escopeta oil
Oil & Gas Development

KITCHEN LIGHTS UNIT
GEOLOGICAL CHARACTERISTICS
COOK INLET BASIN, ALASKA

The proposed "Kitchen Lights Unit" will be the largest unit in the Cook Inlet Basin with approximately ±83,394 acres (±130.308 square miles). The proposed unit is a consolidation of offshore acreage with similar geology, including acreage related to Northern Lights, Corsair, and the Kitchen Unit. The proposed unit contains three very similar, now combined, structural prospects which extend southwest of the giant North Cook Inlet Field along a >30 mile long anticlinal ridge. In addition to the proposed Kitchen Lights Unit anticline includes the Kitchen thrust fault prospect along the eastern flanks of the Middle Ground Shoal oil field, and the North MGS gas accumulation.

The Kitchen Lights Unit

All the prospects within the proposed Kitchen Lights Unit have similar geologic attributes including: stratigraphy, sedimentology, and structural deformation. The rocks within these prospects are nearly identical in age to the rocks making up reservoirs and seals in the nearby giant oil fields of the Cook Inlet basin. In addition the timing of the structural deformation and trap formation are also identical to timing in the fields of the Cook Inlet basin.

Stratigraphy & Sedimentology

The Cook Inlet basin contains over 25,000 ft of Tertiary sedimentary rocks ranging in age from early Paleocene to Pliocene. Most of the Tertiary has been assigned to the Kenai Group, which ranges in age from late Eocene to late Pliocene. Older Tertiary sedimentary rocks occur locally within the basin. The Kenai Group is subdivided into five formations and starting with the oldest is the West Foreland Fm, Hemlock Conglomerate, Tyonek Fm, Beluga Fm and the Sterling Fm. Within the proposed unit the reservoirs targets include oil in the Hemlock, W. Foreland, and lower Tyonek Fm; and gas from the upper Tyonek, Beluga, and Sterling Fm.

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Nearly all of the Tertiary aged sedimentary rocks within the basin were deposited in a non-marine setting. In particular the Tertiary rocks are fluvial and alluvial in origin with associated facies related to a variety of fluvial deposits.

The West Foreland Fm. is dominated by volcaniclastic sedimentary rocks. This is rather typical of the West Foreland formation throughout the Cook Inlet basin. Oil shows are related to the West Foreland Fm. in the five deep wells on the Kitchen Lights Unit – North Cook Inlet ridge.

The overlying Hemlock Conglomerate is composed of conglomerates and interbedded sandstones, siltstone and minor coal. The Hemlock Formation, a major oil-producing reservoir, represents large-scale alluvial fan deposition along the faulted western flanks of the basin. The Hemlock Formation has been penetrated in the five deep wells along the ridge and flowed oil on test in the ARCO N. Foreland St. #1 well. Oil shows are common in the other four penetrations. In addition the Hemlock is a target in the Kitchen thrust fault prospect.

The Tyonek is subdivided into the upper Tyonek and the lower Tyonek. Gas is produced from sands in the upper Tyonek and oil is produced from sands in the lower Tyonek. The Tyonek formation contains thick sequences of siltstone, mudstone, numerous coal beds, sandstones and conglomerates. The finer grained deposits represent flood basin-flood plain deposition related to fluvial deposition, especially in the central part of the basin. Some sandstones are related to a through flowing axial fluvial system. The sandstones and conglomerates were deposited as braided streams related to the development of large alluvial fans along the western flanks of the basin. Lower Tyonek fluvial reservoirs are oil productive in all the fields surrounding the proposed Kitchen Lights unit. In addition several wells (North Cook Inlet) on structure with the Kitchen Lights Unit flowed high gravity crude at high rates (>3,000 BOPD). The fluvial sands in the upper Tyonek in the proposed unit are considered as gas-bearing reservoir targets. The lower Tyonek sands are considered oil bearing. This is especially true in the vicinity of the SRS #1 Shell well.

The Beluga Formation overlies the Tyonek and is also deposited in a fluvial setting with numerous small interconnected channel sands with associated siltstone and mudstones related to flood basin – flood plain deposits. Numerous thin coal seams are also present in the Beluga Fm.

The Sterling Formation overlies the Beluga Fm and represents a shift in depositional facies. The Sterling Fm. is sand-rich being made up of numerous thick sandstones deposited as braided stream throughout most of the central basin. The Sterling and Beluga formations are the major gas-productive reservoirs in the basin. The gas is sourced from the numerous coal beds in the section.

The Kitchen Lights Unit Anticlinal Structure

A >30 mile long anticline trending northeast-southwest controls the North Cook Inlet field, and the Kitchen Lights Unit (formerly the Northern Lights prospect, the Corsair Unit and the Kitchen Unit). The North Cook Inlet Field lies on the north end of this trend, presently producing gas from the shallow Sterling and Beluga Formations with over 2 TCFG produced. Deeper in the field, in the lower Tyonek Formation, there are tested but undeveloped oil sands, the Sunfish Sands, and Channel Sands. If the Hemlock is included, there are over 100 MMBO yet to be produced. Numerous wells have tested over 1000 BOPD from these deeper sands in the field. Other wells further to the southwest such as the SRS #1, have tested similar age sands and recovered high quality oil. In addition, seismic studies over the Kitchen Lights anticline structure show similar amplitude characters "flat spots" to the shallow Sterling and Beluga Gas Sands producing at the North Cook Inlet Field. Additionally, "WEA" seismic studies show that the southern part of the Kitchen Lights Unit anticline contain Beluga amplitude anomalies that seem to be continuous with the seismic events in and around the SRS #1 well, when compared to North Cook Inlet.

This deep Tyonek trend was extensively studied by Arco in the 90's and was named the Sunfish Play. Arco drilled several deep wells, testing their concepts both under the North Cook Inlet Field and on trend in the proposed Kitchen Lights Unit. On the southern flanks of the North Cook Inlet Field, Arco's N. Foreland St-1, tested 2330 BOPD, 44° API, from one Tyonek zone (Tyonek Channel interval), 1270 BOPD, 42° API, from a second Tyonek zone (the Sunfish sand), and 560 BOPD, 39° API, from the Hemlock zone. These productive sands trend southwest through the Kitchen Lights Unit and are present but untested in the SRS #2 well 11 miles to the southwest.

Kitchen Lights Unit, Kitchen Lights Anticline - Sunfish Play

The Sunfish Play is the eastern extension of the oil productive reservoir in the Granite Point Field, four miles to the northwest of the Kitchen Lights Unit. At Granite Point, these reservoirs are thick alluvial fan braided stream deposits sourced from the southwest. Studies show individual sands to thicken, thin or pinch out along the flanks of the field. As these sands are traced southeast from Granite Point, these Sunfish Sands, thin, but clean up with better porosity. Sands map out as lobes of varying thickness to the southeast. At Granite Point, these sands account for over 99% of the +150 MMBO produced. The oil is over 40° API and is similar to what has been tested in the Sunfish Play from North Cook Inlet thru Kitchen Lights to the SRS#1 and SRS#2 well to the south. Geological studies show both the Granite Point trend and the Kitchen Lights Unit were formed structurally and oil emplaced at approximately the same time. The Granite Point Structure is approximately 5 miles long and ±3 miles wide. The Kitchen Lights Unit anticline, containing the same productive sands is 20 miles long and ±3 miles wide.

The Sunfish Play is trapped both structurally and stratigraphically. Within the North Cook Inlet Field, the sands extend from the west across the structure and are trapped by a large thrust fault on the east side of the field. Within the Northern Kitchen Lights area, the sands from the west cross over the structural ridge, thin and pinch out to the east. Similarly, within the proposed Kitchen Lights Unit, the Granite Point reservoir sands are cut and trapped by a major thrust fault on the west and then pinch out to the east, thus trapping oil. (See enclosed Structure Maps)

Within the Kitchen Lights Unit anticline, Sterling and Beluga gas is expected to produce at rates similar to what is produced in the North Cook Inlet. Evidence of gas in the Kitchen Lights Unit can be seen on the seismic as "flat spots" and "WEA Bright Events" as well as a gas chimney. Oil was tested in the Tyonek and had shows in the Hemlock, similar to what is found in the Granite Point Field and North Cook Inlet Field. Additionally, to the southwest in the Kitchen thrust fault prospect, a large fault trap, with a 1,000' thick section of lower Tyonek, and Hemlock is mapped along the eastern flanks of the Middle Ground Shoal oil field and the N. Middle Ground Shoal gas accumulation. Also based on stacked "WEA and High Resolution Bright Spots" fluvial channels with gas similar to these produced in the Lower Tyonek at Kenai Gas Field (2 TCF) should be prospective. Oil is present in the lower sections of the Tyonek and Hemlock.

Reserves

The Kitchen Lights Unit anticline oil and gas reserves are based on standard practices in the petroleum industry. The estimation of oil reserves is based on a series of in-house seismic structure maps of the key hydrocarbon-bearing horizons, as well as petrophysical analysis by Gaffney Cline and Associates and Wm. Cobb and Associates, of all 17 deep exploration wells that have been drilled on the structural ridge encompassing the North Cook Inlet structure, the Kitchen Lights Unit anticline structure, formerly the Northern Lights Unit, the Corsair Unit and the Kitchen Unit. (See enclosed Structural Cross-Section, Sandfish Sands) Recovery factors for Tyonek-Deep Sunfish Sands (98 BO/Ac Ft), Tyonek-Deep Channel Sands (96 BO/Ac Ft), and the Hemlock Formation (25 BO/Ac Ft). The most likely, P5O case was used for reserve estimates.

The application of these same petrophysical factors were applied to all wells on the structural ridge, including all wells to the south of the North Cook Inlet Field. The reserves reported here are based on our revised integrated structure maps and resulting net pay maps included herein south of North Cook Inlet that now cover the entire Kitchen Lights Unit.

Tyonek Sands – Kitchen Lights Oil Reserves Recoverable

Sunfish	136.2 MMBO
Channel	219.4 MMBO
Total	374.4 MMBO

Additional Tyonek Oil Potential

The Shell SRS-St-2 shows an increase of oil sands in the Sunfish section to the south. In addition this well has over 200' of oil sands in the "C" section, just above the Sunfish. Shell recognized the potential in this and deeper sands and set casing to T.D. in 1965 but did not test this well. All third party independent petrophysical reports recognized these oil sands in the Shell SRS St. #2 (See Core Lab Report). They appear to be stratigraphically equivalent to the "C" sands in the North Cook Inlet Field. Several wells have tested oil and gas from the "C" sands in the North Cook Inlet Field like the Shell NCI St #1 which tested 2,270 BOPD, 53° API, and

842 MCFGPD; and the Pan Am Cook Inlet St 17589 #1-A, which tested 661 BOPD, 56° API, and 4.7 MMCFGPD. These sands should test similarly offsetting the SRS #2 well on the southern end of the Kitchen Lights Unit.

Reserve potential of the "C" sands at the southern end of Kitchen Lights even with the higher gravity, using a recovery factor of 128 BO/Ac Ft, there could be an additional 70 MMBO reserves in the "C" sand alone.

Gas

The Kitchen anticline portions of the Kitchen Lights Unit contains several seismic events that indicate large gas potential; very similar to what is seen, shallow, in the North Cook Inlet Field. Seismic "flat spots" are noted; WEA "bright events" occur on many lines; and the presence of a gas chimney is mapped in this area. Mapping on and around the SRS #1 well has resulting in ±2500 acres, and 200' of net pay (50% of what's at North Cook Inlet) there could be possibly 500,000 Ac/Ft in the Sterling, and Beluga, using a recovery factor of 1 MMCFG/Ac Ft), would give reserves over 500 BCF of gas, in the central part of Kitchen Lights anticline from Sterling and Beluga alone. Additional gas reserves could be present in the Sterling, Beluga, and Upper Tyonek as well along the Kitchen Lights anticline (see attached seismic line comparisons.)

Lower Tyonek Gas

Interpretation the deeper WEA seismic "bright events" in the lower Tyonek marked the existence of buried channels in a large basin-center fluvial system in the southern area of Kitchen Lights anticline. These deposits were studied and mapped extensively. Some of these channels are stacked and make excellent multiple drilling targets in this area of the Kitchen Lights Unit. These channels are productive in the Lower Tyonek of the Kenai Gas Field with flow rates of 20 MMCFGPD. Possible gas reserves from these sands alone could range from 1-2 TCFG in the channels by themselves on the Kitchen Lights Unit anticline.

Possible Reserve Summary

The proposed Kitchen Lights Unit anticline project has a possible a reserve potential of 444 MMBO and 1.5-2.5 TCFG. The initial wells to be drilled on the

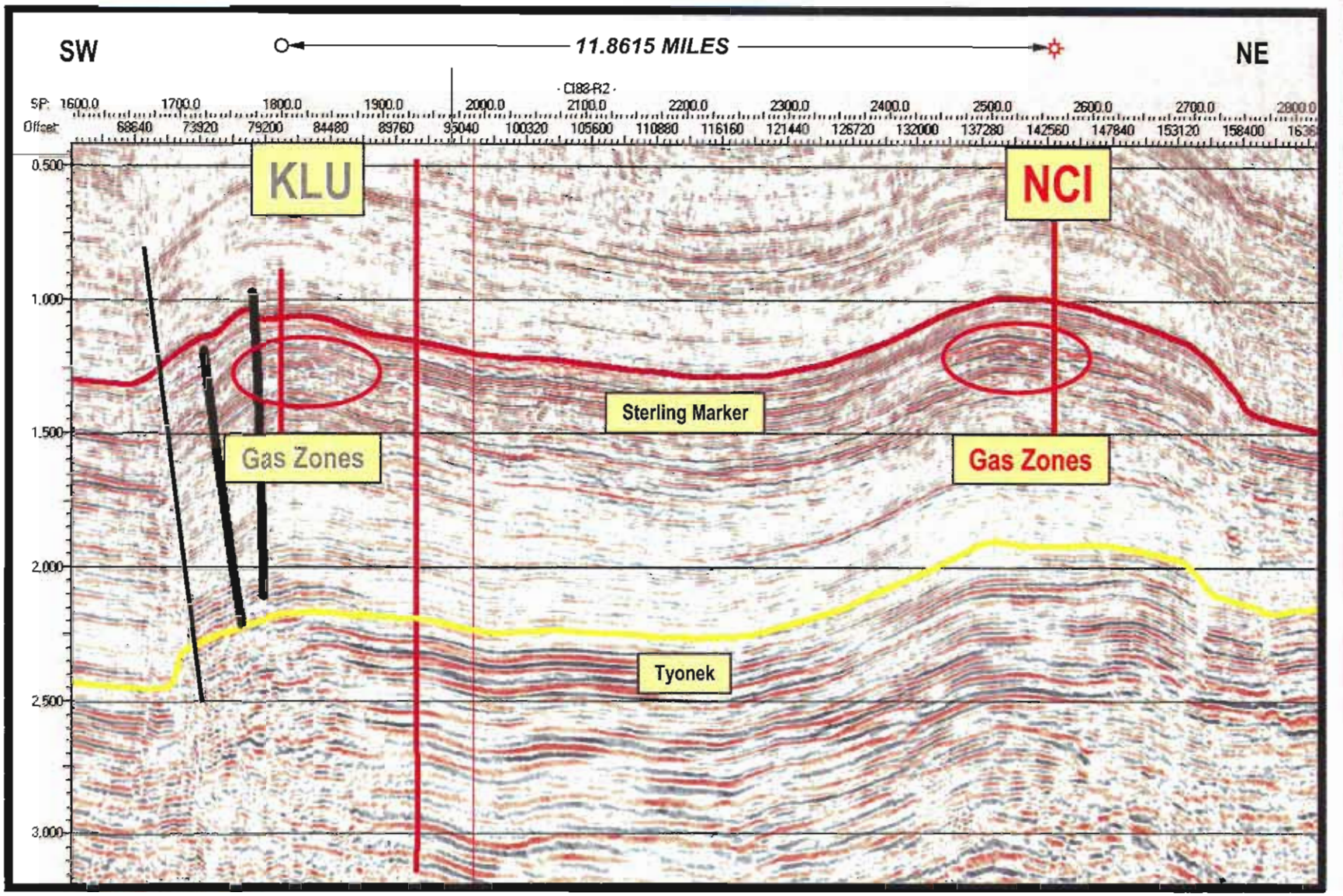
Kitchen Lights Unit anticline will be offset wells drilled and tested but not developed in the mid 1960's.

Enclosures:

Maps-Kitchen Lights Unit

1.) Structure Top Hemlock
2.) Net Pay Isopach Hemlock
3.) Structure Top Sunfish Sand
4.) Net Pay Isopach Sunfish Sand
5.) Structure Near Top Tyonek
6.) Net Pay Isopach
7.) Structural Well Cross Section
    Tyonek Pay Sands
    North Cook Inlet – Kitchen Lights Unit
8.) NuTech Advanced Petrophysical Analysis
    1. Arco North Foreland #1
    2. Arco SCI State #2
    3. Shell SRS State #1
    4. Arco SCI State #3
9.) Core Lab Petrophysical Analysis
    1. Shell SRS #2

Kitchen Lights Unit & NCI Gas Field

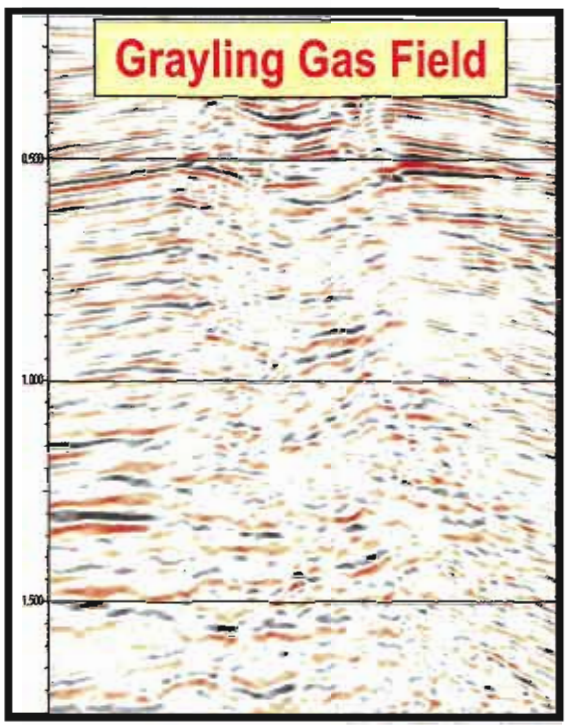


Kitchen Lights Prospect

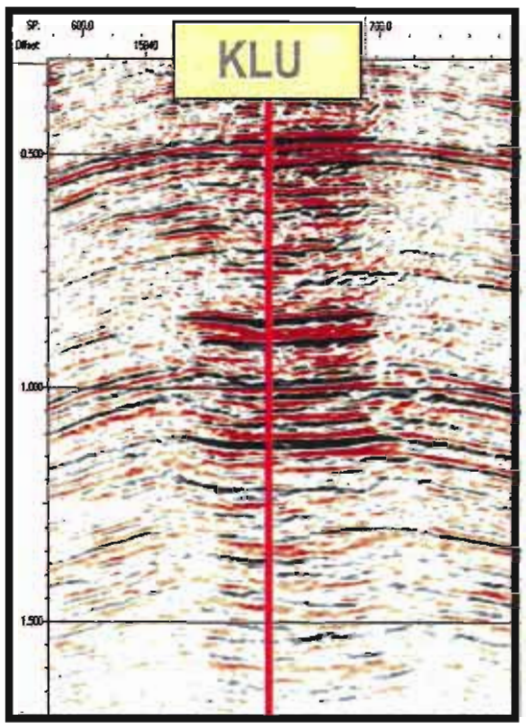
SW

Analogous Seismic Anomaly

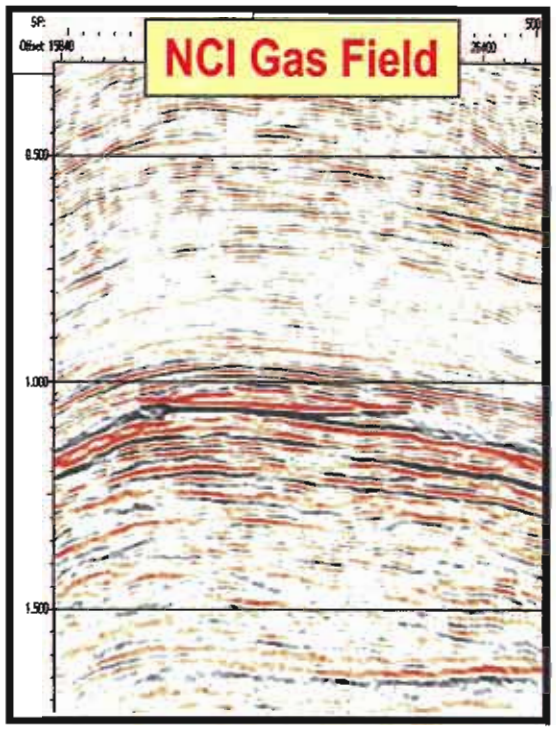
NE



1200 Acres
375' Pay
Porosity - 25%
997 BCF
~52 BCF/Well

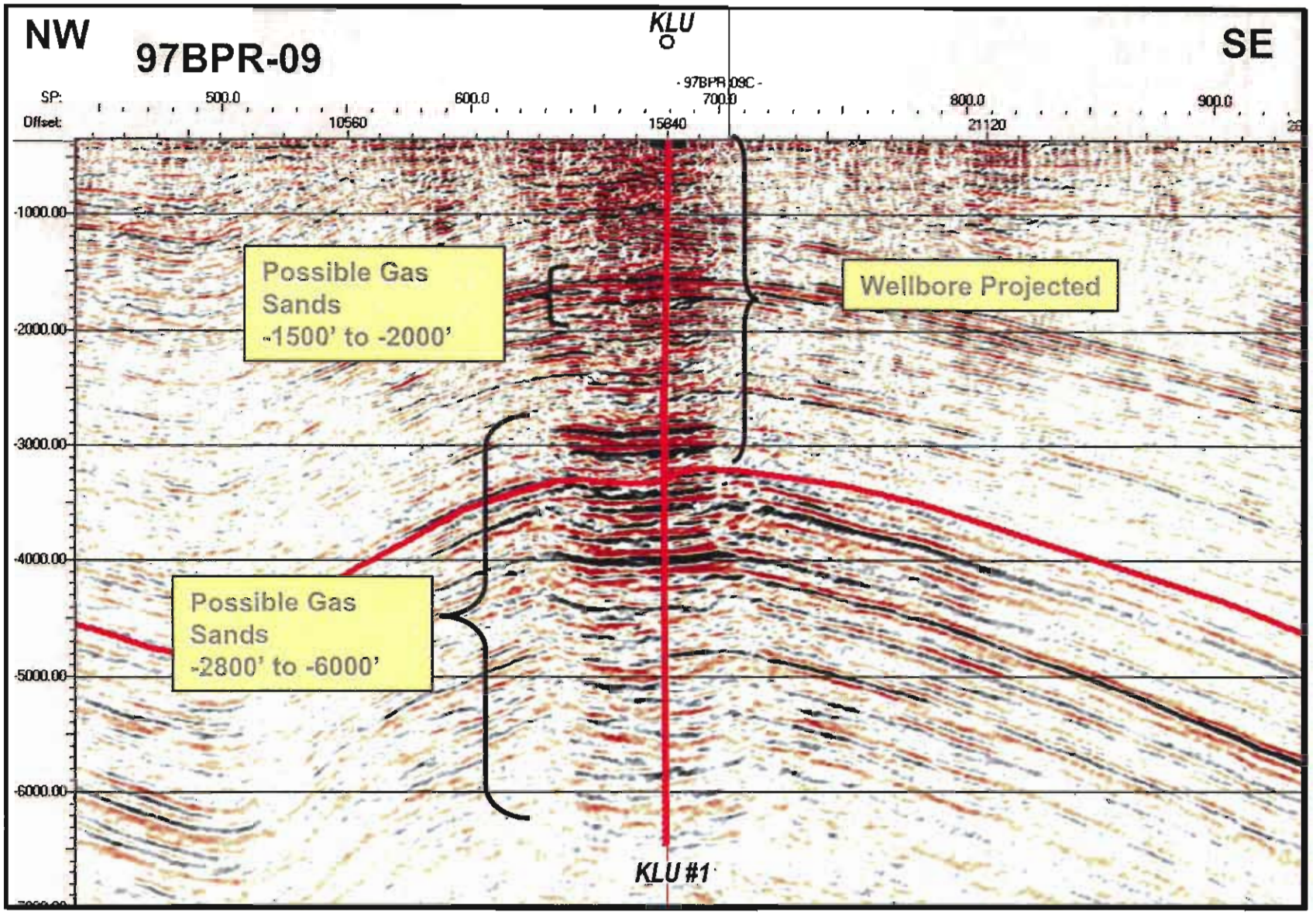


2,500 Acres
200' Pay
Porosity - 30%
500 BCF
~62 BCF/Well

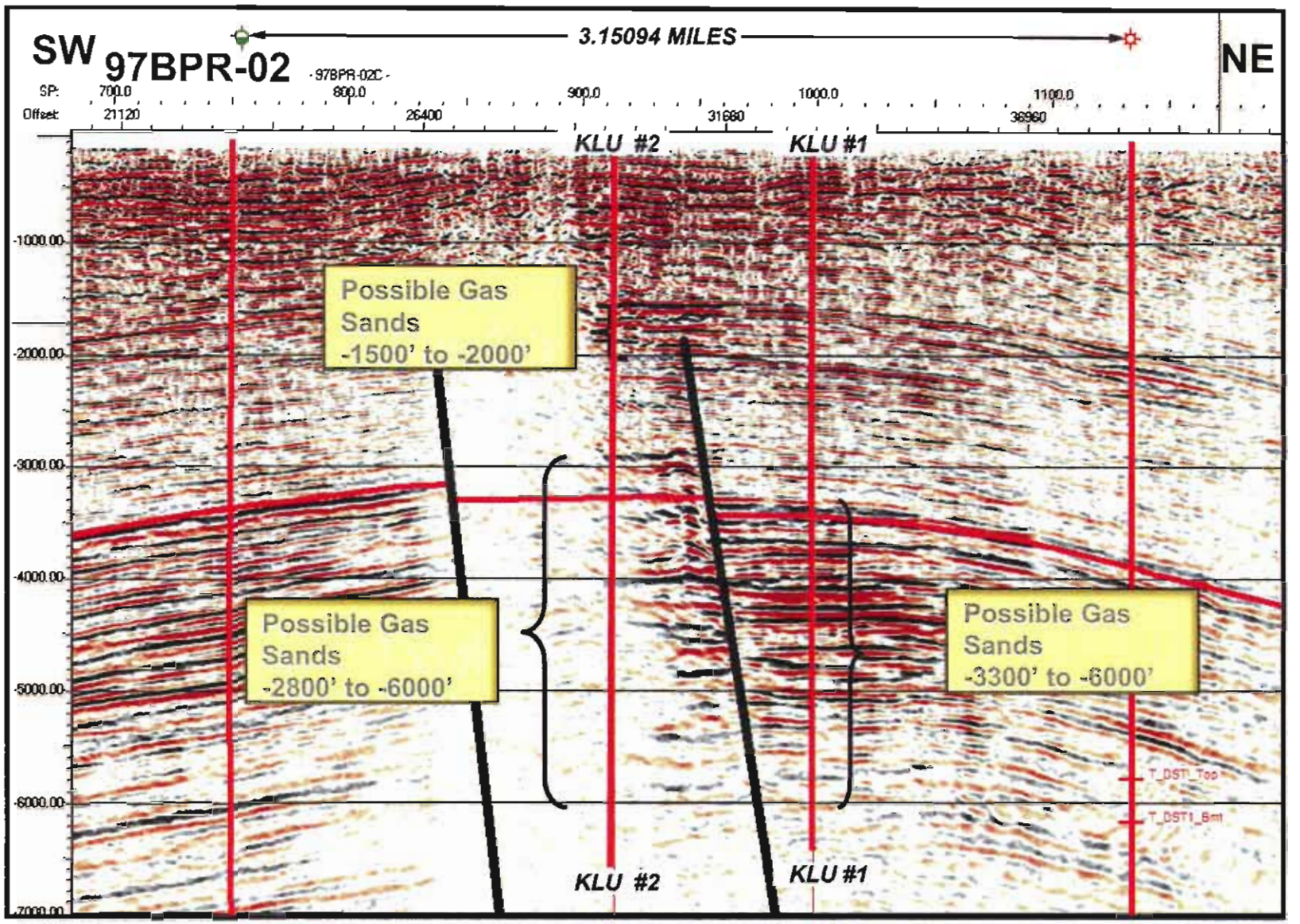


7360 Acres
470' Pay
Porosity - 33%
1730 BCF
~108 BCF/Well

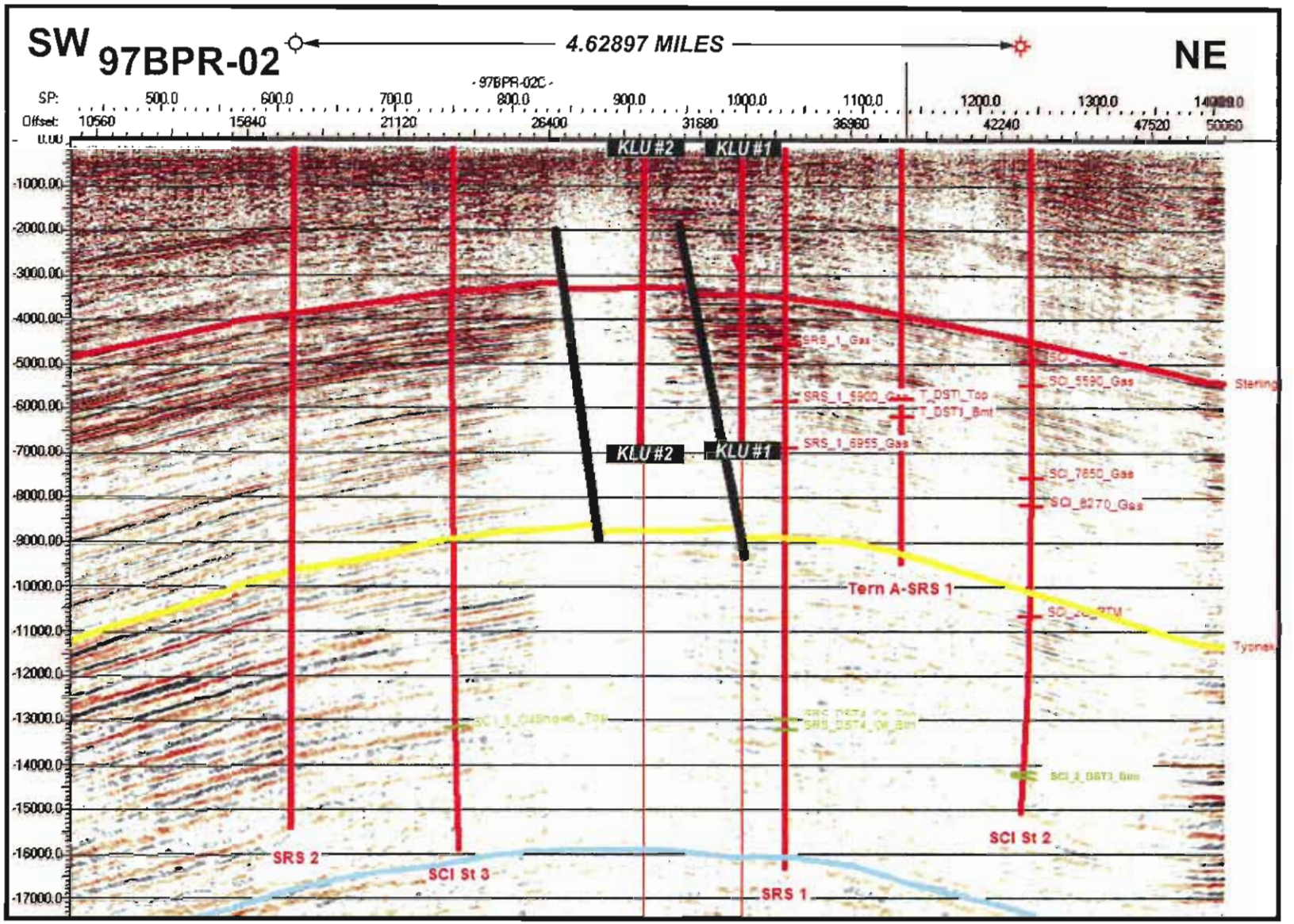
Kitchen Lights Unit -Seismic Line 97BPR-09

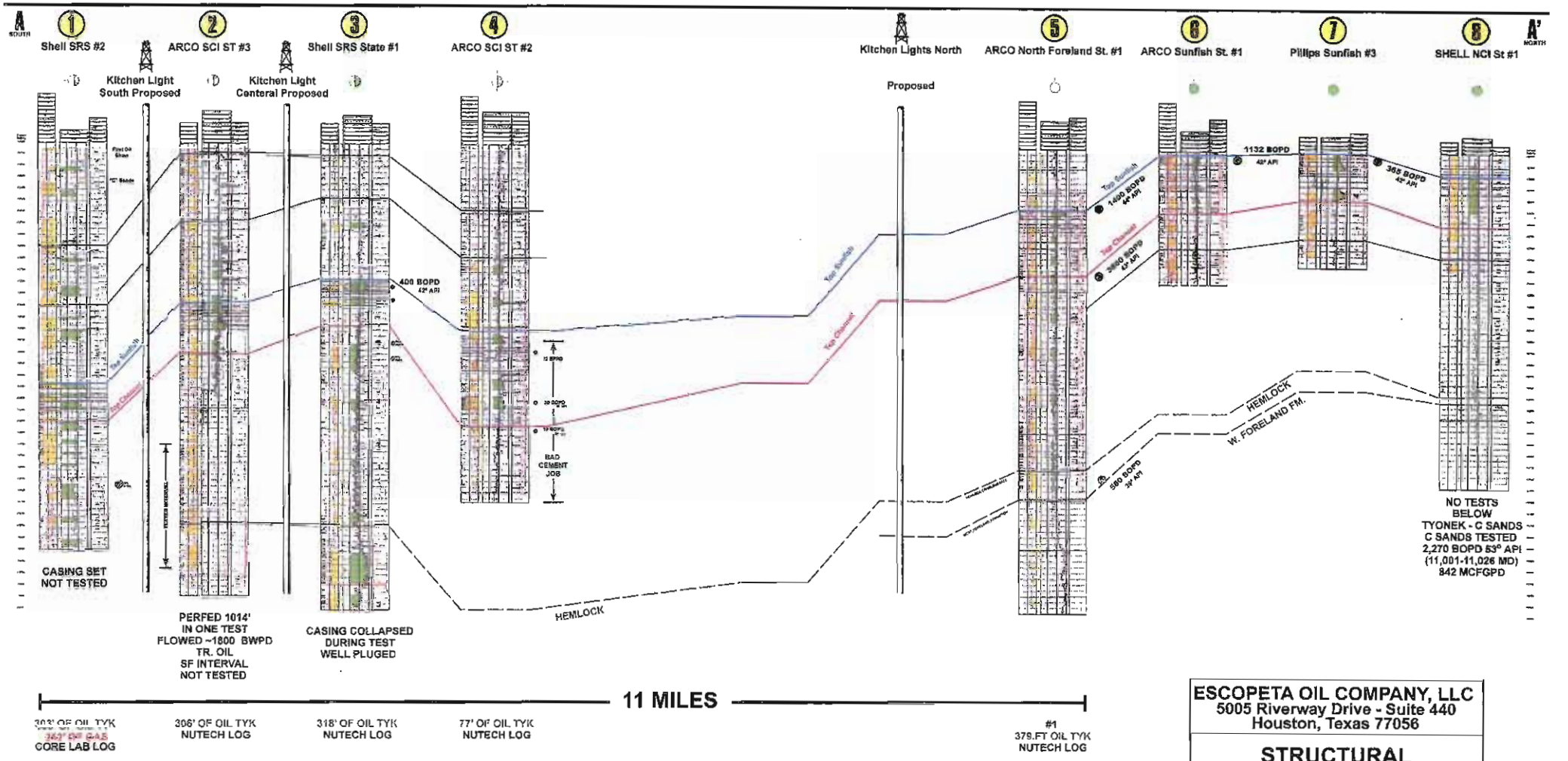


Kitchen Lights Unit -Seismic Line 97BPR-02



Kitchen Lights Unit -Seismic Line 97BPR-02





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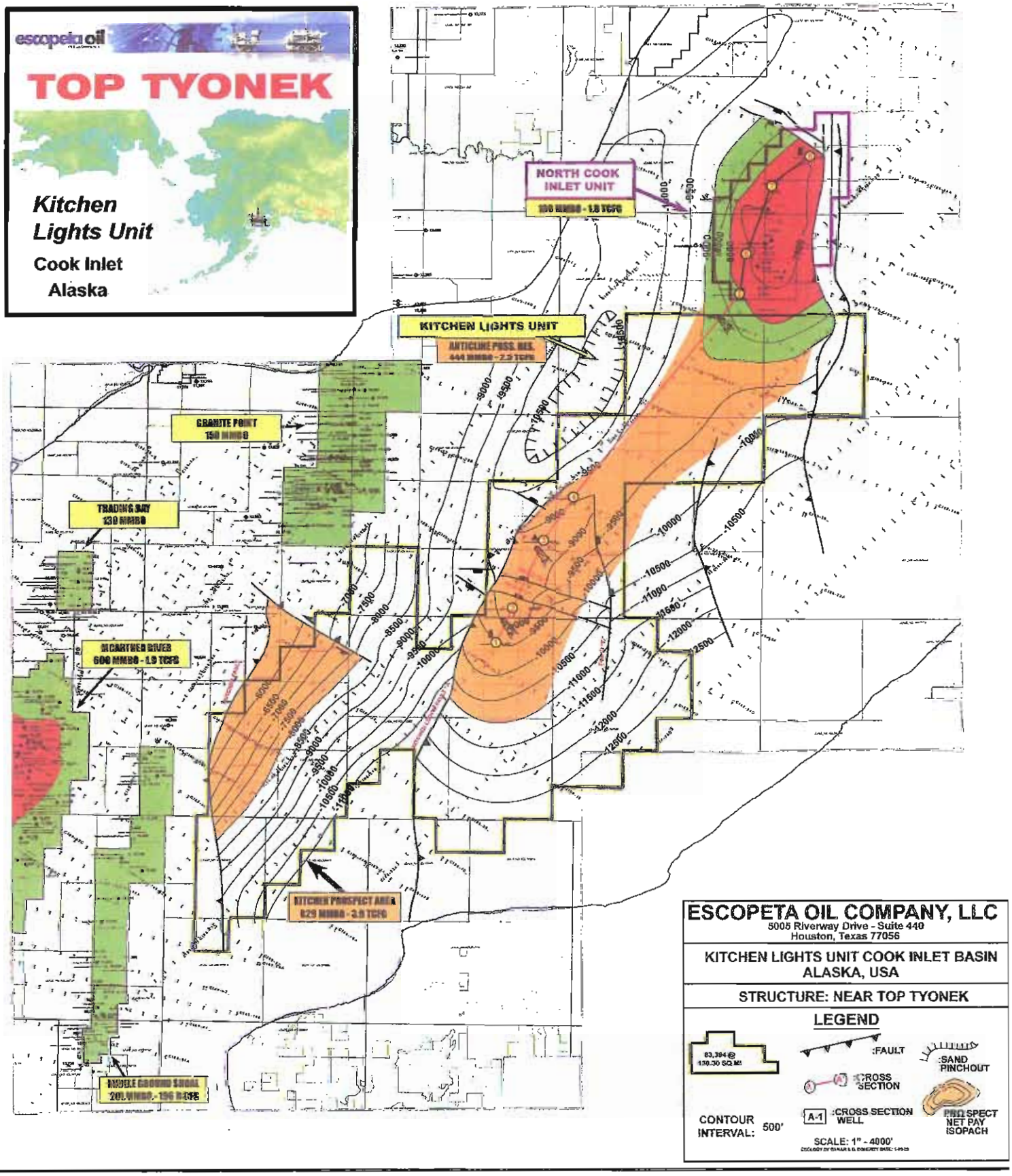
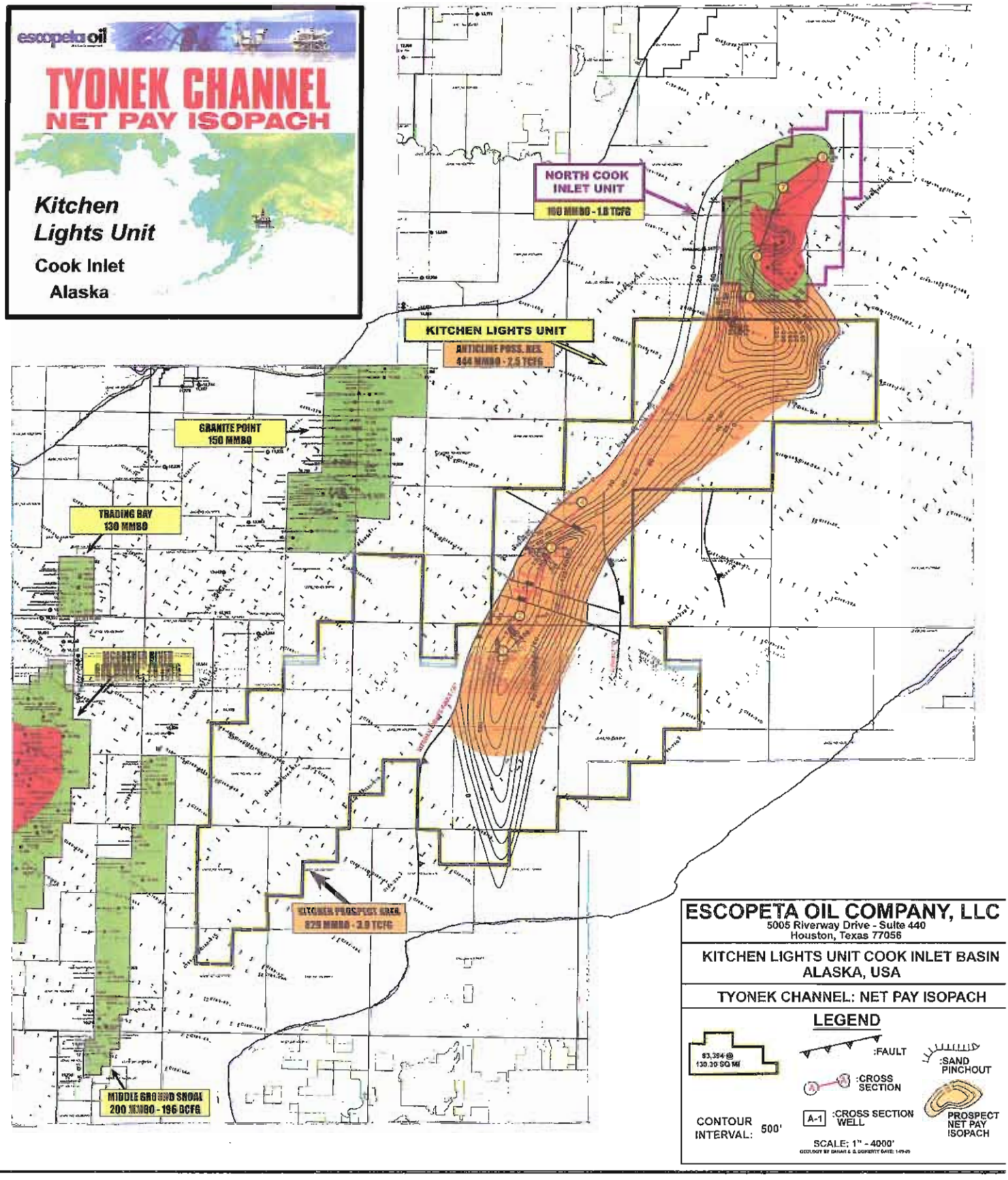
STRUCTURAL WELL CROSS SECTION DEEP TYONEK/HEMLOCK

BANAR/DOHERTY


escopeta oil
TOP TYONEK
Kitchen Lights Unit
Cook Inlet
Alaska
NORTH COOK INLET UNIT
150 MMBO - 1.8 TCFG
KITCHEN LIGHTS UNIT
ANTICLINE PROS. AREA
444 MMBO - 2.9 TCFG
GRANITE POINT
150 MMBO
TRADING BAY
130 MMBO
MCARTHUR RIVER
600 MMBO - 1.9 TCFG
KITCHEN PROSPECT AREA
629 MMBO - 3.9 TCFG
MIDDLE GROUND SHOAL
200 MMBO - 196 BCFG
ESCOPETA OIL COMPANY, LLC
5005 Riverway Drive - Suite 440
Houston, Texas 77056
KITCHEN LIGHTS UNIT COOK INLET BASIN
ALASKA, USA
STRUCTURE: NEAR TOP TYONEK
LEGEND
83,394 @
130.30 SQ MI
:FAULT
:SAND PINCHOUT
:CROSS SECTION
A-1 :CROSS SECTION WELL
PROSPECT NET PAY ISOPACH
CONTOUR INTERVAL: 500'
SCALE: 1" - 4000'


escopeta oil
TYONEK CHANNEL
NET PAY ISOPACH
Kitchen
Lights Unit
Cook Inlet
Alaska
NORTH COOK
INLET UNIT
160 MMBO - 1.8 TCFG
KITCHEN LIGHTS UNIT
ANTICLINE POSS. RES.
444 MMBO - 2.5 TCFG
GRANITE POINT
150 MMBO
TRADING BAY
130 MMBO
KITCHEN PROSPECT AREA
829 MMBO - 3.9 TCFG
MIDDLE GROUND SHOAL
200 MMBO - 196 BCFG
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KITCHEN LIGHTS UNIT COOK INLET BASIN
ALASKA, USA
TYONEK CHANNEL: NET PAY ISOPACH
LEGEND
$3,394 @
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PINCHOUT
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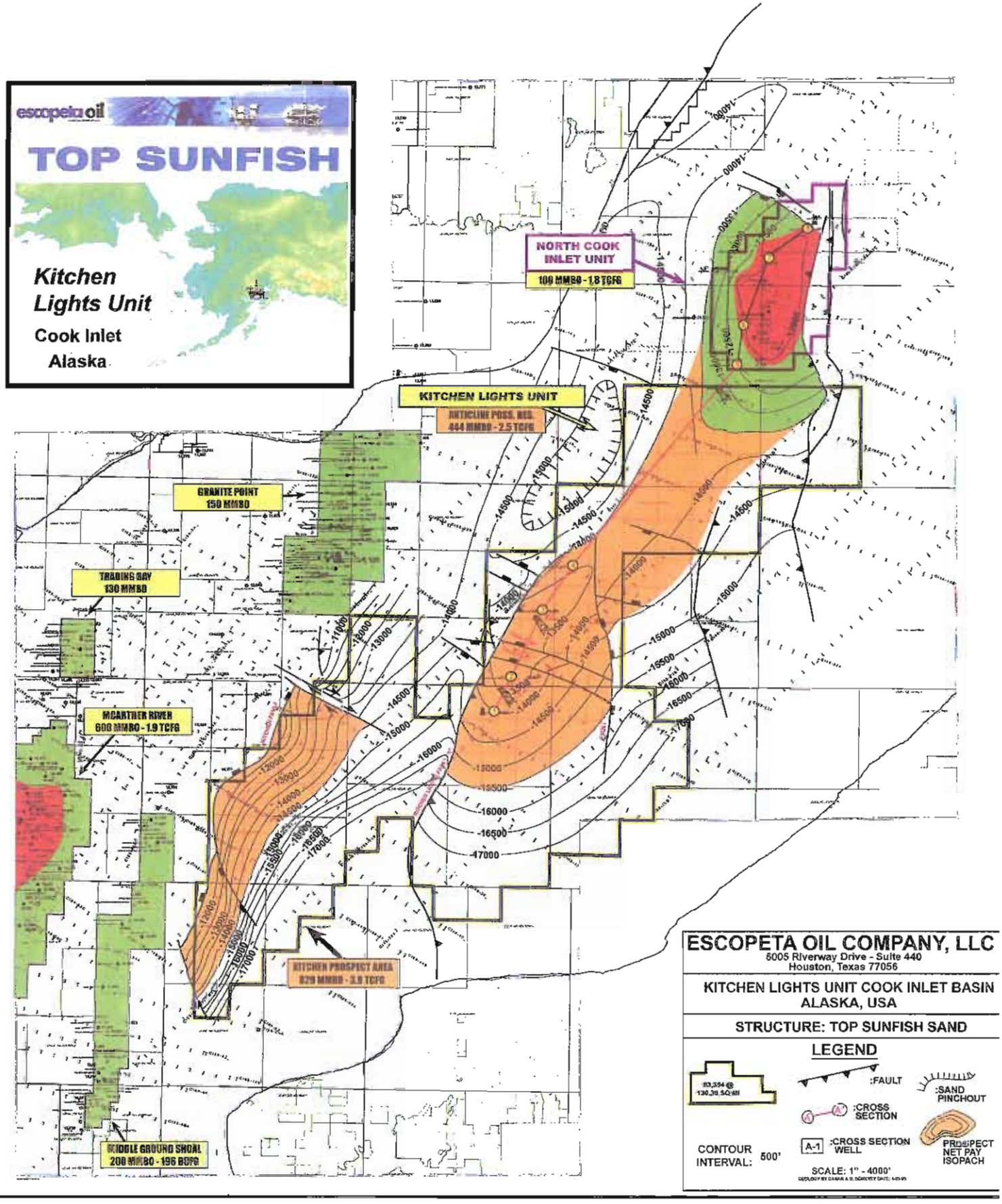
SCALE: 1" - 4000'


escopeta oil
TOP SUNFISH
Kitchen
Lights Unit
Cook Inlet
Alaska
NORTH COOK INLET UNIT
109 MMBO - 1.8 TCFG
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ANTICLINE POSS. RES.
444 MMBO - 2.5 TCFG
GRANITE POINT
150 MMBO
TRADING BAY
130 MMBO
MCARTHER RIVER
608 MMBO - 1.9 TCFG
KITCHEN PROSPECT AREA
829 MMBO - 3.8 TCFG
MIDDLE GROUND SHOAL
208 MMBO - 196 BCFG
ESCOPETA OIL COMPANY, LLC
5005 Riverway Drive - Suite 440
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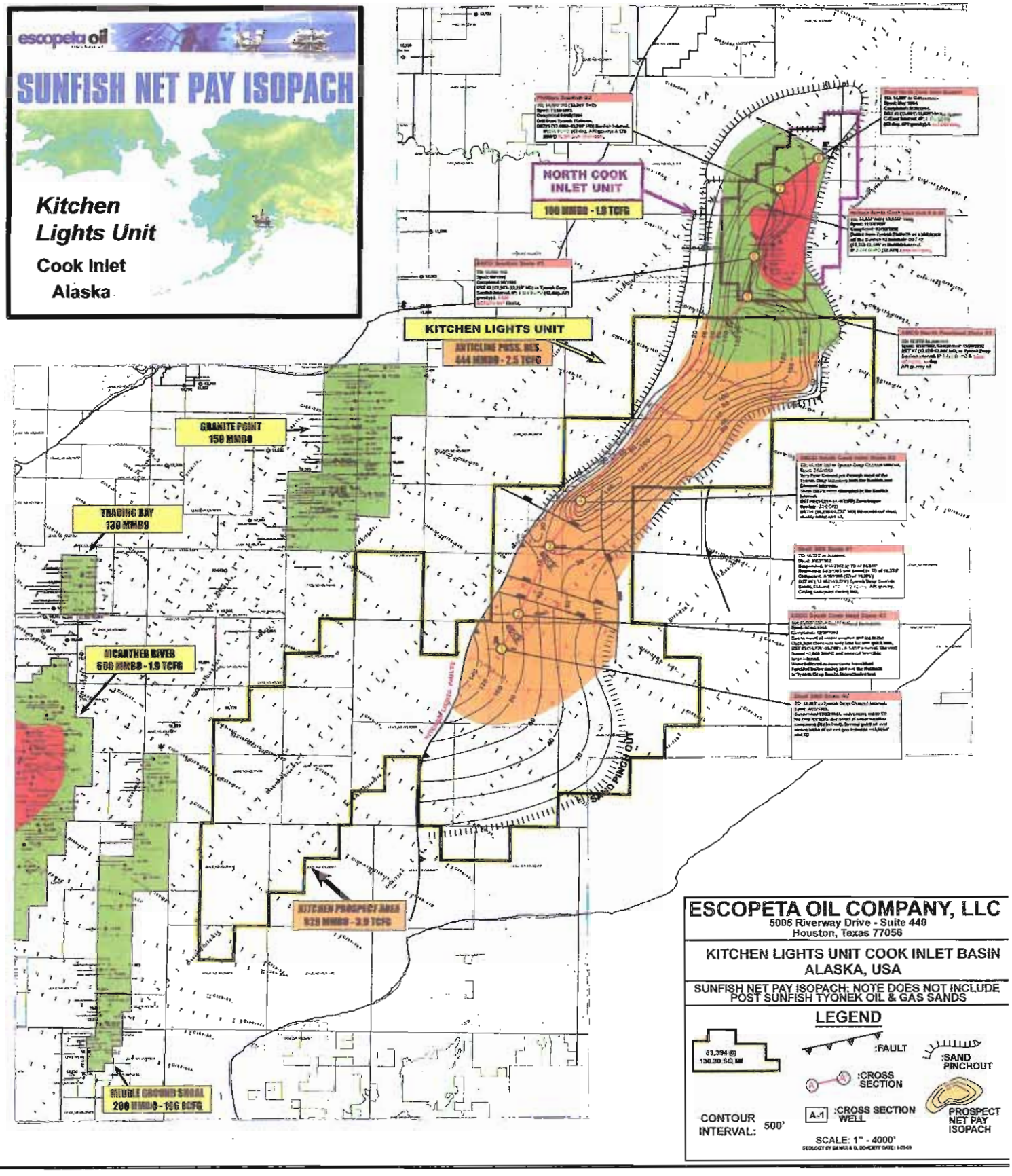
KITCHEN LIGHTS UNIT COOK INLET BASIN
ALASKA, USA
STRUCTURE: TOP SUNFISH SAND
LEGEND
:FAULT
:SAND PINCHOUT
:CROSS SECTION
:CROSS SECTION WELL
PROSPECT NET PAY ISOPACH
CONTOUR INTERVAL: 500'
SCALE: 1" - 4000'


escopeta oil
SUNFISH NET PAY ISOPACH
Kitchen
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100 MMBO - 1.0 TCFG
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SAND PINCH OUT
ESCOPETA OIL COMPANY, LLC
5005 Riverway Drive - Suite 440
Houston, Texas 77056
KITCHEN LIGHTS UNIT COOK INLET BASIN
ALASKA, USA
SUNFISH NET PAY ISOPACH: NOTE DOES NOT INCLUDE
POST SUNFISH TYONEK OIL & GAS SANDS
LEGEND
83,394 @
130.30 SQ MI
:FAULT
:SAND
PINCHOUT
:CROSS
SECTION
A-1
:CROSS SECTION
WELL
PROSPECT
NET PAY
ISOPACH
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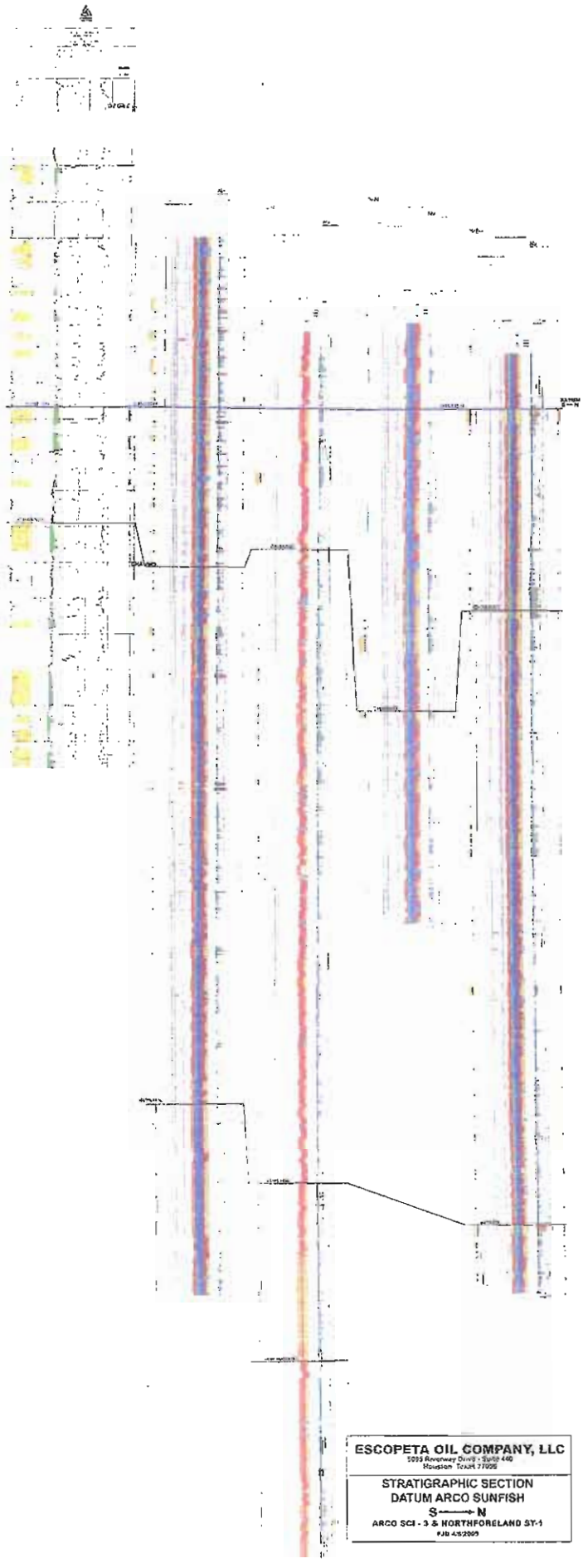
INTERVAL:
500'
SCALE: 1" - 4000'



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STRATIGRAPHIC SECTION
DATUM ARCO SUNFISH
S ⟶ N
ARCO SCI - 3 & NORTHFORELAND SY-1
FEB 4/5/2009

KITCHEN THRUST FAULT PROSPECT – SOUTHWEST KITCHEN LIGHTS UNIT

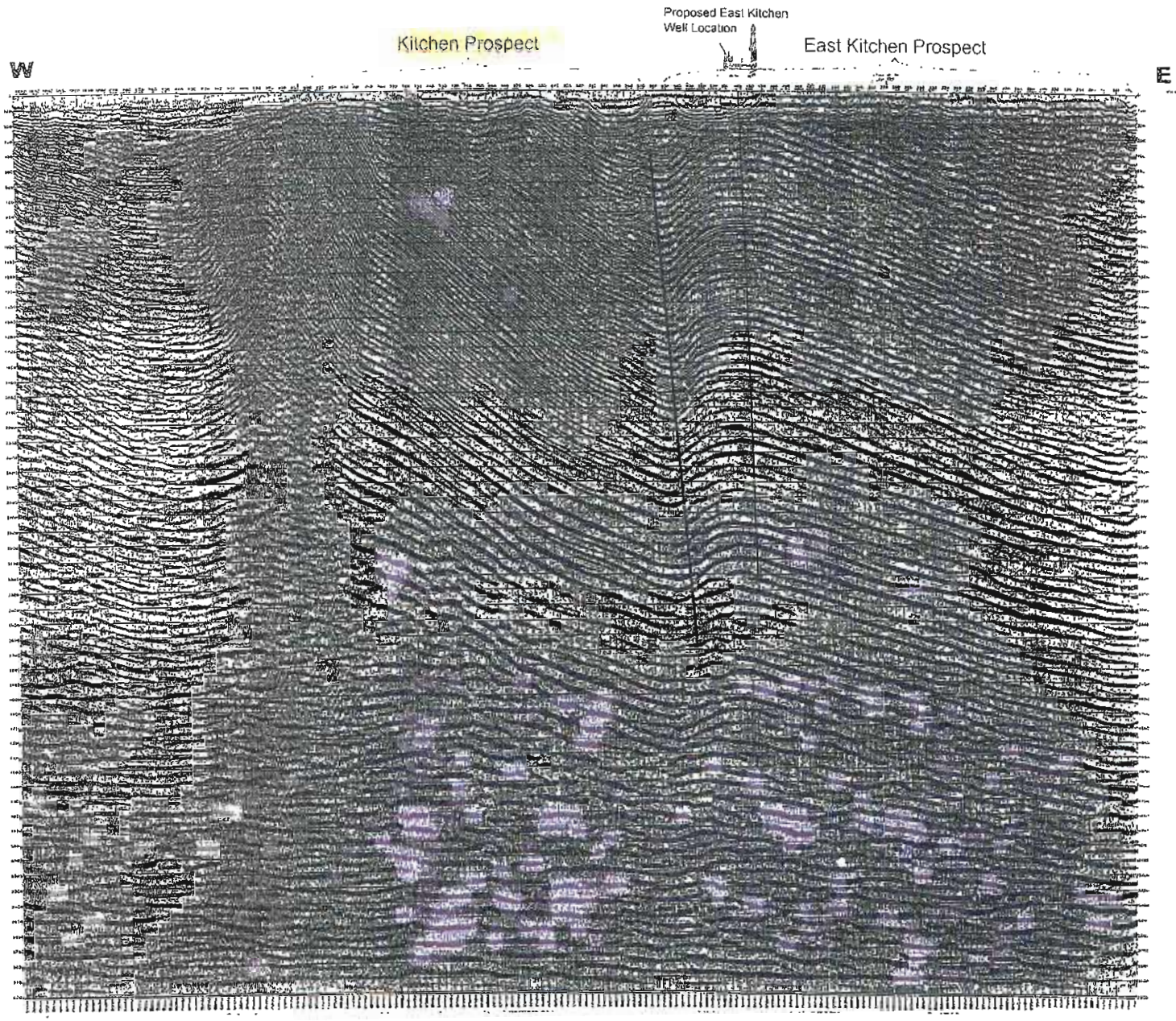
Magoon and Claypool from the USGS wrote "Petroleum Geology of the Cook Inlet Basin - An Exploration Model" in 1980. Their exploration model applied to the upper Cook Inlet and suggests three areas of exploration: one of these was the thrust fault trap on the east side of Middle Ground Shoal field, Escopeta's Kitchen thrust fault prospect. It was based on this that Escopeta bought their first four seismic lines and eight leases on the prospect. Early prospect concept mapping was based on only four E-W seismic lines interspaced across 15 miles. All lines showed thrust faulting on the east side of Middle Ground Shoals (MGS) and appeared to fit the USGS model. Early maps were constructed that showed potential closure against an east fault. Approximately 19,450 acres were assigned to the Sterling, Beluga; and 17,152 acres were assigned to the Upper Tyonek, Lower Tyonek, and Hemlock. Note that the Sterling, Beluga and part of the Tyonek formations are missing on the crest of MGS field, but are present in the Kitchen thrust fault prospect.

Comparing most of the Cook Inlet Basin pay zones, typical pay thickness, and recovery factors, the Kitchen thrust fault prospect could conceptually contain un-risked reserves of 3,943 BCFG and 829 MMBO.

Seismic Line Ua-I0

The east/west seismic line UA-10 is one of the keys to understanding both the Kitchen Lights Unit anticline and especially the separate Kitchen thrust fault prospect. Across this prospect, the original pre-stack time migration UA-10 display, shows the faulting on the east side of the north end of MGS structure and the strong strata dip to the east; terminating at the low point against the South Kitchen Lights Unit anticline. Deep in the section, at the Base Tertiary Unconformity (BTU) and Hemlock levels, there appears to be a bulge. The bulge will be discussed later, it is important for trapping hydrocarbons in deeper Hemlock and Lower Tyonek.

SEISMIC LINE UA-10 BEFORE WEA WORK



UA–10
Escopeta Prod Alaska Inc.
Area: Cook Inlet, Alaska

Prestack Migration

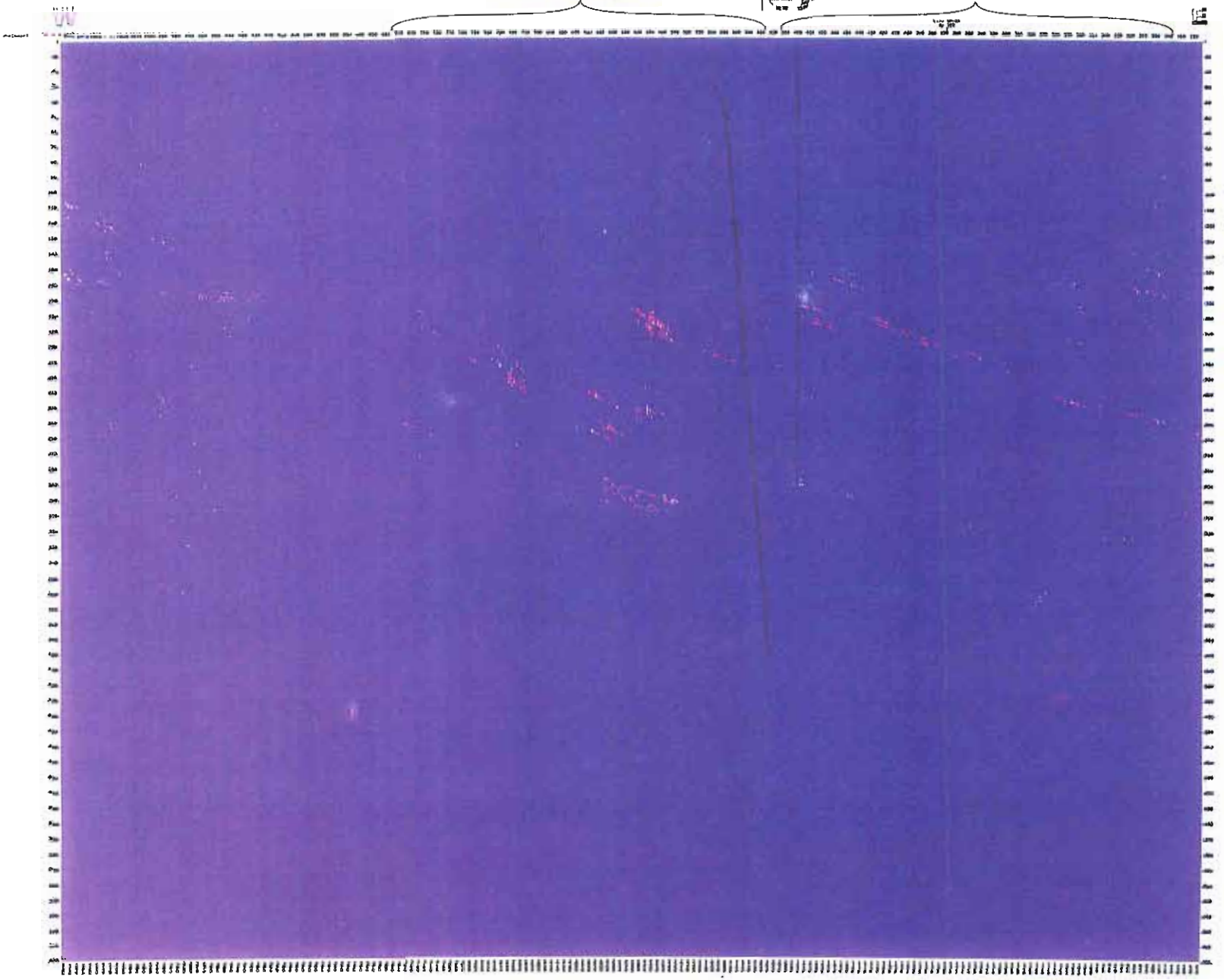
Line. UA-10
S.P.Range: 164–1066

SEISMIC LINE UA-10 EXAMI E OF WEA WORK
BRIGHT AREAS PROBABLE GAS

Proposed East Kitchen
Well Location

Kitchen Prospect

East Kitchen Prospect



UA—10
Escopeta Prod. Alaska Inc.
Area: Cook Inlet, Alaska

Wavelet Energy Absorption

Line: UA-10
S.P.Range: 164--1066

APEX

Enhanced Resolution

Escopeta completed additional processing on UA-I0 and all other lines. The proprietary enhanced resolution revealed seismic anomalies that tie directly to the WEA and High Resolution events. On UA-I0, many of the seismic anomalies and associated bright events, over Kitchen, appear to show fluvial systems. Most are located in the Tyonek Formation, with fewer in the Beluga. The Lower Tyonek river channels could be similar to those mapped in the Kenai Gas Field (2 TCFG).

Lower Tyonek- Kenai Field

These sandstone reservoirs of the "deep Tyonek" are similar in composition to the "upper Tyonek", quartz-rich feldspathic litharenites and sub-litharenites. The primary difference is that these deeper reservoirs represent larger meandering streams sands. Conglomeratic intervals are common in the thicker sandstones of the "deep Tyonek". Grain size varies widely in the sandstones bodies from conglomerate to medium grained. Reservoir thicknesses exceed 40' in the blocky sandstone intervals. Effective porosity of around 12 percent and permeability of more than 50 millidarcies combined to yield initial gas flow rates in excess of 20 mmcfpd (million cubic feet per day) in the early "deep Tyonek" wells of the Kenai field. The sandstones are well consolidate with compaction, clay and calcite cement. Coal beds are thicker in the "deep Tyonek" than any unit above and are often located at the base of the reservoir bodies. "Deep Tyonek" production is limited to the crestal portion of the field and the small closure on the Cannery Loop feature to the north. The Marathon Oil Company Kenai Deep Unit-1 has several of these sands found across 700' of section; some of these deep pays even produce a little condensate.

Kitchen Thrust Fault Stratigraphic Traps

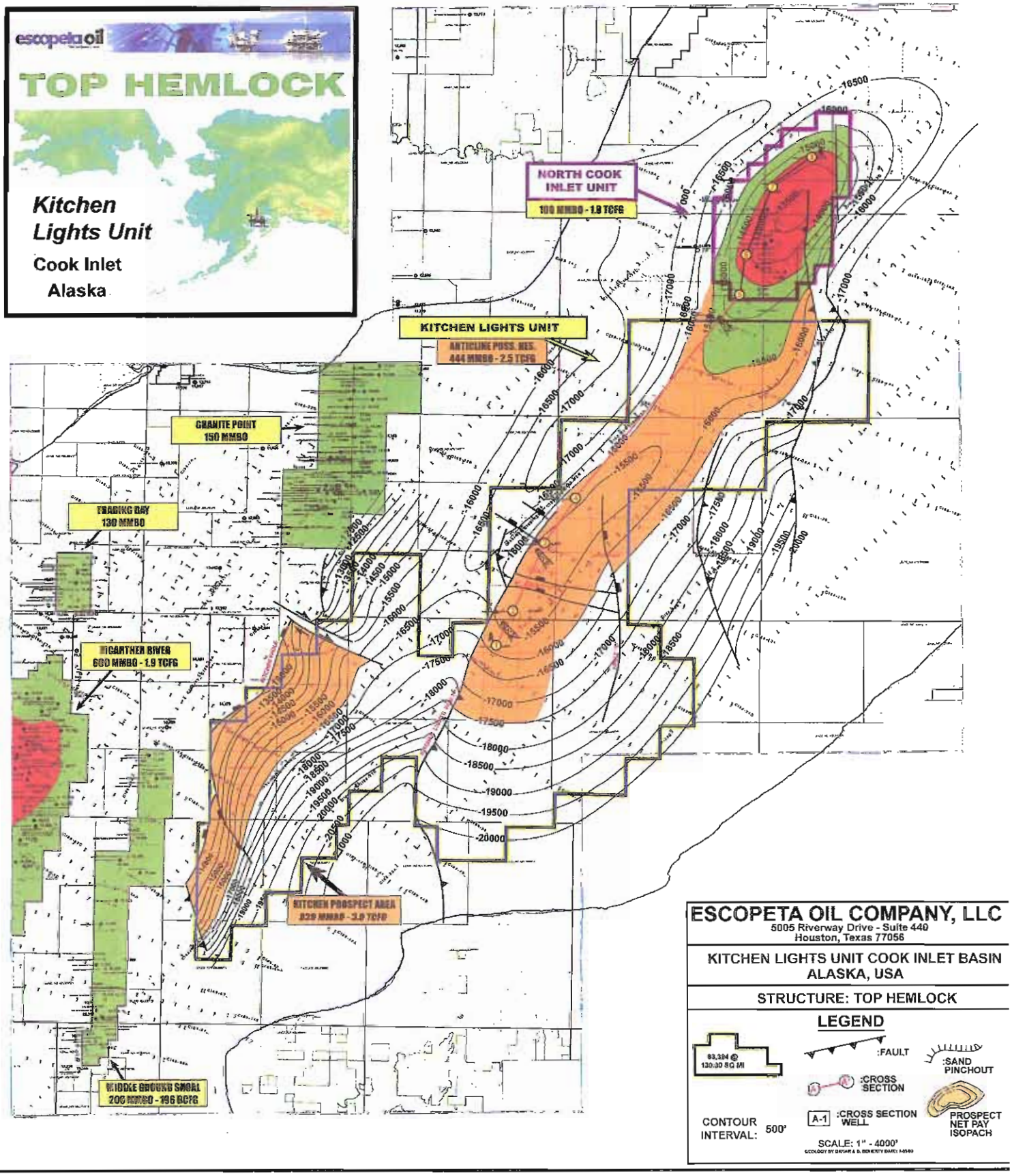
A possible interpretation of these fluvial systems shows one in the Beluga and four in the Tyonek, and generally in a north to south direction. The individual fluvial system appears to be 5 to 10 miles long and approximately three miles wide. Several appear to show branching stream channels. Trapping is related to a combination of factors: confined reservoirs, strong east dip of the section, the total section being defined by major N/S thrust and normal faults, cutting both east and west sides, and possibly by the influence of the bulge mapped in the deeper section.

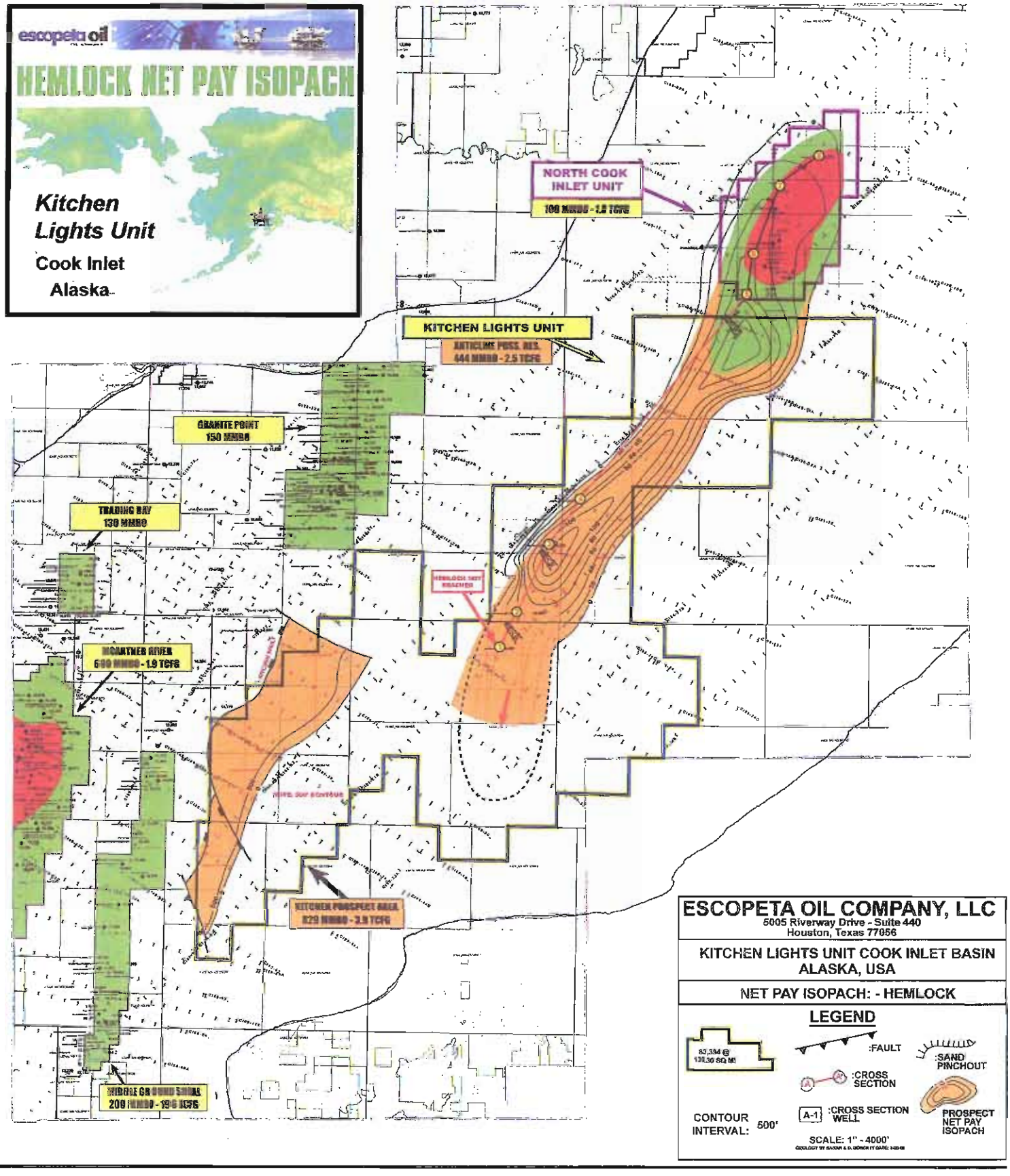
The sandstone reservoirs of the "deep Tyonek" (fig. 5) are similar in composition to the "upper Tyonek", quartz-rich feldspathic litharenites and sub-litharenites. The primary difference is that these deeper reservoirs represent larger meandering stream sands. Conglomeratic intervals are common in the thicker sandstones of the "deep Tyonek". Grain size varies widely in the sandstone bodies from conglomerate to medium grained. Reservoir thicknesses exceed 40 feet in the blocky sandstone intervals. Effective porosity of around 12 percent and permeability of more than 50 millidarcies combined to yield initial gas flow rates in excess of 20 mmcfpd (million cubic feet per day) in the early "deep Tyonek" wells of the Kenai field. The sandstones are well consolidated with compaction, clay and calcite cement. Coal beds are thicker in the "deep Tyonek" than any unit above and are often located at the base of the reservoir bodies. "Deep Tyonek" production is limited to the crestal portion of the field and the small closure on the Cannery Loop feature to the north.

8900
9000
9100
9200
9300
9400
9500
9600
9700
9800

GAS

MARATHON OIL CO
KENAI DEEP UNIT 1


escopeta oil
TOP HEMLOCK
Kitchen
Lights Unit
Cook Inlet
Alaska
NORTH COOK INLET UNIT
100 MMBO - 1.8 TCFG
KITCHEN LIGHTS UNIT
ANTICLINE POSS. RES.
444 MMBO - 2.5 TCFG
GRANITE POINT
150 MMBO
TRADING BAY
130 MMBO
MCARTHER RIVER
600 MMBO - 1.9 TCFG
KITCHEN PROSPECT AREA
829 MMBO - 3.9 TCFG
MIDDLE GROUND SHOAL
200 MMBO - 196 BCFG
ESCOPETA OIL COMPANY, LLC
5005 Riverway Drive - Suite 440
Houston, Texas 77056
KITCHEN LIGHTS UNIT COOK INLET BASIN
ALASKA, USA
STRUCTURE: TOP HEMLOCK
LEGEND
93,394 @
130.30 SQ MI
:FAULT
:SAND PINCHOUT
:CROSS SECTION
A-1 :CROSS SECTION WELL
PROSPECT NET PAY ISOPACH
CONTOUR INTERVAL: 500'
SCALE: 1" - 4000'


escopeta oil
HEMLOCK NET PAY ISOPACH
Kitchen
Lights Unit
Cook Inlet
Alaska
NORTH COOK INLET UNIT
100 MMBO - 1.8 TCFG
KITCHEN LIGHTS UNIT
ANTICLINE POSS. RES.
444 MMBO - 2.5 TCFG
GRANITE POINT
150 MMBO
TRADING BAY
130 MMBO
HEMLOCK NOT REACHED
MCARTHER RIVER
600 MMBO - 1.9 TCFG
KITCHEN PROSPECT AREA
829 MMBO - 3.9 TCFG
MIDDLE GROUND SHOAL
200 MMBO - 196 BCFG
ESCOPETA OIL COMPANY, LLC
5005 Riverway Drive - Suite 440
Houston, Texas 77056
KITCHEN LIGHTS UNIT COOK INLET BASIN
ALASKA, USA
NET PAY ISOPACH: - HEMLOCK
LEGEND
83,334 @
139.30 SQ MI
:FAULT
:SAND PINCHOUT
:CROSS SECTION
A-1 :CROSS SECTION WELL
PROSPECT NET PAY ISOPACH
CONTOUR INTERVAL: 500'
SCALE: 1" - 4000'

UA-10

ENHANCED SEISMIC

WEA EVENTS

FLUVIAL SYSTEMS

WEA EVENTS

FLUVIAL SYSTEMS

First Location

The proposed Kitchen thrust fault prospect well is a test based on the testing of the multiple fluvial systems that are interpreted from WEA and Enhanced Resolution data. The targets are located in the thick wedge of the original USGS recognized thrust fault trap east of MGS and west of the Kitchen Lights fault. The exact location should be on UA-10, at SP640 in about 120' of water. It should be drilled to 17,000' thru the West Foreland.

Additional Location

In order to test the full potential of the Kitchen thrust fault prospect a second location needs to be drilled on UA-10 at SP720, with a total depth of 17,000'. This well will test the bulge, west of the Kitchen Lights thrust fault. Line UA-10 at the BTU horizon parallels the axis of the east dipping Mesozoic anticline (ARCO study) that places the Tuxedni source rocks, on the east end, at or very near the BTU, and thus very near to the Hemlock and Lower Tyonek reservoirs. The harder, early Jurassic Talkeetna rocks underlie most of the bulge and may be a reason that the bulge exists (relic Mesozoic topographic high just below the BTU). This east dipping Mesozoic anticline was a major focal point for hydrocarbon migration, with the Kitchen thrust fault prospect.

Escopeta reviewed additional data that defined the bulge and the trapping faults. Based on these lines and UA-10, a 7,104-acre prospect was mapped at the Hemlock and Lower Tyonek horizons. This prospect is associated with the bulge; it is separated on the west by a normal fault (±500' throw), from the fault block tested by EMGS St. 1875-1 wildcat. Although this well was drilled, tested and abandoned in 1966, recent "PETRA" petrophysical analysis show possibly 100' of scattered pay in the Hemlock and 400' of scattered pay in the Lower Tyonek. North and South portions of the prospect are controlled by faults. The north fault probably has a strike-dip component. It parallels two strike-dip faults seen deeper in gravity magnetic basement maps. This deeper prospect is still within the thrust fault play first proposed by the USGS. It is the largest of several fault traps on the east side of the MGS thrust that sets up the Hemlock and Tyonek oil plays. This location on UA-10, besides testing the deep objectives, has a shallow Tyonek Channel Penetrations to be tested as well.

Other Data

As part of the on going studies, new information was developed that greatly enlarged the area and location of the source rocks. ARCO'S work defining the east dipping Mesozoic anticline under the Kitchen thrust fault prospect was important to the hydrocarbon migration routes and the closer relationship between source and reservoir.

Summary

The Kitchen thrust fault prospect, Southwest Kitchen Lights Unit has the greatest potential. The numerous WEA events appear to the Tyonek gas and oil indicators as interpreted, and related to extensive fluvial systems, this will be the **FIRST AND LARGEST STRATIGRAPHIC TRAP FOUND IN THE COOK INLET**. The deeper Hemlock/Lower Tyonek objectives are very close to the Middle Jurassic source rocks, and should be productive. Line UA-10 one of the keys and both wells need to be drilled on it. If both locations are productive, Kitchen could have total un-risked reserves of 3.9 TCFG and 829 MMBO.

Total Possible Reserves
Kitchen Lights Unit

The combined possible oil and gas reserves for the two separate distinct prospects that comprise the Kitchen Lights Unit are as follows:

1.)	Kitchen Lights Anticline -	444 MMBO	2.5 TCFG
2.)	Kitchen Thrust Fault Trap -	829 MMBO	3.9 TCFG
	Total Kitchen Lights Unit -	1,273 MMBO	6.4 TCFG

Structural Cross Section
Kitchen Lights Unit

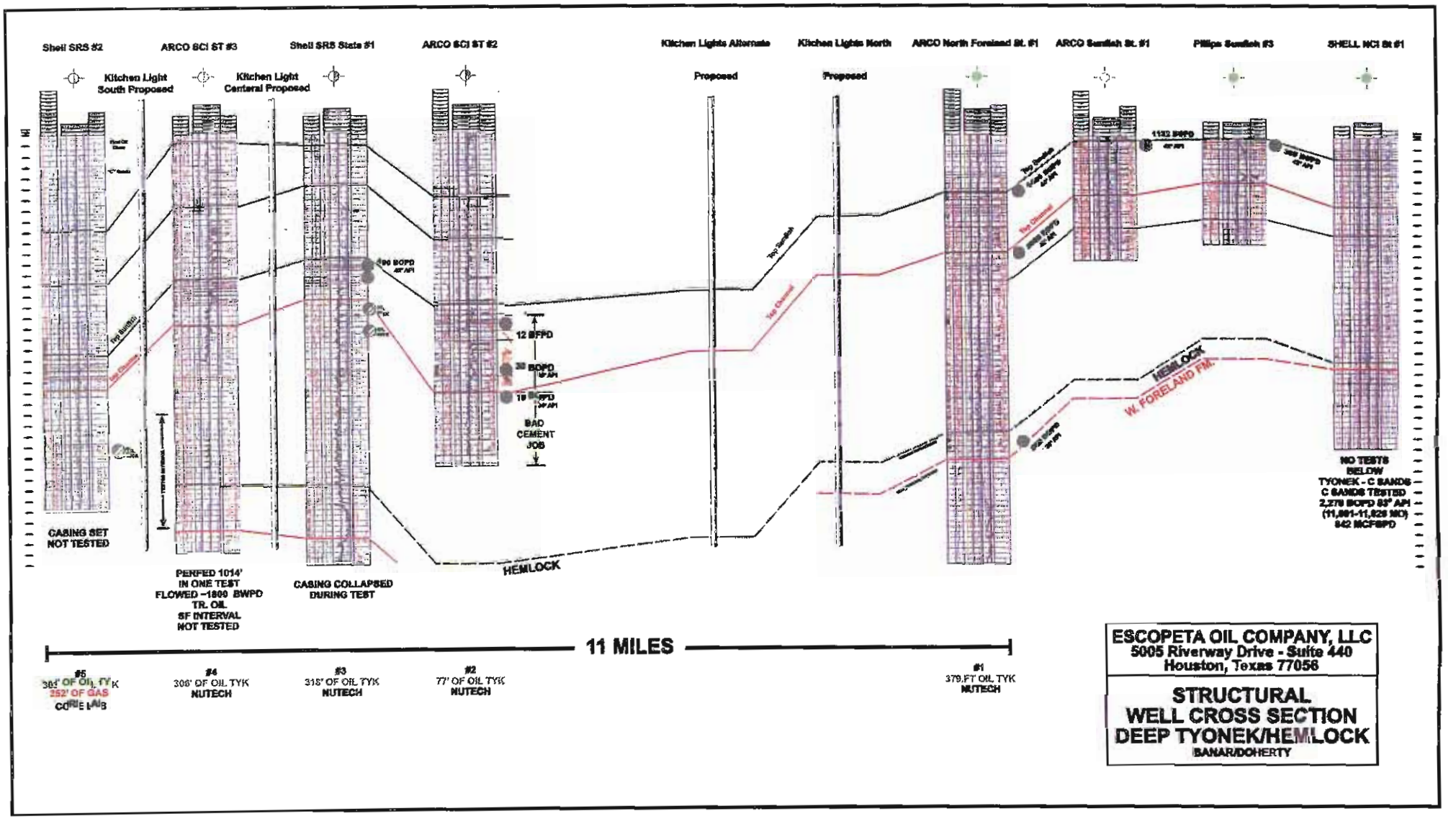
NuTech Advanced Petrophysical Evaluation of Tyonek Oil

Wells:		Ft/Pay Tyonek
1.)	Arco North Foreland #1	379' Oil
2.)	Arco SCI State #2	77' Oil
3.)	Shell SRS State #1	318' Oil
4.)	Arco SCI State #3	306' Oil
5.)	Shell SRS State #2	303' Oil 252' Gas

Note: Distance between Arco North Foreland #1 and Shell SRS #2 is 11 miles, N.E. to S.W.

NORTH FORELAND ST #1

379' OIL



ESCOPETA OIL COMPANY, LLC
5005 Riverway Drive - Suite 440
Houston, Texas 77056

STRUCTURAL WELL CROSS SECTION DEEP TYONEK/HEMLOCK

BANAR/DOHERTY

NuTech ENERGY ALLIANCE

Advanced Petrophysical Evaluation

NuLook™ Textural Vision

Evaluated For:

RENAISSANCE ALASKA

Project #: 007754

Completed: 6/28/2007

Company	ARCO ALASKA INC			
Well	NORTH FORELAND ST #1			
Field	WILDCAT			
County	KENAI	State ALASKA	Country USA	
Location	2242' FNL & 1240' FWL			

Section	13	Township 11N	Range 10W	API Num 50883200850000	
Permanent Datum	MSL		Elevation -82.0	K.B.	104.8
Log Measured From	KB	, 104.8	Above Perm Datum	D.F.	103.0
Drilling Meas From	KB			G.L.	-82.0

#1

379'

OIL

	Run 1	Run 2	Run 3
Date	13-APR-1992 (R1)	26-JUN-1992 (R4)	28-AUG-1992 (R6)
Depth - Driller	2605	13221	17774
Depth - Logger	2580	13209	17761
Btm Log Interval	2498	13203	17757
Top Log Interval	316	8486	13173
Casing - Driller	30@316	30@316	9.625@13179
Casing - Logger	315	316	13173
Bitsize	12.25	26	12.25
Type Fluid in Hole	SEAWATER GEL	FRESH BARITE	FRESH BARITE
Dens. /Visc.	8.8 / 38	14.2 / 54	17 / 45
pH / Fluid Loss	7.5 / 36	9.4 / 4.6	11.2 / 3
Source of Sample	PITS	PITS	PITS
Rm @ Meas. Temp	0.642@81.0	3.160@64.0	3.020@72.0
Rmf @ Meas. Temp	0.636@73.0	1.870@63.0	0.510@72.0
Rmc @ Meas. Temp	0.759@82.4	5.410@63.0	2.880@72.0
Source: Rmf / Rmc	PRESS / PRESS	PRESS / PRESS	PRESS / PRESS
Rm @ BHT	0.607@86	1.394@154	1.002@231
Max. Rec. Temp.	86	154	231

*** CURVE MNEMONICS ***

GR, (GRC)	- GAMMA RAY, (ENVIRONMENTALLY CORRECTED)
SP, (SPBL)	- SPONTANEOUS POTENTIAL, (BASELINE SHIFTED)
CALI, CAL, HCAL, CALX, CALY	- CALIPER
FF_FLAG	- FREE FLUID FLAG
FHC_FLAG	- FREE HYDROCARBON FLAG
LW_FLAG	- LOW WATER FLAG
KF_FLAG	- FAIR PERMEABILITY FLAG
KG_FLAG	- GOOD PERMEABILITY FLAG
MDR_FLAG	- RESISTIVITY MINERAL FLAG
SP_FLAG	- PERMEABILITY MINERAL FLAG
MD_FLAG	- GAS MINERAL FLAG
PHIE_FLAG	- POROSITY MINERAL FLAG
ILD, LLD, HDRS, A*90, M*R9	- DEEP RESISTIVITY
ILM, LLS, HMRS, A*30, M*R3	- MEDIUM RESISTIVITY
SFL, SFLU, RFOC, DFL, MSFL	- SHALLOW RESISTIVITY
PDSS, PDLS, PHID, (PHIDEDIT)	- DENSITY POROSITY, (EDITED)
PCNSS, PCNLS, PHIN	- NEUTRON POROSITY
PSSS, PHIS	- SONIC POROSITY
PE, PEF, PEFZ	- PHOTO ELECTRIC FACTOR
DRHO, HDRA, ZCOR, CORR	- DENSITY CORRECTION
TGAS	- TOTAL GAS FROM MUD LOG
HMIN, HMNO, MINV, MNOR, RLML, RNML	- MICROLOG CURVES
NUMATR	- CLAY VOLUME INDICATOR
ROP	- RATE OF PENETRATION
CLAY, SMALL, MEDIUM, LARGE	- TEXTURAL DISTRIBUTION
VSS, VLS, VDOL	- MATRIX VOLUMES
SW	- WATER SATURATION
BVW	- CONVENTIONAL BULK VOLUME WATER
BVI, BVIC, MBVI, MXBVI, BFV	- IRREDUCIBLE WATER
PHIE, MPHI, CMRP	- EFFECTIVE POROSITY
CORPOR, CORPERM	- POROSITY, PERM FROM CORES
MSIG, TCMR	- TOTAL POROSITY FROM NMR
PERM, MPERM	- TOTAL PERMEABILITY
NUPERM	- TEXTURAL PERM
W	- TEXTURAL PARAMETER
CODE	- PAY QUALITY INDICATOR
PAYFLAG	- POTENTIAL PAY INTERVAL
RWG	- RW USED IN ANALYSIS

*** PARAMETERS ***

Rw	=	TOP '	- 13058'	.397@	75°F	.	N	=	TOP '	- BTM '	W
Rw	=	13058'	- 13900'	.142@	75°F	.	N	=	_____ '	- _____ '	_____
Rw	=	13900'	- BTM'	.237@	75°F	.	N	=	TOP '	- BTM '	2
Rw	=	_____ '	- _____ '	_.___ @	___°F	.	N	=	_____ '	- _____ '	_____
Rw	=	_____ '	- _____ '	_.___ @	___°F	.					
Rw	=	_____ '	- _____ '	_.___ @	___°F	.	Perm				

*** REMARKS ***

All interpretations are opinions based on inferences from electrical or other measurements, and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretations made by any officers, agents or employees of NuTech Energy Alliance. These interpretations

RHOM = TOP ' - BTM ' 2.68
RHOM = ____' - ____' __
RHOM = ____' - ____' __

DTMtx = TOP ' - BTM ' 51
DTMtx = ____' - ____' __
DTMtx = ____' - ____' __

Coeff = ____' - ____' ____
Coeff = ____' - ____' ____

Flag Cutoffs
VClay = .4 Free Fluid = .03
Kmin = .1 Free Water = .01
Kfair = 1 TooMuchWtr = .015
Kgood = 10 LowHydrcbn = .6

are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

PROJECT #: Renaissance007754
DW

NORTH FORELAND ST #1
5 Jul 2007 @ 11:48
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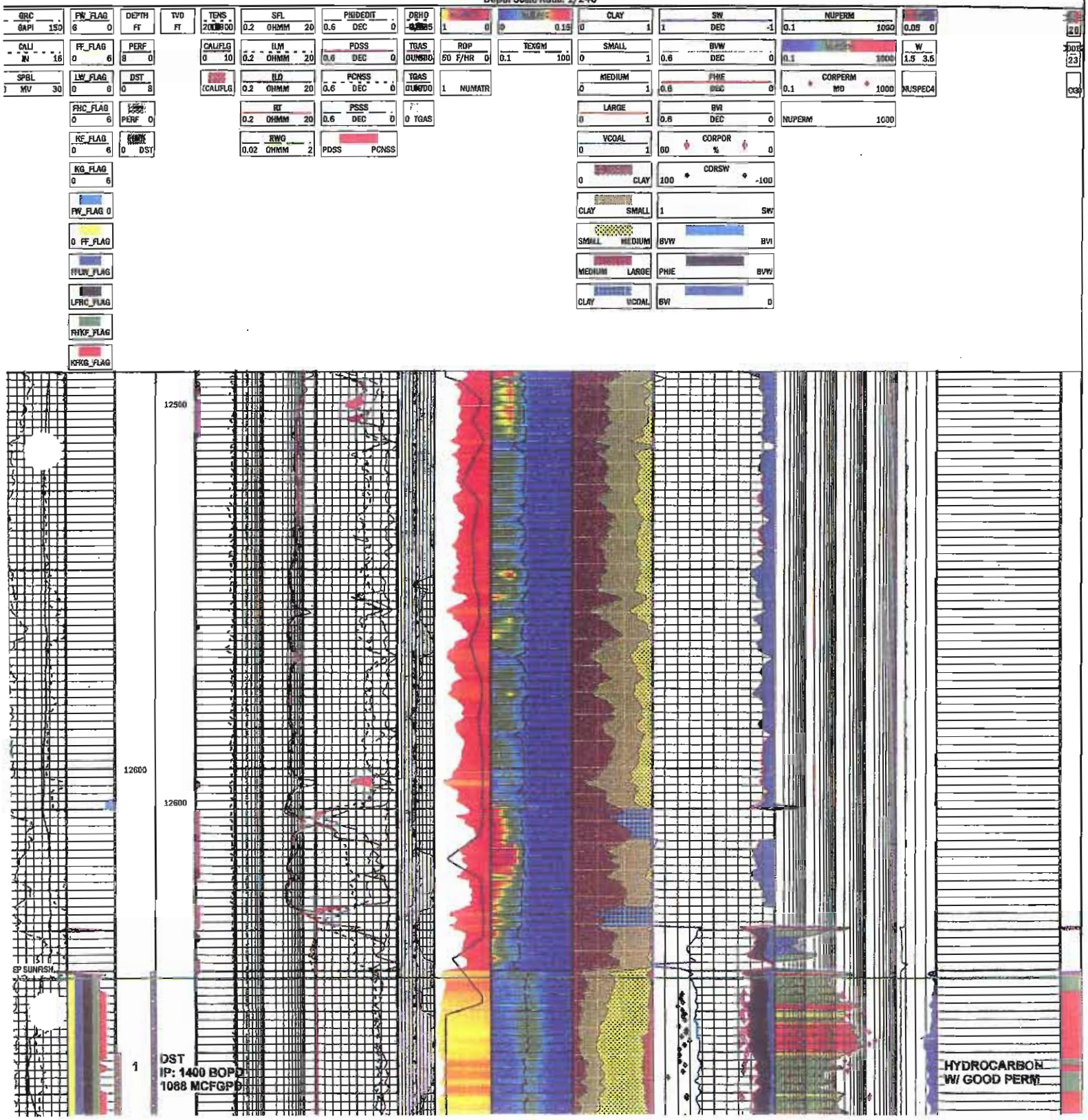
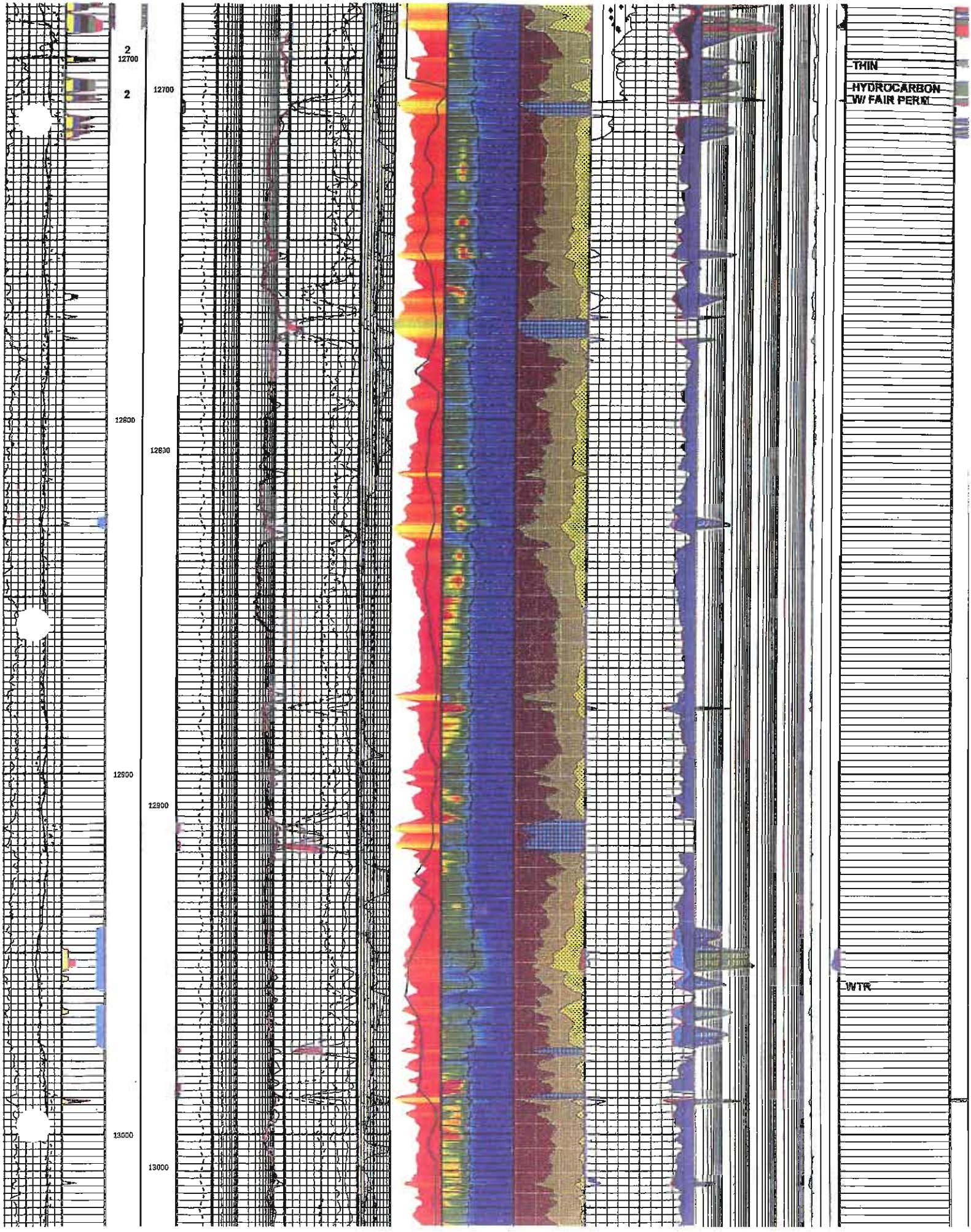
Interval: 12500.00 to 15075.00
Depth Scale Ratio: 1/240

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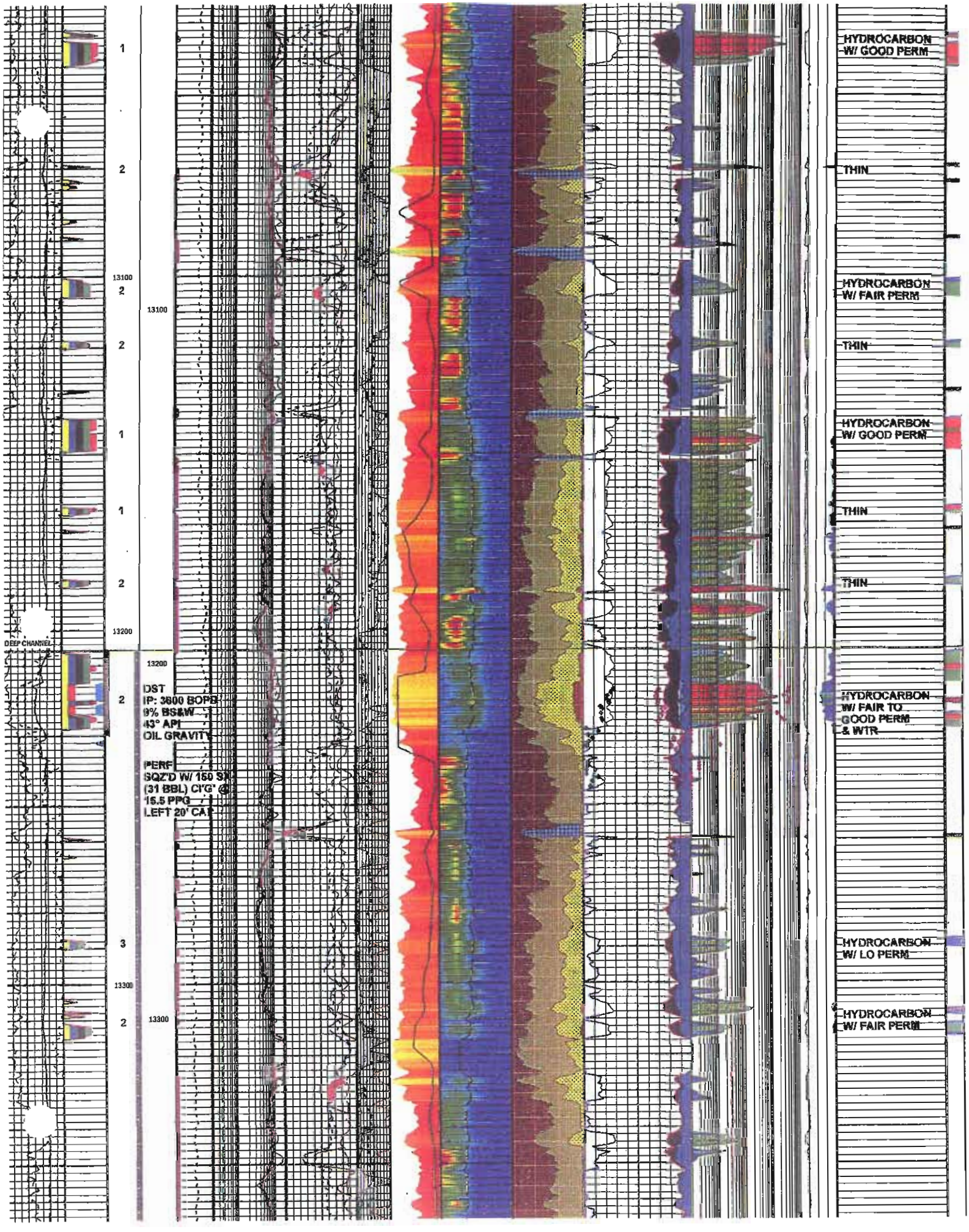
THIN
HYDROCARBON
W/ FAIR PERM
WTR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2
13100
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13100
2
1
1
2
13200
DEEP CHANNEL
13200
2
DST
IP: 3600 BOPD
9% BS&W
43° API
OIL GRAVITY
PERF
SQZ'D W/ 150 SX
(31 BBL) CI'G' @
15.5 PPG
LEFT 20' CAP
3
13300
2
13300
HYDROCARBON W/ GOOD PERM
THIN
HYDROCARBON W/ FAIR PERM
THIN
HYDROCARBON W/ GOOD PERM
THIN
THIN
HYDROCARBON W/ FAIR TO GOOD PERM & WTR
HYDROCARBON W/ LO PERM
HYDROCARBON W/ FAIR PERM

13400
13400
13500
13500
2
3
13600
13600
2
2
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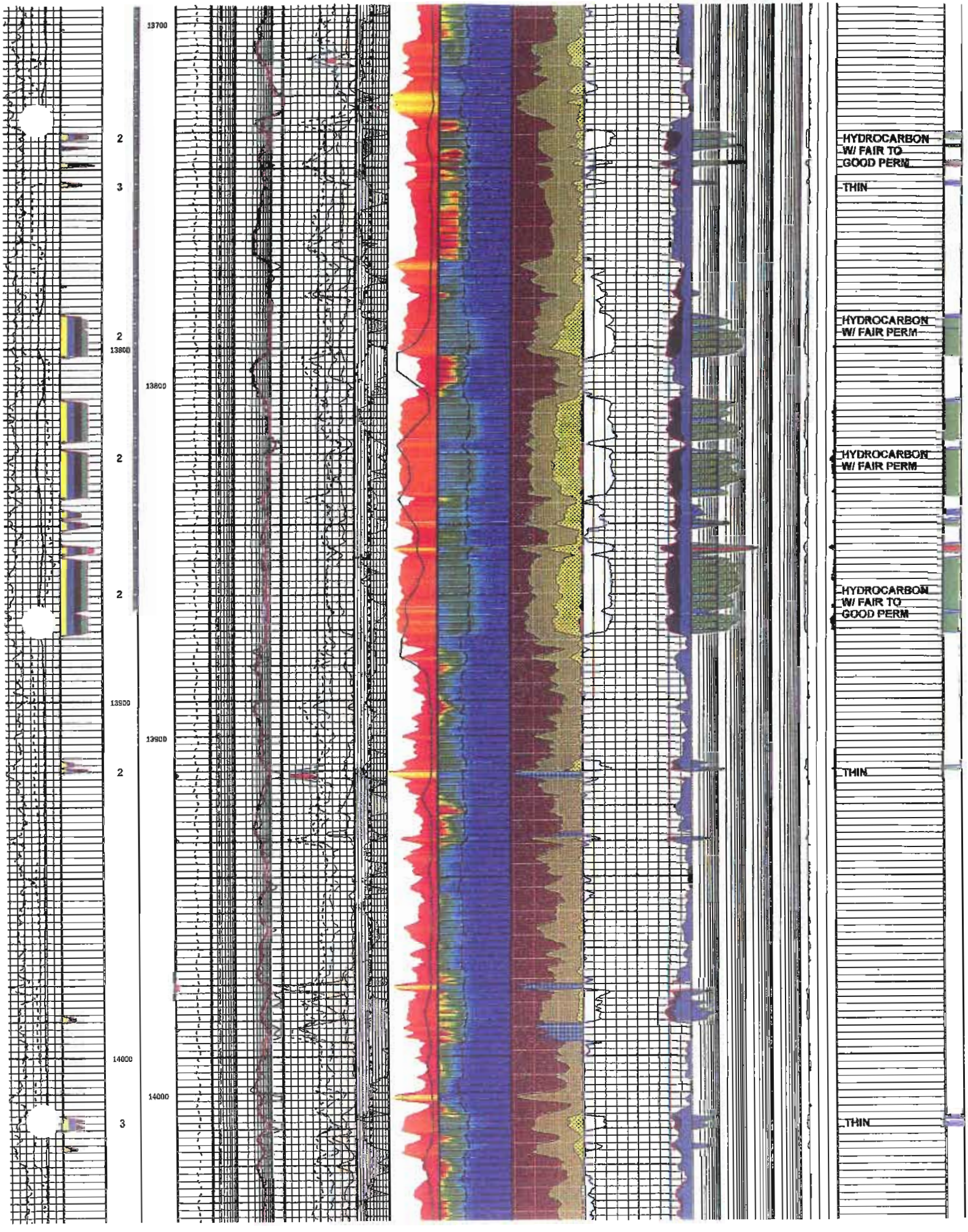
HYDROCARBON W/ LO PERM
THIN
HYDROCARBON W/ FAIR PERM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HYDROCARBON W/ FAIR PERM
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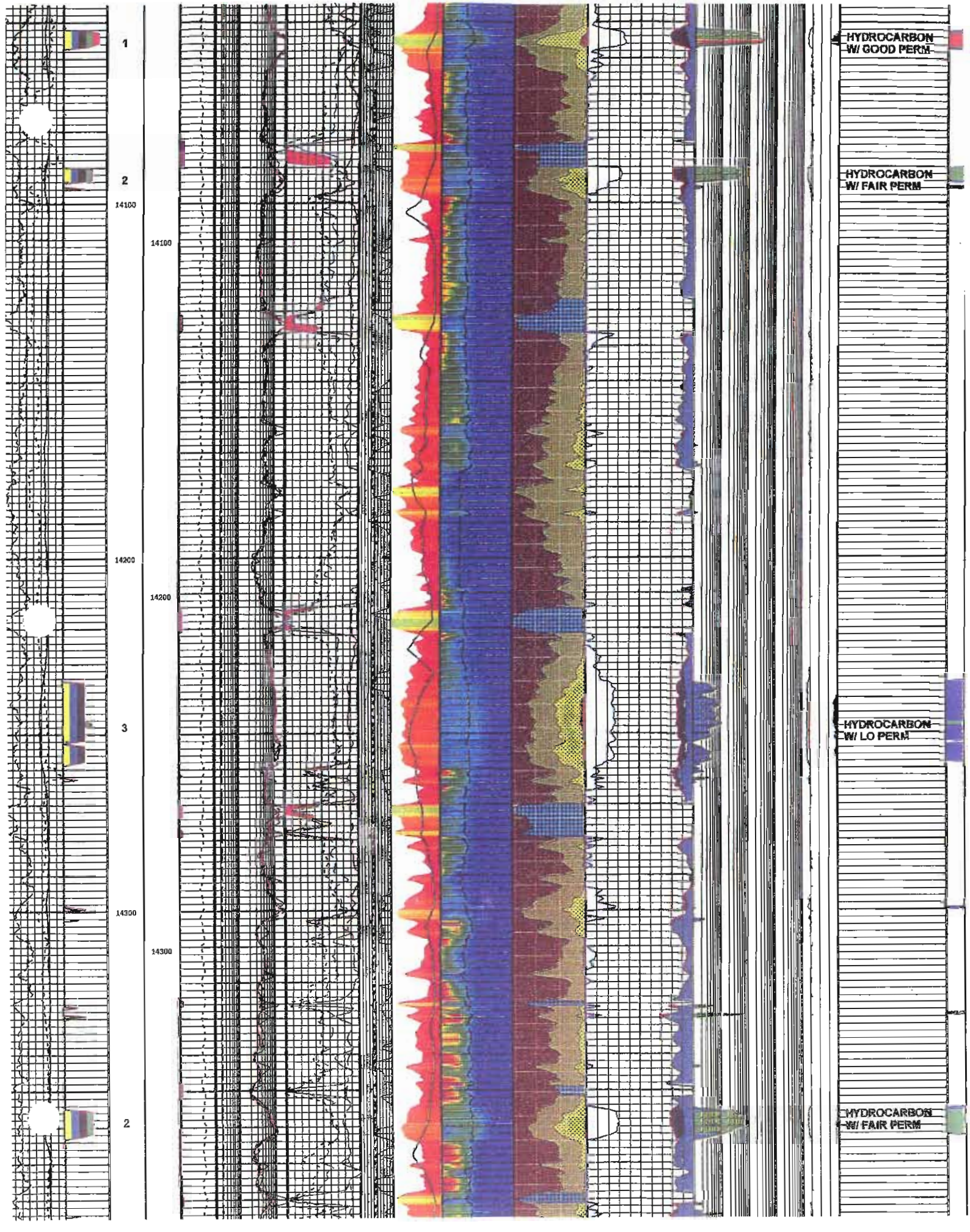
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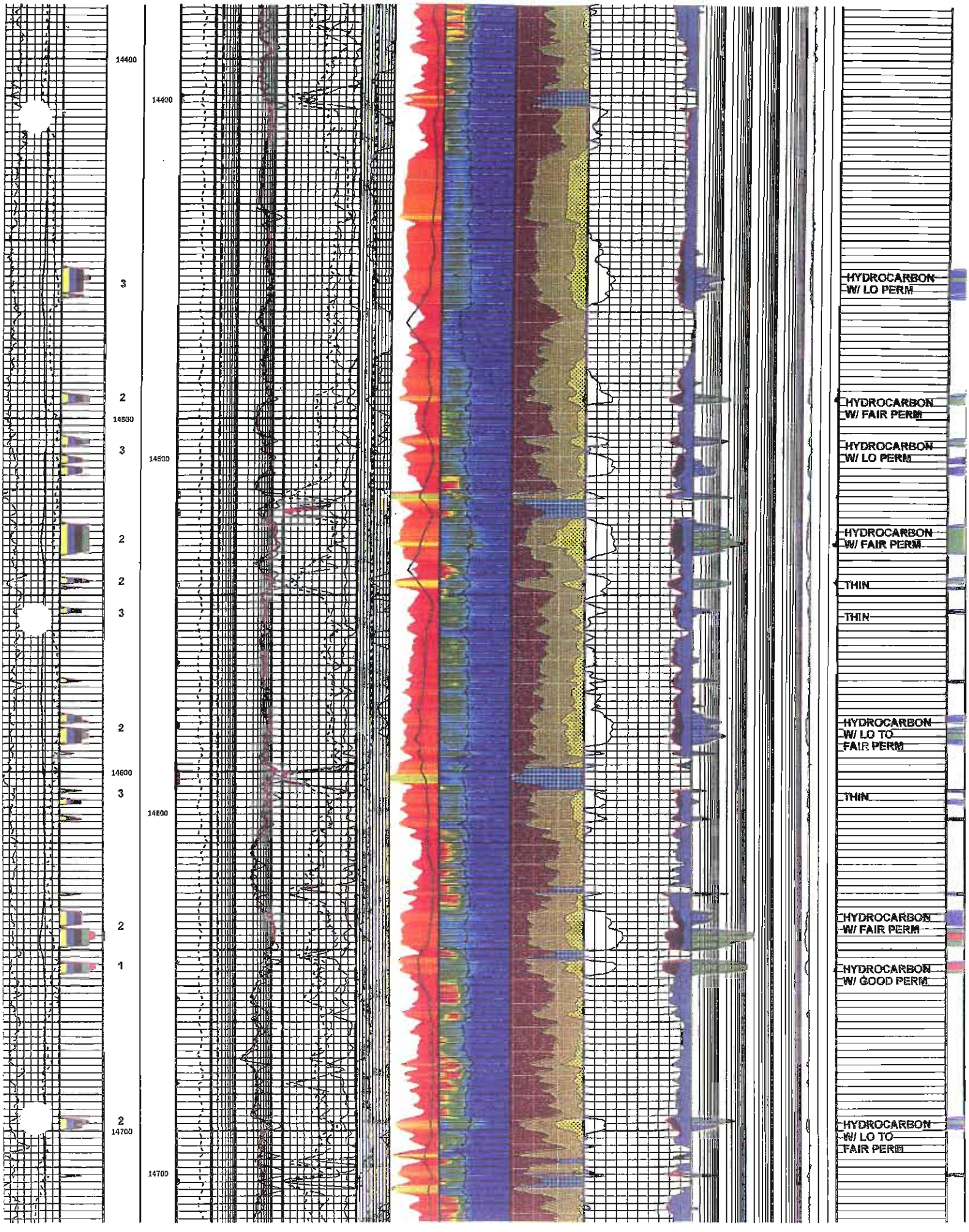
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14700
HYDROCARBON W/ LO PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ LO PERM
HYDROCARBON W/ FAIR PERM
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HYDROCARBON W/ LO TO FAIR PERM
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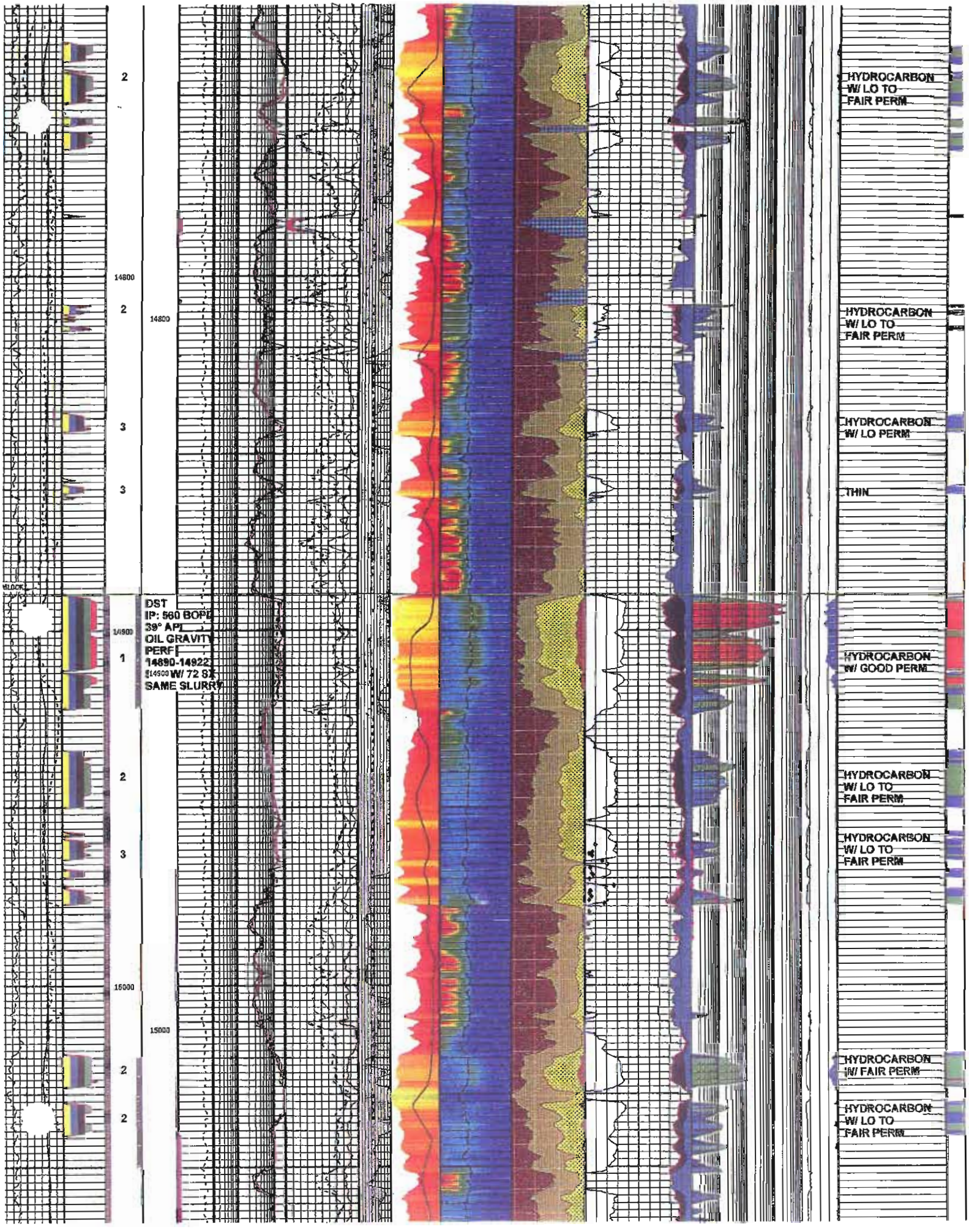
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ LO TO FAIR PERM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DST
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39° API
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PERF
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14900 W/ 72 SX
SAME SLURRY
2
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15000
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HYDROCARBON W/ LO TO FAIR PERM
HYDROCARBON W/ LO TO FAIR PERM
HYDROCARBON W/ LO PERM
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HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ LO TO FAIR PERM
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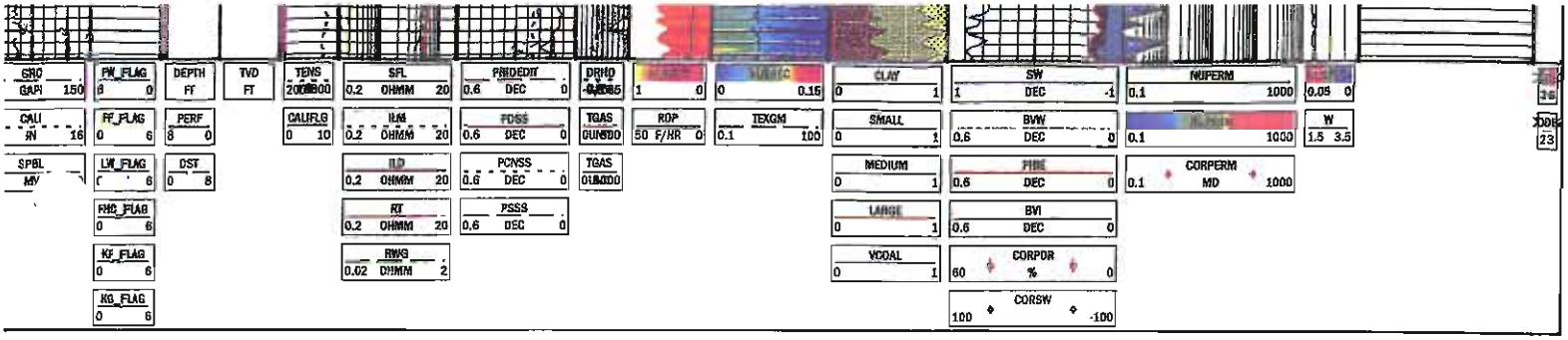
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IN 16
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LW_FLAG
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KF_FLAG
0 6
KG_FLAG
0 6
DEPTH
FT
PERF
8 0
DST
0 8
TVD
FT
TENS
CALIFLG
0 10
SFL
0.2 OHMM 20
ILM
0.2 OHMM 20
ILD
0.2 OHMM 20
RT
0.2 OHMM 20
RWG
0.02 OHMM 2
PRIDEDIT
0.6 DEC 0
PDSS
0.6 DEC 0
PCNSS
0.6 DEC 0
PSSS
0.6 DEC 0
DRHO
TGAS
TGAS
ROP
50 F/HR 0
1 0
0 0.15
TEXGM
0.1 100
CLAY
0 1
SMALL
0 1
MEDIUM
0 1
LARGE
0 1
VCOAL
0 1
SW
1 DEC -1
BVW
0.6 DEC 0
PHIE
0.6 DEC 0
BVI
0.6 DEC 0
CORPOR
60 % 0
CORSW
100 -100
NUPERM
0.1 1000
0.1 1000
CORPERM
0.1 MD 1000
0.05 0
W
1.5 3.5
36
23

SOUTH COOK INLET STATE #2

77' OIL

NuTech ENERGY ALLIANCE

Advanced Petrophysical Evaluation

NuLook™ Textural Vision

Evaluated For:

RENAISSANCE ALASKA

Project #: 008053

Completed: 8/17/2007

Company	ARCO ALASKA, INC.			
Well	SOUTH COOK INLET STATE #2			
Field	WILDCAT			
County	KENAI	State ALASKA	Country USA	
Location	SHL 1604' FNL & 2099' FWL			
Section	18	Township 10N	Range 10W	API Num 50733204490000
Permanent Datum	MLLW	Elevation 0		K.B. 108
Log Measured From	KB	, 108 Above Perm Datum		D.F. 107
Drilling Meas From	KB			G.L. —

#2 77' OIL

	Run 1	Run 2	Run 3
Date	30-JUL-1993	12-OCT-1993	
Depth - Driller	9700	15169	
Depth - Logger	9693	15175	
Btm Log Interval	9693	15173	
Top Log Interval	2489	9905	
Casing - Driller	13.375@2486	9.625@9912	
Casing - Logger	2488	9908	
Bit Size	17.5	12.25	
Type Fluid In Hole	GEL POLYMER	PHPA SOLTEX	
Dens. / Visc.	10 / 39	15.8 / 45	
pH / Fluid Loss	— / 8.4	9.5 / 2	
Source of Sample	PITS/CIRC	PITS	
Rm @ Meas. Temp	4.590@60	1.070@68	
Rmf @ Meas. Temp	4.530@60	0.820@68	
Rmc @ Meas. Temp	3.450@60	1.660@72	
Source: Rmf / Rmc	PRESS / PITS	PITS / PITS	
Rm @ BHT	1.997@147	0.414@187	
Max. Rec. Temp.	147	187	

CURVE MNEMONICS

GR, [GRC]	- GAMMA RAY, [ENVIRONMENTALLY CORRECTED]
SP, [SPBL]	- SPONTANEOUS POTENTIAL, [BASELINE SHIFTED]
CALI, CAL, HCAL, CALX, CALY	- CALIPER
FF_FLAG	- FREE FLUID FLAG
FHC_FLAG	- FREE HYDROCARBON FLAG
LW_FLAG	- LOW WATER FLAG
KF_FLAG	- FAIR PERMEABILITY FLAG
KG_FLAG	- GOOD PERMEABILITY FLAG
MDR_FLAG	- RESISTIVITY MINERAL FLAG
SP_FLAG	- PERMEABILITY MINERAL FLAG
ND_FLAG	- GAS MINERAL FLAG
PHIE_FLAG	- POROSITY MINERAL FLAG
ILD, LLD, HDRS, A*90, M*R9	- DEEP RESISTIVITY
ILM, LLS, HMRS, A*30, M*R3	- MEDIUM RESISTIVITY
SFL, SFLU, RFOC, RFL, MSFL	- SHALLOW RESISTIVITY
PDSS, PDLS, PHID, [PHIDEDIT]	- DENSITY POROSITY, [EDITED]
PCNSS, PCNLS, PHIN	- NEUTRON POROSITY
PSSS, PHIS	- SONIC POROSITY
PE, PEF, PEFZ	- PHOTO ELECTRIC FACTOR
DRHO, HDRA, ZCOR, CORR	- DENSITY CORRECTION
TGAS	- TOTAL GAS FROM MUD LOG
MHIN, MHNO, MINV, MNOR, RLML, RNML	- MICROLOG CURVES
MUMATR	- CLAY VOLUME INDICATOR
ROP	- RATE OF PENETRATION
CLAY, SHALL, MEDIUM, LARGE	- TEXTURAL DISTRIBUTION
VSS, VLS, VDOL	- MATRIX VOLUMES
SW	- WATER SATURATION
BVW	- CONVENTIONAL BULK VOLUME WATER
BVI, BVIC, MBVI, NXBVI, BFV	- IRREDUCIBLE WATER
PHIE, MPHI, CNRP	- EFFECTIVE POROSITY
CORPOR, CORPERM	- POROSITY, PERM FROM CORES
MSIG, TCNR	- TOTAL POROSITY FROM NMR
PERM, MPERM	- TOTAL PERMEABILITY
NUPERM	- TEXTURAL PERM
W	- TEXTURAL PARAMETER
CODE	- PAY QUALITY INDICATOR
PAYFLAG	- POTENTIAL PAY INTERVAL
RWG	- RW USED IN ANALYSIS

PARAMETERS

Rw	=	TOP '	- 14420'	0.397@	75°F	.	M	=	TOP ' - BTM '	W
Rw	=	14420'	- 14880'	0.142@	75°F	.	M	=	____' - ____'	____
Rw	=	14880'	- BTM '	0.237@	75°F	.	M	=	TOP ' - BTM '	2
Rw	=	____'	- ____'	___@	___°F	.	N	=	____' - ____'	____
Rw	=	____'	- ____'	___@	___°F	.				
Rw	=	____'	- ____'	___@	___°F	.	Perm			

REMARKS

All interpretations are opinions based on inferences from electrical or other measurements, and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretations made by any officers, agents or employees of NuTech Energy Alliance. These interpretations

RHOH = TOP ' - BTM ' 2.68
RHOH = ____ ' - ____ ' ____
RHOH = ____ ' - ____ ' ____

DTHLx = TOP ' - BTM ' 51
DTHLx = ____ ' - ____ ' ____
DTHLx = ____ ' - ____ ' ____

Coeff = ____ ' - ____ ' ____
Coeff = ____ ' - ____ ' ____

Flag Cutoffs
VClay = .4 Free Fluid = .03
Kmin = .1 Free Water = .01
Kfair = 1 TooMuchWtr = .015
Kgood = 10 LowHydrcbn = .6

our current Price Schedule.

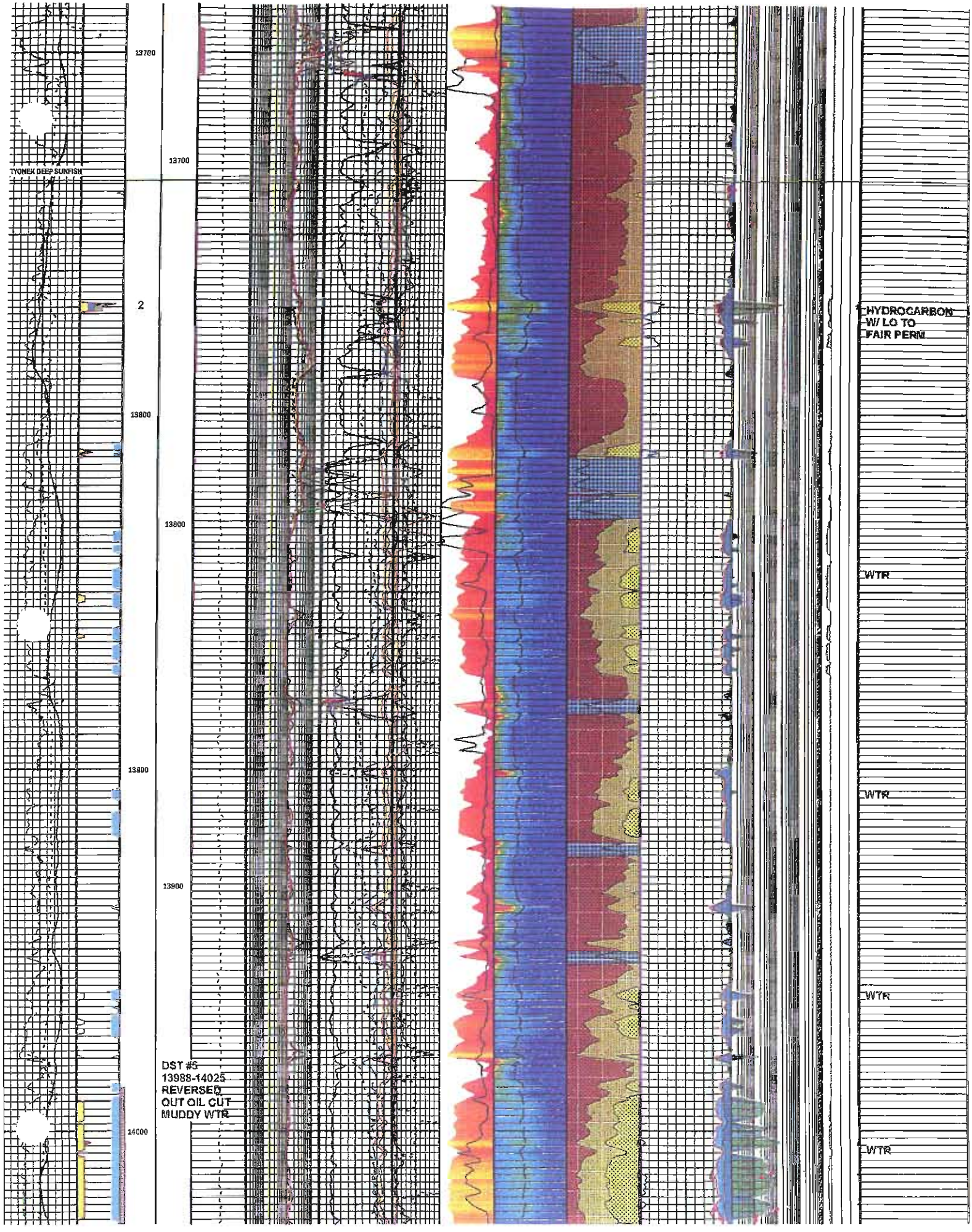
PROJECT #: Renaissance080053
TG/DW
>>DENSITY NORMALIZED +.088 G/CC.

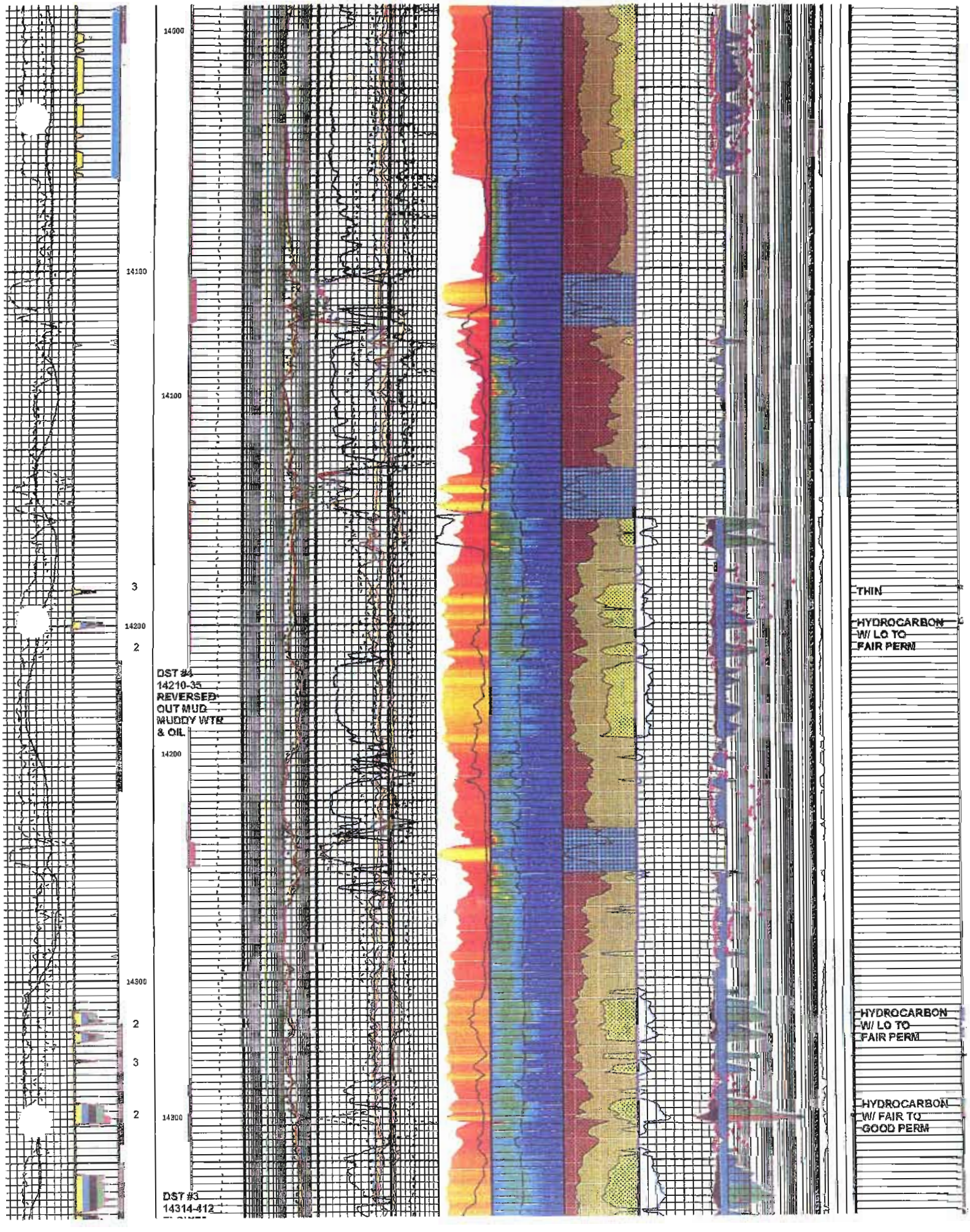
SOUTH COOK INLET STATE #2
17 Aug 2007 @ 8:30
DEPTH (FT)
Interval: 13500.00 to 15144.00
Depth Scale Ratio: 1/240

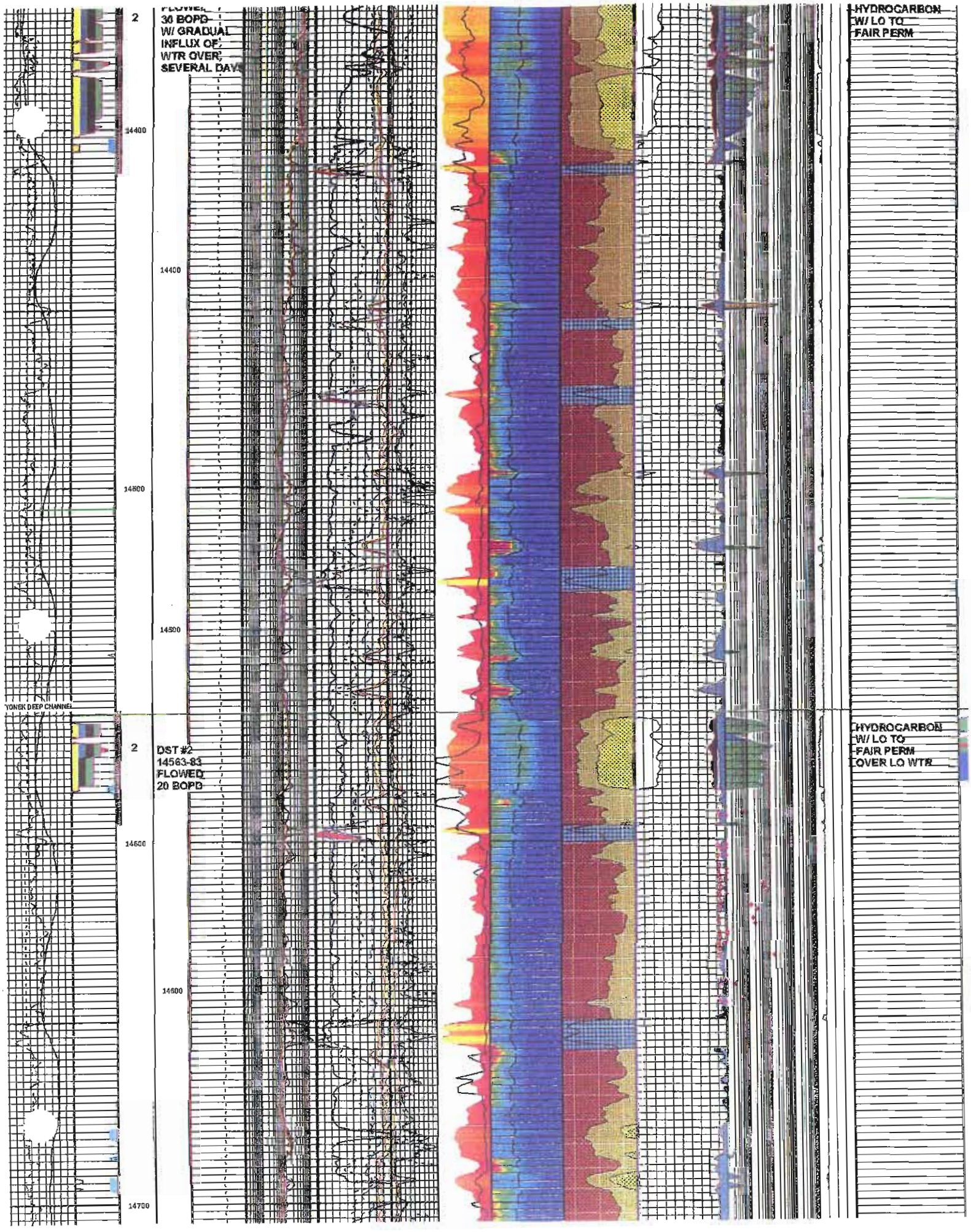
GRC 0 GAPI 150
CALI 6 IN 16
SPBL -160 MV 40
FW_FLAG 0 6
FF_FLAG 0 6
LW_FLAG 0 6
FHC_FLAG 0 6
KF_FLAG 0 6
KG_FLAG 0 6
FW_FLAG 0
0 FF_FLAG
FFLW_FLAG
LFHC_FLAG
FHKF_FLAG
KFKG_FLAG
DEPTH FT
DST 0 8
0 DST
TVD FT
TENS 2000 LBS 4000
CALIFLG 0 10
0 CALIFLG
RSFL 0.2 OHMM 200
RILM 0.2 OHMM 200
RILD 0.2 OHMM 200
RT 0.2 OHMM 200
RWG 0.02 OHMM 20
PHIDNOM 0.6 DEC 0
PHIDEDIT 0.6 DEC 0
PDSS 0.6 DEC 0
PCNSS 0.6 DEC 0
PSSS 0.6 DEC 0
PEF 0 B/E 20
PDSS PCNSS
DRHO -0.25 G/C3 0.25
AHNV 0 OHMM20
MNOR 0 OHMM20
TGAS 0 UNIT100
TGAS 0 UNIT1000
MHV MNOR
0 TGAS
ROP 60 FT/HR 0
1 NUMATR
TEXGN 0.1 100
CLAY 0 DEC 1
SMALL 0 DEC 1
MEDIUM 0 DEC 1
LARGE 0 DEC 1
VCOAL 0 dec 1
0 CLAY
CLAY SMALL
SMALL MEDIUM
MEDIUM LARGE
0 VCOAL
SW 1 DEC -1
BVW 0.6 DEC 0
PHIE 0.6 DEC 0
SWI 0.6 DEC 0
COREPHIE 60 % 0
1 SW
BVW BVI
PHIE BVW
BVI 0
NUPERM 0.1 MD 1000
KAIR 0.1 MD 1000
NUPERM 1000
W 1.5 3.5
NUSPEC4

13500
13600
13600

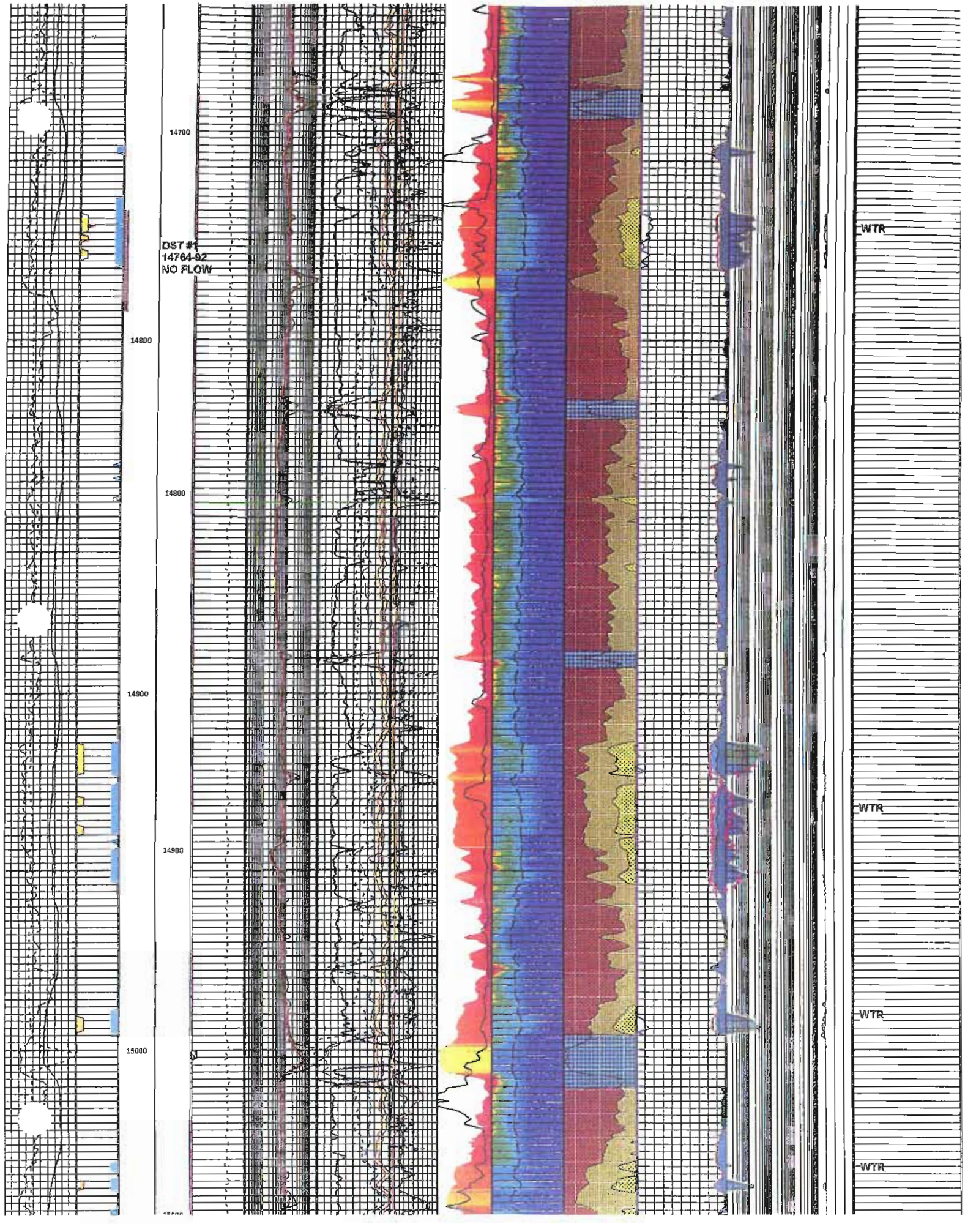
WTR
WTR

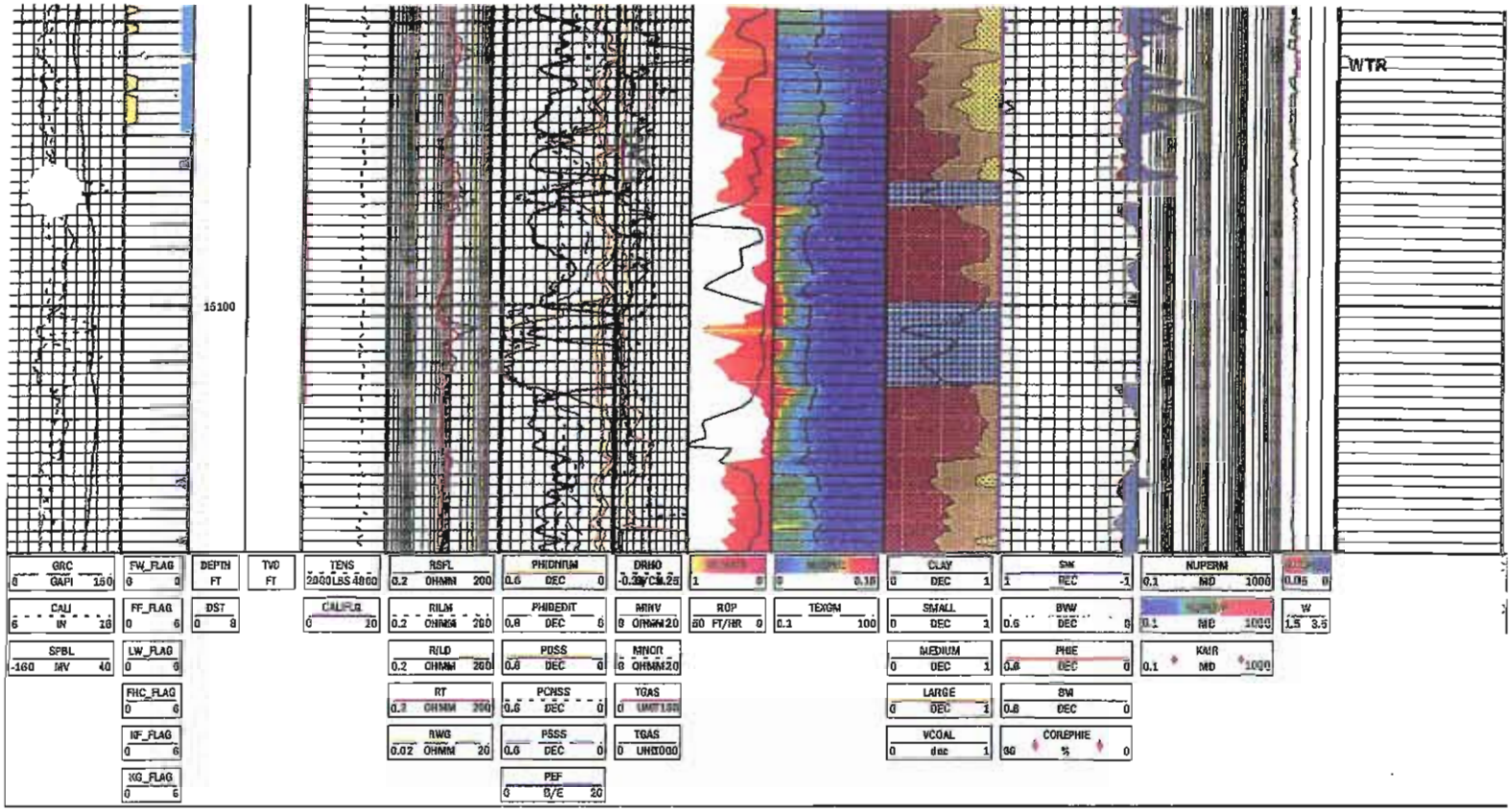

13700
TYONEK DEEP SUNFISH
13700
2
13800
13800
13900
13900
14000
DST #5
13988-14025
REVERSED
OUT OIL CUT
MUDDY WTR
HYDROCARBON
W/ LO TO
FAIR PERM
WTR
WTR
WTR
WTR


14000
14100
14100
3
14200
2
DST #4
14210-35
REVERSED
OUT MUD
MUDDY WTR
& OIL
14200
14300
2
3
2
14300
DST #3
14314-412
THIN
HYDROCARBON
W/ LO TO
FAIR PERM
HYDROCARBON
W/ LO TO
FAIR PERM
HYDROCARBON
W/ FAIR TO
GOOD PERM



2
FLOWED
30 BOPD
W/ GRADUAL
INFLUX OF
WTR OVER
SEVERAL DAYS
HYDROCARBON
W/ LO TO
FAIR PERM
14400
14400
14500
14500
YONEK DEEP CHANNEL
2
DST #2
14563-83
FLOWED
20 BOPD
HYDROCARBON
W/ LO TO
FAIR PERM
OVER LO WTR
14600
14600
14700


14700
DST #1
14764-92
NO FLOW
14800
14800
14900
14900
15000
WTR
WTR
WTR
WTR


WTR
15100
GRC
0 GAPI 150
CALI
6 IN 16
SPBL
-160 MV 40
FW_FLAG
0 0
FF_FLAG
0 6
LW_FLAG
0 6
FHC_FLAG
0 6
KF_FLAG
0 6
KG_FLAG
0 6
DEPTH
FT
DST
0 8
TVD
FT
TENS
2000LBS 4000
CALIFLG
0 10
RSFL
0.2 OHMM 200
RILM
0.2 OHMM 200
RILD
0.2 OHMM 200
RT
0.2 OHMM 200
RWG
0.02 OHMM 20
PHIDNRM
0.6 DEC 0
PHIDEDIT
0.6 DEC 0
PDSS
0.6 DEC 0
PCNSS
0.6 DEC 0
PSSS
0.6 DEC 0
PEF
0 B/E 20
DRHO
MINV
0 OHMM 20
MNOR
0 OHMM 20
TGAS
0 UNIT100
TGAS
0 UNIT000
ROP
50 FT/HR 0
TEXGM
0.1 100
CLAY
0 DEC 1
SMALL
0 DEC 1
MEDIUM
0 DEC 1
LARGE
0 DEC 1
VCOAL
0 dec 1
SW
1 DEC -1
BVW
0.6 DEC 0
PHIE
0.6 DEC 0
SW
0.6 DEC 0
COREPHIE
30 % 0
NUPERM
0.1 MD 1000
0.1 MD 1000
KAIR
0.1 MD 1000
W
1.5 3.5

SRS STATE #1

318' OIL

NuTech ENERGY ALLIANCE

Advanced Petrophysical Evaluation

NuLook™ N-Vision

Evaluated For:

RENAISSANCE ALASKA

Project #: 008053

Completed: 8/17/2007

Company	SHELL OIL COMPANY			
Well	SRS STATE #1			
Field	WILDCAT			
County	KENAI	State ALASKA	Country USA	
Location	1225.47' FSL & 1940.83' FWL			

CONFIDENTIAL

318' #3 OIL

Section	24	Township 10N	Range 11W	API Num 50733100370000
Permanent Datum	MLLW		Elevation 0	K.B. -69
Log Measured From	OF	, -69	Above Perm Datum	D.F. 31
Drilling Meas From	OF			G.L. —

	Run 1	Run 2	Run 3
Date	28-MAY-1965	22-JUN-1965	30-JUN-1965
Depth - Driller	16208	16009	16375
Depth - Logger	16231	16018	16381
Btm Log interval	16227	16014	16377
Top Log interval	13342	16227	16014
Casing - Driller	7@13341	7@13341	7@13341
Casing - Logger	13342	---	—
Bitsize	6.125	6.125	6.125
Type Fluid in Hole	CHROM LIGNO	DIESEL	DIESEL
Dens. / Visc.	12.5 / 70	12.4 / 64	12.4 / 64
pH / Fluid Loss	11.5 / 2.6	9.5 / 4	10.5 / 3.7
Source of Sample	CIRC	CIRC	CIRC
Rm @ Meas. Temp	1.20@81	1.45@66	1.55@66
Rmf @ Meas. Temp	0.53@70	0.63@65	0.69@65
Rmc @ Meas. Temp	---@---	3.80@65	4.55@65
Source: Rmf / Rmc	MEAS / ---	MEAS / MEAS	MEAS / MEAS
Rm @ BHT	0.46@216	0.42@224	0.48@230
Max. Rec. Temp.	216	224	230

*** CURVE MNEMONICS ***

GR, [GRC]	- GAMMA RAY, [ENVIRONMENTALLY CORRECTED]
SP, [SPBL]	- SPONTANEOUS POTENTIAL, [BASELINE SHIFTED]
CALI, CAL, HCAL, CALX, CALY	- CALIPER
FF_FLAG	- FREE FLUID FLAG
FHC_FLAG	- FREE HYDROCARBON FLAG
LW_FLAG	- LOW WATER FLAG
KF_FLAG	- FAIR PERMEABILITY FLAG
KG_FLAG	- GOOD PERMEABILITY FLAG
MDR_FLAG	- RESISTIVITY MINERAL FLAG
SP_FLAG	- PERMEABILITY MINERAL FLAG
MD_FLAG	- GAS MINERAL FLAG
PHIE_FLAG	- POROSITY MINERAL FLAG
ILD, LLD, HDRS, A*90, H*R9	- DEEP RESISTIVITY
ILM, LLS, HMRS, A*30, H*R3	- MEDIUM RESISTIVITY
SFL, SFLU, RFOC, DFL, MSFL	- SHALLOW RESISTIVITY
PDSS, PDLS, PHID, [PHIDEDIT]	- DENSITY POROSITY, [EDITED]
PCNSS, PCNLS, PHIN	- NEUTRON POROSITY
PSSS, PHIS	- SONIC POROSITY
PE, PEF, PEFZ	- PHOTO ELECTRIC FACTOR
DRHO, HDRA, ZCOR, CORR	- DENSITY CORRECTION
TGAS	- TOTAL GAS FROM MUD LOG
HMIN, HNNO, HINV, HNOR, RLHL, RNHL	- MICROLOG CURVES
MUHATR	- CLAY VOLUME INDICATOR
ROP	- RATE OF PENETRATION
CLAY, SMALL, MEDIUM, LARGE	- TEXTURAL DISTRIBUTION
VSS, VLS, VDOL	- MATRIX VOLUMES
SW	- WATER SATURATION
BVW	- CONVENTIONAL BULK VOLUME WATER
BVI, BVIC, HBVI, HXBVI, BFV	- IRREDUCIBLE WATER
PHIE, HPHI, CHRP	- EFFECTIVE POROSITY
CORPOR, CORPERM	- POROSITY, PERM FROM CORES
HSIG, TCMR	- TOTAL POROSITY FROM NMR
PERM, HPERM	- TOTAL PERMEABILITY
NUPERM	- TEXTURAL PERM
W	- TEXTURAL PARAMETER
CODE	- PAY QUALITY INDICATOR
PAYFLAG	- POTENTIAL PAY INTERVAL
RWG	- RW USED IN ANALYSIS

*** PARAMETERS ***

Rw	=	TOP '	- 13570'	0.397@	75°F	.	N	=	TOP '	- BTM ' W
Rw	=	13570'	- 15050'	0.142@	75°F	.	N	=	____ '	- ____ ' ____
Rw	=	15050'	- BTM '	0.237@	75°F	.	N	=	TOP '	- BTM ' 2
Rw	=	____ '	- ____ '	___	@ ___°F	.	N	=	____ '	- ____ ' ____
Rw	=	____ '	- ____ '	___	@ ___°F	.				
Rw	=	____ '	- ____ '	___	@ ___°F	.	Perm			

*** REMARKS ***

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RHOM = ____' - ____' -.__
RHOM = ____' - ____' -.__

DTMtx = TOP ' - BTM ' 51
DTMtx = ____' - ____' -.__
DTMtx = ____' - ____' -.__

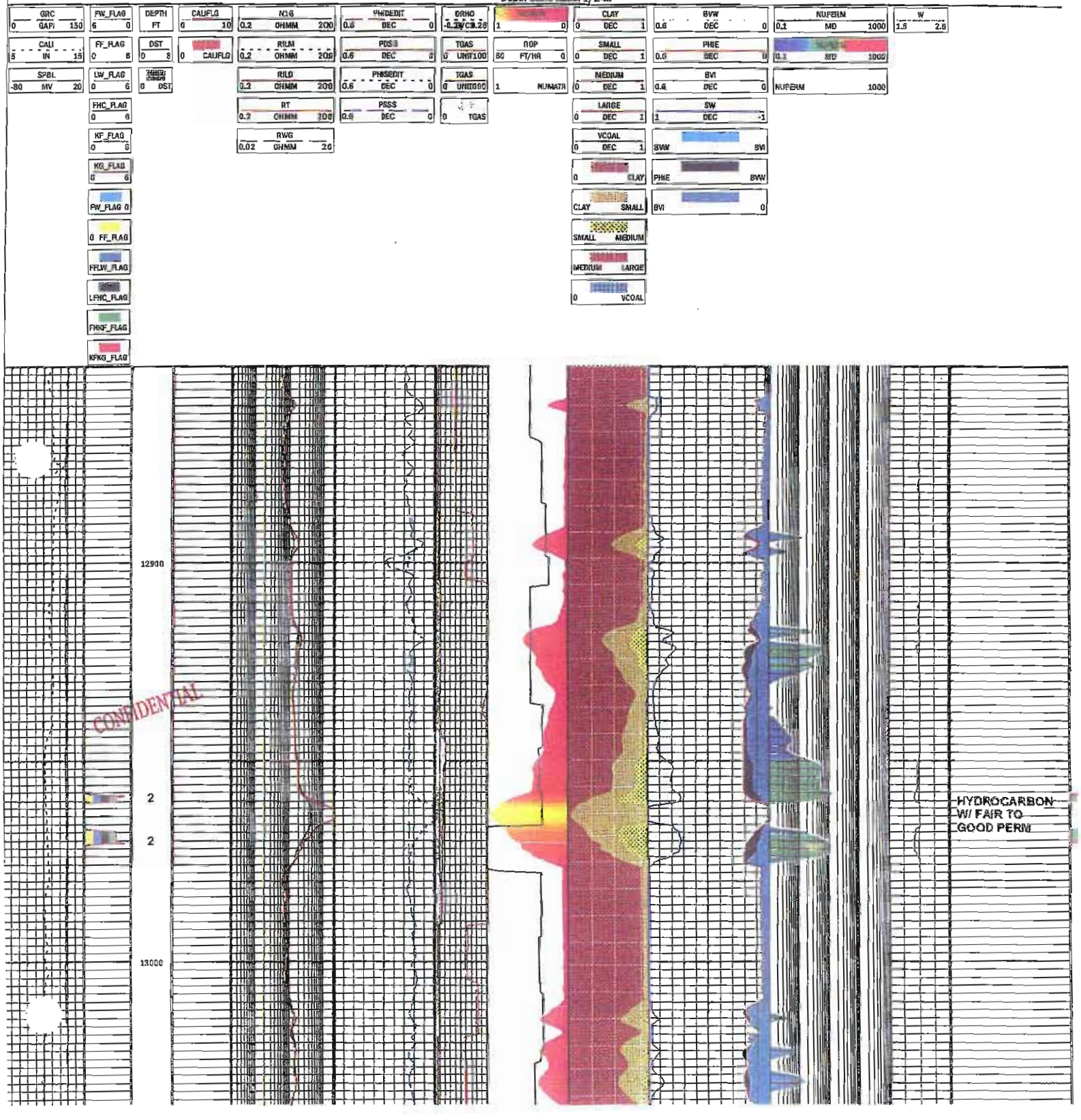
Coeff = ____' - ____' ____
Coeff = ____' - ____' ____

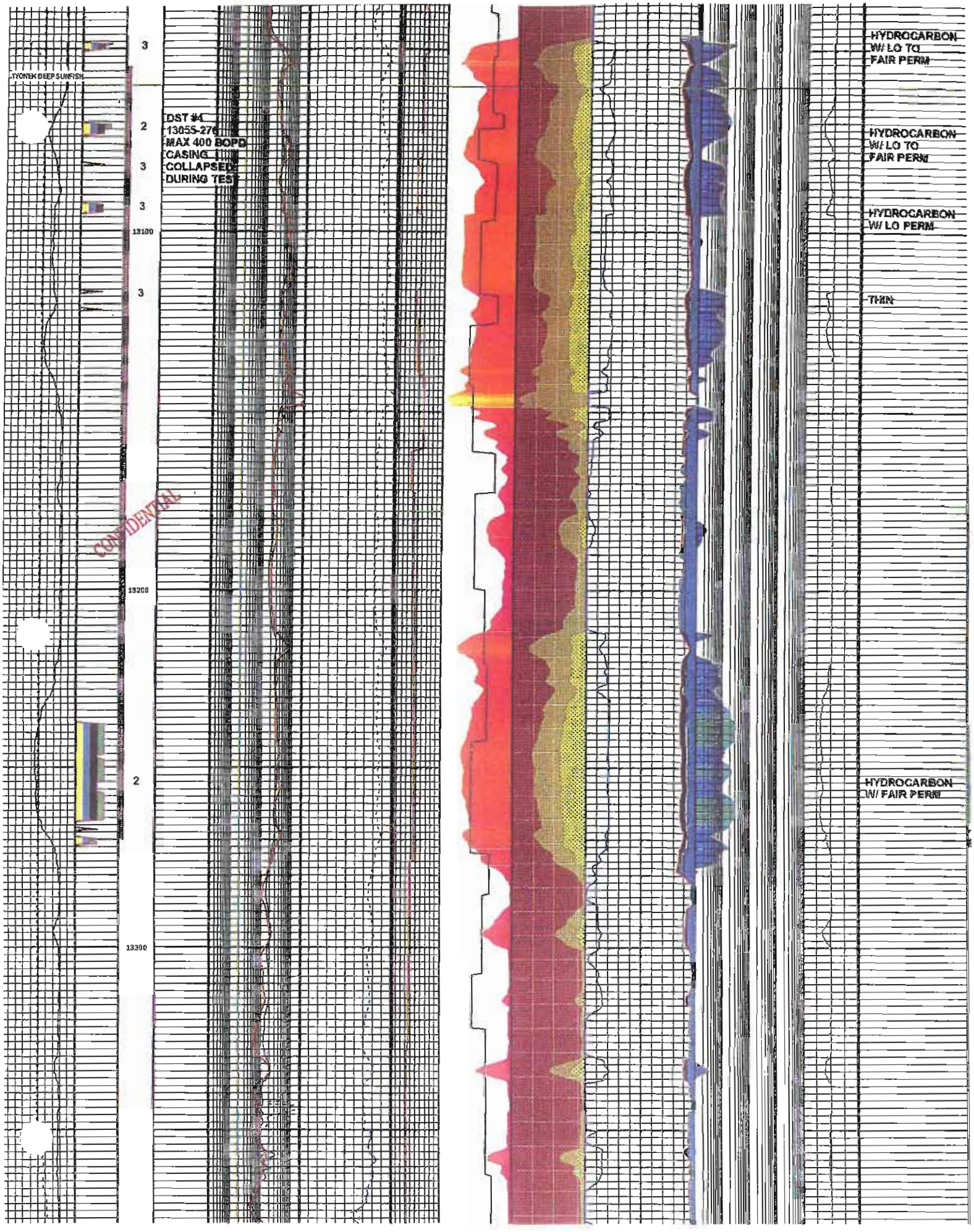
Flag Cutoffs
VClay = .4 Free Fluid = .03
Kmin = .1 Free Water = .01
Kfair = 1 TooMuchWtr = .015
Kgood = 10 LowHydrcbn = .6

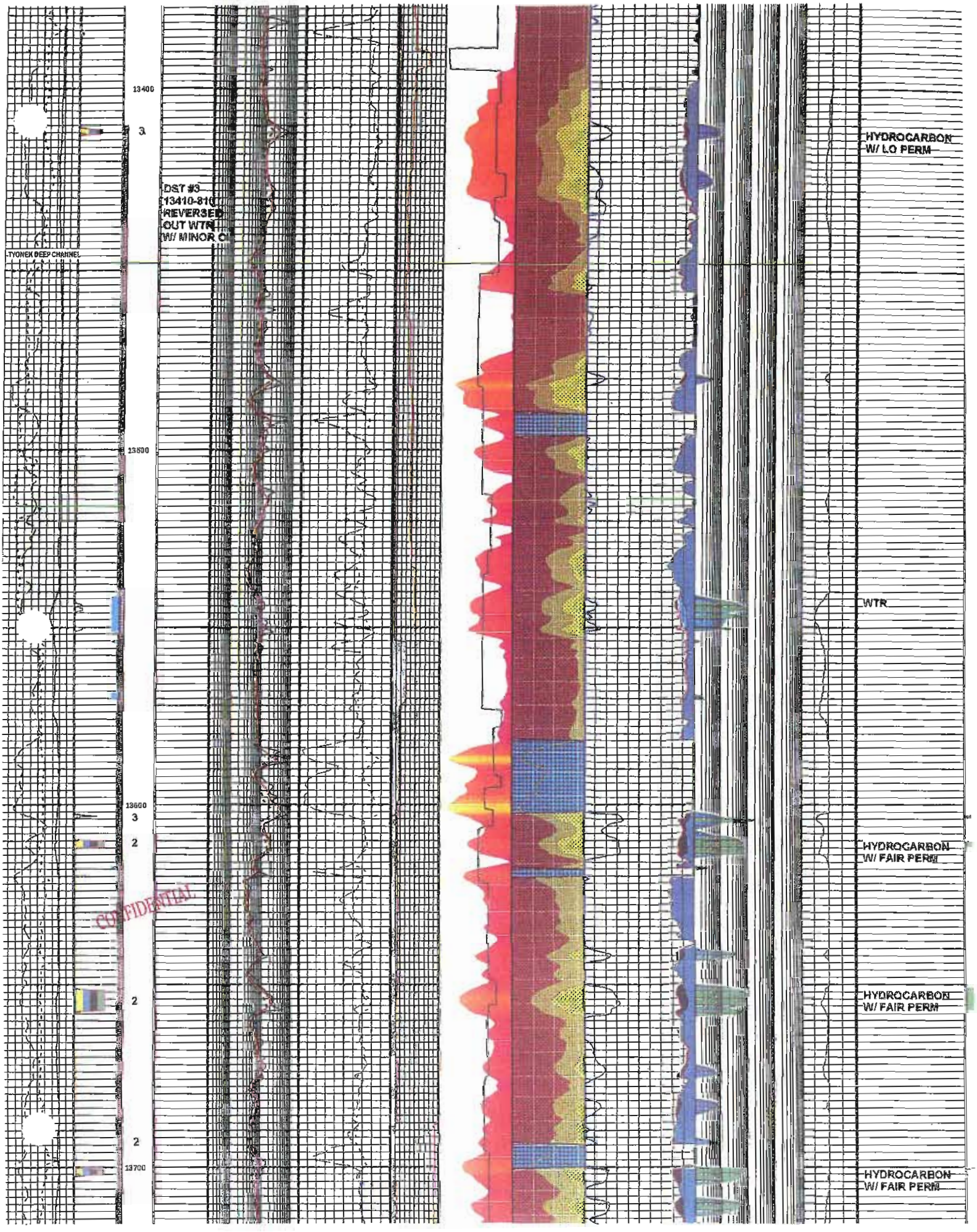
our current Price Schedule.

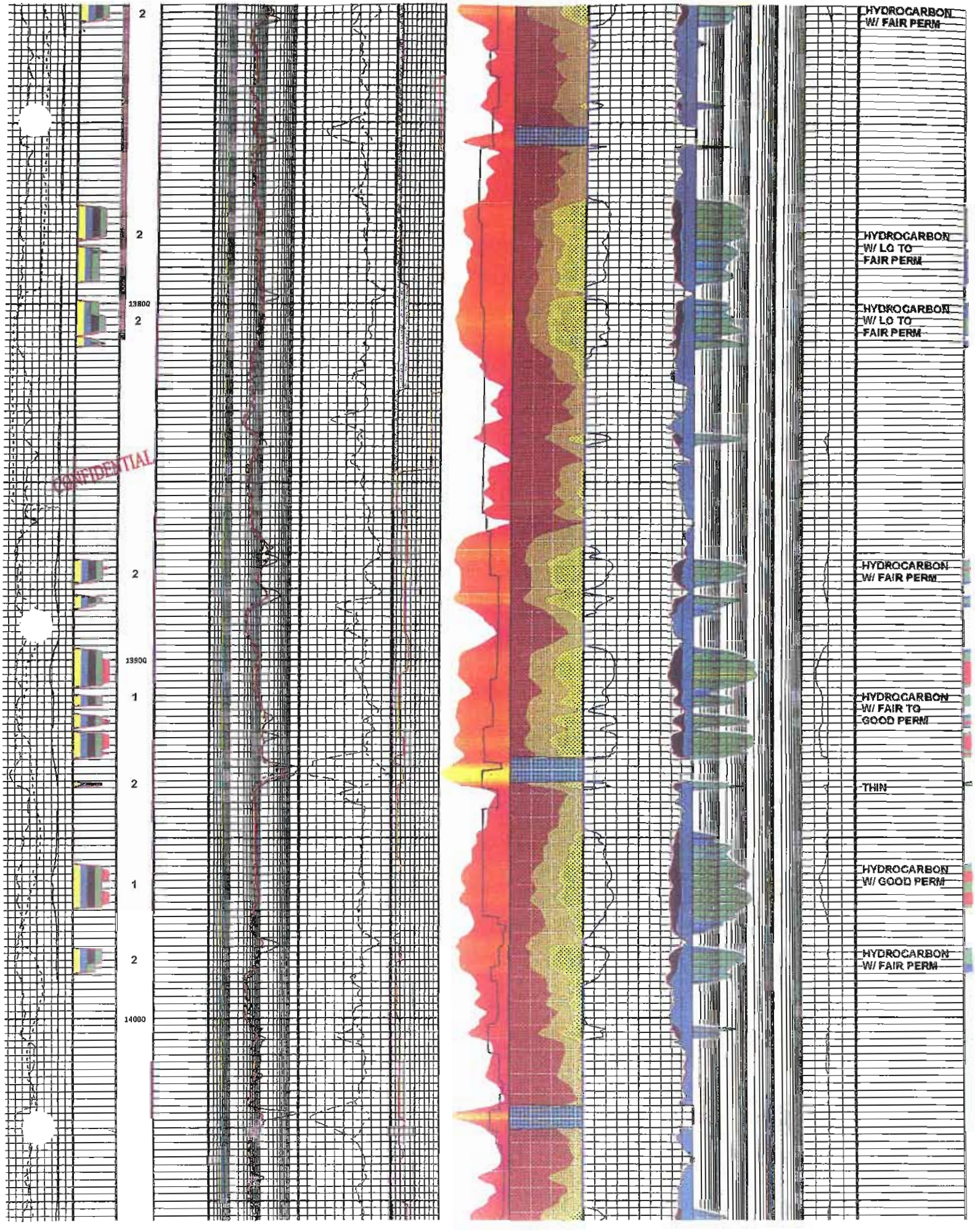
PROJECT #: Renaissance008053
TG/DW

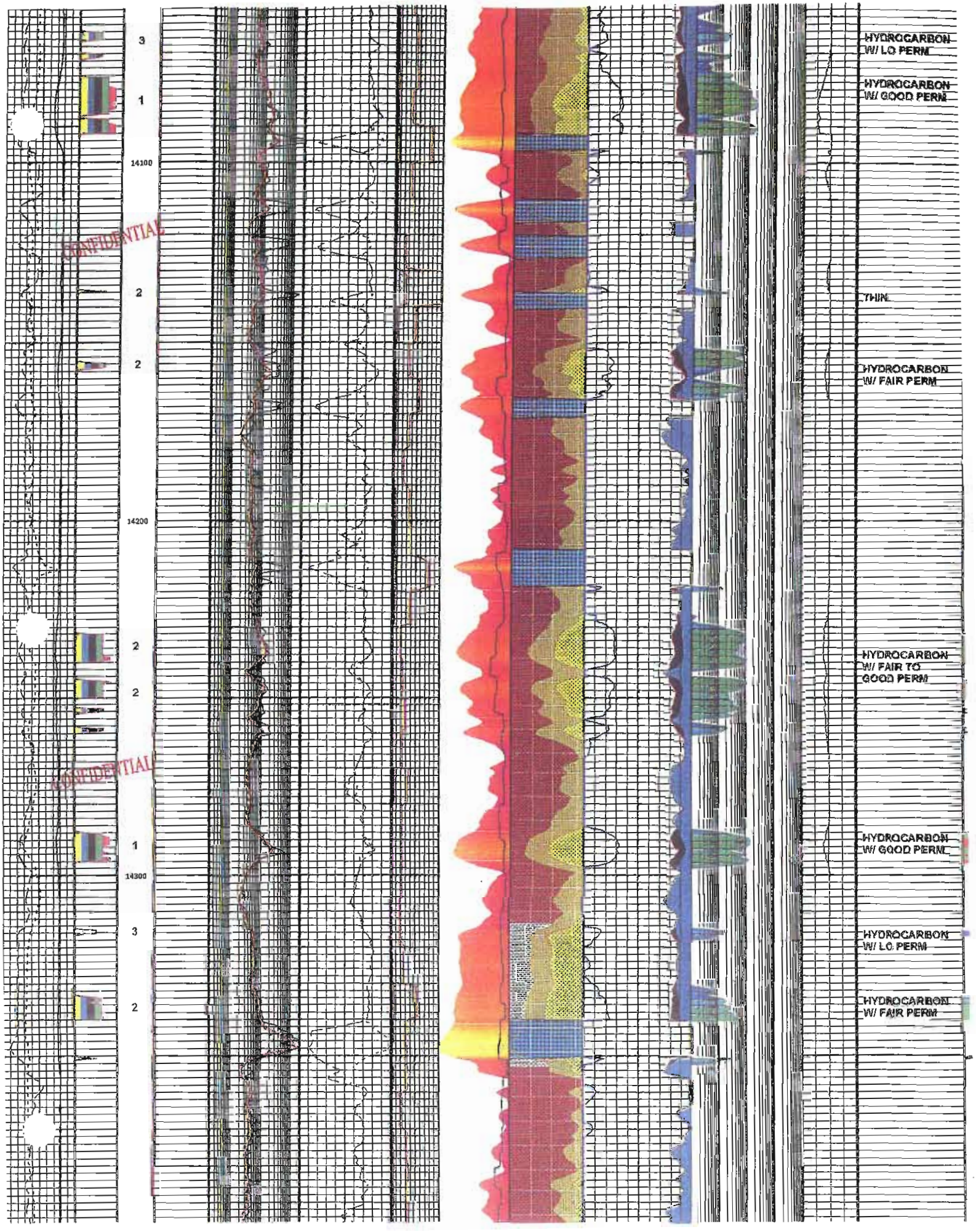
SRS STATE #1
17 Aug 2007 @ 9:15
DEPTH (FT)
Interval: 12850.00 to 16336.00
Depth Scale Ratio: 1/240

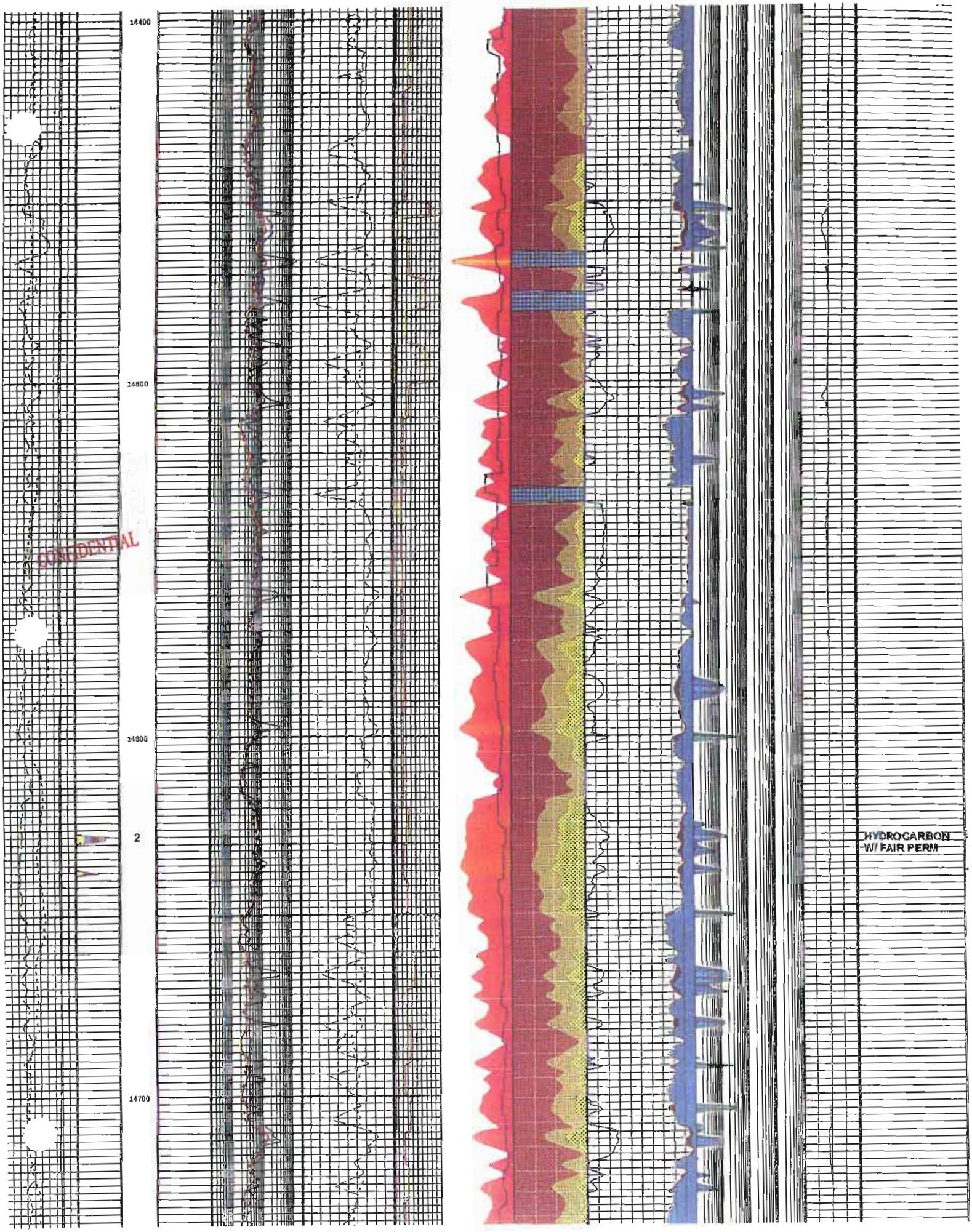


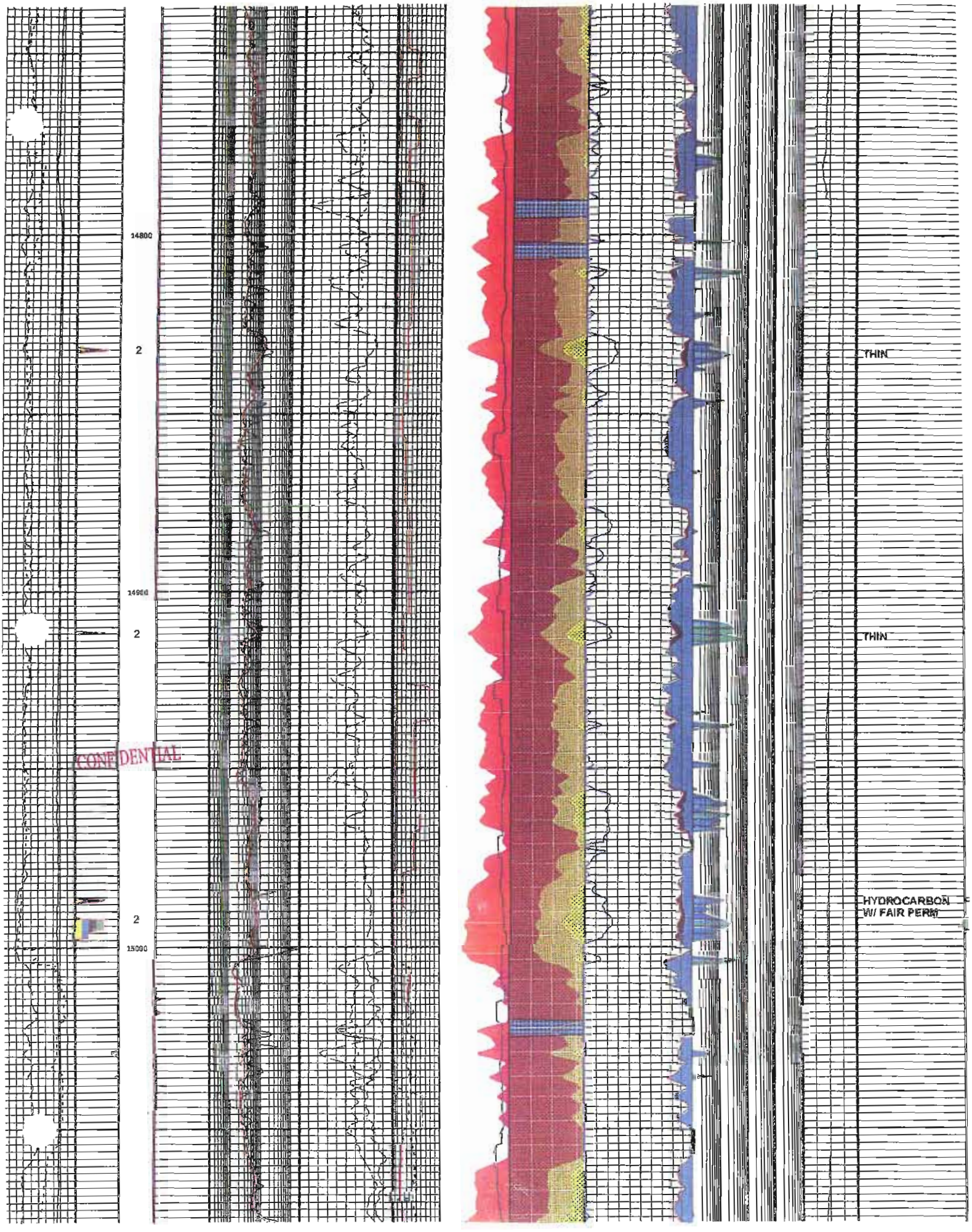

TYONEK DEEP SUNFISH
3
2
3
3
13100
3
2
13200
13300
DST #4
13055-276
MAX 400 BOPD
CASING
COLLAPSED
DURING TEST
CONFIDENTIAL
HYDROCARBON
W/ LO TO
FAIR PERM
HYDROCARBON
W/ LO TO
FAIR PERM
HYDROCARBON
W/ LO PERM
THIN
HYDROCARBON
W/ FAIR PERM

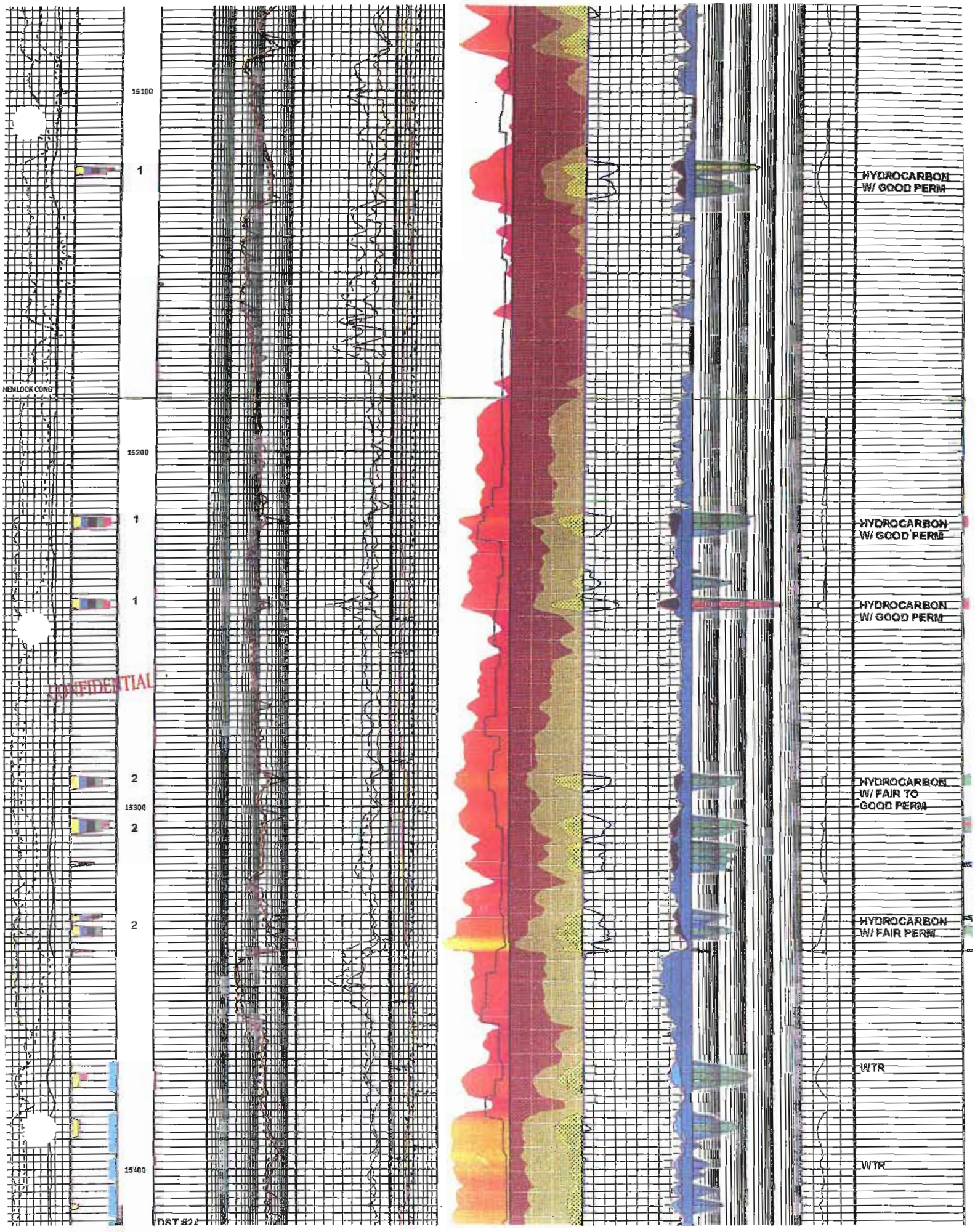

13400
3
DST #3
13410-810
REVERSED
OUT WTR
W/ MINOR O
TYONEK DEEP CHANNEL
13500
13600
3
2
2
2
13700
HYDROCARBON
W/ LO PERM
WTR
HYDROCARBON
W/ FAIR PERM
HYDROCARBON
W/ FAIR PERM
HYDROCARBON
W/ FAIR PERM
CONFIDENTIAL

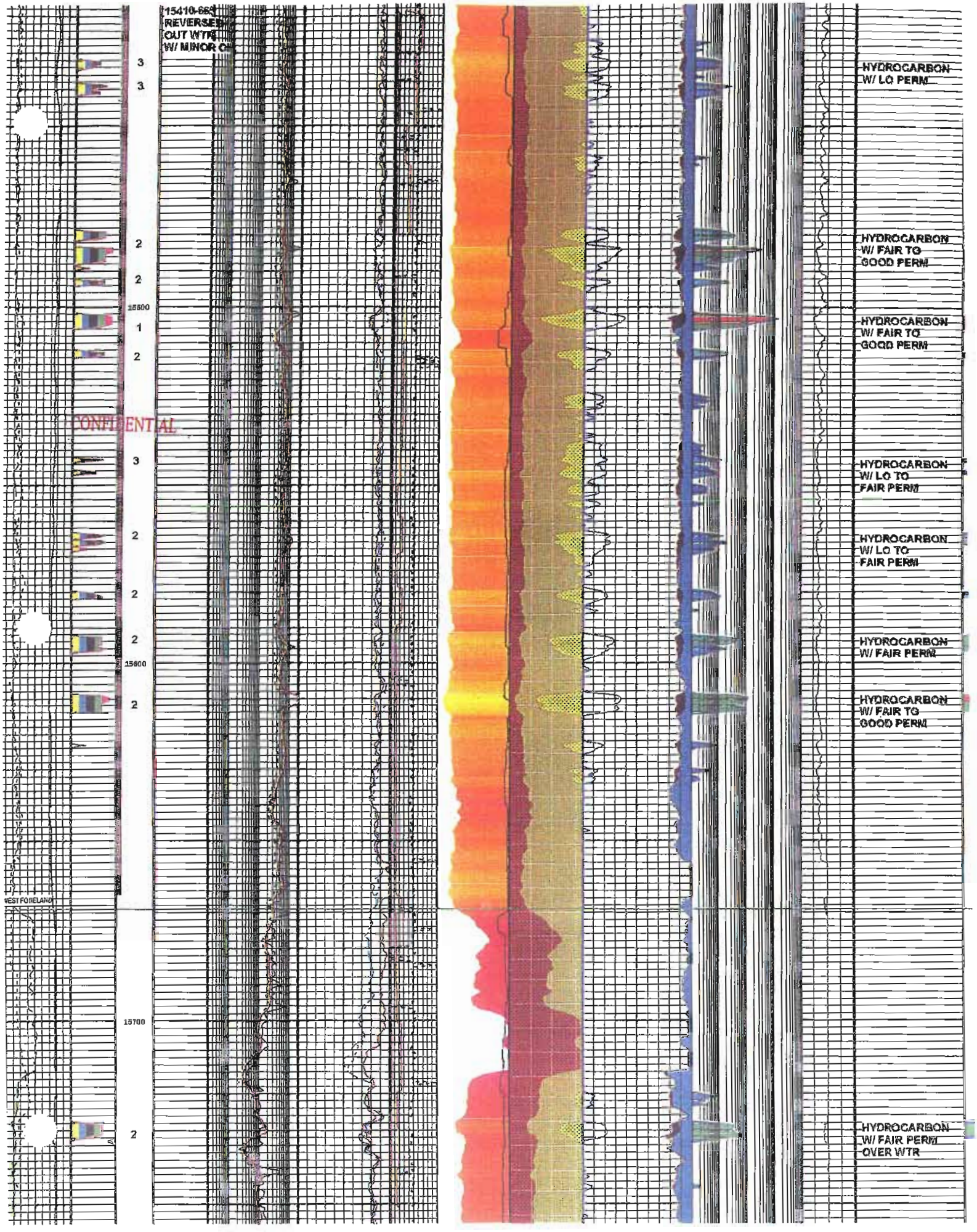

2
2
13800
2
CONFIDENTIAL
2
13900
1
2
1
2
14000
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ LO TO FAIR PERM
HYDROCARBON W/ LO TO FAIR PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ FAIR TO GOOD PERM
THIN
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ FAIR PERM

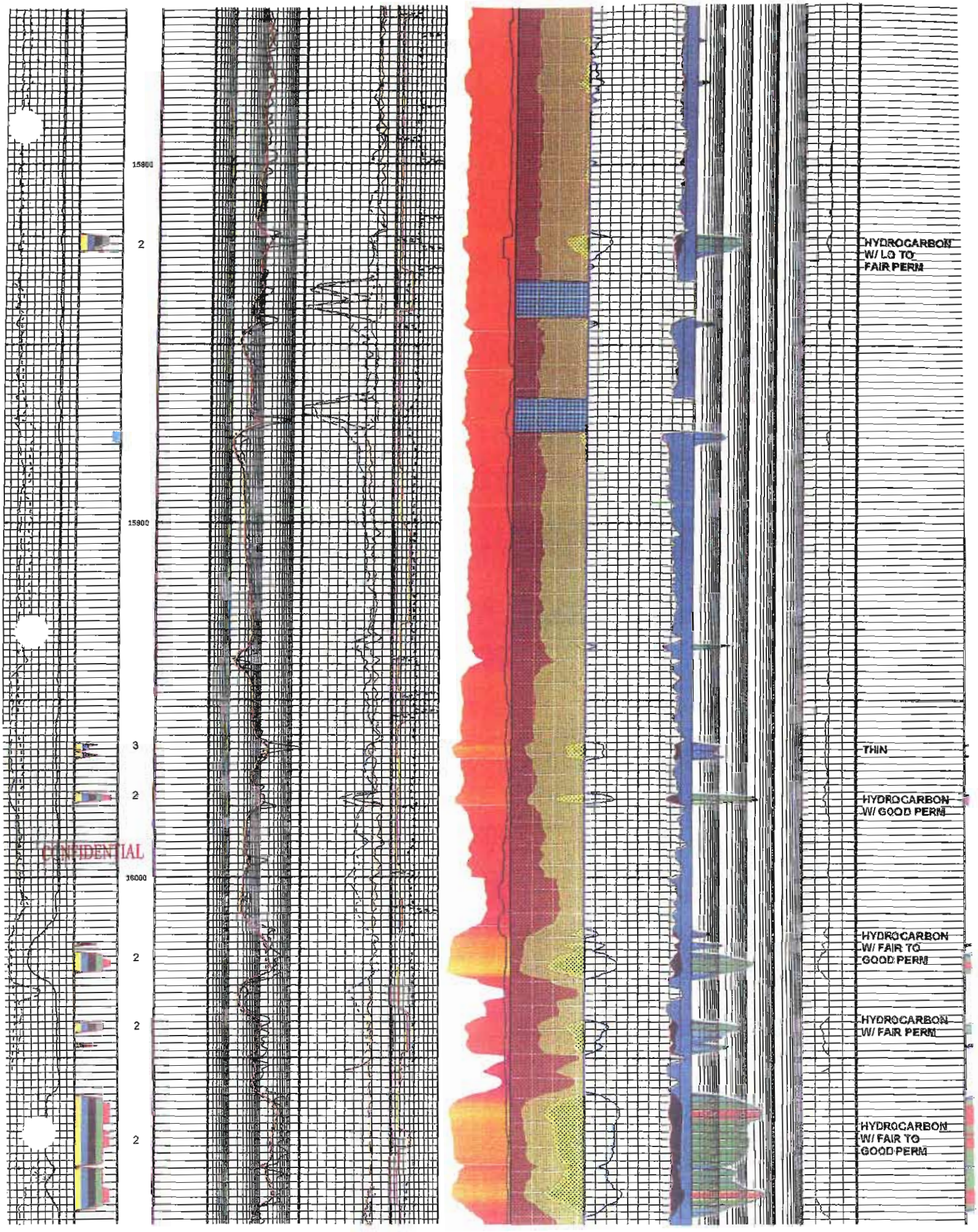

3
1
14100
CONFIDENTIAL
2
2
14200
2
2
CONFIDENTIAL
1
14300
3
2
HYDROCARBON W/ LO PERM
HYDROCARBON W/ GOOD PERM
THIN
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ FAIR TO GOOD PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ LO PERM
HYDROCARBON W/ FAIR PERM

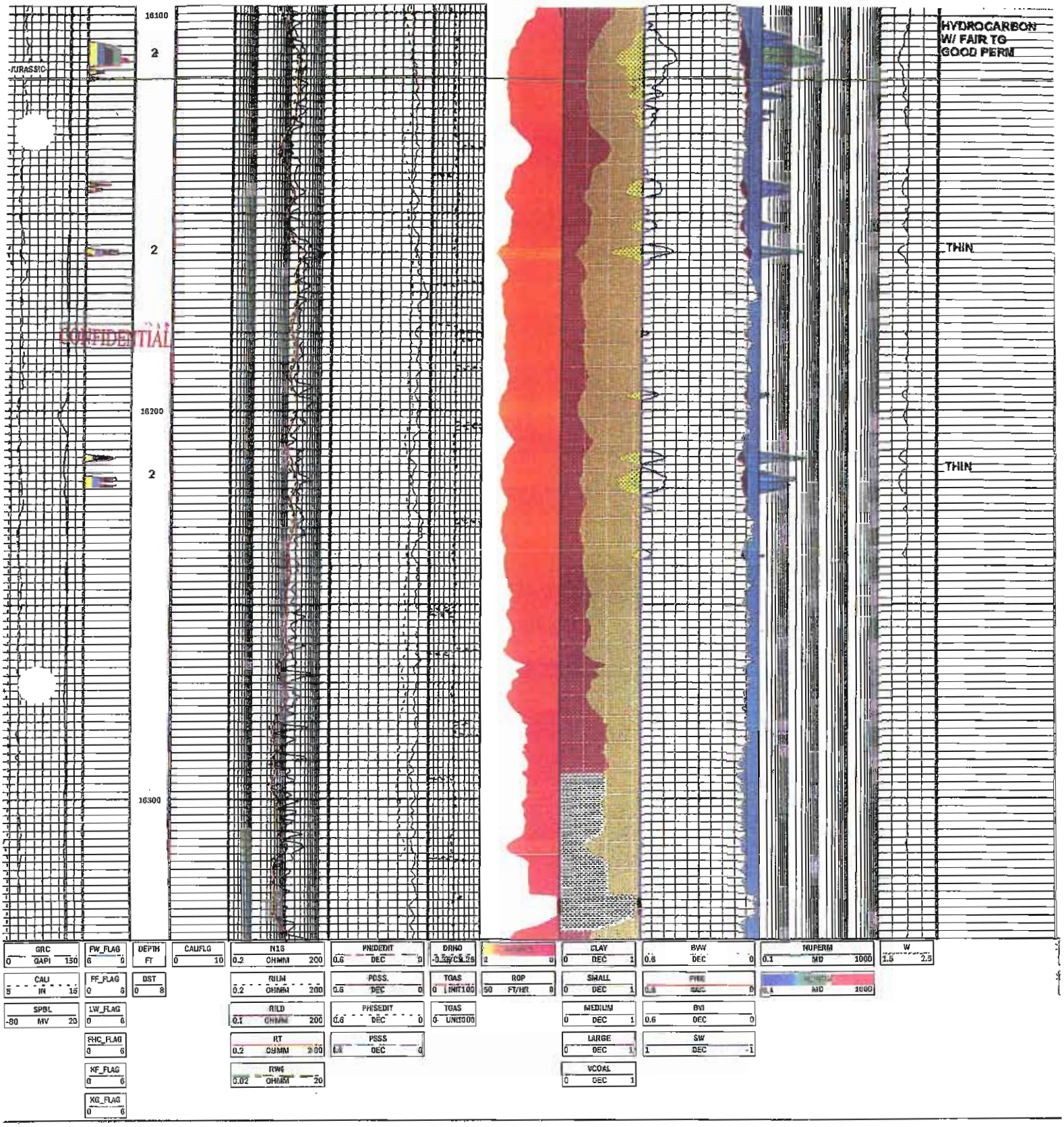

14400
14500
14600
14700
2
CONFIDENTIAL
HYDROCARBON
W/ FAIR PERM


14800
2
14900
2
CONFIDENTIAL
2
15000
THIN
THIN
HYDROCARBON
W/ FAIR PERM


15100
1
HEMLOCK CONG
15200
1
1
CONFIDENTIAL
2
15300
2
2
15400
DST #2
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ FAIR TO GOOD PERM
HYDROCARBON W/ FAIR PERM
WTR
WTR


15410-68
REVERSED
OUT WTR
W/ MINOR C
3
3
2
2
15500
1
2
CONFIDENTIAL
3
2
2
2
15600
2
VEST FORELAND
15700
2
HYDROCARBON W/ LO PERM
HYDROCARBON W/ FAIR TO GOOD PERM
HYDROCARBON W/ FAIR TO GOOD PERM
HYDROCARBON W/ LO TO FAIR PERM
HYDROCARBON W/ LO TO FAIR PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ FAIR TO GOOD PERM
HYDROCARBON W/ FAIR PERM OVER WTR


15800
2
15900
3
2
CONFIDENTIAL
16000
2
2
2
HYDROCARBON W/ LO TO FAIR PERM
THIN
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ FAIR TO GOOD PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ FAIR TO GOOD PERM


JURASSIC
16100
2
2
16200
2
16300
HYDROCARBON W/ FAIR TO GOOD PERM
THIN
THIN
CONFIDENTIAL
GRC 0 GAPI 150
CALI 5 IN 16
SPBL -80 MV 20
FW_FLAG 6 0
FF_FLAG 0 6
LW_FLAG 0 6
RHC_FLAG 0 6
XF_FLAG 0 6
XG_FLAG 0 6
DEPTH FT
DST 0 8
CALFLG 0 10
N1S 0.2 OHMM 200
RILM 0.2 OHMM 200
RILD 0.2 OHMM 200
RT 0.2 OHMM 200
RWA 0.02 OHMM 20
PHIEDEIT 0.6 DEC 0
PDSS. 0.6 DEC 0
PHISEDIT 0.6 DEC 0
PSSS 0.6 DEC 0
DRHO -0.25 G/C3 0.25
TGAS 0 UNIT100
TGAS 0 UNIT100
ROP 50 FT/HR 0
CLAY 0 DEC 1
SMALL 0 DEC 1
MEDIUM 0 DEC 1
LARGE 0 DEC 1
VCOAL 0 DEC 1
BVW 0.6 DEC 0
PHIE 0.6 DEC 0
BVI 0.6 DEC 0
SW 1 DEC 0
NUPERM 0.1 MD 1000
W 1.5 2.5

SRS STATE #2

NuTech ENERGY ALLIANCE

Advanced Petrophysical Evaluation

NuLook™ N-Vision

Evaluated For:

RENAISSANCE ALASKA

Project #: 008402

Completed: 10/23/2007

Company	SHELL OIL COMPANY			
Well	SRS STATE #2			
Field	SOUTH COOK INLET WILDCAT			
County	KENAI	State ALASKA	Country USA	
Location	1562' FEL & 1022' FNL X=289,266.43 Y=2,521,120.42			
	LAT 60 53 43.11 N LONG 151 11 00.025 W			

Section	2	Township 9N	Range 11W	API Num	50733100300000
Permanent Datum	---		Elevation ---	K.B.	-87.0
Log Measured From	---	, ---	Above Perm Datum	D.F.	---
Drilling Meas From	---			G.L.	---

	Run 1	Run 2	Run 3
Date			
Depth - Driller			
Depth - Logger			
Btm Log Interval			
Top Log Interval			
Casing - Driller			
Casing - Logger			
Bitsize			
Type Fluid in Hole			
Dens. /Visc.			
pH / Fluid Loss			
Source of Sample			
Rm @ Meas. Temp			
Rmf @ Meas. Temp			
Rmc @ Meas. Temp			
Source: Rmf / Rmc			
Rm @ BHT			
Max. Rec. Temp.			

*** CURVE MNEMONICS ***

GR, [GRC]	- GAMMA RAY, [ENVIRONMENTALLY CORRECTED]
SP, [SPBL]	- SPONTANEOUS POTENTIAL, [BASELINE SHIFTED]
CALI, CAL, HCAL, CALX, CALY	- CALIPER
FF_FLAG	- FREE FLUID FLAG
FHC_FLAG	- FREE HYDROCARBON FLAG
LW_FLAG	- LOW WATER FLAG
KF_FLAG	- FAIR PERMEABILITY FLAG
KG_FLAG	- GOOD PERMEABILITY FLAG
MDR_FLAG	- RESISTIVITY MINERAL FLAG
SP_FLAG	- PERMEABILITY MINERAL FLAG
MD_FLAG	- GAS MINERAL FLAG
PHIE_FLAG	- POROSITY MINERAL FLAG
ILD, LLD, HDRS, A*9B, M*R9	- DEEP RESISTIVITY
ILM, LLS, HMRS, A*3O, M*R3	- MEDIUM RESISTIVITY
SFL, SFLU, RFOC, DFL, MSFL	- SHALLOW RESISTIVITY
PDSS, PDLS, PHID, [PHIDEDIT]	- DENSITY POROSITY, [EDITED]
PCNSS, PCNLS, PHIN	- NEUTRON POROSITY
PSSS, PHIS	- SONIC POROSITY
PE, PEF, PEFZ	- PHOTO ELECTRIC FACTOR
DRHO, HDRA, ZCOR, CORR	- DENSITY CORRECTION
TGAS	- TOTAL GAS FROM MUD LOG
HMIN, HMNO, MINV, MNOR, RLML, RNML	- MICROLOG CURVES
NUMATR	- CLAY VOLUME INDICATOR
ROP	- RATE OF PENETRATION
CLAY, SMALL, MEDIUM, LARGE	- TEXTURAL DISTRIBUTION
VSS, VLS, VDOL	- MATRIX VOLUMES
SW	- WATER SATURATION
BVW	- CONVENTIONAL BULK VOLUME WATER
BVI, BVIC, MBVI, MXBVI, BFV	- IRREDUCIBLE WATER
PHIE, MPHI, CMRP	- EFFECTIVE POROSITY
CORPOR, CORPERM	- POROSITY, PERM FROM CORES
MSIG, TCMR	- TOTAL POROSITY FROM NMR
PERM, MPERM	- TOTAL PERMEABILITY
NUPERM	- TEXTURAL PERM
W	- TEXTURAL PARAMETER
CODE	- PAY QUALITY INDICATOR
PAYFLAG	- POTENTIAL PAY INTERVAL
RWG	- RW USED IN ANALYSIS

*** PARAMETERS ***

Rw	=	13800'	- 14200'	.397@ 75	°F	M	=	TOP '	- BTM '	W
Rw	=	14200'	- BTM '	.159@ 75	°F	M	=	____'	- ____'	____
Rw	=	____'	- ____'	_.__ @ ___	°F	N	=	TOP '	- BTM '	2.0
Rw	=	____'	- ____'	_.__ @ ___	°F	N	=	____'	- ____'	____
Rw	=	____'	- ____'	_.__ @ ___	°F					
Rw	=	____'	- ____'	_.__ @ ___	°F	Perm				

*** REMARKS ***

All interpretations are opinions based on inferences from electrical or other measurements, and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretations made by any officers, agents or employees of NuTech Energy Alliance. These interpretations

RHOM = TOP ' - BTM ' 2.65
RHOM = ____ ' - ____ ' _.__
RHOM = ____ ' - ____ ' _.__

DTMtx = TOP ' - BTM ' 55.5
DTMtx = ____ ' - ____ ' _.__
DTMtx = ____ ' - ____ ' _.__

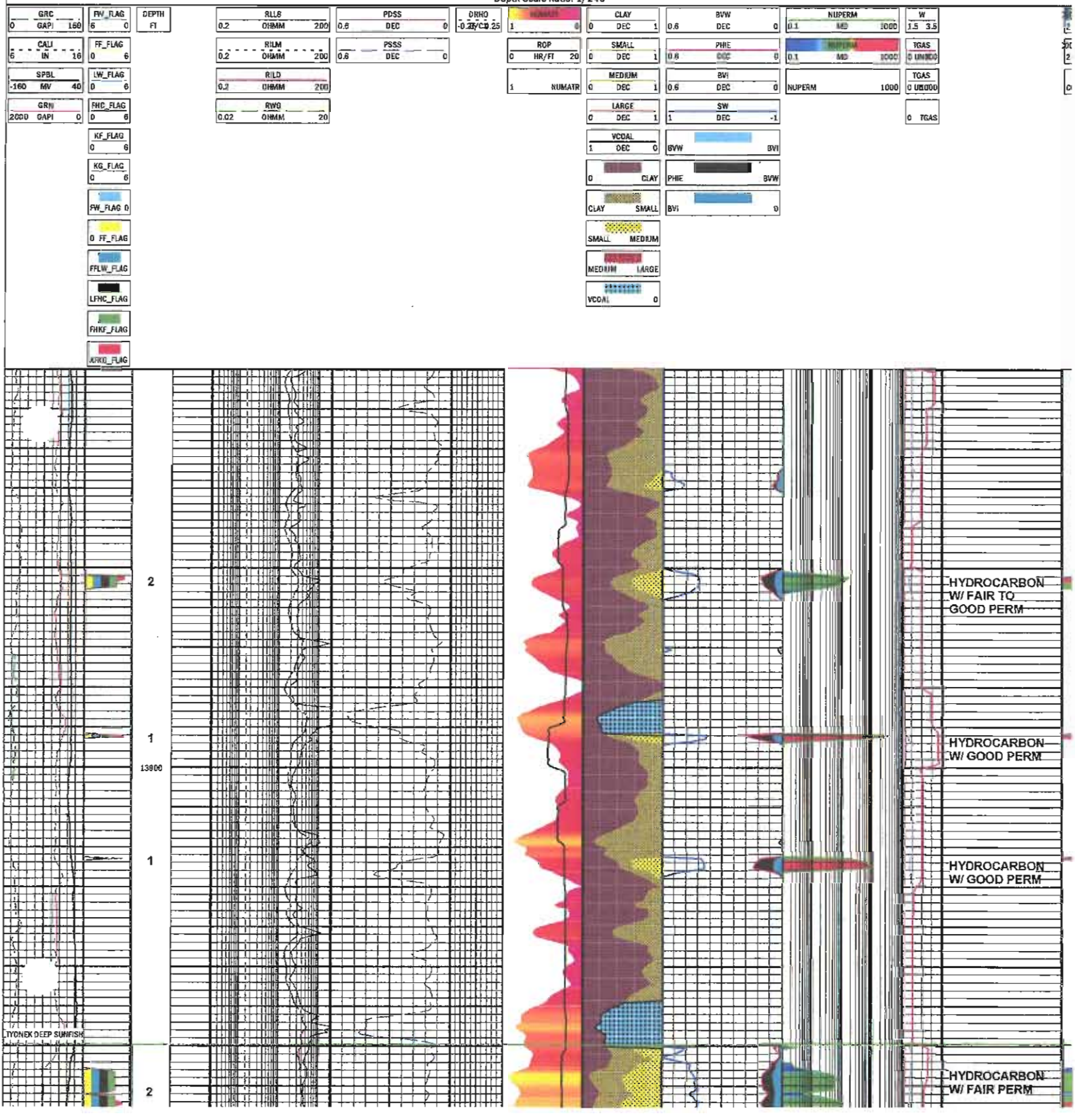
Coeff = TOP ' - BTM ' FF-7
Coeff = ____ ' - ____ ' ____
Coeff = ____ ' - ____ ' ____

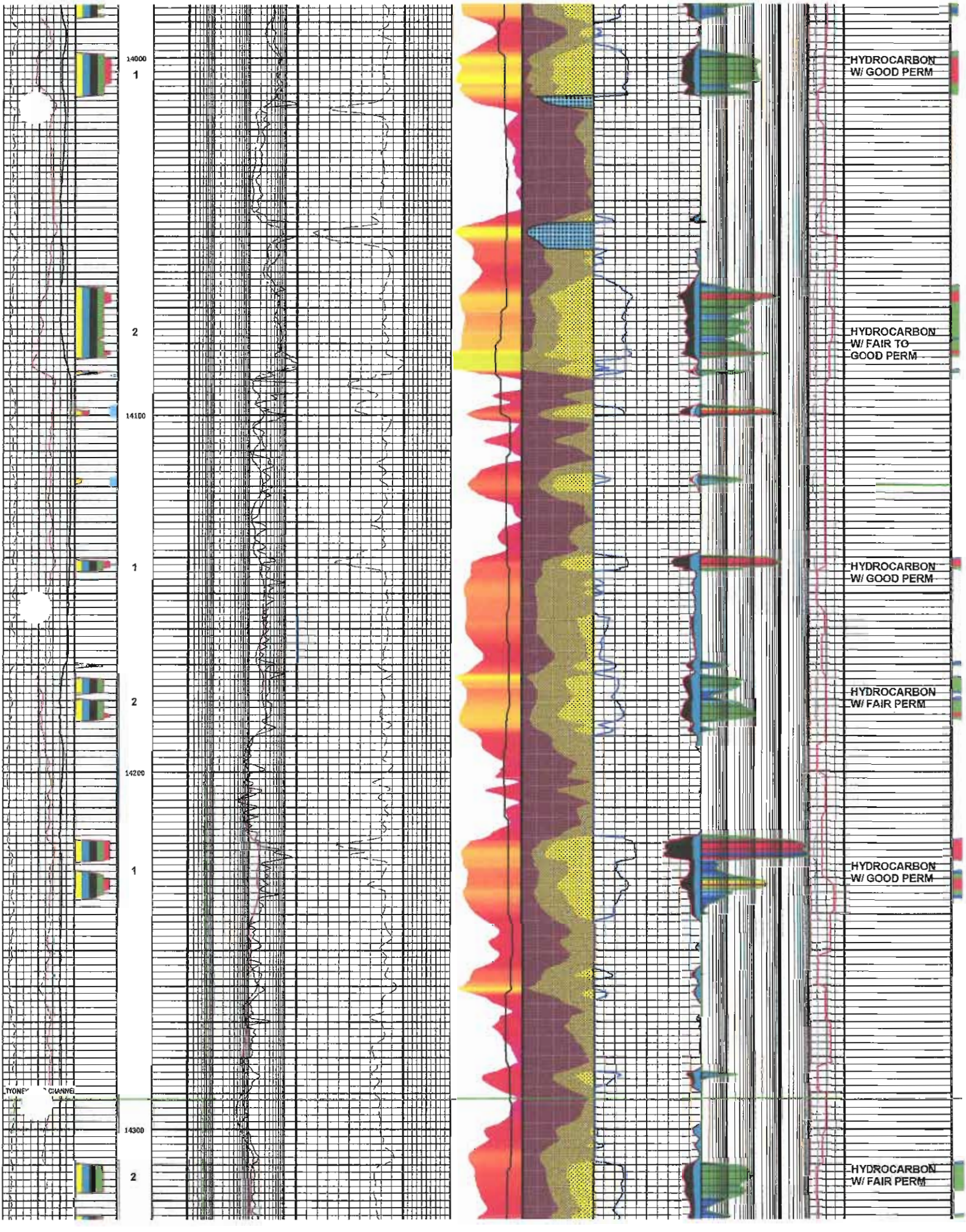
Flag Cutoffs
VClay = .40 Free Fluid = .03
Kmin = .10 Free Water = .01
Kfair = 1.0 TooMuchWtr = .013
Kgood = 10.0 LowHydrcbn = .60

are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

PROJECT ID: 008482
JJB

SRS STATE #2
23 Oct 2007 @ 15:03
DEPTH (FT)
Interval: 13800.00 to 15400.00
Depth Scale Ratio: 1/240

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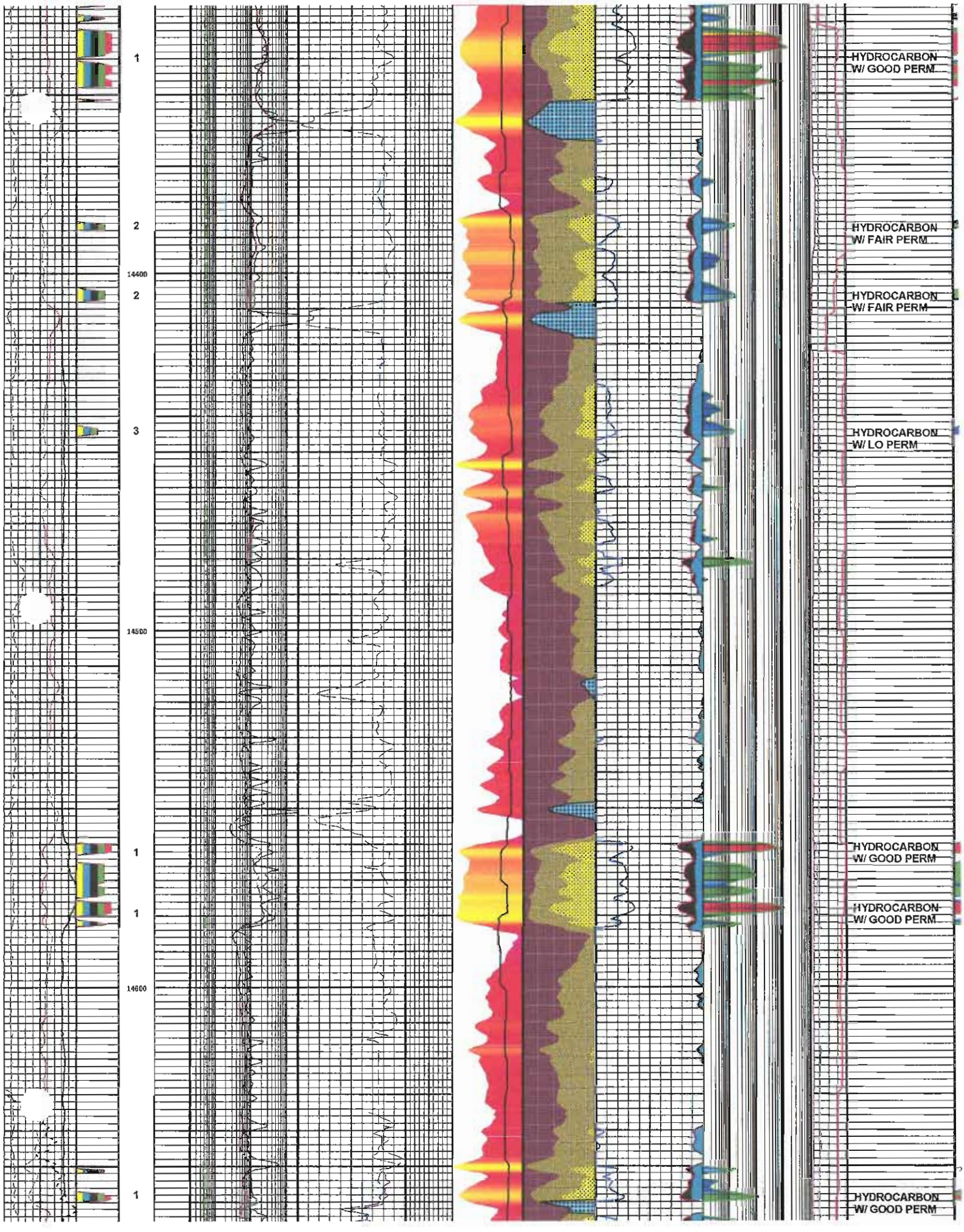
2
14100
1
2
14200
1
14300
2
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ FAIR TO GOOD PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ FAIR PERM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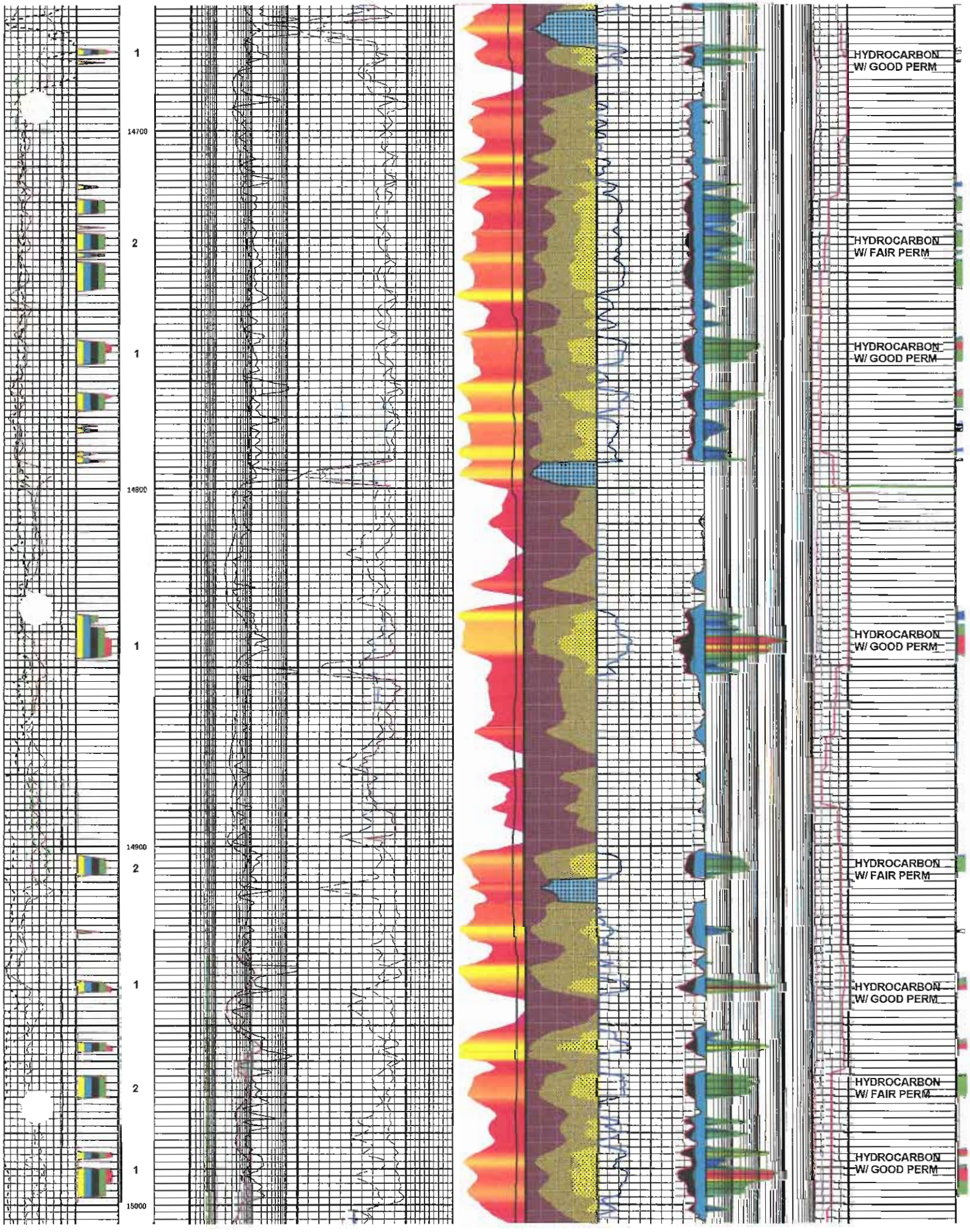
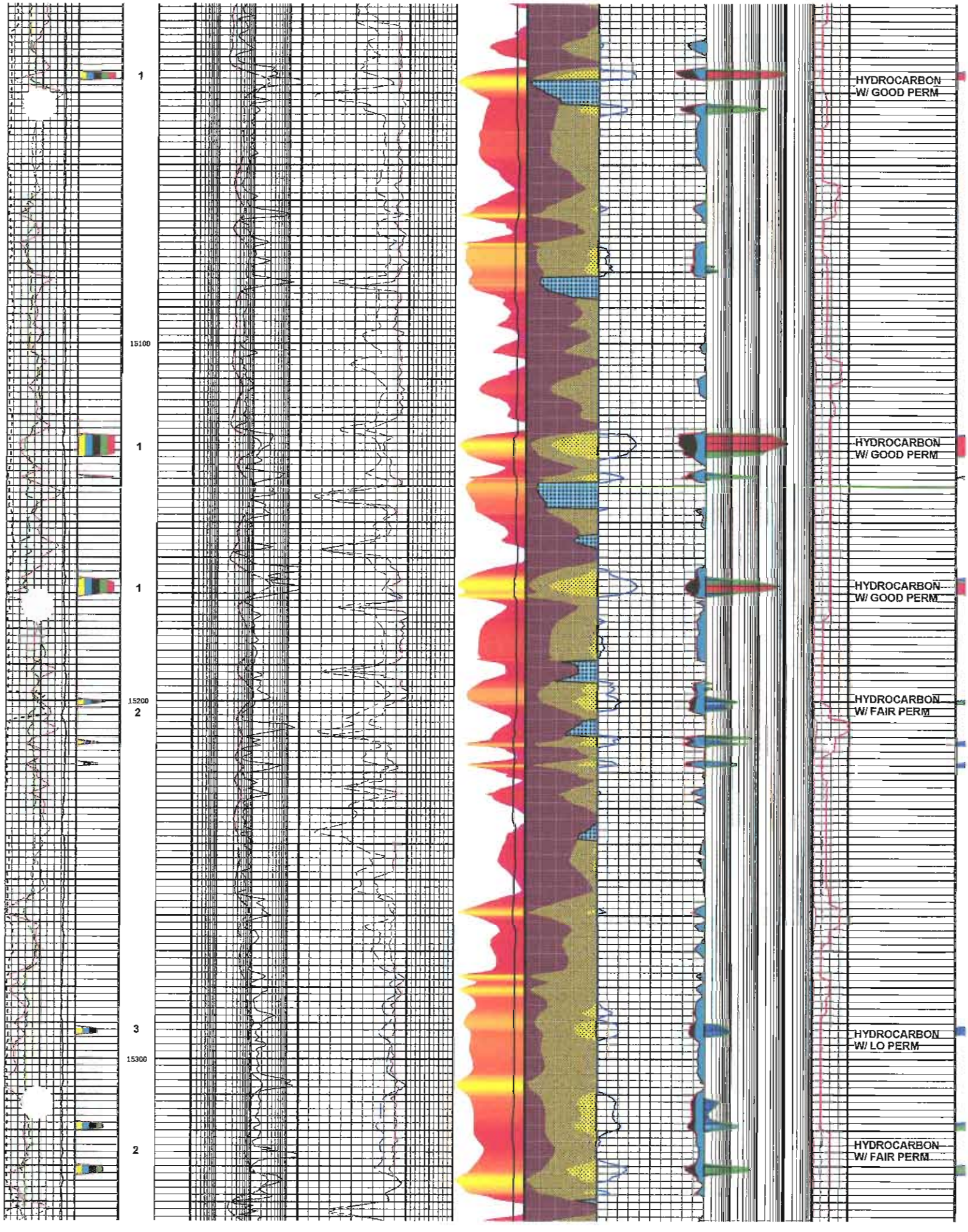
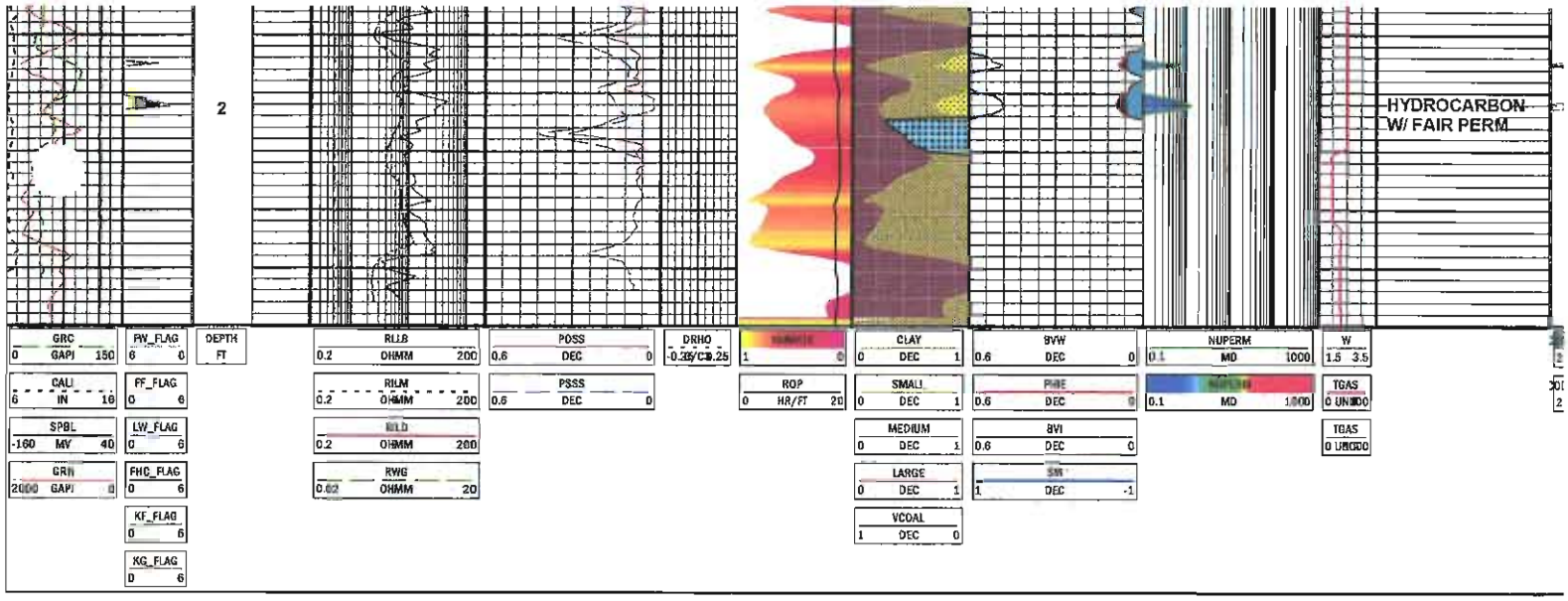
2
14400
2
3
14500
1
1
14600
1
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ LO PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ GOOD PERM


1
14700
2
1
14800
1
14900
2
1
2
1
15000
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ GOOD PERM


1
15100
1
1
15200
2
3
15300
2
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ LO PERM
HYDROCARBON W/ FAIR PERM


2
HYDROCARBON
W/ FAIR PERM
GRC
0 GAPI 150
CALI
6 IN 16
SPBL
-160 MV 40
GRN
2000 GAPI 0
FW_FLAG
6 0
FF_FLAG
0 6
LW_FLAG
0 6
FHC_FLAG
0 6
KF_FLAG
0 6
KG_FLAG
0 6
DEPTH
FT
RLLB
0.2 OHMM 200
RILM
0.2 OHMM 200
RILD
0.2 OHMM 200
RWG
0.02 OHMM 20
POSS
0.6 DEC 0
PSSS
0.6 DEC 0
DRHO
-0.25/C 0.25
1 0
ROP
0 HR/FT 20
CLAY
0 DEC 1
SMALL
0 DEC 1
MEDIUM
0 DEC 1
LARGE
0 DEC 1
VCOAL
1 DEC 0
BVW
0.6 DEC 0
PHIE
0.6 DEC 0
BVI
0.6 DEC 0
SW
1 DEC -1
NUPERM
0.1 MD 1000
NUPERM
0.1 MD 1000
W
1.5 3.5
TGAS
0 UNIT 100
TGAS
0 UNIT 100

SOUTH COOK INLET STATE #3

306' OIL

NuTech ENERGY ALLIANCE

Advanced Petrophysical Evaluation

NuLook™ Textural Vision

Evaluated For: **RENAISSANCE ALASKA**

Project #: 008053

Completed: 8/17/2007

Company	ARCO ALASKA, INC.		
Well	SOUTH COOK INLET STATE #3		
Field	WILDCAT		
County	KENAI	State ALASKA	Country USA
Location	SHL 1007' FSL & 1133' FEL		

Section	35	Township 10N	Range 11W	API Num 50733204500000	
Permanent Datum	MLLW		Elevation 0	K.B. 116	
Log Measured From	KB	, 116	Above Perm Datum	D.F. 116	
Drilling Meas From	KB			G.L. —	

306 OIL #4

	Run 1	Run 2	Run 3
Date	05-OCT-1993 (R3)	23-OCT-1993 (R4)	29-NOV-1993 (R5)
Depth - Driller	13491	14320	16002
Depth - Logger	13483	14242	15994
Btm Log Interval	13473	14239	15990
Top Log Interval	9027	13444	14316
Casing - Driller	13.372 @ 9031	9.625 @ 13447	7 @ 14320
Casing - Logger	9027	13444	14316
Bitsize	12.25	8.5	6
Type Fluid in Hole	GENERIC #2	GENERIC #2	GENERIC #2
Dens. /Visc.	12 / 46	14.7 / 44	16.65 / 56
pH / Fluid Loss	9.95 / 7.2	8.4 / 3.2	10.25 / 3.4
Source of Sample	PITS	FLOWLINE	PITS
Rm @ Meas. Temp	3.160 @ 68	1.540 @ 68	2.227 @ 46
Rmf @ Meas. Temp	0.970 @ 70	0.981 @ 68	1.550 @ 48
Rmc @ Meas. Temp	1.710 @ 66	1.980 @ 58	2.430 @ 46
Source: Rmf / Rmc	PITS / PITS	MEAS / MEAS	PITS / PITS
Rm @ BHT	1.307 @ 174	0.563 @ 198	0.515 @ 222
Max. Rec. Temp.	174	198	222

*** CURVE MNEMONICS ***

GR, [GRC]	- GAMMA RAY, [ENVIRONMENTALLY CORRECTED]
SP, [SPBL]	- SPONTANEOUS POTENTIAL, [BASELINE SHIFTED]
CALI, CAL, HCAL, CALX, CALY	- CALIPER
FF_FLAG	- FREE FLUID FLAG
FHC_FLAG	- FREE HYDROCARBON FLAG
LW_FLAG	- LOW WATER FLAG
KF_FLAG	- FAIR PERMEABILITY FLAG
KG_FLAG	- GOOD PERMEABILITY FLAG
MDR_FLAG	- RESISTIVITY MINERAL FLAG
SP_FLAG	- PERMEABILITY MINERAL FLAG
ND_FLAG	- GAS MINERAL FLAG
PHIE_FLAG	- POROSITY MINERAL FLAG
ILD, LLD, HDRS, A*90, M*R9	- DEEP RESISTIVITY
ILM, LLS, MRS, A*30, M*R3	- MEDIUM RESISTIVITY
SFL, SFLU, RFOC, DFL, MSFL	- SHALLOW RESISTIVITY
PDSS, PDLS, PHID, [PHIDEDIT]	- DENSITY POROSITY, [EDITED]
PCNSS, PCNLS, PHIN	- NEUTRON POROSITY
PSSS, PHIS	- SONIC POROSITY
PE, PEF, PEFZ	- PHOTO ELECTRIC FACTOR
DRHO, HDRA, ZCOR, CORR	- DENSITY CORRECTION
TGAS	- TOTAL GAS FROM MUD LOG
MMIN, MMNO, MINV, MNOR, RLML, RNML	- MICROLOG CURVES
NUMATR	- CLAY VOLUME INDICATOR
ROP	- RATE OF PENETRATION
CLAY, SMALL, MEDIUM, LARGE	- TEXTURAL DISTRIBUTION
VSS, VLS, VDOL	- MATRIX VOLUMES
SW	- WATER SATURATION
BVW	- CONVENTIONAL BULK VOLUME WATER
BVI, BVIC, MBVI, MXBVI, BFV	- IRREDUCIBLE WATER
PHIE, MPHI, CMRP	- EFFECTIVE POROSITY
CORPOR, CORPERM	- POROSITY, PERM FROM CORES
MSIG, TCMR	- TOTAL POROSITY FROM NMR
PERM, MPERM	- TOTAL PERMEABILITY
NUPERM	- TEXTURAL PERM
W	- TEXTURAL PARAMETER
CODE	- PAY QUALITY INDICATOR
PAYFLAG	- POTENTIAL PAY INTERVAL
RWG	- RW USED IN ANALYSIS

*** PARAMETERS ***

Rw	=	TOP ' - 13700'	0.397@	75°F	.	M	=	TOP ' - BTM '	W	
Rw	=	13700' - 15150'	0.142@	75°F	.	M	=	' - '	'	
Rw	=	15150' - BTM '	0.237@	75°F	.	N	=	TOP ' - BTM '	2	
Rw	=	' - '	_.__ @	°F	.	N	=	' - '		
Rw	=	' - '	_.__ @	°F	.					
Rw	=	' - '	_.__ @	°F	. Perm					

*** REMARKS ***

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RHOM = TOP ' - BTM ' 2.68
RHOM = ____ ' - ____ ' ___
RHOM = ____ ' - ____ ' ___

DTMtx = TOP ' - BTM ' 51
DTMtx = ____ ' - ____ ' ___
DTMtx = ____ ' - ____ ' ___

Coeff = ____ ' - ____ ' ____
Coeff = ____ ' - ____ ' ____

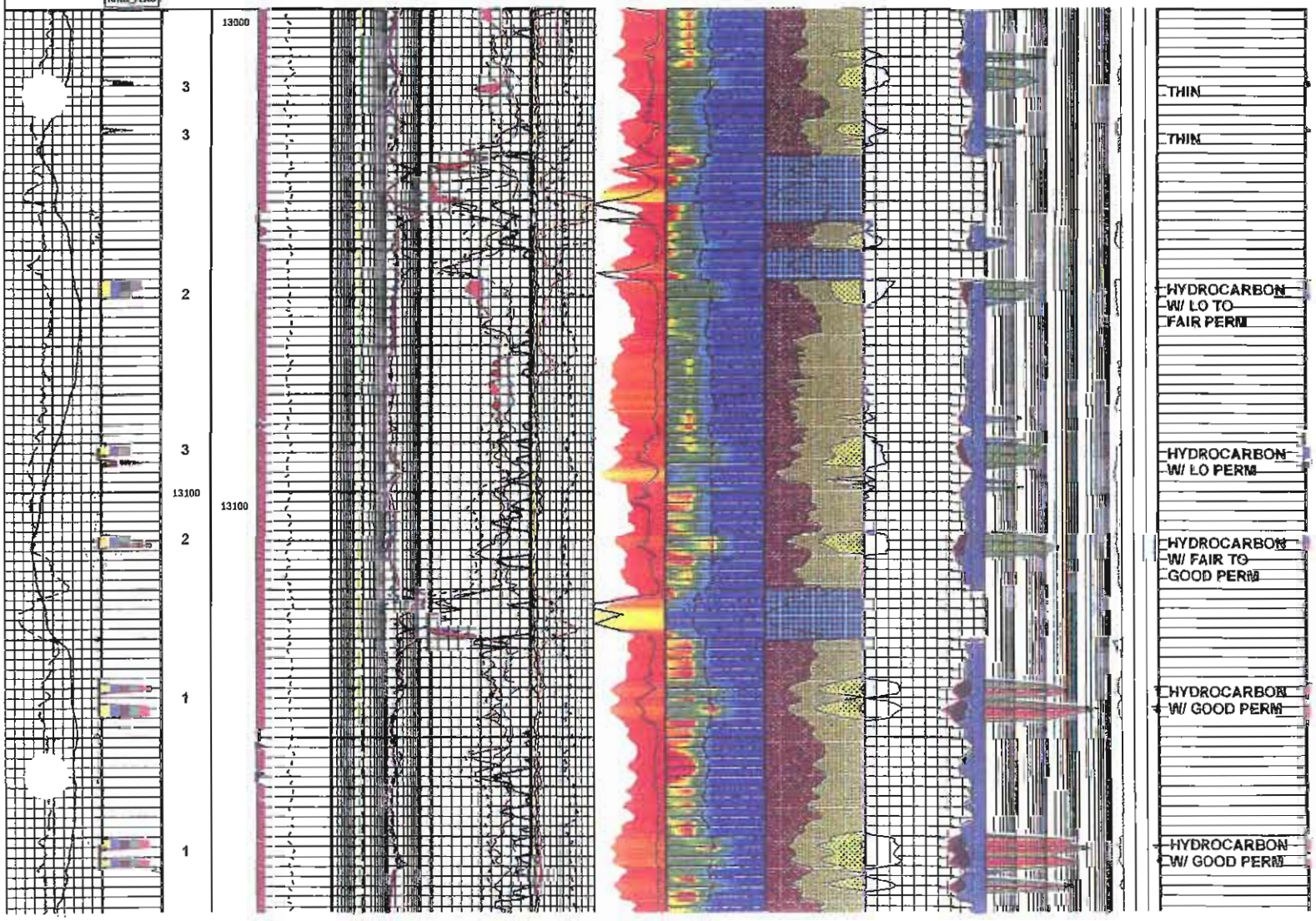
Flag Cutoffs
VClay = .4 Free Fluid = .03
Kmin = .1 Free Water = .01
Kfair = 1 TooMuchWtr = .015
Kgood = 10 LowHydrcbn = .6

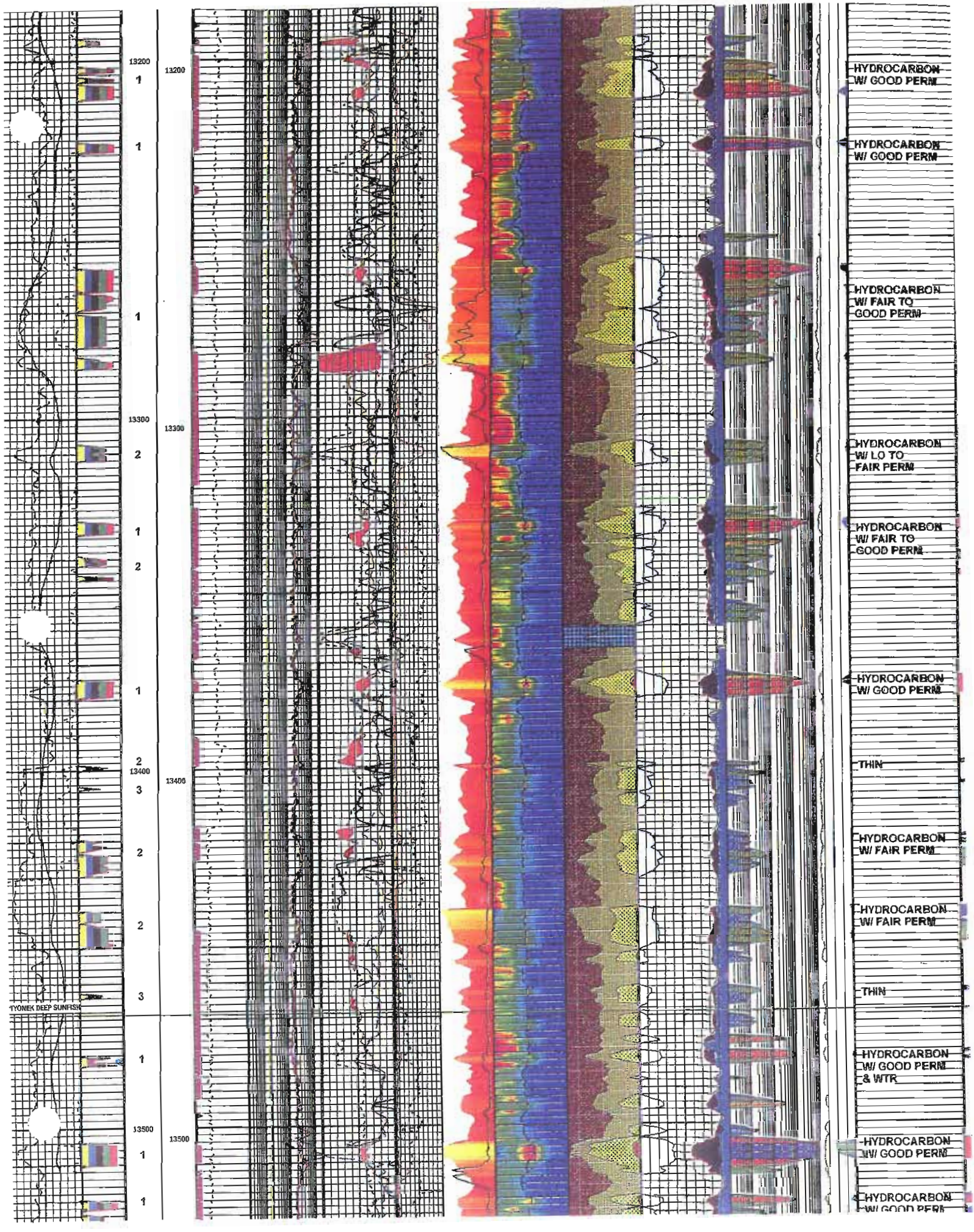
our current Price Schedule.

PROJECT #: Renaissance080053
TG/DW

SOUTH COOK INLET STATE #3
17 Aug 2007 @ 8:47
DEPTH (FT)
Interval: 13000.00 to 15907.00
Depth Scale Ratio: 1/240

GRC 0 GAPI 150 | FW_FLAG 0 0 | DEPTH FT | TVD FT | TENS 3000LBS5000 | AT10 0.2 OHMM 200 | PHIEDNT 0.6 DEC 0 | DRHO -0.25G/C3.25 | 1 0 | 0 0.15 | CLAY 0 DEC 1 | SW 1 DEC -1 | NUPERM 0.1 MD 1000 | 0.05 0
CALI 5 IN 15 | FF_FLAG 0 6 | DST 0 8 | CAUFLG 0 10 | AT20 0.2 OHMM 200 | PDSS 0.6 DEC 0 | MINV 0 OHMM20 | ROP 50 FT/HR 0 | TEXGM 0.1 100 | SMALL 0 DEC 1 | BVW 0.6 DEC 0 | 0.1 MD 1000 | W 1.5 3.5
SPBL -160 MV 40 | LW_FLAG 0 6 | 0 DST | 0 CAUFLG | AT30 0.2 OHMM 200 | PCNSS 0.6 DEC 0 | MNOR 0 OHMM20 | 1 NUMATR | MEDIUM 0 DEC 1 | PHIE 0.6 DEC 0 | CORPERM 0.1 MD 1000 | NUSPEC4
FHC_FLAG 0 6 | AT60 0.2 OHMM 200 | PSSS 0.6 DEC 0 | TQAS 0 UNIT100 | LARGE 0 DEC 1 | BVI 0.6 DEC 0 | NUPERM 1000
KF_FLAG 0 6 | AT90 0.2 OHMM 200 | PEF 0 B/E 20 | TQAS 0 UNITC00 | VCOAL 0 dec 1 | CORPOR 60 % 0
NG_FLAG 0 6 | RSFL 0.2 OHMM 200 | PDSS PCNSS | MINV MNOR | 0 CLAY | 1 SW
FW_FLAG 0 | RILM 0.2 OHMM 200 | 0 TQAS | CLAY SMALL | BVW BVI
0 FF_FLAG | RILD 0.2 OHMM 200 | SMALL MEDIUM | PHIE BVW
FFLW_FLAG | RT 0.2 OHMM 200 | MEDIUM LARGE | BVI 0
LFHC_FLAG | RWG 0.02 OHMM 20 | 0 VCOAL
FHKF_FLAG
WNG_FLAG

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13300
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2
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13400
3
2
2
3
TYONEK DEEP SUNFISH
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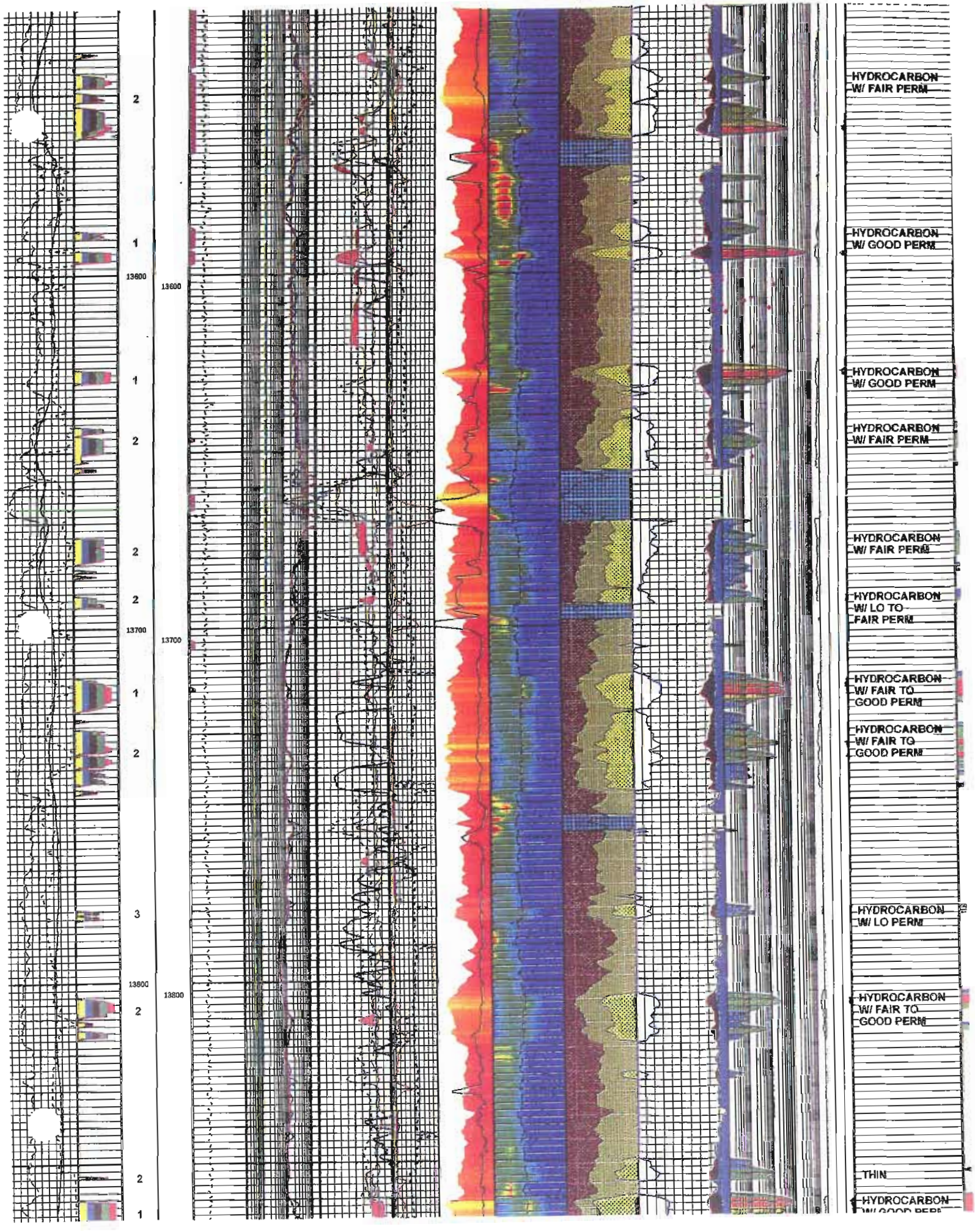
13500
1
1
13200
13300
13400
13500
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ FAIR TO GOOD PERM
HYDROCARBON W/ LO TO FAIR PERM
HYDROCARBON W/ FAIR TO GOOD PERM
HYDROCARBON W/ GOOD PERM
THIN
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ FAIR PERM
THIN
HYDROCARBON W/ GOOD PERM & WTR
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ GOOD PERM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2
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13700
13700
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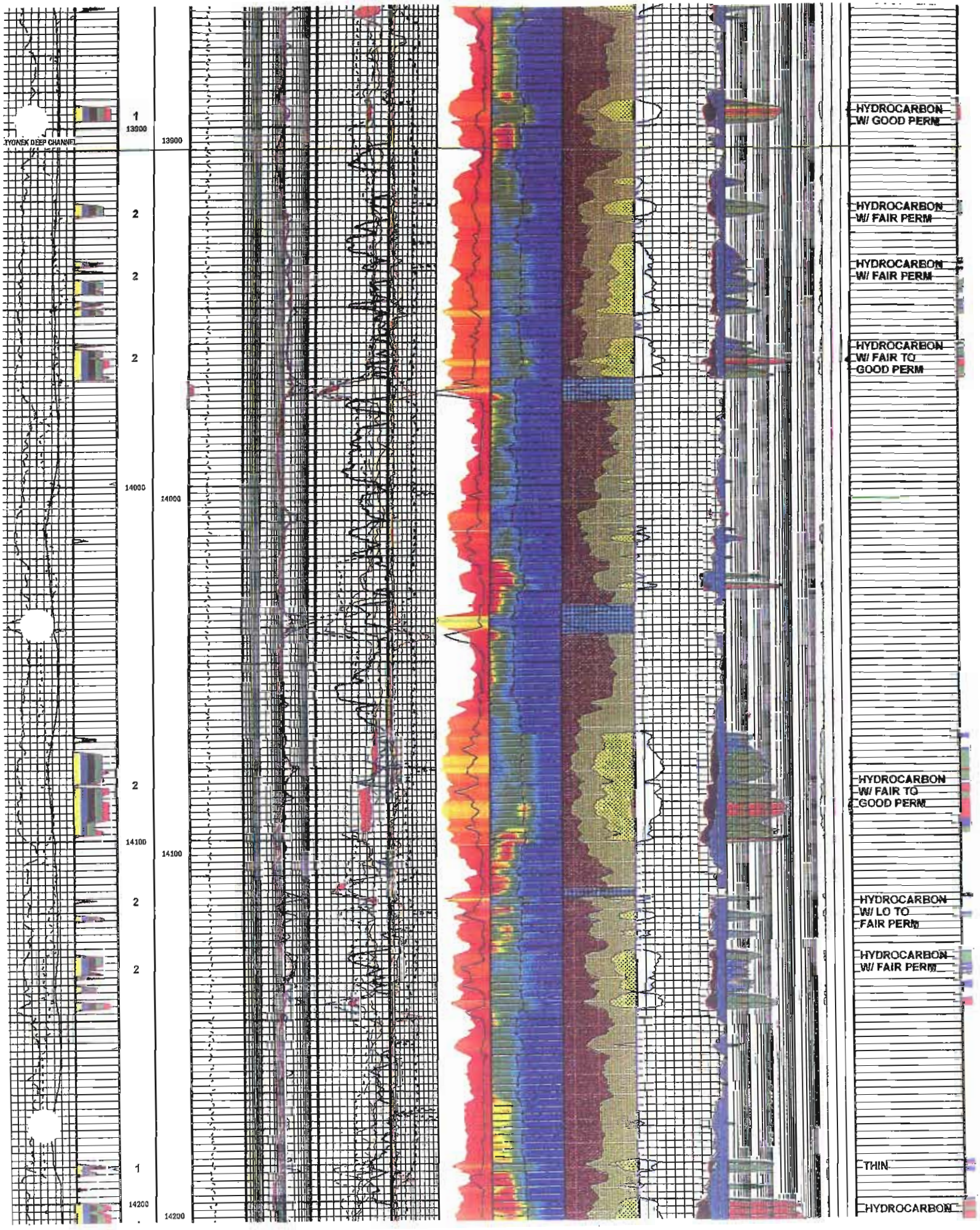
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ LO TO FAIR PERM
HYDROCARBON W/ FAIR TO GOOD PERM
HYDROCARBON W/ FAIR TO GOOD PERM
HYDROCARBON W/ LO PERM
HYDROCARBON W/ FAIR TO GOOD PERM
THIN
HYDROCARBON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13900
TYONEK DEEP CHANNEL
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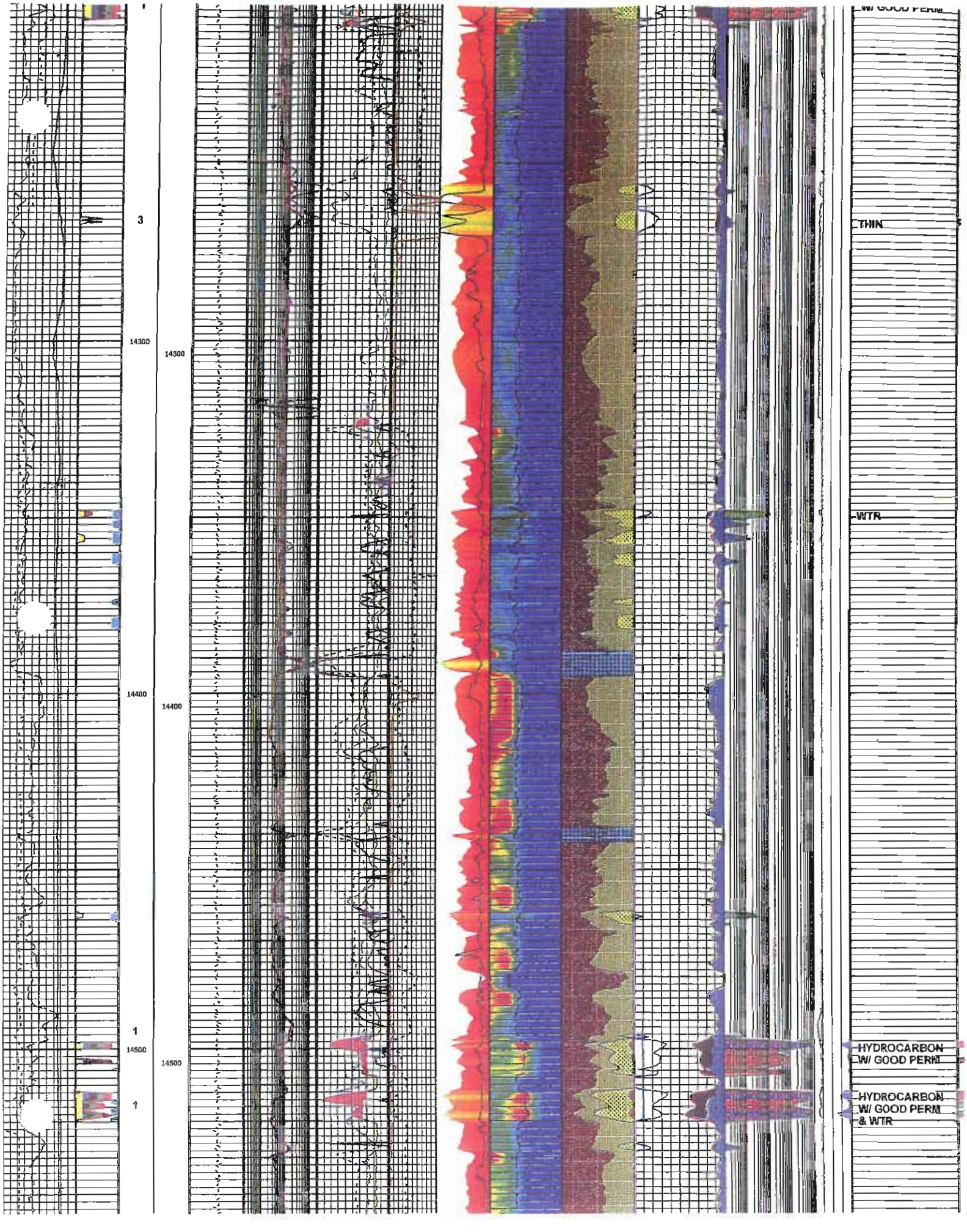
14200
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ FAIR PERM
HYDROCARBON W/ FAIR TO GOOD PERM
HYDROCARBON W/ FAIR TO GOOD PERM
HYDROCARBON W/ LO TO FAIR PERM
HYDROCARBON W/ FAIR PERM
THIN
HYDROCARBON


W/ GOOD PERM
THIN
WTR
HYDROCARBON W/ GOOD PERM
HYDROCARBON W/ GOOD PERM & WTR
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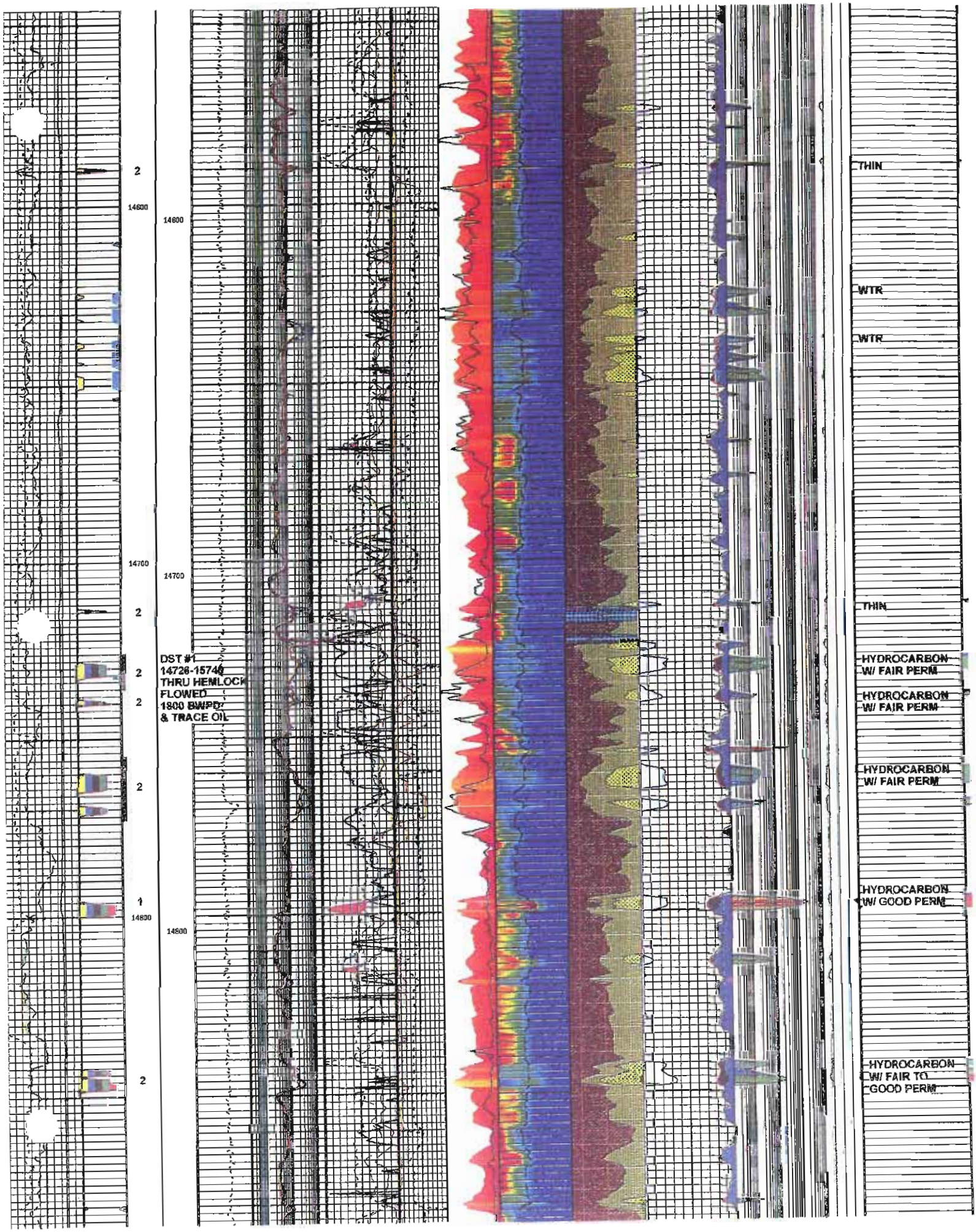
14400
14500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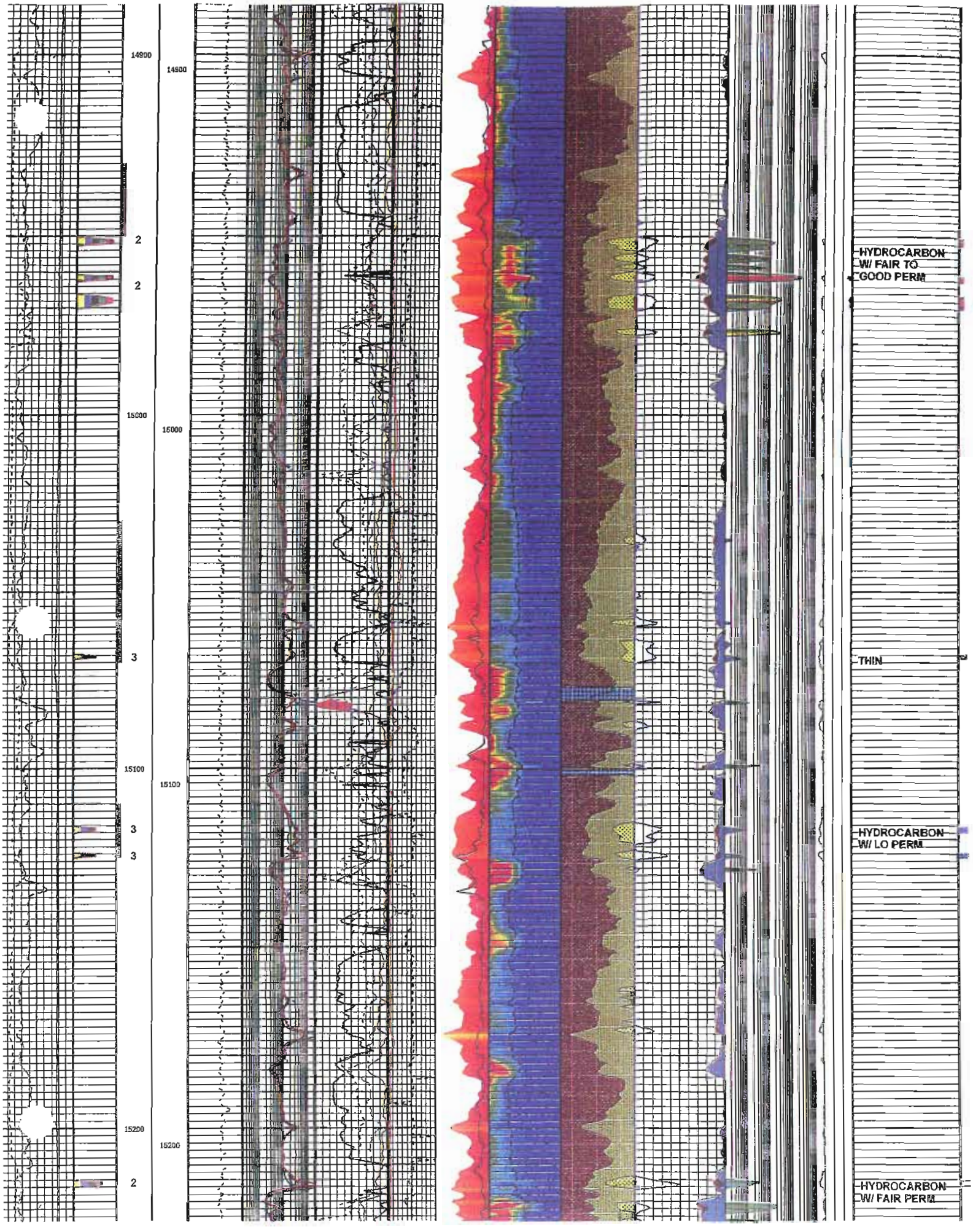
DST #1
14726-15740
THRU HEMLOCK
FLOWED
1800 BWPD
& TRACE OIL
THIN
WTR
WTR
THIN
HYDROCARBON
W/ FAIR PERM
HYDROCARBON
W/ FAIR PERM
HYDROCARBON
W/ FAIR PERM
HYDROCARBON
W/ GOOD PERM
HYDROCARBON
W/ FAIR TO
GOOD PERM


14900
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15000
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15100
3
3
15200
15200
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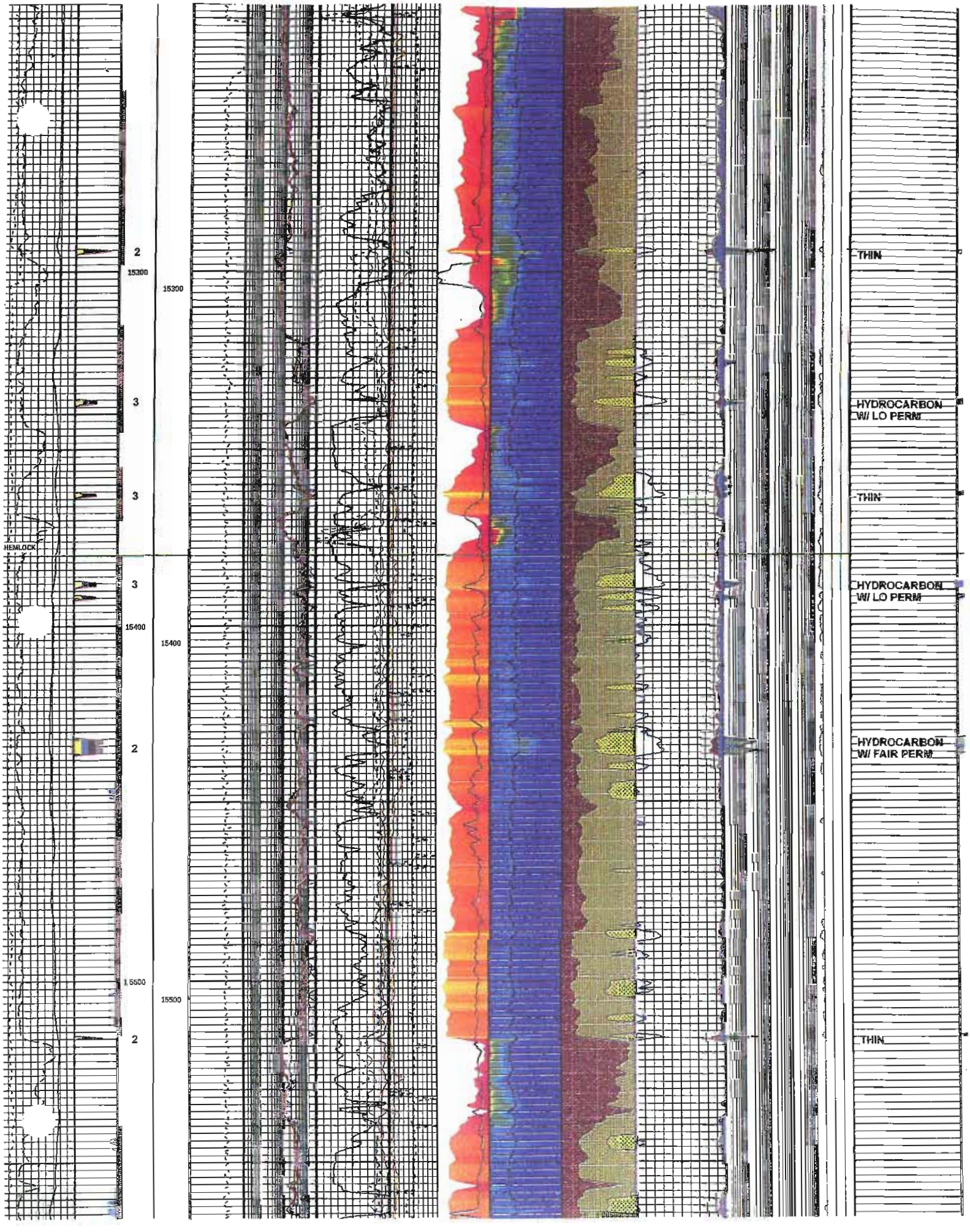
HYDROCARBON W/ FAIR TO GOOD PERM
THIN
HYDROCARBON W/ LO PERM
HYDROCARBON W/ FAIR PERM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3
HEMLOCK
3
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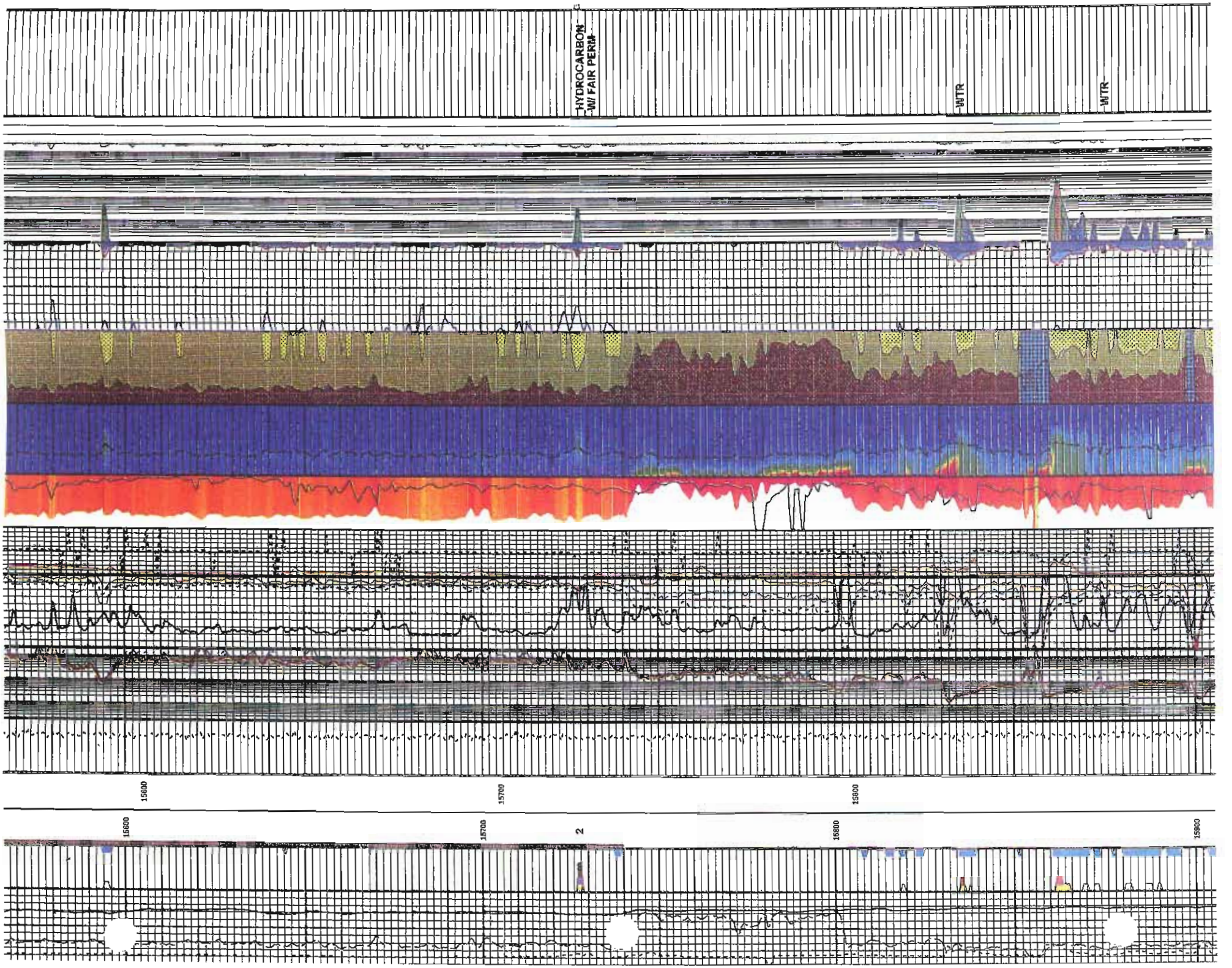
15400
2
15500
15500
2
THIN
HYDROCARBON
W/ LO PERM
THIN
HYDROCARBON
W/ LO PERM
HYDROCARBON
W/ FAIR PERM
THIN


HYDROCARBON
W/ FAIR PERM
WTR
WTR
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15800
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15600
15700
2
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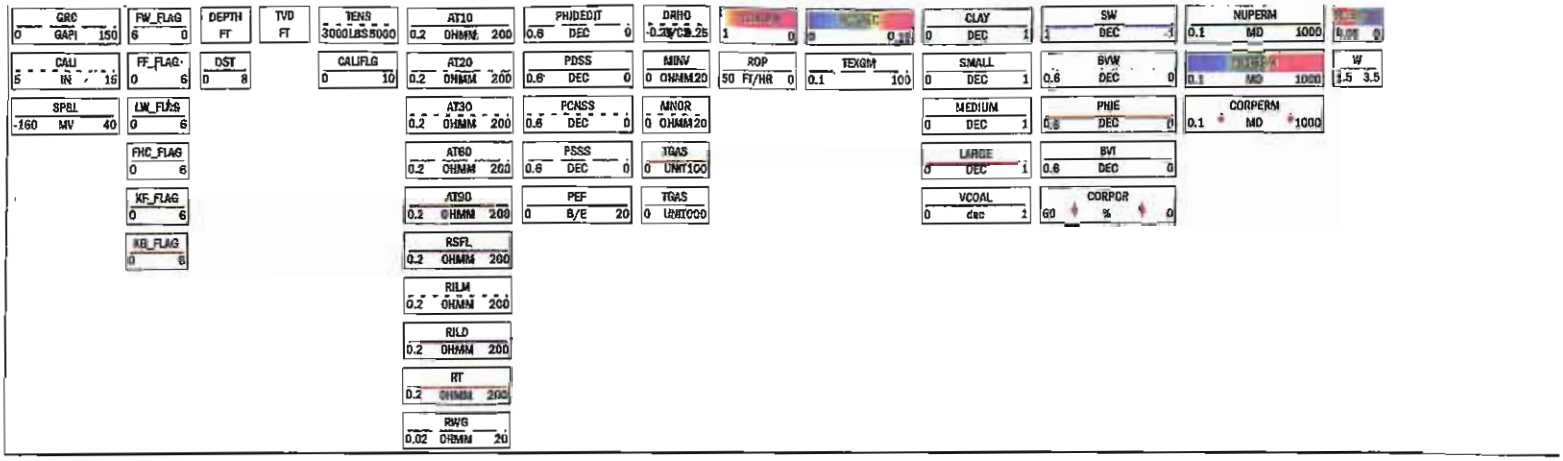
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CORPOR
60 % 0
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0.1 MD 1000
CORPERM
0.1 MD 1000
W
1.5 3.5

CORE LAB
SOUTH COOK INLET #2 WELL

252' GAS
303'OIL

Core Lab
RESERVOIR OPTIMIZATION

Integrated Reservoir Solutions
6316 Windfern
Houston, Texas 77040 USA
Tel: 713-328-2673
Fax: 713-328-2190
www.corelab.com

252' GAS
303' OIL
#5

May 24, 2004

Escopeta Oil
Attn: Danny S. Davis
5005 Riverway, Suite 440.
Houston, Texas 77056

Re: Petrophysical Analysis South Cook Inlet No. 2 Well

Dear Sir

I have today completed the petrophysical analysis of the Lower Tyonek Formation of the South Cook Inlet No.2 well and a summary table of the results is shown below.

The logs were supplied to us as paper copies and were digitized then checked for quality control. The digital logs were then loaded into the Petcom log analysis program. The resistivity logs were corrected for mud filtrate invasion and the Spontaneous Potential curve was baseline shifted.

Porosities were calculated from the sonic log using the Raymer-Hunt equation. There was good agreement between these porosities and the standard Wyllie sonic porosity and also with density log porosities calculated below 14630 feet. A clay volume curve was calculated from the Gamma Ray using a curved (Larinov) relationship. An effective porosity was then calculated to take into account porosity attributable to clay.

A water saturation curve was calculated using the Indonesia equation and a regional formation water resistivity (Rw) of 0.1 ohm-m @ 157°F. This Rw was in good agreement with a Pickett plot analysis of the formation. Archie parameters were available from a well study of the area which used "m" and "n" values of 1.75.

No core data was available for the subject well but some porosity and permeability data from core was available for the North Cook Inlet Unit No. B-01 well. From this data a porosity permeability relationship was derived and the model applied to the South Cook Inlet No. 2 well.

Our Worldwide Rock Catalog© was searched for analogs for the formations encountered in the South Cook Inlet No. 2 well. One analog from the Hemlock formation (10,533.00 - 10,536.00) of the Marathon Oil D-43 well was found which had similar properties to

those calculated in the subject well. Porosities at reservoir conditions were in the 14-15% range, Archie 'm' and 'n' values were 1.92 and 1.53 and gas permeabilities were approximately 50 md.

The analysis was undertaken using digitized logs from an older well, without core data for verification, using models derived from nearby wells. That being said the tabulated results indicate that the South Cook Inlet No. 2 well appears to indicate some hydrocarbon potential. Water saturation values are low in both the gas interval (above 11900 feet) and in the lower oil-bearing interval.

SRS SOUTH COOK INLET #2 PETROPHYSICAL SUMMARY

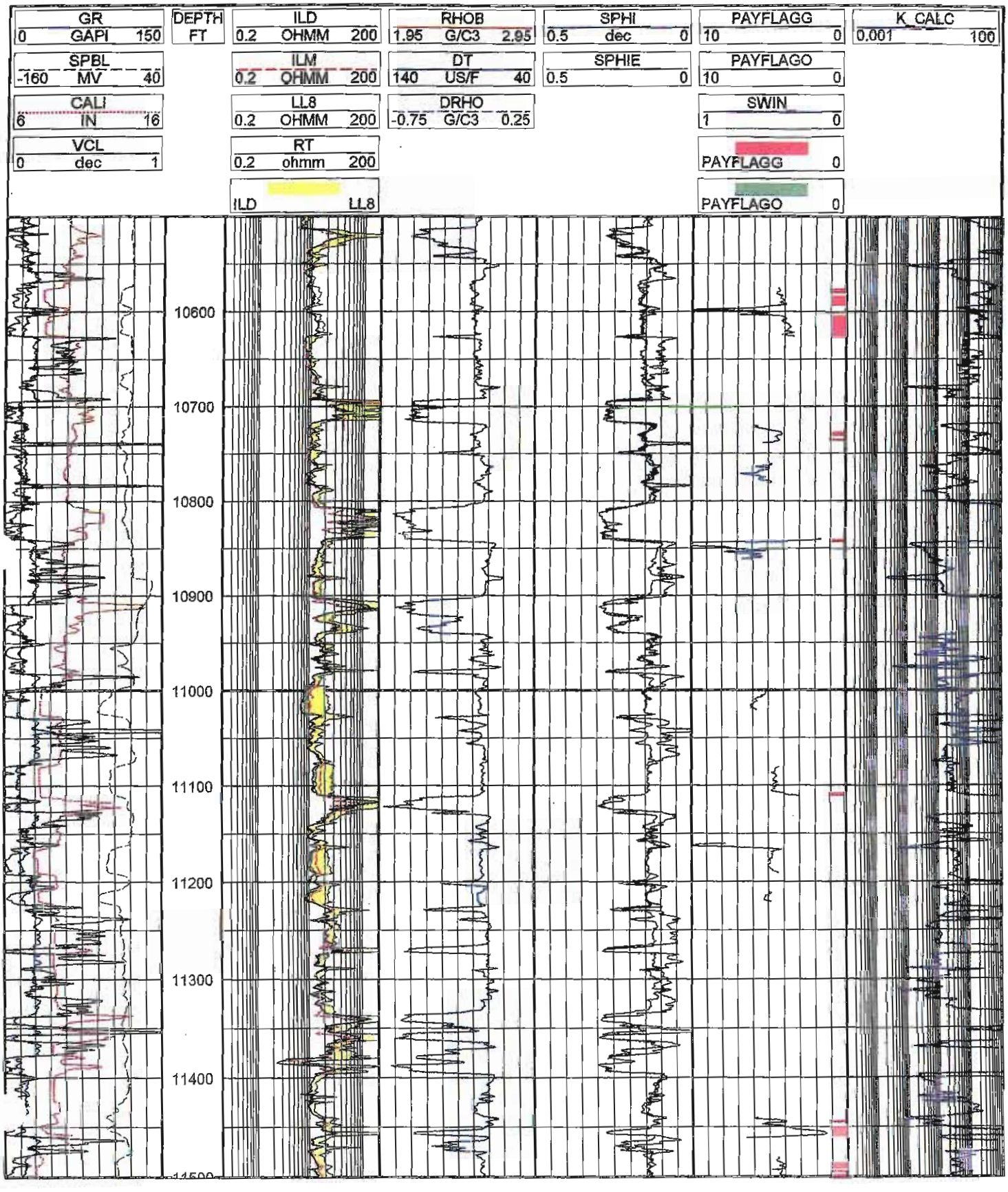
Zone Name	Top (ft)	Base (ft)	Gross Interval (ft)	Net Reservoir (ft)	Net Pay (ft)	Av Φ pay (%)	Av Perm pay (md)	Sw (%)	φh pay φ-ft	Kh pay (md-ft)	HCVH
GAS PROSPECT	10500	11900	1400	346	252	14.7	10.1	41	37.0	2545.2	21.86
OIL PROSPECT	11900	15400	3500	343	303	12.4	4.5	33	37.6	1363.5	25.17
COMBINED	10500	15400	4900	689	555	13.2	7.1	37	73.3	3940.5	46.15

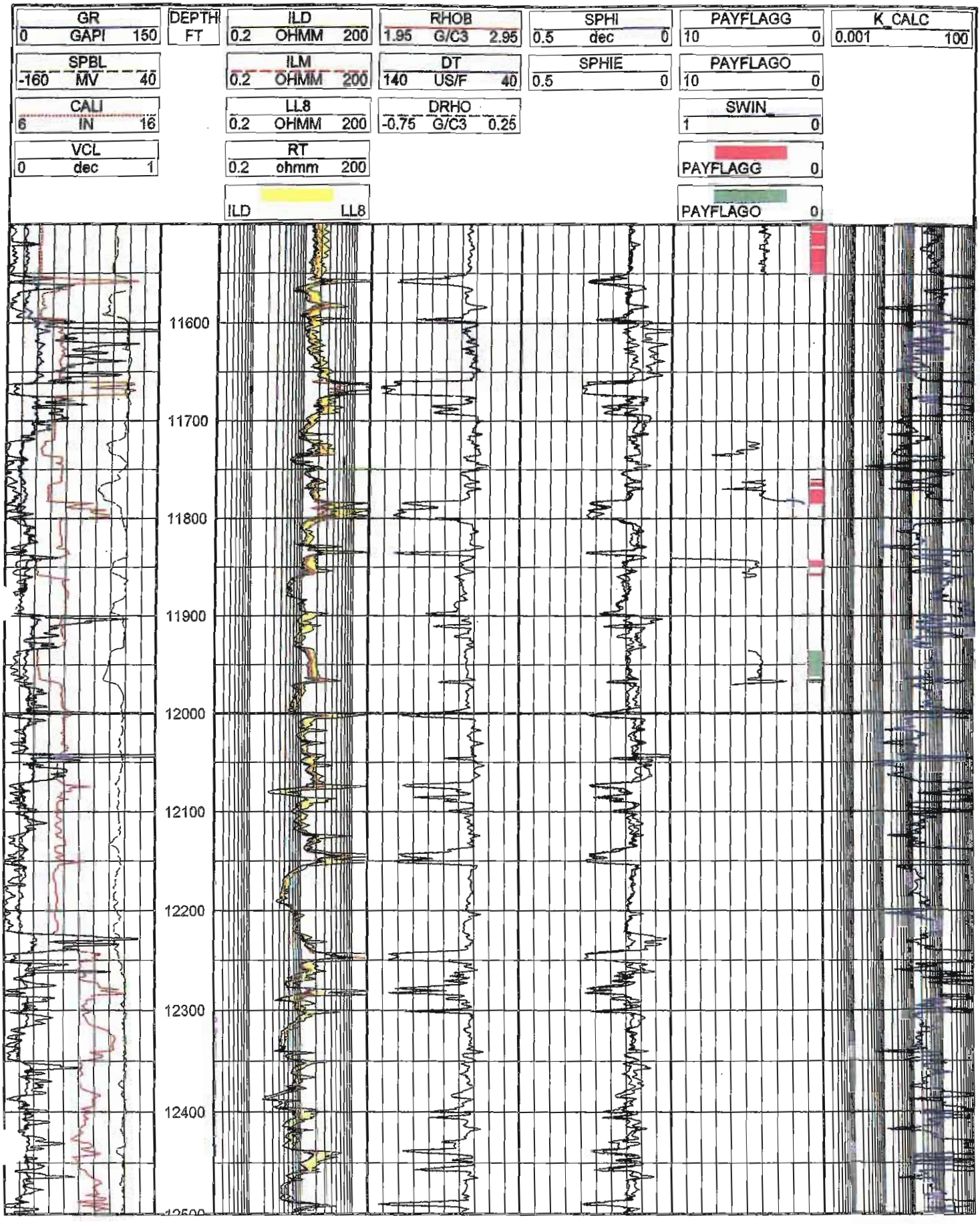
Note:
Net Reservoir: porosity > 0.5%
Pay cutoff: porosity > 0.05%, Sw < 50%

Yours sincerely

Nigel Bedrock
Senior Petrophysicist

South Cook Inlet No.2 Petrophysical Analysis

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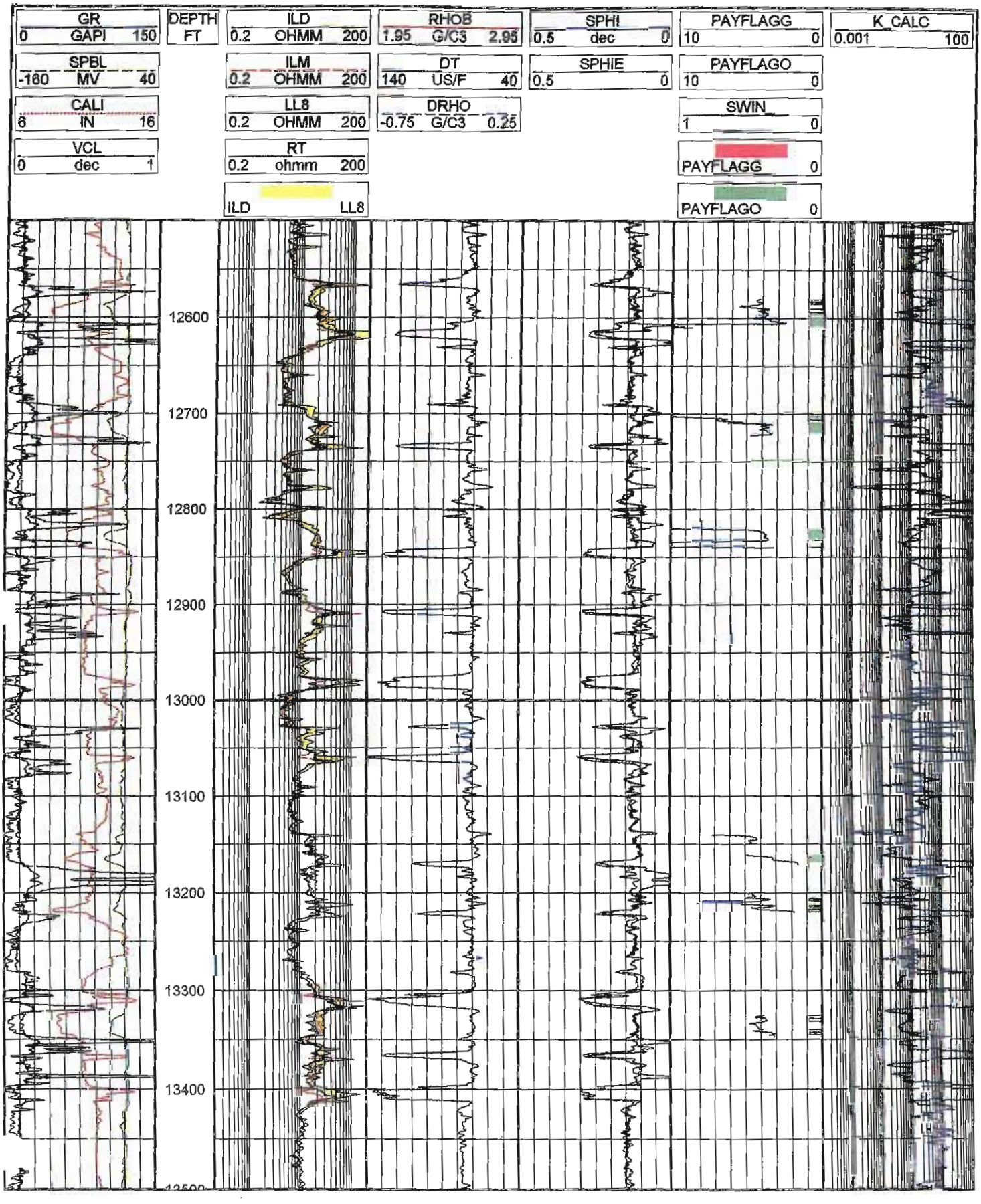
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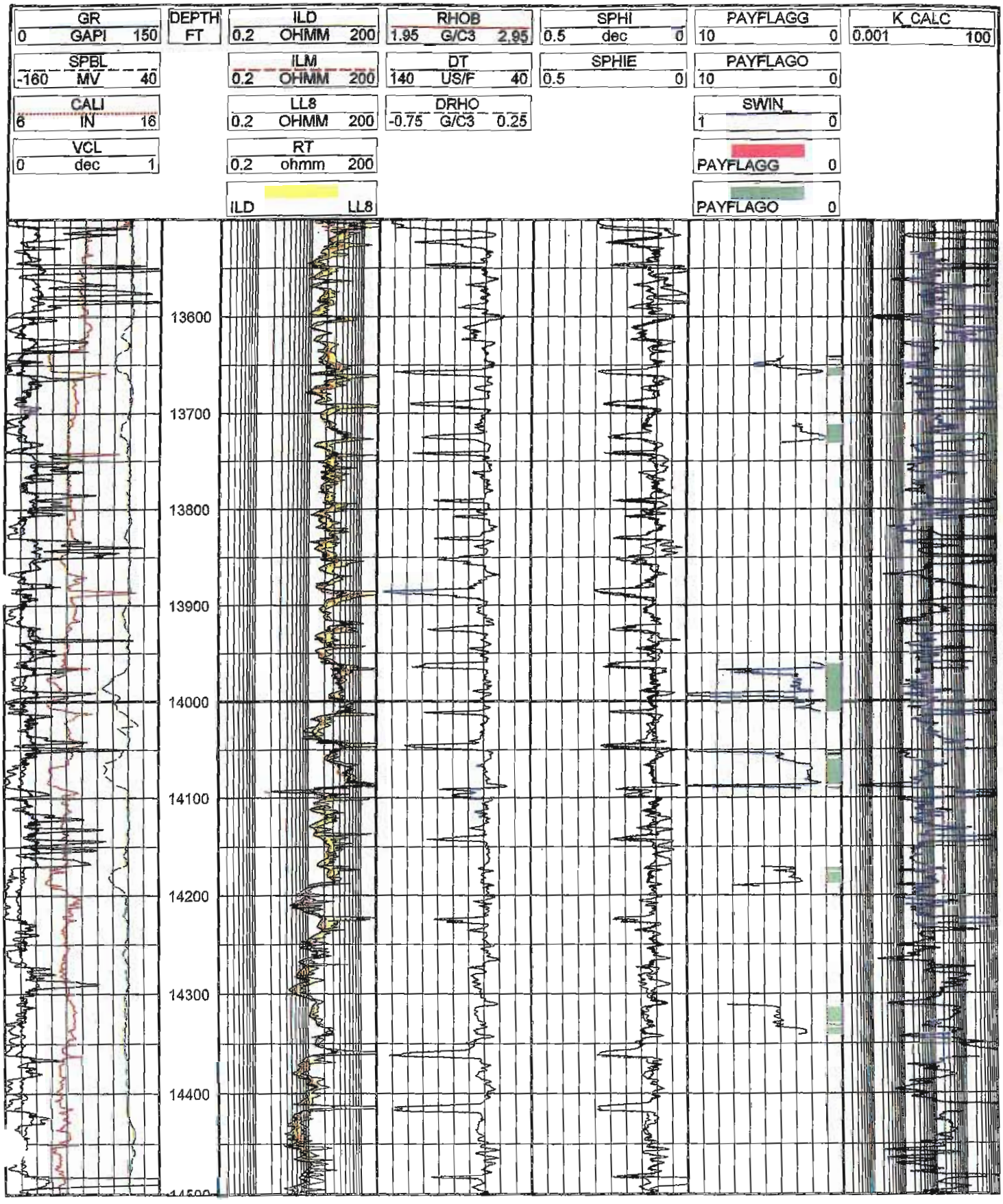
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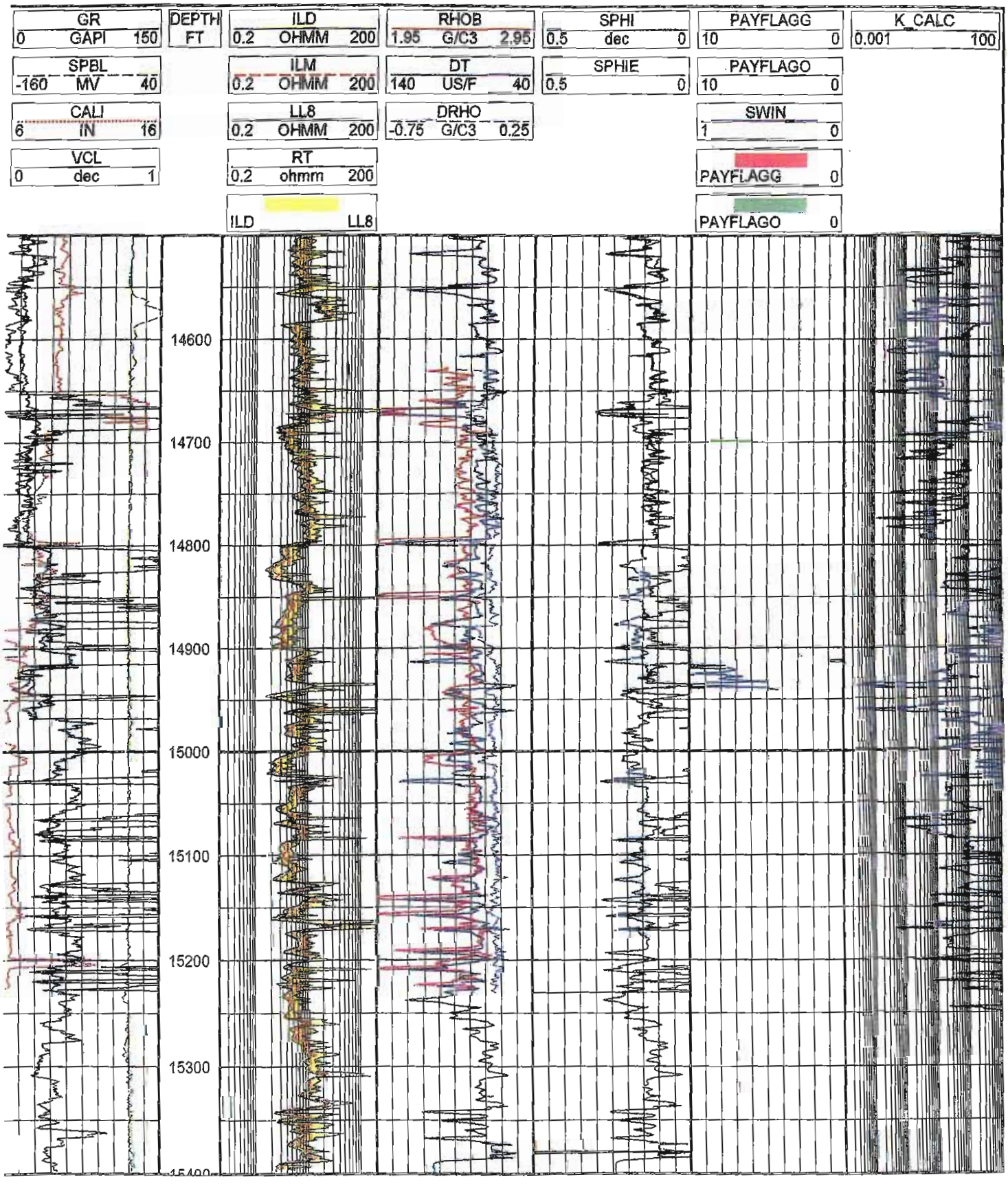
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