Rock Happy #33-3H

Hydrocarbon Shows Observed in Core

Core Depth Top	Core Depth Bottom	Depth Shift	Log Depth Top	Log Depth Bottom	Core Type	Core No.	Formation	Show	Lithology	Date of Observation	Comments
4881.0	4885.0	9.0	4872.0	4876.0	Whole	1	Bear Gulch	Bright Yellow-Gold & Gold-Orange UV Fluorescence on Fracture Surfaces	Limestone	9/29/2011	
4883.0	4885.0	9.5	4873.5	4875.5	Whole	1	Bear Gulch	Bright Yellow-Gold UV Fluorescence in microporous matrix	Limestone	9/29/2011	
4888.0	4890.0	10.0	4878.0	4880.0	Whole	1	Bear Gulch	Gold-Orange UV Fluorescence on Fracture Surfaces	Limestone	9/29/2011	Two Orthogonal fracture sets both with UV Fluorescence
4891.5	4894.0	10.0	4881.5	4884.0	Whole	1	Bear Gulch	Bright Yellow-Gold & Gold-Orange UV Fluorescence on Fracture Surfaces	Limestone	9/29/2011	Two Orthogonal fracture sets both with UV Fluorescence
4900.0	4902.0	9.0	4891.0	4893.0	Whole	1	Bear Gulch	Gold-Orange UV Fluorescence on Fracture Surfaces	Limestone	9/29/2011	
4902.0	4903.0	9.0	4893.0	4894.0	Whole	1	Bear Gulch	Bright Gold-Orange UV Fluorescence on partially Calcite-filled subparallel fractures	Limestone	9/29/2011	
4904.0	4906.5	9.0	4895.0	4897.5	Whole	1	Bear Gulch	Bright Yellow-Gold & Gold-Orange UV Fluorescence on Fracture Surfaces	Limestone	9/29/2011	Yellow-Gold UV from 4905-4906 only
4905.0	4906.0	9.0	4896.0	4897.0	Whole	1	Bear Gulch	White-Blue UV Fluorescence on partially Anhydrite?-filled fracture	Limestone	9/29/2011	fracture fill is ~ 2cm wide, is curved and is subvertical
4907.0	4909.0	9.0	4898.0	4900.0	Whole	1	Bear Gulch	Gold-Orange UV Fluorescence in very fine microporous matrix	Limestone	9/29/2011	
4910.0	4913.0	9.0	4901.0	4904.0	Whole	1	Bear Gulch	Gold-Orange UV Fluorescence on Fracture Surfaces	Limestone	9/29/2011	
4915.0	4918.0	9.0	4906.0	4909.0	Whole	1	Bear Gulch	Gold-Orange UV Fluorescence on Fracture Surfaces	Limestone	9/29/2011	
4932.0	4934.0	8.5	4923.5	4925.5	Whole	1	Lower Tyler	Bright Yellow-White UV Fluorescence on subparallel vertical fractures	Conglomerate, Sandstone, and medium gray clayshale	9/29/2011	
4933.0	4936.0	8.5	4924.5	4927.5	Whole	1	Bear Gulch	Bright Yellow-White-Gold UV Fluorescence in matrix	Limestone	9/29/2011	
4933.0	4936.0	8.5	4924.5	4927.5	Whole	1	Lower Tyler	Bright Yellow-White UV Fluorescence in Matrix	Sandstone vfg & Siltstone	9/29/2011	
5026.0	5027.5	7.5	5018.5	5020.0	Whole	2	1st Bench Heath Limestone	Bright Yellow-White UV fluorescence in dolomitized nodules + Scattered Bright Yellow-White UV in microporous Limestone matrix	Dolomite + Limestone	9/29/2011	
5027.3	5030.0	6.5	5020.8	5023.5	Whole	2	1st Bench Heath Limestone	Scattered Bright Yellow-White UV Fluorescence in matrix	Limestone	9/29/2011	partially dolomitized? Limestone wackestone
5030.0	5032.0	6.5	5023.5	5025.5	Whole	2	1-2 Shale	Scattered Bright Yellow-White UV Fluorescence in matrix	Shale, dark gray, calcareous	9/29/2011	
5032.0	5036.0	6.5	5025.5	5029.5	Whole	2	2nd Bench Heath Limestone	Bright Yellow-Gold UV Fluorescence in matrix	Dolomite	9/29/2011	Oil saturated, some laminations with brighter fluorescence than others
5036.0	5038.0	6.5	5029.5	5031.5	Whole	2	2nd Bench Heath Limestone	Bright Yellow-Gold UV Fluorescence in matrix	Dolomite interbedded with Anhydrite	9/29/2011	Fluorescence is in dolomite laminations
5038.0	5042.0	7.0	5031.0	5035.0	Whole	2	2nd Bench Heath Limestone	Bright Yellow-White UV Fluorescence in scattered irregular pores/vugs	Anhydrite	9/30/2011	
5044.0	5049.5	7.0	5037.0	5042.5	Whole	2	2-3 Shale	Pervasive Bright Yellow-White spotty UV Fluorescence	Shaly Limestone/Calcareous Shale	9/30/2011	
5049.5	5054.5	7.5	5042.0	5047.0	Whole	2	3rd Bench Heath Limestone	Bright Yellow-White UV Fluorescence on vertical fractures + fine pinpoint UV Fluorescence in microporous matrix	Limestone	9/30/2011	
5054.5	5057.0	7.0	5047.5	5050.0	Whole	2	3-4 Shale	Pervasive Bright Yellow-White spotty UV Fluorescence	Shaly Limestone/Calcareous Shale	9/30/2011	
5057.0	5065.0	6.5	5050.5	5058.5	Whole	2	4th Bench Heath Limestone	Bright Yellow-White UV Fluorescence in matrix and on fractures	Dolomite & Dolomitic Limestone	9/30/2011	Strong Oil Odor, especially at 5058-5060
5065.0	5067.0	7.0	5058.0	5060.0	Whole	2	4-5 Shale	Pervasive Bright Yellow-White spotty UV Fluorescence	Shaly Limestone/Calcareous Shale	9/30/2011	
5067.0	5079.5	7.0	5060.0	5072.5	Whole	2	5th Bench Heath Limestone to lower Heath Limestone	Spotty bright yellow-white UV Fluorescence	Limestone (interbedded with calcareous shale)	9/30/2011	
5079.5	5080.5	-7.0	5086.5	5087.5	Whole	2	Cox Ranch	Pervasive Bright Yellow-White spotty UV Fluorescence	Fissile Shale	9/30/2011	High percentage of spotty fluorescence
5084.0	5085.0	7.0	5077.0	5078.0	Whole	2	Cox Ranch	Bright Yellow-Gold UV Fluorescence in matrix	Limestone	9/30/2011	
5087.0	5088.0	7.0	5080.0	5081.0	Whole	2	Cox Ranch	Bright Yellow UV Fluorescence on Fracture	Limestone	9/30/2011	
5096.0	5098.0	7.0	5089.0	5091.0	Whole	2	Cox Ranch	Dull Yellow UV Fluorescence in matrix	Limestone	9/30/2011	
5099.0	5100.0	7.0	5092.0	5093.0	Whole	2	Cox Ranch	Bright Yellow-White spotty UV Fluorescence in matrix	Shale, dark gray, calcareous	9/30/2011	
5100.5	5101.0	7.0	5093.5	5094.0	Whole	2	Cox Ranch	Bright Yellow UV Fluorescence on Fracture	Limestone	9/30/2011	
5105.0	5108.0	7.0	5098.0	5101.0	Whole	2	Cox Ranch	Dull Yellow UV Fluorescence in matrix	Limestone	9/30/2011	
5122.0	5126.0	7.0	5115.0	5119.0	Whole	3	Cox Ranch	Bright Yellow-Gold UV Fluorescence in microporous matrix	Limestone	10/3/2011	best observed with hand-held UV lamp
5136.0	5144.0	7.5	5128.5	5136.5	Whole	3	Lower Heath	Spotty bright yellow-white UV Fluorescence	Claystone	10/3/2011	
5156.0	5156.8	8.0	5148.0	5148.8	Whole	3	Upper Van Dusen	Spotty bright yellow-white UV Fluorescence	Shale, dark gray, fissile	10/3/2011	
5156.8	5164.0	8.0	5148.8	5156.0	Whole	3	Upper Van Dusen	Pervasive Dull Yellow-Gold UV Fluorescence in microporous matrix	Limestone	10/3/2011	
5165.5	5166.0	8.0	5157.5	5158.0	Whole	3	Middle Van Dusen	Bright Yellow-White UV Fluorescence on Fracture	Limestone	10/3/2011	Fracture dip ~ 80 degrees
5174.0	5175.0	8.5	5165.5	5166.5	Whole	3	Middle Van Dusen	Bright Yellow-White UV Fluorescence on Fracture	Shale, fissile, dark gray	10/3/2011	Fracture dip ~ 75 degrees
5175.5	5179.0	8.0	5167.5	5171.0	Whole	3	Middle Van Dusen	Scattered Bright Yellow-White UV Fluorescence in matrix	Shale, fissile, dark gray	10/3/2011	
5178.0	5179.0	8.0	5170.0	5171.0	Whole	3	Middle Van Dusen	Bright Yellow-White UV Fluorescence on Fracture	Shale, fissile, dark gray	10/3/2011	
5179.0	5182.0	8.0	5171.0	5174.0	Whole	3	Middle Van Dusen	Gold-Orange UV Fluorescence in very fine microporous matrix	Limestone, rubbelized	10/3/2011	
5182.0	5192.0	10.0	5172.0	5182.0	Whole	3	Lower Van Dusen	Gold-Orange UV Fluorescence pervasive in matrix	Limestone	10/3/2011	
5189.0	5189.5	10.0	5179.0	5179.5	Whole	3	Lower Van Dusen	Gold-Orange UV Fluorescence on Fracture Surfaces	Limestone	10/3/2011	
5192.0	5198.0	8.0	5184.0	5190.0	Whole	4	Lower Van Dusen	Pervasive Dull Gold-Orange UV Fluorescence in microporous matrix	Limestone & Calcareous Shale	10/3/2011	
5195.8	5195.8	8.0	5187.8	5187.8	Chip	4	Lower Van Dusen	Weak UV Fluorescence, Fair Bright Yellow Cut, Fair Yellow Residual Ring	Limestone	10/3/2011	
5201.4	5201.4	8.0	5193.4	5193.4	Chip	4	Lower Van Dusen	No UV Fluorescence, Strong Bright Yellow Cut, Gold Residual Ring	Shale, calcareous, fossiliferous	10/3/2011	
5208.0	5210.0	8.0	5200.0	5202.0	Whole	4	Lower Heath	Scattered Bright Yellow-White UV Fluorescence in matrix	Claystone	10/3/2011	
5215.0	5216.8	8.0	5207.0	5208.8	Whole	4	Lower Heath	Bright Yellow-Gold UV Fluorescence in matrix	Limestone	10/3/2011	