Form 3160-3
(December 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

New Mexico Oil Conservation Division, Dist. 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

5.LEASE DESIGNATION AND SERIAL NO.	NMNM 112936
6.IF INDIAN, ALLOTTEE OR TRIBE NAME	
7.UNIT AGREEMENT NAME	
8.FARM OR LEASE NAME, WELL NO.	KLEIN 1 FEDERAL 1 (35268)
9.API WELL NO.	30-025-37571
10.FIELD AND POOL, OR WILDCAT	INBE PENNSYLVANIA (Permo)
11.SEC.,T.,R.,M.,OR BLOCK AND SURVEY OR AREA	1-11S-33E

1a TYPE OF WORK: DRILL ☒ DEEPEN ☐

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

2. NAME OF OPERATOR
CHESAPEAKE OPERATING, INC. Linda Good (147179)

3. ADDRESS AND TELEPHONE NO.
P.O. BOX 18496 OKLAHOMA CITY, OK 73154-0496 405-767-4275

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements)**
SUBJECT TO LIKE APPROVAL BY STATE

At surface: 109 FNL 1579 FWL NE NW SEC 1 T11S R33E, LOT 3

At BHLoc: 810 FNL 2130 FWL NE NW SEC 1 T11S R33E, LOT 3

14.DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*	12. COUNTY OR PARISH	13. STATE
Approximately 23 miles West of Tatum, NM.	LEA COUNTY	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
	367.280	40
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***
	9900	Rotary

21.ELEVATIONS (Show whether DF, RT, GR, etc.)	22. APPROX. DATE WORK WILL START*
4205 GR Roswell Controlled Water Basin	

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 9900 to test the Pennsylvania formation. If productive, casing will be run and the well completed. If dry, the well will be plugged and abandoned as per BLM and New Mexico Oil Conservation Division requirements.

Please find the Surface Use Plan and Drilling Plan as required by Onshore Order No. 1.

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.

Chesapeake has obtained a verbal agreement with the surface owner Joel Klein, HC12 Box 41, Tatum, NM 88267.

BLM Nationwide Bond #NM2634.

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 6/2/05

*(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

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 NOV 23 2005

See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

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

DISTRICT I
1625 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

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

Form C-102
Revised March 17, 1999

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-37571	33660	Inbe Permo Penn

Property Code	Property Name	Well Number
35268	KLEIN "1" FEDERAL	1

OGRID No.	Operator Name	Elevation
147179	CHESAPEAKE OPERATING INC.	4205'

Surface Location

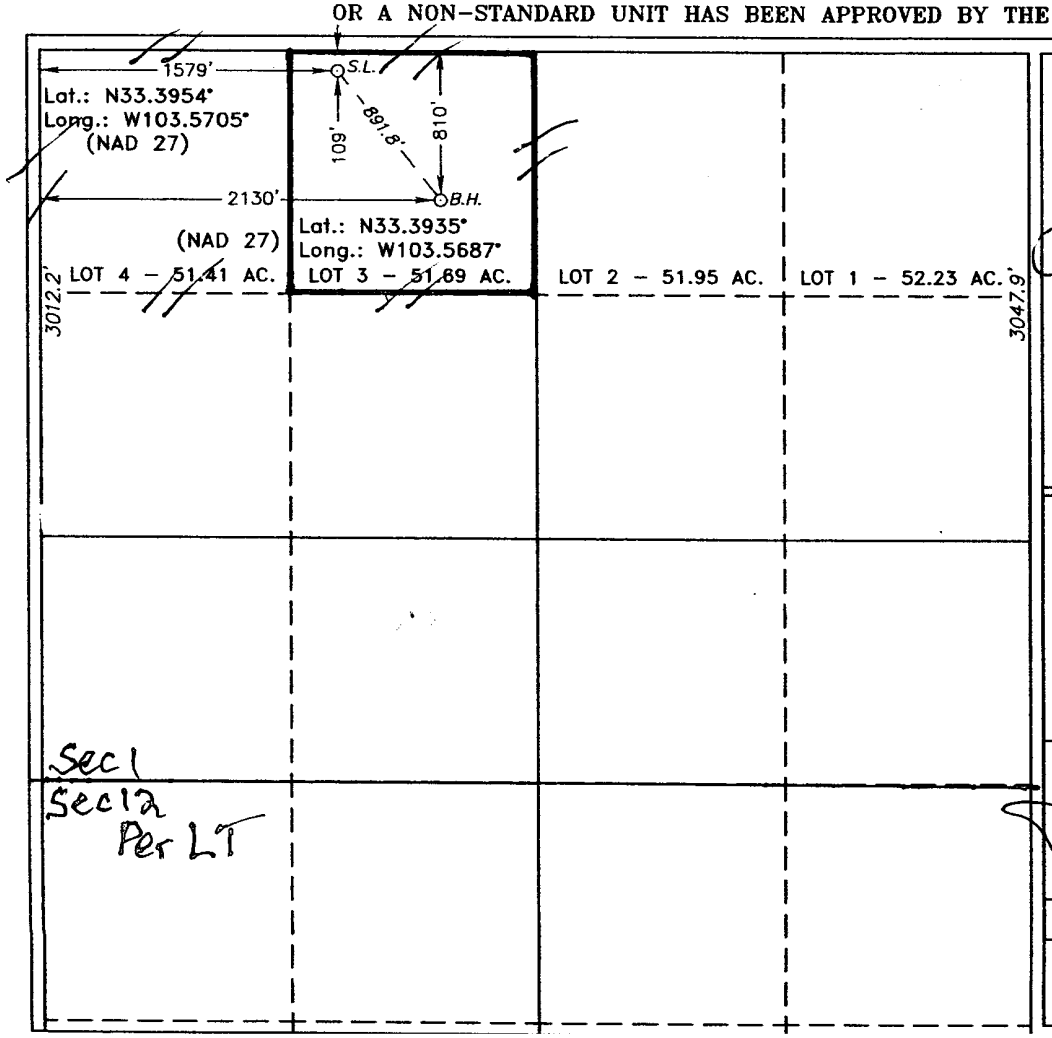
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 3	1	11 S	33 E		109	NORTH	1579	WEST	LEA

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
LOT 3	1	11 S	33 E		810	NORTH	2130	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
103.10			

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.

Signature: Lynda F. Townsend
Printed Name: Lynda F. Townsend
Title: Sr. Landman
Date: 4-19-05

SURVEYOR CERTIFICATION

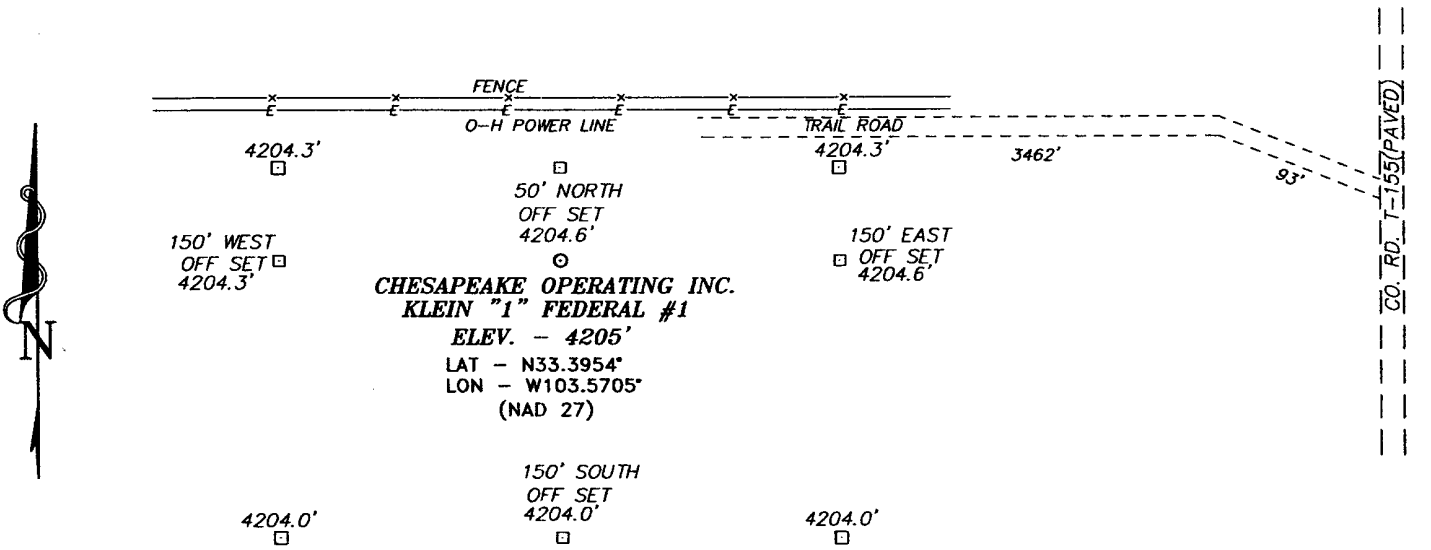
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

APRIL 11, 2005
Date Surveyed
Signature & Seal of Professional Surveyor: Gary L. Jones
NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR BASIN SURVEYS
W.O. No. 5289
Certificate No. Gary L. Jones 7977

Exhibit A1

SECTION 1, TOWNSHIP 11 SOUTH, RANGE 33 EAST, N.M.P.M.,

LEA COUNTY, **NEW MEXICO.**



100 0 100 200 FEET

SCALE: 1" = 100'

Directions to Location:

FROM THE JUNCTION OF US HWY 380 AND CO. RD. T-155, GO NORTH ON T-155 FOR 4.1 MILES TO 2-TRACK ROAD; THENCE WEST ON 2-TRACK ROAD FOR 0.7 MILE TO LOCATION.

CHESAPEAKE OPERATING INC.

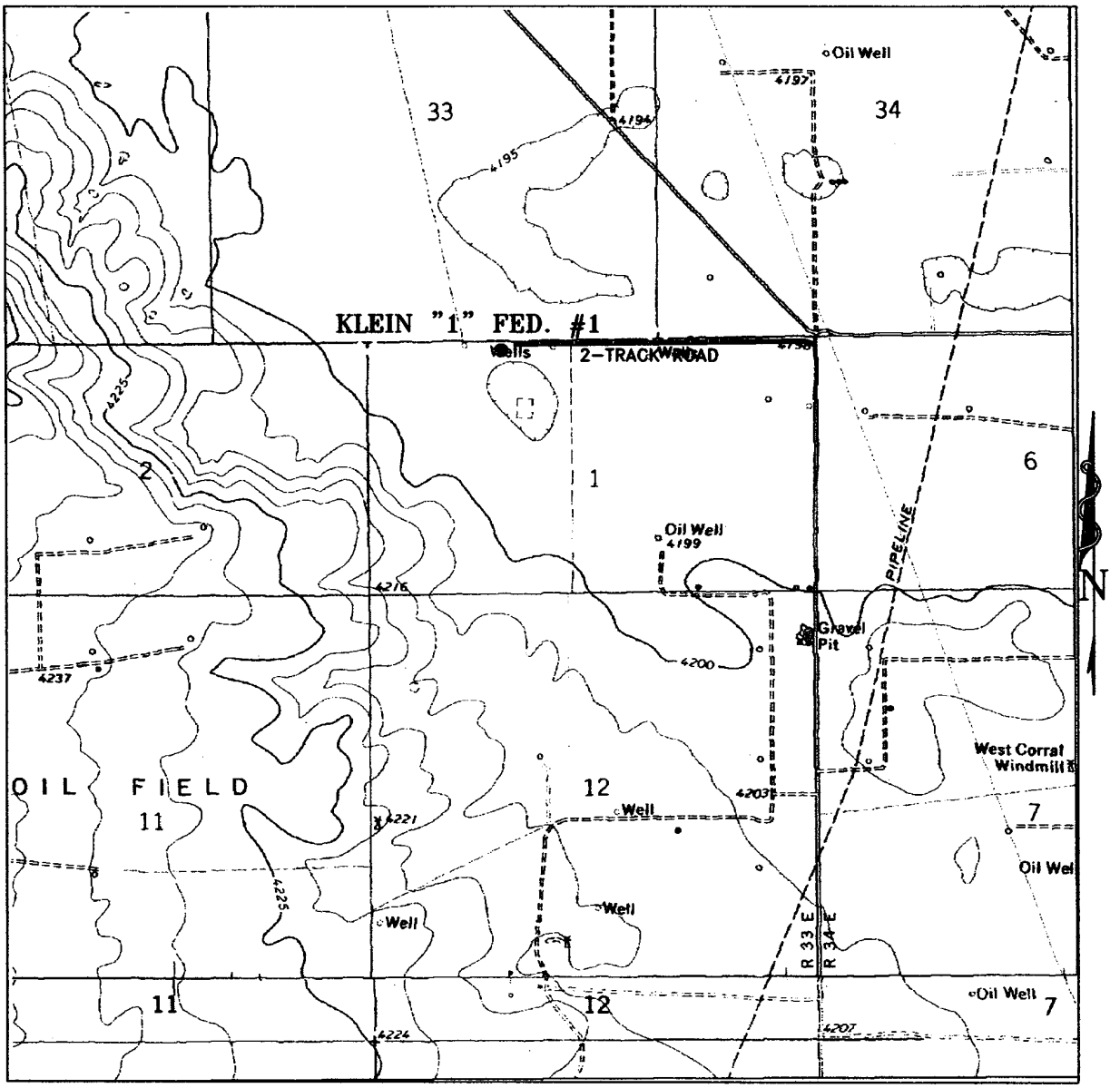
REF: KLEIN "1" FED. #1 / Well Pad Topo

KLEIN "1" FED. #1 LOCATED 109' FROM THE NORTH LINE AND 1579' FROM THE WEST LINE OF SECTION 1, TOWNSHIP 11 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

Exhibit A-2

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

W.O. Number: 5289	Drawn By: K. GOAD		
Date: 04-13-2005	Disk: KJG #1 - 5289A	Survey Date: 04-11-2005	Sheet 1 of 1 Sheets



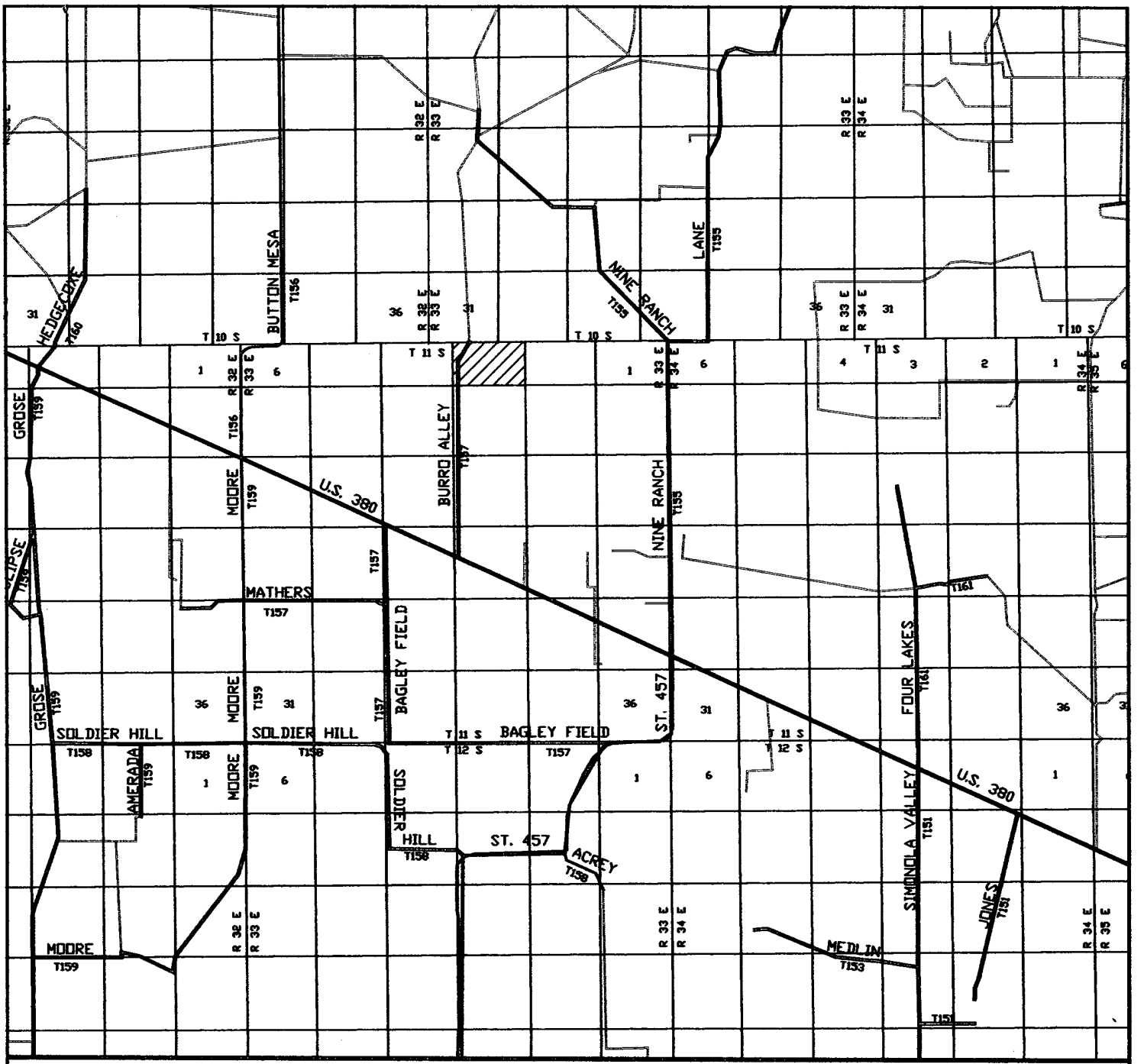
KLEIN "1" FEDERAL #1
Located at 109' FNL and 1579' FWL
Section 1, Township 11 South, Range 33 East,
N.M.P.M., Lea County, New Mexico.

basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	5289AA - KJG #1
Survey Date:	04-11-2005
Scale:	1" = 2000'
Date:	04-13-2005

CHESAPEAKE OPERATING INC.

Exhibit 4-3



KLEIN "1" FEDERAL #1
Located at 109' FNL and 1579' FWL
Section 1, Township 11 South, Range 33 East,
N.M.P.M., Lea County, New Mexico.

Basin Surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	5289AA - KJG #1
Survey Date:	04-11-2005
Scale:	1" = 2 MILES
Date:	04-13-2005

CHESAPEAKE OPERATING INC.

Exhibit A-6

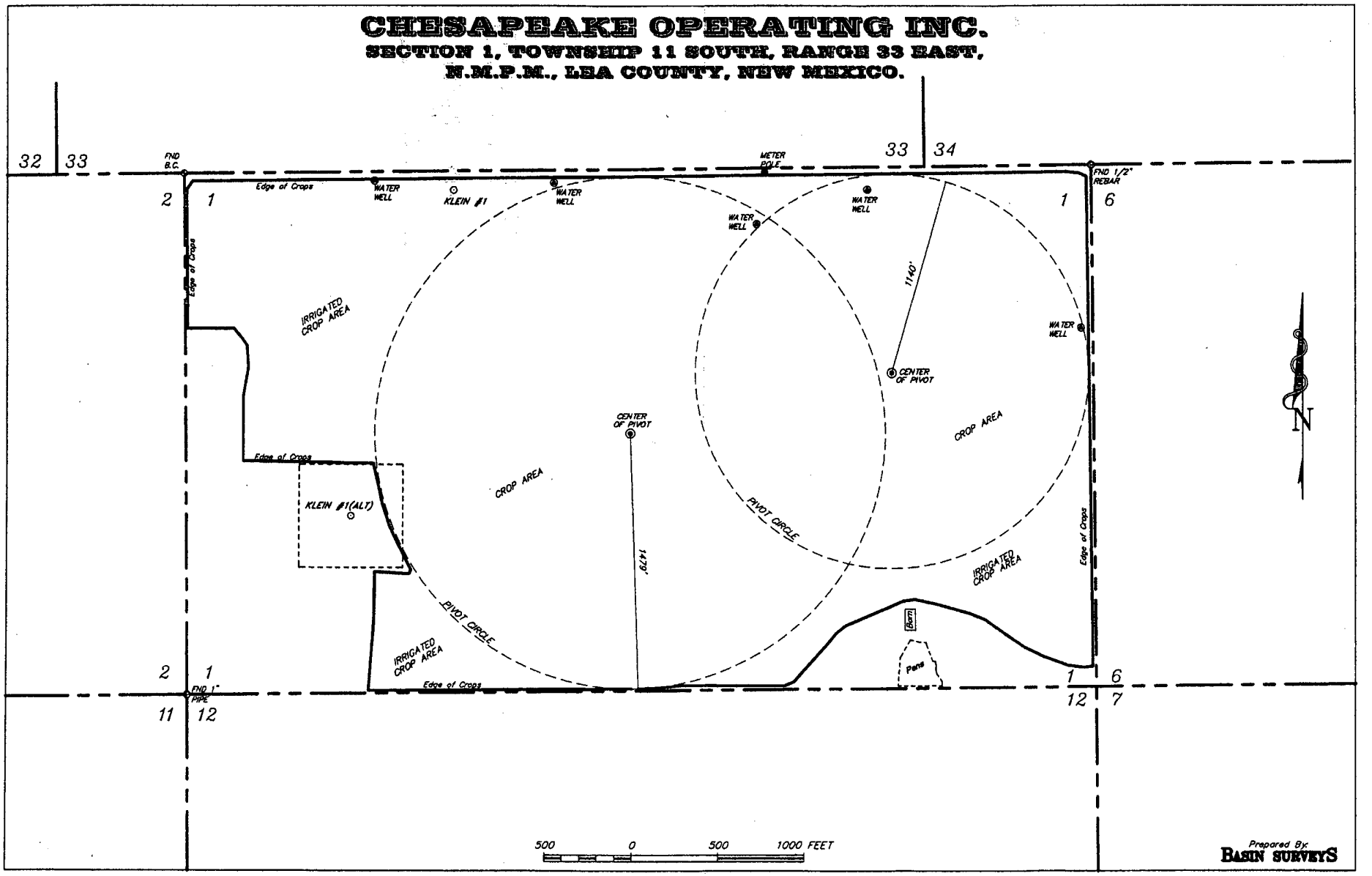

CHESAPEAKE OPERATING INC.
SECTION 1, TOWNSHIP 11 SOUTH, RANGE 33 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.
32
33
33
34
FND B.C.
METER POLE
FND 1/2" REBAR
2
1
1
6
Edge of Crops
WATER WELL
KLEIN #1
WATER WELL
WATER WELL
WATER WELL
WATER WELL
1140'
IRRIGATED CROP AREA
CENTER OF PIVOT
CROP AREA
CENTER OF PIVOT
CROP AREA
KLEIN #1(ALT)
1479'
PIVOT CIRCLE
PIVOT CIRCLE
IRRIGATED CROP AREA
IRRIGATED CROP AREA
Edge of Crops
Edge of Crops
Edge of Crops
Berm
Pens
N
2
1
1
6
FND 1" PIPE
11
12
12
7
500
0
500
1000 FEET
Prepared By:
BASIN SURVEYS

Exhibit A-5

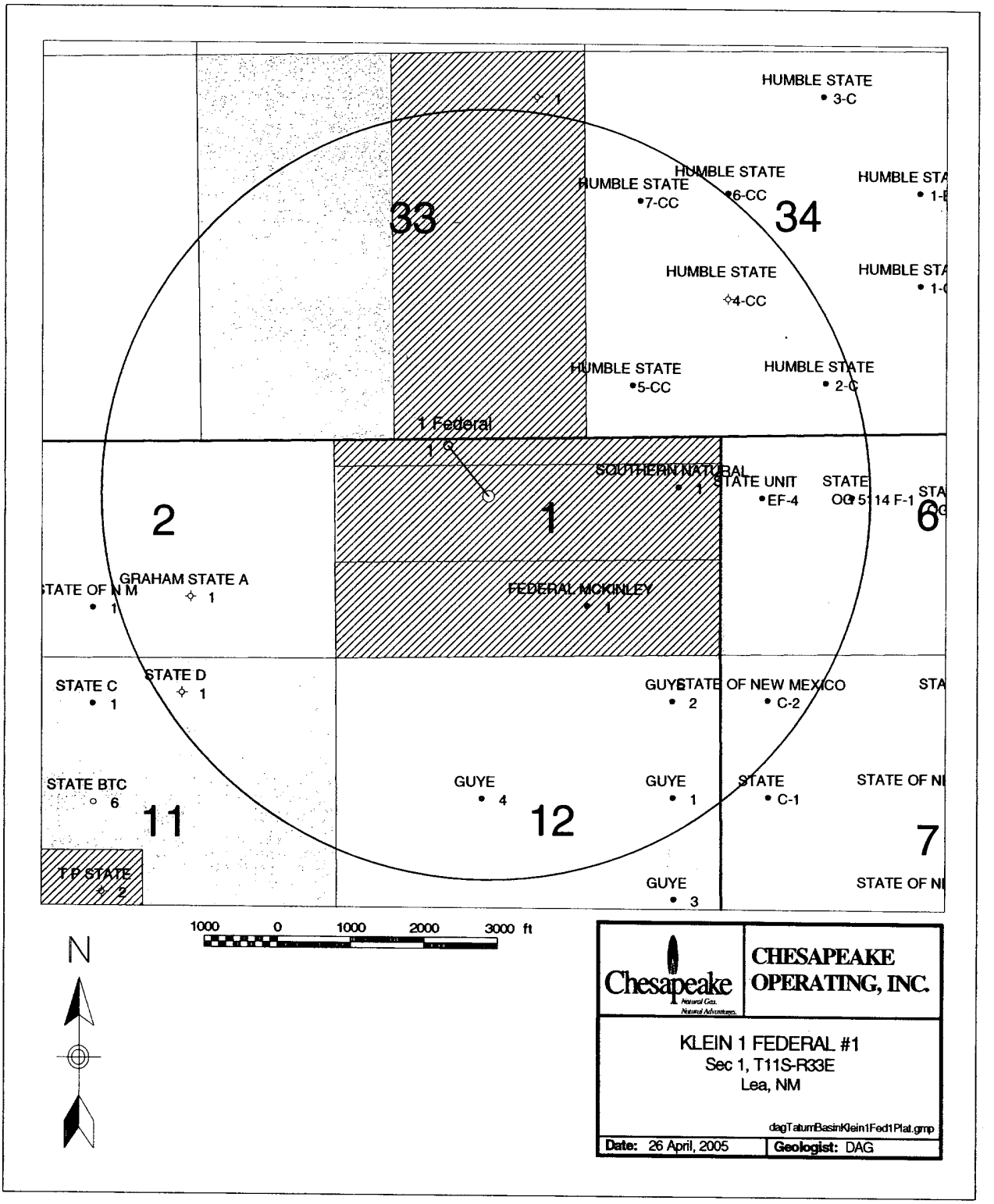

HUMBLE STATE
3-C
HUMBLE STATE
7-CC
HUMBLE STATE
6-CC
HUMBLE STA
1-E
33
34
HUMBLE STATE
4-CC
HUMBLE STA
1-C
HUMBLE STATE
5-CC
HUMBLE STATE
2-C
1 Federal
1
SOUTHERN NATURAL
1
STATE UNIT
EF-4
STATE
OG 5 14 F-1
STA
6
2
1
GRAHAM STATE A
1
STATE OF N M
1
FEDERAL MCKINLEY
1
STATE C
1
STATE D
1
GUYE
2
STATE OF NEW MEXICO
C-2
STA
STATE BTC
6
GUYE
4
GUYE
1
STATE
C-1
STATE OF NI
11
12
7
T P STATE
2
GUYE
3
STATE OF NI
1000 0 1000 2000 3000 ft
N
Chesapeake
Natural Gas. Natural Advantages.
CHESAPEAKE OPERATING, INC.
KLEIN 1 FEDERAL #1
Sec 1, T11S-R33E
Lea, NM
dagTaturnBasinKlein1Fed1Plat.gmp
Date: 26 April, 2005
Geologist: DAG

Exhibit B

Klein 1 Fed #1

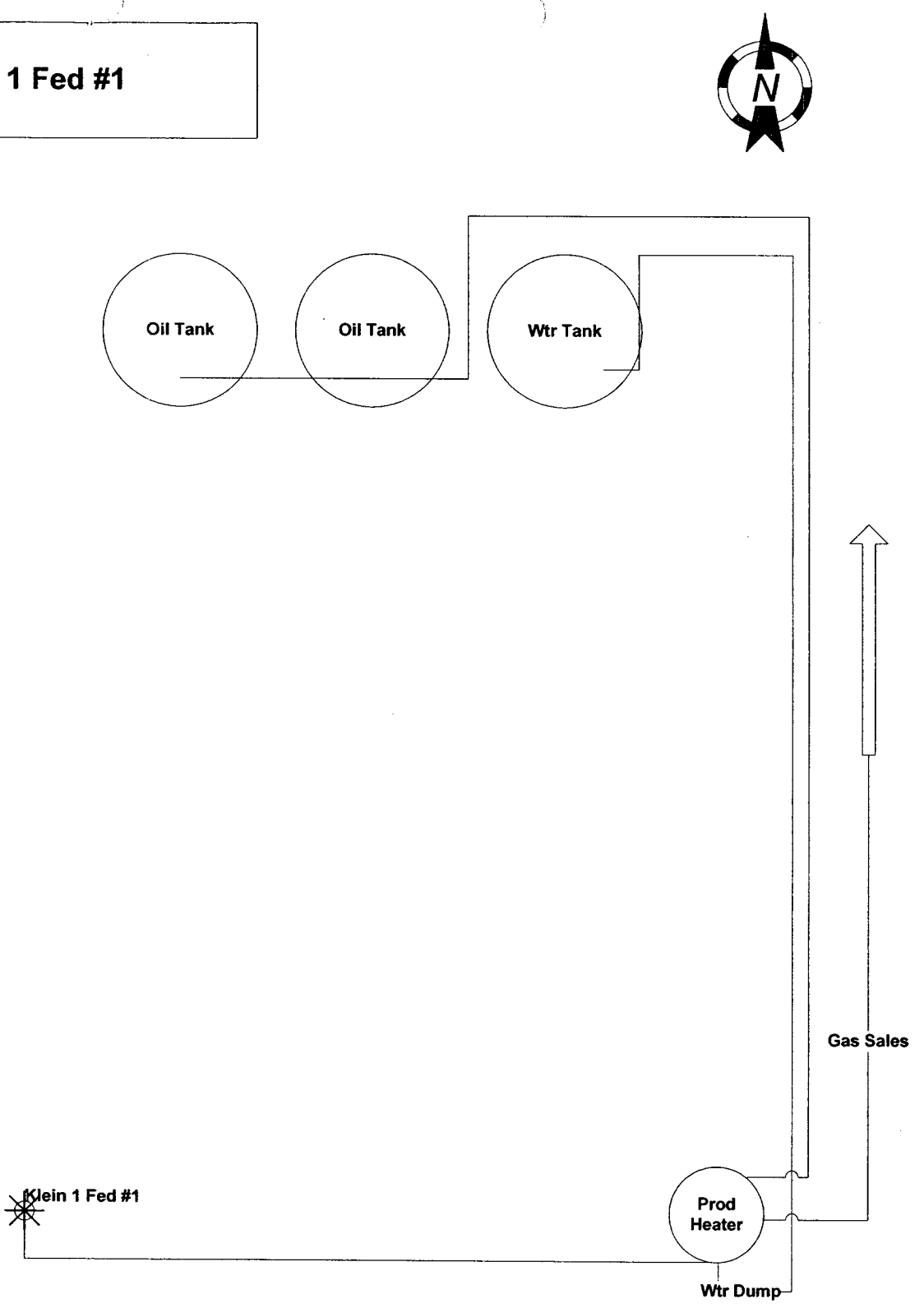


Exhibit C-1

Klein "1" Federal #1 109'N & 1579'W Sec. 1-11-33 Lea Co. NM

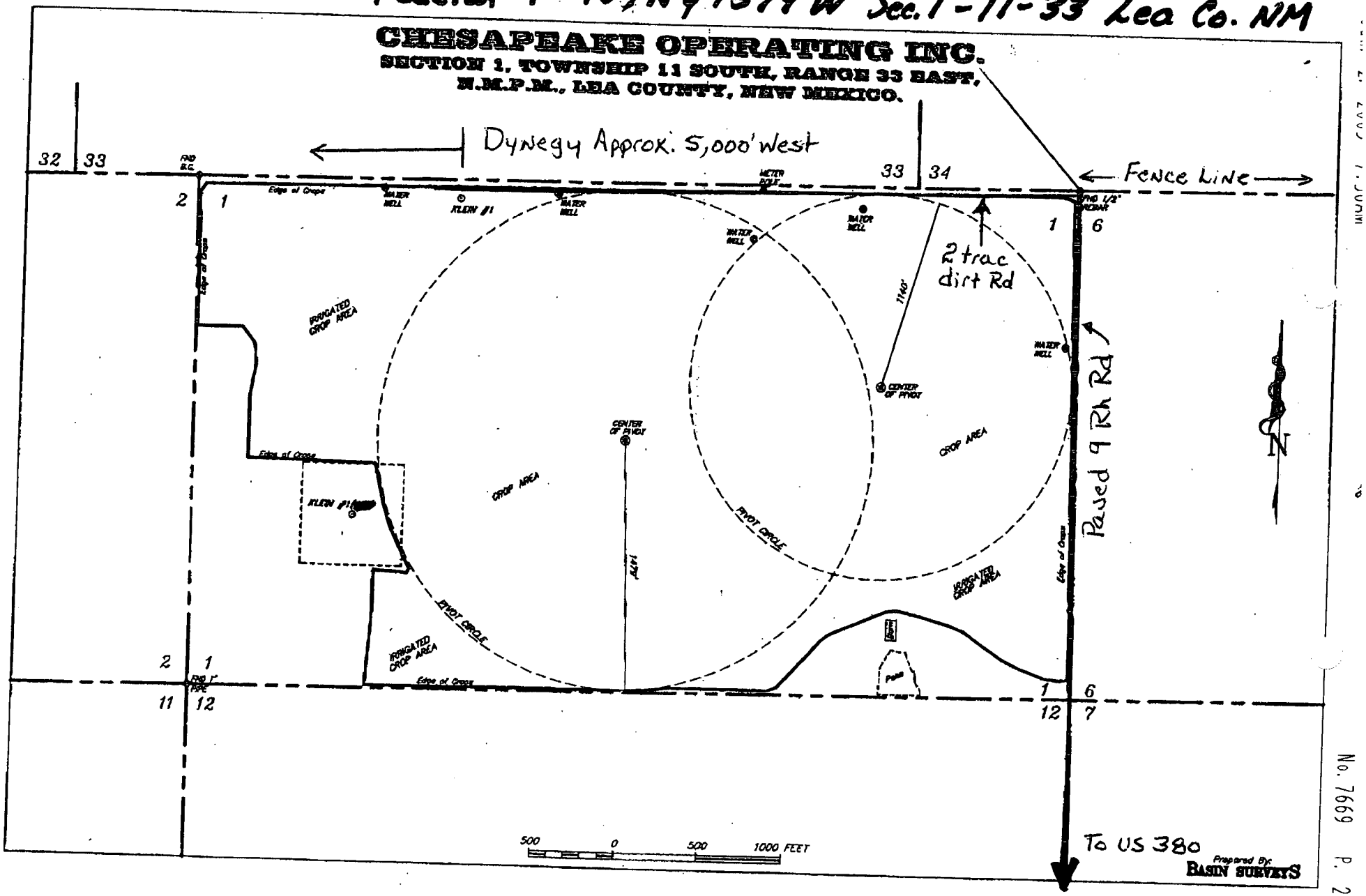


Exhibit C-2

3-12-04

Patterson-UTI Drilling Company

Rig #54

11,500'

DRAWWORKS
Mid Continent U-36-A
Brake: Hydromatic Parkersburg 22" double
Totco Weight Indicator
Brewster 2 engine compound
1 1/8" Drilling Line

ENGINES
Two Cat 3406 engines, 440 HP each

DERRICK
L. C. Moore, 127', 450,000# rated capacity

SUBSTRUCTURE
L. C. Moore, 17' high, 450,000# rated capacity,
KB – 17.5', Rotary Clearance – 13'

MUD PUMPS
Pump #1: Ideco MM700 w/Cat D379, 700 HP
Pump #2: Emsco DB700 w/Cat D379, 700 HP

DRILL STRING
Grade E, 4 ½" , XH drill pipe
30 – 6" x 2 ¼" 30' long drill collars
10 - 8" x 2 ¼" 6 5/8 Reg drill collars

BLOWOUT PREVENTERS
13 5/8" 3000# Shaffer Type E double ram,
13 5/8" 3000# Hydril GK, 80 gal 5 station
Koomey, Air/Electric, 4" 3000# manifold

MUD SYSTEM
1 450 bbl tank and 1 200 bbl premix tank w/5x6 centrifugal pump, 1 electric stirrer

COMMUNICATIONS
24 hour direct cellular telephone

OTHER EQUIPMENT
Blocks. Ideco 250 ton
Hook. Ideco Shorty 160
Swivel. Oilwell PC 300
Rotary Table. Ideco 23" 175 Ton
Shale Shaker. Brandt single double screen
Electrical Power. 1-155 KW 3306
1-210 KW 3306
Fresh Water Storage. Two 500 bbl tanks
Housing.

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

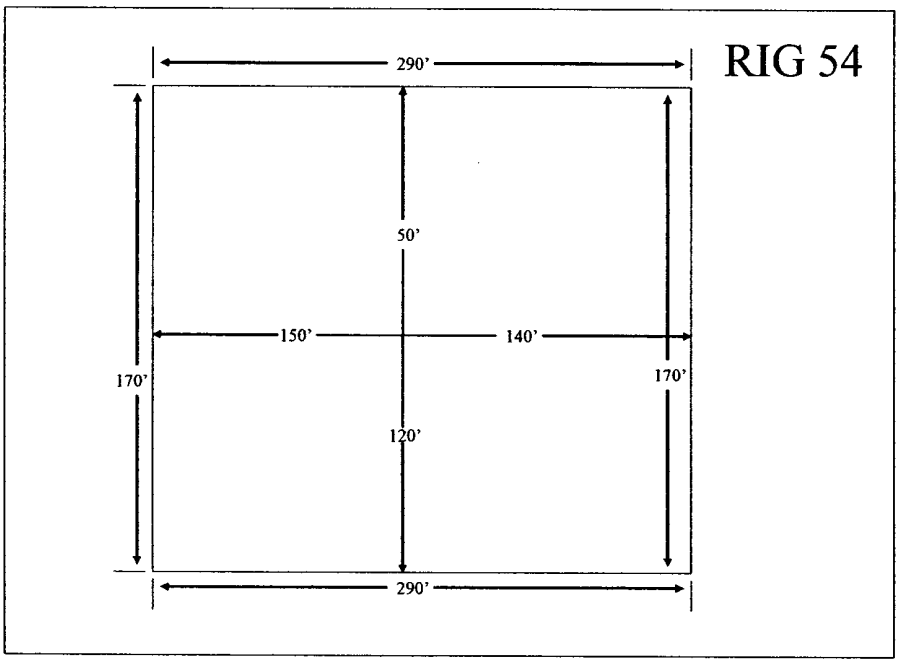


Exhibit D

1. (For BLM Use) BLM Report No.	2. (For BLM Use) Reviewer's Initials/Date_____ Accepted ( ) Rejected ( )	3. NMCRIS Number: 92702

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

5. Title of Report: A Class III Cultural Resource Survey for the Klein "1" Federal No. 1 Well Pad and Access Road Author(s): Justin Rein	6. Fieldwork Date(s): April 27, 2005 7. Report Date: April 28, 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-F 10. Consultant Report No.: BAS-01-05-39
11. Customer Name: Chesapeake Operating, Inc. Responsible Individual: Sharon E. Dries 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)	16.29				16.29
b. Area of Effect (acres)	7.68				7.68

14. Block Length 600 ft Width 600 ft
Linear Length 3,500 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: Tatum, New Mexico

e. Legal Description: T 10 S, R 33 E, Section 33: SW¼ SE¼
T 11 S, R 33 E, Section 1: N½ NW¼, N½ NE¼ (irregular section, template anchored in the northeast corner and along the northern margin)

f. Well Pad Footages: The Klein "1" Fed No. 1 is centered 109 feet from the north line and 1,579 feet from the west line of Section 1.

g. USGS 7.5' Map Name(s), Date(s), and Code(s): Lane Salt Lake, New Mexico 1973 Photorevised 1984 (33103-D5)

Exhibit E

16. **Project Data:**

a. **Records Search:** **Date(s) of BLM File Review:** April 27, 2005 **Name of Reviewer(s):** Justin Rein
Date(s) of ARMS Data Review April 27, 2005 **Name of Reviewer(s):** Justin Rein

Findings (see Field Office requirements to determine area to be reviewed during records search): No previously recorded sites were found within one mile of the project area.

b. **Description of Undertaking:** On April 27, 2005, Justin Rein with Boone Archaeological Services, LLC performed a pedestrian cultural resource survey for the proposed Klein "1" Federal No. 1 well pad and associated access road. Sharon Dries, with Chesapeake Operating, Inc. requested the survey and provided plats. The project can be found in Township 11 South, Range 33 East, Section 1 and Township 10 South, Range 33 East, Section 33. The proposed well is centered 109 feet from the north line and 1,579 feet from the west line of Section 1. An existing two-track road leads from a paved road, 3,500 ft west, to the northeast corner of the proposed well location. This two-track will require upgrading and was therefore surveyed for any potential cultural resources. 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 two-track road. In all, 16.29 acres was surveyed on private 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 located across irrigated crop land roughly 18 miles northwest of Tatum, New Mexico. The elevation averages 4,205 feet above mean sea level. The flat plain slopes gradually downhill, away from a slight rise, towards the northeast at a grade of less than one percent. Local soils are of the Portales-Stegall-Lea association as defined by the Soil Conservation Service of the U.S. Department of Agriculture. A thick carpet of bunch grasses dominates the vegetation and the soil has clearly been tilled. Occasional yucca, thistle, and various low forbes and wild flowers are also included. Due to the vegetative ground cover, surface visibility averaged 65 to 70 percent at the time of survey. A circular irrigated crop area is located within, and beyond, the southeast portion of the project area. A two-track road, barbed-wire fence, and overhead power line travel east to west along the northern portion of the survey. The immediate area is otherwise susceptible to naturally occurring aeolean and alluvial processes.

Meteorological data was obtained for the nearby town of Tatum, New Mexico from the Western Regional Climate Center (WRCC) online database. From 1919 to 2004, Tatum received an average annual precipitation of 16.01 inches. During the same time, Carlsbad had an average high temperature of 74.7 degrees Fahrenheit and an average low temperature of 42.1 degrees Fahrenheit. January was the coldest month averaging 55.4 degrees Fahrenheit, while July was the warmest on average at 92.6 degrees Fahrenheit.

d. **Field Methods (transect intervals; crew size; time in field; etc.):** A crew of one spent 1.5 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

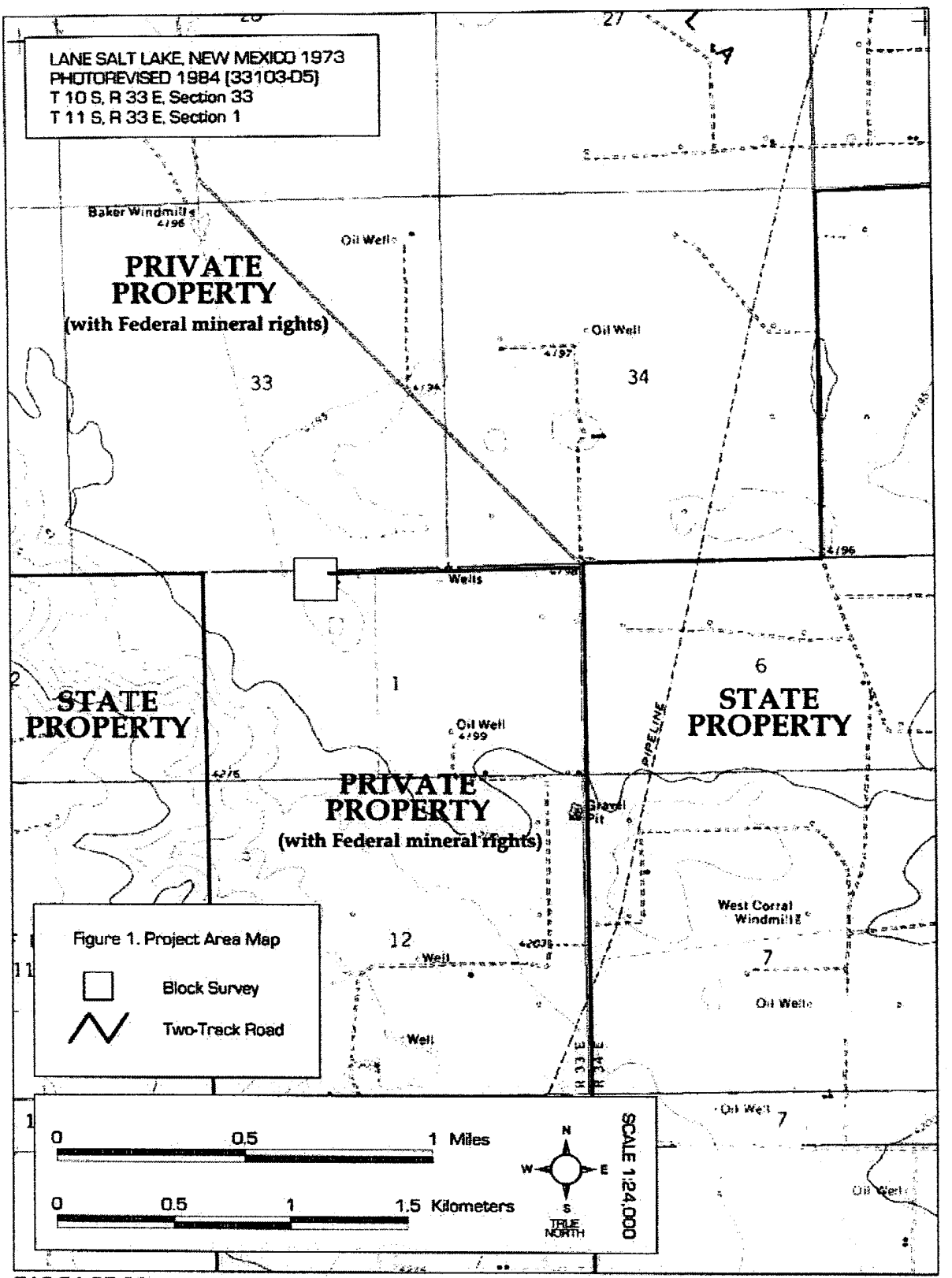
b. **Evaluation of Significance of Each Resource:** N/A

18. **Management Summary (Recommendations):** No cultural materials were encountered during the survey. As such, archaeological clearance is recommended for the proposed Klein "1" Fed No. 1 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 _____ 4.29.05
Signature **Date**


LANE SALT LAKE, NEW MEXICO 1973
PHOTOREVISED 1984 (33103-D5)
T 10 S, R 33 E, Section 33
T 11 S, R 33 E, Section 1
PRIVATE PROPERTY
(with Federal mineral rights)
STATE PROPERTY
PRIVATE PROPERTY
(with Federal mineral rights)
STATE PROPERTY
Baker Windmill
Oil Well
Oil Well
Wells
Oil Well
Gravel Pit
PIPELINE
West Corral Windmill
Oil Well
Oil Well
Oil Well
33
34
1
6
12
7
7
Figure 1. Project Area Map
Block Survey
Two-Track Road
0 0.5 1 Miles
0 0.5 1 1.5 Kilometers
N
W
E
S
TRUE NORTH
SCALE 1:24,000

BAS-01-05-39

BLOWOUT PREVENTO SCHEMATIC

CHESAPEAKE OPERATING INC

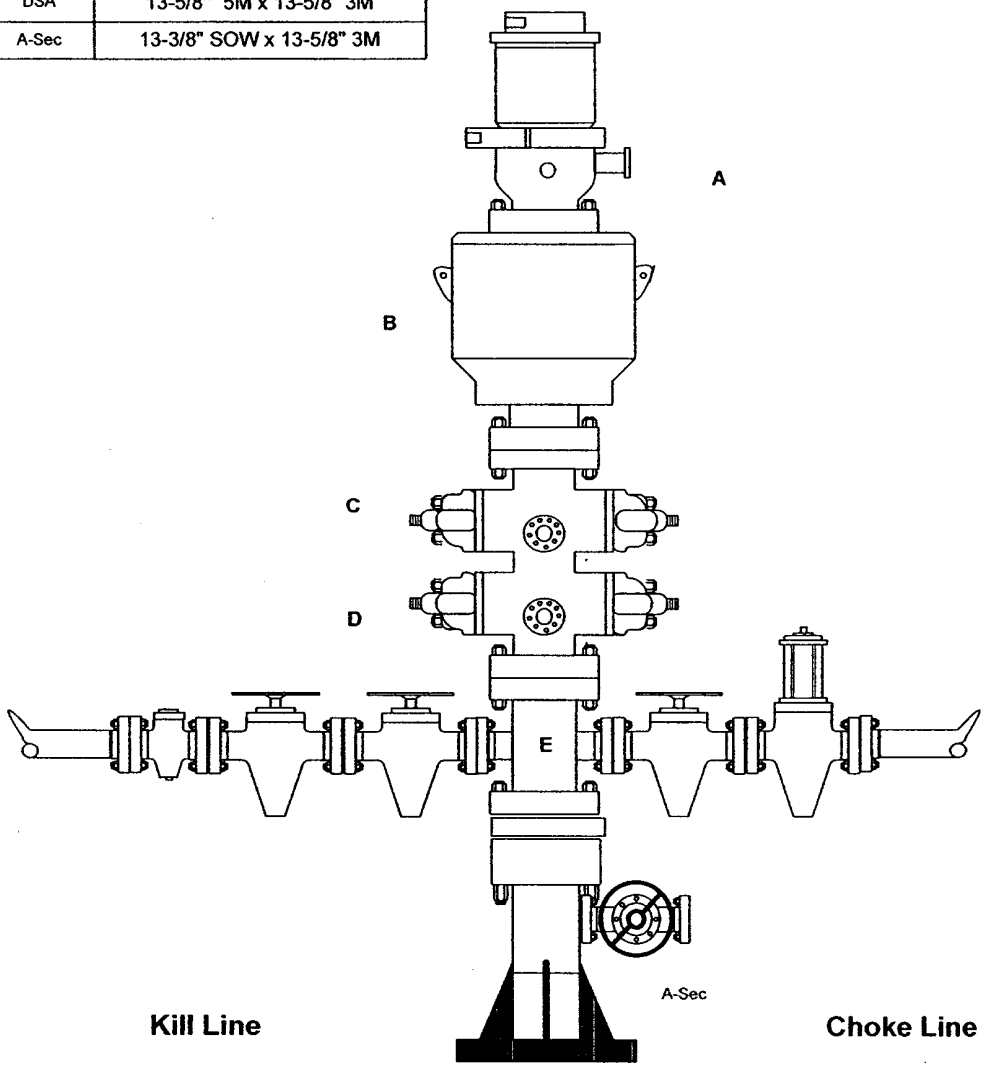
WELL : Klein 1 Federal #1

RIG :

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"	5,000#	Pipe Rams
D	13-5/8"	5,000#	Blind Rams
E	13-5/8"	5,000#	Mud Cross
DSA	13-5/8"" 5M x 13-5/8" 3M		
A-Sec	13-3/8" SOW x 13-5/8" 3M		



Kill Line

SIZE	PRESSURE	DESCRIPTION
2"	5,000#	Check Valve
2"	5,000#	Gate Valve
2"	5,000#	Gate Valve

Choke Line

SIZE	PRESSURE	DESCRIPTION
4"	5,000#	Gate Valve
4"	5,000#	HCR Valve

Exhibit E-1

BLOWOUT PREVENTO. SCHEMATIC

CHESAPEAKE OPERATING INC

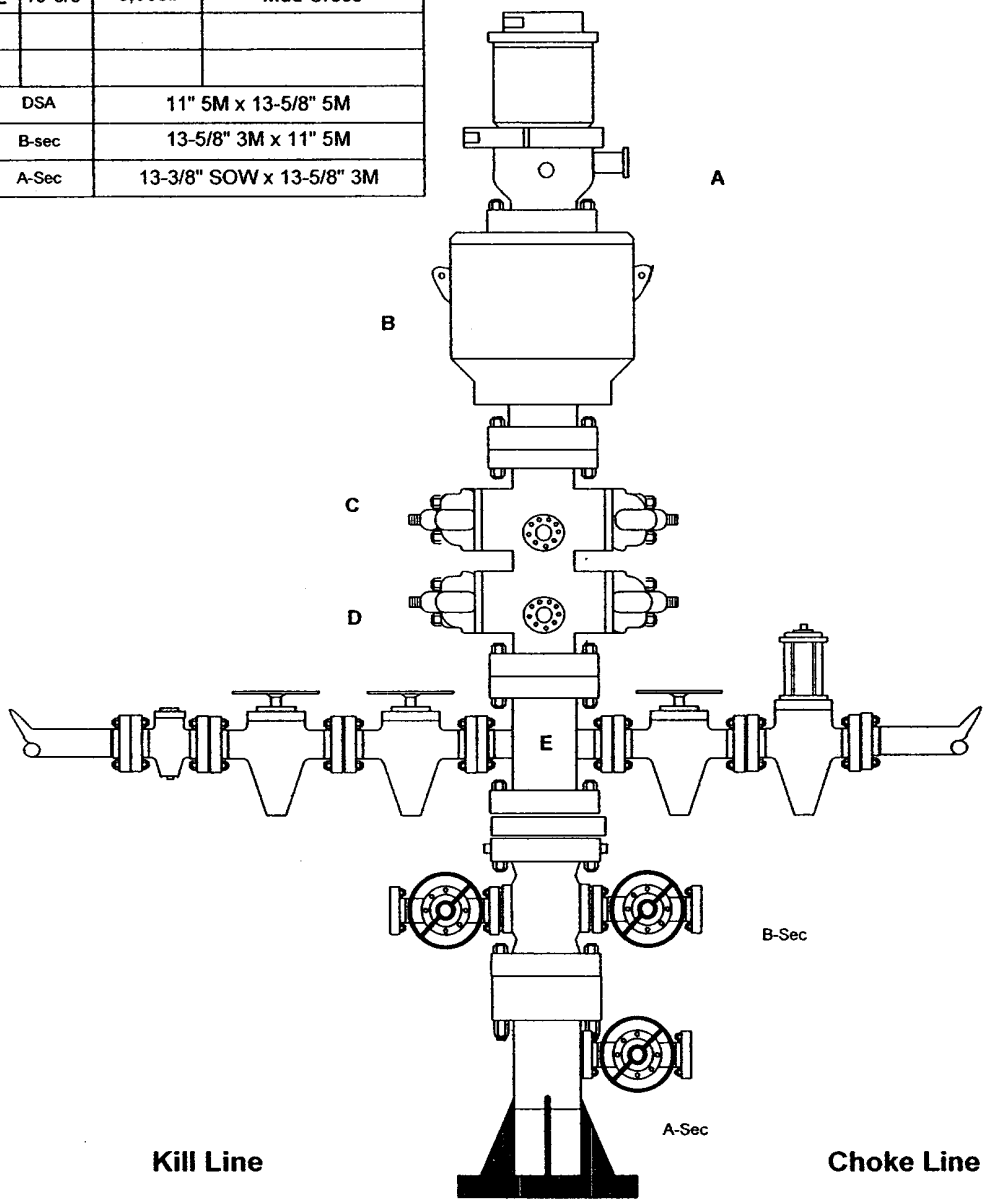
WELL : Klein 1 Federal #1

RIG :

COUNTY : Lea **STATE:** New Mexico

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

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



Kill Line

SIZE	PRESSURE	DESCRIPTION
2"	5,000#	Check Valve
2"	5,000#	Gate Valve
2"	5,000#	Gate Valve

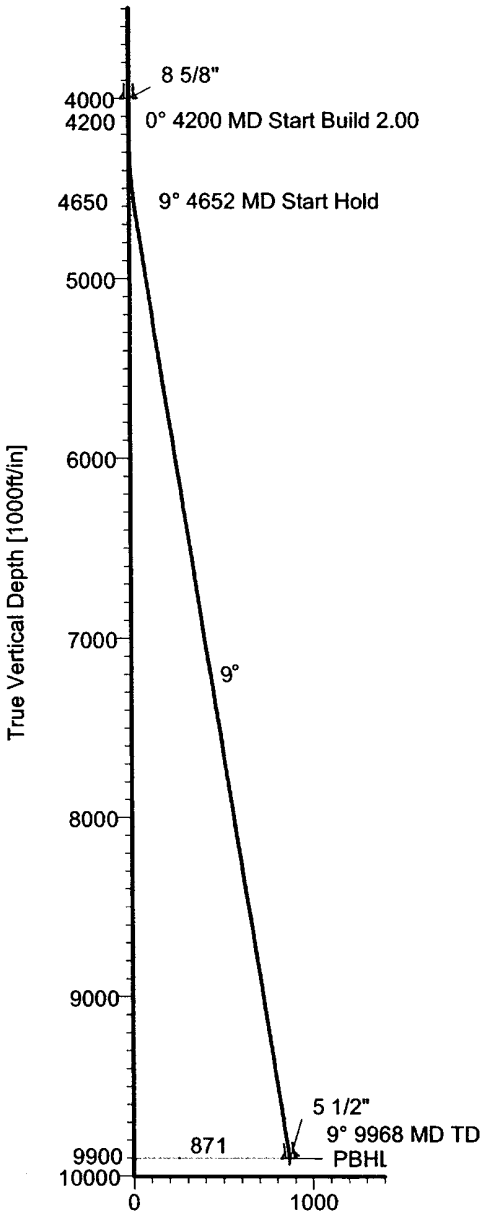
Choke Line

SIZE	PRESSURE	DESCRIPTION
4"	5,000#	Gate Valve
4"	5,000#	HCR Valve

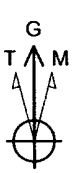
Exhibit E-2

CHESAPEAKE ENERGY CORPORATION
Field: Lea County, New Mexico
Site: Klein 1
Well: Federal 1
Wellpath: Original Hole
Plan: Plan #2

Chesapeake
Natural Gas.
Natural Advantages.

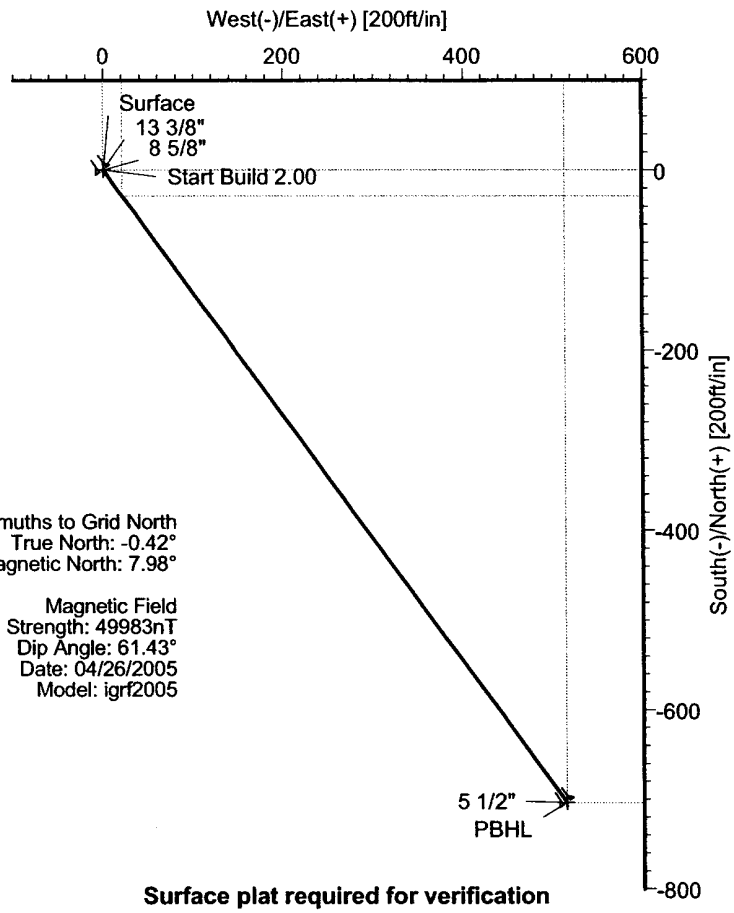


Vertical Section at 143.86° [1000ft/in]



Azimuths to Grid North
True North: -0.42°
Magnetic North: 7.98°

Magnetic Field
Strength: 49983nT
Dip Angle: 61.43°
Date: 04/26/2005
Model: igrf2005



Surface plat required for verification

CASING DETAILS

No.	TVD	MD	Name	Size
1	450.00	450.00	13 3/8"	13.375
2	4000.00	4000.00	8 5/8"	8.625
3	9900.00	9967.99	5 1/2"	5.500

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Surface	0.00	0.00	0.00	872178.92	732894.14	33°23'43.000N	103°34'13.000W	Point
PBHL	9900.00	-703.75	513.90	871475.16	733408.04	33°23'36.000N	103°34'07.000W	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	143.86	0.00	0.00	0.00	0.00	0.00	0.00	
2	4200.00	0.00	143.86	4200.00	0.00	0.00	0.00	0.00	0.00	
3	4652.31	9.05	143.86	4650.43	-28.78	21.01	2.00	143.86	35.63	
4	9967.99	9.05	143.86	9900.00	-703.75	513.90	0.00	0.00	871.41	PBHL

STRATA DIRECTIONAL TECHNOLOGY, INC.
1034 Regional Park Drive Houston, Texas 77060
Phone: 713-934-9600 Fax: 713-934-9067

Plan: Plan #2 (Federal 1/Original Hole)
Created By: Nora Tucker Date: 04/26/2005
Checked: _____ Date: _____

Exhibit A-1

Strata Directional Technology, Inc.
Planning Report

Company:	CHESAPEAKE ENERGY CORPORATION	**Date:** 04/26/2005	**Time:** 13:46:42	**Page:**	1
Field:	Lea County, New Mexico	**Co-ordinate(NE) Reference:**	Site: Klein 1, Grid North		
Site:	Klein 1	**Vertical (TVD) Reference:**	SITE 0.0		
Well:	Federal 1	**Section (VS) Reference:**	Well (0.00N,0.00E,143.86Azi)		
Wellpath:	Original Hole	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Adapti

Field: Lea County, New Mexico

Map System:	US State Plane Coordinate System 1927	**Map Zone:**	New Mexico, Eastern Zone
Geo Datum:	NAD27 (Clarke 1866)	**Coordinate System:**	Site Centre
Sys Datum:	Mean Sea Level	**Geomagnetic Model:**	igrf2005

Site: Klein 1

Site Position:		**Northing:**	872178.92 ft	**Latitude:**	33 23 43.000	N	
From:	Geographic	**Easting:**	732894.14 ft	**Longitude:**	103 34 13.000	W	
Position Uncertainty:	0.00 ft			**North Reference:**	Grid		
Ground Level:	0.00 ft			**Grid Convergence:**	0.42	deg	

Well: Federal 1 **Slot Name:**

Well Position:	+N/-S 0.00 ft	**Northing:**	872178.92 ft	**Latitude:**	33 23 43.000	N	
	+E/-W 0.00 ft	**Easting :**	732894.14 ft	**Longitude:**	103 34 13.000	W	
Position Uncertainty:	0.00 ft						

Wellpath: Original Hole

Drilled From:	Surface				
Tie-on Depth:	0.00 ft				
Current Datum:	SITE	**Height**	0.00 ft	**Above System Datum:**	Mean Sea Level
Magnetic Data:	04/26/2005			**Declination:**	8.40 deg
Field Strength:	49983 nT			**Mag Dip Angle:**	61.43 deg

Vertical Section:	**Depth From (TVD)** ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
	0.00	0.00	0.00	143.86

Plan:	Plan #2	**Date Composed:**	04/26/2005
		Version:	1
Principal:	No	**Tied-to:**	From Surface

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	143.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4200.00	0.00	143.86	4200.00	0.00	0.00	0.00	0.00	0.00	0.00	
4652.31	9.05	143.86	4650.43	-28.78	21.01	2.00	2.00	0.00	143.86	
9967.99	9.05	143.86	9900.00	-703.75	513.90	0.00	0.00	0.00	0.00	PBHL

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
4200.00	0.00	143.86	4200.00	0.00	0.00	0.00	0.00	0.00	0.00	
4300.00	2.00	143.86	4299.98	-1.41	1.03	1.75	2.00	2.00	0.00	
4400.00	4.00	143.86	4399.84	-5.64	4.12	6.98	2.00	2.00	0.00	
4500.00	6.00	143.86	4499.45	-12.67	9.25	15.69	2.00	2.00	0.00	
4600.00	8.00	143.86	4598.70	-22.52	16.44	27.88	2.00	2.00	0.00	
4652.31	9.05	143.86	4650.43	-28.78	21.01	35.63	2.00	2.00	0.00	
4700.00	9.05	143.86	4697.53	-34.83	25.44	43.13	0.00	0.00	0.00	
4800.00	9.05	143.86	4796.29	-47.53	34.71	58.85	0.00	0.00	0.00	
4900.00	9.05	143.86	4895.04	-60.23	43.98	74.58	0.00	0.00	0.00	
5000.00	9.05	143.86	4993.80	-72.93	53.25	90.30	0.00	0.00	0.00	
5100.00	9.05	143.86	5092.55	-85.62	62.52	106.02	0.00	0.00	0.00	
5200.00	9.05	143.86	5191.31	-98.32	71.80	121.75	0.00	0.00	0.00	
5300.00	9.05	143.86	5290.07	-111.02	81.07	137.47	0.00	0.00	0.00	
5400.00	9.05	143.86	5388.82	-123.72	90.34	153.19	0.00	0.00	0.00	
5500.00	9.05	143.86	5487.58	-136.42	99.61	168.91	0.00	0.00	0.00	
5600.00	9.05	143.86	5586.34	-149.11	108.89	184.64	0.00	0.00	0.00	
5700.00	9.05	143.86	5685.09	-161.81	118.16	200.36	0.00	0.00	0.00	

Exhibit G-2

Strata Directional Technology, Inc.
Planning Report

Company:	CHESAPEAKE ENERGY CORPORATION	**Date:** 04/26/2005	**Time:** 13:46:42	**Page:**	2
Field:	Lea County, New Mexico	**Co-ordinate(NE) Reference:**	Site: Klein 1, Grid North		
Site:	Klein 1	**Vertical (TVD) Reference:**	SITE 0.0		
Well:	Federal 1	**Section (VS) Reference:**	Well (0.00N,0.00E,143.86Azi)		
Wellpath:	Original Hole	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Adapti

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
5800.00	9.05	143.86	5783.85	-174.51	127.43	216.08	0.00	0.00	0.00	
5900.00	9.05	143.86	5882.60	-187.21	136.70	231.81	0.00	0.00	0.00	
6000.00	9.05	143.86	5981.36	-199.90	145.97	247.53	0.00	0.00	0.00	
6100.00	9.05	143.86	6080.12	-212.60	155.25	263.25	0.00	0.00	0.00	
6200.00	9.05	143.86	6178.87	-225.30	164.52	278.97	0.00	0.00	0.00	
6300.00	9.05	143.86	6277.63	-238.00	173.79	294.70	0.00	0.00	0.00	
6400.00	9.05	143.86	6376.39	-250.70	183.06	310.42	0.00	0.00	0.00	
6500.00	9.05	143.86	6475.14	-263.39	192.34	326.14	0.00	0.00	0.00	
6600.00	9.05	143.86	6573.90	-276.09	201.61	341.87	0.00	0.00	0.00	
6700.00	9.05	143.86	6672.65	-288.79	210.88	357.59	0.00	0.00	0.00	
6800.00	9.05	143.86	6771.41	-301.49	220.15	373.31	0.00	0.00	0.00	
6900.00	9.05	143.86	6870.17	-314.19	229.43	389.04	0.00	0.00	0.00	
7000.00	9.05	143.86	6968.92	-326.88	238.70	404.76	0.00	0.00	0.00	
7100.00	9.05	143.86	7067.68	-339.58	247.97	420.48	0.00	0.00	0.00	
7200.00	9.05	143.86	7166.44	-352.28	257.24	436.20	0.00	0.00	0.00	
7300.00	9.05	143.86	7265.19	-364.98	266.51	451.93	0.00	0.00	0.00	
7400.00	9.05	143.86	7363.95	-377.67	275.79	467.65	0.00	0.00	0.00	
7500.00	9.05	143.86	7462.70	-390.37	285.06	483.37	0.00	0.00	0.00	
7600.00	9.05	143.86	7561.46	-403.07	294.33	499.10	0.00	0.00	0.00	
7700.00	9.05	143.86	7660.22	-415.77	303.60	514.82	0.00	0.00	0.00	
7800.00	9.05	143.86	7758.97	-428.47	312.88	530.54	0.00	0.00	0.00	
7900.00	9.05	143.86	7857.73	-441.16	322.15	546.26	0.00	0.00	0.00	
8000.00	9.05	143.86	7956.49	-453.86	331.42	561.99	0.00	0.00	0.00	
8100.00	9.05	143.86	8055.24	-466.56	340.69	577.71	0.00	0.00	0.00	
8200.00	9.05	143.86	8154.00	-479.26	349.96	593.43	0.00	0.00	0.00	
8300.00	9.05	143.86	8252.75	-491.96	359.24	609.16	0.00	0.00	0.00	
8400.00	9.05	143.86	8351.51	-504.65	368.51	624.88	0.00	0.00	0.00	
8500.00	9.05	143.86	8450.27	-517.35	377.78	640.60	0.00	0.00	0.00	
8600.00	9.05	143.86	8549.02	-530.05	387.05	656.32	0.00	0.00	0.00	
8700.00	9.05	143.86	8647.78	-542.75	396.33	672.05	0.00	0.00	0.00	
8800.00	9.05	143.86	8746.53	-555.44	405.60	687.77	0.00	0.00	0.00	
8900.00	9.05	143.86	8845.29	-568.14	414.87	703.49	0.00	0.00	0.00	
9000.00	9.05	143.86	8944.05	-580.84	424.14	719.22	0.00	0.00	0.00	
9100.00	9.05	143.86	9042.80	-593.54	433.41	734.94	0.00	0.00	0.00	
9200.00	9.05	143.86	9141.56	-606.24	442.69	750.66	0.00	0.00	0.00	
9300.00	9.05	143.86	9240.32	-618.93	451.96	766.39	0.00	0.00	0.00	
9400.00	9.05	143.86	9339.07	-631.63	461.23	782.11	0.00	0.00	0.00	
9500.00	9.05	143.86	9437.83	-644.33	470.50	797.83	0.00	0.00	0.00	
9600.00	9.05	143.86	9536.58	-657.03	479.78	813.55	0.00	0.00	0.00	
9700.00	9.05	143.86	9635.34	-669.73	489.05	829.28	0.00	0.00	0.00	
9800.00	9.05	143.86	9734.10	-682.42	498.32	845.00	0.00	0.00	0.00	
9900.00	9.05	143.86	9832.85	-695.12	507.59	860.72	0.00	0.00	0.00	
9967.99	9.05	143.86	9900.00	-703.75	513.90	871.41	0.00	0.00	0.00	PBHL

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<— Latitude —> Deg Min Sec	<— Longitude —> Deg Min Sec
Surface			0.00	0.00	0.00	872178.92	732894.14	33 23 43.000 N	103 34 13.000 W
PBHL -Plan hit target			9900.00	-703.75	513.90	871475.16	733408.04	33 23 36.000 N	103 34 7.000 W

Strata Directional Technology, Inc.
Planning Report

Company:	CHESAPEAKE ENERGY CORPORATION	**Date:** 04/26/2005	**Time:** 13:46:42	**Page:**	3
Field:	Lea County, New Mexico	**Co-ordinate(NE) Reference:**	Site: Klein 1, Grid North		
Site:	Klein 1	**Vertical (TVD) Reference:**	SITE 0.0		
Well:	Federal 1	**Section (VS) Reference:**	Well (0.00N,0.00E,143.86Azi)		
Wellpath:	Original Hole	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Adapti

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
450.00	450.00	13.375	17.500	13 3/8"
4000.00	4000.00	8.625	9.875	8 5/8"
9967.99	9900.00	5.500	6.500	5 1/2"

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	1855	2350	
Yates	2570	1635	
Seven Rivers	2775	1430	
Queen	3275	930	
San Andres	3865	340	
*San Andres PI mkr	4395	-190	(OIL)
Glorieta	5280	-1075	
Tubb	6720	-2515	
*Abo	7540	-3335	(OIL)
Wolfcamp	8790	-4540	
*Bough C	9605	-5400	(OIL)
TD	9900		

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
Oil/Gas	San Andres Pl mkr	4395
Oil/Gas	Abo	7540
Oil/Gas	Bough C	9605

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

3. BOP EQUIPMENT: 3,000# 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 and F-2.

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~~. BURST PRESSURE
7. A record of all pressures will be made on a pressure-recording chart.

* See STIPS

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	0-425'	17-1/2"	13-3/8"	48#	H40	STC	New
Intermediate	425'-4,000'	11"	8-5/8"	24#	J55	STC	New
Production	4,000' – 9,800'	7-7/8"	5-1/2"	17#	L80	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
Surface	35:65 Poz:C (Lead)	245 sx	1.75	20%	100%
	Class C (Tail)	150 sx	1.34		100%
Intermediate	50:50 Poz:C (Lead)	880 sx	2.37	20%	75%
	Class C (Tail)	150 sx	1.34		50%
Production	50:50 Poz:H (Lead)	290 sx	1.94	10%	25%
	50:50 Poz:H (Tail)	425 sx	1.71		25%

5. MUD PROGRAM

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

Interval	Mud Type	Mud Weight	Viscosity	Fluid Loss
Surface	Native/Spud Mud	8.4 – 9.0	29 - 34	N/C
Intermediate	Brine	8.4 – 10.2	28 - 33	N/C
Production	FW-Cut Brine	8.4 – 9.0	28 - 45	10 - 8

A closed system will be utilized consisting of above ground steel tanks. 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-toliet and then hauled to an approved sanitary landfill.

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 3400 psi. No abnormal pressures or temperatures are anticipated.
b. Hydrogen sulfide gas is not anticipated.

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 two-track road will be improved for the access road. The two-track road is 3555' in length. An access road of 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 Tatum, New Mexico, travel West to Hwy 457, then turn North for 4.1 miles. Turn West before Cattle guard for 0.5 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 that production facilities will be located on the well pad as product will be sold at the wellhead and/or tank battery. Pipeline will be provided for gas sales by Dynegy. – see Exhibit C1-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 4-20S-33E. All material (i.e. shale) will be acquired from private or commercial sources.

7. METHODS FOR HANDLING WASTE DISPOSAL

A closed loop system will be utilized consisting of above ground steel tanks. 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-toliet and then hauled to an approved sanitary landfill.

All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations.

8. ANCILLARY FACILITIES

None

9. WELLSITE LAYOUT

The proposed site layout plat is attached showing the Patterson Rig #54. 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 New Mexico Oil Conservation Division 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 OWNERSHIP

Ed & Joel Klein
HC 1 Box 41
Tatum, NM 88267
505-398-6670 (home)
505-631-6648 (cell)

Mineral Ownership
United States of America
Department of Interior
Bureau of Land Management

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
Jeff Finnell
P.O. Box 18496
Oklahoma City, OK 73154-0496
405-767-4347 (OFFICE)
405-879-7930 (FAX)
jfinnell@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

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 Tester

Date: 6/2/05

SPECIAL DRILLING STIPULATIONS

THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

Operator's Name Chesapeake Operating Inc. Well Name & No. Klein Federal #1
Location 109 F N L & 1579 F W L Sec. 1, T. 11 S, R 33 E. SHL
Lease No. NM-112936 County Lea State New Mexico
Location 810' FNL & 2130' FWL Sec. 1, T.11S., R.33E. BHL

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 (x) 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.

(X) Other. Closed loop system

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 of ½ inch) with the following seed mixture, in pounds of Pure Live Seed (PLS), per acre.

( ) 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.

(X) Other. Reclamation will be done in accordance with land owner agreement.

RESERVE PIT CONSTRUCTION STANDARDS

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: Klein 1 Federal # 01
Location: Surface 109' FNL & 1579' FWL, BHL: 810'FNL & 2130' FWL
Section: 01, T. 11 S. R. 33 E.
Lease: NMNM 112936
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 8 ⅝ inch 5 ½ inch

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 425 **Feet** 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.

2. The minimum required fill of cement behind the 8 ⅝ inch Intermediate casing is to **circulate.**

3. The minimum required fill of cement behind the 5 ½ inch Production casing is to **Tie Back past the 8 ⅝ casing shoe by at least 200 Ft.(sealing of the Glorieta is essential).**

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.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 3M **psi.**

III. Pressure Control (continued):

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-112936
Company Reference: Chesapeake Operating Inc.
Well No. & Name: Klein Federal #1

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).

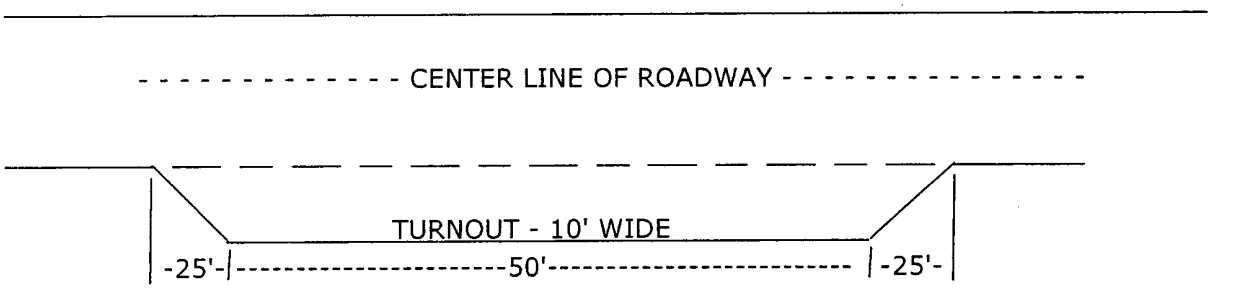
C. On road slopes exceeding 2%, drainage dips shall drain water into an adjacent lead-off ditch. Drainage dip location and spacing shall be determined by the formula:

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. 30-025-37571
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: Klein 1 Federal
1. Type of Well: Oil Well ☒ Gas Well ☐ Other
8. Well Number 1
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: INBE;Pennsylvanian

4. Well Location
Unit Letter Lot3 : 109 feet from the North line and 1579 feet from the West line
Section 1 Township 11S Range 33E NMPM County Lea

11. Elevation (*Show whether DR, RKB, RT, GR, etc.*) 4205'

Pit or Below-grade Tank Application ☒ or Closure ☐
Pit type Drilling Depth to Groundwater 25' Distance from nearest fresh water well <500' Distance from nearest surface water 1000
Pit Liner Thickness: mil Below-Grade Tank: Volume 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:Drilling Pit Application			☒	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 will use a closed loop system for this well.

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 11/28/2005

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

For State Use Only

APPROVED BY: TITLE PETROLEUM ENGINEER DATE DEC 06 2005

Conditions of Approval (if any):