Form 3160-3
(December 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

SUBMIT IN TRIPLICATE* (See other instructions on reverse side)

Form approved.

CONFIDENTIAL – TIGHT HOLE

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK: DRILL ☒ DEEPEN ☐

b. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ Other ___ SINGLE ZONE ☐ MULTIPLE ZONE ☐

2. NAME OF OPERATOR 147179
CHESAPEAKE OPERATING, INC. Attn. Linda Good 405-767-4275

3. ADDRESS AND TELEPHONE NO.
P.O. BOX 18496 OKLAHOMA CITY, OK 73154-0496 405-848-8000

LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface 2430 FSL 2420 FEL, NW SE
At top proposed prod. zone 2430 FSL 2420 FEL, NW SE "J" NSL-5231

5. LEASE DESIGNATION AND SERIAL NO.: NMNM68821
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME:
8. FARM OR LEASE NAME, WELL NO.: PALOMA 30 FEDERAL 2 34425
9. API WELL NO.: 30-025-37413
10. FIELD AND POOL, OR WILDCAT 72000 Bell Lake; Morrow, Mid (Gas)
11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: SECTION 30-23S-34E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 23 MILES NW OF JAL, NEW MEXICO

12. COUNTY OR PARISH: LEA COUNTY
13. STATE: NM

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
	633.72	320
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS***
	13,850	ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.): ~~3600' EST~~ 3608 CAPITAN CONTROLLED WATER BASIN

22. APPROX. DATE WORK WILL START*:

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
"	"	#	'	+/-
"	"	#	'	+/-
	"	#	'	+/-

Chesapeake Operating, Inc. proposes to drill a well to 13,850' to test the Morrow 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.

Attached please find the Surface Use Plan, Drilling Plan, and attachments as required by Onshore Order No. 1. Patterson Rig #504 plat is attached as Exhibit D-1 & D-2.

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.

Bond coverage for this well is provided by Chesapeake Operating, Inc. under their Nationwide Bond No. NM1634.

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.
24.

SIGNED J. Mark Lester TITLE J. Mark Lester Sr. Vice President Exploration DATE 7/14/05

*(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval 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.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY /s/ Joe G. Lara TITLE ACTING FIELD MANAGER DATE AUG 10 2005

See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes 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

APPROVAL FOR 1 YEAR

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. A new access road 501' in length and 14' in travel way width 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 intersection of State Hwy. #128 and Delaware Basin Rd, go North on Delaware Basin Rd for approx. 4.6 miles to a caliche road on the right. Turn right (East) and go approx. 0.1 miles to a proposed road survey on the right. Follow proposed road survey South for approx. 0.1 miles to location.

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

4. LOCATION OF PRODUCTION FACILITIES
   It is anticipated production facilities will be located on the well pad and the gas meter will be located on edge of pad. Product will be sold at the wellhead and/or tank battery – See Exhibit C-1_to_C-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 30-23S-34E. All material (i.e. shale) will be acquired from private or commercial sources.

7. METHODS FOR HANDLING WASTE DISPOSAL

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, get strength, filtration, and pH.

8. ANCILLARY FACILITIES

None

9. WELLSITE LAYOUT

The proposed site layout plat for the Patterson-UTI Drilling Co. is attached showing the rig orientation and equipment location. See Exhibit D1-D2.

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. 12 JC

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. MINERAL OWNERSHIP

United States of America
Department of Interior
Bureau of Land Management

Surface Owner
State of New Mexico

GRAZING LEASE HELD BY:
Keller RV LLC
2811 County Road 460
Oakley, KS 67748
Phone: 785-672-3257
James Keller (contact)

Chesapeake has an agreement with the grazing lessee.

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.

An application for the proposed unorthodox gas well location has been filed and approved by the New Mexico Oil Conservation Division. – See Exhibit G.

Chesapeake Operating, Inc. agrees to be responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

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)

Sr. Landman
Cecil Gutierrez
550 West Texas Ave.
Midland, TX 79701
432-687-2992 Ext 6012 (OFFICE)
432-687-3675 (FAX)
cgutierrez@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
Permitting Agent - Federal
P.O. Box 11050
Oklahoma City, OK 73154
(405) 767-4275 (OFFICE)
(405) 879-9583 (FAX)
lgood@chkenergy.com

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: 7/14/05

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	1200	2425
Delaware	5100	1475
Bell Canyon	5135	1510
Cherry Canyon	6000	2375
Brushy Canyon	7290	3665
Bone Springs Lime	8640	5015
First Bone Springs	9670	6045
Second Bone Springs	10290	6665
Third Bone Springs	11,200	7575
Wolfcamp	11,470	7845
Strawn	12,230	8605
Atoka Shale	12,420	8795
Atoka Bank	12,530	8905
Atoka Carbonate	12,620	8995
Upper Morrow Sand	13,110	9485
Morrow A Sand	13,290	9665
Morrow Clastic	13265	9640
Morrow B Sand	13,410	9785
Morrow C Sand	13,560	9935
Morrow D Sand	13,630	10,005
Lower Morrow	13,785	10,160
TD	13,850	10,225

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:

Substance	Formation	Depth
Water	Santa Rosa	500
Oil	Bell Canyon	5,135'
Oil	Brushy Canyon	7,290'
Gas	First Bone Springs	9,670'
Gas	Third Bone Springs	11,200'
Gas	Atoka Bank	12,530'
Gas	Morrow A Sand	13,290'

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-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.

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 as 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.

System Operating Pressures	Precharge Pressure
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:

System Pressure	Remaining Pressure At Conclusion of Test
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:

Purpose	Interval	Hole Size	Casing Size	Weight	Grade	Thread	Condition
Surface	0' – 800'	17.5"	13.375"	48	H-40	STC	New
Intermediate 1	800' – 5,000'	12.25"	9.625"	40	J-55	STC	New
Intermediate 2	5,000 – 12,300	8.75"	7"	26	P-110	LTC	New
Production Casing	12,300 – 13,850	6.125"	4.5"	13.5	P-110	LTC	New

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

Interval	Type	Amount	Yield	Washout	Excess
0' – 800'	**Lead**: 35:65 Poz:Class C + 6% D20 Bentonite + 2% S1 CaCl2 +.25 pps D29 Tail: Class C + 2% S1 CaCl2	715 sks 215 sks	1.94 1.34	50%	100%
800' – 5,000'	1st Stage Lead: 10% D20 Bentonite + 1.5% D44 Salt (bwow) + 0.2% D65 TIC + 0.2% D46 AF + 0.25 D29 Celloflake (1st 150 sx will have 0.3% D112 FLAC) 1st Stage Tail: Class C + 0.5% S1 CaCl	500 sks 160 sks	2.45 1.34	50%	100%

	2nd Stage – Lead: Class C +10% D20 Bentonite + 1.5% D44 Salt (bwow) + 0.2% D65 TIC + 0.2% D46 AF + 0.25 D29 Celloflake 2nd Stage Tail: Class C + 0.5% S1 CaCl	450 sks 150 sks	2.45 1.34		
5,000' – 12,300'	Lead: 10% D20 Bentonite + 0.2% D65 TIC + 0.2% D46 AF + 0.25 D29 Celloflake (1st 150 sx will have 0.2% D800 Retarder) Tail: 0.05% D167 UniFlac + 0.2% D65 TIC + 0.2% D800 Retarder	620 sks 250 sks	2.45 1.34	20%	35%
12,300' – 13,850'	Class H + Additives	400 sks	1.1	20%	35%

5. MUD PROGRAM
   a. The proposed circulating mediums to be used in drilling are as follows:

* See Stips

Interval	Mud Type	Mud Weight	Viscosity	Fluid Loss
0' – 800'	FW	8.6 – 9.0	28-29	NC
800' – 5,000'	Brine	10 – 10.1	28-29	NC
5,000 – 12,300	FW/Brine	8.4 – 9.7	32-36	20-30
12,300 – 13,850	Brine/XCD	12.5 - 14	38-42	8-20

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:

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

7. ABNORMAL PRESSURES AND HYDROGEN SULFIDE
   a. The estimated bottom hole pressure is 9,365 psi. No abnormal pressures or temperatures are anticipated.
   b. Hydrogen sulfide gas is not anticipated.

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
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised JUNE 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
30-025-37413	72000	Bell Lake; Morrow, Mid (Gas)

Property Code	Property Name	Well Number
34425	PALOMA 30 FEDERAL	2

OGRID No.	Operator Name	Elevation
147179	CHESAPEAKE OPERATING, INC.	3608'

Surface Location

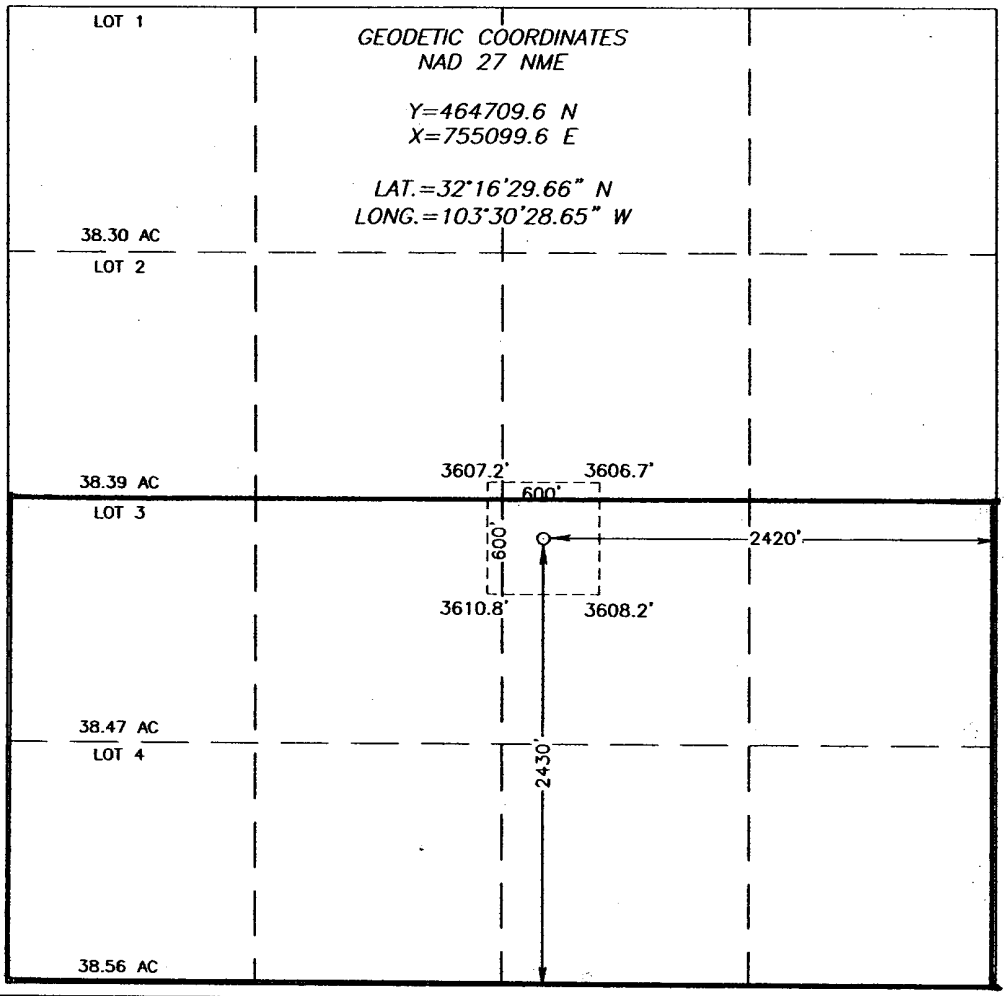
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	30	23-S	34-E		2430	SOUTH	2420	EAST	LEA

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	Joint or Infill	Consolidation Code	Order No.
			NSL-5231 (Atoka & Morrow)

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 the the information contained herein is true and complete to the best of my knowledge and belief.

Kathy F. Blick
Signature

Kathy F. Blick
Printed Name

Landman
Title

06-21-05
Date

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 supervison, and that the same is true and correct to the best of my belief.

JUNE 2, 2005
Date Surveyed JR

Signature & Seal of Professional Surveyor

GARY EIDSON NEW MEXICO 12641 05.11.0850 REGISTERED PROFESSIONAL SURVEYOR

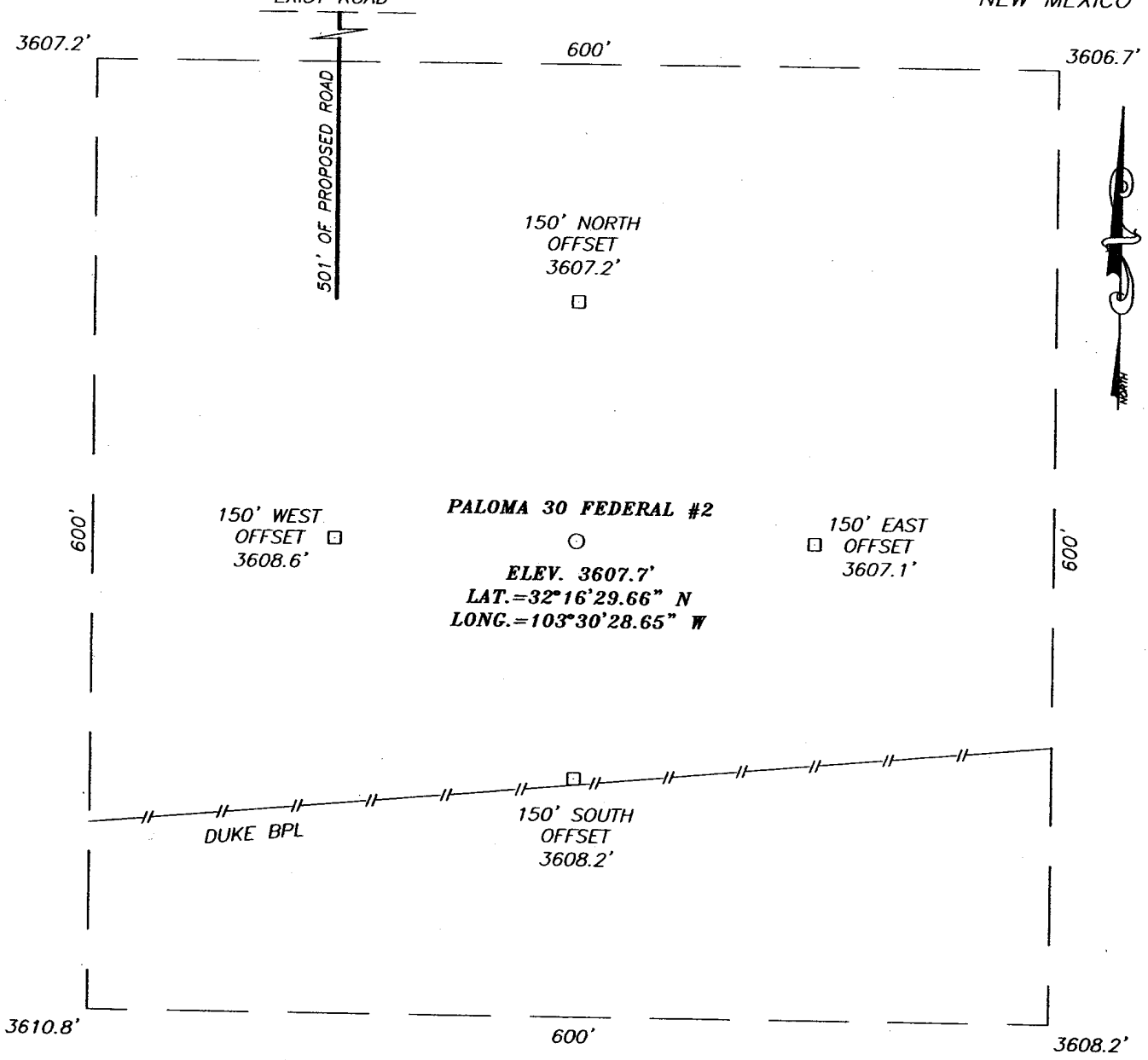
6/9/05

Certificate No. GARY EIDSON 12641

Exhibit A-1

SECTION 30, TOWNSHIP 23 SOUTH, RANGE 34 EAST, N.M.P.M.,

LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #128 AND DELAWARE BASIN RD., GO NORTH ON DELAWARE BASIN RD. FOR APPROX. 4.6 MILES TO A CALICHE ROAD ON THE RIGHT. TURN RIGHT (EAST) AND GO APPROX. 0.1 MILES TO A PROPOSED ROAD SURVEY ON THE RIGHT. FOLLOW PROPOSED ROAD SURVEY SOUTH FOR APPROX. 0.1 MILES TO THIS LOCATION.

100 0 100 200 Feet

Scale:1"=100'

PROVIDING SURVEYING SERVICES SINCE 1946

JOHN WEST SURVEYING COMPANY

412 N. DAL PASO

HOBBS, N.M. 88240

(505) 393-3117

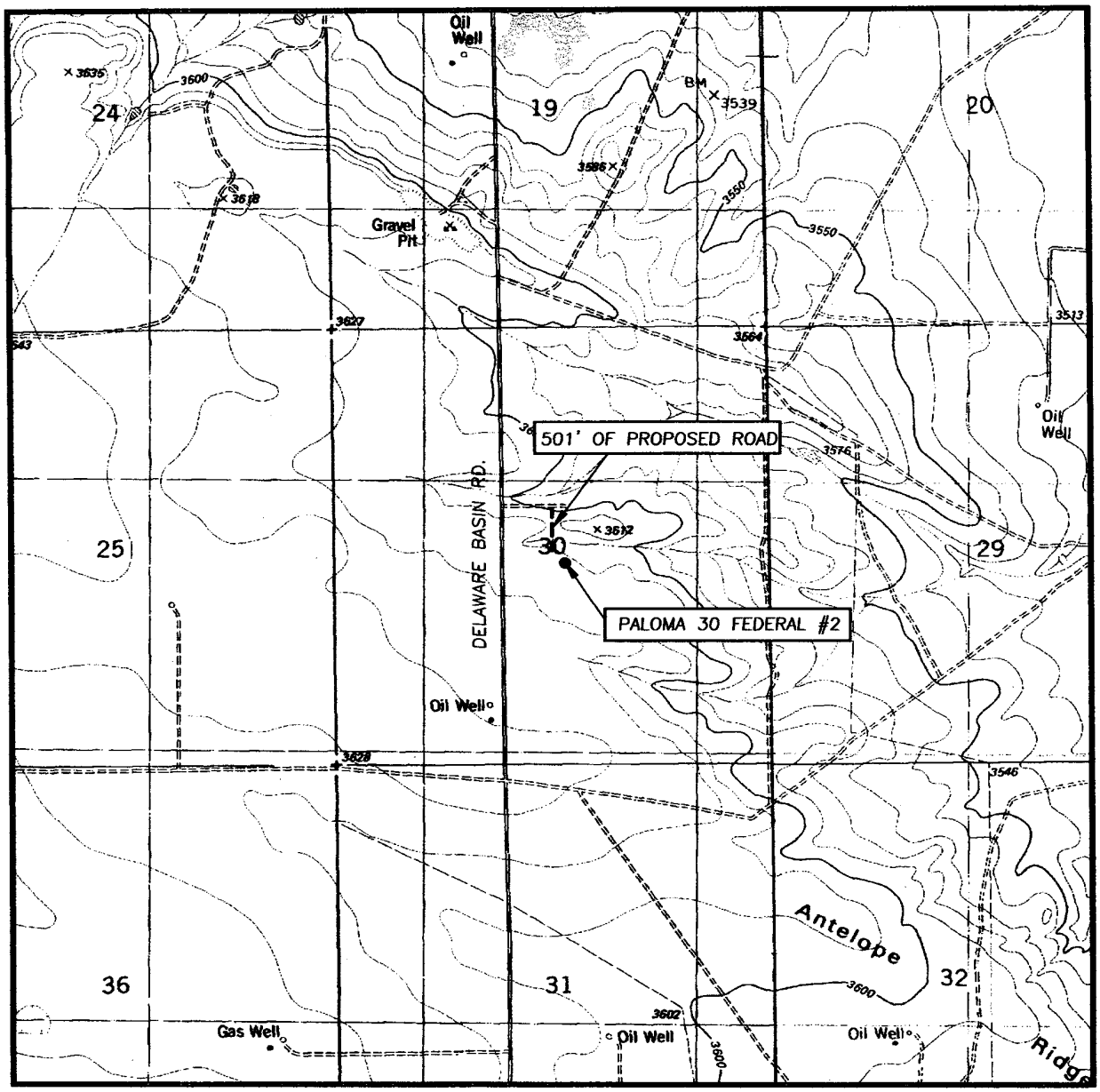
CHESAPEAKE OPERATING, INC.

PALOMA 30 FEDERAL #2 WELL
LOCATED 2430 FEET FROM THE SOUTH LINE
AND 2420 FEET FROM THE EAST LINE OF SECTION 30,
TOWNSHIP 23 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

Survey Date: 06/02/05	Sheet 1 of 1 Sheets		
W.O. Number: 05.11.0850	Dr By: J.R.	Rev 1:N/A	
Date: 06/08/05	Disk: CD#5	05110850	Scale:1"=100'

Exhibit A-2

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
TIP TOP WELLS, N.M. – 10'
SAN SIMON SINK, N.M. – 10'

SEC. 30 TWP. 20-S RGE. 34-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 2430' FSL & 2420' FEL

ELEVATION 3608'

OPERATOR CHESAPEAKE OPERATING, INC.

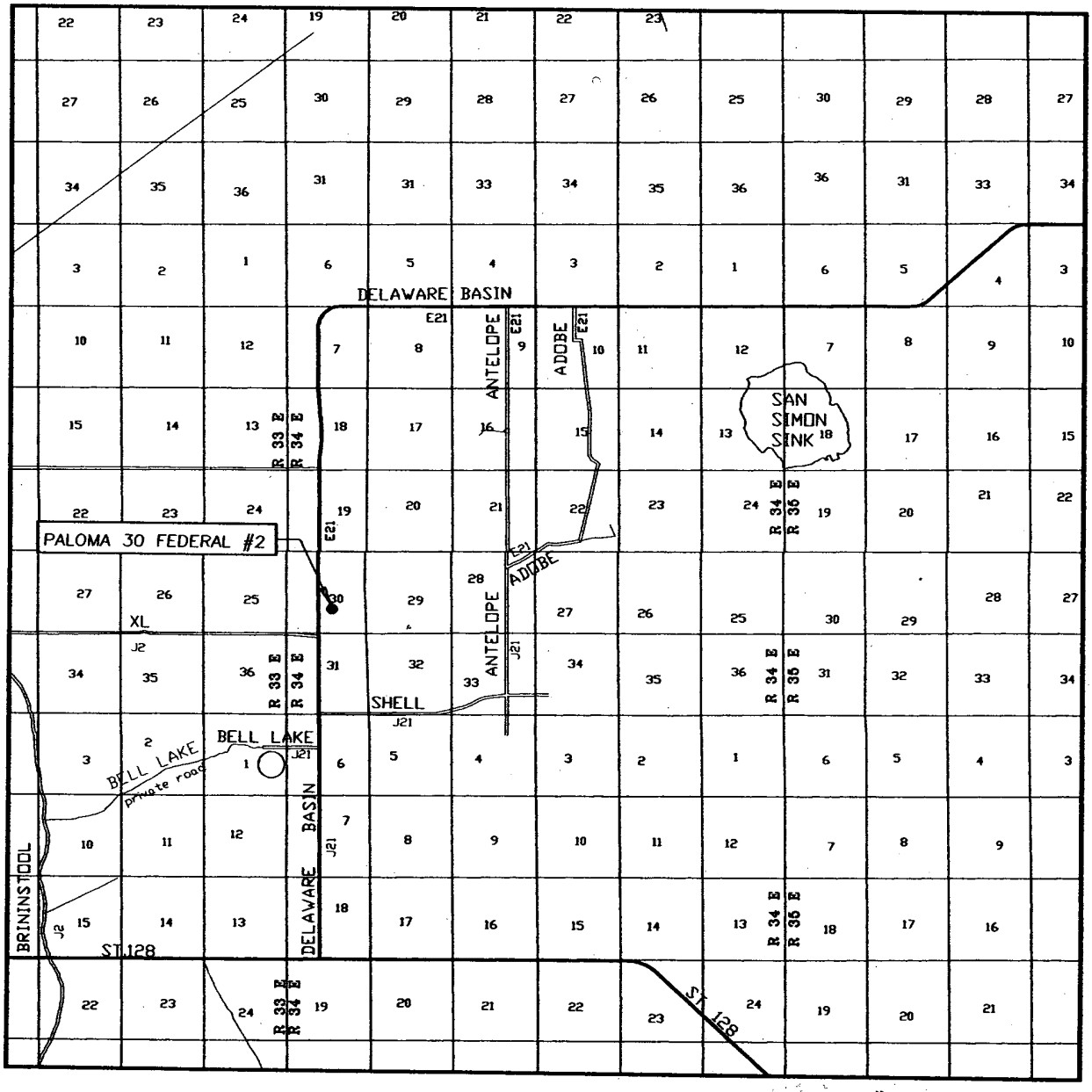
LEASE PALOMA 30 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
TIP TOP WELLS, N.M.

PROVIDING SURVEYING SERVICES SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

Exhibit A-3

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 30 TWP. 23-S RGE. 34-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 2430' FSL & 2420' FEL

ELEVATION 3608'

OPERATOR CHESAPEAKE OPERATING, INC.

LEASE PALOMA 30 FEDERAL

PROVIDING SURVEYING SERVICES SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

Exhibit A-4

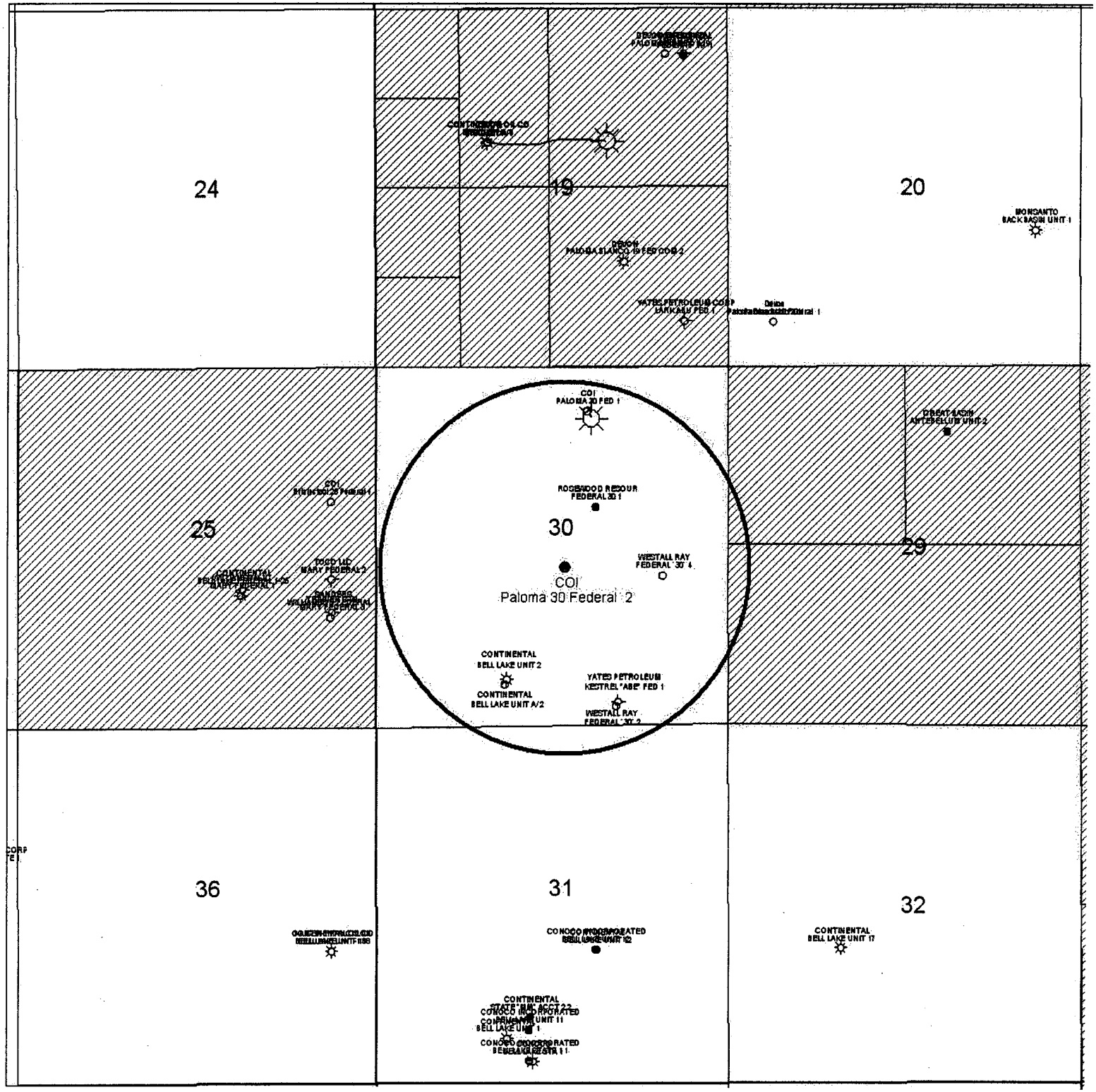
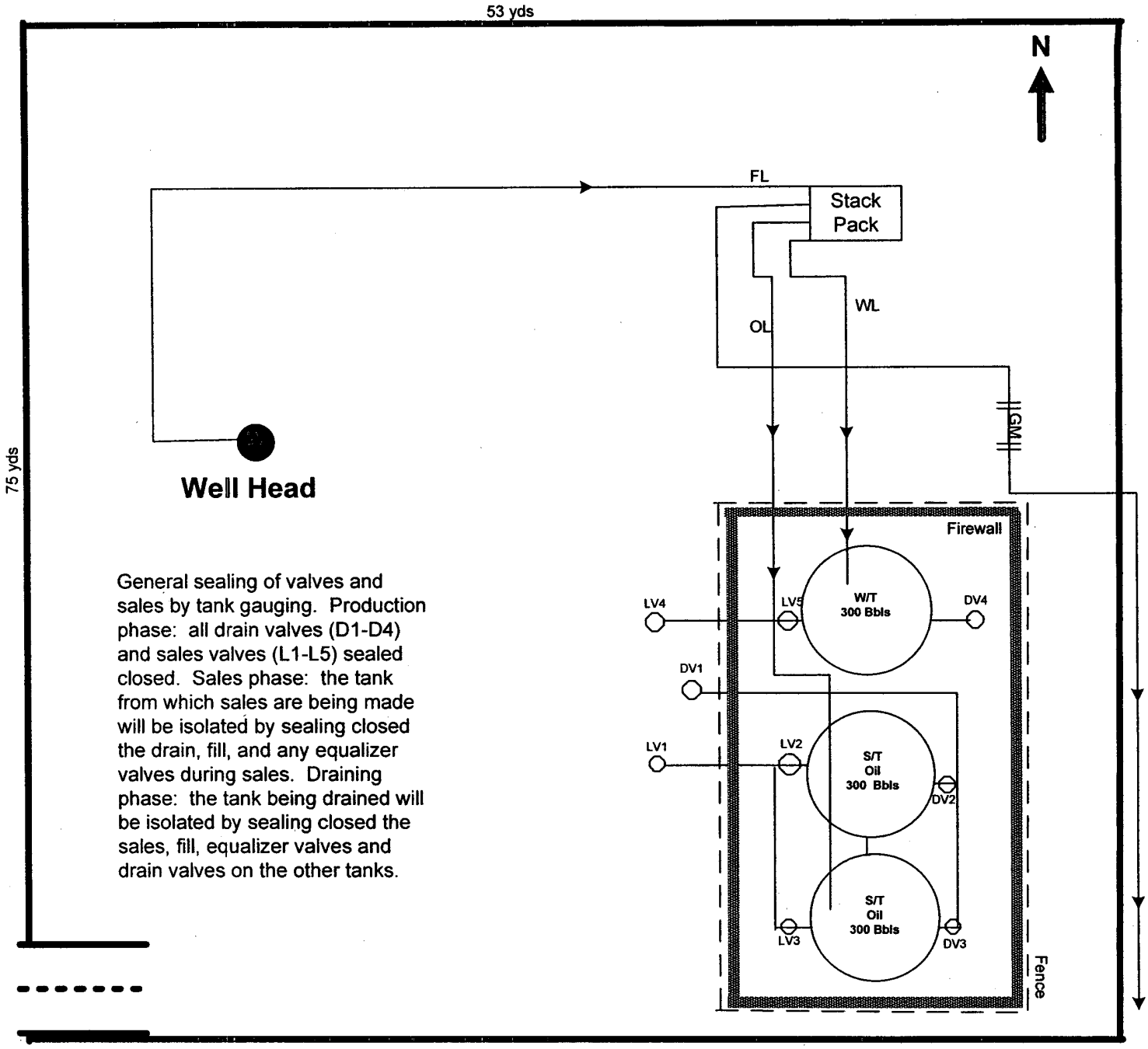

24
19
20
MONSANTO
BACK BASIN UNIT 1
DEVON
PALOMA BLANCO 19 FED COM 2
YATES PETROLEUM CORP
LARKASU FED 1
COI
PALOMA 30 FED 1
GREAT BASIN
ANTELLUS UNIT 2
ROSEWOOD RESOUR
FEDERAL 30 1
25
30
29
WESTALL RAY
FEDERAL 30 4
COI
Paloma 30 Federal 2
CONTINENTAL
BELL LAKE UNIT 2
CONTINENTAL
BELL LAKE UNIT A/2
YATES PETROLEUM
KESTREL "ABE" FED 1
WESTALL RAY
FEDERAL 30 2
36
31
32
CONTINENTAL
BELL LAKE UNIT 17
CONTINENTAL

Exhibit 6

CHESAPEAKE OPERATING, INC.

PALOMA 30 FEDERAL 2
30-23S-34E
LEA COUNTY, NEW MEXICO

PRODUCTION FACILITY



General sealing of valves and sales by tank gauging. Production phase: all drain valves (D1-D4) and sales valves (L1-L5) sealed closed. Sales phase: the tank from which sales are being made will be isolated by sealing closed the drain, fill, and any equalizer valves during sales. Draining phase: the tank being drained will be isolated by sealing closed the sales, fill, equalizer valves and drain valves on the other tanks.

Direction of Flow off Site: N

PALOMA 30 FED 2

Prepared by: DEBBIE HERNANDEZ
Date: 06-27-2005

Approved by:
Date:

Exhibit C-1

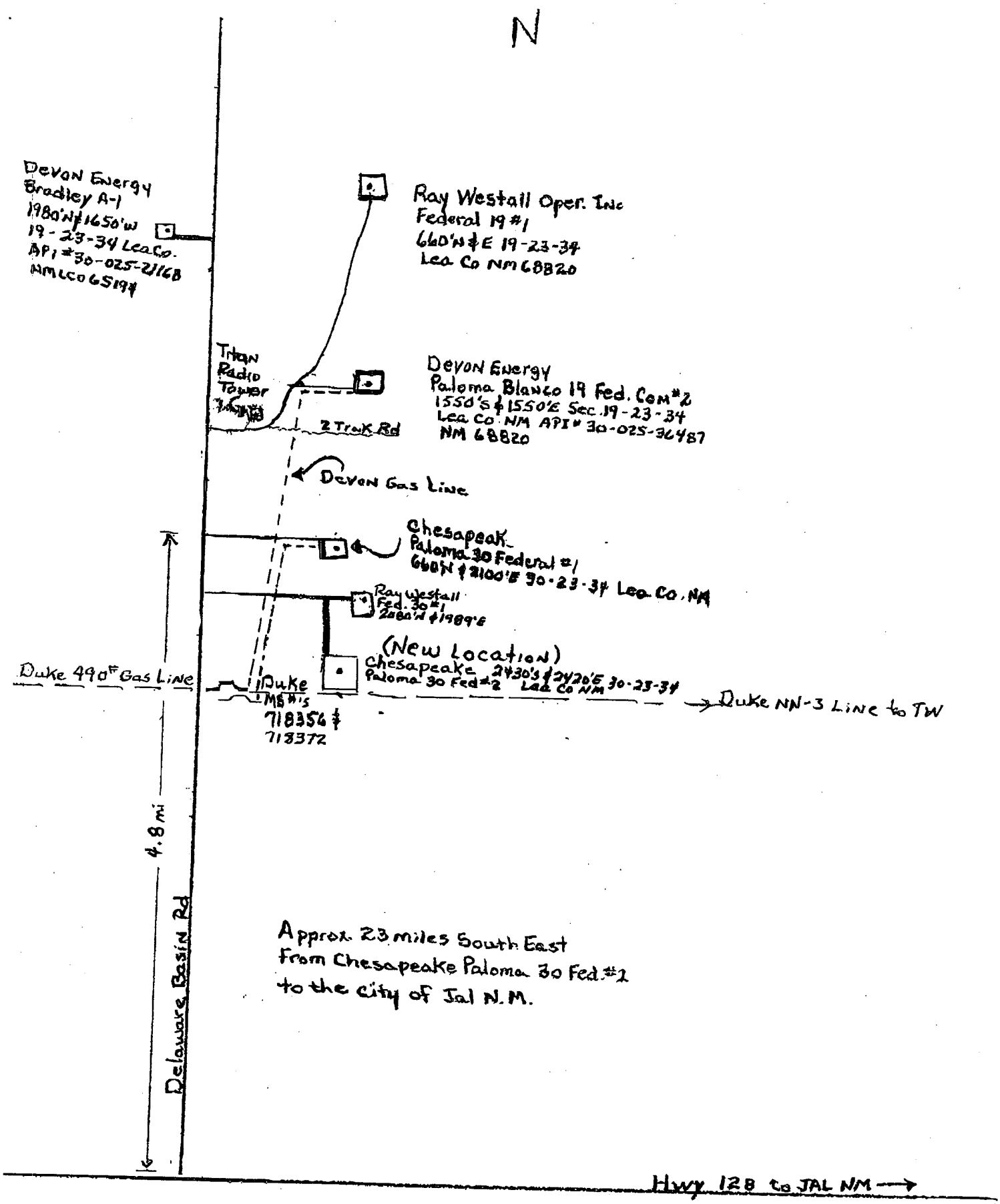

N
Devon Energy
Bradley A-1
1980'N & 1650'W
19-23-34 Lea Co.
API #30-025-21168
NM LC 065194
Ray Westall Oper. Inc
Federal 19 #1
660'N & E 19-23-34
Lea Co NM 68820
Triad Radio Tower
2 Track Rd
Devon Energy
Paloma Blanco 19 Fed. Com #2
1550'S & 1550'E Sec. 19-23-34
Lea Co. NM API # 30-025-36487
NM 68820
Devon Gas Line
Chesapeak
Paloma 30 Federal #1
660'N & 2100'E 30-23-34 Lea Co, NM
Ray Westall
Fed. 30 #1
2080'N & 1980'E
(New Location)
Chesapeake
Paloma 30 Fed #2
2430'S & 2420'E 30-23-34
Lea Co NM
Duke 490# Gas Line
Duke
M&P's
718356 &
718372
Duke NN-3 Line to TW
4.8 mi
Delaware Basin Rd
Approx. 23 miles South East
From Chesapeake Paloma 30 Fed #1
to the city of Jal N.M.
Hwy 128 to JAL NM

Exhibit C-2

RIG 504

Exhibit D-1

4-13-04

Patterson-UTI Drilling Company

Rig # 504

14,000'

DRAWWORKS
Gardner-Denver 700 w/Parkersburg 342 hydromatic brake

ENGINES
2 – Caterpillar 3412, 1070HP

DERRICK
Tri-State 770,000# Gross nominal, 550,000# hook load w/10 lines

SUBSTRUCTURE
17' height, vertical clear 15'

MUD PUMPS
2 - Gardner-Denver PZ-8 w/Caterpillar D-379-TA, 750HP max pressure 2200 psi w/6" liners @ 300 gpm, 2500 psi w/5 ½" liners @ 250 gpm

DRILL STRING
4 ½" 16.60# Grade X-95 & 20.00# Grade X-95 w/4 ½" XH

BLOWOUT PREVENTERS
Shaffer 13 5/8", 5000 psi double LWS, H2S trim w/(2)4" openings between rams and (2) 4" openings below rams Shaffer 13 5/8" 5000 psi annular H2S trim

MUD SYSTEM
2 pits 800 bbls,Fsi Shaker, Desander and mud cleaner

COMMUNICATIONS
24 hour direct cellular telephone

OTHER EQUIPMENT
Blocks. McKissick 542, 250 tons, 5 sheaves 1 ¼" line
Hook. Web Wilson 250 ton hydrahook
Swivel. Continental EMSCO LB 300, 300 ton
Rotary Table.27 ½" Continental Emsco
Electrical Power. 2 – 210KW
Fresh Water Storage. Housing. 500 bbl

"Hole Requirements will dictate actual Reserve Pit size (TOOLPUSHER SHOULD BE CONSULTED)"

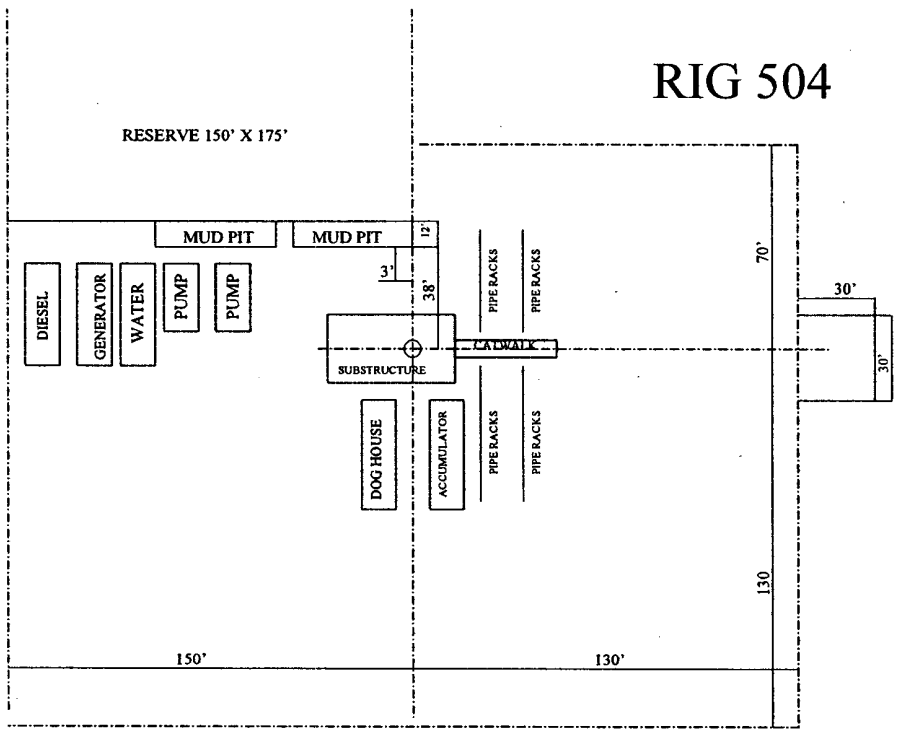


Exhibit D-2

1. (For BLM Use) BLM Report No.	2. (For BLM Use) Reviewer's Initials/Date_____ Accepted ( ) Rejected ( )	3. NMCRIS Number: 93611

4. Type of Report: Negative (X) Positive ( )

5. Title of Report: A Class III Cultural Resource Survey for the Paloma "30" Federal No. 2 Well Pad and Access Road Author(s): Justin Rein	6. Fieldwork Date(s): June 29, 2005 7. Report Date: June 30, 2005
8. Consultant Name/Address: Boone Archaeological Services, LLC Direct Charge: Danny Boone Field Personnel Names: Justin Rein Address: 2030 North Canal Carlsbad, New Mexico 88220 Phone (505) 885-1352	9. Cultural Resource Permit No.: 190-2920-05-G 10. Consultant Report No.: BAS-06-05-32
11. Customer Name: Chesapeake Operating, Inc. Responsible Individual: Linda Good Address: PO Box 18496 Oklahoma City, OK 73154-0496 Phone: (405) 767-4275	12. Customer Project No.:

13. Land Status	BLM	State	Private	Other	Total
a. Area Surveyed (acres)	9.41				9.41
b. Area of Effect (acres)	4.24				4.24

14. Block Length 600 ft Width 600 ft
Linear Length 501 ft Width 100 ft

15. Location (Map[s] Attached):

a. State: New Mexico

b. County: Lea County

c. BLM Office: Carlsbad Field Office

d. Nearest City or Town: Jal, New Mexico

e. Legal Description: T 23 S, R 34 E, Section 30: SE¼ NW¼, SW¼ NE¼, NE¼ SW¼, NW¼ SE¼

f. Well Pad Footages: The Paloma "30" Fed No. 2 is centered 2,430 feet from the south line and 2,420 feet from the east line of Section 30.

g. USGS 7.5' Map Name(s), Date(s), and Code(s): Tip Top Wells, New Mexico 1984 (32103-C5)

Exhibit E

16. **Project Data:**

a. **Records Search:** **Date(s) of BLM File Review:** June 28, 2005 **Name of Reviewer(s):** Justin Rein
Date(s) of ARMS Data Review June 28, 2005 **Name of Reviewer(s):** Justin Rein

Findings (see Field Office requirements to determine area to be reviewed during records search): One previously recorded site, LA 131861, was found within 0.25 miles of the project area. The site is further than 500 ft from the project and will not be affected by the current undertaking.

b. Description of Undertaking: On June 29, 2005, Justin Rein with Boone Archaeological Services, LLC performed a pedestrian cultural resource survey for the proposed Paloma "30" Federal No. 2 well pad and associated access road. Linda Good, with Chesapeake Operating, Inc. requested the survey and provided plats. The project can be found in Township 23 South, Range 34 East, Section 30. The proposed well is centered 2,430 feet from the south line and 2,420 feet from the east line of Section 30. The proposed access road begins at the northwest corner of the well location and travels 501 ft north to an existing lease road. A 600 ft by 600 ft block was surveyed around the well center to ensure protection of cultural materials. Similarly, a 100 ft wide corridor was surveyed along the staked access road centerline. In all, 9.41 acres was surveyed on State of New Mexico property with Federal mineral rights under the jurisdiction of the Bureau of Land Management – Carlsbad Field Office (BLM-CFO).

c. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.): The project area is situated across a flat plain atop Antelope Ridge, just east of Highway 21, roughly 25 miles northwest of Jal, New Mexico. The elevation averages 3,610 feet above mean sea level. The flat plain trends gradually downhill towards Antelope Ridge at a grade of less than one percent, then descends into the valley below at a grade of 2.5 percent. Local soils are of the Simona-Tonuca association as defined by the Soil Conservation Service of the U.S. Department of Agriculture. Vegetation is typical of Chihuahuan Desert scrub and includes various grasses, mesquite, snakeweed, cacti, yucca, and low forbes. Due to the vegetative ground cover, surface visibility averaged 80 percent at the time of survey. Highway 21 is located west of the project area. In addition, wells, pipelines, and power lines are visible in the area. Communication towers are likewise located nearby. The immediate area is otherwise largely undeveloped and susceptible to naturally occurring aeolean and alluvial processes and openly grazing cattle.

Meteorological data was obtained for the nearby town of Jal, New Mexico from the Western Regional Climate Center (WRCC) online database. From 1919 to 2004, Jal received an average annual precipitation of 12.39 inches. During the same time, Jal had an average high temperature of 79.5 degrees Fahrenheit and an average low temperature of 48.3 degrees Fahrenheit. January was the coldest month averaging 59.8 degrees Fahrenheit, while July was the warmest on average at 96.5 degrees Fahrenheit.

d. Field Methods (transect intervals; crew size; time in field; etc.): A crew of one spent 2.5 hours surveying the project area. A 15 m transect interval was used.

e. Artifacts Collected?: None

17. **Cultural Resource Findings:** No cultural materials were encountered.

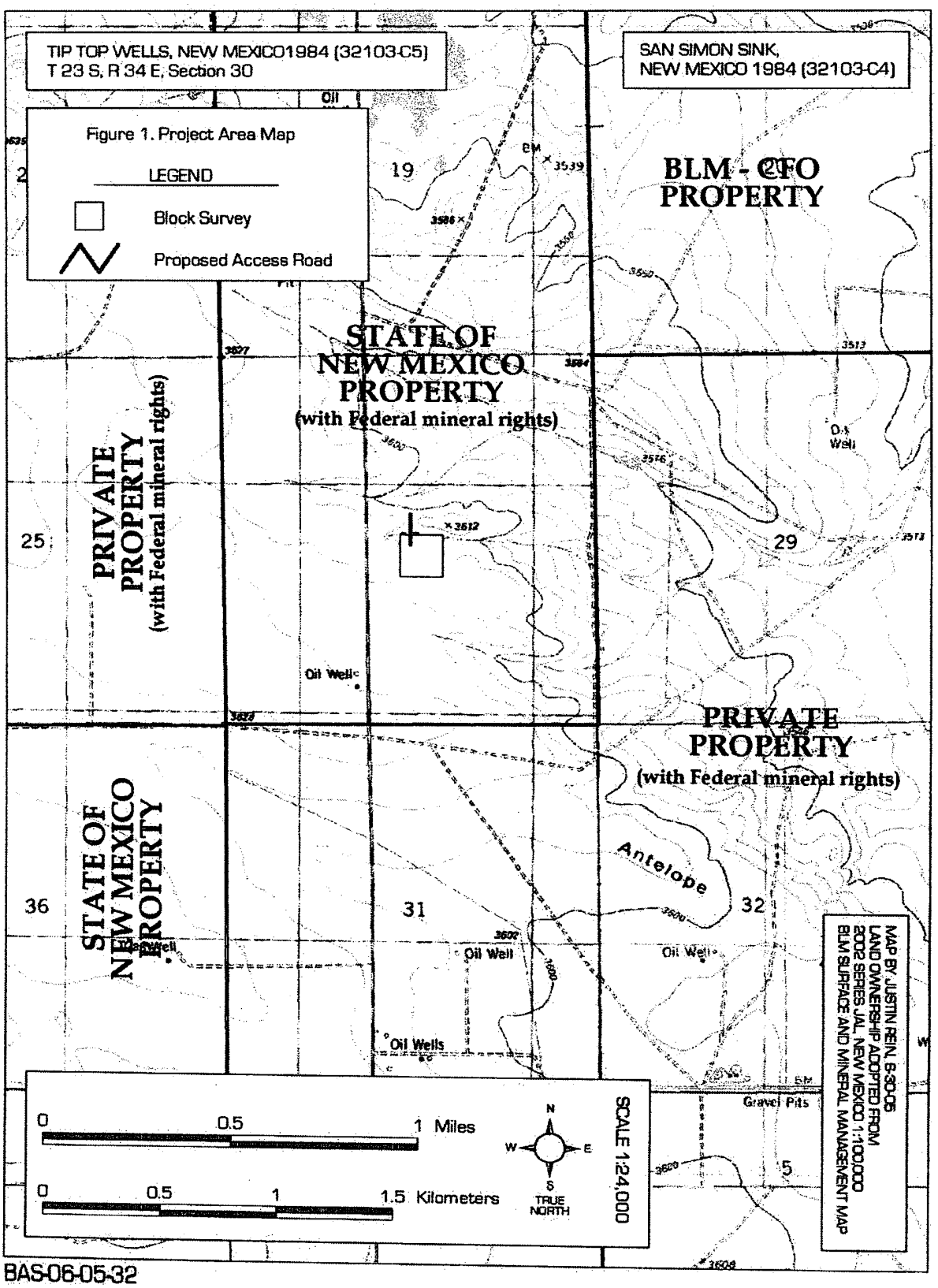
a. **Location/Identification of Each Resource:** N/A

b. **Evaluation of Significance of Each Resource:** N/A

18. **Management Summary (Recommendations):** No cultural materials were encountered during the survey. As such, archaeological clearance is recommended for the proposed Paloma "30" Fed No. 2 well and associated access road. If any cultural materials are encountered during construction, work at that location should cease and archaeologists with the BLM-CFO should be notified immediately.

19.
I certify the information provided above is correct and accurate and meets all applicable BLM standards.

Responsible Archaeologist _____ 6·30·05
Signature **Date**


TIP TOP WELLS, NEW MEXICO1984 (32103-C5)
T 23 S, R 34 E, Section 30
SAN SIMON SINK,
NEW MEXICO 1984 (32103-C4)
Figure 1. Project Area Map
LEGEND
Block Survey
Proposed Access Road
BLM - CFO PROPERTY
STATE OF NEW MEXICO PROPERTY
(with Federal mineral rights)
PRIVATE PROPERTY
(with Federal mineral rights)
PRIVATE PROPERTY
(with Federal mineral rights)
STATE OF NEW MEXICO PROPERTY
Oil Well
Oil Wells
Gravel Pits
Antelope
19
25
29
31
32
36
5
0 0.5 1 Miles
0 0.5 1 1.5 Kilometers
N
W
E
S
TRUE NORTH
SCALE 1:24,000
MAP BY: JUSTIN REIN, 6-30-05
LAND OWNERSHIP ADOPTED FROM
2002 SERIES JAL, NEW MEXICO 1:100,000
BLM SURFACE AND MINERAL MANAGEMENT MAP

BAS-06-05-32

BLOWOUT PREVENTC SCHEMATIC

CHESAPEAKE OPERATING INC

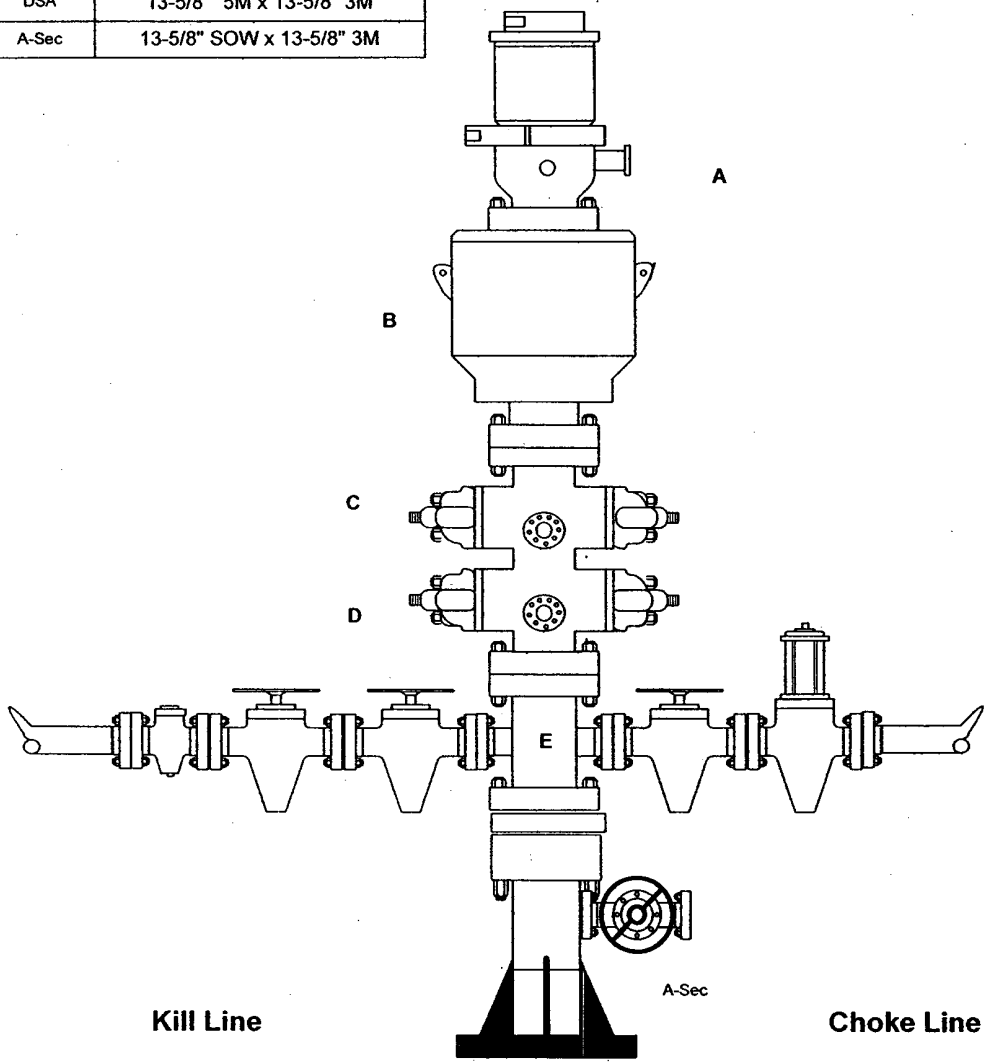
WELL : Paloma 30 Federal 2

RIG : Patterson 504

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"" 5M x 13-5/8" 3M	
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-1

BLOWOUT PREVENTC SCHEMATIC

CHESAPEAKE OPERATING INC

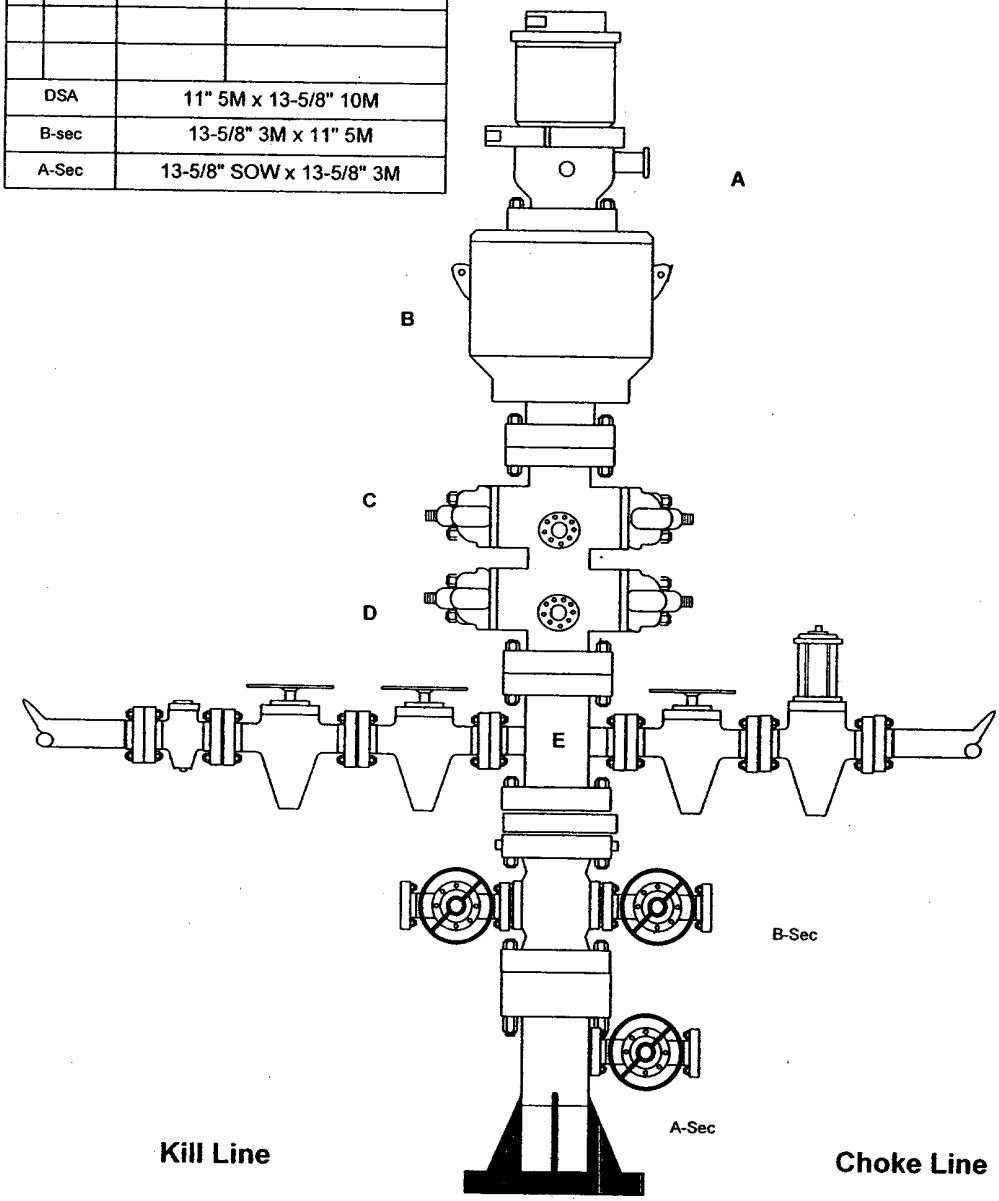
WELL : Paloma 30 Federal 2

RIG : Patterson 504

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
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

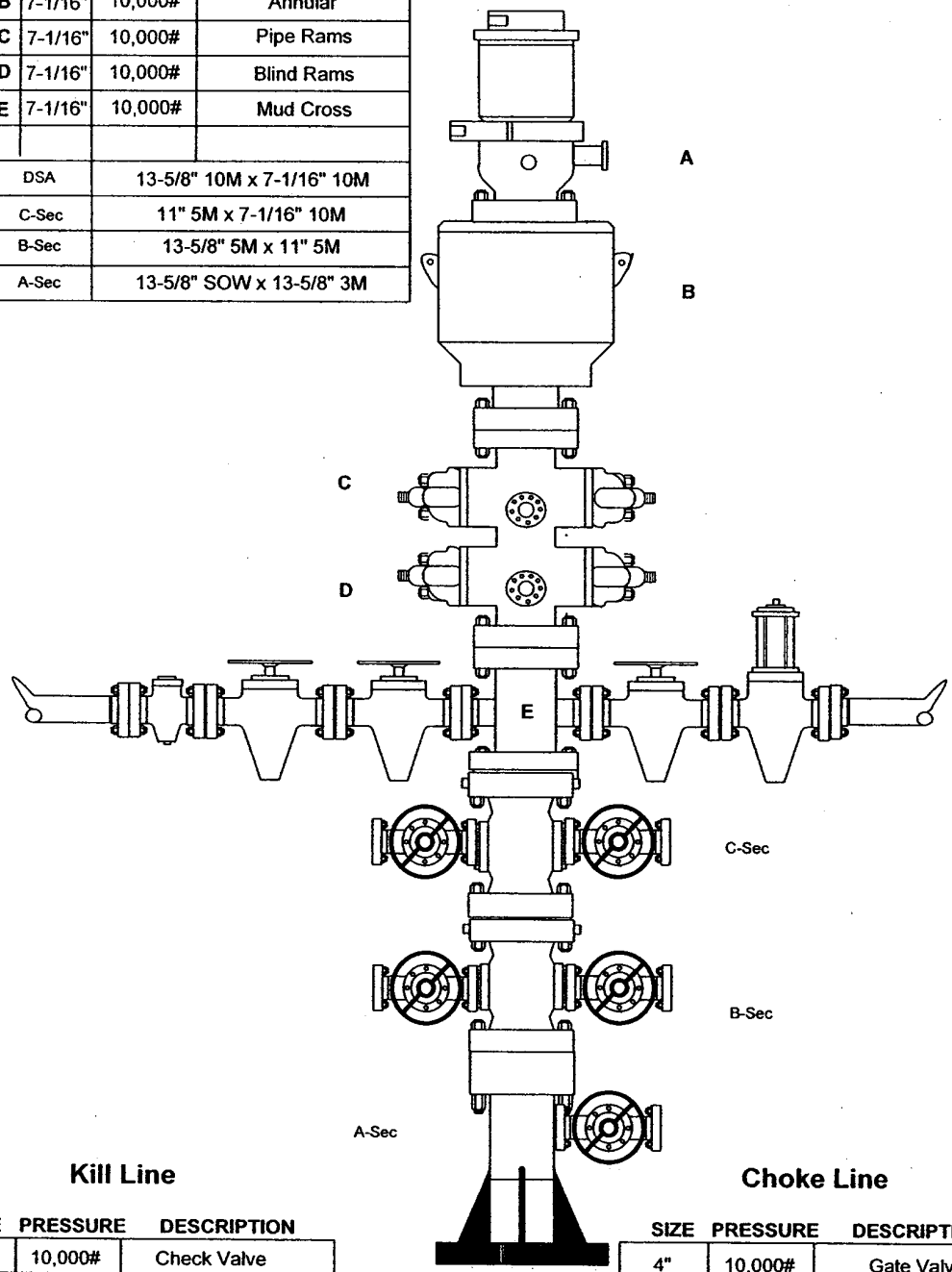
WELL : Paloma 30 Federal 2

RIG : Patterson 504

COUNTY : Lea **STATE:** New Mexico

OPERATION: Drill out below 7" Casing

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

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

July 6, 2005

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

Chesapeake Operating, Inc.
c/o W. Thomas Kellahin
P. O. Box 2265
Santa Fe, New Mexico 87504

Administrative Order NSL-5231

Dear Mr. Kellahin:

Reference is made to the following: (i) your application (***administrative application reference No. pSEM0-518128343***) filed with the New Mexico Oil Conservation Division ("Division") in Santa Fe, New Mexico on June 28, 2005 on behalf of the operator, Chesapeake Operating, Inc. ("Chesapeake"); and (ii) the Division's records in Santa Fe and Hobbs: all considering Chesapeake's request for an unorthodox gas well location in both the Atoka and Morrow formations for its proposed Paloma "30" Federal Well No. 2 to be drilled 2430 feet from the South line and 2420 feet from the East line (Unit J) of Section 30, Township 23 South, Range 34 East, NMPM, Lea County, New Mexico.

Lots 3 and 4, the E/2 SW/4, and the SE/4 (S/2 equivalent) of Section 30, being a standard 317.03-acre lay-down gas spacing unit for both the Undesignated and designated Bell Lake-Atoka Gas Pool (**71720**) and Undesignated Mid Bell Lake-Morrow Gas Pool (**72000**), is to be dedicated to this well.

This application has been duly filed under the provisions of Division Rule 104.F.

The geologic interpretation submitted with this application, based on 3-D seismic, indicates that a well drilled at the proposed unorthodox gas well location will be at a more favorable geologic position within both the Atoka and Morrow formations than a well drilled at a location considered to be standard within the subject 317.03-acre unit.

It is the Division's understanding after reviewing your application and our records that all of Section 30 is a single Federal lease issued by the U. S. Bureau of Land Management (***U. S. Government lease No. NM-68821***) with common mineral interest in which Chesapeake is the leasehold operator.

By the authority granted me under the provisions of Division Rule 104.F (2), the above-described unorthodox gas well location for Chesapeake's proposed Paloma "30" Federal Well No. 2 in both the Atoka and Morrow formations within this 317.03-acre unit comprising the S/2 equivalent of Section 30 is hereby approved.

Sincerely,

Mark E. Fesmire, P. E.
Director

MEF/mes

cc: New Mexico Oil Conservation Division – Hobbs
U. S. Bureau of Land Management – Carlsbad

Exhibit G

SPECIAL DRILLING STIPULATIONS

THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

Operator's Name Chesapeake Operating Co. Well Name & No Paloma 30 Federal #2
Location 2430 F S L & 2420 F E L Sec. 30, T. 23 S, R 34 E.
Lease No. NM-68821 County Lea State New Mexico

The Special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the General Requirements. The permittee should be familiar with the General Requirements, a copy of which is available from a Bureau of Land Management office. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CRF 3165.3 AND 3165.4.

This permit is valid for a period of one year from the date of approval or until lease expiration or termination whichever is shorter.

I. SPECIAL ENVIRONMENT REQUIREMENTS

( ) Lesser Prairie Chicken (stips attached)
( ) San Simon Swale (stips attached)
( ) Flood plain (stips attached)
( ) Other

II. ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING

(X) The BLM will monitor construction of this drill site. Notify the ( ) Carlsbad Field Office at (505) 234-5972 ( ) Hobbs Office (505) 393-3612, at least 3 working days prior to commencing construction.

(X) Roads and the drill pad for this well must be surfaced with 6 inches of compacted caliche upon completion of well and it is determined to be a producer.

( ) All topsoil and vegetation encountered during the construction of the drill site area will be stockpiled and made available for resurfacing of the disturbed area after completion of the drilling operation. Topsoil on the subject location is approximately _____inches in depth. Approximately _____cubic yards of topsoil material will be stockpiled for reclamation.

( ) Other.

III. WELL COMPLETION REQUIREMENTS

( ) A Communlitization Agreement covering the acreage dedicated to the well must be filed for approval with the BLM. The effective date of the agreement must be prior to any sales.

(x) Surface Restoration: If the well is a producer, the reserve pit(s) will be backfilled when dry, and cut-and-fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be re-contoured to resemble the original contours of the surrounding terrain, and topsoil must be re-distributed and re-seeded with a drill equipped with a depth indicator (set at depth of½inch) with the following seed mixture, in pounds of Pure Live Seed (PLS), per acre.

(X) A. Seed Mixture 1 (Loamy Sites)
Side Oats Grama (*Bouteloua curtipendula*) 5.0
Sand Dropseed (*Sporobolus cryptandrus*) 1.0

( ) B. Seed Mixture 2 (Sandy Sites)
Sand Dropseed (*Sporobolus crptandrus)* 1.0
Sand Lovegrass (*Eragostis trichodes*) 1.0
Plains Bristlegrass (*Setaria magrostachya*) 2.0

( ) C. Seed Mixture 3 (Shallow Sites)
Side oats Grama (*Boute curtipendula*) 1.0

( ) D. Seed Mixture 4 (Gypsum Sites)
Alkali Sacaton (*Sporobollud airoides*) 1.0
Four-Wing Saltbush (*Atriplex canescens*) 5.0

( ) OTHER SEE ATTACHED SEED MIXTURE

Seeding should be done either late in the fall (September 15 - November 15, before freeze up, or early as possible the following spring to take advantage of available ground moisture.

( ) Other.

RESERVE PIT CONSTRUCTION STANDARDS

see C-144

The reserve pit shall be constructed entirely in cut material and lined with ~~6 mil~~ plastic. Mineral material extracted from within the boundary of the APD during construction of the well pad and reserve pits and be used for the construction of this well pad and its immediate access road only, as long as that portion of the access road it is use on remains on-lease. Removal of any additional material from this location for construction or improvement of other well pads and other access or lease roads must first be purchased from BLM.

Reclamation: Reclamation of this type of deep pit will consist of pushing the pit walls into the pit when sufficiently dry to support track equipment. The pit liner is NOT TO BE RUPTURED to facilitate drying; a ten month period after completion of the well is allowed for drying of the pit contents.
The pit area must be contoured to the natural terrain with all contaminated drilling mud buried with at least 3 feet of clean soil. The reclaimed area will then be seeded as specified in this permit.

OPTIONAL PIT CONSTRUCTION STANDARDS

The reserve pit may be constructed in predominantly fill material if:

(1) Lined as specified above and

(2) A temporary or emergency pit may be constructed immediately adjacent to the reserve pit as long as the pit remains within the APD boundary. Mineral material removed from this pit may be used for the construction of this well pad only and its immediate access road, as long as that portion of the access road the material is used on remains on-lease. Removal of any material from the APD boundary for use on other well locations or roads must first be purchased from BLM.

Reclamation of the reserve pit consists of bulldozing all reserve pit contents and contaminants into the borrow pit and covering with a minimum of 3 feet of clean soil material. The entire area must be recontoured, all trash removed, and reseeded as specified in this permit.

CULTURAL

Whether or not an archaeological survey has been completed and notwithstanding that operations are being conducted as approved, the lessee/operator/grantee shall notify the BLM immediately if previously unidentified cultural resources are observed during surface disturbing operations. From the time of the observation, the lessee/operator/grantee shall avoid operations that will result in disturbance to these cultural resources until directed to processed by BLM.

TRASH PIT STIPS

All trash, junk, and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Chesapeake Operating Incorporated
Well Name & No: Paloma 30 Federal No. 02
Location: Surface: 2430' FSL & 2420' FEL, Sec.30, T. 23 S., R. 34 E.
Lease: NMNM 68821
Lea County, New Mexico

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 13 ⅜ inch; 9 ⅝ inch; 7 inch; 4 ½ inch Liner

C. BOP Tests

2. A Hydrogen Sulfide (H2S) Drilling Plan is not required for this wellbore.

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

II. CASING:

1. The 13 ⅜ inch shall be set at **1250 Feet** into the Rustler Anhydrite with cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string. **It is recommended to set the surface casing at 1250 feet or it is required to drill out from under surface casing with fresh water only, brine shall not be added until 100 feet prior to drilling into the Salt section.**

2. The minimum required fill of cement behind the 9 ⅝ inch Intermediate casing is to Circulate to surface. ~~Tie back into the 13 ⅜ inch casing shoe by at least 200 feet.~~ JL

3. The minimum required fill of cement behind the 7 inch Production casing is to **Tie back into the 9 ⅝ inch casing shoe by at least 200 feet .**

4. The **4 ½ inch** Liner shall have cement circulated to top of liner.

III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13 ⅜ inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

III. Pressure Control (continued):

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **5 M psi.**

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the test.

-The test shall be done by an independent service company
-The results of the test shall be reported to the appropriate BLM office.
-Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures.
-Use of drilling mud for testing is not permitted since it can mask small leaks.
-Testing must be done in safe workman-like manner. Hard line connections shall be required.
-Both low pressure and high pressure testing of BOPE is required.

BLM Serial Number: NM-68821
Company Reference: Chesapeake Operating Co.
Well No. & Name: Paloma 30 Federal #2

STANDARD STIPULATIONS FOR PERMANENT RESOURCE ROADS
CARLSBAD FIELD OFFICE

A copy of the grant and attachments, including stipulations and map, will be on location during construction. BLM personnel may request to view a copy of your permit during construction to ensure compliance with all stipulations.

~~The holder/grantee/permittee shall hereafter be identified as the holder in these~~ stipulations. The Authorized Officer is the person who approves the Application for Permit to Drill (APD) and/or Right-of-Way (ROW).

GENERAL REQUIREMENTS

A. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

B. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, *et. seq.*) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

C. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et. seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et. seq.*) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

D. If, during any phase of the construction, operation, maintenance, or termination of the road, any oil or other pollutant should be discharged, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil of other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting there from, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

E. The holder shall minimize disturbance to existing fences and other improvements on public domain surface. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times.

The holder will make a documented good-faith effort to contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence.

F. The Holder shall ensure that the entire right-of-way, including the driving surface, ditching and drainage control structures, road verges and any construction sites or zones, will be kept free of the following plant species: Malta starthistle, African rue, Scotch thistle and salt cedar.

Holder agrees to comply with the following stipulations:

1. ROAD WIDTH AND GRADE

The road will have a driving surface of 14 feet (all roads shall have a minimum driving surface of 12 feet, unless local conditions dictate a different width). The maximum grade is 10 percent unless the box below is checked. Maximum width of surface disturbance from construction will be 30 feet.

/__/ Those segments of road where grade is in excess of 10% for more than 300 feet shall be designed by a professional engineer.

2. CROWNING AND DITCHING

Crowning with materials on site and ditching on one side of the road on the uphill side will be required. The road cross-section will conform to the cross section diagrams in Figure 1. If conditions dictate, ditching may be required for both sides of the road; if local conditions permit, a flat-bladed road may be considered (if these conditions exist, check the appropriate box below). The crown shall have a grade of approximately 2% (i.e., 1" crown on a 12' wide road).

/_X_/ Ditching will be required on both sides of the roadway as shown on the attached map or as staked in the field.

/__/ Flat-blading is authorized on segment(s) delineated on the attached map.

3. DRAINAGE

Drainage control shall be ensured over the entire road through the use of borrow ditches, outsloping, insloping, natural rolling topography, lead-off (turnout) ditches, culverts, and/or drainage dips.

A. All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval for lead-off ditches shall be determined according to the following table, but may be amended depending upon existing soil types and centerline road slope (in %):

SPACING INTERVAL FOR TURNOUT DITCHES

Percent slope	Spacing interval
0% - 4%	400' - 150'
4% - 6%	250' - 125'
6% - 8%	200' - 100'
8% - 10%	150' - 75'

A typical lead-off ditch has a minimum depth of 1 foot below and a berm 6 inches above natural ground level. The berm will be on the down-slope side of the lead-off ditch. The ditch end will tie into vegetation whenever possible.

For this road the spacing interval for lead-off ditches shall be at

/_x_/ 400 foot intervals.

/__/ _____ foot intervals.

/__/ locations staked in the field as per spacing intervals above.

/__/ locations delineated on the attached map.

B. Culvert pipes shall be used for cross drains where drainage dips or low water crossings are not feasible. The minimum culvert diameter must be 18 inches. Any culvert pipe installed shall be of sufficient diameter to pass the anticipated flow of water. Culvert location and required diameter are shown on the attached map (Further details can be obtained from the Roswell District Office or the appropriate Resource Area Office).

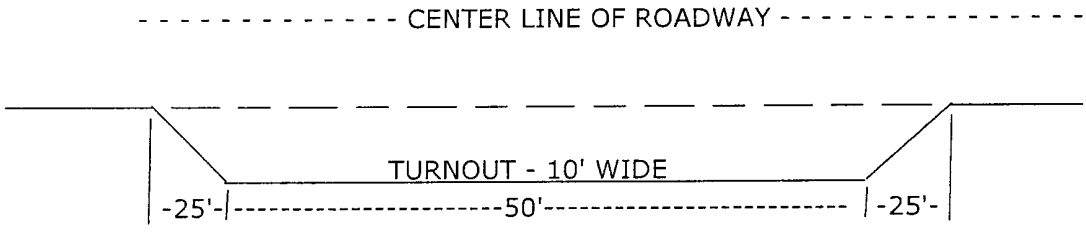
C. On road slopes exceeding 2%, drainage dips shall drain water into an adjacent lead-off ditch. Drainage dip location and spacing shall be determined by the formula:

spacing interval = $\frac{400'}{\text{road slope in \%}} + 100'$

Example: 4% slope: spacing interval = $\frac{400}{4} + 100 = 200$ feet

4. TURNOUTS

Unless otherwise approved by the Authorized Officer, vehicle turnouts will be required. Turnouts will be located at 2000-foot intervals, or the turnouts will be intervisible, whichever is less. Turnouts will conform to the following diagram:



STANDARD TURNOUT - PLAN VIEW

5. SURFACING

Surfacing of the road or those portions identified on the attached map may, at the direction of the Authorized Officer, be required, if necessary, to maintain traffic within the right-of-way with caliche, gravel, or other surfacing material which shall be approved by the Authorized Officer. When surfacing is required, surfacing materials will be compacted to a minimum thickness of six inches with caliche material. The width of surfacing shall be no less than the driving surface. Prior to using any mineral materials from an existing or proposed Federal source, authorization must be obtained from the Authorized Officer.

A sales contract for the removal of mineral materials (caliche, sand, gravel, fill dirt, etc.) from an authorized pit, site, or on location must be obtained from the BLM prior to using any such mineral material from public lands. Contact the BLM solid minerals staff for the various options to purchase mineral material.

6. CATTLEGUARDS

Where used, all cattleguard grids and foundation designs and construction shall meet the American Association of State Highway and Transportation Officials (AASHTO) Load Rating H-20, although AASHTO U-80 rated grids shall be required where heavy loads (exceeding H-20 loading), are anticipated (See BLM standard drawings for cattleguards). Cattleguard grid length shall not be less than 8 feet and width of not less than 14 feet. A wire gate (16-foot minimum width) will be provided on one side of the cattleguard unless requested otherwise by the surface user.

7. MAINTENANCE

The holder shall maintain the road in a safe, usable condition. A maintenance program shall include, but not be limited to blading, ditching, culvert installation, culvert cleaning, drainage installation, cattleguard maintenance, and surfacing.

8. PUBLIC ACCESS

Public access along this road will not be restricted by the holder without specific written approval being granted by the Authorized Officer. Gates or cattleguards on public lands will not be locked or closed to public use unless closure is specifically determined to be necessary and is authorized in writing by the Authorized Officer.

9. CULTURAL RESOURCES

Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the authorized officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the authorized officer after consulting with the holder.

10. SPECIAL STIPULATIONS:

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 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
May 27, 2004

WELL API NO. 30-025-37413

5. Indicate Type of Lease STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

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.)

7. Lease Name or Unit Agreement Name: Paloma 30 Federal

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

8. Well Number 002

2. Name of Operator: Chesapeake Operating, Inc.

9. OGRID Number 147179

3. Address of Operator: P. O. Box 11050, Midland, TX 79702-8050

10. Pool name or Wildcat: Bell Lake;Morrow,Mid (Gas)

4. Well Location
Unit Letter J : 2430 feet from the South line and 2420 feet from the East line
Section 30 Township 23S Range 34E NMPM County Lea

11. Elevation (*Show whether DR, RKB, RT, GR, etc.*) 3608' GR

Pit 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 12,129 bbls; Construction Material

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	P AND A	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
OTHER:	☐			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 request that the attached procedure be approved for the drilling pit for this well. Chesapeake, hereby, agrees to close the pit according to NMOCD guidelines.

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 Brenda Coffman TITLE Regulatory Analyst DATE 08/17/2005

Type or print name Brenda Coffman E-mail address: bcoffman@chkenergy.com Telephone No. (432)687-2992

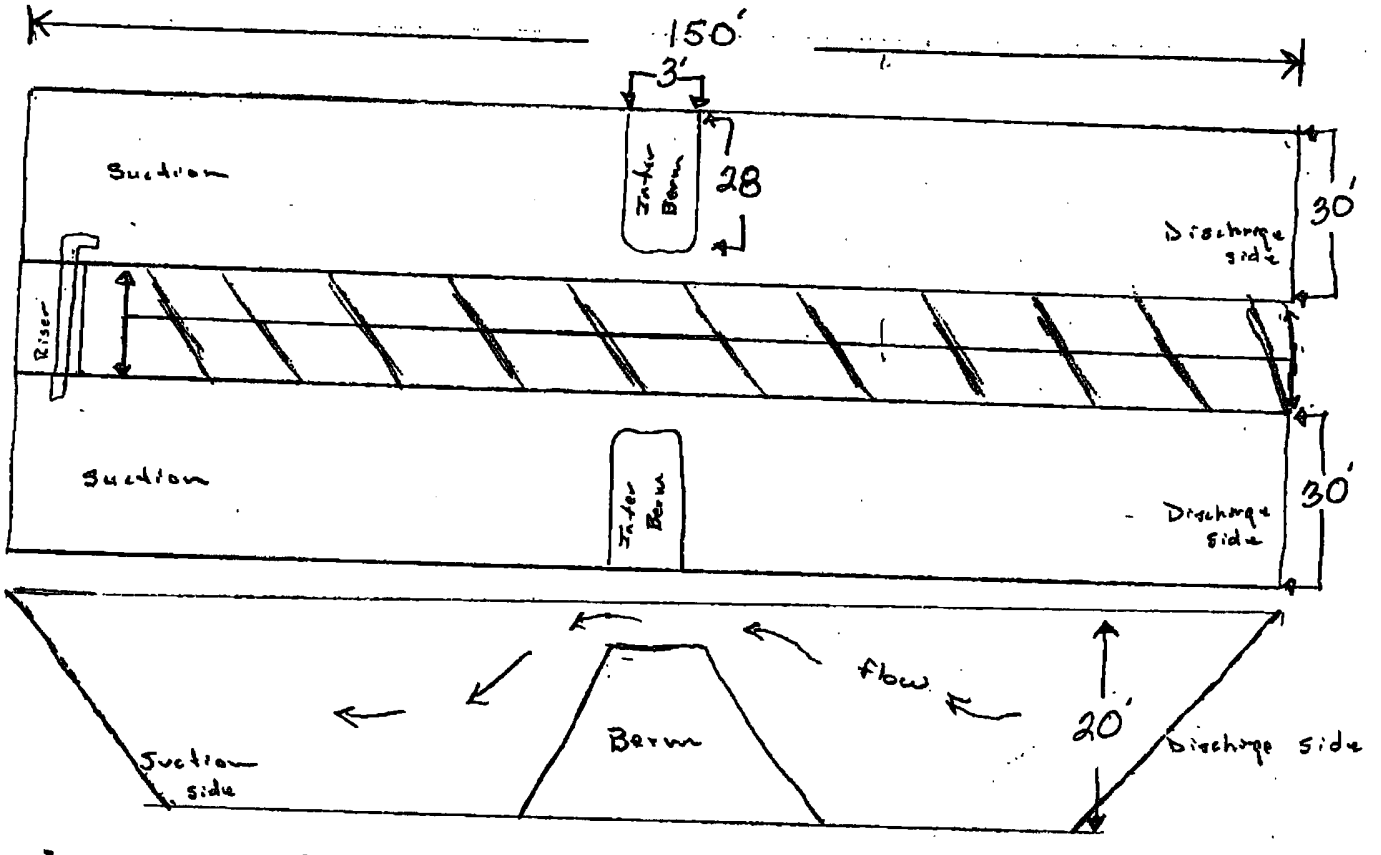
For State Use Only

APPROVED BY: ORIGINAL SIGNED BY PAUL F. KAUTZ TITLE PETROLEUM ENGINEER DATE AUG 17 2005

Conditions of Approval (if any):

Chesapeake Energy

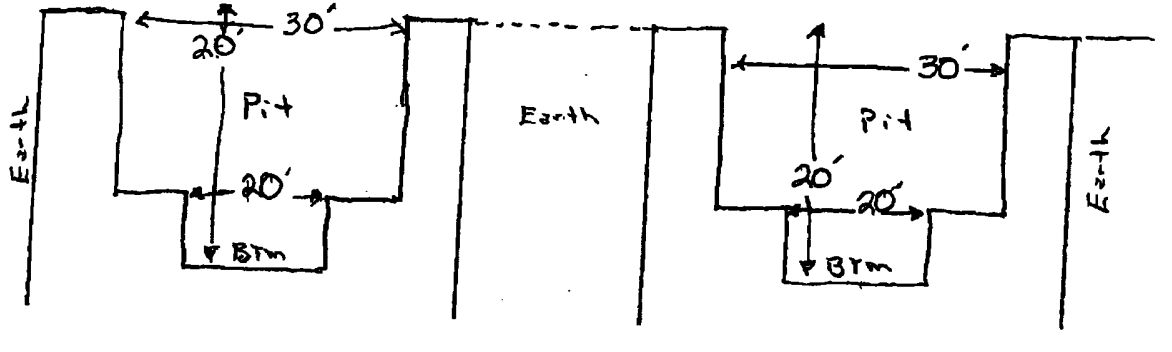
Double Pit Guideline 3A



12 mm plastic over all

3' x 30' x 140' = 75600 ft³ ÷ 5.6146 = 13464.8 bbls x 2 = 26929.7 bbls. with 18' of fluid & cuttings in pits.

0' x 30 x 140 = 90000 ft³ ÷ 56146 = 16029.6 bbls x 2 = 32059.2 bbls with 20'



End cross section