

OPER. OGRID NO. 147179
PROPERTY NO. 34425
POOL CODE 72000
EFF. DATE 11/22/04
APPLICANT API NO. 30-025-36969FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

EC

Lease Serial No.
NMNM68821

If Indian, Allottee or Tribe Name

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		CONFIDENTIAL		7. If Unit or CA Agreement, Name and No.	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone				8. Lease Name and Well No. PALOMA 30 FEDERAL 1	
2. Name of Operator CHESAPEAKE OPERATING INC		Contact: LINDA GOOD E-Mail: lgood@chkenenergy.com		9. API Well No. <u>30-025-36969</u>	
3a. Address P O BOX 18496 OKLAHOMA CITY, OK 73154		3b. Phone No. (include area code) Ph: 405.767.4275 Fx: 405.879.9583		10. Field and Pool, or Exploratory <u>PALOMA BLANCO</u> <u>Bell Lake Morrow Mid</u>	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWNE 660FNL 2100FEL At proposed prod. zone NWNE 660FNL 2100FEL <u>Unit B</u>				11. Sec., T., R., M., or Blk. and Survey or Area Sec 30 T23S R34E Mer NMP SME: BLM	
14. Distance in miles and direction from nearest town or post office*				12. County or Parish LEA	13. 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		17. Spacing Unit dedicated to this well 320.00	
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.		19. Proposed Depth 13900 MD		20. BLM/BIA Bond No. on file	
21. Elevations (Show whether DF, KB, RT, GL, etc.) 3580 GL		22. Approximate date work will start		23. Estimated duration	

24. Attachments

CARLSBAD 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:

- | | |
|---|--|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. 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: 405.767.4275		Date 10/27/2004
Title AUTHORIZED REPRESENTATIVE				
Approved by (Signature) <u>/s/ Joe G. Lara</u>		Name (Printed/Typed) <u>/s/ Joe G. Lara</u>		Date 19 NOV 2004
Title ACTING FIELD MANAGER		Office CARLSBAD FIELD OFFICE		

Application 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.

APPROVAL FOR 1 YEAR

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 #50403 verified by the BLM Well Information System
For CHESAPEAKE OPERATING INC, sent to the Hobbs
Committed to AFMSS for processing by LINDA ASKWIG on 10/27/2004 (05LA0014AE)APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

Additional Operator Remarks:

Chesapeake Operating, Inc. proposed to drill a well to 13900 to test the Morrow. If productive, casing will be run and the well will be completed. If dry, the well will be plugged & abandoned as per BLM and New Mexico Oil Conservation Division requirements.

Attached please find the Surface Use Plan, Drilling Plan, and attachments as required by Onshore Order No.1. A general plat is attached as Exhibit D. A final rig plat will be submitted prior to spud once a rig is assigned.

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.

DISTRICT I
1825 N. French Dr., Hobbs, NM 88240

DISTRICT II
811 South First, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised March 17, 1999

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-36969	Pool Code 72000	Pool Name Bell Lake Morrow Mid
Property Code 34425	Property Name PALOMA "30" FEDERAL	Well Number 1
OGRID No. 147179	Operator Name CHESAPEAKE OPERATING INC.	Elevation 3582'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	30	23 S	34 E		660	NORTH	2100	EAST	LEA

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

Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.
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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

<div>Lot: N32.2809° Long.: W103.4403° (NAD 27)</div> <div>3586.1' 3586.0' 2100' 3589.3' 3579.8'</div>	OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i> <div>Signature <i>Lynda F. Townsend</i></div> <div>Printed Name <i>Lynda F. Townsend</i></div> <div>Title <i>Senior Landman</i></div> <div>Date <i>9-13-04</i></div>
	SURVEYOR CERTIFICATION <i>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.</i> <div>SEPTEMBER 1, 2004</div> <div>Date Surveyed</div> <div>Signature <i>Gary L. Jones</i></div> <div>Professional Surveyor</div> <div>Certification No. <i>4578</i></div> <div>7977</div>

Exhibit A-1

DISTRICT I

1623 N. French Dr., Hobbs, NM 88240

DISTRICT II

811 South First, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

2040 South Pacheco, Santa Fe, NM 87506

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised March 17, 1999

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

2040 South Pacheco

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
Property Code	Property Name PALOMA "30" FEDERAL	Well Number 1
OGRID No.	Operator Name CHESAPEAKE OPERATING INC.	Elevation 3582'

Surface Location

UL or lot No.	Section	Township	Range	Lot 1/4	Feet from the	North/South line	Feet from the	East/West line	County
B	30	23 S	34 E		660	NORTH	2100	EAST	LEA

Bottom Hole Location if Different From Surface

UL or lot No.	Section	Township	Range	Lot 1/4	Feet from the	North/South line	Feet from the	East/West line	County

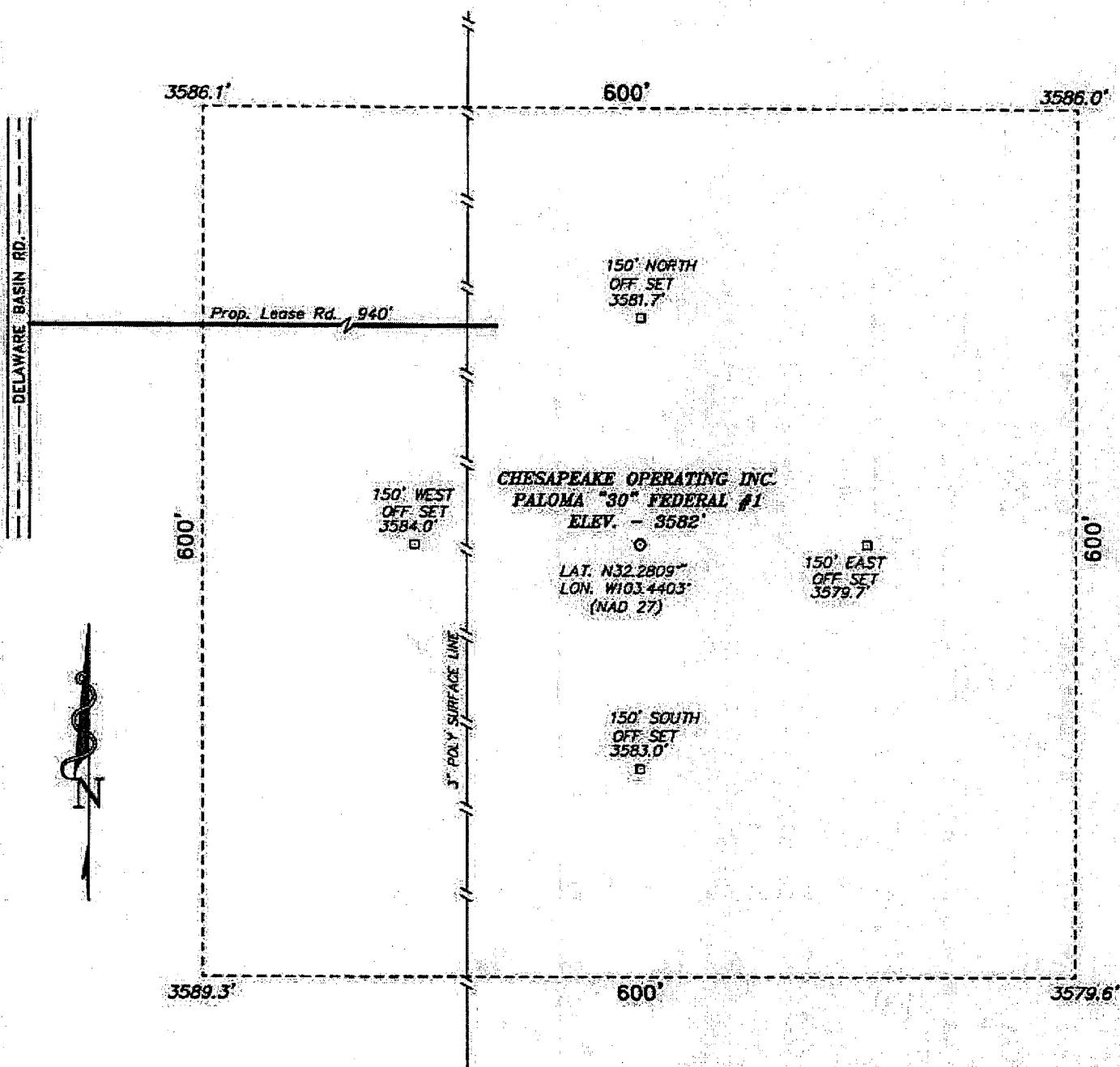
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

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

<p>Lot: N32.2809° Long: W103.4403° (NAD 27)</p> <p>3586.1' 3586.0' 2100' 3589.3' 3579.6'</p>	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Lynnda F. Townsend</i> Signature</p> <p><i>Lynnda F. Townsend</i> Printed Name</p> <p><i>Senior Landman</i> Title</p> <p><i>9-13-04</i> Date</p>
	<p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>SEPTEMBER 1, 2004</p> <p>Date Surveyed</p> <p><i>Gary L. Johns</i> Signature</p> <p><i>GARY L. JOHNS</i> Professional Surveyor</p> <p>W.O. No. 4578</p> <p>Certificate No. Gary L. Johns 7977</p>

Exhibit A-2

SECTION 30, TOWNSHIP 23 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF STATE HWY 128 AND CO.
RD. E-21 (DELAWARE BASIN RD.), GO NORTH FOR
4.7 MILES TO PROPOSED LEASE ROAD.

BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 4578

Drawn By: K. GOAD

Date: 09-02-2004

Disk: KJG #1 - 4578A.DWG

Survey Date: 09-01-2004

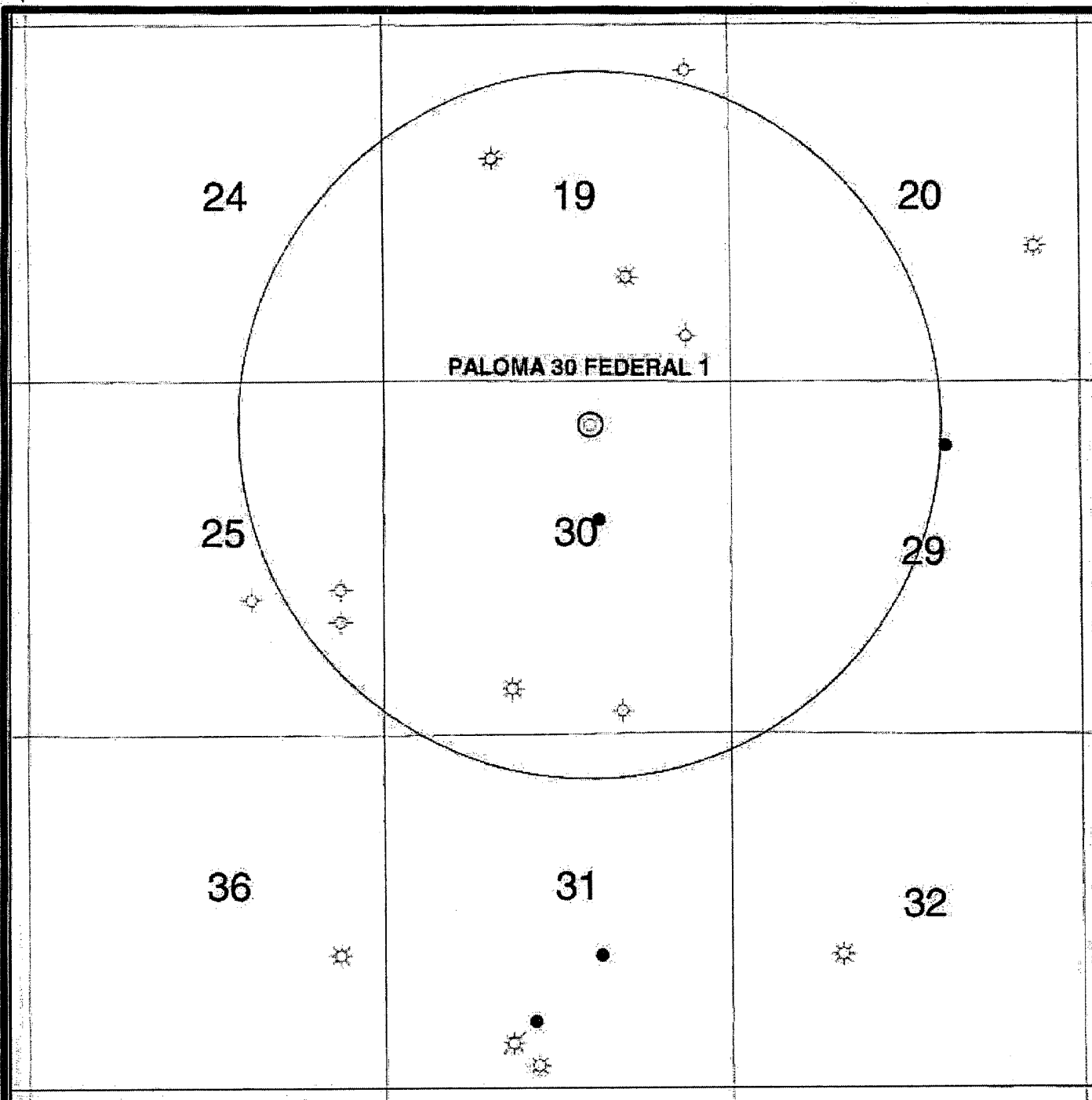
Sheet 1 of 1 Sheets

CHESAPEAKE OPERATING INC.

REF: PALOMA "30" FEDERAL #1 / Well Pad Top

PALOMA "30" FEDERAL #1 LOCATED 660' FROM
THE NORTH LINE AND 2100' FROM THE EAST LINE OF
SECTION 30, TOWNSHIP 23 SOUTH, RANGE 34 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.

Exhibit A-3




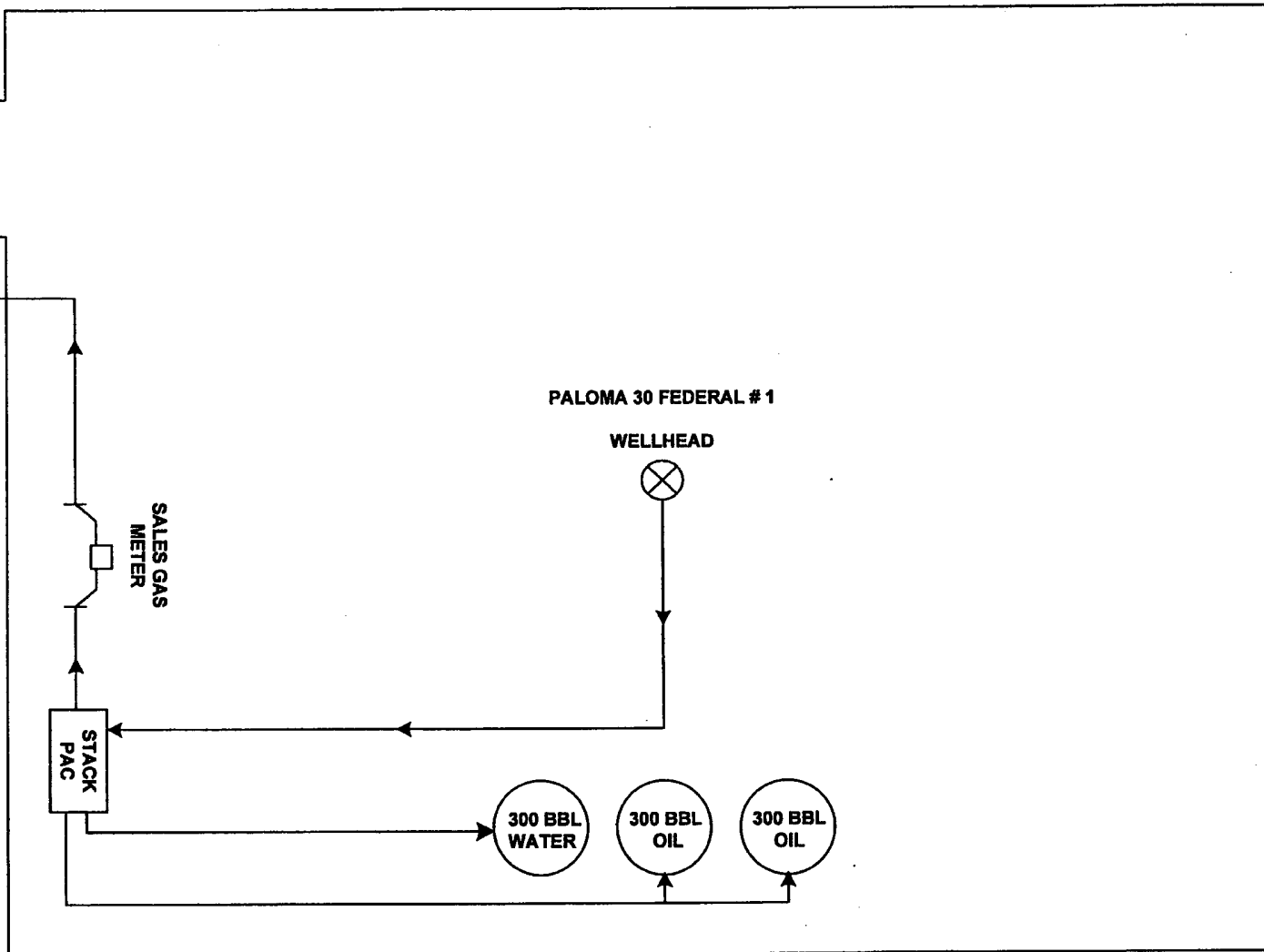
	CHESAPEAKE OPERATING, INC.
PALOMA BALNCO PROSPECT Lea County, NM	
1 mile radius around the Paloma 30 Federal 1	
<small>Paloma 30 Federal 1 one mile radius all wells group</small>	
Date: 14 September, 2004	Geologist: Doug Bellis

Exhibit B



ROAD

Gas Line



(Gas & Oil will be measured on location)

CHESAPEAKE OPERATING, INC.
OKLAHOMA CITY, OK



PALOMA 30 FEDERAL #1
660' FNL & 2100' FEL; SECTION 30-23S-34E
LEA COUNTY, NEW MEXICO

DATE: 9/24/04
DRAWN BY: GAK
Not To Scale

Exhibit

C

Prevailing Winds from the North in Winter and from the South in Summer.

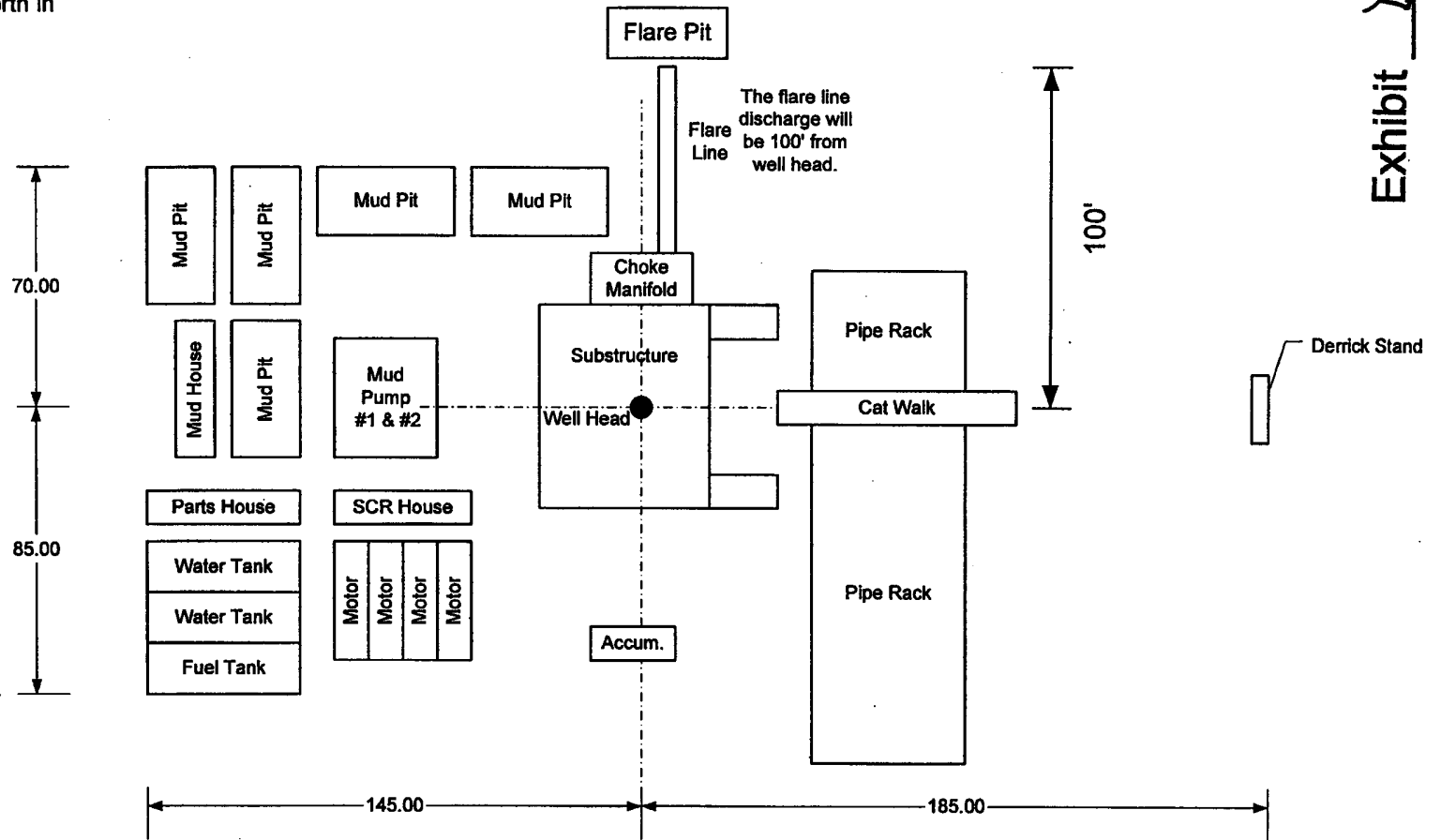


Exhibit D

Chesapeake Operating, Inc			
General Rig Layout			
SIZE	FSCM NO	DWG NO	REV
SCALE	Not to Scale	SHEET	1 OF 1

**TITLE PAGE/ABSTRACT/
NEGATIVE SITE REPORT
CFO/RFO**

1/03

1. BLM Report No.		2. Reviewer's Initials/Date _____ ACCEPTED () REJECTED ()		3. NMCRIS No.: 90255	
4. Type of Report: Negative(X) Positive ()					
5. Title of Report: Class III archaeological survey of a pad and access road for the Paloma "30" Federal well No 1. Author(s): Ann Boone				6. Fieldwork Date(s) from 29 Sept., 2004 to	
8. Consultant Name & Address: Boone Archaeological Services 2030 North Canal Carlsbad, NM 88220 Direct Charge: Danny Boone Field Personnel Names: Danny Boone Phone: (505) 885-1352				7. Report Date: 29 Sept., 2004	
				9. Cultural Resource Permit No. BLM 190-2920-03-E State Permit No.: NM-04-157	
11. Customer Name: Chesapeake Operating, Inc. Responsible Individual: Linda Good Address: P.O. Box 18496 Oklahoma City, Oklahoma 73154-0496 Phone: (405) 848-8000				10. Consultant Report No. BAS 09-04-17	
				12. Customer Project No.: None	
13. Land Status	BLM	STATE	PRIVATE	OTHER	TOTAL
a. Area Surveyed (acres)	0	9.79 (Fed. Min.)	0	0	9.79 (+/-)
b. Area of Effect (acres)	0	5.83 (Fed. Min.)	0	0	5.83 (+/-)
14. Linear: Length: 940' (-/+) Block: 600' x 600'					
15. Location: (Maps Attached if Negative Survey) a. State: New Mexico b. County: Lea c. BLM Office: Carlsbad d. Nearest City or Town: Jal, NM e. Legal Location: T 23, R 34, Sec. 30 Access Road, NE¼ NW¼, Pad, NW¼, NE¼. f. Well Pad Footages: 660' FNL, 2100' FEL g. USGS 7.5 Map Name(s) and Code Number(s): Tip Top Wells, NM (1984) 32103-C5					

RECEIVED

OCT 25 2004

Exhibit

16. Project Data:

a. Records Search: Date(s) of BLM File Review: 16 Sept., 2004

Name of Reviewer (s): Ann Boone

Date(s) of ARMS Data Review: 23 Sept., 2004

Name of Reviewer (s): Ann Boone

Findings (see Field Office requirements to determine area to be reviewed during records search):

LA 133272 and 131861 are within 1.0 mile. LA 131861 does not appear on BLM Map.

b. Description of Undertaking:

This project is located on State Of New Mexico Land that has Federal Minerals. The access road begins at Delaware Basin Road and trends east for 940 feet, crossing one buried pipeline (BLM No. 04-517) to a point approximately 175' inside of the northwest portion of the pad survey area. Survey acres were estimated on 665 feet by 50 feet of road and the 600 feet by 600 feet pad survey area. Impact acres are unknown and are estimated. A plat is attached to this report.

c. Environmental Setting (NRCS soil designation; vegetative community; etc.):

Topography: East sloping alluvial valley.

Vegetation: Approximately 45% ground cover, mesquite, yucca cactus, broom snakeweed, mormon tea, stick cholla cactus, prickly pear cactus, various grasses and other flora.

NRCS: Berino-Cacique association: Nearly level and gently sloping, sandy soils that are deep and moderately deep to soft or indurated caliche.

d. Field Methods: (transect intervals; crew size; time in field, etc.):

Transects: For the pad a grid of parallel transects spaced 15 meters or less and for the road one zig-zag spaced up to 15 meters on each side of staked centerline.

Crew Size: One

Time in Field: 3.0 hours.

e. Artifacts Collected (?): None

17. Cultural Resource Findings: None

a. Identification and description:

b. Evaluation of significance of Each Resource:

18. Management Summary (Recommendations):

Archaeological clearance of a pad and access road for the Paloma "30" Federal well No. 1 for Chesapeake Operating, Inc. as presently staked is recommended. If cultural resources are encountered at any time all activity should cease and the BLM Archaeologist notified immediately.

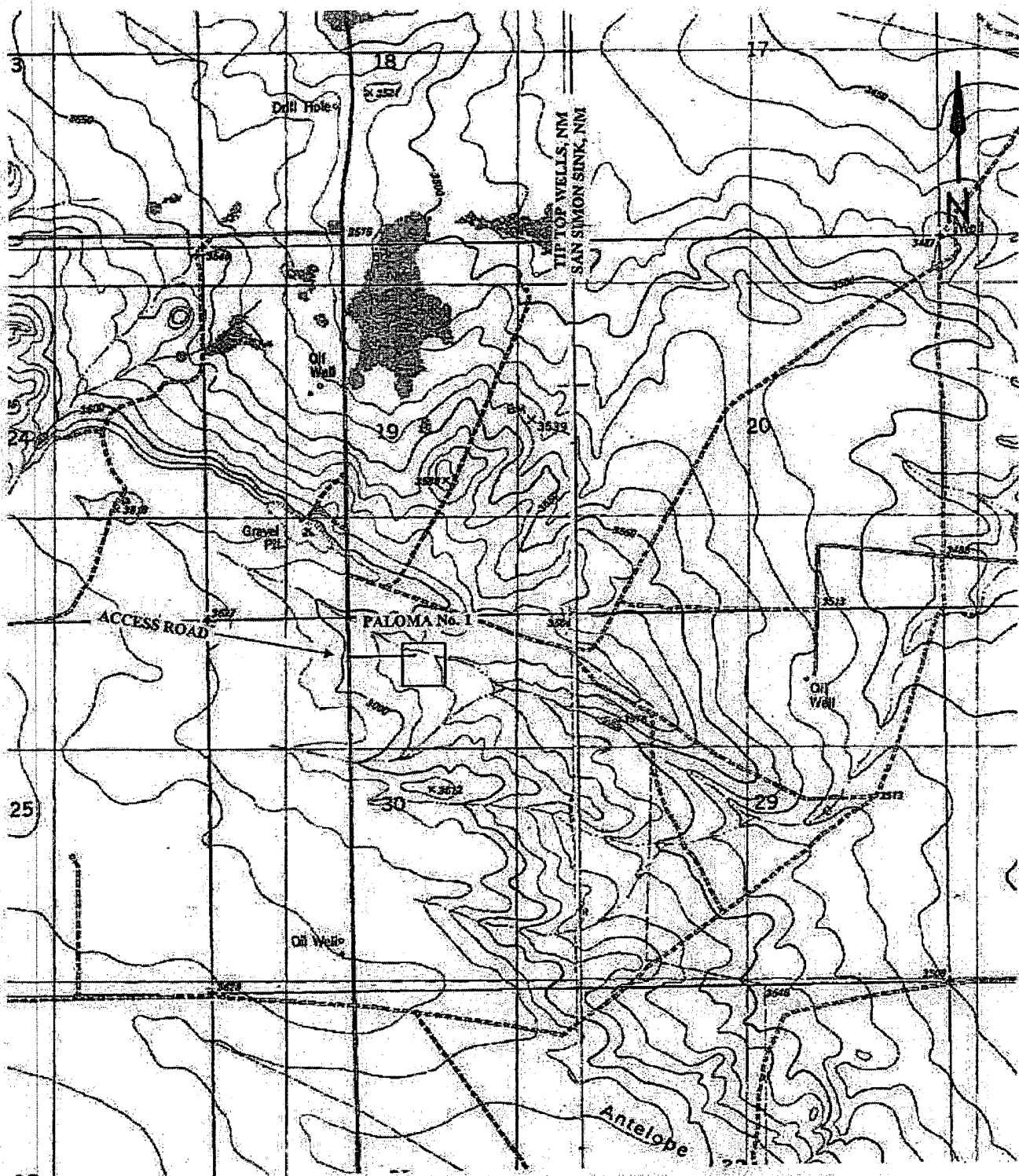
19.

I certify that the information provided above is correct and accurate and meets all appreciable BLM standards.

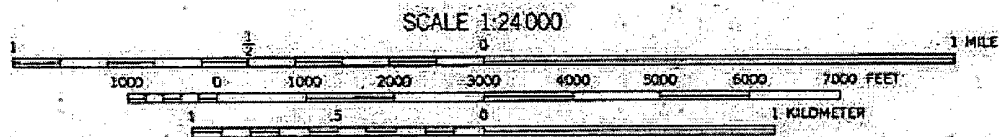
Responsible Archaeologist

Day Boone
Signature

29 Sept. 2004
Date



Location Map of a pad and access road for the Paloma "30" Fed. well No. 1 for Chesapeake Operating, Inc. in Section 30, T23S, R34E, NMPM, LEA County, NM.
Map Reference USGS 7.5' Series; Tip Top Wells, NM (1984) 32103-C5



BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

WELL : Paloma '30' Federal #1

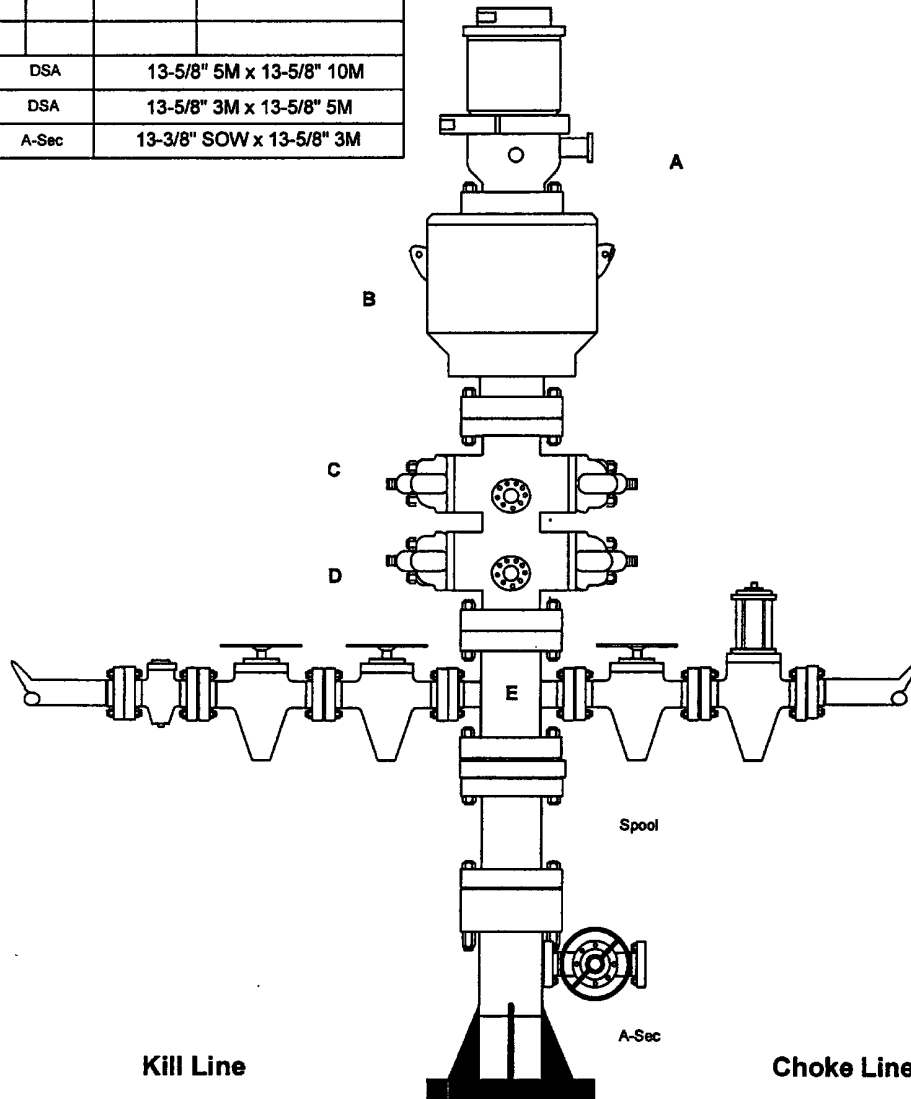
RIG : Nabors #311

COUNTY : Lea

STATE: New Mexico

OPERATION: Drill out below 13-3/8" Casing

	SIZE	PRESSURE	DESCRIPTION
A	13-5/8"	500#	Rot Head
B	13-5/8"	5,000#	Annular
C	13-5/8"	10,000#	Pipe Rams
D	13-5/8"	10,000#	Blind Rams
E	13-5/8"	10,000#	Mud Cross
DSA	13-5/8" 5M x 13-5/8" 10M		
DSA	13-5/8" 3M x 13-5/8" 5M		
A-Sec	13-3/8" SOW x 13-5/8" 3M		



SIZE	PRESSURE	DESCRIPTION
2"	10,000#	Check Valve
2"	10,000#	Gate Valve
2"	10,000#	Gate Valve

SIZE	PRESSURE	DESCRIPTION
4"	10,000#	Gate Valve
4"	10,000#	HCR Valve

Exhibit F-1

BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

WELL : Paloma '30' Federal #1

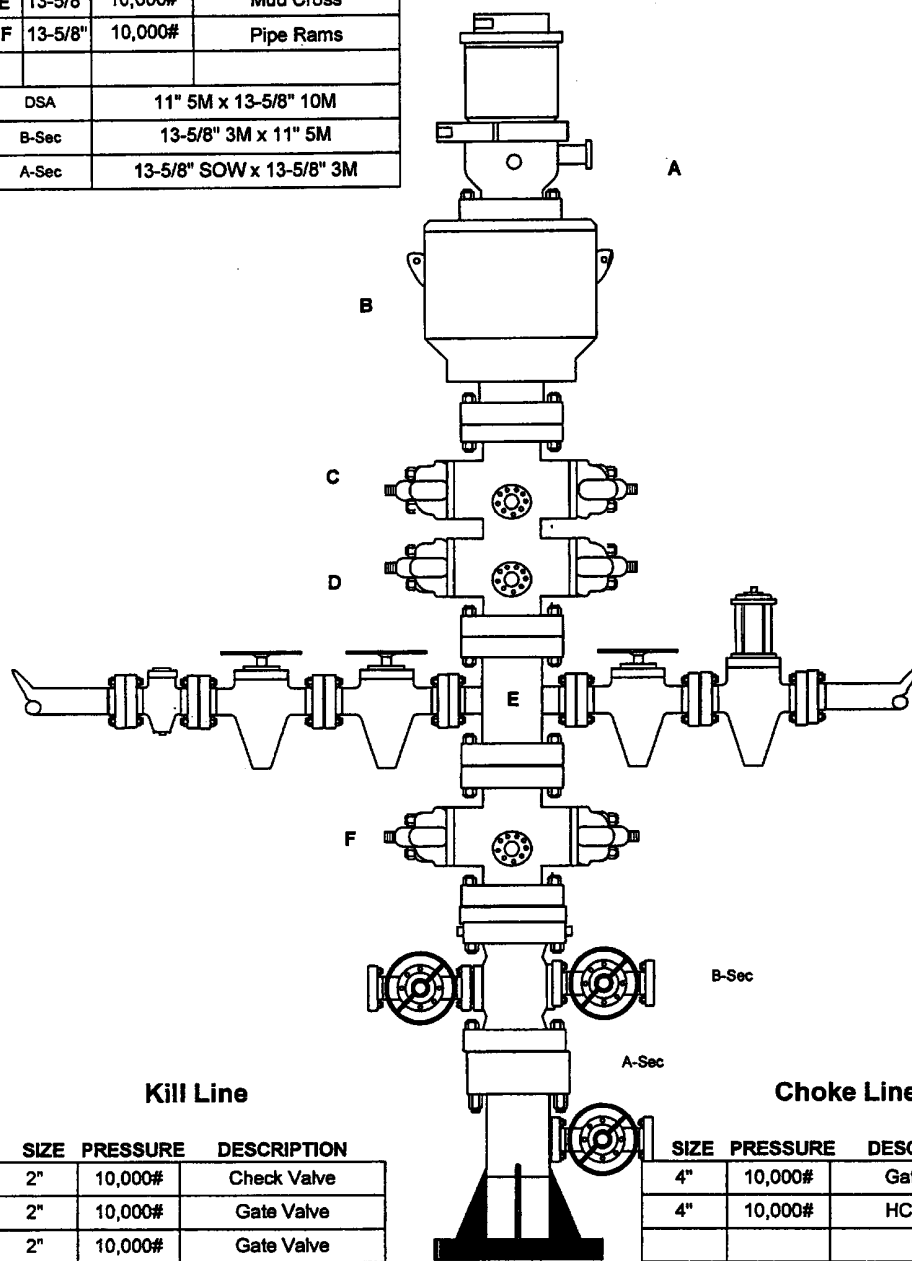
RIG : Nabors 311

COUNTY : Lea

STATE: New Mexico

OPERATION: Drill out below 9-5/8" Casing

SIZE	PRESSURE	DESCRIPTION
A 13-5/8"	500#	Rot Head
B 13-5/8"	5,000#	Annular
C 13-5/8"	10,000#	Pipe Rams
D 13-5/8"	10,000#	Blind Rams
E 13-5/8"	10,000#	Mud Cross
F 13-5/8"	10,000#	Pipe Rams
DSA	11" 5M x 13-5/8" 10M	
B-Sec	13-5/8" 3M x 11" 5M	
A-Sec	13-5/8" SOW x 13-5/8" 3M	



Kill Line

SIZE	PRESSURE	DESCRIPTION
2"	10,000#	Check Valve
2"	10,000#	Gate Valve
2"	10,000#	Gate Valve

Choke Line

SIZE	PRESSURE	DESCRIPTION
4"	10,000#	Gate Valve
4"	10,000#	HCR Valve

Exhibit F-2

BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

WELL : Paloma '30' Federal #1

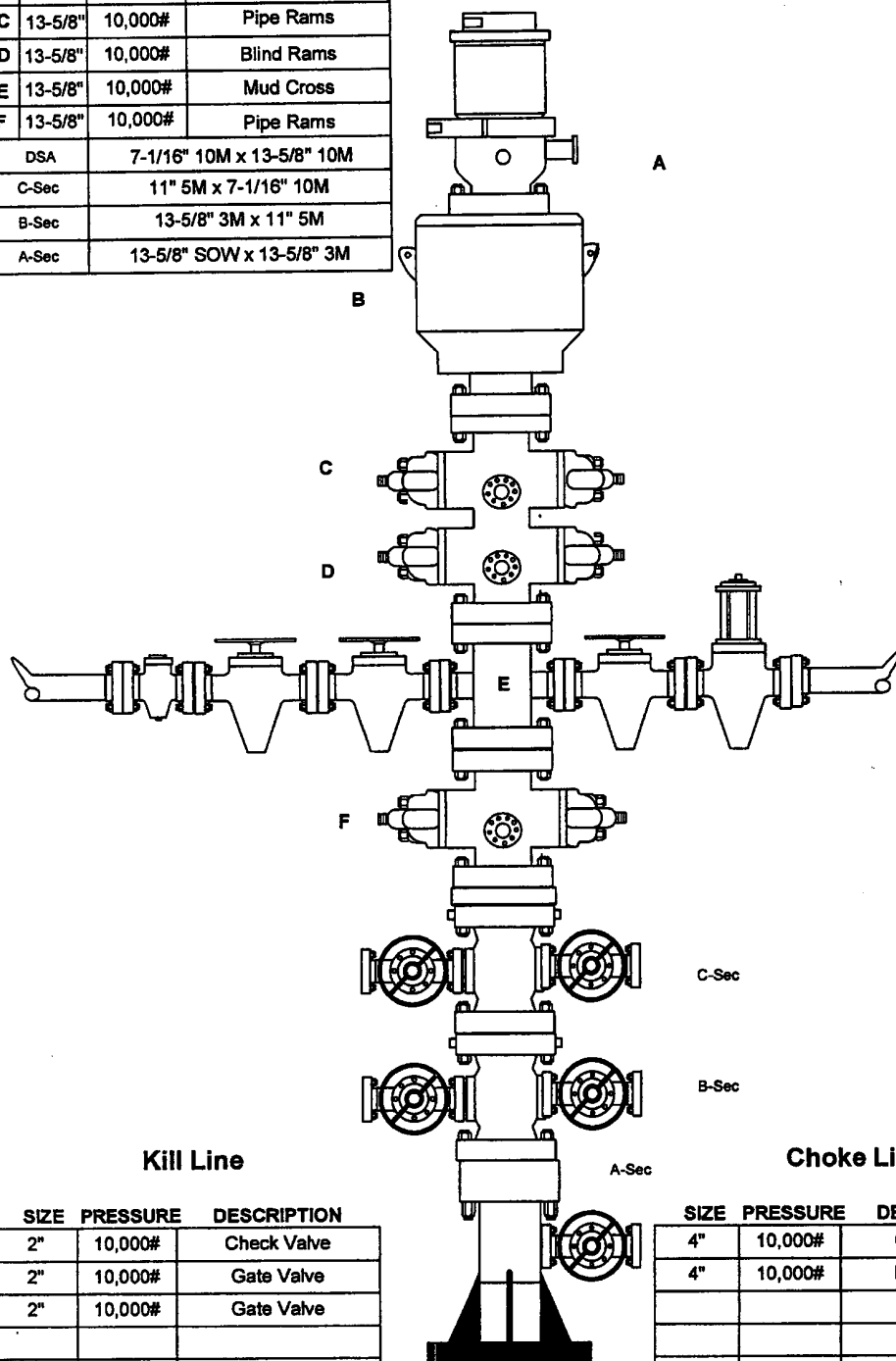
RIG : Nabors 311

COUNTY : Lea

STATE: New Mexico

OPERATION: Drill out below 7" Casing

SIZE	PRESSURE	DESCRIPTION
A 13-5/8"	500#	Rot Head
B 13-5/8"	5,000#	Annular
C 13-5/8"	10,000#	Pipe Rams
D 13-5/8"	10,000#	Blind Rams
E 13-5/8"	10,000#	Mud Cross
F 13-5/8"	10,000#	Pipe Rams
DSA	7-1/16" 10M x 13-5/8" 10M	
C-Sec	11" 5M x 7-1/16" 10M	
B-Sec	13-5/8" 3M x 11" 5M	
A-Sec	13-5/8" SOW x 13-5/8" 3M	



Kill Line

SIZE	PRESSURE	DESCRIPTION
2"	10,000#	Check Valve
2"	10,000#	Gate Valve
2"	10,000#	Gate Valve

Choke Line

SIZE	PRESSURE	DESCRIPTION
4"	10,000#	Gate Valve
4"	10,000#	HCR Valve

Exhibit F-3

ONSHORE ORDER NO. 1
Chesapeake Operating, Inc.
Paloma 30 Federal 1
1800 FNL 2010 FEL
NW NE of Section 30-23S-34E
Lea County, NM

CONFIDENTIAL – TIGHT HOLE

Lease No. NMNM68821

SURFACE USE PLAN
Page 1

ONSHORE OIL & GAS ORDER NO. 1
Approval of Operations on Onshore
Federal and Indian Oil and Gas Leases

1. EXISTING ROADS

- a. Existing county roads will be used to enter proposed access road.
- b. Location, access, and vicinity plats attached hereto. See Exhibits A-1 through A-4.

2. PLANNED ACCESS ROADS

- a. Coming off Delaware Basin Road (County Road) 1000' into location - road to be 14' wide with a maximum disturbance area of 30' will be built in accordance with guidelines set forth in the BLM Onshore Orders.
- b. No turnouts are expected.
- c. In order to level the location, cut and fill will be required. Please see attached Well Location and Acreage Dedication Plat – Exhibit A1-A4.
- d. A locking gate will be installed at the site entrance.
- e. Any fences cut will be repaired. Cattle guards will be installed, if needed.
- f. Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.
- g. Driving directions are from the Jct. of State Hwy 128 and County Rd E-21 (Delaware Basin Rd), go North for 4.7 miles to proposed lease rd.

3. LOCATION OF EXISTING WELLS WITHIN A 1-MILE RADIUS OF THE PROPOSED LOCATION – see Exhibit B.

4. LOCATION OF PRODUCTION FACILITIES

Production facilities will be located on the well pad and the gas meter will be located about .4 miles SW of site in the SW Qtr, as product will be sold at the wellhead and/or tank battery. The gas meter will be located on lease. – See Exhibit C

ONSHORE ORDER NO. 1
Chesapeake Operating, Inc.
Paloma 30 Federal 1
1800 FNL 2010 FEL
NW NE of Section 30-23S-34E
Lea County, NM

CONFIDENTIAL – TIGHT HOLE

Lease No. NMNM68821

SURFACE USE PLAN

Page 2

5. LOCATION AND TYPE OF WATER SUPPLY

Water will be obtained from a private water source. Chesapeake Operating, Inc. will ensure all proper notifications and filings are made with the state.

6. CONSTRUCTION MATERIALS

No construction materials will be used from Section 4-20S-33E. All material (i.e. shale) will be acquired from private or commercial sources.

7. METHODS FOR HANDLING WASTE DISPOSAL

Lined pits will be utilized during the drilling of this well. All fluids and cutting will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulation. All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. Sanitary wastes will be contained in a chemical porta-toilet and then hauled to an approved sanitary landfill.

8. ANCILLARY FACILITIES

None

9. WELLSITE LAYOUT

The proposed site layout plat is attached showing a general rig plat with rig orientation and equipment location. See Exhibit D.

10. PLANS FOR RECLAMATION OF THE SURFACE

The location will be restored to as near as original condition as possible. Reclamation of the surface shall be done in strict compliance with the existing Oklahoma Corporation Commission regulations.

Backfilling leveling, and contouring are planned as soon as the drilling rig and steel tanks are removed. Wastes and spoils materials will be buried immediately after drilling is completed. If production is obtained, the unused area will be restored as soon as possible. The rehabilitation will begin after the drilling rig is removed.

11. SURFACE & MINERAL OWNERSHIP

United States of America
Department of Interior
Bureau of Land Management

GRAZING LEASE HELD BY:

ONSHORE ORDER NO. 1
Chesapeake Operating, Inc.
Paloma 30 Federal 1
1800 FNL 2010 FEL
NW NE of Section 30-23S-34E
Lea County, NM

Keller RV LLC
2811 County Road 460
Oakley, KS 67748
Phone: 785-672-3257

CONFIDENTIAL – TIGHT HOLE

Lease No. NMNM68821

SURFACE USE PLAN
Page 3

12. ADDITIONAL INFORMATION

A Class III cultural resource inventory report was prepared by Boone Archaeological Services, Carlsbad, New Mexico for the proposed location. A copy of the report has been sent to the BLM office under separate cover and is also attached for reference. See Exhibit E.

13. OPERATOR'S REPRESENTATIVES

Drilling and Completion Operations

Rob Jones
District Manager
P.O. Box 18496
Oklahoma City, OK 73154
(405) 810-2694 (OFFICE)
(405) 879-9573 (FAX)
rjones@chkenergy.com

Drilling Engineer

David DeLaO
P.O. Box 18496
Oklahoma City, OK 73154
(405) 767-4339 (OFFICE)
(405) 879-9573 (FAX)
(405) 990-8182 (MOBILE)

Field Representative

Mike Whitefield
550 West Texas Ave.
Midland, TX 79701
432-683-7443 (OFFICE)
432-685-4399 (FAX)
mwhitefield@chkenergy.com

Asset Manager

Andrew McCalmont
P.O. Box 18496
Oklahoma City, OK 73154-0496
405-879-7852 (OFFICE)
405-879-7930 (FAX)
amccalmont@chkenergy.com

Regulatory Compliance

Linda Good
Regulatory Compliance Analyst
P.O. Box 11050
Oklahoma City, OK 73154
(405) 767-4275 (OFFICE)
(405) 879-9583 (FAX)
lgood@chkenergy.com

ONSHORE ORDER NO. 1
Chesapeake Operating, Inc.
Paloma 30 Federal 1
1800 FNL 2010 FEL
NW NE of Section 30-23S-34E
Lea County, NM

CONFIDENTIAL – TIGHT HOLE

Lease No. NMNM68821

SURFACE USE PLAN
Page 4

14. CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this surface use plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed will be performed by operator (including contractors and subcontractors) submitting the APD, in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

By: J. Mark Lester

Date: 10/25/04

ONSHORE OIL & GAS ORDER NO. 1
Approval of Operations on Onshore
Federal and Indian Oil and Gas Leases

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (CFR 43, Part 3160) and the approved Application for Permit to Drill. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling and completion operations.

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease, which would entitle the applicant to conduct operations thereon.

1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

Formation	Depth	Subsea
Rustler	1130	2475
Delaware	5082	-1477
Bell Canyon	5135	-1530
Cherry Canyon	6000	-2395
Brushy Canyon	7290	-3685
Bone Springs Lime	8640	-5035
First Bone Springs	9670	-6065
Second Bone Springs	10290	-6685
Third Bone Springs	11200	-7595
Wolfcamp	11470	-7865
Cisco	11770	-8165
Strawn	12110	-8505
Atoka	12370	-8765
Paloma Blanco Fault	12380	-8775
Atoka Bank	12400	-8795
Morrow	12930	-9325
Upper Morrow Sand	12960	-9355
Morrow A Sand	13155	-9550
Morrow Clastic	13265	-9660
Morrow B Sand	13330	-9725
Morrow C Sand	13440	-9835
Morrow D Sand	13510	-9905
Lower Morrow	13670	-10065
Barnett Shale	13800	-10195
TD	13900	-10295

2. ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS

The estimated depths at which the top and bottom of the anticipated water, oil, gas or other mineral bearing formations are expected to be encountered are as follows:

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
Oil/Gas	Morrow A Sand	13155
Oil/Gas	Morrow B Sand	13330

All shows of fresh water and minerals will be reported and protected.

3. BOP EQUIPMENT: 10,000# System

Chesapeake Operating, Inc.'s minimum specifications for pressure control equipment are as follows:

I. BOP, Annular, Choke Manifold, Pressure Test - See Exhibit F-1 to F-3.

A. Equipment

1. The equipment to be tested includes all of the following that is installed on the well:
 - (a) Ram-type and annular preventers,
 - (b) Choke manifolds and valves,
 - (c) Kill lines and valves, and
 - (d) Upper and lower kelly cock valves, inside BOP's and safety valves.

B. Test Frequency

1. All tests should be performed with clear water,
 - (a) when installed,
 - (b) before drilling out each casing string,
 - (c) at any time that there is a repair requiring a pressure seal to be broken in the assembly, and
 - (d) at least once every 30 days while drilling.

C. Test Pressure

1. In some drilling operations, the pressures to be used for low and high-pressure testing of preventers and casing may be different from those given below due to governmental regulations, or approved local practices.
2. If an individual component does not test at the low pressure, **do not**, test to the high pressure and then drop back down to the low pressure.
3. All valves located downstream of a valve being tested must be placed in the open position.
4. All equipment will be tested with an initial "low pressure" test at 250 psi.
5. The subsequent "high pressure" test will be conducted at the rated working pressure of the equipment for all equipment except the annular preventer.

DRILLING PROGRAM

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6. The "high pressure" test for the annular preventer will be conducted at 70% of the rated working pressure.
7. A record of all pressures will be made on a pressure-recording chart.

D. Test Duration

1. In each case, the individual components should be monitored for leaks for 5 minutes, with no observable pressure decline, once the test pressure has been applied.

II. Accumulator Performance Test

A. Scope

1. The purpose of this test is to check the capabilities of the BOP control systems, and to detect deficiencies in the hydraulic oil volume and recharge time.

B. Test Frequency

1. The accumulator is to be tested each time the BOP's are tested, or any time a major repair is performed.

C. Minimum Requirements

1. The accumulator should be of sufficient volume to supply 1.5 times the volume to close and hold all BOP equipment in sequence, without recharging and the pump turned off, and have remaining pressures of 200 PSI above the precharge pressure.

2. Minimum precharge pressures for the various accumulator systems per manufacturers recommended specifications are as follows:

3.

<u>System Operating Pressures</u>	<u>Precharge Pressure</u>
1500 PSI	750 PSI
2000 PSI	1,000 PSI
3000 PSI	1,000 PSI

3. Closing times for the Hydril should be less than 20 seconds, and for the ram-type preventers less than 10 seconds.

4. System Recharge time should not exceed 10 minutes.

D. Test Procedure

1. Shut accumulator pumps off and record accumulator pressure.
2. In sequence, close the annular and one set of properly sized pipe rams, and open the HCR valve.

3. Record time to close or open each element and the remaining accumulator pressure after each operation.
4. Record the remaining accumulator pressure at the end of the test sequence. Per the previous requirement, this pressure **should not be less** than the following pressures:

<u>System Pressure</u>	<u>Remaining Pressure At Conclusion of Test</u>
1,500 PSI	950 PSI
2,000 PSI	1,200 PSI
3,000 PSI	1,200 PSI

5. Turn the accumulator pumps on and record the recharge time. This time should not exceed **10 minutes**.
6. Open annular and ram-type preventers. Close HCR valve.
7. Place all 4-way control valves in **full open** or **full closed** position. **Do not leave in neutral position**.

4. CASING AND CEMENTING PROGRAM

- a. The proposed casing program will be as follows:

<u>Purpose</u>	<u>Interval</u>	<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Thread</u>	<u>Condition</u>
Surface	0' – 1,175'	17-1/2"	13-3/8"	48#	H40	STC	New
Intermediate	1,175' – 5,040'	12-1/4"	9-5/8"	40#	J55	LTC	New
Production	5,040' – 12,300'	8-3/4"	7"	23&26#	L80	LTC	New
Production Liner	12,000' – 13,900'	6-1/8"	4-1/2"	13.5#	P110	LTC	New

- b. Casing design subject to revision based on geologic conditions encountered.
- c. The cementing program will be as follows:

<u>Interval</u>	<u>Type</u>	<u>Amount</u>	<u>Yield</u>	<u>Washout</u>	<u>Excess</u>
0'-1,175'	Class C + Additives	700+300	1.74/1.34	75	100
0'- 5,040'	Class C 50/50 Poz + Additives	1025+200	2.23/1.34	50	75
4,500' – 12,300'	Class H + Additives	700+100	1.99/1.19	10	30
12,300'-13,900'	Class H + additives	150	1.57	10	30

5. MUD PROGRAM

- a. The proposed circulating mediums to be used in drilling are as follows:

<u>Interval</u>	<u>Mud Type</u>	<u>Mud Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0 – 1,175'	FW	8.7	29-38	NC
1,175' - 5,040'	Brine	10	29	NC
5,040'-12,300'	FW/Brine	8.5 – 10	29-32	NC
12,300'-13,900'	Brine/XCD	10-11.5	29-40	NC-15

An in-ground, lined pit will be utilized during the drilling of this well. All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

6. TESTING, LOGGING AND CORING

The anticipated type and amount of testing, logging and coring are as follows:

- Drill stem tests are not planned.
- The logging program will consist of Natural GR, Density-Neutron, PE & Dual Laterolog from TD to surface casing; Neutron-GR surface casing to surface.
- Cores samples are not planned.

7. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

- The estimated bottom hole pressure is 7400 psi. No abnormal pressures or temperatures are anticipated.
- Hydrogen sulfide gas is not anticipated.

Submit 3 Copies To Appropriate District
Office

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM
87505State of New Mexico
Energy, Minerals and Natural ResourcesOIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103

May 27, 2004

WELL API NO. 30-025-3488
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Paloma "30" Federal
8. Well Number 001
9. OGRID Number 147179
10. Pool name or Wildcat Bell Lake Morrow Mid

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH
PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other2. Name of Operator
Chesapeake Operating, Inc.3. Address of Operator P. O. Box 11050
Midland, TX 79702-80504. Well Location
Unit Letter B : 660 feet from the North line and 2100 feet from the East line
Section 30 Township 23S Range 34E NMPM County Lea11. Elevation (Show whether DR, RKB, RT, GR, etc.)
3582' GRPit or Below-grade Tank Application ☒ or Closure ☐Pit type Drilling Depth to Groundwater 100+ Distance from nearest fresh water well 1000+ Distance from nearest surface water 1000+Pit Liner Thickness: 12 mil Below-Grade Tank: Volume Attached bbls; Construction Material Synthetic

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

SUBSEQUENT REPORT OF:

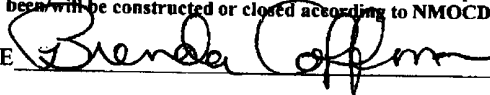
REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐OTHER: Pit Requirements ☒OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Chesapeake, respectfully, requests that the attached procedure be approved for the drilling pit for this well. Chesapeake, hereby, agrees to close the pit according to NMOCD guidelines per item #3 in rule 50.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☒.

SIGNATURE



TITLE Regulatory Analyst

DATE 11/22/2004

Type or print name Brenda Coffman

For State Use Only

E-mail address: bcoffman@chkenergy.com

Telephone No. (432)685-4310

APPROVED BY:

Conditions of Approval (if any):



TITLE

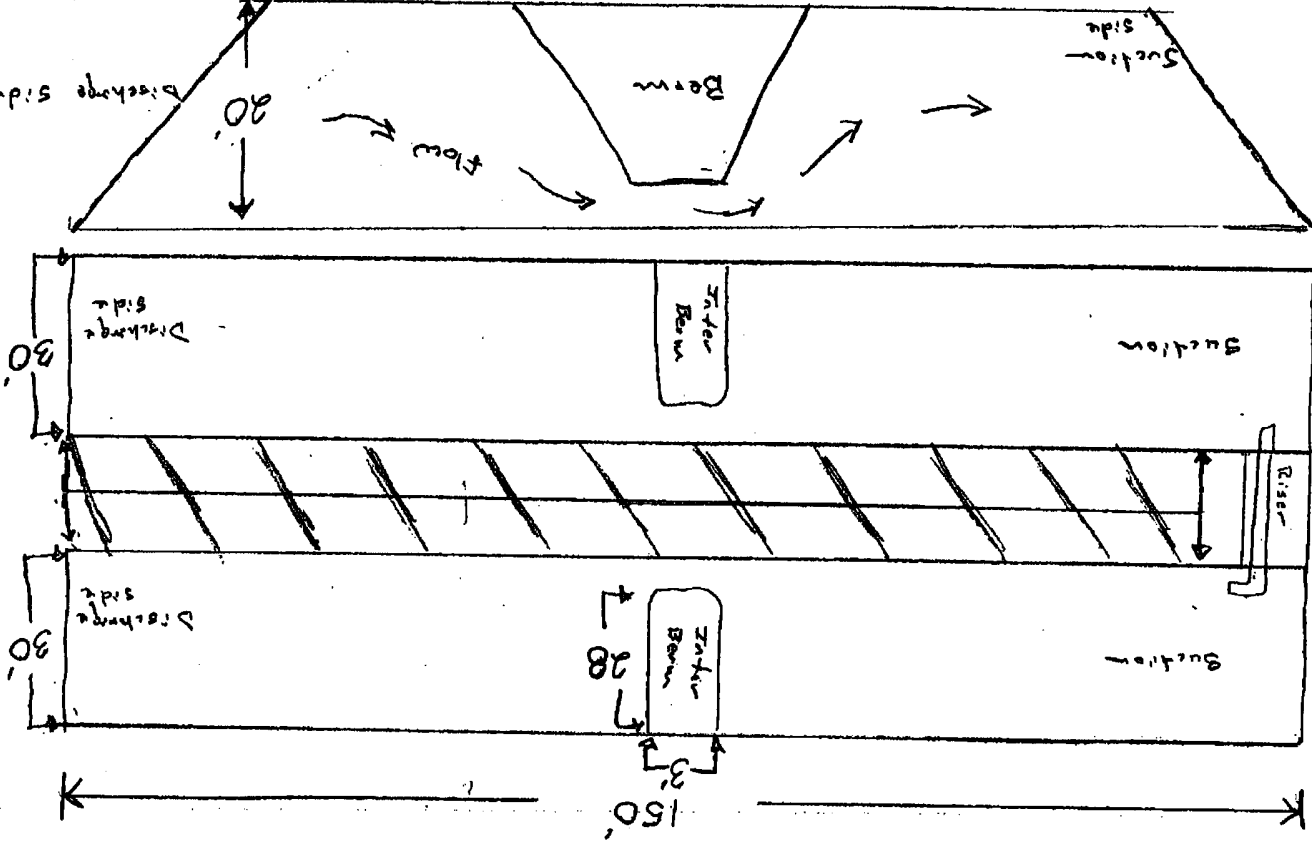
PETROLEUM ENGINEER

DATE

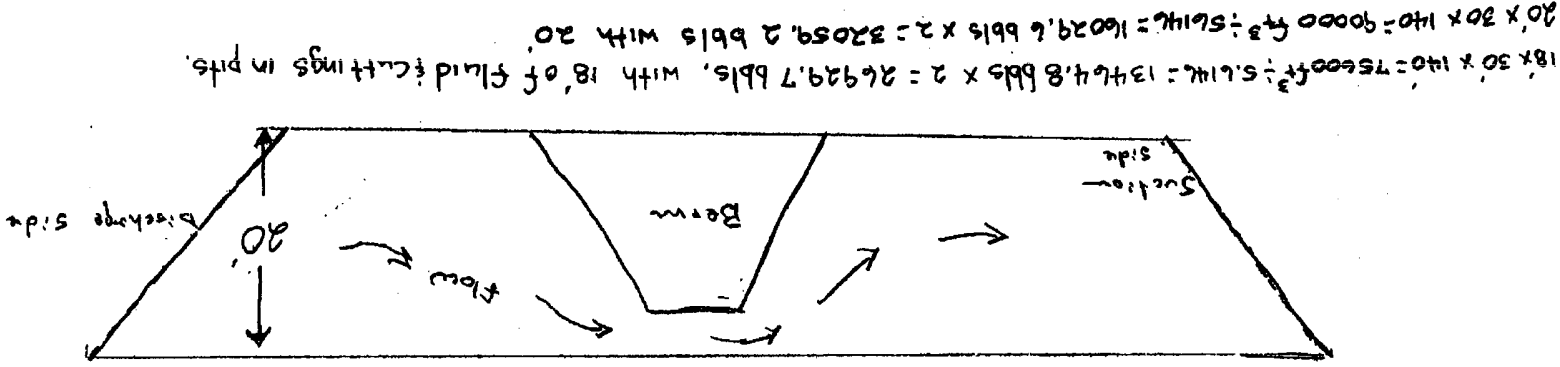
NOV 23 2004

Top View

12 MM Plate
over all



Side View



$18' \times 30' \times 140' = 75600 \text{ ft}^3 \div 5.6146 = 13464.8 \text{ bbls} \times 2 = 26929.7 \text{ bbls}$, with 18' of fluid cuttings in pits.
 $20' \times 30' \times 140' = 90000 \text{ ft}^3 \div 5.6146 = 16029.6 \text{ bbls} \times 2 = 32059.2 \text{ bbls}$ with 20'

End cross section

