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(// // //)

MATLAB

[]

[]

[]

) (m-1)m/2 ()

()

y .(

:[]

y = d(1,1), d(1,2), d(1,3), ..., d(1,m), d(2,3),
d(2,4), ..., d(m-1,m)

()

d

()

d

$$d_{rs}^2 = (x_r - x_s)D^{-1}(x_r - x_s)'$$

()

r :x_r

s :x_s

:(x_r-x_s)'

r,s

:d_{rs}

D

.[] r,s

I DD⁻¹=I

D⁻¹

x_s x_r

(m* n)

n

m

Terra

()

()

[]

$$d(r,s) = \frac{1}{n_r n_s} \sum_{i=1}^{n_r} \sum_{j=1}^{n_s} dist(x_{ri}, x_{sj})$$

$$Z = (V - \text{mean}(V)) / \text{std}(V)$$

()

:

=V

=std

()

r,s

n_r, n_s

d

r i x_{ri}

s j x_{sj}

()

() GR

()

) Sonic (

GR) CGR

) CNL () LDL (

(

()

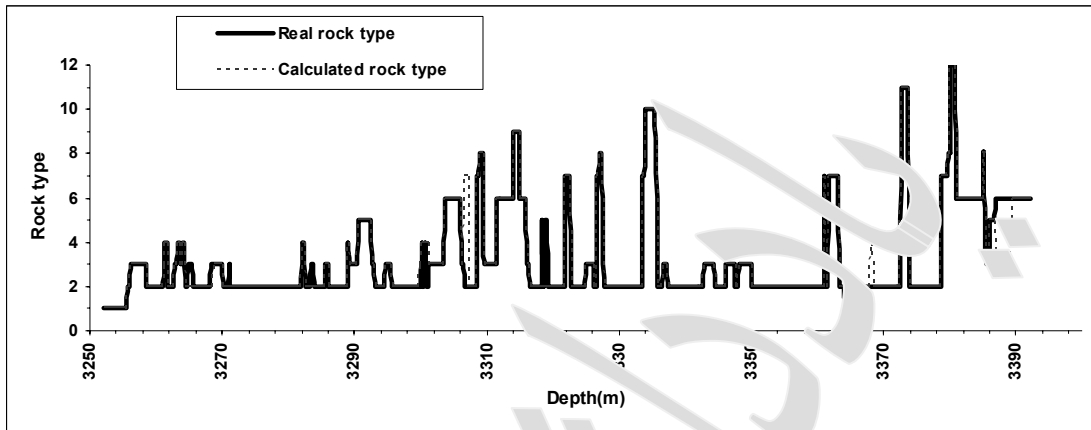
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Statistical Character \ Log	GR (API)	Sonic (ms/ft)	CNL (%)	LDL (gr/cm ³)	CGR (API)	Porosity (%)
Mean	7.66	52.05	0.001	2.91	2.61	2.21
Median	4.74	52.1	-0.27	2.94	1.63	2.2
Mode	3.07	52.1	-0.40	2.96	1.39	2.2
Standard Deviation	7.00	1.38	0.74	0.06	2.17	1.47
Sample Variance	49.13	1.91	0.55	0.004	4.72	2.18
Minimum	1.94	50.1	-0.46	2.73	0.068	0
Maximum	30.4	56.3	3.16	2.97	9.09	6.9

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Log Statistical Character	GR (API)	Sonic (ms/ft)	CNL (%)	LDL (gr/cm ³)	CGR (API)	Porosity (%)
Mean	104.42	73.68	16.12	2.42	76.86	20.86
Median	107	74	16.3	2.43	75.9	21.1
Mode	#N/A	#N/A	#N/A	2.43	#N/A	#N/A
Standard Deviation	15.37	1.51	1.60	0.01	8.14	0.92
Sample Variance	236.36	2.28	2.59	0.00	66.31	0.85
Minimum	80.8	71.5	13.9	2.4	66.2	19.5
Maximum	120	75.3	17.9	2.44	86.6	21.8

:#N/A



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.()

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MATLAB

- 1 - Elphic, R. Y. (2004). *Schlumberger oil field glossary*.
- 2 - Everitt, B. S. (1993). *Cluster analysis*, New York- Toronto, John Wiley and Sons, third edition.
- 3 - Granier, B. (2003). *A new approach in rock-typing, documented by a case study of layer-cake reservoirs in field "A"*, offshore Abu Dhabi (U.A.E.), Notebooks on Geology, Article 2003/04 (CG2003_A04_BG), PP.1-13.
- 4 - RIPI, (2004). *Petrophysical analysis and sequence stratigraphy of the Asmari formation in the Marun well#A*, South west of Iran, NISOC Internal report, unpublished.

- 1 - Rock Types
- 2 - High Resolution
- 3 - Standardized Euclidean Distance
- 4 - Variance
- 5 - Transpose
- 6 - Diagonal