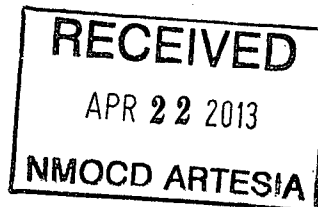




PHOENIX
TECHNOLOGY SERVICES

April 17, 2013



Oil Conservation Division
State of New Mexico
811 S. First St.
Artesia, New Mexico 88210

Dear District 2 - Artesia

Re: Chesapeake Operating Inc.
Nereid 1 Federal #1H
Chaves, NM
API #30-005-29145
Job No. 1310232

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 606018). Other information required by your office is as follows:

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Derek Webster	1H	135	13,413	03/12/13	04/09/13	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Kelly Jo Walter

Kelly Jo Walter
Operations Administrator

Certified mail receipt number: 7011 1570 0001 4364 9612

Phoenix Technology Services SURVEY DATA CERTIFICATION



PHOENIX
TECHNOLOGY SERVICES

PHOENIX JOB NUMBER 1310232

OPERATOR Chesapeake

WELL NAME Nereid 1 Federal #1H

COUNTY & STATE

Chaves Co, NM

API WELL NUMBER 30-00529145

PROPOSED DIRECTION 269.36

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
ft	.00 ft	.0 ft	.0 ft	.00 ft	.00 ft	Surface

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
12-Mar-13	135 ft	0.4	132.5

SURVEY INSTRUMENT

TYPE

Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
09-Apr-13	13,413 ft	91.4	271.2

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED	PROJECTED		
TD SURVEY	TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
09-Apr-13	13,480 ft	91.4	271.2

Derek Webster

PRINT YOUR NAME ABOVE

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.22
DECLINATION OR GRID	GRID

4-9-13
TODAY'S DATE

MWD SUPERVISOR 1

Derek Webster

DIRECTIONAL DRILLER 1

Keith Scheppler

MWD SUPERVISOR 2

Zak Dawson

DIRECTIONAL DRILLER 2

Justin Jackson

1805 Brittmore Road

Houston, Texas 77043

(713)3370609 (Voice), (713)337-0599 (Fax)

DISTRICT I
1625 N. FRENCH DR., MOBIS, NM 88240

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102

Revised October 12, 2005

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

OIL CONSERVATION DIVISION

Submit to Appropriate District Office

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410

11885 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT IV
11995 S. ST. FRANCIS DR., SANTA FE, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
		Wildcat; Wolfcamp
Property Code	Property Name	Well Number
	NEREID 1 FEDERAL	1H
OGRID No. 147179	Operator Name CHESAPEAKE OPERATING, INC.	Elevation 4367'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	1	15-S	31-E		660	SOUTH	100	EAST	CHAVES

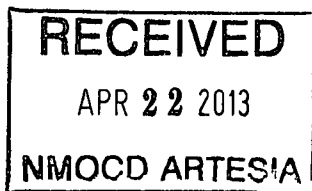
Bottom Hole Location (If Different From Surface)

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	1	15-S	31-E		660	SOUTH	330	WEST	CHAVES

Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.
------------------------	-----------------	--------------------	-----------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

LOT 4	LOT 3	LOT 2	LOT 1
GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=742364.5 N X=673770.3 E LAT.=33.039533° N LONG.=103.766288° W BOTTOM HOLE LOCATION Y=742310.7 N X=668916.5 E Project Area			
Producing Area GRID AZ.=269°21'51" HORIZ. DIST.=1855.2'			
DETAIL 4368.3' 4364.5' 600' 600' 4366.3' 4365.5'			
Penetration Point 660' FSL & 348' FEL			
OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling, agreement or a compulsory pooling order heretofore entered by the division. Signature: Bryan Arrant Date: 4/27/2010 Printed Name: Bryan Arrant			
SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. GARY G. EIDSON MARCH 30, 2010 Date Surveyed: 12641 Signature & Seal of Professional Surveyor 10.11.0423 Certificate No.: GARY EIDSON 12641 RONALD J. EIDSON 3239			



Chesapeake Operating Inc.

Chaves County, NM (NAD27 NME)

Nereid 1 Federal

#1H

Wellbore #1 / Job #1310232

Survey: Phoenix Pilot Hole MWD Suvey

Phoenix Final Survey Report

10 April, 2013





Phoenix Technology Services

Phoenix Final Survey Report



Company:	Chesapeake Operating Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Chaves County, NM (NAD27 NME)	TVD Reference:	RF @ 4384.00usft (Trinidad 110)
Site:	Nereid 1 Federal	MD Reference:	RF @ 4384.00usft (Trinidad 110)
Well:	#1H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310232	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Trinidad 110)	Database:	GCR-DB

Project	Chaves County, NM (NAD27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Nereid 1 Federal		
Site Position:		Northing:	742,364.50 usft
From:	Map	Easting:	673,770.30 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Latitude:	33° 2' 22.320228 N
		Longitude:	103° 45' 58.635673 W
		Grid Convergence:	0.31 °

Well	#1H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	33° 2' 22.320228 N
		Longitude:	103° 45' 58.635673 W
		Ground Level:	4,367.00 usft

Wellbore	Wellbore #1 / Job #1310232				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010_14	02/21/13	7.53	60.86	48,909

Design	Surveys (Trinidad 110)			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth:
				0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	239.36

Survey Program	Date 04/10/13			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
135.00	9,060.00	Phoenix Pilot Hole MWD Survey (Wellbore)	MWD	MWD - Standard
8,249.00	13,480.00	Phoenix MWD Surveys (Wellbore #1 / Job	MWD	MWD - Standard

Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	135.00	0.40	132.50	135.00	-0.32	0.35	-0.14	0.30
Phoenix First MWD Survey	292.00	0.70	190.30	291.99	-1.63	0.58	0.33	0.38
	481.00	0.60	185.10	480.98	-3.75	0.29	1.67	0.06
	671.00	0.50	168.20	670.97	-5.56	0.37	2.52	0.10
	861.00	0.40	180.60	860.97	-7.03	0.53	3.13	0.07
	1,051.00	0.30	173.40	1,050.96	-8.19	0.58	3.67	0.06
	1,241.00	0.20	177.60	1,240.96	-9.01	0.65	4.03	0.05
	1,431.00	0.20	145.40	1,430.96	-9.62	0.85	4.17	0.06
	1,623.00	0.10	273.40	1,622.96	-9.88	0.88	4.28	0.14



Phoenix Technology Services
Phoenix Final Survey Report



Company:	Chesapeake Operating Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Chaves County, NM (NAD27 NME)	TVD Reference:	RF @ 4384.00usft (Trinidad 110)
Site:	Nereid 1.Federal	MD Reference:	RF @ 4384.00usft (Trinidad 110)
Well:	#1H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310232	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Trinidad 110)	Database:	GCR.DB

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,814.00	0.10	296.00	1,813.96	-9.80	0.56	4.51	0.02
2,005.00	0.10	193.00	2,004.96	-9.89	0.37	4.72	0.08
2,196.00	0.50	85.40	2,195.96	-9.99	1.17	4.09	0.28
2,387.00	0.30	100.00	2,386.95	-10.01	2.49	2.96	0.12
2,577.00	0.20	100.80	2,576.95	-10.15	3.30	2.33	0.05
2,769.00	0.30	93.00	2,768.95	-10.24	4.14	1.66	0.05
2,960.00	0.20	58.00	2,959.95	-10.09	4.92	0.91	0.09
3,150.00	0.20	35.30	3,149.94	-9.65	5.39	0.28	0.04
3,341.00	0.20	61.10	3,340.94	-9.21	5.87	-0.36	0.05
3,532.00	0.20	61.10	3,531.94	-8.89	6.46	-1.03	0.00
3,722.00	0.10	33.10	3,721.94	-8.59	6.84	-1.51	0.06
3,912.00	0.30	5.10	3,911.94	-7.96	6.97	-1.94	0.11
3,935.00	0.20	9.40	3,934.94	-7.86	6.99	-2.01	0.44
4,107.00	0.50	27.20	4,106.94	-6.89	7.38	-2.83	0.18
4,296.00	0.80	357.60	4,295.93	-4.84	7.70	-4.16	0.23
4,487.00	1.00	352.20	4,486.90	-1.86	7.42	-5.43	0.11
4,677.00	0.80	352.80	4,676.88	1.10	7.03	-6.61	0.11
4,867.00	1.00	335.00	4,866.85	3.92	6.16	-7.30	0.18
5,058.00	0.80	335.10	5,057.83	6.64	4.89	-7.59	0.10
5,248.00	0.90	328.80	5,247.81	9.12	3.56	-7.71	0.07
5,438.00	0.80	323.50	5,437.79	11.46	2.00	-7.56	0.07
5,629.00	1.10	319.20	5,628.76	13.92	0.01	-7.10	0.16
5,819.00	1.10	347.80	5,818.73	17.08	-1.57	-7.36	0.29
6,010.00	1.10	352.70	6,009.69	20.69	-2.19	-8.66	0.05
6,201.00	1.00	5.20	6,200.66	24.17	-2.27	-10.37	0.13
6,387.00	0.70	2.60	6,386.64	26.92	-2.07	-11.94	0.16
6,568.00	0.90	43.10	6,567.63	29.07	-1.05	-13.91	0.32
6,748.00	0.70	28.80	6,747.61	31.06	0.45	-16.21	0.16
6,928.00	0.70	21.80	6,927.59	33.05	1.38	-18.03	0.05
7,109.00	0.70	28.10	7,108.58	35.05	2.31	-19.85	0.04
7,290.00	0.60	17.50	7,289.57	36.93	3.12	-21.50	0.09
7,470.00	0.90	34.70	7,469.55	38.99	4.21	-23.49	0.21
7,651.00	1.10	57.70	7,650.53	41.09	6.49	-26.52	0.25
7,831.00	1.50	55.00	7,830.48	43.36	9.88	-30.60	0.22
8,012.00	1.50	54.50	8,011.42	46.09	13.75	-35.32	0.01
8,192.00	1.50	54.90	8,191.36	48.82	17.59	-40.01	0.01
8,373.00	1.40	55.30	8,372.30	51.44	21.35	-44.58	0.06
8,554.00	1.80	61.10	8,553.23	54.07	25.65	-49.63	0.24
8,735.00	1.80	58.60	8,734.14	56.93	30.57	-55.31	0.04
8,915.00	1.80	50.60	8,914.05	60.19	35.17	-60.93	0.14
8,996.00	1.60	49.80	8,995.01	61.73	37.01	-63.31	0.25
9,060.00	1.60	49.80	9,058.99	62.88	38.38	-65.07	0.00

Projection to TD, Pilot Hole



Phoenix Technology Services
Phoenix Final Survey Report



Company:	Chesapeake Operating Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Chaves County, NM (NAD27 NME)	TVD Reference:	RF @ 4384.00usft (Trinidad 110)
Site:	Nereid-1 Federal	MD Reference:	RF @ 4384.00usft (Trinidad 110)
Well:	#1H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310232	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Trinidad 110)	Database:	GCR-DB

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
135.00	135.00	-0.32	0.35	Phoenix First MWD Survey
9,060.00	9,058.99	62.88	38.38	Projection to TD, Pilot Hole

Checked By: _____ Approved By: _____ Date: _____



Chesapeake Operating Inc.

Chaves County, NM (NAD27 NME)

Nereid 1 Federal

#1H

Wellbore #1 / Job #1310232

Survey: Phoenix Curve & Lateral Surveys

Phoenix Final Survey Report

10 April, 2013





Phoenix Technology Services
Phoenix Final Survey Report



Company:	Chesapeake Operating Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Chaves County, NM (NAD27 NME)	TVD Reference:	RF @ 4384.00usft (Trinidad 110)
Site:	Nereid 1 Federal	MD Reference:	RF @ 4384.00usft (Trinidad 110)
Well:	#1H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310232	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Trinidad 110)	Database:	GCR DB

Project:	Chaves County, NM (NAD27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Nereid 1 Federal		
Site Position:		Northing:	742,364.50 usft
From:	Map	Easting:	673,770.30 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Latitude:	33° 2' 22.320228 N
		Longitude:	103° 45' 58.635673 W
		Grid Convergence:	0.31 °

Well:	#1H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	33° 2' 22.320228 N
		Longitude:	103° 45' 58.635673 W
		Ground Level:	4,367.00 usft

Wellbore:	Wellbore #1 / Job #1310232				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010_14	02/21/13	7.53	60.86	48,909

Design:	Surveys (Trinidad 110)			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth:
				0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	239.36

Survey Program	Date 04/10/13			
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
135.00	9,060.00	Phoenix Pilot Hole MWD Survey (Wellbore	MWD	MWD - Standard
8,249.00	13,480.00	Phoenix Curve & Lateral Surveys (Wellbor	MWD	MWD - Standard

Survey	MD	Inc	Azi (azimuth)	TVD	N/S	E/W	V. Sec	DLeg
	(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)
	8,192.00	1.50	54.90	8,191.36	48.82	17.59	-40.01	0.00
	8,249.00	1.40	51.40	8,248.34	49.68	18.75	-41.45	0.23
	8,294.00	0.90	29.90	8,293.33	50.33	19.35	-42.30	1.45
	8,339.00	2.90	298.50	8,338.31	51.18	18.53	-42.02	6.79
	8,384.00	6.30	277.00	8,383.16	52.02	15.08	-39.48	8.34
	8,429.00	12.10	272.30	8,427.56	52.51	7.91	-33.57	12.99
	8,474.00	17.40	272.20	8,471.06	52.96	-3.54	-23.95	11.78
	8,520.00	19.30	272.00	8,514.72	53.49	-18.01	-11.77	4.13
	8,565.00	22.90	269.00	8,556.70	53.60	-34.20	2.11	8.35
	8,610.00	29.10	264.40	8,597.13	52.38	-53.87	19.65	14.48
	8,655.00	32.80	262.80	8,635.72	49.78	-76.86	40.76	8.42



Phoenix Technology Services
Phoenix Final Survey Report



Company: Chesapeake Operating Inc.
Project: Chaves County, NM (NAD27-NME)
Site: Nereid 1 Federal
Well: #1H
Wellbore: Wellbore #1 / Job #1310232
Design: Surveys (Trinidad-110)

Local/Co-ordinate Reference: Well #1H
TVD Reference: RF @ 4384.00usft (Trinidad-110)
MD Reference: RF @ 4384.00usft (Trinidad-110)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: GCR DB

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
8,700.00	37.70	262.60	8,672.45	46.48	-102.61	64.60	10.89
8,730.00	42.40	262.30	8,695.41	43.94	-121.74	82.35	15.68
8,775.00	47.60	261.90	8,727.22	39.56	-153.25	111.69	11.57
8,820.00	50.20	263.20	8,756.80	35.17	-186.87	142.85	6.17
8,865.00	52.30	264.10	8,784.97	31.30	-221.75	174.84	4.92
8,875.45	52.87	264.40	8,791.32	30.47	-230.00	182.37	5.89
330' Perf Hardline							
8,911.00	54.80	265.40	8,812.30	27.92	-258.59	208.26	5.89
8,956.00	60.70	266.70	8,836.30	25.31	-296.54	242.24	13.34
9,001.00	66.60	268.40	8,856.26	23.60	-336.81	277.75	13.54
9,046.00	70.00	269.10	8,872.90	22.70	-378.60	314.18	7.69
9,091.00	72.00	269.30	8,887.55	22.10	-421.14	351.08	4.46
9,136.00	74.50	269.00	8,900.52	21.46	-464.23	388.48	5.59
9,182.00	79.50	268.90	8,910.86	20.64	-509.03	427.44	10.87
9,227.00	80.90	268.50	8,918.52	19.63	-553.36	466.09	3.23
9,272.00	84.00	269.40	8,924.43	18.82	-597.95	504.88	7.17
9,317.00	88.00	271.10	8,927.57	19.02	-642.83	543.39	9.65
9,362.00	89.50	270.90	8,928.55	19.80	-687.81	581.69	3.36
9,452.00	91.60	270.00	8,927.69	20.51	-777.80	658.76	2.54
9,543.00	92.00	269.20	8,924.83	19.87	-868.75	737.33	0.98
9,633.00	90.10	268.30	8,923.18	17.91	-958.71	815.73	2.34
9,723.00	90.30	269.40	8,922.87	16.10	-1,048.69	894.07	1.24
9,814.00	89.30	267.80	8,923.19	13.88	-1,139.66	973.47	2.07
9,904.00	90.20	268.10	8,923.58	10.66	-1,229.60	1,052.50	1.05
9,994.00	90.90	268.50	8,922.71	7.99	-1,319.55	1,131.25	0.90
10,084.00	89.90	268.00	8,922.09	5.24	-1,409.51	1,210.05	1.24
10,174.00	90.00	267.50	8,922.17	1.71	-1,499.44	1,289.23	0.57
10,264.00	91.20	267.80	8,921.22	-1.98	-1,589.36	1,368.47	1.37
10,355.00	91.30	267.10	8,919.24	-6.03	-1,680.24	1,448.73	0.78
10,445.00	90.90	267.00	8,917.51	-10.66	-1,770.11	1,528.41	0.46
10,535.00	91.90	266.40	8,915.31	-15.84	-1,859.93	1,608.33	1.30
10,626.00	89.40	268.90	8,914.28	-19.57	-1,950.83	1,688.44	3.88
10,716.00	87.90	268.60	8,916.40	-21.53	-2,040.78	1,766.84	1.70
10,806.00	88.30	268.70	8,919.38	-23.65	-2,130.71	1,845.29	0.46
10,896.00	89.80	269.30	8,920.87	-25.22	-2,220.68	1,923.50	1.80
10,987.00	89.80	268.90	8,921.19	-26.65	-2,311.67	2,002.51	0.44
11,077.00	93.30	269.50	8,918.76	-27.91	-2,401.61	2,080.54	3.95
11,168.00	94.70	269.80	8,912.41	-28.46	-2,492.39	2,158.92	1.57
11,258.00	94.40	269.70	8,905.27	-28.85	-2,582.10	2,236.31	0.35
11,348.00	92.40	269.00	8,899.93	-29.87	-2,671.93	2,314.12	2.35
11,438.00	89.60	269.10	8,898.36	-31.36	-2,761.90	2,392.28	3.11
11,529.00	88.60	269.20	8,899.79	-32.71	-2,852.88	2,471.25	1.10
11,619.00	88.30	268.50	8,902.23	-34.52	-2,942.82	2,549.56	0.85
11,709.00	90.90	268.90	8,902.86	-36.56	-3,032.79	2,628.01	2.92
11,799.00	92.40	269.60	8,900.26	-37.74	-3,122.74	2,706.00	1.84



Phoenix Technology Services
Phoenix Final Survey Report



Company:	Chesapeake Operating Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Chaves County, NM (NAD27 NME)	TVD Reference:	RF @ 4384.00usft (Trinidad 110)
Site:	Nereid 1 Federal	MD Reference:	RF @ 4384.00usft (Trinidad 110)
Well:	#1H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310232	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Trinidad 110)	Database:	GCR DB

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
11,889.00	91.00	268.50	8,897.59	-39.23	-3,212.69	2,784.15	1.98
11,979.00	91.00	268.10	8,896.02	-41.90	-3,302.63	2,862.90	0.44
12,070.00	89.20	266.80	8,895.86	-45.95	-3,393.54	2,943.17	2.44
12,160.00	91.80	267.90	8,895.08	-50.11	-3,483.43	3,022.63	3.14
12,250.00	92.80	268.10	8,891.47	-53.25	-3,573.30	3,101.56	1.13
12,341.00	92.10	266.70	8,887.58	-57.37	-3,664.12	3,181.80	1.72
12,431.00	92.10	267.90	8,884.28	-61.61	-3,753.96	3,261.25	1.33
12,521.00	90.20	268.50	8,882.47	-64.43	-3,843.89	3,340.07	2.21
12,611.00	90.20	268.60	8,882.16	-66.71	-3,933.86	3,418.64	0.11
12,701.00	91.60	271.10	8,880.74	-66.95	-4,023.84	3,496.18	3.18
12,792.00	91.60	270.70	8,878.20	-65.52	-4,114.79	3,573.71	0.44
12,882.00	93.30	270.80	8,874.36	-64.34	-4,204.70	3,650.46	1.89
12,973.00	92.90	271.20	8,869.44	-62.76	-4,295.55	3,727.82	0.62
13,063.00	90.20	270.50	8,867.00	-61.42	-4,385.50	3,804.53	3.10
13,153.00	91.60	271.00	8,865.59	-60.24	-4,475.48	3,881.35	1.65
13,243.00	92.30	270.60	8,862.53	-58.99	-4,565.42	3,958.09	0.90
13,333.00	90.20	270.00	8,860.56	-58.52	-4,655.39	4,035.26	2.43
13,413.00	91.40	271.20	8,859.44	-57.68	-4,735.38	4,103.65	2.12
Phoenix Last MWD Survey							
13,480.00	91.40	271.20	8,857.81	-56.28	-4,802.34	4,160.55	0.00
Projection to Bit							

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
135.00				Phoenix First MWD Survey
8,875.45	8,791.32	30.47	-230.00	330' Perf Hardline
13,413.00	8,859.44	-57.68	-4,735.38	Phoenix Last MWD Survey
13,480.00	8,857.81	-56.28	-4,802.34	Projection to Bit

Checked By: _____ Approved By: _____ Date: _____