API #15-023-21524

Saman Sharifaie
Petroleum Geologist

GEOLOGIST'S REPORT
DRILLING TIME AND SAMPLE LOG

WELL NAME:	Rosemary 1-8
LOCATION:	SE - SW - NW - NW
COORDINATES:	1000' FNL & 1000' FWL
SECTION:	8
TOWNSHIP:	33 S
RANGE:	41 W
COUNTY:	Baca County, Colorado
API #:	15-023-21524
OPER:	Noble Energy, Inc.
RIG #:	Frontier Drilling #14
SPUD:	10/12/10
TD REACHED:	10/20/10
RELEASED:	10/21/10
TOTAL DEPTH:	5300' MD
ELEVATION:	GL: 3,577' KB: 3,590'
CASING:	Surface: 8 5/8" @ 1,800' MD Production: 4 1/2" @ 5300' MD
DIRECTIONAL SURVEY:	Straight Hole
MUD:	Water Based Gel Chemical
MUD CO.:	Frontier Drilling
MUD ENGINEER:	Frontier Drilling
DRILLING TIME & SAMPLE CO.:	Saman Sharifaie
ELECTRICAL SURVEYS:	Triple Combo: Schlumberger
GEOLOGICAL SUPERVISION FROM:	3,710'
GEOLOGISTS:	Saman Sharifaie, Petroleum Geologist
DRILLING TIME & SAMPLE LOG:	3,710' - 5300' MD
ELECTRICAL SURVEYS:	Triple Combo: Schlumberger
DIP:	0°
DIP DIRECTION:	0°
DIRECTIONAL:	Straight Hole
SAMPLES:	Bagged and Delivered
SAMPLE CONTAINERS:	Bags
SAMPLE INTERVAL:	10'
SAMPLE TYPE:	Dry Cuttings
SAMPLE PREPARATION:	Washed, Dried, Bagged
SAMPLE DISTRIBUTION:	1 set to Noble Energy, Inc.
GEOLOGICAL SUPERVISOR:	Saman Sharifaie, Petroleum Geologist

Formations	Sample Type	Sample Texture	Sample Color	Calcareous	Fossiliferous	Porosity	Oil Stain	Oil Fluorescence	Cut Fluorescence
Ardrystie	Dry Cuttings	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Morrow	Dry Cuttings	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Morrow Sandstone	Dry Cuttings	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Morrow Shale	Dry Cuttings	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Morrow Limestone