, carbonaceous, silty, interbedded with Limestone - Medium to dark brown, cryptocrystalline, dense, siliceous, tight, no show, with trace Chert - Medium to dark brown, occasionally black, hard, crystalline

4730 - 4754' Limestone - Medium to dark brown to gray, occasionally black, micrite, cryptocrystalline, hard, dense, argillaceous to marly, fossiliferous in part, pyritic, carbonaceous, trace Chert nodules, no visible porosity, no fluorescence, no stain or cut, interbedded with Shale - Dark gray, black, hard, blocky, calcareous, carbonaceous, pyritic, trace Chert

4754 - 4784' Limestone - Medium to dark brown to gray, occasionally black, micrite, cryptocrystalline, dense, argillaceous to marly, fossiliferous, carbonaceous, pyritic,

tight, no show, interbedded with Shale - Blck, dark brown, gray, subfissile to blocky, carbonaceous, calcareous, silty

4784 - 4804' Shale - Dark gray, black, brown, hard, blocky, carbonaceous, calcerous, silty, fossiliferous, with Chert - Brown, black

Atoka 4828'

4804 - 4852' Shale - Black, dark brown to gray, hard, subfissile, carbonaceous, calcareous, silty, pyritic, interbedded with Limestone - Medium to dark brown to gray, micrite, cryptocrystalline, hard, dense, argillaceous to marly, silty, carbonaceous, pyritic, tight, no show

4852 - 4860' Shale - Dark gray, black, subfissile, firm, carbonaceous, calcerous, silty

4860 - 4890' Limestone - Dark brown, occasionally black, micrite, cryptocrystalline, hard, dense, argillaceous to marly, tight, no show, interbedded with Shale - as above

4890 - 4930' *Limestone - dark mottled brown to gray, occasionally black, micrite, cryptocrystalline, hard, dense, argillaceous to marly, fossiliferous, pyritic, trace dark mottle bluegreen hydrocarbon fluorescence(1% Spl), faint bleeding cut, no stain, interbedded with Shale - Black, firm, fissile, carbonaceous

4930 - 4975' Shale - Black, dark gray, hard, fissile to blocky, carbonaceous, calcaeous, interbedded with Limestone - as above, poor visible porosity, trace dark mottled bluegreen hydrocarbon fluorescence with faint cut, no stain

4975 - 5001' *Limestone - Dark mottled brown to gray, black, biomicrite, cryptocrystalline, hard, dense, argillaceous to marly, pyritic, fossiliferous, poor visible porosity, dark mottled bluegreen hydrocarbon fluorescence in 2% of the sampled, faint bleeding cut, no stain, occasionally interbedded with Shale - As above trace chert - Black, dark gray, hard, crystalline

Morrow 5002'

5001 - 5014' Shale - Black, firm, fissil, carbonaceous

5014 - 5045' Shale - Black, dark gray, hard, blocky to subfissile, calcareous, carbonaceous, fossiliferous, pyritic, trace Chert - Brown, gray, hard, crystalline

5045 - 5055' Limestone - Dark gray, black, biomicrite, cryptocrystalline, hard, dense, siliceous, marly, pyritic, fossiliferous, tight, no show, interbedded with Shale - As above, black, hard, blocky, pyritic, carbonaceous, trace Chert - Dark gray, black

5055 - 5075' Trace Siltstone to very fine Sandstone(1% Spl) - Medium to dark gray to graygreen, hard, dense, very fine upper, well sorted, subround grains, siliceous cement, pyritic, argillaceous, slightly glauconitic, tight, no show, with abundant Limestone - Dark mottled brown, black, hard, calcareous, carbonaceous, fossiliferous, marly, tight, no show, with Shale - Black, fissile

5075 - 5086' Shale - Black, dark gray to brown, hard, blocky, carbonaceous, calcareous, pyritic, fossiliferous, trace Sandstone(2% spl) - Dark graygreen, mottled green, hard, dense, very fine, well sorted grains, siliceous cement and clay cement, slightly glauconitic and calcareous, tight, no show, with Limestone - As above

5086 - 5098' Shale - Black, dark mottled gray to green, hard, subfissile to blocky, calcareous, carbonaceous, waxy, sandy in part

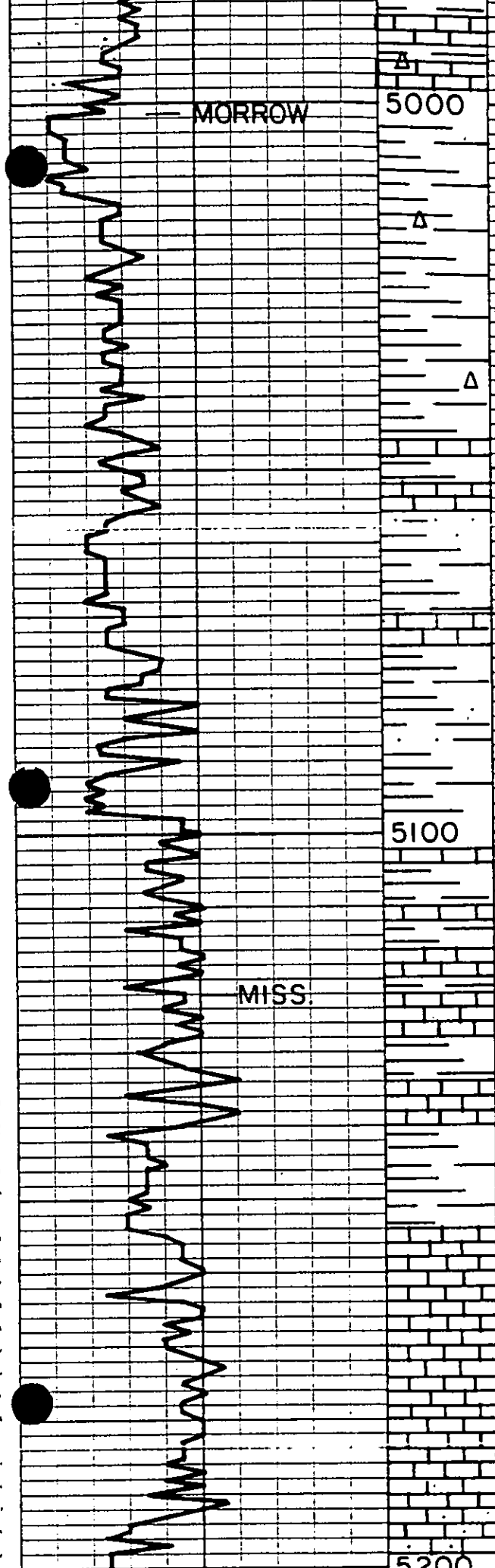
5098 - 5128' Limestone - Medium to dark mottled brown, occasionally black, biomicrite, finely crystalline, dense, clean to marly, pyritic, sandy, slightly glauconitic, poor visible porosity, no fluorescence, no stain or cut, occasionally interbedded with Shale - as above

5128 - 5155' Shale - Black, dark gray to graygreen, medium green, firm, subfissile to blocky, waxy, calcareous, carbonaceous, pyritic, fossiliferous, interbedded with Limestone - Mottled brown to gray, buff, occasionally graygreen, finely crystalline, dense, fossiliferous, pyritic, glauconitic, poor visible porosity, no show

Mississippi 5157'

5155 - 5192' Limestone - Mottled brown, drk brown, buff, biomicrite, microcrystalline to cryptocrystalline, dense, subchalky in part, clean to argillaceous, fossiliferous, sandy, poor visible porosity, mottled mineral fluorescence, no stain or cut

5192 - 5200'TD Limestone - Medium to light brown, speckled green, finely crystalline, dense, fossiliferous, very sandy with fine upper, well sorted, round grains, glauconitic, poor visible porosity, no fluorescence, no stain or cut



CUT NO STN OCC INTBD W/
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 TR CHRT - BLK GY GLR

 SH - BLK FRM FIS CARB

 SH - BLK DK GY TO BRN HD SPT
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 TR CHRT - BRN GY BLK HD XL

 LS - BK GY BLK BIOMICR GRPXL
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 NO SHOW INTBD W/
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 TR CHRT - DK GY BLK
 TR SLTST/VF SS - M/DK GYGN/G
 DNS VELL W SRTD SHRD GRS
 & CLAY CMT PYR GLAUC TI
 NO FLOR NO STN OR CUT
 ART LS - DK MOT BRN BLK HD
 CRPXL DNS ARG/MRLY CARB POS
 SH - BLK DK GY TO BRN HD BLK
 CARB CALC PYR FOSS
 TR SS (1% SPL) - DK GN GYGN MO
 DNS VF W SRTD GRS V SIL GLA
 NO VIS Ø NO FLOR STN OR CUT

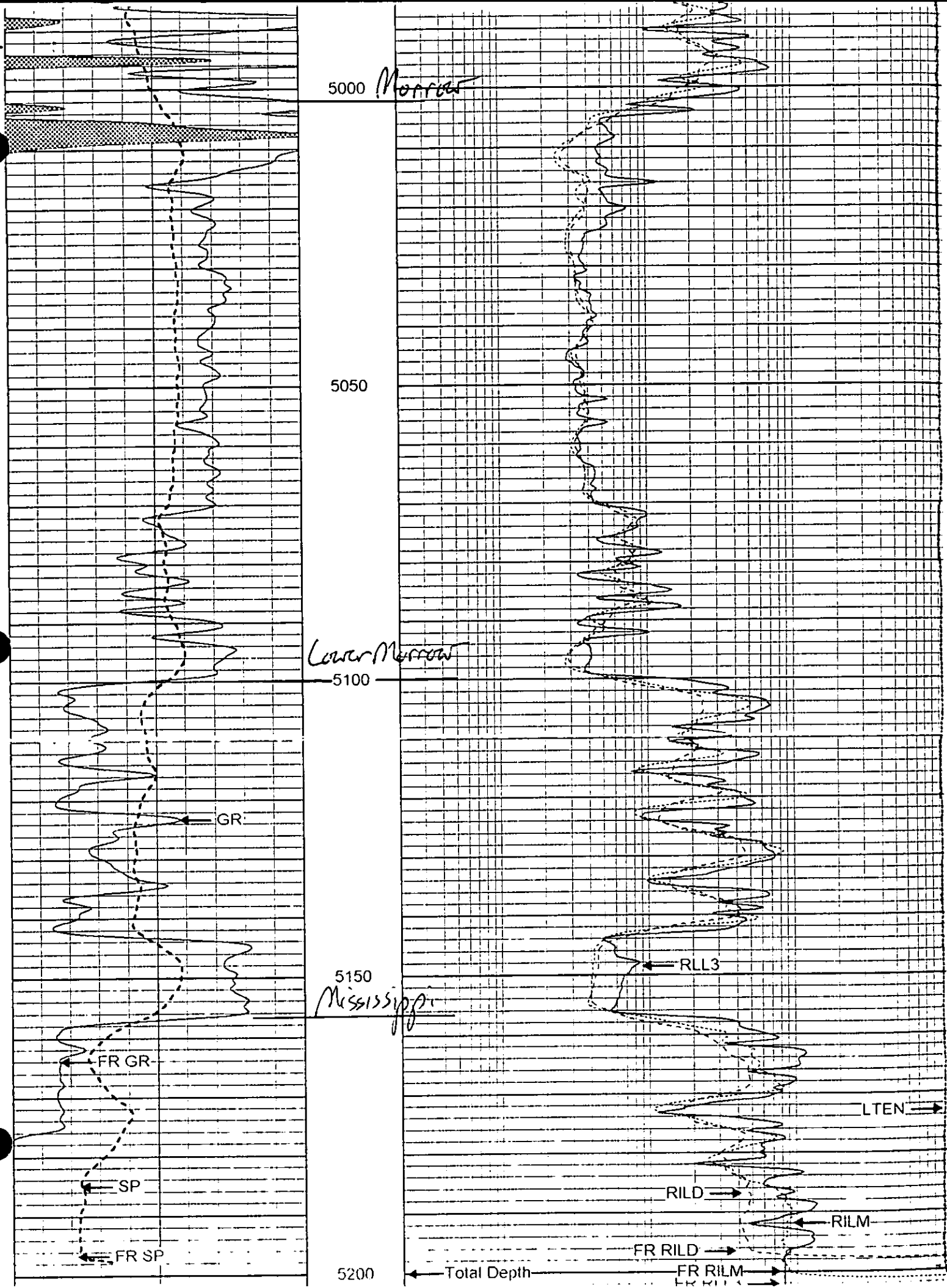
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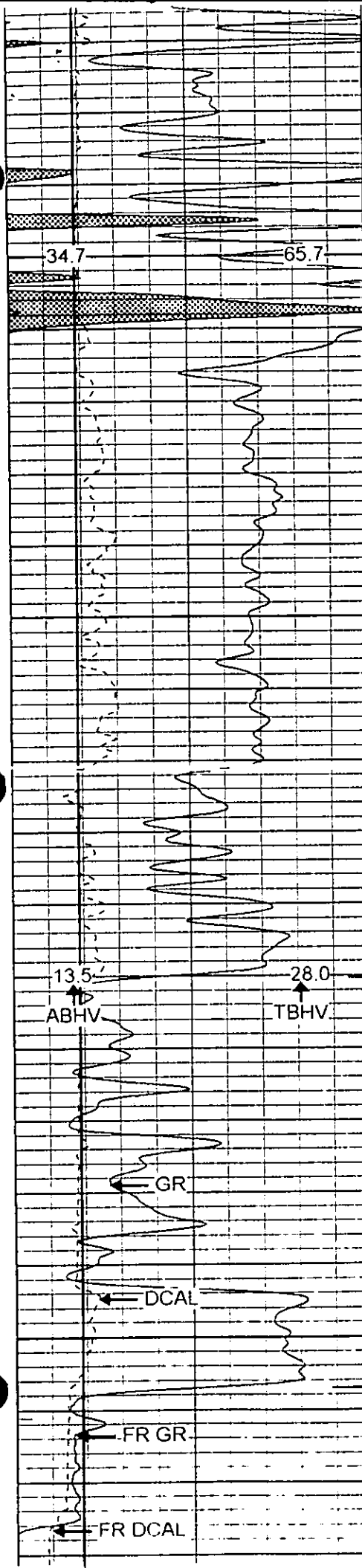
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 LS - MOT BRN DB BRN/BF BIGNLI
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 ARG FOSS SNDY P VIS Ø MIN
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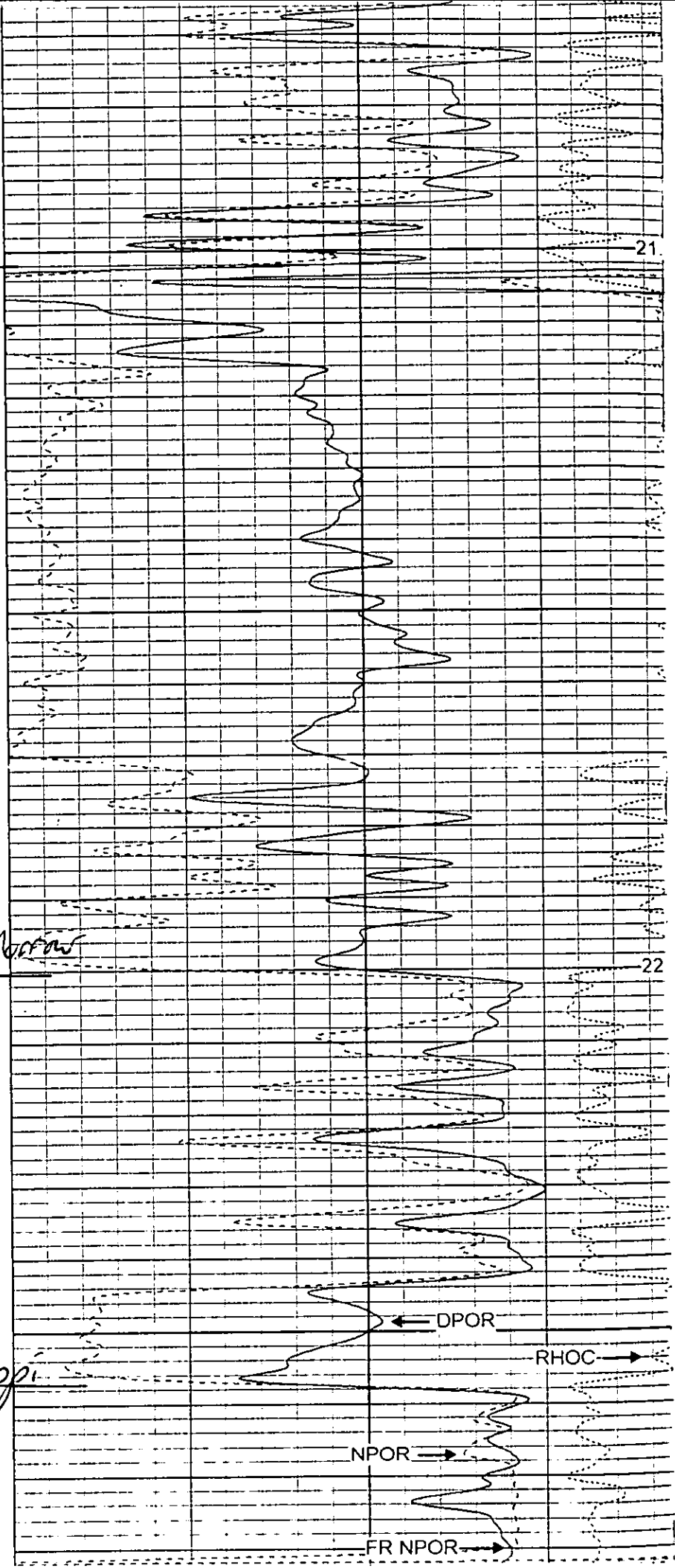
Morrow
5000

5050

Lower Morrow
5100

5150

Mississippi



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22