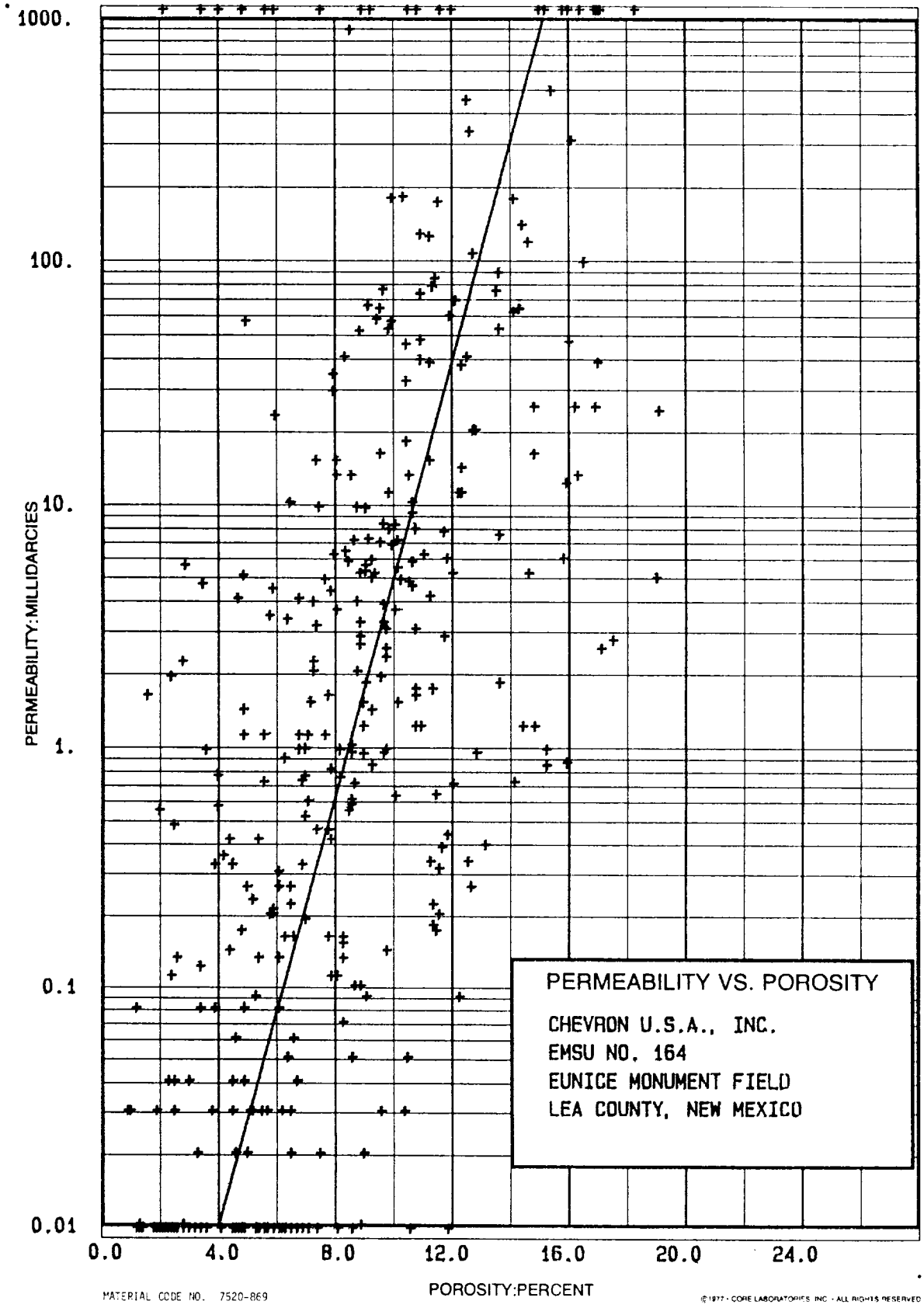
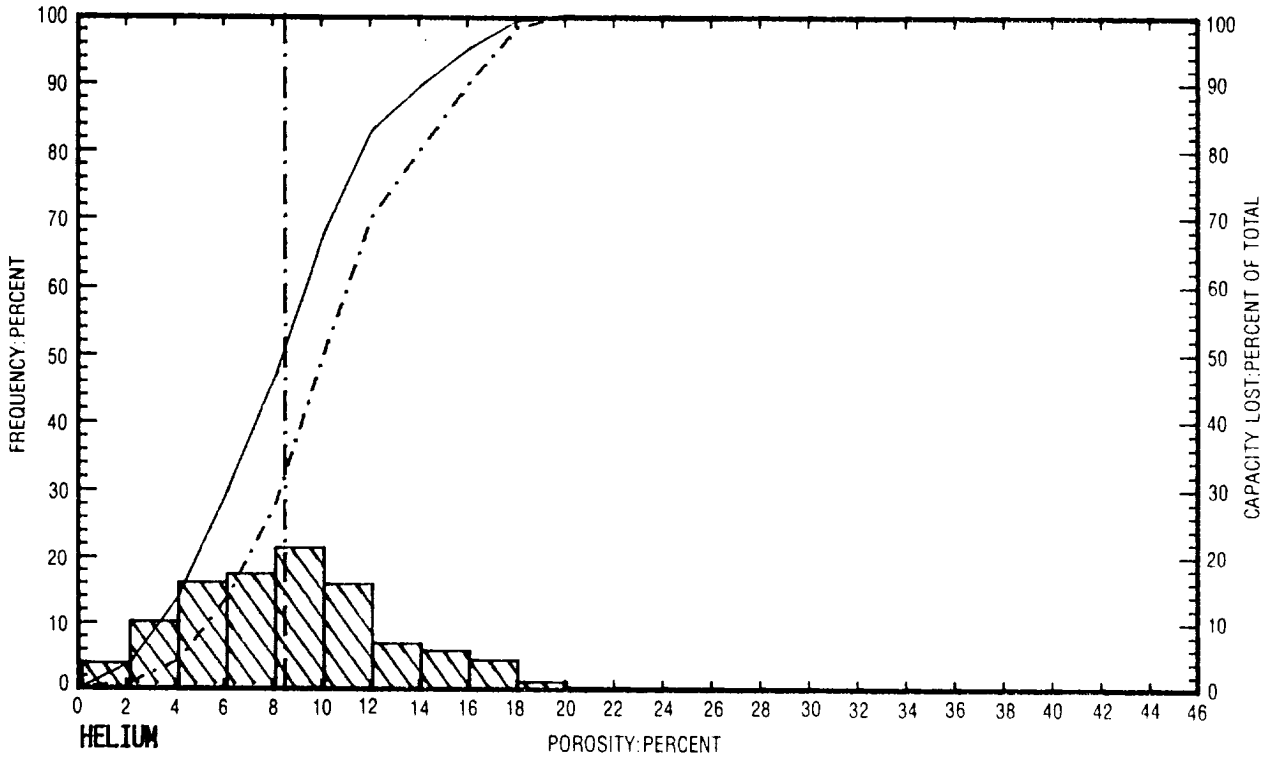
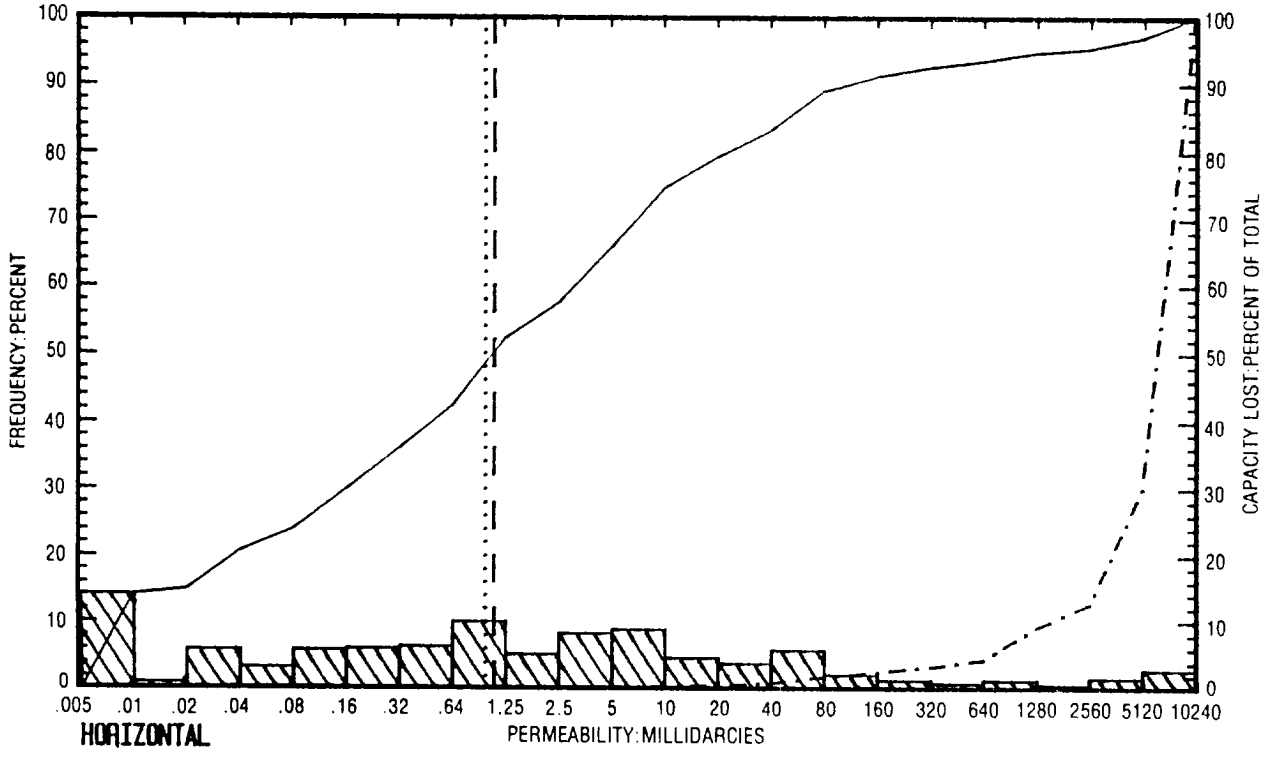


MATERIAL CODE NO. 7520-869





PERMEABILITY AND POROSITY HISTOGRAMS

CHEVRON U.S.A., INC.
EMSU NO. 164
EUNICE MONUMENT FIELD
LEA COUNTY, NEW MEXICO

LEGEND

- ARITHMETIC MEAN POROSITY
- GEOMETRIC MEAN PERMEABILITY
- MEDIAN VALUE
- CUMULATIVE FREQUENCY
- CUMULATIVE CAPACITY LOST

PERMEABILITY VS POROSITY

COMPANY: CHEVRON U.S.A., INC. WELL : EMSU NO. 164
FIELD : EUNICE MONUMENT FIELD COUNTY, STATE: LEA COUNTY, NEW MEXICO

AIR PERMEABILITY : MD - HORIZONTAL (UNCORRECTED FOR SLIPPAGE)
POROSITY : PERCENT (HELIUM)

DEPTH INTERVAL(FT)	RANGE & SYMBOL	PERMEABILITY MINIMUM	PERMEABILITY MAXIMUM	POROSITY MIN.	POROSITY MAX.	POROSITY AVERAGE	PERMEABILITY AVERAGES ARITHMETIC	HARMONIC	GEOMETRIC
3630.0 - 4003.0	1 (+)	0.001	9999.0	0.8	19.1	8.4	329.	0.01	0.95

EQUATION OF REDUCED LINE RELATING PERMEABILITY(K) TO POROSITY :
LOG(K) = (SLOPE)(POROSITY) + LOG OF INTERCEPT
K = ANTILOG((SLOPE)(POROSITY) + LOG OF INTERCEPT)

RANGE	EQUATION OF THE LINE
1	PERM = ANTILOG((0.4438)(POROSITY) + -3.7404)

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CHEVRON U.S.A., INC. WELL : EMSU NO. 164
FIELD : EUNICE MONUMENT FIELD COUNTY, STATE: LEA COUNTY, NEW MEXICO

AIR PERMEABILITY : MD. (HORIZONTAL) RANGE USED 0.000 TO 9999.
POROSITY : PERCENT (HELIUM) RANGE USED 0.0 TO 46.0

(PERMEABILITY UNCORRECTED FOR SLIPPAGE)

DEPTH LIMITS (FEET) : 3630.0 - 4003.0 INTERVAL LENGTH : 373.0
FEET ANALYZED IN ZONE : 362.0 LITHOLOGY EXCLUDED : NONE

DATA SUMMARY

POROSITY	PERMEABILITY AVERAGES		
AVERAGE	ARITHMETIC	HARMONIC	GEOMETRIC
8.4	329.	0.01	0.95

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CHEVRON U.S.A., INC. WELL : EMSU NO. 164
FIELD : EUNICE MONUMENT FIELD COUNTY, STATE: LEA COUNTY, NEW MEXICO

GROUPING BY POROSITY RANGES

POROSITY RANGE	FEET IN RANGE	AVERAGE POROSITY	AVERAGE PERM. (GEOM.)	AVERAGE PERM. (ARITH)	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
0.0 - 2.0	13.0	1.4	0.022	0.181	3.6	3.6
2.0 - 4.0	36.0	2.9	0.091	383.	9.9	13.5
4.0 - 6.0	57.0	5.0	0.139	379.	15.7	29.3
6.0 - 8.0	62.0	6.9	0.344	132.	17.1	46.4
8.0 - 10.0	76.0	8.9	2.5	201.	21.0	67.4
10.0 - 12.0	56.0	10.9	5.1	262.	15.5	82.9
12.0 - 14.0	24.0	12.7	12.	98.	6.6	89.5
14.0 - 16.0	20.0	14.9	27.	698.	5.5	95.0
16.0 - 18.0	15.0	16.7	166.	1422.	4.1	99.2
18.0 - 20.0	3.0	18.8	98.	2642.	0.8	100.0

TOTAL NUMBER OF FEET = 362.0

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CHEVRON U.S.A., INC. WELL : EMSU NO. 164
FIELD : EUNICE MONUMENT FIELD COUNTY, STATE: LEA COUNTY, NEW MEXICO

GROUPING BY PERMEABILITY RANGES

PERMEABILITY RANGE	FEET IN RANGE	AVERAGE PERM. (GEOM.)	AVERAGE PERM. (ARITH)	AVERAGE POROSITY	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
0.005 - 0.010	51.0	0.005	0.005	4.6	14.1	14.1
0.010 - 0.020	3.0	0.010	0.010	4.2	0.8	14.9
0.020 - 0.039	21.0	0.027	0.027	5.2	5.8	20.7
0.039 - 0.078	12.0	0.047	0.048	5.6	3.3	24.0
0.078 - 0.156	21.0	0.106	0.108	6.1	5.8	29.8
0.156 - 0.312	22.0	0.211	0.215	7.6	6.1	35.9
0.312 - 0.625	23.0	0.437	0.448	7.4	6.4	42.3
0.625 - 1.250	36.0	0.916	0.931	9.1	9.9	52.2
1.250 - 2.500	19.0	1.7	1.8	8.0	5.2	57.5
2.500 - 5.000	30.0	3.6	3.7	9.4	8.3	65.7
5.- 10.	32.0	6.5	6.7	9.7	8.8	74.6
10.- 20.	17.0	13.	13.	10.8	4.7	79.3
20.- 40.	14.0	28.	29.	12.6	3.9	83.1
40.- 80.	21.0	57.	58.	11.0	5.8	89.0
80.- 160.	8.0	108.	110.	13.2	2.2	91.2
160.- 320.	5.0	197.	202.	12.4	1.4	92.5
320.- 640.	3.0	418.	424.	13.5	0.8	93.4
640.- 1280.	5.0	1100.	1110.	9.3	1.4	94.8
1280.- 2560.	2.0	2041.	2092.	13.8	0.6	95.3
2560.- 5120.	6.0	3371.	3443.	14.9	1.7	97.0
5120.-10240.	11.0	7423.	7571.	9.6	3.0	100.0

TOTAL NUMBER OF FEET = 362.0

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CHEVRON U.S.A., INC. WELL : EMSU NO. 164
FIELD : EUNICE MONUMENT FIELD COUNTY, STATE: LEA COUNTY, NEW MEXICO

POROSITY-FEET OF STORAGE CAPACITY LOST FOR SELECTED POROSITY CUT OFF

POROSITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	ARITH MEAN	MEDIAN
0.0	0.0	0.0	362.0	100.0	8.4	8.3
2.0	13.0	0.6	349.0	99.4	8.6	8.5
4.0	49.0	4.0	313.0	96.0	9.3	9.0
6.0	106.0	13.4	256.0	86.6	10.3	9.7
8.0	168.0	27.5	194.0	72.5	11.3	10.8
10.0	244.0	49.9	118.0	50.1	12.9	12.3
12.0	300.0	70.0	62.0	30.0	14.7	14.7
14.0	324.0	80.1	38.0	19.9	15.9	15.9
16.0	344.0	89.9	18.0	10.1	17.0	17.2
18.0	359.0	98.1	3.0	1.9	18.8	19.0
20.0	362.0	100.0	0.0	0.0		

TOTAL STORAGE CAPACITY IN POROSITY-FEET = 3032.9

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CHEVRON U.S.A., INC. WELL : EMSU NO. 164
FIELD : EUNICE MONUMENT FIELD COUNTY, STATE: LEA COUNTY, NEW MEXICO

MILLIDARCY-FEET OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

PERMEABILITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	GEOM MEAN	MEDIAN
0.005	0.0	0.0	362.0	100.0	0.95	1.07
0.010	51.0	0.0	311.0	100.0	2.92	2.37
0.020	54.0	0.0	308.0	100.0	3.09	2.50
0.039	75.0	0.0	287.0	100.0	4.38	3.19
0.078	87.0	0.0	275.0	100.0	5.33	3.66
0.156	108.0	0.0	254.0	100.0	7.37	4.67
0.312	130.0	0.0	232.0	100.0	10.32	5.95
0.625	153.0	0.0	209.0	100.0	14.62	7.63
1.250	189.0	0.0	173.0	100.0	26.02	12.51
2.500	208.0	0.1	154.0	99.9	36.31	18.43
5.	238.0	0.2	124.0	99.8	63.45	38.07
10.	270.0	0.3	92.0	99.7	139.83	65.63
20.	287.0	0.5	75.0	99.5	239.13	99.34
40.	301.0	0.9	61.0	99.1	389.80	196.97
80.	322.0	1.9	40.0	98.1	1069.68	1114.26
160.	330.0	2.6	32.0	97.4	1897.74	2873.48
320.	335.0	3.5	27.0	96.5	2887.35	3835.62
640.	338.0	4.6	24.0	95.4	3676.22	4561.39
1280.	343.0	9.2	19.0	90.8	5049.97	5627.61
2560.	345.0	12.7	17.0	87.3	5617.96	5993.60
5120.	351.0	30.1	11.0	69.9	7422.80	7240.78
10240.	362.0	100.0	0.0	0.0		

TOTAL FLOW CAPACITY IN MILLIDARCY-FEET(ARITHMETIC) = 119085.36

CHEVRON U.S.A., INC.

EMSU NO. 164

EUNICE MONUMENT FIELD

LEA COUNTY, NEW MEXICO

Litton
Core Lab

April 27, 1987

CHEVRON U.S.A., INC.
P.O. Box 670
Midland, Texas 88241

File : 43202-15265
Subject: Core Analysis
EMSU No. 164
Eunice Monument Field
Lea County, New Mexico

Gentlemen:

The subject well was cored using diamond coring equipment and water base mud to obtain 4 inch diameter cores from 3630 to 3720 feet and 3723 to 4003 feet from the Penrose/Grayburg formation.

Core analysis data is presented in tabular and graphical form for your convenience. A porosity vs. permeability plot and porosity and permeability histograms were prepared for statistical evaluation. Also, a list of other Core Lab services is included that could possibly be helpful in Chevron's evaluation of this or future wells.

We trust these data will be useful in the evaluation of your property and thank you for the opportunity of serving you.

Very truly yours,

CORE LABORATORIES, INC.

Wade J. Reinheimer
Laboratory Supervisor II/Geologist

WJR/yn

CHEVRON U.S.A., INC.
EMSU No. 164
File No. 43202-15265
Procedural Page

The cores were preserved at the wellsite in a CO2 atmosphere and transported to Midland by Core Laboratories, Inc. personnel.

Preserved fresh core was taken from selected intervals on location.

Core analysis was made from intervals requested on full diameter samples.

Fluid removal was achieved using a gas solvent extraction method.

Fluid saturations were determined using controlled temperature downdraft retort technique.

Gas expansion porosity and grain density were determined using Boyle's Law.

Air permeability was measured in two horizontal directions and vertically while the core was held in a Hassler rubber sleeve.

The entire cored interval will be slabbed vertically and the slabs boxed seperately.

The core was boxed after the analysis and will remain at our Midland core storage facility.

To further enhance your evaluation of the reservoir in question, let me suggest the following Core Lab services that could possibly help your company.

1.) Thermal Extraction chromatography (TEC)
   A.)Heat is used to vaporize residual hydrocarbons from core chip samples or drill cuttings into the column of a chromatograph for measurement of richness and composition.
   B.)Both the concentration and molecular distribution of hydrocarbons show charateristic differences in rock samples from productive and non-productive intervals.
   C.)A plot of relative hydrocarbon richness and composition by depth can readily be correlated with well logs to aid in defining productive intervals and type of production to be expected from those intervals.
   D.)TEC can predict flushed zones and unswept zones in secondary recovery techniques.
2.) Capillary pressures to relate residual water saturations to porosity and permeability. At this time pore size distribution can also be measured.
3.) A.)Water-oil relative permeabilities (Kw/Ko) to calculate the fractional flow of water and fluid permeability characteristics.
   B.)Gas-oil relative permeabilities (Kg/Ko) to predict primary depletion.
4.) Electrical resistivity measurements:
   To define A, M, and N values in Archies' equation to calculate water saturations and along with logs to calculate oil in place.
5.) Petrology work:
   A.)X-Ray Diffraction
   B.)Scanning Electron Microscope (SEM)
   C.)Thin Secions:
   To define mineral constituents, their location in the pores, and to identify potential completion problems.
6.) CMS-200:
   Ability to acquire permeability and porosity at net over-burden pressures on a routine basis. Also can measure equivalent liquid permeability (K_L).
7.) Water compatability can be used to evaluate potential water used for flooding.

For more information on these or other tests, please contact your local Core Laboratories Representative, at 915-694-7761.

Litton
Core Lab

CORE ANALYSIS REPORT

FOR

CHEVRON U.S.A., INC.

EMSU NO. 164
EUNICE MONUMENT FIELD
LEA COUNTY, NEW MEXICO

Litton
Core Lab

CHEVRON U.S.A., INC.
EMSU NO. 164
EUNICE MONUMENT FIELD
LEA COUNTY, NEW MEXICO

DATE : 3-18-87
FORMATION : PENROSE/GRAYBURG
DRLG. FLUID: WATER BASE MUD
LOCATION : 2280' FSL & 1980' FWL, SEC. 26, T-20-S, R-36-E

FILE NO. : 43202-15265
API WELL NO.:
LABORATORY : MIDLAND, TEXAS

FULL DIAMETER ANALYSIS

SAMPLE NUMBER		DEPTH FEET	PERM MAXIMUM	PERM 90 DEG	PERM VERTICAL	HE POR	OIL% POR	WTR% POR	GRAIN DEN M	DESCRIPTION
		CORE NO. 1 3630.0-3720.0 CUT 90' REC 89'								
S	1	3630.0-31.0	0.08	<0.01	<0.01	1.1	17.6	35.2	2.70	SD DOLC SL/F STY
	2	3631.0-32.0	<0.01	<0.01	<0.01	4.5	0.0	82.1	2.80	DOL SL/SHY SHLAM
	3	3632.0-33.0	0.03	<0.01	<0.01	4.4	4.3	69.1	2.84	DOL SL/SHY STY
*	4	3633.0-34.0	7242.		1.7	2.1	7.6	68.1	2.83	DOL SL/SHY F VF SHLAM
	5	3634.0-35.0	<0.01	<0.01	<0.01	4.5	8.3	66.7	2.84	DOL SHLAM STY
S	6	3635.0-36.0	<0.01	<0.01	<0.01	4.7	17.0	61.1	2.80	DOL SL/SHY SHLAM
	7	3636.0-37.0	<0.01	<0.01	<0.01	4.4	9.3	65.4	2.83	DOL STY
	8	3637.0-38.0	0.03	<0.01	<0.01	3.7	10.9	74.1	2.82	DOL VF SHLAM
	9	3638.0-39.0	<0.01	<0.01	<0.01	5.3	24.8	58.8	2.75	SD V/DOLC SHLAM
	10	3639.0-40.0	<0.01	<0.01	<0.01	5.3	12.7	61.1	2.76	SD V/DOLC
S	11	3640.0-41.0	0.93	0.62	0.09	9.6	17.8	48.4	2.63	SD SL/DOLC
*	12	3641.0-42.0	0.26		0.07	12.6	12.8	34.7	2.66	SD SL/DOLC SL/SHY F VF SHLAM
*	13	3642.0-43.0	<0.01		<0.01	5.2	14.1	42.2	2.77	SD SL/DOLC F VF
	14	3643.0-44.0	0.07	0.04	<0.01	8.2	21.3	47.2	2.67	SD SL/DOLC VF
	15	3644.0-45.0	0.13	0.09	0.02	8.2	16.5	44.0	2.70	SD DOLC
	16	3645.0-46.0	0.03	0.03	<0.01	6.1	19.3	60.6	2.71	SD DOLC
	17	3646.0-47.0	<0.01	<0.01	<0.01	4.6	0.0	97.2	2.71	SD DOLC
	18	3647.0-48.0	<0.01	<0.01	<0.01	2.5	0.0	95.0	2.83	DOL SL/SHY VF SHLAM
	19	3648.0-49.0	0.03	<0.01	<0.01	5.1	3.4	85.2	2.71	SD DOLC
	20	3649.0-50.0	0.16	0.13	<0.01	8.2	14.5	48.4	2.74	SD V/DOLC VF SHLAM STY
	21	3650.0-51.0	0.09	0.03	0.11	9.0	7.9	47.1	2.75	SD V/DOLC VF STY
	22	3651.0-52.0	<0.01	<0.01	<0.01	2.1	11.3	78.9	2.87	DOL SL/SHY STY
	23	3652.0-53.0	<0.01	<0.01	<0.01	5.6	32.6	55.8	2.78	DOL SDY SL/PYRC STY
S	24	3653.0-54.0	0.02	0.02	<0.01	6.4	3.2	86.6	2.75	DOL SDY

CHEVRON U.S.A., INC.
EMSU NO. 164

DATE : 3-18-87
FORMATION : PENROSE/GRAYBURG

FILE NO. : 43202-15265
API WELL NO.:

FULL DIAMETER ANALYSIS

	SAMPLE NUMBER	DEPTH FEET	PERM MAXIMUM	PERM 90 DEG	PERM VERTICAL	HE POR	OIL% POR	WTR% POR	GRAIN DEN M	DESCRIPTION
	25	3654.0-55.0	<0.01	<0.01	<0.01	5.5	11.6	69.8	2.78	DOL SDY LAM
	26	3655.0-56.0	0.02	<0.01	<0.01	3.2	6.5	78.6	2.84	DOL SHLAM
S	27	3656.0-57.0	0.03	0.03	<0.01	9.5	20.8	14.8	2.86	DOL VF SL/V PP
	28	3657.0-58.0	0.38	0.09	<0.01	11.6	13.7	16.0	2.84	DOL SL/V PP
	29	3658.0-59.0	0.02	<0.01	<0.01	8.9	9.1	22.1	2.81	DOL STY
	30	3659.0-60.0	<0.01	<0.01	<0.01	5.2	24.5	42.1	2.84	DOL VF STY
	31	3660.0-61.0	0.14	0.17	<0.01	9.7	14.8	42.2	2.69	SD SL/DOLC
S	32	3661.0-62.0	13.	6.5	0.42	16.3	11.4	39.8	2.68	SD SL/DOLC SL/F
	33	3662.0-63.0	<0.01	<0.01	<0.01	4.7	4.6	92.3	2.77	SD DOLC PYRC CHTY
	34	3663.0-64.0	<0.01	<0.01	<0.01	4.7	5.2	88.3	2.74	SD V/DOLC
	35	3664.0-65.0	0.03	0.03	<0.01	0.9	14.3	71.3	2.93	DOL PYRC VF STY
S	36	3665.0-66.0	0.03	0.03	0.05	0.8	13.7	68.4	2.86	DOL SL/PYRC VF STY
	37	3666.0-67.0	0.02	<0.01	<0.01	4.9	11.7	35.2	2.79	DOL SL/SDY SL/PYRC VF
	38	3667.0-68.0	<0.01	<0.01	<0.01	4.8	13.9	52.4	2.81	DOL SL/SDY
	39	3668.0-69.0	0.41	0.25	<0.01	7.8	28.9	37.0	2.71	SD DOLC LAM
	40	3669.0-70.0	1.8	0.05	<0.01	9.0	18.2	31.9	2.75	SD V/DOLC VF PP
S	41	3670.0-71.0	1.2	1.1	0.26	14.4	20.5	19.7	2.72	SD SL/DOLC
	42	3671.0-72.0	<0.01	<0.01	<0.01	5.6	19.7	45.9	2.77	DOL SL/SDY
	43	3672.0-73.0	0.02	0.02	<0.01	7.4	11.3	52.6	2.74	DOL V/SDY
	44	3673.0-74.0	0.04	0.02	<0.01	2.9	6.5	65.4	2.83	DOL SL/SHY PP SHLAM STY
	45	3674.0-75.0	<0.01	<0.01	<0.01	1.9	6.3	88.8	2.86	DOL STY
	46	3675.0-76.0	0.03	0.03	<0.01	2.4	7.1	70.5	2.90	DOL SL/PYRC PP SHLAM
S	47	3676.0-77.0	<0.01	<0.01	<0.01	3.3	18.8	45.0	2.87	DOL VF SL/V
	48	3677.0-78.0	<0.01	<0.01	<0.01	1.8	16.7	66.8	2.86	DOL SL/V STY
	49	3678.0-79.0	3.6	3.1	1.5	10.0	13.4	23.8	2.86	DOL
	50	3679.0-80.0	5.7	3.1	4.0	10.6	24.0	16.0	2.86	DOL VF
S	51	3680.0-81.0	3.0	2.3	3.6	10.7	25.3	14.5	2.86	DOL
	52	3681.0-82.0	<0.01	<0.01	<0.01	4.0	26.0	37.1	2.85	DOL SHLAM STY
	53	3682.0-83.0	0.03	<0.01	<0.01	5.4	7.2	60.2	2.79	DOL SL/SDY VF SHLAM
	54	3683.0-84.0	<0.01	<0.01	<0.01	6.2	17.2	49.2	2.79	DOL SL/SDY

CHEVRON U.S.A., INC.
EMSU NO. 164

DATE : 3-18-87
FORMATION : PENROSE/GRAYBURG

FILE NO. : 43202-15265
API WELL NO.:

FULL DIAMETER ANALYSIS

	SAMPLE NUMBER	DEPTH FEET	PERM MAXIMUM	PERM 90 DEG	PERM VERTICAL	HE POR	OIL% POR	WTR% POR	GRAIN DEN M	DESCRIPTION
	55	3684.0-85.0	0.04	0.04	<0.01	2.2	15.5	77.4	2.85	DOL VF PP STY
S	56	3685.0-86.0	56.	2.4	40.	4.9	28.6	16.3	2.85	DOL VF V
	57	3686.0-87.0	<0.01	<0.01	0.05	1.3	15.0	74.9	2.84	DOL VF SL/V STY
	58	3687.0-88.0	<0.01	<0.01	<0.01	1.2	15.7	78.4	2.84	DOL VF STY
	59	3688.0-89.0	<0.01	<0.01	0.05	1.7	8.7	87.4	2.84	DOL VF SL/V STY
	60	3689.0-90.0	<0.01	<0.01	<0.01	2.7	12.7	50.8	2.84	DOL VF SHLAM STY
	61	3690.0-91.0	2.2	0.08	<0.01	2.7	8.9	88.9	2.80	DOL SL/ANHY SL/PYRC STY
	62	3691.0-92.0	<0.01	<0.01	<0.01	3.1	4.7	94.1	2.79	DOL SL/SDY SHLAM
	63	3692.0-93.0	<0.01	<0.01	1.6	2.9	18.2	43.7	2.85	DOL SL/PYRC VF
	64	3693.0-94.0	<0.01	<0.01	<0.01	2.3	8.0	63.8	2.83	DOL LAM STY
S	65	3694.0-95.0	0.01	0.01	<0.01	2.7	9.7	87.4	2.78	DOL SDY STY
	66	3695.0-96.0	0.04	0.01	<0.01	2.4	8.1	73.1	2.85	DOL PYRC VF SHLAM
	67	3696.0-97.0	0.14	<0.01	<0.01	4.3	12.2	68.4	2.80	DOL SL/PYRC VF SHLAM
	68	3697.0-98.0	<0.01	<0.01	<0.01	5.8	14.2	62.3	2.81	DOL PYRC
	69	3698.0-99.0	0.41	0.34	0.04	5.3	11.6	43.0	2.83	DOL SL/V STY
S	70	3699.0- 0.0	1259.	0.19	134.	4.0	12.4	24.8	2.85	DOL VF V
	71	3700.0- 1.0	0.47	0.47	<0.01	2.4	17.7	42.5	2.86	DOL PYRC V STY
	72	3701.0- 2.0	0.03	<0.01	<0.01	5.6	9.4	56.7	2.82	DOL VF SL/V FOSS
	73	3702.0- 3.0	0.03	0.03	<0.01	6.4	9.8	39.3	2.83	DOL SL/PYRC VF V STY
	74	3703.0- 4.0	1.6	<0.01	1.1	1.5	24.6	49.2	2.88	DOL PYRC VF STY
	75	3704.0- 5.0	<0.01	<0.01	<0.01	2.2	5.0	89.4	2.84	DOL SL/PYRC SHLAM STY
S	76	3705.0- 6.0	0.03	<0.01	<0.01	6.4	3.2	58.2	2.83	DOL SL/V
	77	3706.0- 7.0	0.16	0.08	<0.01	6.2	6.5	45.2	2.85	DOL V
	78	3707.0- 8.0	<0.01	<0.01	<0.01	2.0	21.4	68.6	2.82	DOL STY
	79	3708.0- 9.0	<0.01	<0.01	<0.01	1.1	9.7	58.4	2.84	DOL SL/PYRC STY
S	80	3709.0-10.0	<0.01	<0.01	0.13	2.4	20.5	41.0	2.84	DOL VF SL/V
	81	3710.0-11.0	<0.01	<0.01	<0.01	2.0	10.1	60.5	2.84	DOL VF STY
	82	3711.0-12.0	0.03	<0.01	<0.01	1.8	15.9	63.5	2.86	DOL SL/PYRC VF
	83	3712.0-13.0	<0.01	<0.01	<0.01	3.5	22.6	45.2	2.85	DOL VF SL/V STY
S	84	3713.0-14.0	0.04	0.04	<0.01	4.8	5.0	74.4	2.78	DOL SL/SDY VF

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	SAMPLE NUMBER	DEPTH FEET	PERM MAXIMUM	PERM 90 DEG	PERM VERTICAL	HE POR	OIL% POR	WTR% POR	GRAIN DEN M	DESCRIPTION
	85	3714.0-15.0	0.26	0.02	<0.01	6.4	9.7	50.4	2.78	DOL SDY VF V
	86	3715.0-16.0	<0.01	<0.01	<0.01	8.5	9.4	29.4	2.87	DOL
	87	3716.0-17.0	<0.01	<0.01	<0.01	5.3	0.0	64.7	2.78	DOL SL/SDY
	88	3717.0-18.0	<0.01	<0.01	<0.01	6.2	0.0	63.2	2.80	DOL SL/SDY
	89	3718.0-19.0	0.71	0.13	2.4	5.5	6.3	50.2	2.86	DOL PYRC VF V PP STY
		3719.0-20.0								LOST CORE
		3720.0-23.0								CLEANED OUT HOLE
		CORE NO. 2 3723.0-3813.0 CUT 90' REC 90'								
S	90	3723.0-24.0	<0.01	<0.01	<0.01	10.5	26.0	34.7	2.80	DOL SL/SDY SL/V
	91	3724.0-25.0	0.04	0.04	<0.01	4.4	22.0	31.4	2.85	DOL SL/SHY SHLAM STY
	92	3725.0-26.0	<0.01	<0.01	<0.01	6.0	10.6	30.4	2.85	DOL SL/F STY
	93	3726.0-27.0	0.60	0.34	<0.01	8.5	16.0	32.0	2.83	DOL SL/PYRC SL/V SHLAM
	94	3727.0-28.0	0.05	0.02	<0.01	10.4	12.1	58.8	2.78	DOL SDY SL/F SL/V
	95	3728.0-29.0	0.22	0.08	<0.01	11.3	10.9	49.9	2.86	DOL SL/F SL/V
	96	3729.0-30.0	<0.01	<0.01	<0.01	8.0	24.0	40.0	2.75	DOL V/SDY SL/V
S	97	3730.0-31.0	2.6	2.1	<0.01	8.8	17.2	38.1	2.75	DOL V/SDY
	98	3731.0-32.0	63.	60.	118.	14.3	18.8	28.2	2.85	DOL PP
	99	3732.0-33.0	117.	111.	115.	14.6	19.8	25.5	2.86	DOL SL/F PP
	100	3733.0-34.0	306.	243.	358.	16.1	15.3	29.1	2.85	DOL SL/V
S	101	3734.0-35.0	490.	484.	518.	15.4	10.0	33.8	2.85	DOL SL/V
	102	3735.0-36.0	0.88	0.05	0.14	6.2	9.6	38.5	2.86	DOL V FOSS STY
	103	3736.0-37.0	1.1	0.25	0.35	4.8	21.5	30.7	2.86	DOL VF V STY
*	104	3737.0-38.0	0.09		0.02	5.2	18.1	31.0	2.84	DOL F VF SL/V FOSS STY
	105	3738.0-39.0	0.41	0.08	0.06	4.3	17.8	49.7	2.86	DOL V STY
S	106	3739.0-40.0	6530.	0.76	6914.	3.4	18.7	32.0	2.93	DOL PYRC VF PP
	107	3740.0-41.0	0.13	<0.01	0.26	5.3	31.1	42.8	2.84	DOL VF SL/V STY
	108	3741.0-42.0	0.20	0.10	0.21	11.5	21.8	23.0	2.75	DOL SDY VF

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	109	3742.0-43.0	0.17	0.17	0.19	11.4	19.9	23.0	2.75	DOL SDY VF
S	110	3743.0-44.0	0.11	0.09	<0.01	7.8	20.5	38.0	2.80	DOL SL/SDY SL/PYRC VF
	111	3744.0-45.0	0.15	0.12	<0.01	8.2	31.5	31.5	2.79	DOL SDY VF
	112	3745.0-46.0	0.33	0.18	0.07	11.2	22.4	24.0	2.76	DOL SDY VF
	113	3746.0-47.0	0.21	0.07	0.11	5.8	21.6	33.6	2.85	DOL F VF STY
	114	3747.0-48.0	<0.01	<0.01	<0.01	3.3	36.9	52.8	2.80	DOL SL/SDY SL/F SL/V STY
S	115	3748.0-49.0	<0.01	<0.01	<0.01	6.8	12.4	44.5	2.84	DOL V STY
	116	3749.0-50.0	0.12	0.12	<0.01	3.3	16.5	49.5	2.87	DOL SL/V STY
	117	3750.0-51.0	0.35	0.10	0.48	4.1	25.0	50.0	2.83	DOL VF PP
	118	3751.0-52.0	0.11	0.05	0.06	8.0	37.1	27.8	2.83	DOL V SHLAM
S	119	3752.0-53.0	1.4	0.83	0.47	9.2	31.0	20.7	2.86	DOL VF PP STY
	120	3753.0-54.0	0.16	0.16	0.09	7.7	40.6	20.3	2.84	DOL SL/V
	121	3754.0-55.0	0.20	0.20	<0.01	5.7	26.2	39.4	2.84	DOL STY
	122	3755.0-56.0	<0.01	<0.01	0.10	7.3	35.5	40.6	2.82	DOL SHLAM
S	123	3756.0-57.0	0.06	0.06	<0.01	6.5	10.6	53.0	2.83	DOL VF STY
	124	3757.0-58.0	68.	67.	31.	12.1	25.4	19.9	2.84	DOL V
	125	3758.0-59.0	4.8	2.8	1.1	7.6	20.0	25.8	2.85	DOL VF V
S	126	3759.0-60.0	137.	71.	86.	14.4	30.1	18.8	2.83	DOL VF V
	127	3760.0-61.0	2552.	268.	1199.	16.9	26.1	20.8	2.89	DOL VF V
*	128	3761.0-62.0	0.05		0.01	6.3	24.7	38.5	2.85	DOL VF SL/F SL/V
*	129	3762.0-63.0	0.63		0.12	11.4	33.1	20.7	2.86	DOL VF SL/F SL/V
	130	3763.0-64.0	6228.	0.70	8914.	10.5	8.1	37.0	2.86	DOL SL/ANHY VF PP
S	131	3764.0-65.0	45.	8.2	5165.	10.4	20.7	25.9	2.85	DOL SL/ANHY VF PP
	132	3765.0-66.0	3.8	3.2	5.1	9.6	28.1	20.0	2.86	DOL SL/ANHY VF
	133	3766.0-67.0	4.7	4.0	5.7	10.5	32.0	17.8	2.85	DOL VF PP
	134	3767.0-68.0	3.9	1.3	2.1	8.7	21.5	27.1	2.90	DOL ANHY VF SL/V
	135	3768.0-69.0	0.75	0.44	1.6	3.9	39.1	39.1	2.85	DOL SL/PYRC VF SL/F STY
*S	136	3769.0-70.0	0.01		<0.01	1.2	35.2	42.3	2.81	DOL VF SL/F PP
	137	3770.0-71.0	4.4	0.07	1.9	5.8	54.1	30.9	2.84	DOL VF PP STY
	138	3771.0-72.0	<0.01	<0.01	<0.01	6.1	23.5	62.7	2.78	DOL SDY VF PP

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	139	3772.0-73.0	<0.01	<0.01	<0.01	5.8	17.7	58.9	2.78	DOL SDY PP SHLAM
	140	3773.0-74.0	0.01	0.01	<0.01	8.8	7.5	66.3	2.75	DOL V/SDY SL/F SL/V
S	141	3774.0-75.0	<0.01	<0.01	<0.01	11.8	4.7	75.4	2.81	DOL SL/SDY SL/V
	142	3775.0-76.0	0.09	0.07	<0.01	12.2	16.8	62.4	2.80	DOL SL/ANHY V
	143	3776.0-77.0	<0.01	<0.01	<0.01	7.0	11.7	66.8	2.79	DOL SDY SL/F PP
	144	3777.0-78.0	<0.01	<0.01	<0.01	6.6	11.6	65.2	2.83	DOL SL/SDY SL/PYRC VF
	145	3778.0-79.0	32.	27.	35.	10.4	31.2	17.8	2.84	DOL PP STY
S	146	3779.0-80.0	0.11	0.04	<0.01	2.3	30.1	60.3	2.83	DOL VF V STY
	147	3780.0-81.0	0.13	<0.01	0.04	2.5	44.5	37.4	2.81	DOL VF V
	148	3781.0-82.0	0.26	0.26	0.13	4.9	38.0	45.6	2.81	DOL VF SL/F V STY
	149	3782.0-83.0	29.	0.82	0.96	7.9	23.2	33.1	2.84	DOL VF V
	150	3783.0-84.0	7.0	6.5	1.8	10.1	26.0	26.0	2.85	DOL SL/ANHY SL/V
S	151	3784.0-85.0	0.54	0.05	0.65	1.9	6.7	80.1	2.84	DOL VF SL/F SL/V
	152	3785.0-86.0	0.08	0.08	<0.01	3.8	43.4	36.5	2.84	DOL SL/F SL/V STY
	153	3786.0-87.0	4.6	0.06	0.31	3.4	26.4	52.7	2.82	DOL VF SL/V
	154	3787.0-88.0	5.0	0.20	2.3	4.8	25.6	58.4	2.84	DOL VF SL/V STY
	155	3788.0-89.0	0.32	0.08	0.08	4.4	58.8	39.2	2.84	DOL VF SL/F PP STY
	156	3789.0-90.0	0.96	0.22	0.35	6.7	25.0	35.7	2.86	DOL SL/ANHY VF SL/F V
	157	3790.0-91.0	11.	4.9	10.	9.8	20.2	28.8	2.87	DOL ANHY SL/F V STY
S	158	3791.0-92.0	5.9	2.0	1.2	11.8	15.2	33.8	2.84	DOL V
	159	3792.0-93.0	<0.01	<0.01	<0.01	6.4	44.0	55.7	2.81	DOL SL/SDY
	160	3793.0-94.0	0.10	0.01	0.06	8.8	8.2	68.7	2.81	DOL VF V
	161	3794.0-95.0	0.18	0.17	<0.01	11.3	12.9	46.0	2.80	DOL SL/SDY V SHLAM
	162	3795.0-96.0	0.45	0.38	0.03	7.7	9.0	40.0	2.85	DOL SL/ANHY SL/F SL/V STY
S	163	3796.0-97.0	0.51	0.37	0.29	6.9	27.7	27.7	2.85	DOL SL/ANHY VF PP STY
	164	3797.0-98.0	40.	0.92	0.20	8.3	19.5	34.6	2.85	DOL SL/ANHY VF
	165	3798.0-99.0	3.0	2.1	2.5	9.7	34.5	19.4	2.85	DOL SL/ANHY VF V
	166	3799.0- 0.0	4.8	4.5	2.7	10.2	37.6	15.0	2.86	DOL SL/ANHY PP
*	167	3800.0- 1.0	0.02		<0.01	4.5	48.4	55.4	2.83	DOL VF SL/F PP
	168	3801.0- 2.0	3.2	2.6	3.3	8.8	17.2	28.7	2.86	DOL SL/ANHY PP

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S 169	3802.0- 3.0	11.	8.6	17.	12.2	17.9	22.6	2.86	DOL SL/ANHY VF SL/F V
170	3803.0- 4.0	6.7	3.5	5.9	9.9	23.9	27.3	2.84	DOL V STY
171	3804.0- 5.0	18.	16.	12.	10.4	22.2	18.7	2.84	DOL SL/F V
172	3805.0- 6.0	40.	30.	24.	12.5	24.2	19.9	2.85	DOL SL/ANHY SL/V STY
173	3806.0- 7.0	0.96	0.77	0.16	6.9	32.6	27.4	2.83	DOL V STY
174	3807.0- 8.0	15.	14.	2.8	8.0	22.6	25.8	2.85	DOL SL/ANHY SL/F PP STY
S 175	3808.0- 9.0	4.0	0.16	0.03	4.6	8.2	40.9	2.83	DOL VF SL/F V STY
176	3809.0-10.0	0.95	0.83	0.52	3.5	13.0	39.0	2.85	DOL SL/ANHY VF SL/F SL/V
177	3810.0-11.0	10.	0.77	0.62	6.4	37.1	23.9	2.84	DOL SL/F PP STY
*S 178	3811.0-12.0	9.5		0.48	9.0	34.6	25.5	2.86	DOL SL/ANHY VF SL/F PP STY
S 179	3812.0-13.0	2.3	1.8	0.79	9.7	26.4	27.7	2.84	DOL VF SL/V PP
CORE NO. 3 3813.0-3850.0 CUT 37' REC 35'									
S 180	3813.0-14.0	47.	6.8	1.4	10.9	18.9	30.2	2.84	DOL VF SL/V PP STY
181	3814.0-15.0	2.0	1.0	0.34	7.2	31.3	23.0	2.85	DOL SL/ANHY VF SL/V PP STY
182	3815.0-16.0	5.2	4.0	4.2	9.0	32.3	23.1	2.86	DOL SL/ANHY VF PP
183	3816.0-17.0	1.1	1.1	0.89	5.5	49.8	31.9	2.79	DOL SL/SDY
S 184	3817.0-18.0	2.2	2.0	0.54	7.2	26.9	25.6	2.86	DOL SL/ANHY VF STY
185	3818.0-19.0	6.9	3.0	5.7	9.5	36.8	19.5	2.85	DOL SL/ANHY F VF
186	3819.0-20.0	105.	95.	12.	12.7	24.8	24.8	2.84	DOL F VF
187	3820.0-21.0	1632.	1.2	17078.	10.8	27.4	21.9	2.88	DOL ANHY VF SL/V
* 188	3821.0-22.0	1.2		0.23	10.9	28.1	20.6	2.86	DOL SL/ANHY F VF
* 189	3822.0-23.0	1.7		0.31	11.3	34.5	16.4	2.86	DOL SL/ANHY F VF
S 190	3823.0-24.0	1.7	1.5	2.7	10.7	34.1	14.6	2.87	DOL ANHY VF SL/F PP
191	3824.0-25.0	3.2	2.5	2.0	9.6	35.4	17.7	2.84	DOL VF PP
192	3825.0-26.0	3528.	1.2	7077.	8.9	35.1	18.7	2.85	DOL SL/ANHY VF
193	3826.0-27.0	4.1	3.2	2.5	11.2	33.9	21.7	2.85	DOL SL/ANHY VF PP
S 194	3827.0-28.0	0.70	0.56	0.85	8.6	21.0	38.5	2.85	DOL SL/ANHY VF SL/V PP

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	195	3828.0-29.0	11560.	0.16	0.87	5.6	9.8	39.3	2.88	DOL SL/ANHY SL/PYRC F VF STY
	196	3829.0-30.0	1.9	1.4	0.64	2.3	28.3	34.0	2.86	DOL SL/ANHY F VF STY
S	197	3830.0-31.0	1.4	0.66	1.1	4.8	12.0	59.9	2.83	DOL F VF SL/V PP
	198	3831.0-32.0	883.	15.	1.0	8.5	31.6	31.6	2.85	DOL SL/ANHY F VF V PP
	199	3832.0-33.0	72.	4.1	20.	10.9	16.8	43.3	2.85	DOL SL/ANHY F VF V PP
	200	3833.0-34.0	83.	76.	13.	11.4	17.2	26.8	2.84	DOL F V PP
	201	3834.0-35.0	333.	303.	99.	12.6	11.7	23.4	2.86	DOL SL/ANHY SL/V PP
S	202	3835.0-36.0	77.	43.	19.	11.3	12.8	31.4	2.86	DOL SL/ANHY F VF V PP
	203	3836.0-37.0	63.	22.	6.0	9.5	23.0	23.0	2.84	DOL F VF V SHR SHLAM
	204	3837.0-38.0	4.3	4.0	0.58	7.8	15.9	31.8	2.86	DOL SL/ANHY F VF V SHR PP
S	205	3838.0-39.0	20.	17.	2.8	12.7	29.0	24.9	2.86	DOL SL/ANHY SL/F PP
	206	3839.0-40.0	7.6	7.3	5.6	11.7	30.0	16.9	2.86	DOL SL/ANHY SL/F PP
	207	3840.0-41.0	7.8	5.9	4.5	10.7	31.5	15.8	2.84	DOL VF PP
*	208	3841.0-42.0	0.62		0.24	10.0	33.7	19.2	2.84	DOL F PP
KS	209	3842.0-43.0	0.33		0.08	12.5	30.5	18.0	2.85	DOL SL/ANHY F PP
*	210	3843.0-44.0	7.4		0.43	13.6	39.8	18.7	2.83	DOL F PP
*	211	3844.0-45.0	13.		0.62	10.5	32.1	15.0	2.85	DOL SL/ANHY F
*	212	3845.0-46.0	0.06		0.01	4.5	25.5	29.1	2.86	DOL SL/ANHY F VF
*	213	3846.0-47.0	0.57		0.14	8.5	29.2	17.2	2.85	DOL SL/ANHY F STY
*	214	3847.0-48.0	0.54		0.11	8.4	22.9	19.3	2.85	DOL SL/ANHY F
		3848.0-50.0								LOST CORE
		CORE NO. 4 3850.0-3883.0 CUT 33' REC 28'								
*S	215	3850.0-51.0	0.75		0.21	6.9	32.7	16.4	2.86	DOL F VF
	216	3851.0-52.0	3.4	0.68	<0.01	5.7	27.5	35.3	2.85	DOL SL/ANHY F VF PP STY
	217	3852.0-53.0	39.	38.	3.7	10.9	32.9	18.8	2.90	DOL ANHY SL/F PP
	218	3853.0-54.0	59.	58.	16.	11.9	32.4	35.2	2.84	DOL VF PP
	219	3854.0-55.0	10.	10.	1.2	10.6	34.6	27.7	2.84	DOL F VF PP

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DATE : 3-18-87
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FILE NO. : 43202-15265
API WELL NO.:

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH FEET	PERM MAXIMUM	PERM 90 DEG	PERM VERTICAL	HE POR	OIL% POR	WTR% POR	GRAIN DEN M	DESCRIPTION
220	3855.0-56.0	0.80	0.64	0.38	7.8	29.1	29.1	2.84	DOL F VF PP STY
S 221	3856.0-57.0	0.97	0.49	0.68	6.9	31.2	22.3	2.69	SD DOLC F STY
* 222	3857.0-58.0	1.5		0.03	8.9	19.0	29.6	2.86	DOL SL/ANHY F
223	3858.0-59.0	1.1	1.0	0.19	7.6	27.1	31.4	2.85	DOL SL/ANHY VF PP
224	3859.0-60.0	0.95	0.70	0.37	8.1	28.8	28.8	2.85	DOL SL/ANHY F VF PP
225	3860.0-61.0	1.0	0.97	0.50	8.5	26.5	30.3	2.85	DOL SL/ANHY VF PP STY
S 226	3861.0-62.0	0.93	0.74	0.91	8.5	26.1	29.9	2.85	DOL SL/ANHY VF
227	3862.0-63.0	9052.	1.7	2.8	4.8	38.3	40.3	2.83	DOL F VF SL/V
228	3863.0-64.0	8057.	0.54	1.7	7.5	31.7	26.7	2.86	DOL SL/ANHY F VF STY
229	3864.0-65.0	4.5	3.4	4.5	10.6	33.5	19.2	2.85	DOL SL/ANHY F VF PP
230	3865.0-66.0	15.	1.6	5.8	7.3	28.7	21.6	2.85	DOL SL/ANHY F VF SL/V
231	3866.0-67.0	9.6	4.0	4.4	7.4	23.0	31.7	2.85	DOL SL/ANHY F VF STY
232	3867.0-68.0	0.26	0.11	0.04	6.0	36.7	23.6	2.86	DOL SL/ANHY F VF SL/V STY
*S 233	3868.0-69.0	0.20		0.01	5.8	21.4	24.9	2.85	DOL SL/ANHY F
234	3869.0-70.0	56.	15.	19.	9.9	27.0	21.6	2.86	DOL SL/ANHY VF SL/V STY
235	3870.0-71.0	171.	148.	55.	11.5	25.6	24.6	2.86	DOL SL/ANHY VF PP STY
236	3871.0-72.0	52.	17.	9.5	9.8	24.8	28.3	2.85	DOL SL/ANHY VF SL/V
* 237	3872.0-73.0	51.		0.83	8.8	20.3	27.8	2.85	DOL SL/ANHY F
238	3873.0-74.0	65.	52.	19.	9.1	29.9	22.8	2.85	DOL SL/ANHY F VF PP
*S 239	3874.0-75.0	1.5		0.13	10.1	31.0	22.1	2.85	DOL SL/ANHY F
* 240	3875.0-76.0	1.2		0.10	8.9	30.2	23.8	2.85	DOL SL/ANHY F
* 241	3876.0-77.0	0.32		0.01	3.8	35.6	40.0	2.85	DOL SL/ANHY F SL/V
*S 242	3877.0-78.0	0.03		<0.01	5.0	25.7	36.7	2.86	DOL SL/ANHY F SL/V
	3878.0-83.0								LOST CORE
	CORE NO. 5 3883.0-3943.0 CUT 60' REC 60'								
* 243	3883.0-84.0	3.1		0.67	7.3	20.2	35.9	2.86	DOL SL/ANHY F VF PP
S 244	3884.0-85.0	23.	4.7	3.4	5.9	33.8	29.0	2.82	DOL F VF PP STY

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FILE NO. : 43202-15265
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	SAMPLE NUMBER	DEPTH FEET	PERM MAXIMUM	PERM 90 DEG	PERM VERTICAL	HE POR	OIL% POR	WTR% POR	GRAIN DEN M	DESCRIPTION
	245	3885.0-86.0	57.	46.	0.49	9.4	18.9	26.9	2.85	DOL SL/ANHY F VF PP STY
	246	3886.0-87.0	34.	12.	1.4	7.9	19.2	25.6	2.86	DOL SL/ANHY VF PP STY
	247	3887.0-88.0	7.0	6.7	3.9	8.6	29.3	23.0	2.86	DOL SL/ANHY VF PP
	248	3888.0-89.0	5.7	5.6	5.1	8.4	32.0	20.2	2.85	DOL SL/ANHY VF PP
S	249	3889.0-90.0	7.1	6.1	0.78	9.1	22.2	18.7	2.87	DOL ANHY VF PP STY
	250	3890.0-91.0	9.6	7.8	6.2	8.7	28.4	18.2	2.85	DOL SL/ANHY VF PP STY
	251	3891.0-92.0	1.1	1.0	0.63	6.7	31.6	23.3	2.82	DOL VF PP STY
	252	3892.0-93.0	3.9	3.0	0.95	7.2	31.2	22.5	2.85	DOL SL/ANHY F VF PP STY
	253	3893.0-94.0	16.	15.	7.0	14.8	29.8	21.5	2.86	DOL SL/ANHY PP
S	254	3894.0-95.0	11.	7.5	12.	12.3	34.4	18.8	2.86	DOL SL/ANHY VF PP
*	255	3895.0-96.0	14.		1.2	12.3	23.9	21.2	2.85	DOL SL/ANHY F VF PP
*	256	3896.0-97.0	13.		0.89	8.0	27.5	26.4	2.86	DOL SL/ANHY F VF PP
	257	3897.0-98.0	0.30	0.05	0.19	6.0	30.9	29.3	2.84	DOL VF STY
	258	3898.0-99.0	1.2	0.12	0.04	10.7	19.7	22.5	2.79	DOL SL/SDY VF
S	259	3899.0- 0.0	0.03	0.03	<0.01	10.3	19.0	22.0	2.81	DOL VF
	260	3900.0- 1.0	180.	107.	16.	10.3	20.3	27.8	2.84	DOL F VF PP STY
	261	3901.0- 2.0	123.	114.	119.	11.2	25.0	21.4	2.85	DOL SL/ANHY PP
	262	3902.0- 3.0	126.	110.	57.	10.9	21.0	26.9	2.85	DOL SL/ANHY VF PP
*	263	3903.0- 4.0	5.5		0.74	9.0	46.5	19.6	2.85	DOL SL/ANHY VF PP
*	264	3904.0- 5.0	6.3		0.81	8.3	40.8	20.4	2.85	DOL SL/ANHY VF PP
	265	3905.0- 6.0	1169.	0.45	6619.	5.9	30.0	20.0	2.84	DOL VF PP STY
*S	266	3906.0- 7.0	0.08		<0.01	6.0	26.1	23.2	2.85	DOL SL/ANHY VF PP
	267	3907.0- 8.0	0.96	0.91	<0.01	9.7	28.0	15.7	2.80	DOL SL/SDY STY
*	268	3908.0- 9.0	0.05		<0.01	8.5	29.4	25.2	2.83	DOL VF PP
	269	3909.0-10.0	15.	6.0	5.4	11.2	27.9	23.9	2.82	DOL VF SL/V STY
	270	3910.0-11.0	0.04	0.04	<0.01	6.6	34.0	25.0	2.82	DOL F VF STY
S	271	3911.0-12.0	0.39	0.32	0.35	13.1	20.5	11.5	2.78	DOL SDY
	272	3912.0-13.0	0.31	0.31	0.12	11.5	24.8	14.2	2.77	DOL SDY VF
	273	3913.0-14.0	0.10	0.10	0.10	8.6	28.6	19.1	2.81	DOL SL/SDY STY
	274	3914.0-15.0	0.70	0.65	0.10	12.0	23.7	17.3	2.79	DOL SDY STY

CHEVRON U.S.A., INC.
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S 275	3915.0-16.0	4.9	4.1	11.	19.0	19.5	16.1	2.69	SD DOLC VF
276	3916.0-17.0	2.7	1.8	19.	17.5	18.2	19.1	2.68	SD DOLC VF
277	3917.0-18.0	2.5	2.4	22.	17.1	18.4	19.5	2.68	SD DOLC VF
278	3918.0-19.0	0.96	0.79	0.81	15.2	19.5	19.5	2.70	SD DOLC VF
279	3919.0-20.0	5714.	1.8	7096.	15.8	20.5	19.2	2.69	SD DOLC VF
S 280	3920.0-21.0	1.2	0.92	4.6	14.8	20.5	19.2	2.68	SD DOLC VF
281	3921.0-22.0	0.85	0.82	0.79	15.9	19.7	20.9	2.69	SD DOLC
282	3922.0-23.0	0.83	0.83	0.73	15.2	19.1	19.1	2.68	SD DOLC
*S 283	3923.0-24.0	0.83		0.11	9.2	21.6	28.8	2.82	DOL F VF
284	3924.0-25.0	4.9	4.3	3.7	9.2	21.7	28.9	2.83	DOL SL/F SL/V
285	3925.0-26.0	5.4	4.4	0.15	10.1	19.8	26.4	2.85	DOL SL/ANHY VF SL/V STY
286	3926.0-27.0	0.43	0.42	0.15	11.8	29.1	16.6	2.82	DOL SL/SDY STY
S 287	3927.0-28.0	0.93	0.90	0.06	12.8	31.6	12.6	2.82	DOL SL/SDY STY
288	3928.0-29.0	0.71	0.64	0.53	14.1	25.2	15.9	2.79	DOL SDY
289	3929.0-30.0	38.	25.	17.	11.2	32.0	24.0	2.85	DOL SL/ANHY VF PP
290	3930.0-31.0	37.	36.	27.	12.3	32.1	24.1	2.86	DOL SL/ANHY VF PP STY
291	3931.0-32.0	88.	18.	4787.	13.6	37.4	23.4	2.85	DOL SL/ANHY VF PP STY
292	3932.0-33.0	52.	37.	34.	13.6	29.7	22.3	2.85	DOL SL/ANHY PP
S 293	3933.0-34.0	61.	53.	14.	14.1	19.4	36.1	2.85	DOL SL/ANHY VF PP
294	3934.0-35.0	7896.	324.	7754.	18.3	31.2	24.5	2.89	DOL ANHY VF PP STY
295	3935.0-36.0	2640.	85.	6140.	16.4	29.6	33.3	2.85	DOL SL/ANHY PP
296	3936.0-37.0	7008.	145.	5788.	17.1	28.0	26.6	2.87	DOL ANHY VF PP STY
297	3937.0-38.0	25.	23.	13.	14.8	34.3	25.3	2.85	DOL SL/ANHY PP STY
*S 298	3938.0-39.0	97.		4.8	16.5	41.9	37.0	2.85	DOL SL/ANHY VF PP
299	3939.0-40.0	12.	12.	12.	15.9	26.3	30.9	2.85	DOL SL/ANHY VF PP
S 300	3940.0-41.0	25.	23.	20.	16.2	33.1	23.9	2.86	DOL SL/ANHY VF PP
* 301	3941.0-42.0	25.		2.1	16.9	38.0	38.0	2.85	DOL SL/ANHY VF PP
302	3942.0-43.0	24.	22.	24.	19.1	40.1	13.4	2.89	DOL ANHY VF PP

CORE NO. 6 3943.0-4003.0 CUT 60' REC 60'

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*S 303	3943.0-44.0	38.		2.4	17.0	42.1	31.6	2.84	DOL SL/SDY F VF
* 304	3944.0-45.0	5.9		0.37	15.8	43.7	18.2	2.86	DOL SL/ANHY F VF
305	3945.0-46.0	5.1	4.8	5.0	14.6	38.3	18.4	2.86	DOL SL/ANHY SL/F STY
306	3946.0-47.0	3920.	15.	7077.	15.0	29.3	24.7	2.87	DOL ANHY VF SL/F STY
307	3947.0-48.0	1233.	28.	7868.	16.0	36.0	22.3	2.85	DOL SL/ANHY VF
*S 308	3948.0-49.0	1.8		0.21	13.6	36.6	26.1	2.86	DOL SL/ANHY F VF
309	3949.0-50.0	46.	40.	102.	16.0	31.8	23.1	2.86	DOL SL/ANHY VF SL/F
310	3950.0-51.0	4682.	18.	4328.	17.0	31.9	27.4	2.87	DOL ANHY VF
311	3951.0-52.0	2666.	23.	1873.	17.1	35.0	28.0	2.86	DOL SL/ANHY VF
312	3952.0-53.0	3220.	14.	3384.	15.2	28.4	27.0	2.85	DOL SL/ANHY F VF STY
S 313	3953.0-54.0	2.8	2.2	4.2	11.7	25.3	27.1	2.86	DOL SL/ANHY F VF PP STY
314	3954.0-55.0	20.	9.0	8.7	12.8	28.5	29.6	2.85	DOL SL/ANHY VF
315	3955.0-56.0	6.1	3.2	7.7	11.0	22.6	29.1	2.85	DOL SL/ANHY VF SL/F STY
316	3956.0-57.0	5550.	3.3	2164.	11.6	30.4	72.3	2.85	DOL SL/ANHY VF SL/F
317	3957.0-58.0	1006.	2.5	2872.	12.0	25.7	27.5	2.86	DOL SL/ANHY VF
318	3958.0-59.0	5.1	2.6	6.3	12.0	31.9	25.2	2.85	DOL SL/ANHY VF
S 319	3959.0-60.0	448.	3.6	450.	12.5	30.1	26.5	2.86	DOL SL/ANHY VF PP
320	3960.0-61.0	5.8	2.2	1.8	9.2	31.8	26.8	2.84	DOL VF PP STY
321	3961.0-62.0	2.0	1.6	2.0	8.7	25.1	25.1	2.84	DOL F VF PP
322	3962.0-63.0	1.6	1.0	1.1	7.7	21.8	28.0	2.85	DOL SL/ANHY VF
323	3963.0-64.0	3.6	3.4	1.7	8.0	22.4	28.9	2.85	DOL SL/ANHY F VF
S 324	3964.0-65.0	0.26	0.13	0.10	6.0	36.8	26.3	2.84	DOL VF STY
* 325	3965.0-66.0	0.13		0.01	6.0	34.4	28.9	2.85	DOL SL/ANHY F VF
326	3966.0-67.0	0.72	0.45	7.0	6.8	31.9	27.4	2.83	DOL F VF PP
327	3967.0-68.0	0.56	0.56	0.19	3.9	31.1	27.6	2.83	DOL VF
328	3968.0-69.0	5.5	1.5	0.23	2.8	50.5	28.3	2.82	DOL F VF STY
S 329	3969.0-70.0	1.6	0.78	0.26	10.7	13.5	37.8	2.80	DOL SL/SDY F VF
* 330	3970.0-71.0	13.		1.2	8.5	23.1	26.9	2.85	DOL SL/ANHY F VF PP STY
331	3971.0-72.0	75.	15.	25.	9.6	25.4	24.2	2.85	DOL SL/ANHY VF

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332	3972.0-73.0	5.1	4.9	5.8	8.8	30.6	17.5	2.85	DOL SL/ANHY F VF STY
333	3973.0-74.0	6.1	5.6	5.9	7.9	31.6	23.3	2.83	DOL VF STY
*S 334	3974.0-75.0	2.8		0.41	8.8	22.9	22.9	2.85	DOL SL/ANHY F VF
* 335	3975.0-76.0	5.1		0.73	9.3	30.2	23.0	2.85	DOL SL/ANHY F VF
* 336	3976.0-77.0	8.2		1.2	9.6	30.3	24.3	2.85	DOL SL/ANHY F VF
* 337	3977.0-78.0	9.1		0.98	10.6	31.4	22.4	2.84	DOL F VF
* 338	3978.0-79.0	8.1		0.74	10.0	24.6	19.7	2.84	DOL F VF
* 339	3979.0-80.0	1.9		0.23	9.5	27.4	24.0	2.85	DOL SL/ANHY F VF STY
* 340	3980.0-81.0	0.45		0.03	7.3	19.1	25.4	2.85	DOL SL/ANHY F
*S 341	3981.0-82.0	0.19		0.01	6.9	20.4	22.6	2.84	DOL F STY
* 342	3982.0-83.0	0.92		0.24	8.9	24.5	24.5	2.85	DOL SL/ANHY F VF
* 343	3983.0-84.0	1.1		0.11	7.0	27.3	18.2	2.83	DOL F STY
* 344	3984.0-85.0	0.32		<0.01	6.8	28.5	17.8	2.83	DOL F PP STY
345	3985.0-86.0	4.0	0.91	10.	6.7	28.9	21.7	2.84	DOL VF SL/F STY
346	3986.0-87.0	0.08	0.03	<0.01	4.8	19.1	13.6	2.83	DOL VF SL/F STY
S 347	3987.0-88.0	0.74	0.70	0.68	8.1	36.4	17.5	2.83	DOL VF
* 348	3988.0-89.0	0.59		0.04	7.0	22.7	36.9	2.85	DOL SL/ANHY F PP
349	3989.0-90.0	7.8	6.7	4.4	9.8	22.7	24.3	2.83	DOL VF PP
*S 350	3990.0-91.0	0.17		0.01	4.7	15.7	37.6	2.85	DOL SL/ANHY F STY
* 351	3991.0-92.0	0.16		<0.01	6.5	20.8	32.3	2.84	DOL F PP
352	3992.0-93.0	10253.	267.	6546.	9.2	17.2	49.3	2.87	DOL ANHY F VF
353	3993.0-94.0	74.	74.	63.	13.5	25.0	27.8	2.83	DOL
354	3994.0-95.0	176.	157.	183.	14.1	22.3	29.7	2.83	DOL PP
355	3995.0-96.0	16.	14.	12.	9.5	26.5	29.6	2.85	DOL SL/ANHY VF SL/F PP STY
356	3996.0-97.0	178.	62.	25.	9.9	27.6	27.6	2.85	DOL SL/ANHY VF SL/F
S 357	3997.0-98.0	0.22	0.18	0.11	6.4	14.5	29.1	2.91	DOL ANHY VF SL/V STY
358	3998.0-99.0	0.08	0.06	<0.01	3.3	33.2	45.4	2.83	DOL
359	3999.0- 0.0	0.23	0.20	0.18	5.1	16.0	70.4	2.81	DOL VF SHR
360	4000.0- 1.0	2.5	2.1	0.15	9.7	4.4	36.7	2.84	DOL VF SL/V
S 361	4001.0- 2.0	1.5	1.5	0.90	7.1	19.0	29.6	2.84	DOL VF SL/V SHR

CHEVRON U.S.A., INC.
EMSU NO. 164

DATE : 3-18-87
FORMATION : PENROSE/GRAYBURG

FILE NO. : 43202-15265
API WELL NO.:

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH FEET	PERM MAXIMUM	PERM 90 DEG	PERM VERTICAL	HE POR	OIL% POR	WTR% POR	GRAIN DEN M	DESCRIPTION
362	4002.0- 3.0	3.3	1.5	0.36	6.3	29.0	33.8	2.83	DOL VF SL/V SHR

* INDICATES PLUG PERMEABILITY

S INDICATES A PRESERVED SAMPLE

LITHOLOGICAL ABBREVIATIONS

ANH(Y)	ANHYDRITE, ANHYDRITIC
ARK	ARKOSE, ARKOSIC
BAN	BAND, BANDED
BREC	BRECCA, BRECCIATED
CALC	CALCITE, CALCAREOUS
CARB	CARBONACEOUS
CG	COARSE GRAINED
CHK(Y)	CHALK, CHALKY
CHT(Y)	CHERT, CHERTY
CONGL	CONGLOMERATE, CONGLOMERITIC
CXLN	COARSELY CRYSTALLINE
DNS	DENSE
DOL(C)	DOLOMITE, DOLOMITIC
F	RANDOMLY ORIENTED FRACTURES
FG	FINE GRAINED
FOSS	FOSSILIFEROUS
FR	FRIABLE
FXLN	FINELY CRYSTALLINE
GAL	GALENA
GLAUC	GLAUCONITE, GLAUCONITIC
GRAN	GRANITE
GYP	GYPSUM, GYPSIFEROUS
HF	PREDOMINANTLY HORIZONTALLY FRACTURED
INC	INCLUSION
INTBD	INTERBEDDED
LAM	LAMINATED
LM(Y)	LIMESTONE, LIMY
MG	MEDIUM GRAINED
MTX	MATRIX
NA	INTERVAL NOT ANALYZED (AT REQUEST OF CLIENT)
NOD	NODULE, NODULAR
OOL	OOLITIC
PISO	PISOLITIC
PP	PINPOINT POROSITY
PT	PARTING
PYR	PYRITE, PYRITIC
SD(Y)	SANDSTONE, SANDY
SH(Y)	SHALE, SHALY
SHR	SOLID HYDROCARBON RESIDUE
SL/	SLIGHTLY
SLT(Y)	SILT, SILTY
STY	STYLOLITE, STYLOLITIC
SUC	SUCROSIC
SUL	SULPHUR
TBFA	TOO BROKEN FOR ANALYSIS
TRIP	TRIPOLITE
V/	VERY
VF	PREDOMINANTLY VERTICALLY FRACTURED
V	VUGULAR
XBD	CROSSBEDDED
XLN	MEDIUM CRYSTALLINE
XTL	CRYSTAL

THE FIRST WORD IN THE DESCRIPTION COLUMN OF THE CORE ANALYSIS REPORT DESCRIBES THE ROCK TYPE. FOLLOWING ARE ROCK MODIFIERS IN DECREASING ABUNDANCE AND MISCELLANEOUS DESCRIPTIVE TERMS.

Litton
Core Lab

CHEVRON U.S.A., INC.
EMSU NO. 164
LEA COUNTY, NEW MEXICO

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