



CORE ANALYSIS REPORT
Conventional Core

Vecta Oil & Gas, Ltd.

Grays 23-27 Well
Cheyenne County, Colorado

FINAL REPORT

Performed for:
Vecta Oil & Gas, Ltd.
575 Union Blvd., Suite 208
Lakewood, Colorado 80228

Report issued:
February 9, 2010

Performed by:
Weatherford Laboratories
16161 Table Mountain Parkway
Golden, Colorado 80403

File: DN-45813



February 9, 2010

Herb Mosca
Vecta Oil & Gas, Ltd.
575 Union Blvd., Suite 208
Lakewood, Colorado 80228

Subject: Conventional Core
Final Core Analysis Report
Grays 23-27 Well
Cheyenne County, Colorado
File: DN-45813

Mr. Mosca:

A core study using core material from the subject well has been completed for Vecta Oil & Gas, Ltd. The procedures were modified during the course of the study through e-mail and telephone conversations between Weatherford Laboratories' and Vecta Oil & Gas, Ltd personnel. Final results of the core study are presented herein. Preliminary data were provided to Vecta Oil & Gas, Ltd and posted to the Weatherford Laboratories' secure data hosting website, as available throughout the course of the study. The routine core analysis data and graphical results are presented in tabular and graphic formats in Section 1 of this report.

Wellsite

Weatherford Laboratories personnel were present at the wellsite for recovery of the conventional core as it reached surface. A total of twenty-five (25) feet of conventional core from one (1) coring runs was recovered and delivered to Weatherford Laboratories in Golden, Colorado on December 26, 2009.

Core Handling and Sampling

Core Inventory & Gamma

Upon arrival at the Weatherford Laboratories facility, all recovered core material was inventoried and logged for total gamma. A final inventory of received core is included in Appendix A of this report. Core gamma data were processed and plotted in depth versus total gamma (API units), at a vertical scale of 5 inches to 100 feet.

Core Sampling

Sixteen (16) core plug samples were drilled from Core 1 for Fast Track routine core analysis (RCA). The RCA core plug samples were acquired in a horizontal orientation from the requested intervals at a frequency of one sample per foot. The RCA samples were cut 1.5-inches in diameter, using humidified nitrogen as a bit lubricant. Each horizontal RCA sample was then trimmed to 2.0-inches in length to come from the center of the core, weighed, and wrapped in Saran and aluminum foil. Each RCA sample was immediately taken to the extraction lab to begin the Fast Track RCA.

Routine Core Analysis

Extraction/Leaching

The core plug samples for Fast Track routine core analysis was weighed to 0.001 grams. Then each core plug sample was placed in a pre-dried, pre-weighed, and pre-labeled glass extraction thimble. The core plug and thimble samples were weighed together for accuracy just prior to loading into the extraction unit. The core plug

sample was not removed from the glass thimble until after the drying process described below. All associated glassware used for the extraction and leaching process was cleaned, rinsed with solvents, and dried before use.

Selected samples were submitted to the Dean Stark extraction process, where gas phase toluene is used to extract hydrocarbons and in-situ water from individual core samples. Each condenser, core chamber and flask used for the Dean-Stark extraction process was rinsed with fresh reagent grade toluene before pre-boiling. The toluene in each Dean Stark extraction unit was pre-boiled for a minimum of one hour to ensure there was no free water in the system prior to loading the core plug samples. A control unit was established for each set of core plug samples where a pre-weighed amount of distilled water was added to the toluene and monitored for full recovery during the pre-boiling step. This is performed to ensure the batch of toluene was not contaminated with chemicals that would make the extracted water miscible with the Toluene solvent. Each graduated sidearm receiving tube was checked for water and dried prior to loading the core plug samples.

After the samples were loaded into its individual Dean Stark extraction unit, the condenser was capped with desiccant to prevent the introduction of condensed atmospheric water into the system. Water volume in each graduated sidearm receiving tube was monitored during the toluene extraction until a stable volume was observed over a 24-hour period due to the requested Fast Track analysis. The condenser was rinsed with reagent grade toluene and a wire was used to detach any water droplets from the neck of the condenser. Each sample was removed from its Dean-Stark extraction unit and allowed to vent overnight. Final water volumes were measured volumetrically to (± 0.05 cc), removed from the graduated sidearm tube by a syringe, and weighed gravimetrically to (± 0.001 grams).

Each sample was placed in a batch reflux soxhlet under a chloroform-methanol azeotrope to further extract any residual hydrocarbons and leach inorganic salt. After the azeotrope effluent was clear and did not precipitate silver nitrate, the samples were removed, and checked for fluorescence under UV light using a cutting solvent. All core plug samples that did not produce an oil cut were submitted for drying. Due to the requested Fast Track analysis the samples were in batch cleaning for a 24-hour period.

Sample Drying

Each core plug and thimble sample was dried in a vacuum oven at 180 degrees Fahrenheit. Samples were removed from the oven and cooled to room temperature over desiccant in a sealed container. Sample weights were monitored daily until weight stabilization (± 0.05 grams) was achieved over a 24-hour period. Due to the requested Fast Track analysis after a 24-hour period each core plug sample was removed from its glass thimble. The core plug sample was weighed and its associated glass thimble was weighed to ensure accuracy.

Grain Volume and Grain Density Determination

A grain volume of each core plug sample was measured by helium injection using the Boyle's Law method. The equipment was calibrated with known volume steel billets to establish a pressure vs. volume linear relationship. Berea, titanium and steel standards were measured before each run to ensure the system was properly calibrated. The core plug samples were kept in a desiccator until ready for grain volume measurement and individually weighed just prior to its grain volume measurement. The Berea check plug was measured after every fifth sample, and the measurement of every fifth core plug sample was repeated to ensure continued calibration of the system.

Grain densities (gm/cc) were calculated from the dry sample weight (gm) and grain volume data (cc) using the formula:

$$GD = \frac{DW}{GV}$$

Where: GD = Grain Density, gm/cc
DW = Dry weight, gm
GV = Grain Volume, cc

Plug Permeability to Air and Porosity Measurements

Boyle's law helium pore volumes and steady state nitrogen permeability values were measured at the designated net confining stress (NCS) of 800 psi. Each core plug sample was loaded into a Hydrostatic core holder system and pressure was applied to achieve a simulated reservoir stress. Using the techniques established by Frank Jones, pore volume was measured and calculated using the following equation:

At NCS:

$$\phi = (PV) / (GV + PV) * 100$$

Where: ϕ = Porosity, percent
 PV = Pore Volume, cc
 GV = Helium Grain Volume, cc

Permeability to air was measured by establishing a constant differential pressure and constant flow rate of nitrogen gas across each core plug sample. Permeability values are calculated based on Darcy's Law.

$$K_{air} = 14700 * \frac{(Length * Volume * Viscosity)}{(Pressure * Area * Time)}$$

Where: K_{air} = Permeability to Air, millidarcys
 14700 = constant for unit conversions
 Length = length of test sample, cm
 Volume = volume of nitrogen measured, cm³
 Viscosity = nitrogen's viscosity at test temperature, cp
 Pressure = pressure drop across test sample, psi
 Area = area of test sample, cm²
 Time = time of measurement, seconds

Klinkenberg permeability values are provided for each sample and were calculated from the observed steady-state data using the following equation:

$$KK = G - \frac{(G + AA * G^{\frac{Ma+1}{PMa}} - Ka)}{1 + AA * G^{\frac{Ma}{PMa}}}$$

Where: KK = Klinkenberg Permeability
 G = Ka
 If Ka > 0.437, then AA = 0.777 and Ma = -0.39
 If Ka < 0.437, then AA = 0.86 and Ma = -0.33
 PMa = Mean Pressure

Vecta Oil & Gas, Ltd.
Grays 23-27 Well
Cheyenne County, Colorado
File No.: DN-45813

Sample Disposition

After the core sampling program nine (9) boxes of core material were delivered, via Weatherford Laboratories personnel to Triple "O" Slabbing on December 28, 2009. The release forms and inventories are included in Appendix B.

Weatherford Laboratories appreciates the opportunity to have been of service to Vecta Oil & Gas, Ltd. If you have any questions, or if we may be of any further assistance, please contact any Weatherford Laboratories' representatives at (720) 898-8200.

Sincerely,

David B. Sutton
General Manager
Western US – Core Analysis

TABLE OF CONTENTS

SECTION 1: ROUTINE CORE ANALYSIS

- Total Gamma
- Core Data
- Permeability/Saturation and Porosity Cross Plots

APPENDIX A: CORE INVENTORIES

- Received Inventory
- Sample List / Drill Sheet

APPENDIX B: SAMPLE SHIPMENTS

- Release Forms
- Inventories

Vecta Oil & Gas, Ltd.
Grays 23-27 Well
Cheyenne County, Colorado
File No.: DN-45813

SECTION 1

ROUTINE CORE ANALYSIS RESULTS

- Total Gamma
- Core Data
- Permeability/Saturation and Porosity Cross Plots

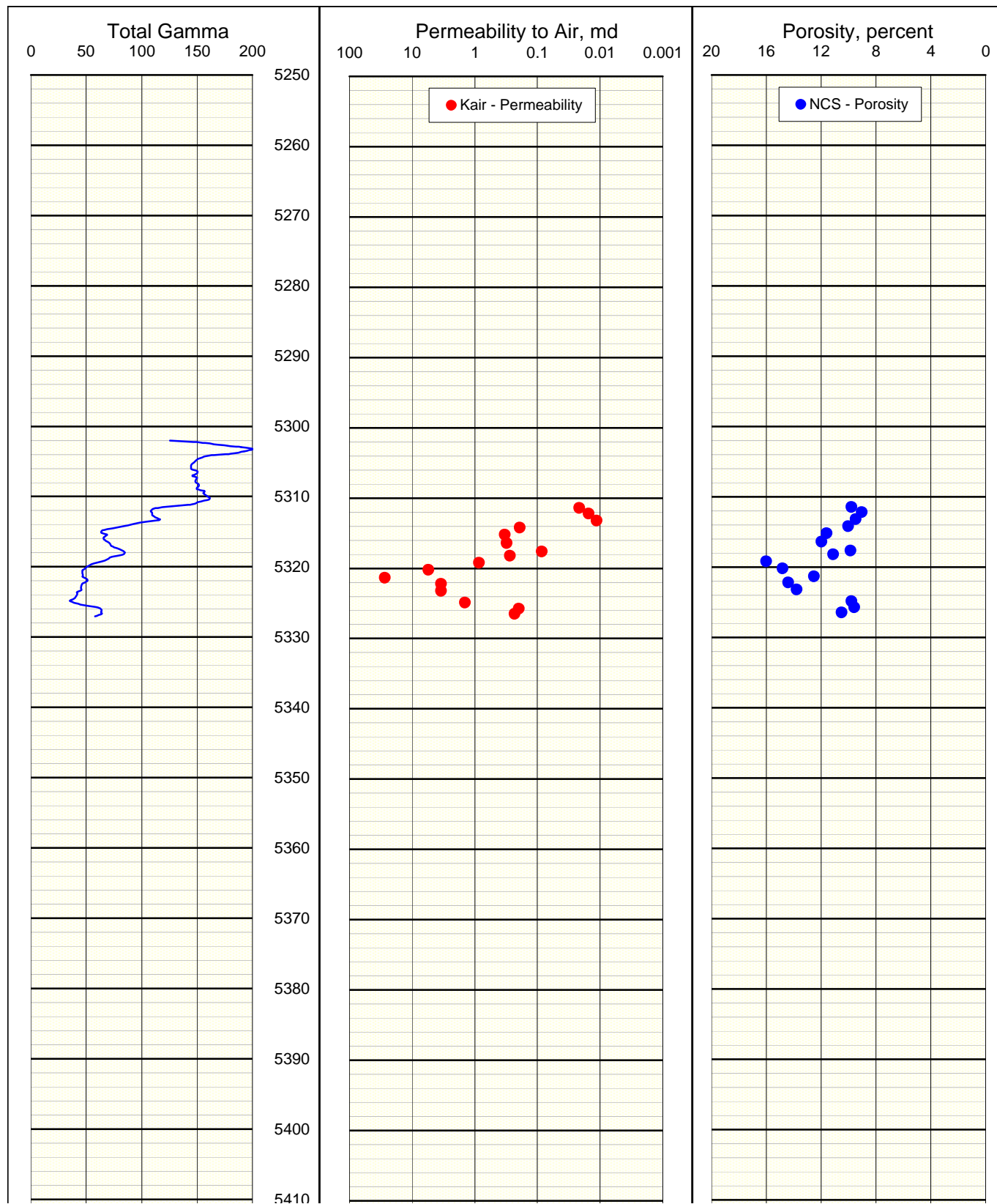
CORE GAMMA, PERMEABILITY, AND POROSITY PROFILE PLOT

VERTICAL SCALE 5 inch:100 feet

Vecta Oil & Gas, Ltd.
Grays 23-27 Well
Morrow Sand

Cheyenne County, Colorado
File No.: DN-45813
Date: 12/29/2009

Core: 1 (5302.0' - 5327.05')





SUMMARY OF FAST TRACK CORE ANALYSES RESULTS

Vacuum Oven Dried at 180° F Net Confining Stress: 800 psi

Vecta Oil & Gas, Ltd.
Grays 23-27 Well
Marrow Sandstone

Cheyenne County, Colorado
File No.: DN-45813
Date: 12/29/2009

Core Number	Sample Number	Sample Depth, feet	Permeability, millidarcys		Porosity, percent		Grain Density, gm/cc	Fluid Saturation, percent		
			to Air	Klinkenberg	Ambient	NCS		Water	Oil	Total
1	1-10	5311.45	0.021	0.011	9.8	9.8	2.69	65.6	29.5	95.2
1	1-11	5312.20	0.015	0.007	9.1	9.0	2.69	62.0	37.6	99.6
1	1-12	5313.20	0.011	0.005	9.5	9.5	2.68	47.8	51.5	99.3
1	1-13	5314.20	0.189	0.115	10.1	10.0	2.66	59.8	29.3	89.1
1	1-14	5315.20	0.328	0.213	11.7	11.6	2.67	75.3	3.9	79.2
1	1-15	5316.40	0.307	0.189	12.0	11.9	2.66	68.4	10.0	78.5
1	1-16	5317.65	0.085	0.045	9.9	9.8	2.88	64.5	25.8	90.2
1	1-17	5318.20	0.272	0.173	11.2	11.1	2.65	66.1	11.7	77.7
1	1-18	5319.20	0.856	0.680	16.1	16.0	2.66	69.8	6.9	76.7
1	1-19	5320.20	5.43	4.36	14.9	14.8	2.65	47.4	20.4	67.8
1	1-20	5321.35	27.1	22.7	12.5	12.5	2.64	42.7	3.0	45.7
1	1-21	5322.20	3.41	2.70	14.5	14.4	2.65	59.3	12.4	71.8
1	1-22	5323.20	3.43	2.74	13.8	13.8	2.65	67.9	4.6	72.5
1	1-23	5324.90	1.42	1.12	9.8	9.8	2.69	56.6	3.8	60.4
1	1-24	5325.75	0.198	0.143	9.6	9.6	2.65	61.4	8.1	69.4
1	1-25	5326.50	0.229	0.169	10.6	10.5	2.68	67.3	1.2	68.6
Average values:			2.70	2.21	11.6	11.5	2.68	61.4	16.2	77.6

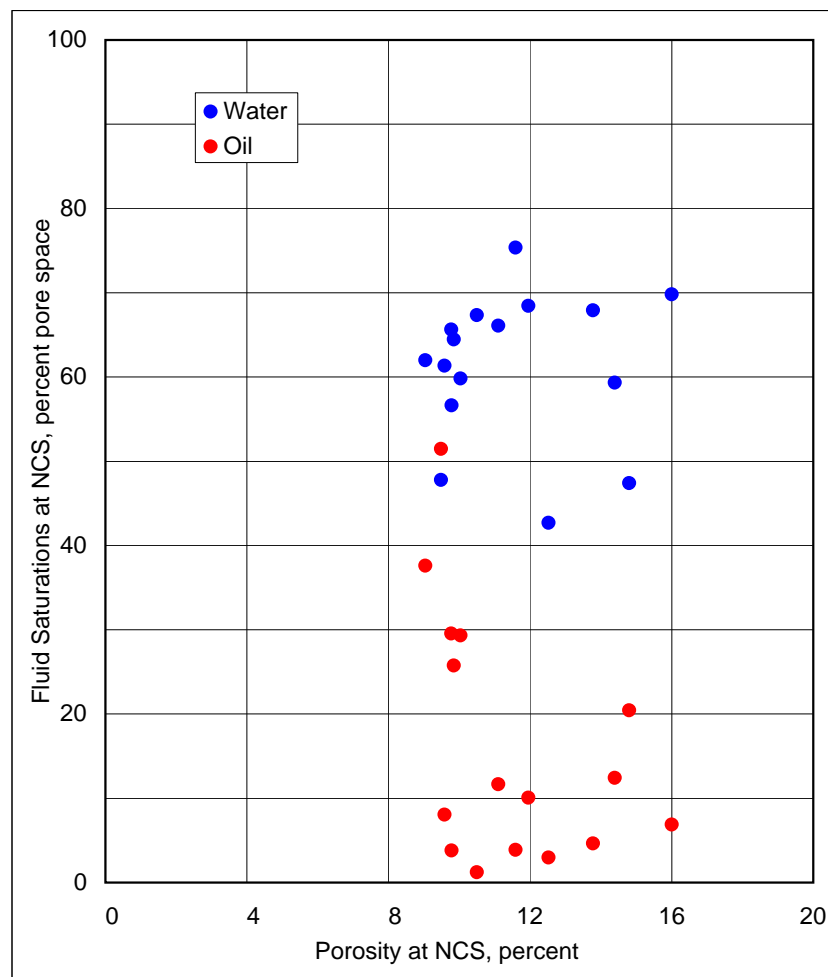
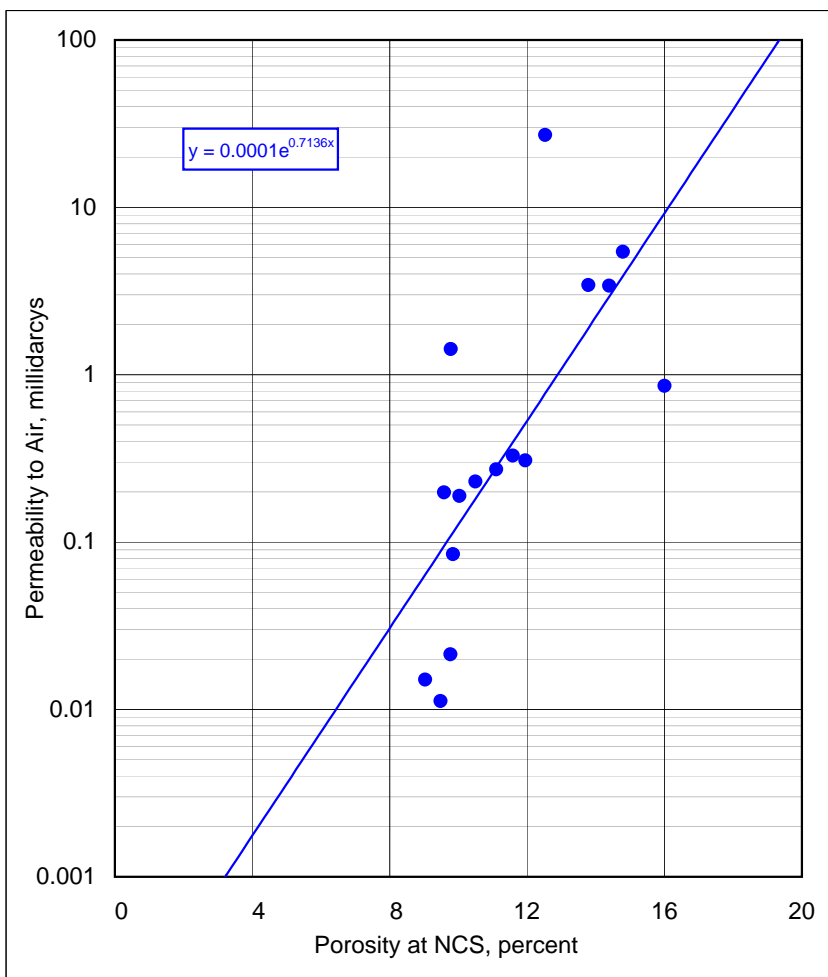


PERMEABILITY AND FLUID SATURATIONS VERSUS POROSITY

Vacuum Oven Dried at 180° F Net Confining Stress: 800 psi

Vecta Oil & Gas, Ltd.
Grays 23-27 Well
Marrow Sandstone

Cheyenne County, Colorado
File No.: DN-45813
Date: 12/29/2009



Vecta Oil & Gas, Ltd.
Grays 23-27 Well
Cheyenne County, Colorado
File No.: DN-45813

APPENDIX A

CORE INVENTORIES

- Received Inventory
- Sample List / Drill Sheet



WELLSITE - TUBE LIST

Vecta Oil & Gas, Ltd.
Grays 23-27 Well
Cheyenne County, Colorado

File No.: DN-45813
Date: 12/26/2009

Core 1				
Tube (Box) Number	Top Depth, feet	Bottom Depth, feet	Recovered Core, feet	Comments
1	5302.00	5305.00	3.00	mud
2	5305.00	5308.00	3.00	mud
3	5308.00	5311.00	3.00	mud
4	5311.00	5314.00	3.00	
5	5314.00	5317.00	3.00	
6	5317.00	5320.00	3.00	
7	5320.00	5323.00	3.00	
8	5323.00	5325.55	2.55	
9	5325.55	5327.05	1.50	shoe
Total footage recovered:			25.05	



DRILL SHEET CORE 1

Vecta Oil & Gas, Ltd.
Grays 23-27 Well
Cheyenne County, Colorado

File No.: DN-45813
Date: 12/26/2009

Core No.	Sample No.	Routine Plugs		RCA - for Dean Stark extraction RCA Plug Diameter: 1.5 - inch Plug Length: 2.0 - inches Drilling Fluid: Humidified Nitrogen (3% KCl) Comments: Orient End Trim By Notching W/Trim Saw "Up-Hole" Direction	Driller Name	Date Drilled	Plug Weight, grams
		Requested Sample Depth, feet	Actual Sample Depth, feet				
1	1-10	5311.45	5311.45		J. Bean	12/26/2009	54.80
1	1-11	5312.20	5312.20		J. Bean	12/26/2009	54.13
1	1-12	5313.20	5313.20		J. Bean	12/26/2009	55.38
1	1-13	5314.20	5314.20		J. Bean	12/26/2009	57.64
1	1-14	5315.20	5315.20		J. Bean	12/26/2009	56.99
1	1-15	5316.40	5316.40	2 attempts - short plug	J. Bean	12/26/2009	41.71
1	1-16	5317.65	5317.65		J. Bean	12/26/2009	58.89
1	1-17	5318.20	5318.20		J. Bean	12/26/2009	53.19
1	1-18	5319.20	5319.20		J. Bean	12/26/2009	54.67
1	1-19	5320.20	5320.20		J. Bean	12/26/2009	53.39
1	1-20	5321.35	5321.35	short plug	J. Bean	12/26/2009	39.88
1	1-21	5322.20	5322.20		J. Bean	12/26/2009	49.59
1	1-22	5323.20	5323.20		J. Bean	12/26/2009	56.04
1	1-23	5324.90	5324.90		J. Bean	12/26/2009	53.75
1	1-24	5325.75	5325.75		J. Bean	12/26/2009	58.48
1	1-25	5326.50	5326.50		J. Bean	12/26/2009	55.72

(16) Total RCA Samples

Vecta Oil & Gas, Ltd.
Grays 23-27 Well
Cheyenne County, Colorado
File No.: DN-45813

APPENDIX B

SAMPLE SHIPMENTS

- Release Forms
- Inventories



(720) 898-8200

Fax: (720) 898-8222

16161 Table Mountain Parkway, Golden, Colorado 80403

Release Form

Upon Receipt, please sign release form and fax back to (720) 898-8222

Date: 12/28/2009

WFT Labs Employee Authorizing Release: Suzy Nickerson

Means Of Delivery: WFT Labs personnel

OMNI File Number: DN-45813

Well Information: Vecta Oil & Gas, Ltd.
Grays 23-27 Well
Cheyenne County, Colorado

Material Released: (25.05) Feet of whole core

Individual Requesting Release: Herb Mosca (Vecta)

Individual Authorizing Release: Matt Goolsby (Vecta)

Purpose Of Release: Per Client Request

Address Material Was Delivered To: Triple "O" Slabbing
Attention: Butch Oliver
2830 W. 9th Ave
Denver, Colorado 80204

Phone: (303) 778-7173

Delivery Accepted By: _____ **Date:** _____

Printed Name: _____



INVENTORY

Vecta Oil & Gas, Ltd.
Grays 23-27 Well
Cheyenne County, Colorado

File No.: DN-45813
Date: 12/28/2009

Core 1				
Tube (Box) Number	Top Depth, feet	Bottom Depth, feet	Recovered Core, feet	Comments
1	5302.00	5305.00	3.00	mud
2	5305.00	5308.00	3.00	mud
3	5308.00	5311.00	3.00	mud
4	5311.00	5314.00	3.00	
5	5314.00	5317.00	3.00	
6	5317.00	5320.00	3.00	
7	5320.00	5323.00	3.00	
8	5323.00	5325.55	2.55	
9	5325.55	5327.05	1.50	shoe
Total footage recovered:			25.05	



(720) 898-8200

Fax: (720) 898-8222

16161 Table Mountain Parkway, Golden, Colorado 80403

Release Form

Upon Receipt, please sign release form and fax back to (720) 898-8222

Date: 1/6/2010

WFT Labs Employee Authorizing Release: Suzy Nickerson

Means Of Delivery: WFT Labs personnel

OMNI File Number: DN-45813

Well Information: Vecta Oil & Gas, Ltd.
Grays 23-27 Well
Cheyenne County, Colorado

Material Released: (16) Endtrims

Individual Requesting Release: Herb Mosca (Vecta)

Individual Authorizing Release: Matt Goolsby (Vecta)

Purpose Of Release: Per Client Request

Address Material Was Delivered To: Vecta Oil & Gas, Ltd.
Attention Herb Mosca
2830 W. 9th Street
Denver, Colorado 80204

Phone: (214) 686-0091

Delivery Accepted By: _____ **Date:** _____

Printed Name: _____



INVENTORY

Vecta Oil & Gas, Ltd.
Grays 23-27 Well
Cheyenne County, Colorado

File No.: DN-45813
Date: 1/6/2010

Sample Number	Depth, Feet
1-10	5311.45
1-11	5312.20
1-12	5313.20
1-13	5314.20
1-14	5315.20
1-15	5316.40
1-16	5317.65
1-17	5318.20
1-18	5319.20
1-19	5320.20
1-20	5321.35
1-21	5322.20
1-22	5323.20
1-23	5324.90
1-24	5325.75
1-25	5326.50