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Drilling Dynamics MD

COMPANY	Exxon Mobil
WELL	PCU 296-5A10
FIELD	Piceance Creek
REGION	Rockies - Colorado
COORDINATES	LAT: 39.911881000 LONG:-108.198694000
ELEVATION	GL = 7294.2'
COUNTY, STATE	Rio Blanco, CO
API INDEX	051031123900
SPUD DATE	12/09/2009
CONTRACTOR	HP
CO. REP.	Candice Curtis, Marc Hudon
RIG/TYPE	321/Flex 4
LOGGING UNIT	31
GEOLOGISTS	Chad Record, Mark Gross, Bart Smelser
ADD. PERSONS	Mickey Piper, Robert McCane Donald Evans
CO. GEOLOGIST	Chris Alba

LOG INTERVAL

DEPTHS: 4664' **TO** 14122'

DATES: 01/16/2011 **TO** 04/26/2011

SCALE: 1" = 100'

CASING DATA

16.00" **AT** 118'

10.75" **AT** 4632'

7.00" **AT** 9836'

4.50" **AT** 14108'

MUD TYPES

Water Based **TO** 14122'

TO

TO

TO

HOLE SIZE

14.75" **TO** 4664'

9.875" **TO** 9883'

6.125" **TO** 14122'

TO

ABBREVIATIONS

<i>NB</i> NEWBIT	<i>PV</i> PLASTIC VISCOSITY	<i>LC</i> LOST CIRCULATION
<i>RRB</i> RERUN BIT	<i>YP</i> YIELD POINT	<i>CO</i> CIRCULATE OUT
<i>CB</i> CORE BIT	<i>FL</i> FLUID LOSS	<i>NR</i> NO RETURNS
<i>WOB</i> WEIGHT ON BIT	<i>CL</i> PPM CLORIDE ION	<i>TG</i> TRIP GAS
<i>RPM</i> ROTARY REV/MIN	<i>Rm</i> MUD RESISTIVITY	<i>SG</i> SURVEY GAS
<i>PP</i> PUMP PRESSURE	<i>Rmf</i> FILTRATE RESISTIVITY	<i>WG</i> WIPER GAS
<i>SPM</i> STROKES/MIN	<i>PR</i> POOR RETURNS	<i>CG</i> CONNECTION GAS
<i>MW</i> MUD WEIGHT	<i>LAT</i> LOGGED AFTER TRIP	
<i>VIS</i> FUNNEL VISCOSITY	<i>LAS</i> LOGGED AFTER SURVEY	

ALTERED ZONE	CHERT - GLASSY	FELSIC SILIC DIKE	MARL - CALC	SANDSTONE
ANDESITE	CHERT - PORCEL	FOSSIL	METAMORPHICS	SANDSTONE-TUFFACEOUS
ANHYDRITE	CHERT - TIGER STRIPE	GABBRO	MUDSTONE	SERICITIZATION
BASALT	CHERT - UNDIFF	GLASSY TUFF	OBSIDIAN	SERPENTINE
BENTONITE	CLAY	GRANITE	PALEOSOL	SHALE
BIOTITIZATION	CLAY-MUDSTONE	GRANITE WASH	PHOSPHATE	SHALE TUFFACEOUS
BRECCIA	CLYST-TUFFACEOUS	GRANODIORITE	PORCELANITE	SHELL FRAGMENTS
CALCARENITE	CHLORITIZATION	GYPSUM	PORCELANEOUS CLYST	SIDERITE
CALCAREOUS TUFF	COAL	HALITE	PYRITE	SILICIFICATION
CALCILUTITE	CONGLOMERATE	HORNBL-QTZ-DIO	PYROCLASTICS	SILTSTONE
CARBONATES	CONGL. SAND	IGNEOUS (ACIDIC)	QUARTZ DIORITE	SILTST-TUFFACEOUS
CARBONACEOUS MAT	CONGL. SANDSTONE	IGNEOUS (BASIC)	QUARTZ LATITE	TUFF
CARBONACEOUS SH	COQUINA	INTRUSIVES	QUARTZ MONZONITE	VOLCANICLASTICS SEDS
CEMENT CONTAM.	DACITE	KAOLINITIC	RECRYSTALLIZED CALCITE	VOLCANICS
CHALK	DIATOMITE	LIMESTONE	RHYOLITE	
CRYSTALLINE TUFF	DIORITE	LITHIC TUFF	SALT	
CHERT - ARGILL	DOLOSTONE	MARL - DOLO	SAND	

Lithology	Survey Data, Mud Reports, Other Info.						Remarks
	Survey Data, Mud Reports, Other Info.						
	Survey Data, Mud Reports, Other Info.						
ALL SAMPLE COLOR DESCRIPTIONS REFERENCED TO THE G.S.A. ROCK COLOR CHART.							
ROCK CHARACTERISTICS AND CONSTITUENTS ARE LISTED FROM MOST ABUNDANT TO LEAST ABUNDANT PERCENTAGE OF SAMPLE.							
GAS CALIBRATED TO S.P.L.W.A. STANDARDS (2% ME = 100 UNITS). GAS CHROMATOGRAPHY EQUIPMENT CALIB TO A TEST GAS COMPOSED OF THE FOLLOWING:							
METHANE = 10,130 PPM ETHANE = 1,010 PPM PROPANE = 1,000 PPM I-BUTANE = 1,000 PPM N-BUTANE = 1,000 PPM I-PENTANE = 1,000 PPM N-PENTANE = 1,010 PPM							
EPOCH WELL SERVICES COMMENCED LOGGING THE PCU 296-5A10 WELL AT 4664' MD ON 01/16/2011.							
SHALE = PALE YELLOWISH GRAY TO MODERATE YELLOWISH BROWN; PLATY TO SCALY CUTTINGS HABIT; SILTY TO CLAYEY TEXTURE; GRADES TO SILTSTONE; THINLY INTERBEDDED WITH SANDSTONE; HIGH CONTENT OF CLAYSTONE WASHED OUT DURING CLEANING PROCESS; DULL EARTHY LUSTER; TRACE AMOUNTS OF LIMESTONE IN SAMPLE.							
SILTSTONE = MODERATE YELLOWISH BROWN TO PALE YELLOWISH BROWN TO GRAYISH RED; HARD TO CRUNCHY; SILTY TO GRITTY TEXT; SPARKLING TO EARTHY LUSTER; GRADES TO SANDSTONE; THINLY INTERBEDDED WITH SHALE; PLATY TO SCALY TO TABULAR CUTTINGS HABIT.							
SHALE = MODERATE YELLOWISH BROWN TO GRAYISH RED; PLATY TO WEDGELIKE TO SEMI ELONGATED; CLAYEY TO SILTY TEXTURE; GRADES TO SILTSTONE; DULL EARTHY LUSTER; IRREGULAR TO SPLINTERY TO HACKLY FRAC.							
SHALE = MODERATE YELLOWISH BROWN TO PALE YELLOWISH GRAY WITH SOME GRAYISH RED; PLATY TO WEDGELIKE TO FLAKY CUTTING HABIT; CLAYEY TO SILTY TEXTURE; 20-30% CLAY WASHED OUT DURING CLEANING PROCESS; EARTHY LUSTER; GRADES TO SILTSTONE.							
NOTE: PARTIAL LOSS OF RETURNS @ 5062' WITH FULL RETURNS BY 5071'.							
SHALE = MOD YELLOWISH BROWN TO PALE YELLOWISH GRAY MINOR GRAYISH RED; PLATY TO SCALY TO TABULAR CUTTINGS HABIT; CLAYEY TO SILTY TEXTURE; EARTHY LUSTER; GRADES TO PALE YELLOWISH GRAY SILTSTONE; SOFT TO HARD TENACITY.							
SANDSTONE = OFF WHITE TO VERY LIGHT GRAY TO MINOR PALE RED; HARD TO MODERATE FRIABLE; ANGULAR TO SUB ROUND; WELL SORTED; VERY FINE TO FINE GRAIN WITH TR MEDIUM GRAIN; LOW TO MOD SPHERICITY; 1-3% DARK LITHIC FLECKS IN SAMPLE FRAGS; GRADES TO LIGHT GRAY TO PALE YELLOWISH GRAY SILTSTONE; THINLY INTERBEDDED WITH SILTSTONE AND SHALE; PREDOMINANTLY GRAIN SUPPORTED W/ SILICA AND CALCITE CEMENT; MODERATELY TO HIGHLY CALCAREOUS; TRACE MICAS IN SAMPLE FRAGMENTS.							
SHALE = MODERATE YELLOWISH BROWN TO PALE YELLOWISH; PLATY TO SCALY TO WEDGELIKE CUTTINGS HABIT; CLAYEY TO SILTY TEXTURE; EARTHY LUSTER; GRADES TO SILTSTONE; TRACE AMOUNTS OF FINE GRAIN SAND IN SAMPLE FRAGMENTS.							
SHALE = PALE YELLOWISH GRAY TO MODERATE YELLOWISH BROWN WITH MINOR GRAYISH RED; PLATY TO WEDGELIKE TO TABULAR CUTTINGS HABIT; DULL EARTHY LUSTER; GRADATION AND THINLY INTERBEDDED WITH SILTSTONE.							
SILTSTONE = MEDIUM GRAY TO MODERATE YELLOWISH BROWN TO PALE YELLOWISH GRAY; SILTY TO GRITTY TEXTURE; SPARKLING TO EARTHY LUSTER; GRADES TO LIGHT GRAY							

















