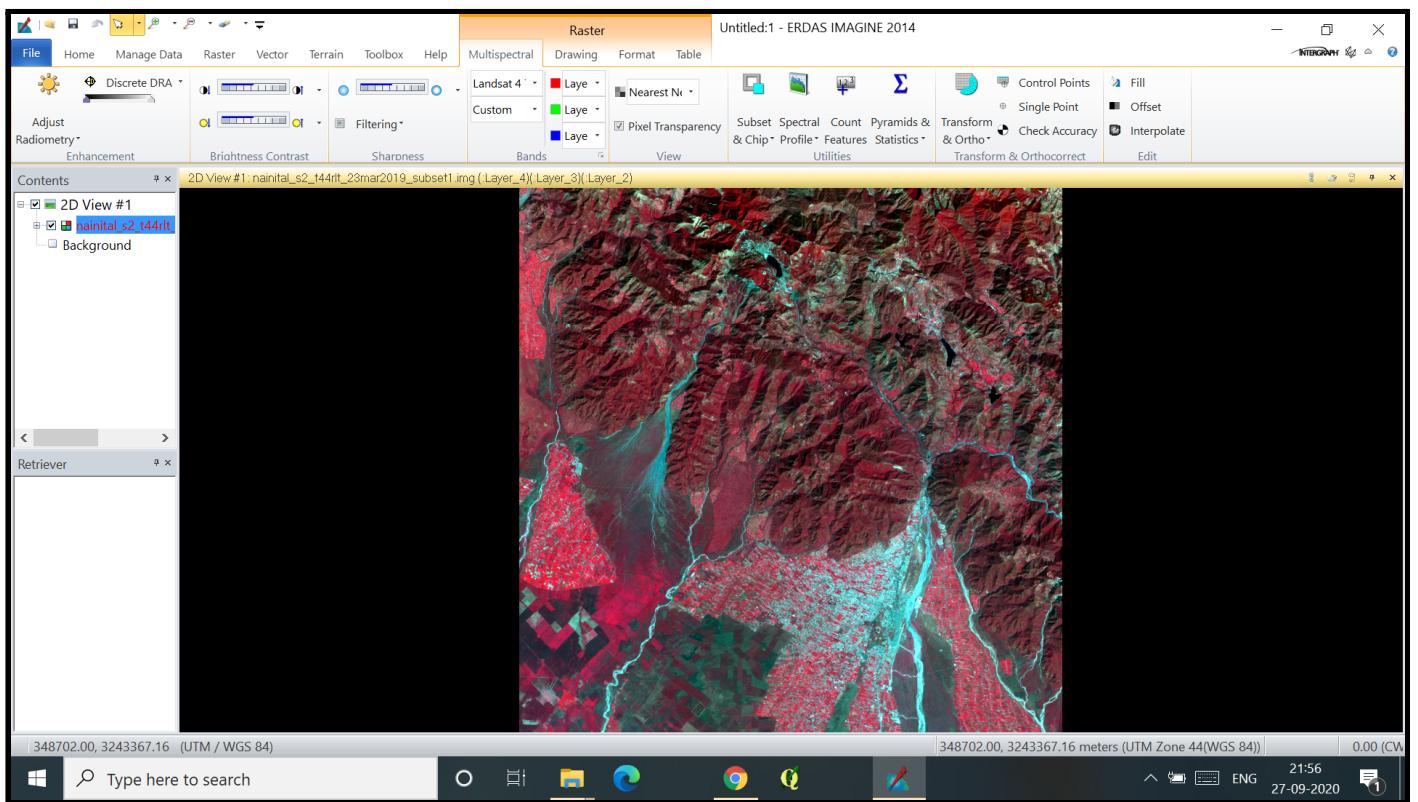


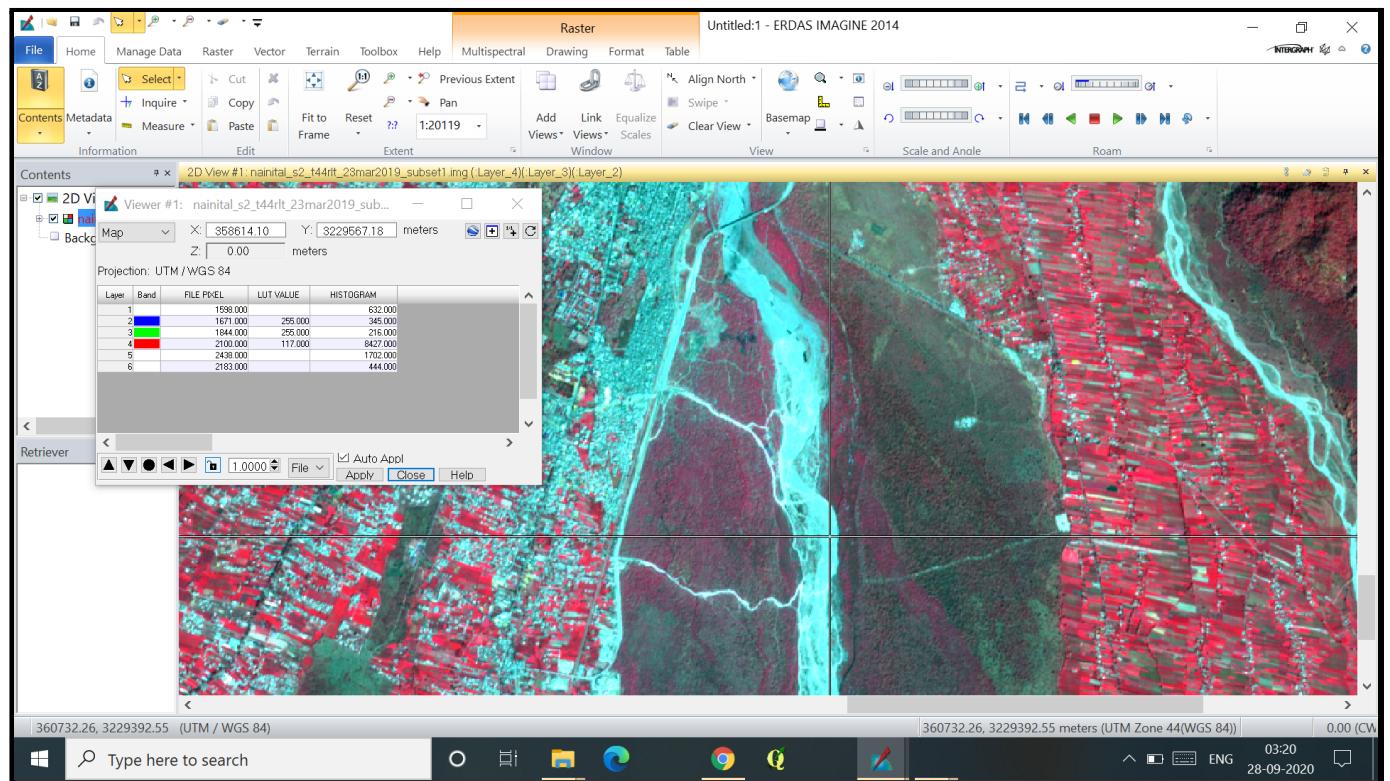
IMAGE- NAINITAL

(Standard False colour composite-4,3,2)

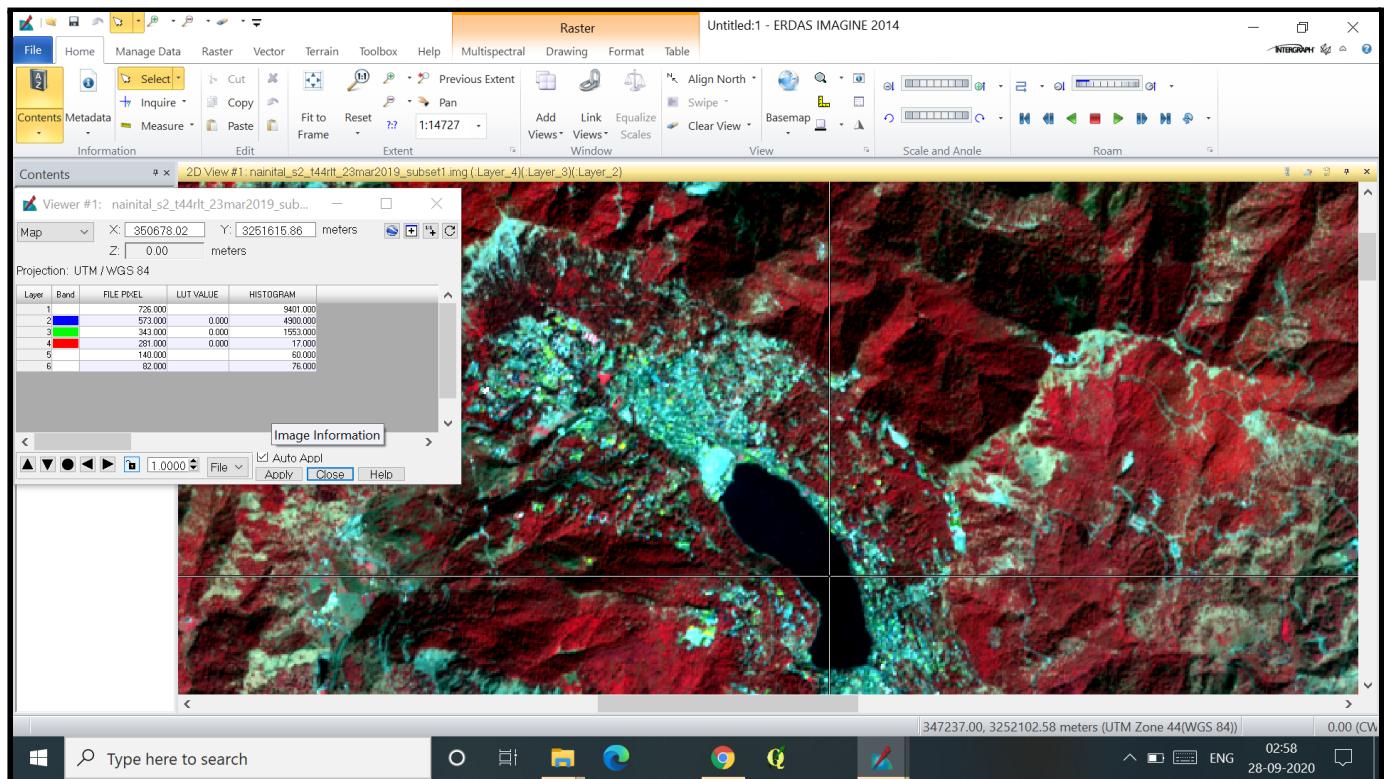


FEATURES

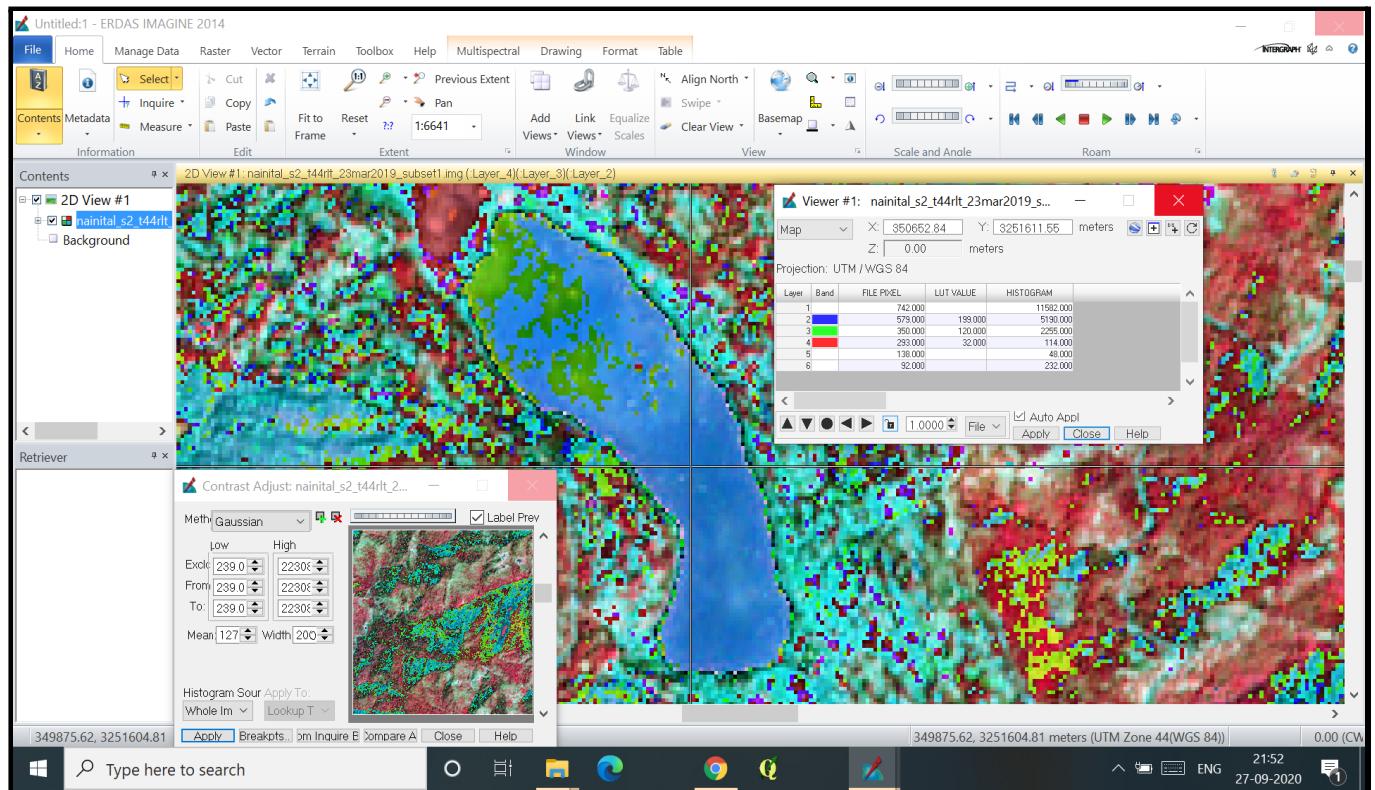
A.



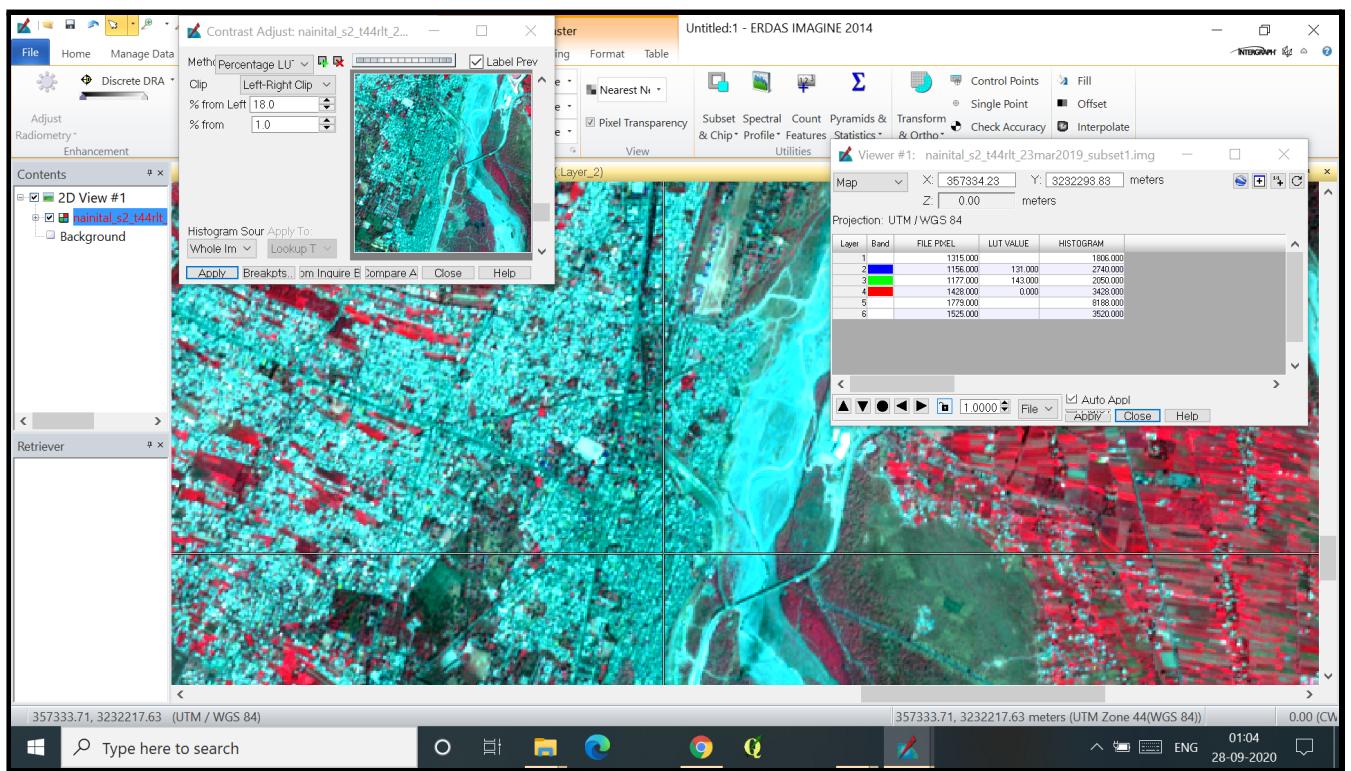
B.



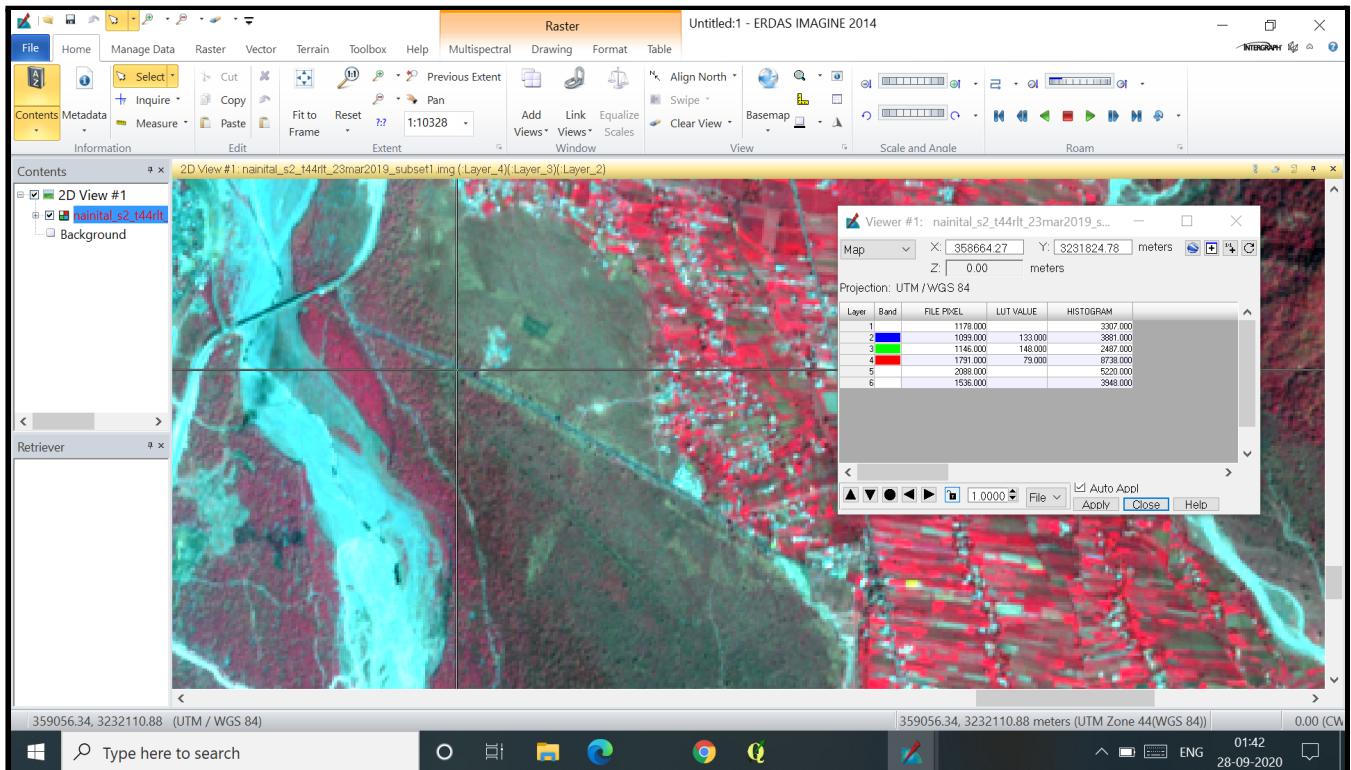
Same feature using Gaussian stretch to enhance visuality



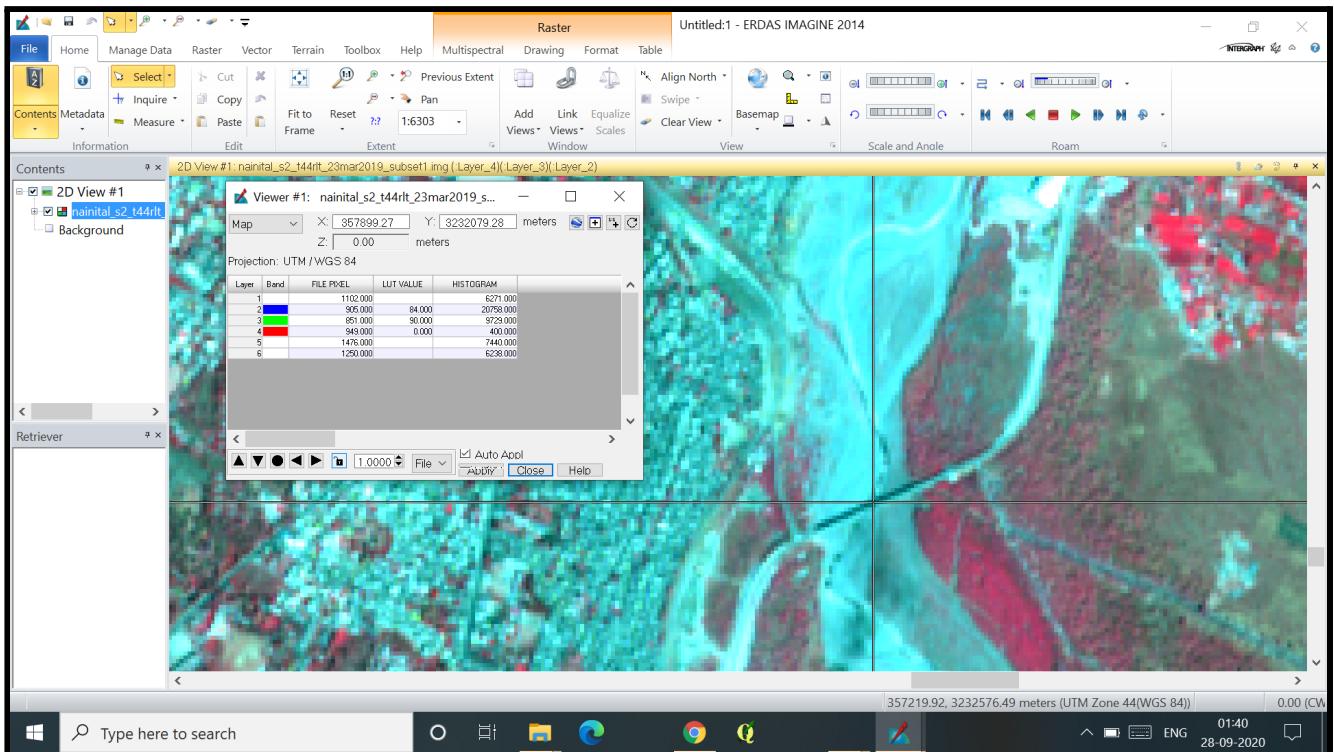
C.



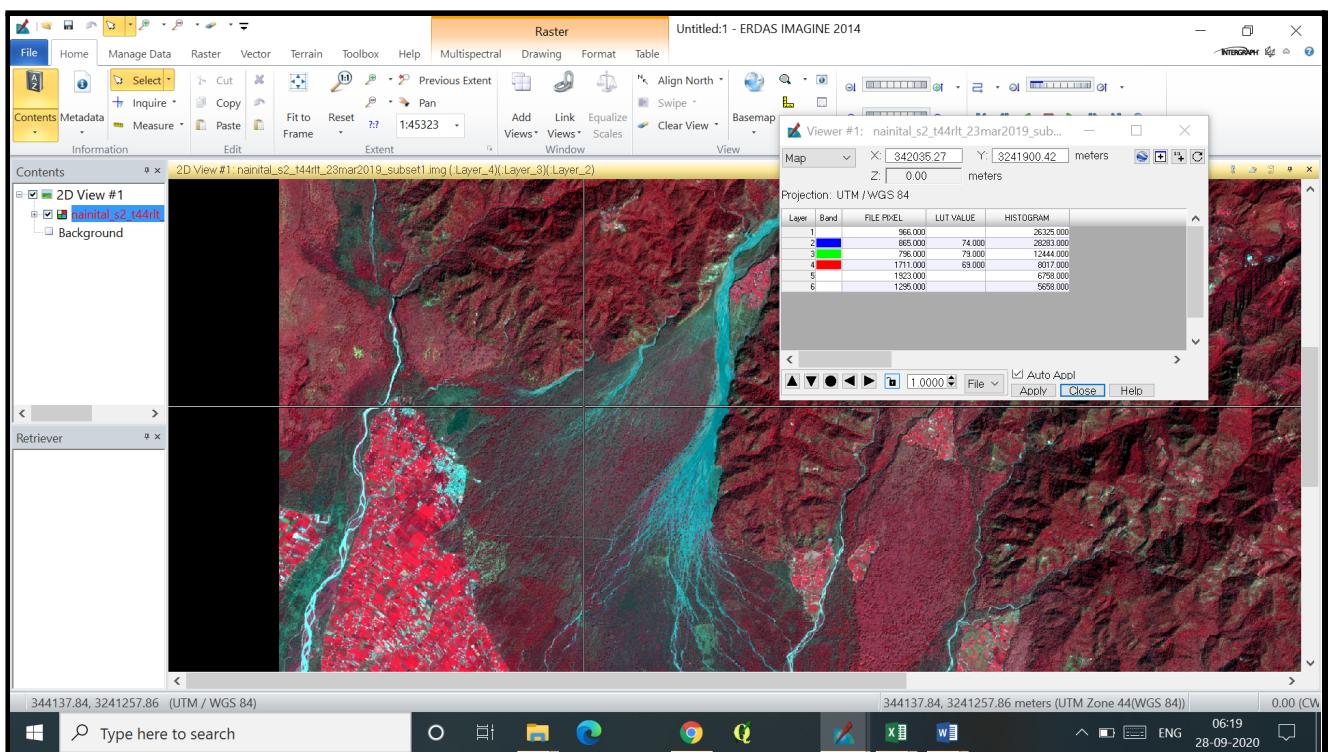
D.



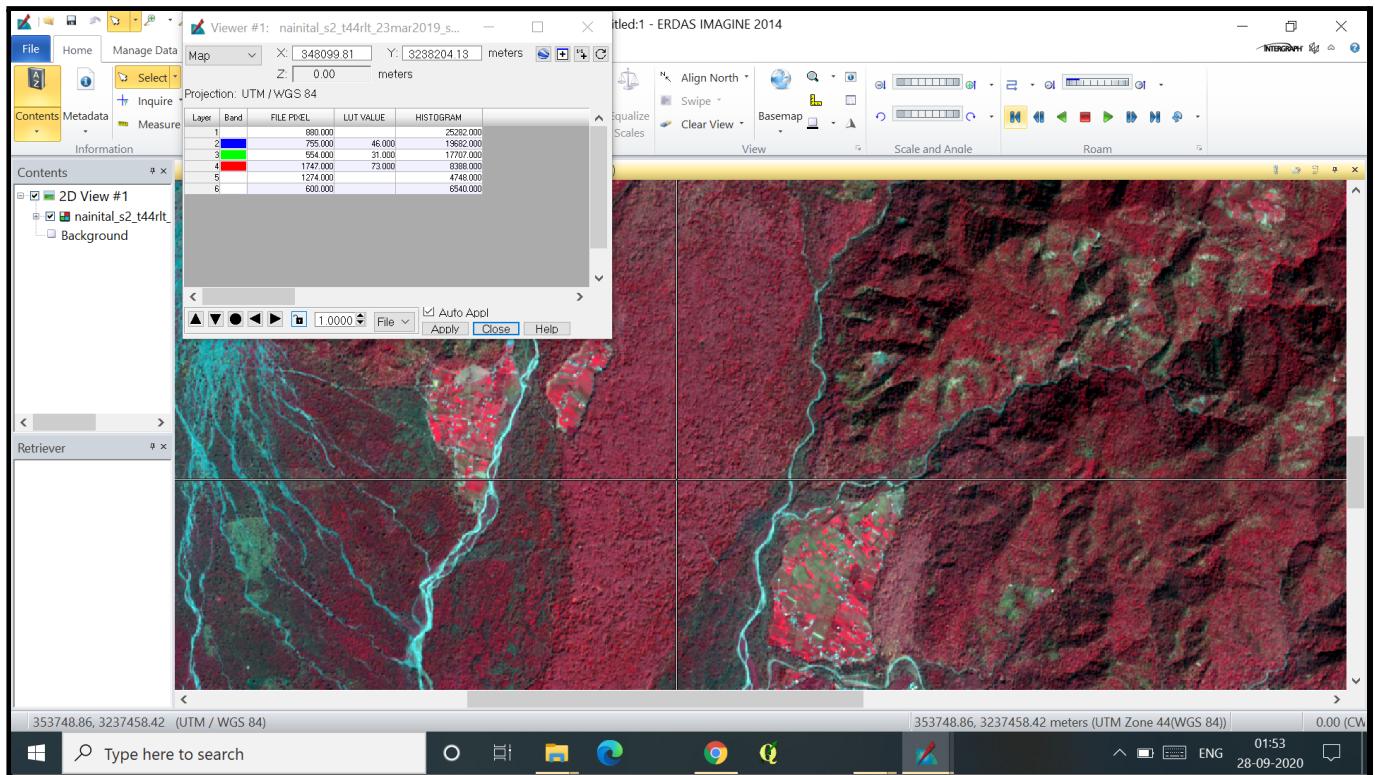
E.



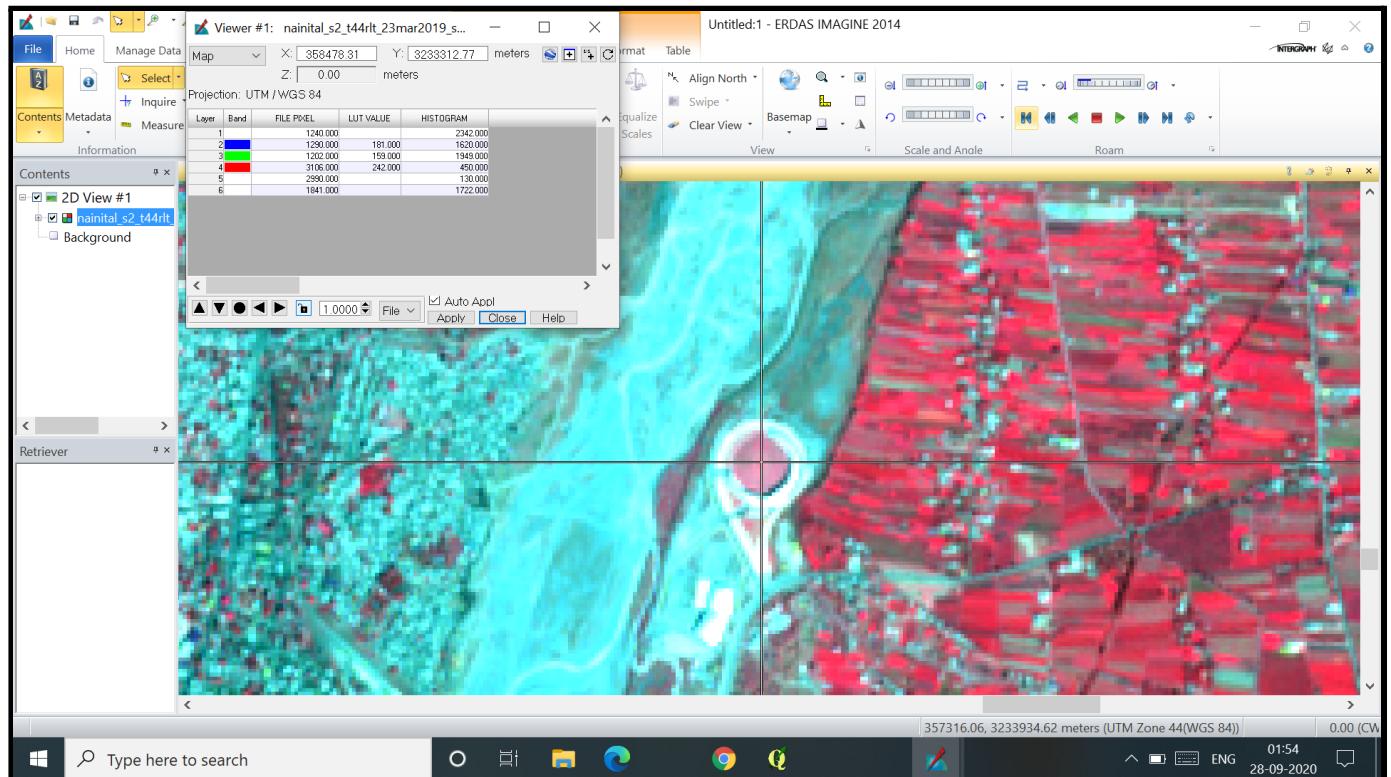
F.



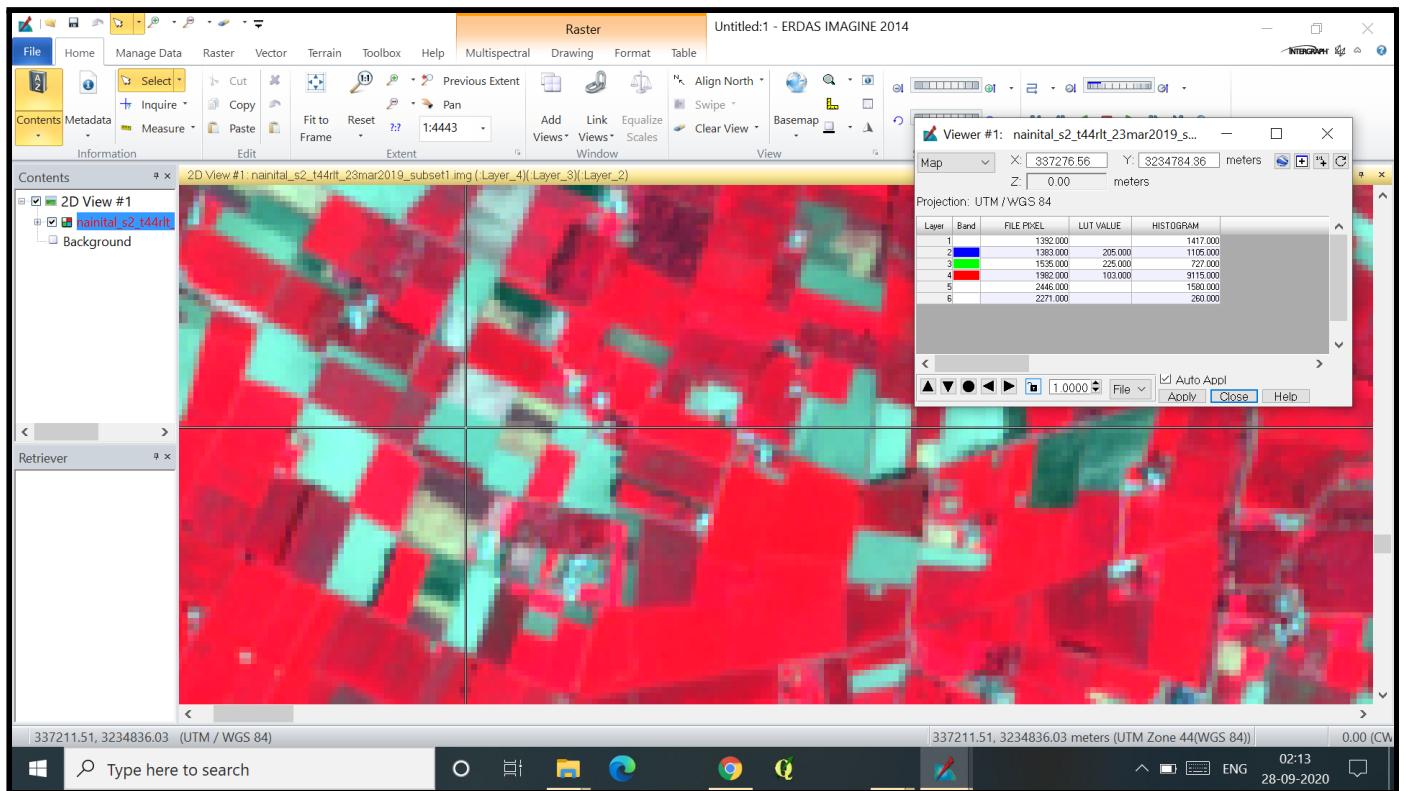
G.



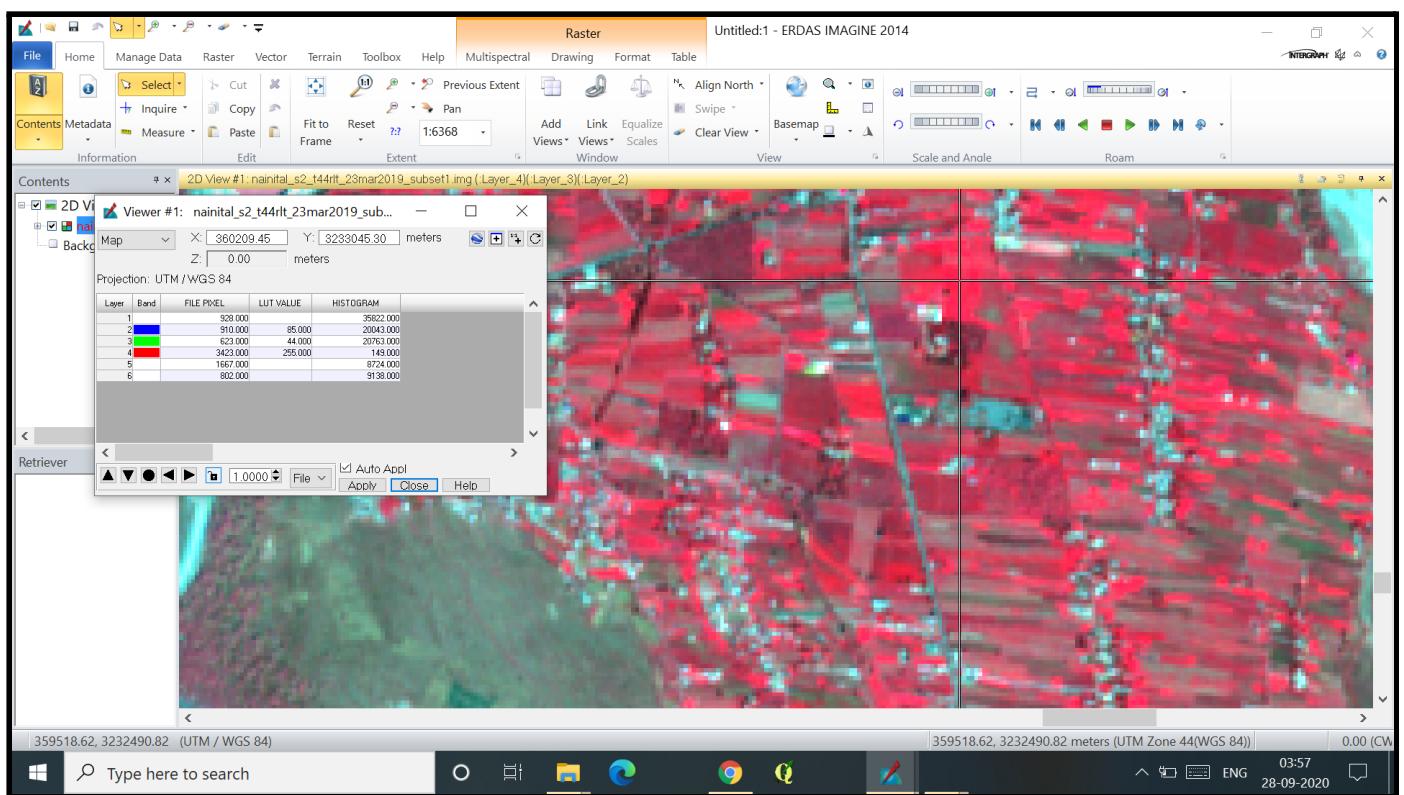
H.



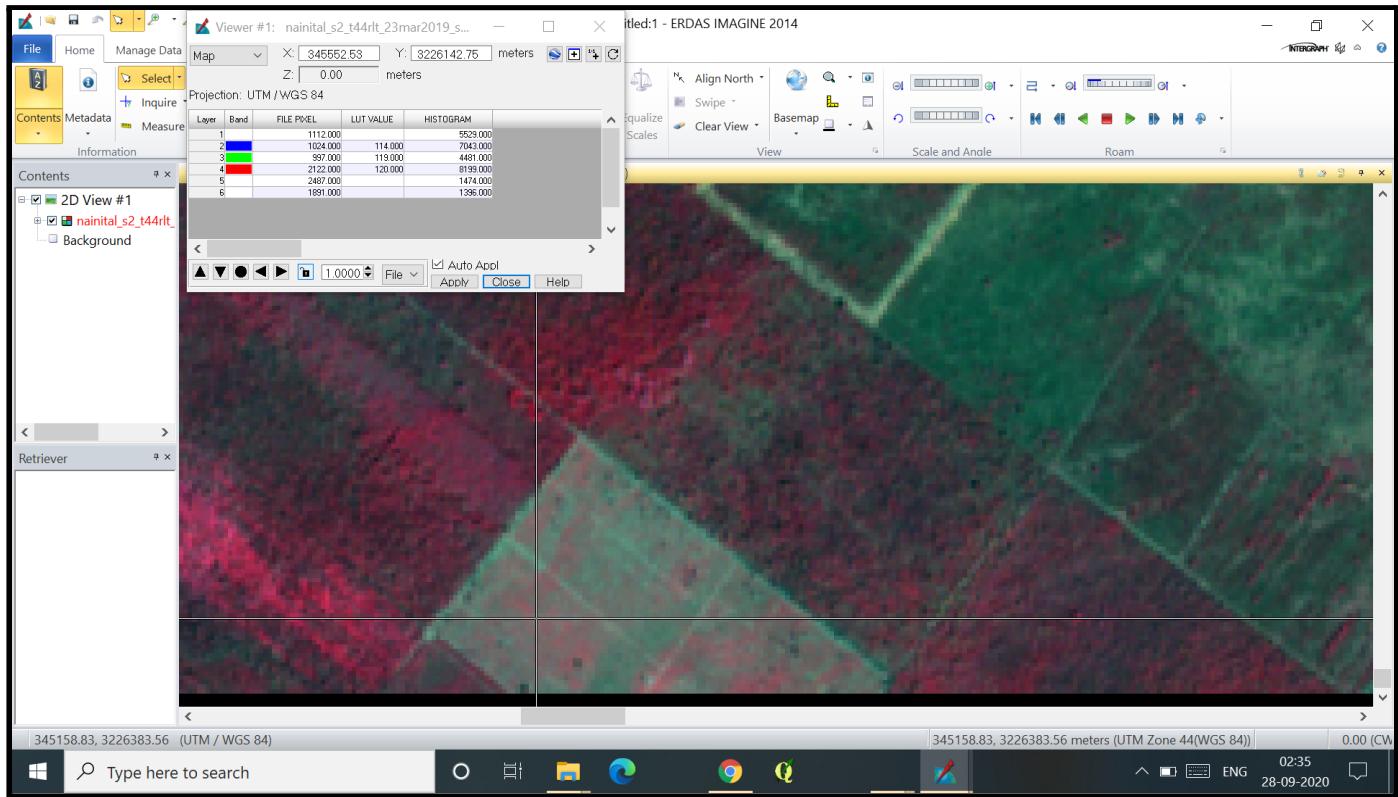
I.



J.



K.



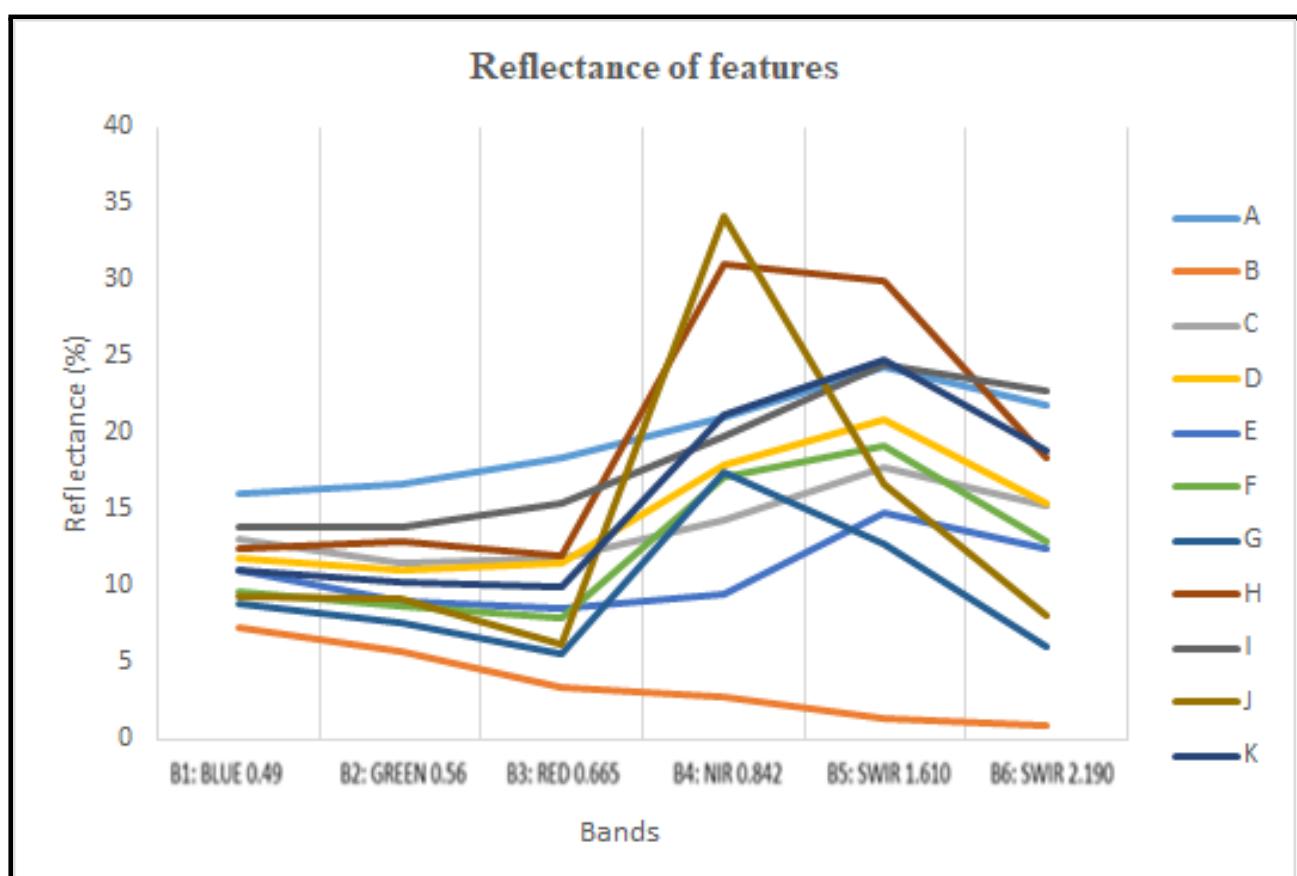
Digital Number values of features identified

Features	Digital Number Values (FCC)					
	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6
A.	1598	1671	1844	2100	2438	2183
B.	726	573	343	281	140	82
C.	1315	1156	1177	1428	1779	1525
D.	1178	1099	1146	1791	2088	1536
E.	1102	905	851	949	1476	1250
F.	966	865	796	1711	1923	1295
G.	880	755	554	1747	1274	600
H.	1240	1290	1202	3106	2990	1841
I.	1392	1383	1535	1982	2446	2271
J.	928	910	623	3423	1667	802
K.	1112	1024	997	2122	2487	1891

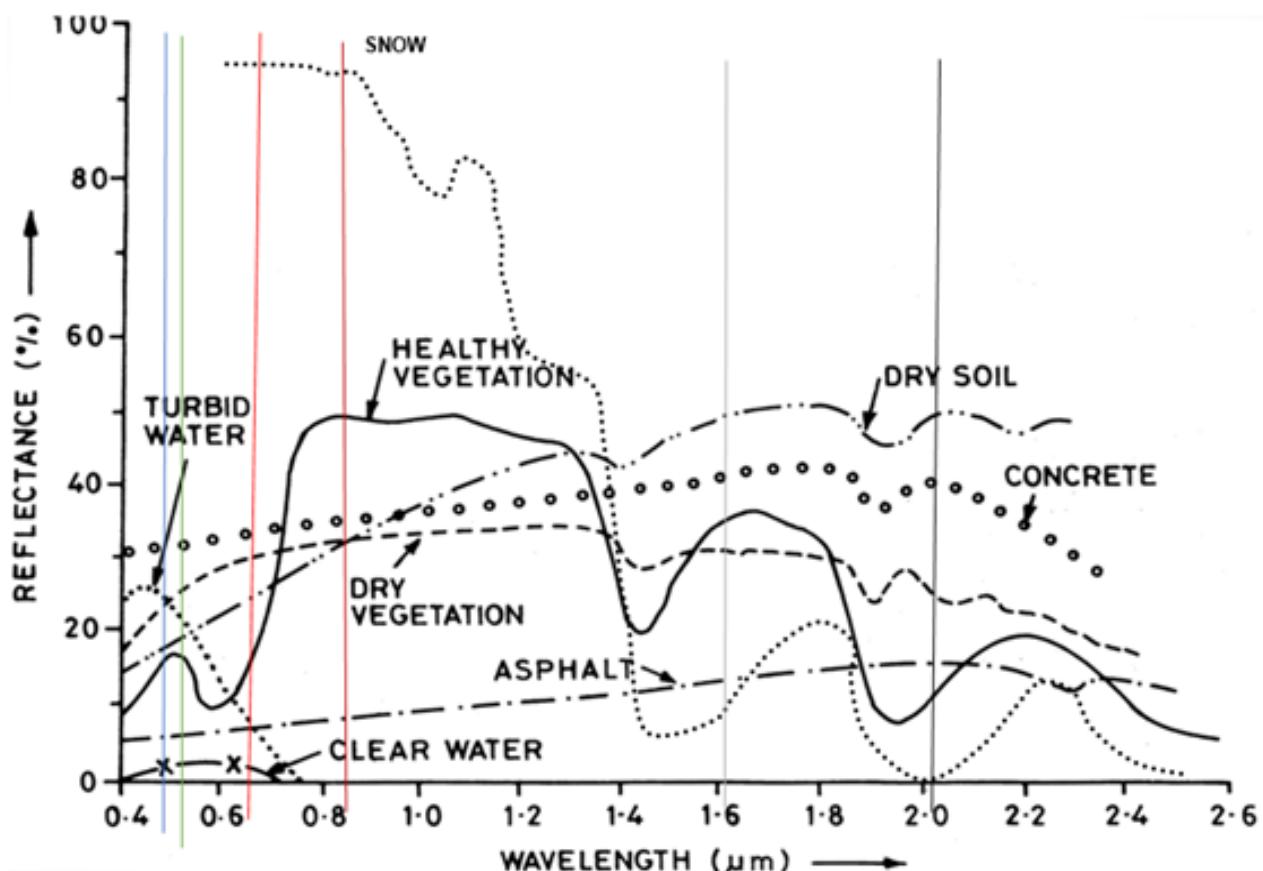
Reflectance in (%) for features identified

Features	Reflectance in % (FCC)					
	B1: Blue 0.49	B2: Green 0.56	B3: Red 0.665	B4: NIR 0.842	B5: SWIR 1.601	B6: SWIR 2.190
A.	15.98	16.71	18.44	21.00	24.38	21.83
B.	7.26	5.73	3.43	2.81	1.40	0.82
C.	13.15	11.56	11.77	14.28	17.79	15.25
D.	11.78	10.99	11.46	17.91	20.88	15.36
E.	11.02	9.05	8.51	9.49	14.76	12.50
F.	9.66	8.65	7.96	17.11	19.23	12.95
G.	8.80	7.55	5.54	17.47	12.74	6.00
H.	12.40	12.90	12.02	31.06	29.90	18.41
I.	13.92	13.83	15.35	19.82	24.46	22.71
J.	9.28	9.10	6.23	34.23	16.67	8.02
K.	11.12	10.24	9.97	21.22	24.87	18.91

Reflectance of features plotted on graph.

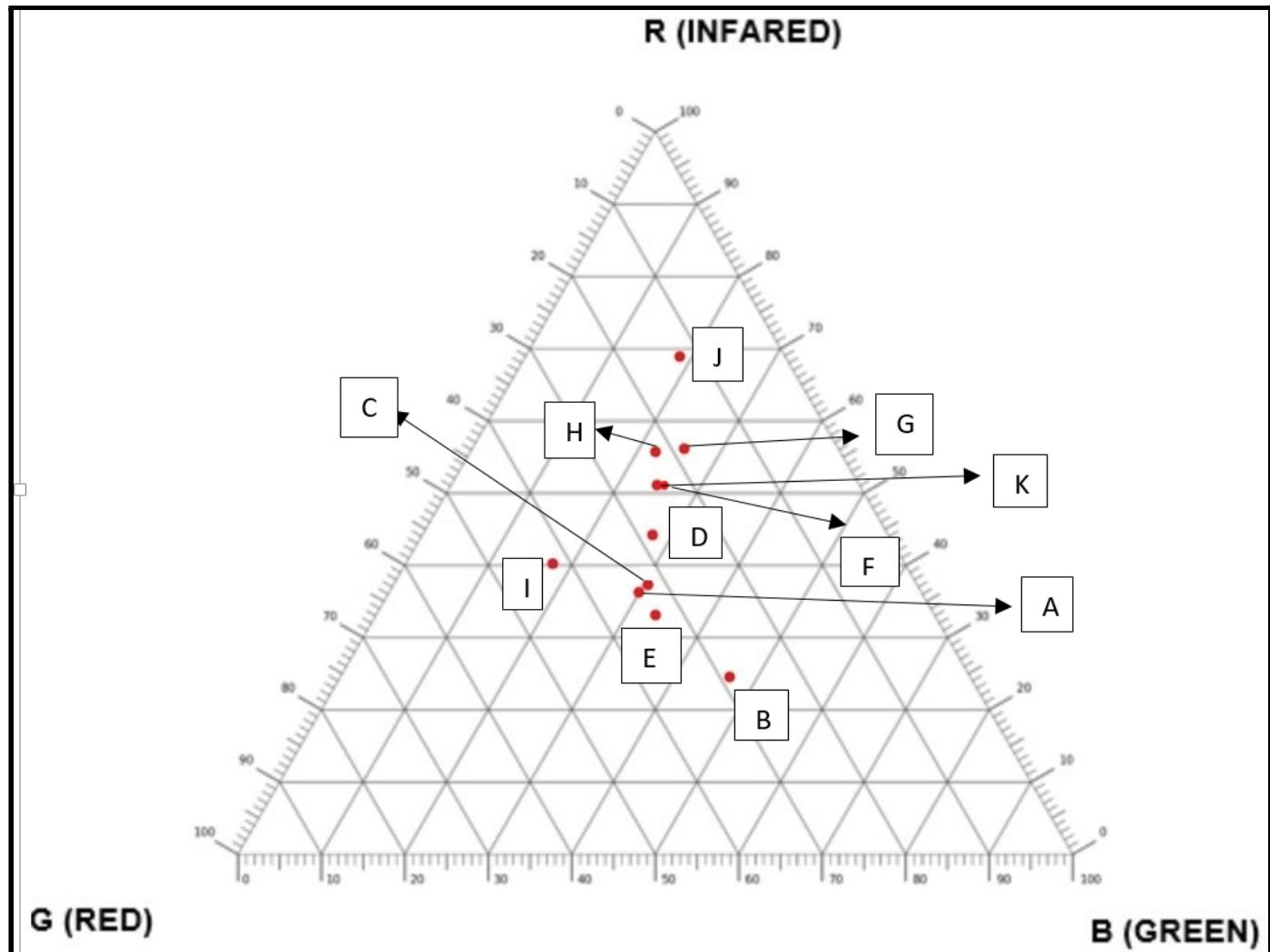


Spectral Signature Curves for Common Objects



Sentinel-2 Bands	Wavelengths
B1: Blue	0.49
B2: Green	0.56
B3: Red	0.665
B4: NIR	0.842
B5: SWIR	1.610
B6: SWIR	2.190

TERNARY DIAGRAM FOR FEATURES BASED ON REFLECTANCE



Calculation of reflectance for ternary representation

Features	DN Values (FCC)			Reflectance for ternary representation (%)		
	B2: Green 0.56	B3: Red 0.665	B4: NIR 0.842	B2: Green	B3: Red	B4: NIR
A.	16.71	18.44	21.00	30	33	37
B.	5.73	3.43	2.81	48	29	23
C.	11.56	11.77	14.28	31	31	38
D.	10.99	11.46	17.91	27	28	44
E.	9.05	8.51	9.49	33	31	35
F.	8.65	7.96	17.11	26	24	51
G.	7.55	5.54	17.47	25	18	57
H.	12.90	12.02	31.06	23	21	55
I.	13.83	15.35	19.82	18	31	40
J.	9.10	6.23	34.23	18	13	69
K.	10.24	9.97	21.22	25	24	51

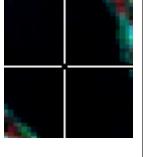
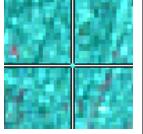
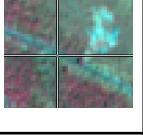
IMAGE INTERPRETATION

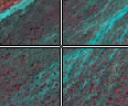
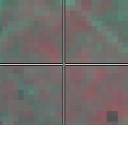
1. INTRODUCTION

In the image taken for interpretation, there are **11 land covers that are distinct and identifiable**. This image is in **standard false colour composite**. For identification of those elements we have marked it with letters of the alphabet in the pages above.

2. INTERPRETATION

2.1 INTERPRETATION TABLE

Feature	Tone	Size	Shape	Texture	Pattern	Height/s hadow	Remarks
A. 	Aqua	Large	Sinuous	Rough with small grains	Braided	-	It looks like mountainous river with silt loaded water
B. 	Dark- Blue to black	Medium	Randomly elongated	Smooth	Dispersed (5)	-	This feature might be a deep and clear pond. (Taal)
C. 	Blue	Small	Quadrilater als	Rough with small grains	Along water body	-	This feature looks like dense settlement
D. 	Light grey	Narrow	Regularly elongated	Smooth	Linear	-	This feature looks like an asphalt road.
E. 	Dark grey	Narrow	-	Smooth	-	-	This feature might be a bridge
F.	Brownis	-	Irregular	Rough	Near	-	This might be

	h red			with medium sized grains	alluvial fans		alluvial soil
G. 	Dark red	Large	Large patches	Rough with medium sized grains	Dispersed	Small silhouette	This feature looks like dense vegetation .
H. 	Light pink	Small	Circular	Smooth	-	-	This feature seems like a stadium .
I. 	Cyan	Variable	Quadrilaterals	Smooth	Dispersed	-	This might be moist fallow land
J. 	Pinkish red	Variable	Quadrilaterals	Smooth	Dispersed	-	This feature might be cropland .
K. 	Light brown	Small patches	Irregular	Smooth	-	-	This might be barren land with dry soil .

3. Site, Situation and Association

This image shows a mountainous region with many braided streams with sediment mixed in their water. The settlements are dispersed in upper reaches of mountains i.e. only around ponds and clustered in the lower flood plain. In the upper reaches, terrace farming can be seen and in the foothills agricultural fields can be seen along the river. Alluvial fans are also present.

4. Final remarks

Based on prior information, it is an image of Nainital in Uttarakhand in India; one can clearly ascertain that the river is Ganga with its tributaries falling in a braided and dendritic pattern. There is a plain in the lower part with dense urban settlement along the river.