

RECEIVED
OPERATOR'S COPYFORM APPROVED
OMB No. 1004-0136
Expires July 31, 2010

RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAY 03 2010

HOBBSON

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM105885

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

CONFIDENTIAL

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone8. Lease Name and Well No. **<38150>**
PERSEUS 10 FEDERAL COM 3H2. Name of Operator
CHESAPEAKE OPERATING, INC. E-Mail linda.good@chk.com

Contact: LINDA GOOD

9. API Well No.

3a. Address
P.O. BOX 18496
OKLAHOMA CITY, OK 73154-04963b. Phone No. (include area code)
Ph: 405-935-427510. Field and Pool, or Exploratory
WILDCAT **ADD - Wolfcamp**

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At surface SENE 1980FNL 200FEL **Unit H**At proposed prod. zone SWNW 1980FNL 330FWL **Unit E**

11. Sec., T., R., M., or Blk. and Survey or Area

Sec 10 T15S R31E Mer NMP

14. Distance in miles and direction from nearest town or post office*
11 MILES NORTH OF MALJAMAR, NM.12. County or Parish
CHAVES13. State
NM

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)

16. No. of Acres in Lease
800.0017. Spacing Unit dedicated to this well
160.00

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.

19. Proposed Depth
13466 MD20. BLM/BIA Bond No. on file
NM263421. Elevations (Show whether DF, KB, RT, GL, etc.)
4402 GL

22. Approximate date work will start

23. Estimated duration

24. Attachments

ROSWELL CONTROLLED WATER BASIN

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature
(Electronic Submission)Name (Printed/Typed)
LINDA GOOD Ph: 405-935-4275Date
02/16/2010Title
SR. REGULATORY COMPLIANCE SPEC

Approved by (Signature)

Name (Printed/Typed)

Date

Title
Assistant Field Manager,
Lands And MineralsOffice
ROSWELL FIELD OFFICEDate
7/29/10Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVED FOR 2 YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #81468 verified by the BLM Well Information System
For CHESAPEAKE OPERATING, INC., sent to the Roswell
Committed to AFMSS for processing by RUBEN SANCHEZ on 02/16/2010 ()

DECLARED WATER BASIN

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS ATTACHEDCHECK BEHIND THE **1132**
CASING MUST BE **CIRCULATED**

WITNESS

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

Additional Operator Remarks:

CHESAPEAKE OPERATING, INC. RESPECTFULLY REQUESTS PERMISSION TO DRILL A WELL TO 13,466' TO TEST THE BONE SPRING FORMATION. IF PRODUCTIVE, CASING WILL BE RUN AND THE WELL COMPLETED. IF DRY, THE WELL WILL BE PLUGGED AND ABANDONED AS PER BLM AND NEW MEXICO OIL CONSERVATION DIVISION REQUIREMENTS.

PLEASE FIND THE SURFACE USE PLAN AND DRILLING PROGRAM AS REQUIRED BY ONSHORE ORDER NO. 1.

ATTACHED ARE THE EXHIBIT A-1 TO A-4 SURVEY PLATS, EXHIBIT B 1 MILE RADIUS PLAT, EXHIBIT C PRODUCTION FACILITY, EXHIBIT D PATTERSON RIG LAYOUT, EXHIBIT F-1 TO F-2 BOP & CHOKE MANIFOLD, EXHIBIT G DIRECTIONAL DRILL PLAN AND EXHIBIT H_H2S CONTINGENCY PLAN.

EXHIBIT E ARCHAEOLOGICAL SURVEY WILL BE DELIVERED TO THE BLM WHEN COMPLETED.

CHESAPEAKE OPERATING, INC. HAS AN AGREEMENT WITH THE SURFACE OWNER.

PLEASE BE ADVISED THAT CHESAPEAKE OPERATING, INC. IS CONSIDERED TO BE THE OPERATOR OF THE ABOVE MENTIONED WELL. CHESAPEAKE OPERATING, INC. AGREES TO BE RESPONSIBLE UNDER THE TERMS AND CONDITIONS OF THE LEASE FOR THE OPERATIONS CONDUCTED UPON THE LEASE LANDS.

(CHK PN 618836)

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

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

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

DISTRICT IV
11885 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

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

Form C-102

Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-005-29137	Pool Code 97715	Pool Name Wildcat; Wolfcamp
Property Code 38150	Property Name PERSEUS 10 FEDERAL COM	Well Number 3H
GRID No. 147179	Operator Name CHESAPEAKE OPERATING, INC.	Elevation 4404'

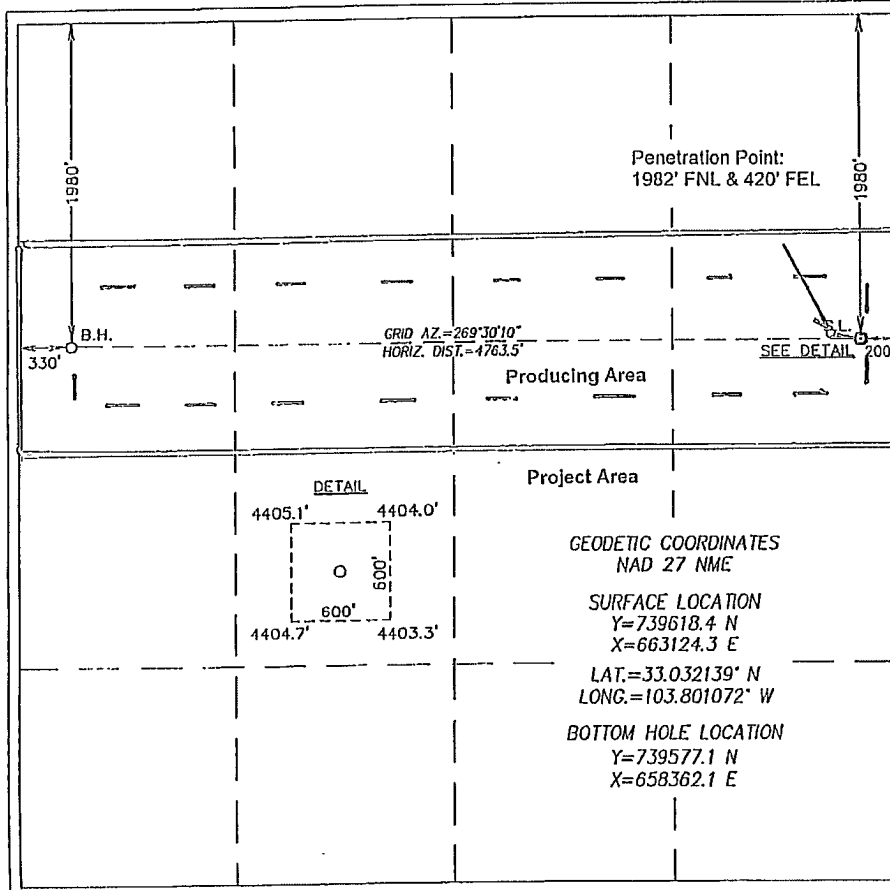
Surface Location

UL or lot No.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
H	10	15-S	31-E		1980	NORTH	200	EAST	CHAVES

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
E	10	15-S	31-E		1980	NORTH	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



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.

Bryan Arrant 2/5/2010
Signature Date
Bryan Arrant
Printed Name

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
JANUARY 29, 2010
Date Surveyed
Signature & Seal of Professional Surveyor
10.11.0139

Certificate No. GARY EIDSON 12641
RONALD J. EIDSON 3239

Permian District

NM - Chaves - Wolfcamp

Perseus 10 Federal COM #3H

Perseus 10 Federal Com #3H

Perseus 10 Federal Com #3H

Plan: Plan #1

Standard Planning Report

08 February, 2010

Chesapeake Operating Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well Perseus 10 Federal Com #3H
Company:	Permian District	TVD Reference:	RKB @ 4420.0ft
Project:	NM - Chaves - Wolfcamp	MD Reference:	RKB @ 4420.0ft
Site:	Perseus 10 Federal COM #3H	North Reference:	True
Well:	Perseus 10 Federal Com #3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Perseus 10 Federal Com #3H		
Design:	Plan #1		

Project	NM - Chaves - Wolfcamp		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Ground Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		Using geodetic scale factor

Site	Perseus 10 Federal COM #3H		
Site Position:		Northing:	739,619.97 ft
From:	Map	Easting:	663,125.52 ft
Position Uncertainty:	0.0 ft	Slot Radius:	0.000in
		Latitude:	33° 1' 55.70040000 N
		Longitude:	103° 48' 3.85920000 W
		Grid Convergence:	0.29 °

Well	Perseus 10 Federal Com #3H		
Well Position	+N/-S	0.0 ft	Northing:
	+E/-W	0.0 ft	Easting:
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	33° 1' 55.70040000 N
		Longitude:	103° 48' 3.85920000 W
		Ground Level:	4,402.0 ft

Wellbore	Perseus 10 Federal Com #3H		
Magnetics	Model Name	Sample Date	Declination
	User Defined	12/27/2007	0.00
			Dip Angle
			0.00
			Field Strength
			0

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
			Direction
			269.48

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target:
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
8,374.1	0.00	0.00	8,374.1	0.0	0.0	0.00	0.00	0.00	0.00	
9,020.6	90.50	269.48	8,783.4	-3.7	-412.8	14.00	14.00	0.00	269.48	
13,371.5	90.50	269.48	8,745.4	-42.9	-4,763.4	0.00	0.00	0.00	0.00	BHL

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well Perseus 10 Federal Com #3H
Company:	Permian District	TVD Reference:	RKB @ 4420.0ft
Project:	NM - Chaves - Wolfcamp	MD Reference:	RKB @ 4420.0ft
Site:	Perseus 10 Federal COM #3H	North Reference:	True
Well:	Perseus 10 Federal Com #3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Perseus 10 Federal Com #3H		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
13 3/8"									
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
9 5/8"									
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00

Chesapeake Operating Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well Perseus 10 Federal Com #3H
Company:	Permian District	TVD Reference:	RKB @ 4420.0ft
Project:	NM - Chaves - Wolfcamp	MD Reference:	RKB @ 4420.0ft
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Well:	Perseus 10 Federal Com #3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Perseus 10 Federal Com #3H		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,374.1	0.00	0.00	8,374.1	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	3.62	269.48	8,400.0	0.0	-0.8	0.8	14.00	14.00	0.00
8,425.0	7.12	269.48	8,424.9	0.0	-3.2	3.2	14.00	14.00	0.00
8,450.0	10.62	269.48	8,449.6	-0.1	-7.0	7.0	14.00	14.00	0.00
8,475.0	14.12	269.48	8,474.0	-0.1	-12.4	12.4	14.00	14.00	0.00
8,500.0	17.62	269.48	8,498.0	-0.2	-19.2	19.2	14.00	14.00	0.00
8,525.0	21.12	269.48	8,521.6	-0.2	-27.5	27.5	14.00	14.00	0.00
8,550.0	24.62	269.48	8,544.6	-0.3	-37.2	37.2	14.00	14.00	0.00
8,575.0	28.12	269.48	8,567.0	-0.4	-48.3	48.3	14.00	14.00	0.00
8,600.0	31.62	269.48	8,588.7	-0.5	-60.8	60.8	14.00	14.00	0.00
8,625.0	35.12	269.48	8,609.6	-0.7	-74.5	74.5	14.00	14.00	0.00
8,650.0	38.62	269.48	8,629.6	-0.8	-89.5	89.5	14.00	14.00	0.00
8,675.0	42.12	269.48	8,648.6	-1.0	-105.7	105.7	14.00	14.00	0.00
8,700.0	45.62	269.48	8,666.6	-1.1	-123.0	123.0	14.00	14.00	0.00
8,725.0	49.12	269.48	8,683.6	-1.3	-141.4	141.4	14.00	14.00	0.00
8,750.0	52.62	269.48	8,699.3	-1.4	-160.8	160.8	14.00	14.00	0.00
8,775.0	56.12	269.48	8,713.9	-1.6	-181.1	181.1	14.00	14.00	0.00
8,800.0	59.62	269.48	8,727.2	-1.8	-202.3	202.3	14.00	14.00	0.00
8,820.2	62.46	269.48	8,737.0	-2.0	-220.0	220.0	14.00	14.00	0.00

Wolfcamp NMOC

Chesapeake Operating Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well Perseus 10 Federal Com #3H
Company:	Permian District	TVD Reference:	RKB @ 4420.0ft
Project:	NM - Chaves - Wolfcamp	MD Reference:	RKB @ 4420.0ft
Site:	Perseus 10 Federal COM #3H	North Reference:	True
Well:	Perseus 10 Federal Com #3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Perseus 10 Federal Com #3H		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,825.0	63.12	269.48	8,739.2	-2.0	-224.2	224.2	14.00	14.00	0.00
8,850.0	66.62	269.48	8,749.8	-2.2	-246.9	246.9	14.00	14.00	0.00
8,875.0	70.12	269.48	8,759.0	-2.4	-270.1	270.1	14.00	14.00	0.00
8,900.0	73.62	269.48	8,766.8	-2.6	-293.8	293.9	14.00	14.00	0.00
8,920.2	76.45	269.48	8,772.0	-2.8	-313.4	313.4	14.00	14.00	0.00
Top of Wolfcamp Pay									
8,925.0	77.12	269.48	8,773.1	-2.9	-318.0	318.0	14.00	14.00	0.00
8,950.0	80.62	269.48	8,777.9	-3.1	-342.6	342.6	14.00	14.00	0.00
8,975.0	84.12	269.48	8,781.2	-3.3	-367.3	367.3	14.00	14.00	0.00
9,000.0	87.62	269.48	8,783.0	-3.5	-392.3	392.3	14.00	14.00	0.00
9,020.6	90.50	269.48	8,783.4	-3.7	-412.8	412.8	14.00	14.00	0.00
9,100.0	90.50	269.48	8,782.7	-4.4	-492.2	492.3	0.00	0.00	0.00
9,200.0	90.50	269.48	8,781.8	-5.3	-592.2	592.3	0.00	0.00	0.00
9,300.0	90.50	269.48	8,780.9	-6.2	-692.2	692.3	0.00	0.00	0.00
9,400.0	90.50	269.48	8,780.1	-7.1	-792.2	792.3	0.00	0.00	0.00
9,500.0	90.50	269.48	8,779.2	-8.0	-892.2	892.3	0.00	0.00	0.00
9,600.0	90.50	269.48	8,778.3	-8.9	-992.2	992.2	0.00	0.00	0.00
9,700.0	90.50	269.48	8,777.4	-9.8	-1,092.2	1,092.2	0.00	0.00	0.00
9,800.0	90.50	269.48	8,776.6	-10.7	-1,192.2	1,192.2	0.00	0.00	0.00
9,900.0	90.50	269.48	8,775.7	-11.6	-1,292.2	1,292.2	0.00	0.00	0.00
10,000.0	90.50	269.48	8,774.8	-12.5	-1,392.2	1,392.2	0.00	0.00	0.00
10,100.0	90.50	269.48	8,773.9	-13.4	-1,492.2	1,492.2	0.00	0.00	0.00
10,200.0	90.50	269.48	8,773.1	-14.3	-1,592.2	1,592.2	0.00	0.00	0.00
10,300.0	90.50	269.48	8,772.2	-15.2	-1,692.2	1,692.2	0.00	0.00	0.00
10,400.0	90.50	269.48	8,771.3	-16.1	-1,792.1	1,792.2	0.00	0.00	0.00
10,500.0	90.50	269.48	8,770.5	-17.0	-1,892.1	1,892.2	0.00	0.00	0.00
10,600.0	90.50	269.48	8,769.6	-17.9	-1,992.1	1,992.2	0.00	0.00	0.00
10,700.0	90.50	269.48	8,768.7	-18.8	-2,092.1	2,092.2	0.00	0.00	0.00
10,800.0	90.50	269.48	8,767.8	-19.7	-2,192.1	2,192.2	0.00	0.00	0.00
10,900.0	90.50	269.48	8,767.0	-20.6	-2,292.1	2,292.2	0.00	0.00	0.00
11,000.0	90.50	269.48	8,766.1	-21.5	-2,392.1	2,392.2	0.00	0.00	0.00
11,100.0	90.50	269.48	8,765.2	-22.4	-2,492.1	2,492.2	0.00	0.00	0.00
11,200.0	90.50	269.48	8,764.3	-23.3	-2,592.1	2,592.2	0.00	0.00	0.00
11,300.0	90.50	269.48	8,763.5	-24.2	-2,692.1	2,692.2	0.00	0.00	0.00
11,400.0	90.50	269.48	8,762.6	-25.1	-2,792.1	2,792.2	0.00	0.00	0.00
11,500.0	90.50	269.48	8,761.7	-26.0	-2,892.1	2,892.2	0.00	0.00	0.00
11,600.0	90.50	269.48	8,760.9	-26.9	-2,992.1	2,992.2	0.00	0.00	0.00
11,700.0	90.50	269.48	8,760.0	-27.8	-3,092.0	3,092.2	0.00	0.00	0.00
11,800.0	90.50	269.48	8,759.1	-28.7	-3,192.0	3,192.2	0.00	0.00	0.00
11,900.0	90.50	269.48	8,758.2	-29.6	-3,292.0	3,292.2	0.00	0.00	0.00
12,000.0	90.50	269.48	8,757.4	-30.5	-3,392.0	3,392.2	0.00	0.00	0.00
12,100.0	90.50	269.48	8,756.5	-31.4	-3,492.0	3,492.2	0.00	0.00	0.00
12,200.0	90.50	269.48	8,755.6	-32.3	-3,592.0	3,592.1	0.00	0.00	0.00
12,300.0	90.50	269.48	8,754.8	-33.2	-3,692.0	3,692.1	0.00	0.00	0.00
12,400.0	90.50	269.48	8,753.9	-34.1	-3,792.0	3,792.1	0.00	0.00	0.00
12,500.0	90.50	269.48	8,753.0	-35.0	-3,892.0	3,892.1	0.00	0.00	0.00
12,600.0	90.50	269.48	8,752.1	-35.9	-3,992.0	3,992.1	0.00	0.00	0.00
12,700.0	90.50	269.48	8,751.3	-36.8	-4,092.0	4,092.1	0.00	0.00	0.00
12,800.0	90.50	269.48	8,750.4	-37.7	-4,192.0	4,192.1	0.00	0.00	0.00
12,900.0	90.50	269.48	8,749.5	-38.6	-4,291.9	4,292.1	0.00	0.00	0.00
13,000.0	90.50	269.48	8,748.6	-39.5	-4,391.9	4,392.1	0.00	0.00	0.00
13,100.0	90.50	269.48	8,747.8	-40.4	-4,491.9	4,492.1	0.00	0.00	0.00
13,200.0	90.50	269.48	8,746.9	-41.3	-4,591.9	4,592.1	0.00	0.00	0.00

Chesapeake Operating Planning Report

Database: Drilling Database
Company: Permian District
Project: NM - Chaves - Wolfcamp
Site: Perseus 10 Federal COM #3H
Well: Perseus 10 Federal Com #3H
Wellbore: Perseus 10 Federal Com #3H
Design: Plan #1

Local Co-ordinate Reference: Well Perseus 10 Federal Com #3H
TVD Reference: RKB @ 4420.0ft
MD Reference: RKB @ 4420.0ft
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13,300.0	90.50	269.48	8,746.0	-42.2	-4,691.9	4,692.1	0.00	0.00	0.00
13,371.5	90.50	269.48	8,745.4	-42.9	-4,763.4	4,763.6	0.00	0.00	0.00

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
BHL	0.00	0.00	8,745.4	-42.9	-4,763.4	739,552.98	658,362.68	33° 1' 55.27273228 N	3° 48' 59.80776647 W
- plan hits target center									
- Point									

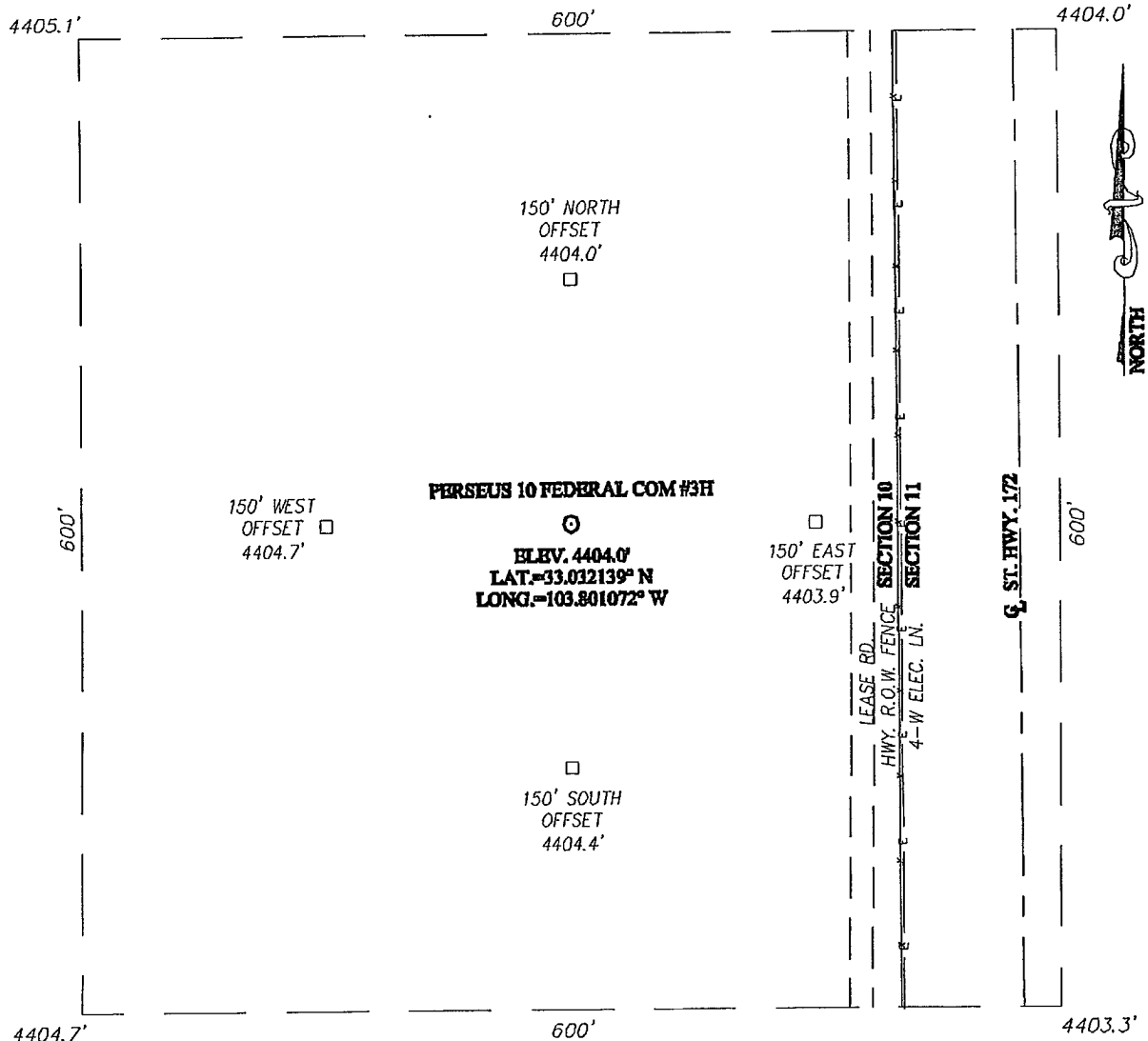
Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
400.0	400.0	13 3/8"	13.375	17.500
13,371.5	8,745.4	5 1/2"	5.500	8.750
4,000.0	4,000.0	9 5/8"	9.625	12.250

Formations

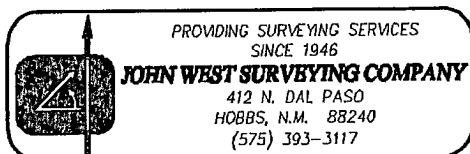
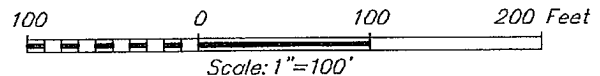
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
8,820.2	8,737.0	Wolfcamp NMOC		0.00	
8,920.2	8,772.0	Top of Wolfcamp Pay		0.00	

SECTION 10, TOWNSHIP 15 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #249 AND ST. HWY. #172, GO NORTH ON ST. HWY. 172 APPROX. 2.2 MILES. TURN LEFT AND GO WEST APPROX. 100 FEET. TURN LEFT AND GO SOUTH APPROX. 0.9 MILES. THIS LOCATION STAKE IS APPROX. 175 FEET WEST OF LEASE RD.



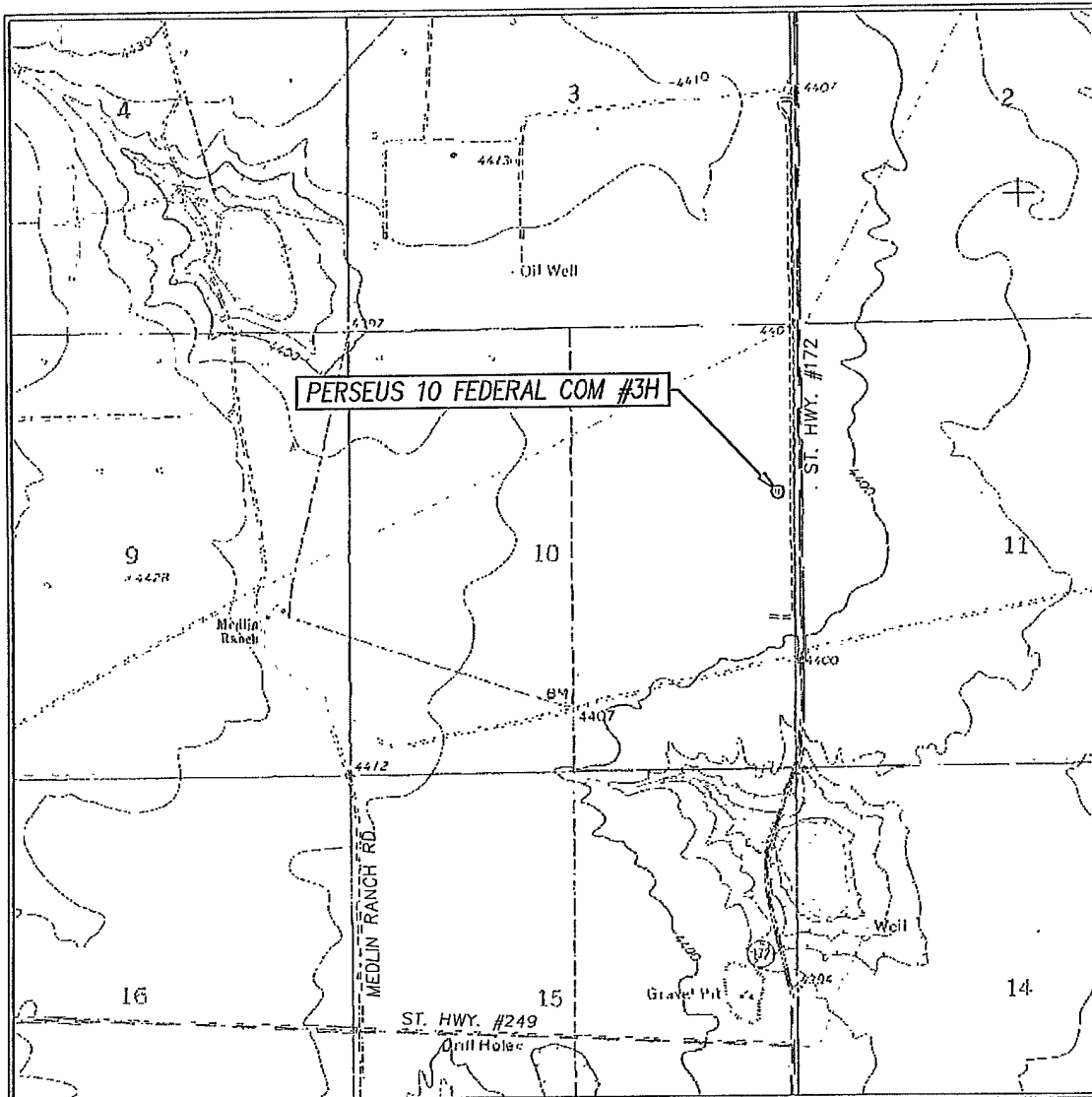
CHESAPEAKE OPERATING, INC.

PERSEUS 10 FEDERAL COM #3H WELL
LOCATED 1980 FEET FROM THE NORTH LINE
AND 200 FEET FROM THE EAST LINE OF SECTION 10,
TOWNSHIP 15 SOUTH, RANGE 31 EAST, N.M.P.M.,
CHAVES COUNTY, NEW MEXICO

Survey Date: 01/29/10	Sheet 1 of 1 Sheets
W.O. Number: 10.11.0139	Dr. By: DSS
Date: 02/02/10	Rel. W.O.: 101101393
	Scale: 1"=100'

EXHIBIT A-2

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
CEDAR POINT SE, N.M. - 10'

SEC. 10 TWP. 15-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY CHAVES STATE NEW MEXICO

DESCRIPTION 1980' FNL & 200' FEL

ELEVATION 4404'

OPERATOR CHESAPEAKE OPERATING, INC.

LEASE PERSEUS 10 FEDERAL COM

U.S.G.S. TOPOGRAPHIC MAP

CEDAR POINT SE, N.M.

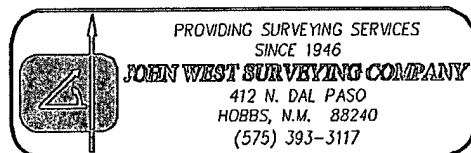
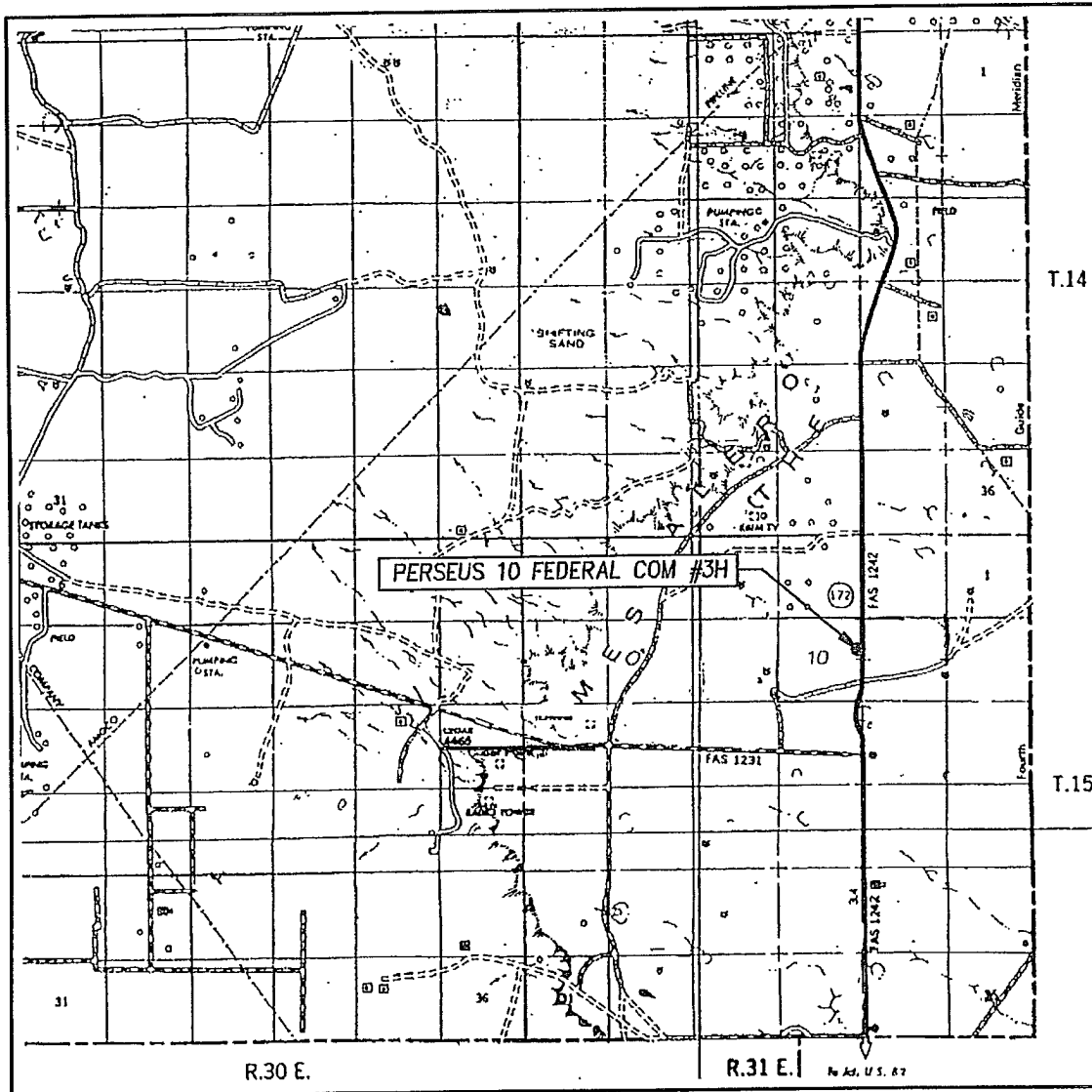


EXHIBIT A-3

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 10 TWP. 15-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY CHAVES STATE NEW MEXICO

DESCRIPTION 1980' FNL & 200' FEL

ELEVATION 4404'

OPERATOR CHESPEAKE OPERATING, INC.

LEASE PERSEUS 10 FEDERAL COM

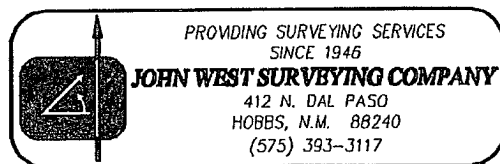


EXHIBIT A-4