Form 3160-3
(April 2004)

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HOBBS OCD

ATS-08-254

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NM 117557 (~~NM-44106~~)

6. If Indian, Allotee or Tribe Name

1a. Type of work: [X] DRILL [ ] REENTER

7 If Unit or CA Agreement, Name and No.

1b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone

8. Lease Name and Well No. (37113)
BAM BAM "27"FEDERAL COM # 1

2. Name of Operator (249099)
CAZA OPERATING, LLC. (RICHARD WRIGHT 432-682-7424 EXT 1006)

9. API Well No.
30-025-38861

3a. Address 200 NORTH LORAINE
SUITE 1550 MIDLAND, TEXAS 79701

3b. Phone No. *(include area code)*
432-682-7424

10. Field and Pool, or Exploratory
LA RICA-MORROW WEST (GAS)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* Unit D
At surface 990' FNL & 660' FWL SECTION 27 T18S-R34E LEA CO. NM
At proposed prod. zone SAME Capitan Controlled Water Basin

11. Sec., T. R. M. or Blk. and Survey or Area
SECTION 27 T18S-R34E

14. Distance in miles and direction from nearest town or post office*
Approximately 26 miles West of Hobbs New Mexico

12. County or Parish
LEA CO.

13. State
NEW MEXICO

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
660'	320	320
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
NA	13,700'	NMB-000471
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
4017 GL	WHEN APPROVED	60 Days

24. Attachments

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

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer

25. Signature	Name *(Printed/Typed)*	Date
Joe T. Janica	Joe T. Janica	12/28/07

Title: Permit Engineer

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Don Peterson	/s/ Don Peterson	APR 11 2008

Title: FOR FIELD MANAGER

Office: CARLSBAD FIELD OFFICE

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, are attached.

APPROVAL FOR TWO YEARS

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

*(Instructions on page 2)

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

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 October 12, 2005

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
30-025-38861	79830	LA RICA MORROW WEST-GAS

Property Code	Property Name	Well Number
37113	BAM BAM "27" FEDERAL COM	1

OGRID No.	Operator Name	Elevation
249099	CAZA PETROLEUM CORP.	4017'

Surface Location

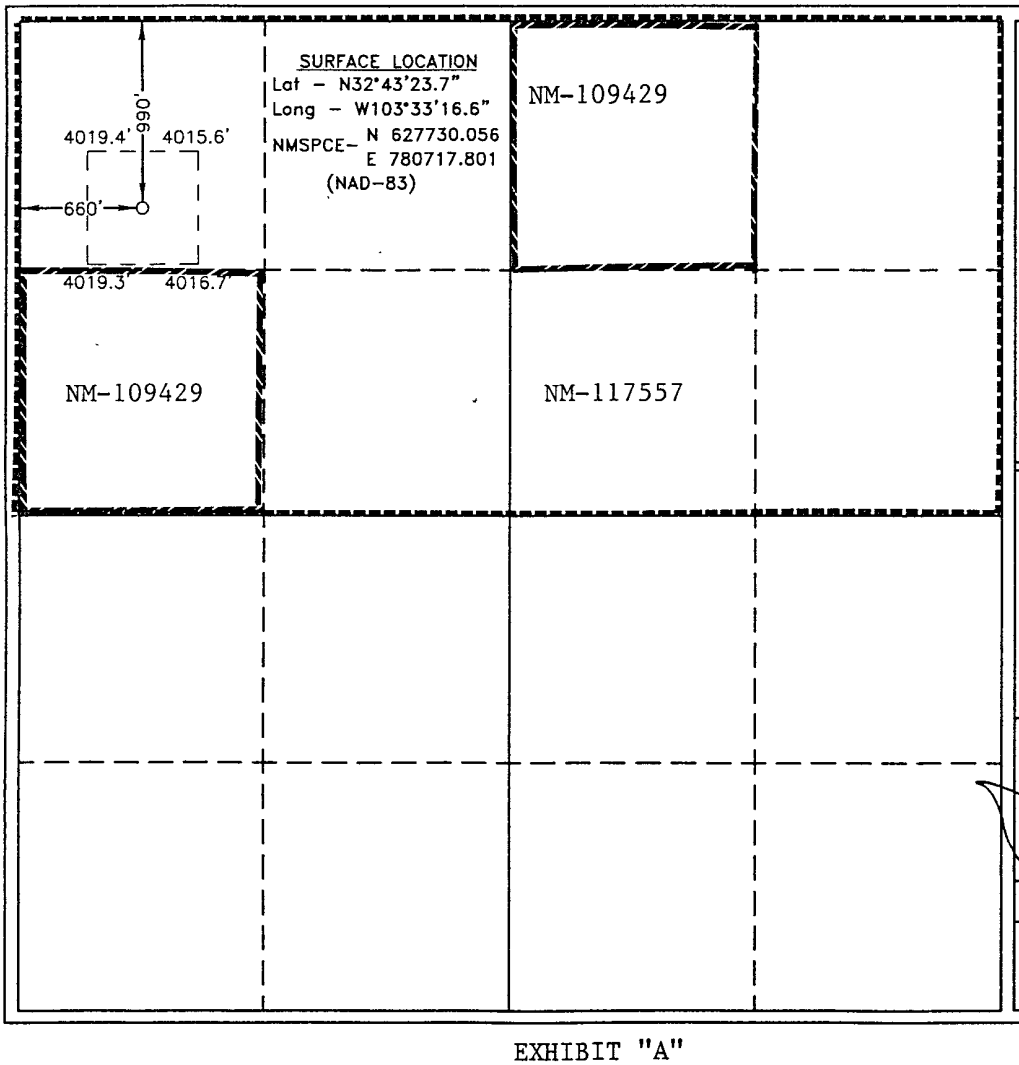
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	27	18 S	34 E		990	NORTH	660	WEST	LEA

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Joe T. Janica

Signature Date 12/28/07

Joe T. Janica
Printed Name

SURVEYOR CERTIFICATION

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

OCTOBER 31, 2007
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL SURVEYOR

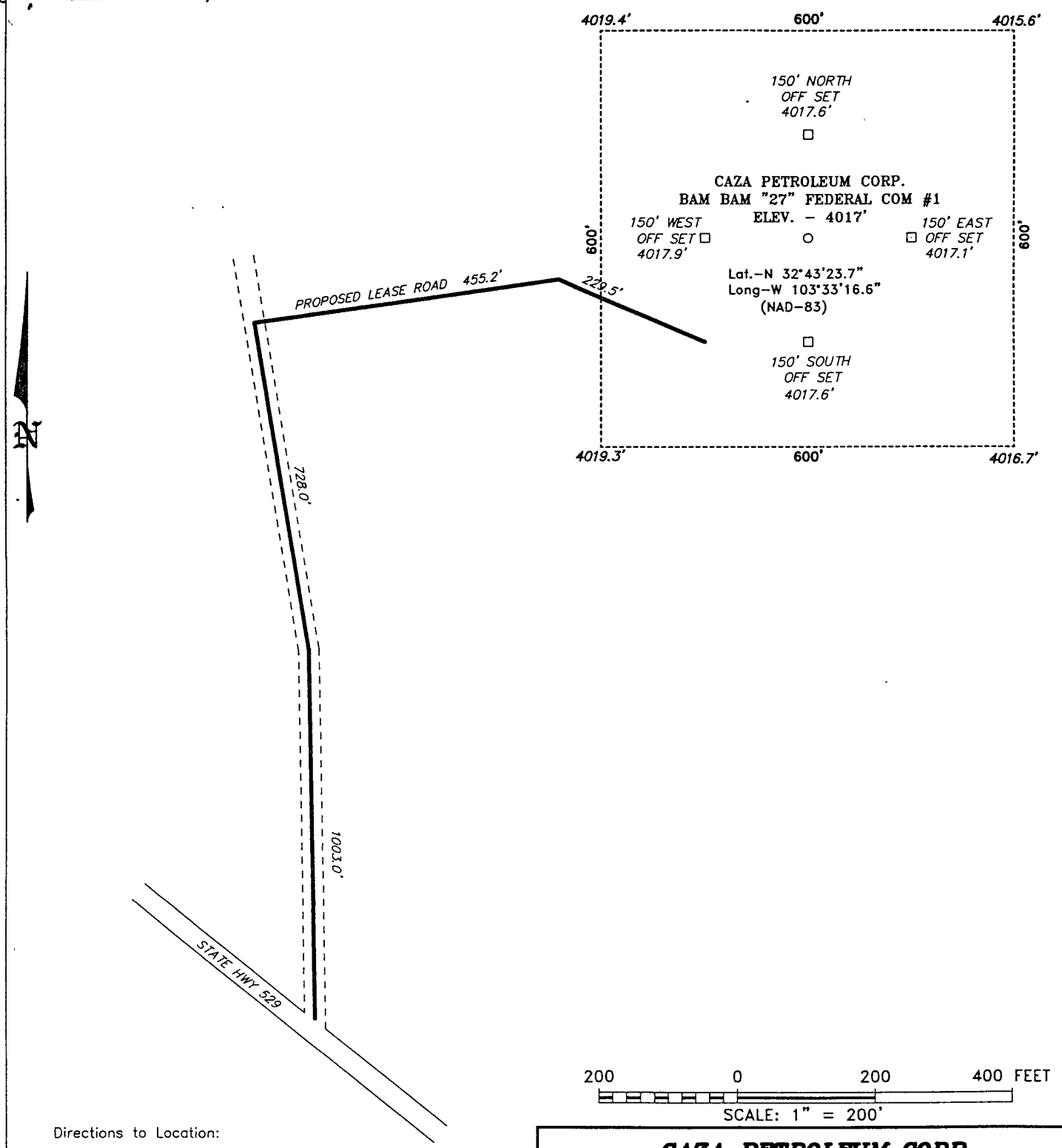
W.O. No. 18737

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

EXHIBIT "A"

SECTION 27, TOWNSHIP 18 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



Directions to Location:

FROM JUNCTION OF US HWY 62-180 AND STATE HWY 529, GO WEST ON 529 FOR 10.8 MILE TO LEASE ROAD, ON LEASE ROAD GO NORTH 0.3 MILES TO PROPOSED LEASE ROAD.

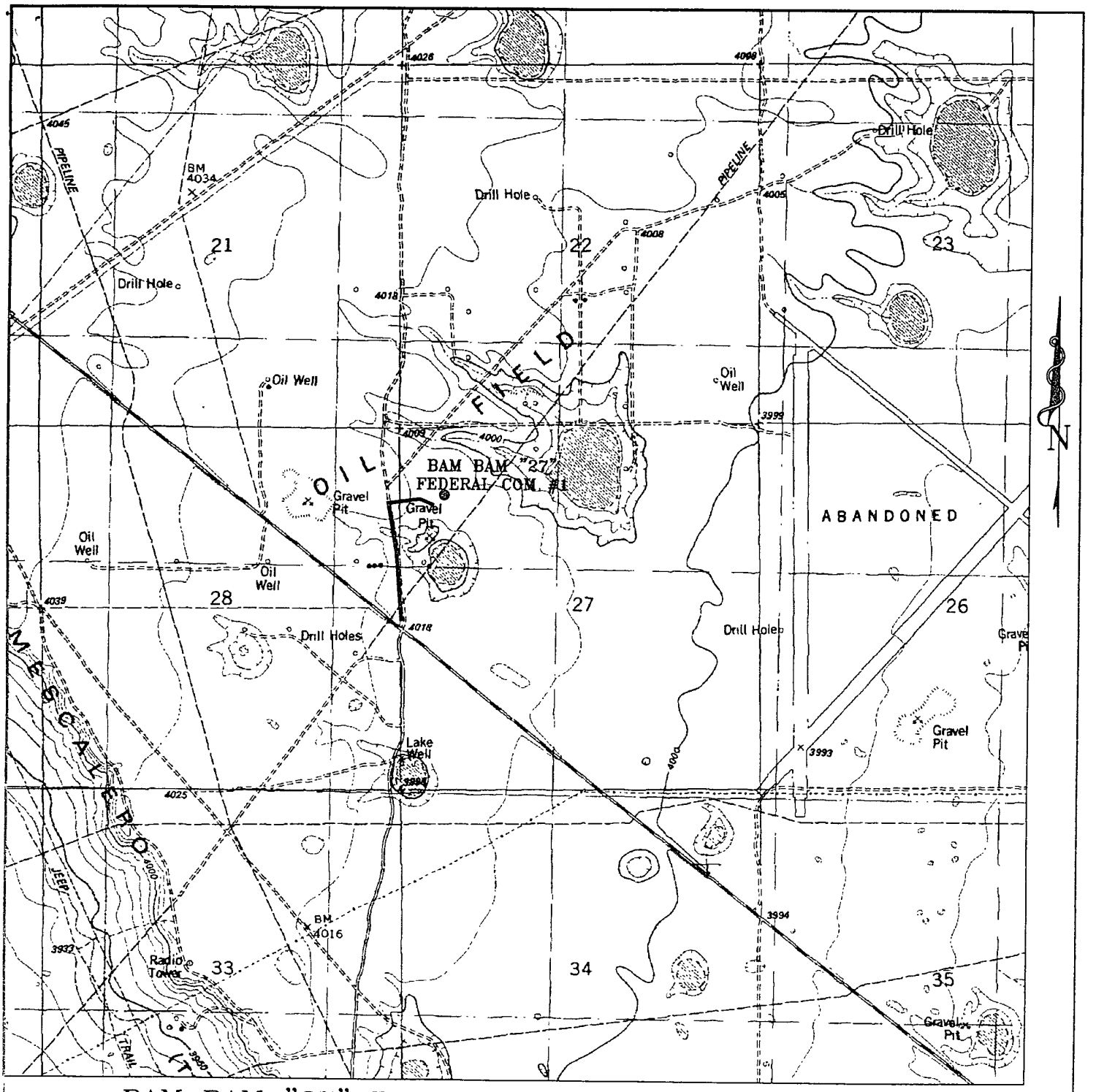
CAZA PETROLEUM CORP.

REF: BAM BAM '27" FEDERAL COM #1 / WELL PAD TOPO

THE BAM BAM "27" FEDERAL COM #1 LOCATED 990' FROM THE NORTH LINE AND 660' FROM THE WEST LINE OF SECTION 27, TOWNSHIP 18 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

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

W.O. Number: 18737	Drawn By: J. SMALL		
Date: 11-01-2007	Disk: JMS 18737W	Survey Date: 10-31-2007	Sheet 1 of 1 Sheets



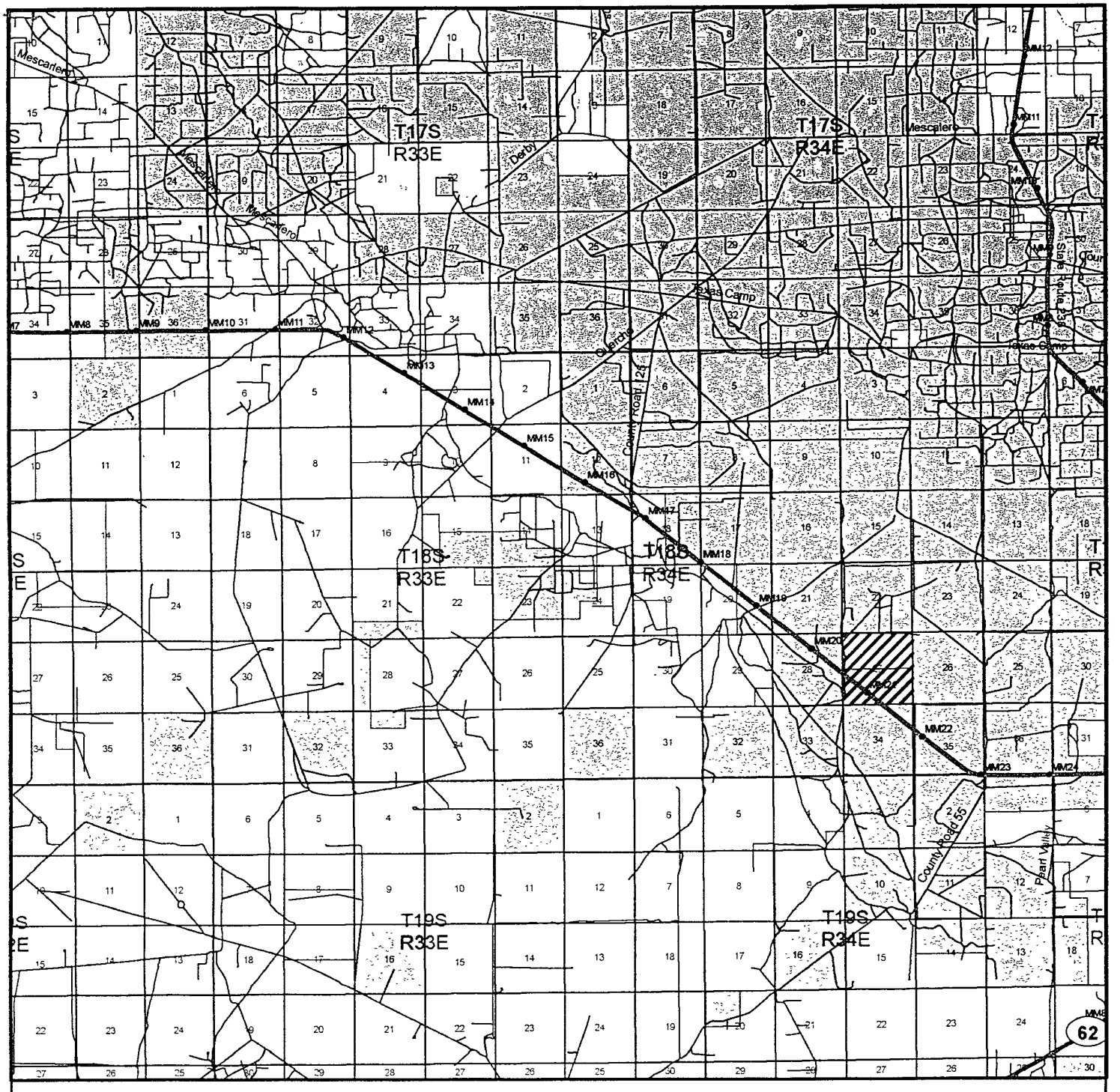
BAM BAM "27" FEDERAL COM #1
Located 990' FNL and 660' FWL
Section 27, Township 18 South, Range 34 East,
N.M.P.M., Eddy County, New Mexico.

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	JMS 18737T
Survey Date:	10-31-2007
Scale:	1" = 2000'
Date:	11-01-2007

CAZA PETROLEUM CORP.



BAM BAM "27" FEDERAL COM #1
Located 990' FNL and 660' FEL
Section 27, Township 18 South, Range 34 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: JMS 18737TR
Survey Date: 10-31-2007
Scale: 1" = 2 MILES
Date: 11-01-2007

CAZA PETROLEUM CORP.

1. Bam Bam 27 Fed Com # 1
990 FNL & 660FWL , SEC 27, T18S, R34E, LEA COUNTY, NEW MEXICO. TD 13,700 ft. "MORROW". 320 ACRE N1/2 LAY DOWN PRORATION UNIT GAS WELL.

SURFACE CASING:
17 ½" HOLE DRILLED W/ FRESH WATER. SET 13 3/8" 48 # H-40 CASING @ 400 ft. CMT'D W/ 300 SKS CAZA SLURRY # 1. FOLLOWED BY 200 SKS CAZA SLURRY # 2. CMT CIRCULATED TO SURFACE. HYDRAULIC DIAMETER OF ANNULUS .695 CU FT PER FT. VOLUME FIGURED @ 200% WASHOUT OR 3 TIMES HYDRAULIC DIAMETER OF ANNULUS.

see COA

see COA

INTERMEDIATE CASING:
NIPPLE UP 5K BOP EQUIPMENT. TEST SAME WITH RIG PUMP ASSUMING BLM APPROVAL TO 3K SPECS. START R/U GAS EQUIPMENT WHILE DRILLING INTERMEDIATE HOLE. MONITOR H2S FOR SAFETY. H2S PLAN NOT REQUIRED EXCEPT FOR PRUDENT OPERATION. DRILL 12 ¼" HOLE WITH BRINE WATER & SWEEPS TO 4000 FT. RUN FLUID CALIPER. SET 9 5/8" 40# N-80 CASING @ ± 4000 FT. CEMENT 9 5/8" CASING AS PER VOLUME ADJUST WITH FLUID CALIPER. PLAN LEAD @ 1375 SKS CAZA SLURRY # 1 FOLLOWED BY 200 SKS CAZA SLURRY # 2. CEMENT SHOULD BE CIRCULATED. NO STAGE WORK EXPECTED IN THIS PORTION OF HOLE. TRUE HOLE HYDRAULIC DIAMETER .313 CU FT PER FT. VOLUME FIGURED @ 150% WASH OUT OR 2 ½ TIMES HYDRAULIC DIAMETER OF ANNULUS. SLURRY LEAD ADJUSTED AFTER RUNNING FLUID CALIPER.

PRODUCTION CASING:
NIPPLE UP 5K BOP EQUIPMENT. TEST SAME WITH 3RD PARTY. 8 1/2" HOLE DRILLED W/ FW TO CUT BRINE 9.2 PPG TO 12,000'. MUD UP @ 12,000 FT. W/ DYNAZAN & STARCH WITH FLUID LOSS CONTROL OF 12-6 CC'S /30MIN AS NEEDED FOR SHALE CONTROL TO TD. WEIGHT ADJUSTED WITH BARITE ADDITION. MAX WEIGHT ANTICIPATED 10.5 PPG. . SET 5 ½" 17# P-110 CASING @ 13,700 ft. CMT 1ST STAGE W/ 1200 SKS CAZA SLURRY #7 ADJUSTED FOR BHT & FLUID LOSS. TOP OF SLURRY SHOULD BE ± 8000 . . STAGE TOOL @ 8000 FT. 2ND STAGE 1200 SKS SLURRY #7 ADJUSTED FOR BHT. & FLUID LOSS. TOP OF SLURRY ± 3500' CALCULATED. HYDRAULIC DIAMETER OF TRUE HOLE ANNULUS = .229 CU FT PER FT. ADJUSTED FOR 50% WASHOUT OR 1.5 TIMES HYDRAULIC DIAMETER ON ALL CALCULATIONS. CEMENT VOLUMES WILL BE ADJUSTED AFTER REVIEWING LOG CALIPER.

NOTE: 8 ½" HOLE WILL BE DRILL FOR A 7" CASING CONTIGENCY STRING IN THE EVENT OF HOLE PROBLEMS. HOLE MAY BE REDUCED TO 7 7/8" BELOW PENN SHALE.

APPLICATION TO DRILL

CAZA OPERATING, LLC.
BAM BAM "27" FEDERAL COM. #1
UNIT "D" SECTION 27
T18S-R34E LEA CO. NM

In response to questions asked under Section II of Bulliten NTL-6, the following information on the above will be provided.

1. LOCATION: 990' FNL & 660' FWL SECTION 27, T18S-R34E LEA CO. NEW MEXICO.

2. ELEVATION ABOVE SEA LEVEL: 4017' GL.

3. GEOLOGICAL NAME OF SURFACE FORMATION: Quaternery Aeolian Deposits.

4. DRILLING TOOLS AND ASSOCIATED EQUIPMENT: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.

5. PROPOSED DRILLING DEPTH: 13,700'

6. ESTIMATED TOPS OF GEOLOGICAL FORMATIONS:

Rustler Anhydrite	1840'	Strawn	12,200'
7 Rivers	3800'	Atoka	12,550'
Bone Spring	7650'	Morrow	13,000'
1st Bone Spring Carb.	9000'	Lower Morrow	13,520'
Wolfcamp	10,300'	Barnett Shale	13,700'

7. POSSIBLE MINERAL BEARING FORMATIONS:

Bone Spring	Oil	Atoka	Gas
Wolfcamp	Gas	Morrow	Gas
Strawn	Gas		

8. CASING PROGRAM:

HOLE SIZE	INTERVAL	OD OF CASING	WEIGHT	THREAD	COLLAR	GRADE	
17½"	0-~~400'~~ 1810'	13 3/8"	~~48#~~ 54.5	8-R	ST C	~~J-55~~ J-55	New
12¼"	0-4000'	9 5/8"	40#	8-R	~~ST&C~~ LTC	N-80	New
8½"	0-13,700'	5½"	17#	8-9	LT&C	P-110 HCP-110	New

Notes per operator 4-9-08

DESIGN FACTORS: Collapse 1.125, Burst 1.0, Joint strength 1.8 Body Yield 1.5

APPLICATION TO DRILL

CAZA OPERATING, LLC.
BAM BAM "27" FEDERAL COM. #1
UNIT "D" SECTION 27
T18S-R34E LEA CO. NM

9. CASING CEMENTING & SETTING DEPTHS:

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
13 3/8"	Surface	Run and set 400' of 13 3/8" 48# H-40 ST&C casing. Cement with 300 Sx. of 65/35 Class "C" POZ + 6% Gel + 5% Salt, Yield 1.89, tail in with 200 Sx. of Class "C" cement + 2% CaCl, Yield 1.32. Circulate cement to surface.
9 5/8"	Intermediate	Run and set 4,300' of 9 5/8" 40# N-80 ST&C casing. Cement with 1375 Sx. of 65/35 Class :C: POZ, + 6% Gel, + 5% Salt, Yield 1.89, tail in with 200 Sx. of Class "C" cement + 2% CaCl, Yield 1.32. Circulate cement to surface.
5½"	Production	Run and set 13,700' of 5½" 17# P-110-HCP-110 LT&C CASING. Cement in in two stages with Dv Tool at 8000'±. Cemen. 1st stage with 1000 Sx. of "H" Cement + 50% POZ + 0.01% Bentonite + 0.6 LAP-1 + 5# Gilsonite/Sx. + 0.3% CFR-3 + 0.25#/Sx. D-AIR-3000 + .125#/Sx. Poly flake +0.25% econolite + 0.1% HR-7. Yield 1.3. Cement 2nd stage with 1200 Sx. of the same slurry used to cement 1st stage Yield 1.3 estimate top of cement 3500' from surface.

LTC per operator 4-9-08

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E" shows a 1500 Series 5000 PSI working perssure B.O.P. consisting of an annular bag type preventor, middle blind rams, and bottom pipe rams. The B.O.P. will be nippled up on the 13 3/8" casing it is requested that the test of B.O.P to be tested with rig pump for the intermediate casing. After the 9 5/8" casing is run a third party will test the B.O.P. to API specifications.The B.O.P. will be worked at least once in each 24 hour period and the blind rams will be worked when the drill pipe is out of hole on trips. Full opening stabbing valve and kelly cock will be available at all times. Exhibit "E-1" shows a 3" choke manifold assembly rated at 5000 PSI, and a hydraulically operated closing unit. No abnormal pressures or temperatures are expected while drilling this well.

APPLICATION TO DRILL

CAZA OPERATING, LLC.
BAM BAM "27" FEDERAL COM. #1
UNIT "D" SECTION 27
T18S-R34E LEA CO. NM

Caza Oil & Gas

BamBam 27 Federal Com #1

Section 27, T-18-S, R-34-E
Lea County, New Mexico

PROGRAM HIGHLIGHTS:

TOTAL DEPTH : 13,800'

CASING REQUIREMENTS :
: Interval 1: 17-1/2" hole to 400', set 13-3/8" Casing.
: Interval 2: 12-1/4" hole to 4,000', set 9-5/8" Casing.
: Interval 3: 8-3/4" hole to 13,800' set 5-1/2" Casing.

MUD WEIGHT REQUIREMENTS :
: 8.6 – 8.8 ppg @ 400'
: 8.4 – 10.3 ppg @ 4,000'
: 8.4 – 9.9 ppg @ 12,000'
: 9.9 – 10.5 ppg @ 13,800'

MUD PROPERTIES SUMMARY:

Depth (feet)	Weight (ppg)	Viscosity (sec/1000cc)	Fluid Loss (cc/30min)	PV (cps)	YP (lb/100ft^2)	Mud Type
0' – 400' Set 13-3/8" Casing	8.6 – 8.8	34 – 38	NC	6 – 10	6 – 20	Spud Mud
400' - 4,000' Set 9-5/8" Casing	8.4 – 10.3	28 – 34	NC	0 – 10	0 – 12	Native/Oil
4,000' – 12,000' –	8.4 – 9.9	28 – 29	NC	0 – 1	0 – 1	Fresh Water to Cut Brine
12,000' – 13,800' Set 5-1/2"	9.9 – 10.5	36 – 45	12 – 6	4 – 34	6 – 36	Dynazan/ White starch Barite

Note: The mud weight schedule is intended as a guideline only. Actual mud weights used should be determined by hole conditions and drilling parameters. Drilling with a minimum amount of overbalance will reduce the possibility of losing returns and/or of differentially sticking the drill string.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run open hole logs, DST's and casing the viscosity and water loss may have to be adjusted to meet these needs.

12. LOGGING, CORING, AND TESTING PROGRAM:

A. Open hole logs: Dual Laterolog, SNP, LDT, MSFL, CALIPER, Gamma Ray from TD back to 9 5/8" casing shoe.

B. Cased hole log from 9 5/8" casing shoe back to surface Gamma Ray, Neutron.

C. Mud logger rigged up on hole at 2500'±.

D. DST's will be run as shows dictate.

E. Sidewall cores will be taked when deemed necessary by Geologist.

13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of H^2S in this area. If H^2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 6800± PSI, and Estimated BHT 215°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take 65 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The Morrow formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialed as a gas well.

Well name: **Bam Bam 27 Fed Com # 1**
Operator: **CAZA Operating LLC**
String type: Production
Location: Raptor Prospect New Mexico

Design parameters:

Collapse
Mud weight: 10.500 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 5,829 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 7,473 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.10

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 11,519 ft

Environment:
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 164 °F
Temperature gradient: 0.65 °F/100ft
Minimum section length: 1,500 ft

Cement top: 3,500 ft

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
2	12000	5.5	17.00	P-110	LT&C	12000	12000	4.767	1566.3
1	1700	5.5	17.00	HCP-110	LT&C	13700	13700	4.767	221.9

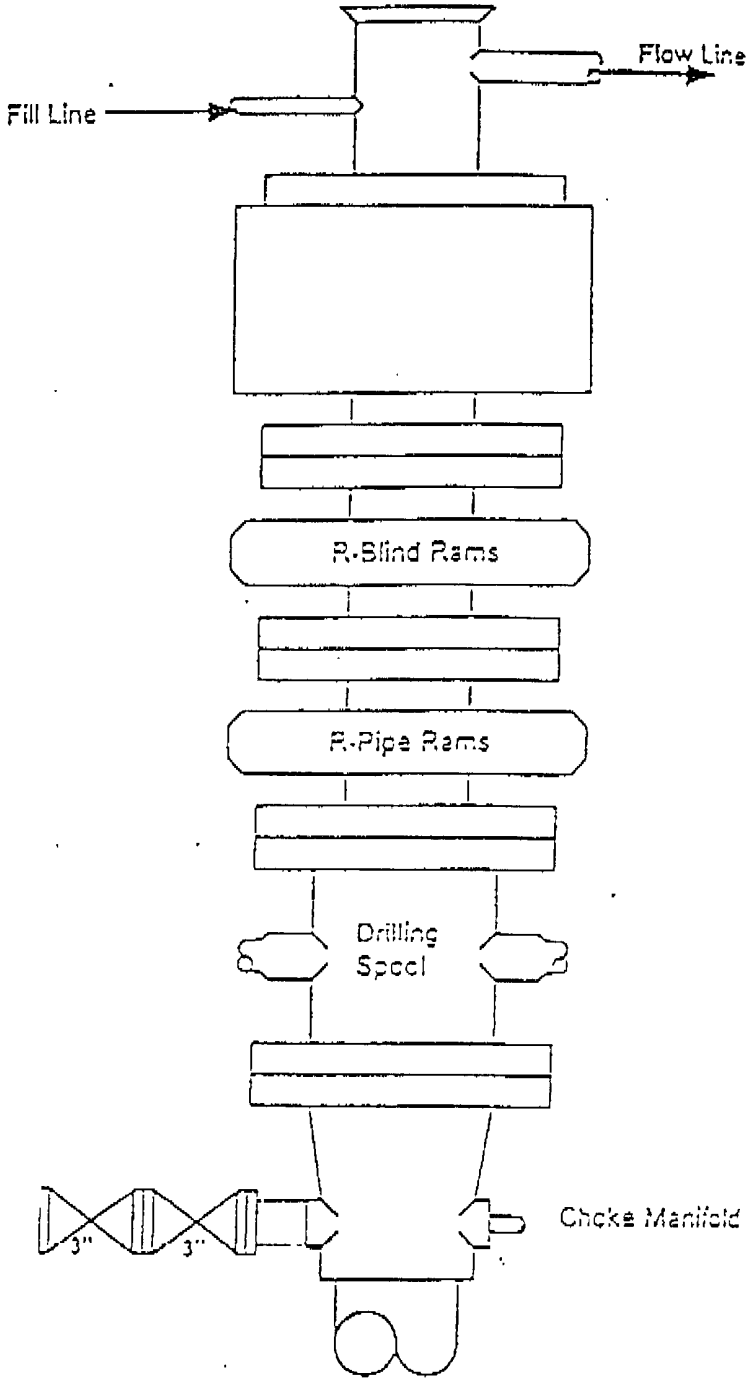
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
2	6646	7480	1.143	7269	10640	1.46	196	445	2.27 J
1	7473	8680	1.148	7473	10640	1.42	-8	445	-54.38 J

Prepared by: Richard Wright
Phillips
Phone: 432 682 7424 ext 1006
FAX: 432 682 7425
Date: December 20,2007
Midland, Texas

Remarks:
Collapse is based on a vertical depth of 13700 ft, a mud weight of 10.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.



Type 900 Series
3000 psi WP

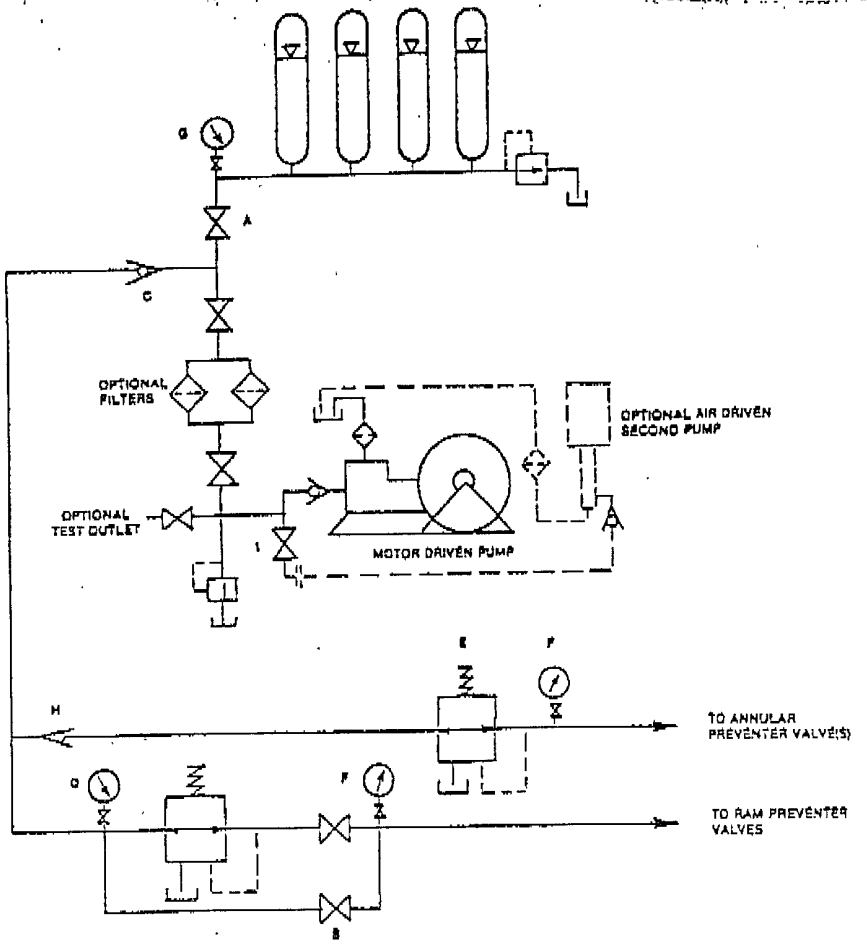


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

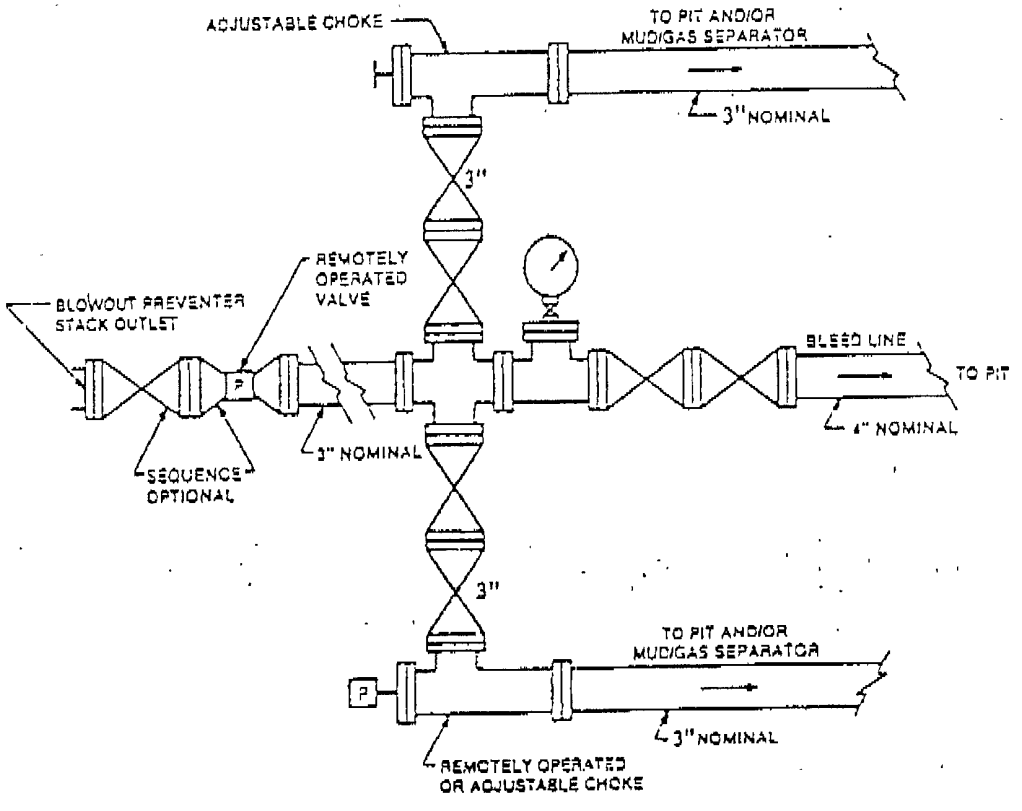


FIGURE K4-2. Typical choke manifold assembly for 5M rated working

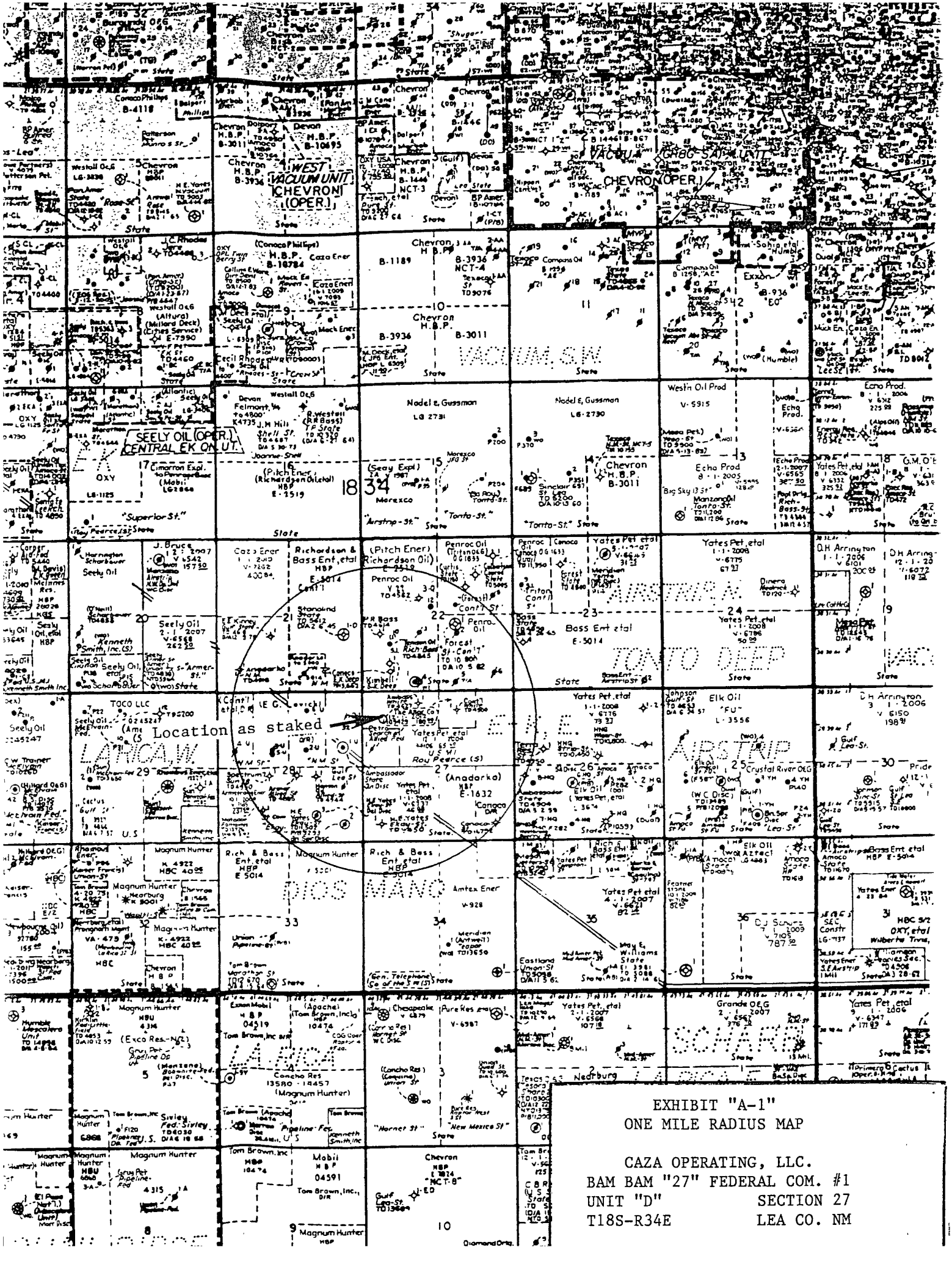


EXHIBIT "A-1"
ONE MILE RADIUS MAP

CAZA OPERATING, LLC.
BAM BAM "27" FEDERAL COM. #1
UNIT "D" SECTION 27
T18S-R34E LEA CO. NM

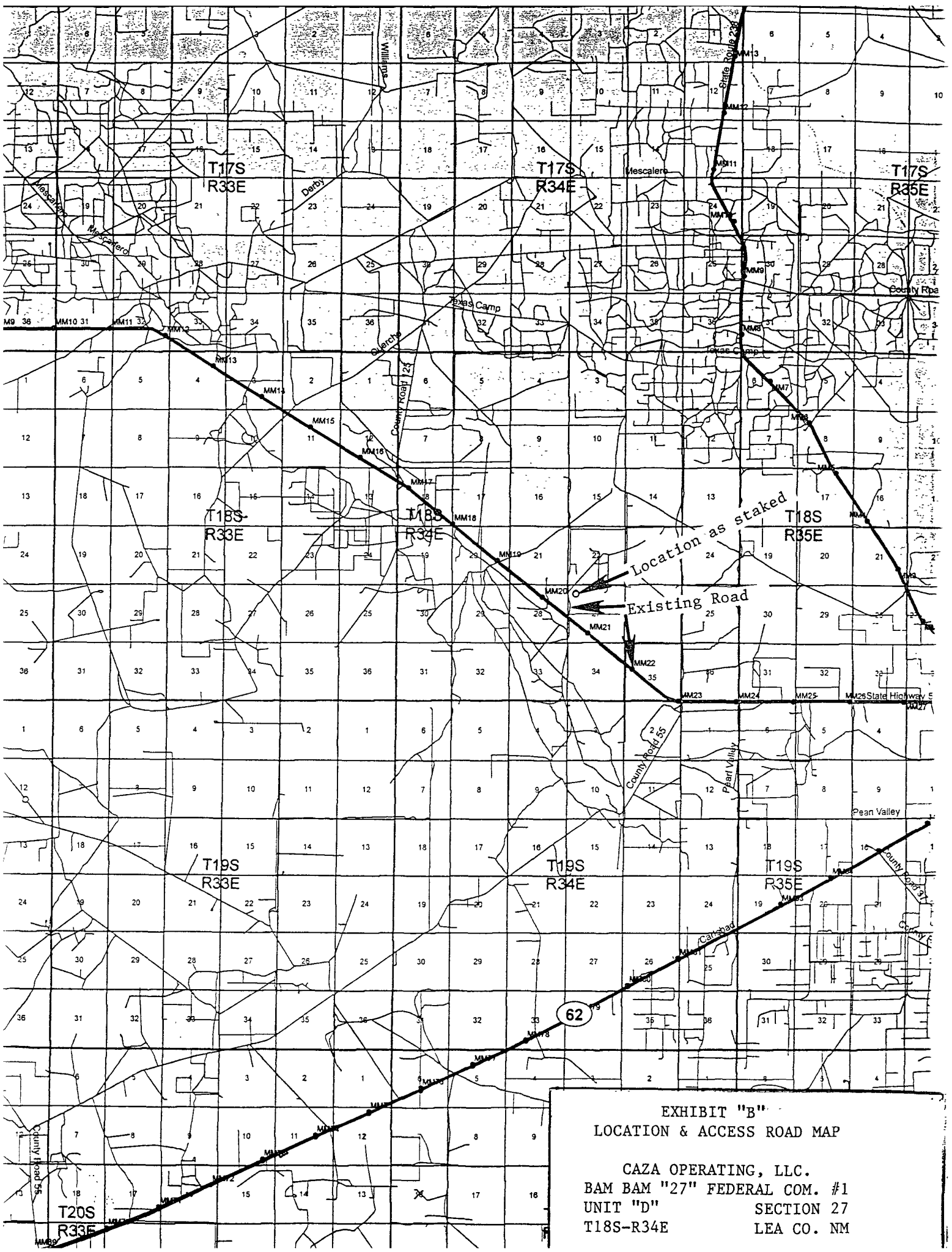


EXHIBIT "B"
LOCATION & ACCESS ROAD MAP

CAZA OPERATING, LLC.
BAM BAM "27" FEDERAL COM. #1
UNIT "D" SECTION 27
T18S-R34E LEA CO. NM

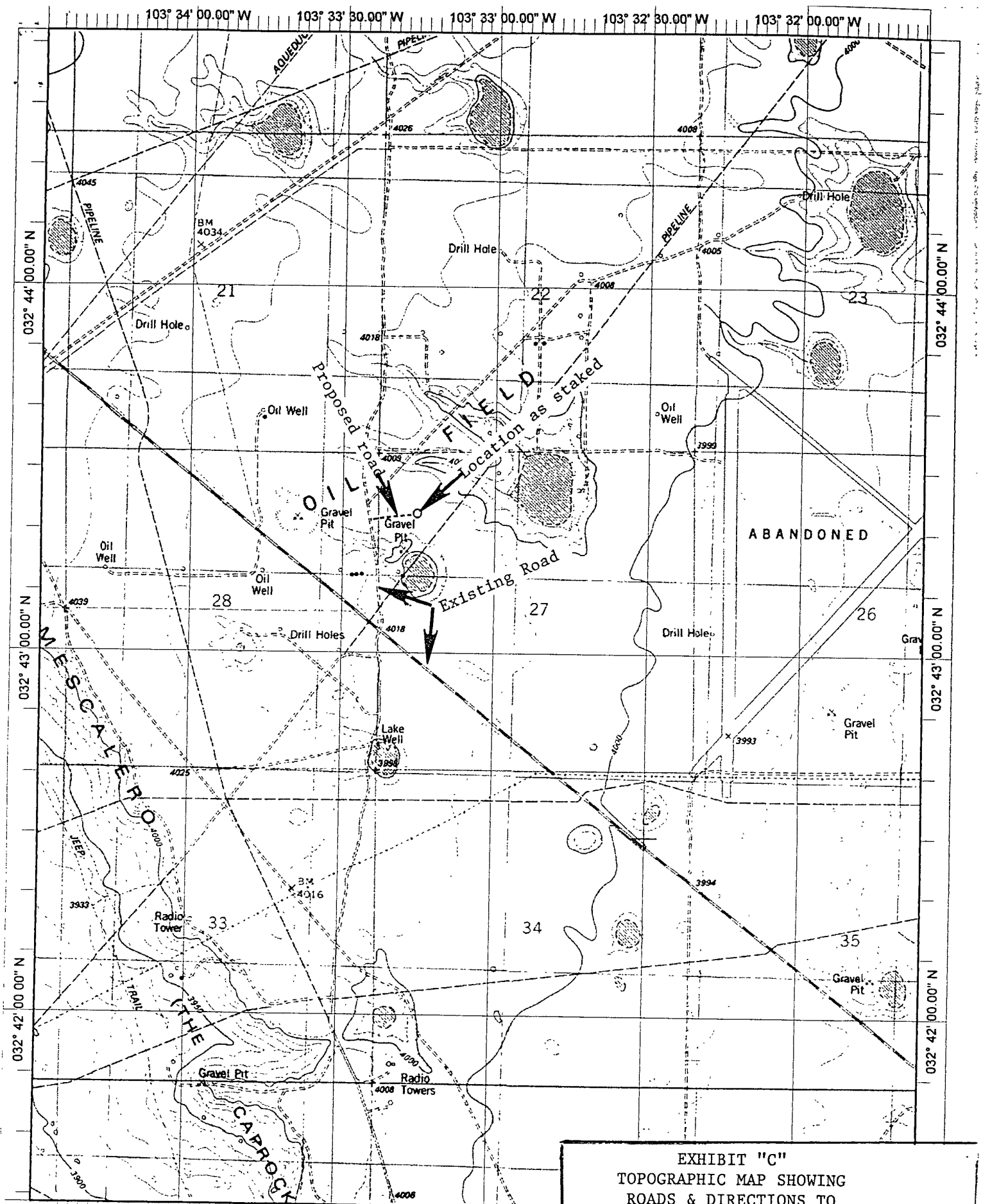


EXHIBIT "C"
TOPOGRAPHIC MAP SHOWING
ROADS & DIRECTIONS TO

CAZA OPERATING, LLC.
BAM BAM "27" FEDERAL COM. # !
UNIT "D" SECTION 27
T18S-R34E LEA CO. NM

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CASA Operating, LLC
LEASE NO.:	NM117557
WELL NAME & NO.:	BAM BAM 27 FEDERAL COM No. 1
SURFACE HOLE FOOTAGE:	990' FNL & 660 ' FWL
BOTTOM HOLE FOOTAGE	SAME
LOCATION:	Section 27, T. 18 S., R 34 E., NMPM
COUNTY:	Lea County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator 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 shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Any fluid collection facilities on the location will be constructed with a surrounding earthen berm to prevent the collection of water on the location and also prevent the runoff of fluids from the location into the nearby drainage and/or nearby playa features.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Hobbs Field Station at (505) 393-3612 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

There is no measurable soil on this well pad to stockpile. No topsoil stockpile is required.

C. RESERVE PITS

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 165' X 120' on the North side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the
Carlsbad Field Office at (505) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

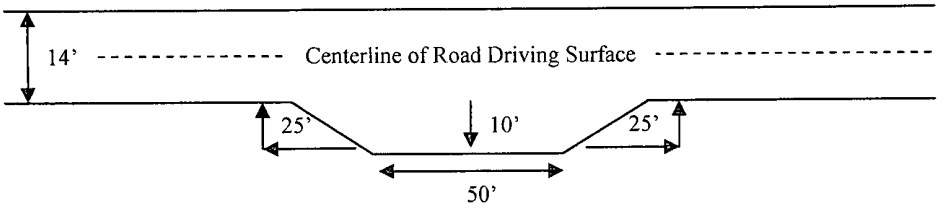
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

Standard Turnout – Plan View

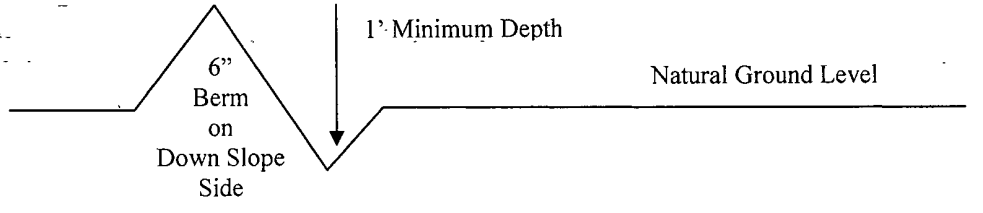


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Culvert Installations

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

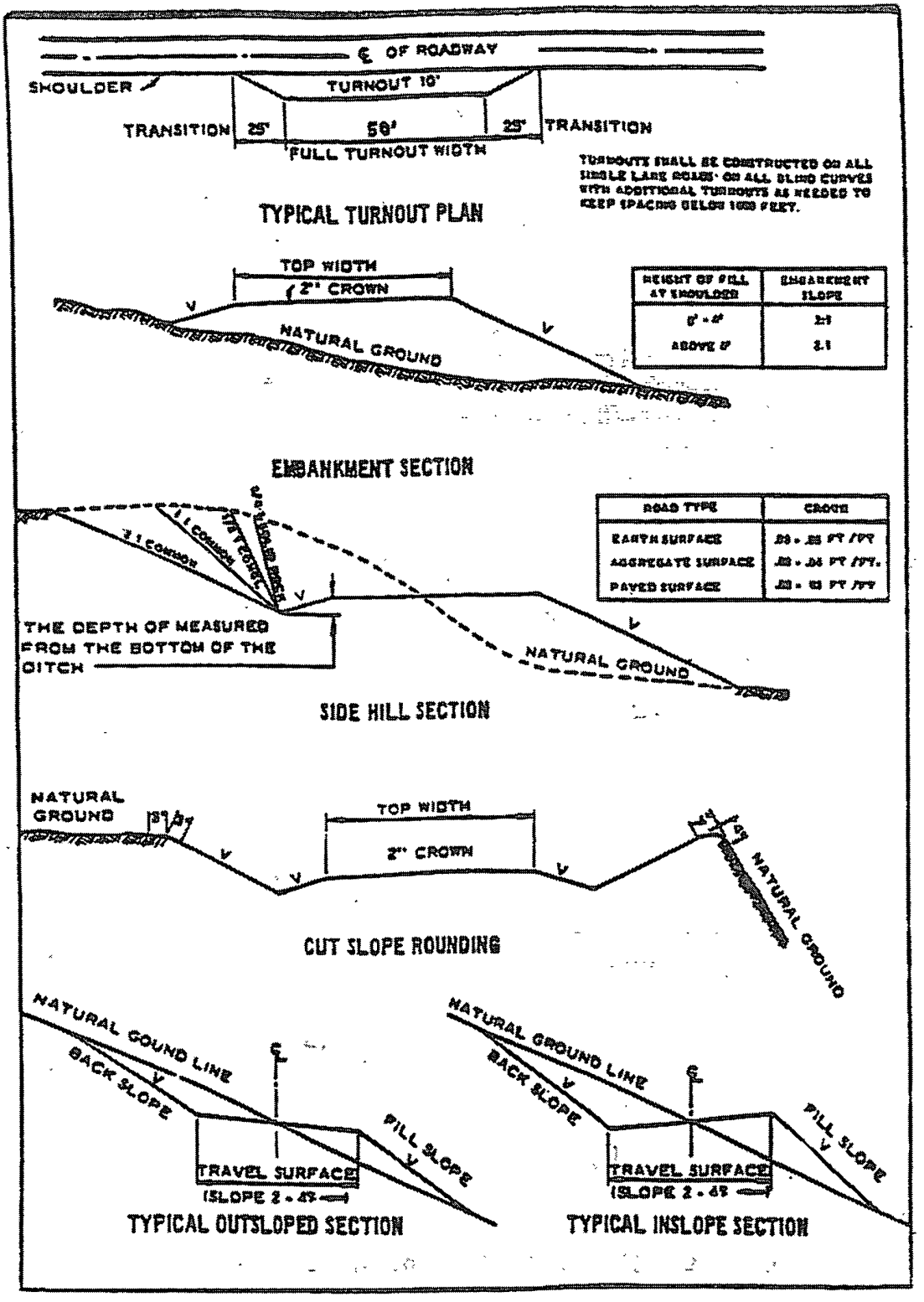
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a possible hazard. It has been reported in the Township to the east. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**

2. 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.

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Possible lost circulation in the Grayburg and San Andres formations.
Possible water flows in the Salado and Artesia group.
Possible high pressure in the Wolfcamp and Pennsylvanian Section.

1. The **13-3/8** inch surface casing shall be set **at approximately 1810 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Fresh water to be used to setting depth. Additional cement will be required due to added length of surface casing.**

Onshore Order II requires casing to be set across a competent bed and the Rustler Anhydrite is the first formation that meets that criteria.

a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).

c. **Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing.**

d. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

e. If cement falls back, remedial action will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

☒ Cement to surface. If cement does not circulate see B.1.a-e above.
a. **Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing.**

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i.

NOTE! If the 7" contingency string is required, a sundry must be submitted with casing/cement details and approved prior to running casing.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

a. **First stage to DV tool, cement shall:**

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with second stage cement job. **Additional cement may be required to circulate.**

b. **Second stage above DV tool, cement shall:**

☒ Cement should tie-back at least 200 feet into previous casing string. **Operator shall provide method of verification.**

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. The tests shall be done by an independent service company.

    b. The results of the test shall be reported to the appropriate BLM office.

    c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

    d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

    e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation **if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days**. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

    f. A variance to test the surface casing and BOP/BOPE to the reduced pressure of **1000** psi with the rig pumps is approved.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

WWI 040808

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RESERVE PIT CLOSURE

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

Seed Mixture 1, for Loamy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection bye the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent gemination = pounds pure live seed

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.