N. M. Oil Cons. Division
811 S. 1ST ST.
ARTESIA, NM 88210-2834

Form 3160-3
(July 1992)

SUBMIT IN TRIPLICATE (Other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED OCD - ARTESIA

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NM 02887-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [X]

7. UNIT AGREEMENT NAME: JAMES RANCH UNIT 1786

8. FARM OR LEASE NAME, WELL NO.: JAMES RANCH UNIT 79

2. NAME OF OPERATOR: Bass Enterprises Production Co. 1801

9. API WELL NO.: 30-015-31056

3. ADDRESS AND TELEPHONE NO.: P.O. Box 2760, Midland, TX 79702-2760 915-683-2277

10. FIELD AND POOL, OR WILDCAT: LOS MEDANOS (WOLFCAMP, South ~~BONE SPRING, DELAWARE)~~

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 330' FNL & 990' FEL, SECTION 6, T23S, R31E
At proposed prod. zone: Unit A, Lot 1

R-111-P POTASH
SECRETARY'S POTASH

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC 6, T23S, R31E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 16.7 MILES EAST OF LOVING, NM

12. COUNTY OR PARISH: EDDY — 13. STATE: NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 330'

16. NO. OF ACRES IN LEASE: 685.5

17. NO. OF ACRES ASSIGNED TO THIS WELL: 40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 1320'

19. PROPOSED DEPTH: 11,500'

20. ROTARY OR CABLE TOOLS: ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.): GR 3326'

CARLSBAD CONTROLLED WATER BASIN

22. APPROX. DATE WORK WILL START*: UPON APPROVAL

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
*14-3/4"	11-3/4" WC40	42#	700'	400 SX CIRC TO SURFACE WITNESS
**11"	8-5/8" WC50	28# & 32#	4000'	915 SX CIRC TO SURFACE WITNESS
7-7/8"	5-1/2" P110	17#	11,500'	1870 SX CIRC TO SURFACE

*SURFACE CASING TO BE SET +/-50' ABOVE THE SALT IN THE RUSTLER ANHYDRITE.
**INTERMEDIATE CASING TO BE SET IN THE TOP OF THE LAMAR LIME.
THIS LOCATION IS INSIDE THE R-111P POTASH AREA. ALL POTASH COMPANIES WHO HAVE LEASES WITHIN 1 MILE WILL BE NOTIFIED OF THIS PROPOSED WELL.
NOTE: THIS WELL WAS ORIGINALLY APPLIED FOR ON JANUARY 31, 1997. THE ORIGINAL APD WAS DENIED DUE TO POTASH. THE LOCATION WAS RE-STAKED 330' NORTH FROM THE ORIGINAL LOCATION AND IS NOW BEING RE-SUBMITTED FOR YOUR APPROVAL.
AN ARCH SURVEY WILL BE CONDUCTED AFTER POTASH APPROVAL HAS BEEN GRANTED. PLEASE CONTACT THE OPERATOR WHEN POTASH APPROVAL HAS BEEN GRANTED SO THAT ARRAGEMENTS CAN BE MADE TO CONDUCT ARCH SURVEY.

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

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

24. SIGNED William R. Dannels TITLE W. R. DANNELS DIVISION DRILLING SUPT. DATE 12-7-99

OCD 12/14/99

(This space for Federal or State office use)

PERMIT NO. ________ APPROVAL DATE ________

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY /s/ Bruce L. Gandy TITLE Acting STATE DIRECTOR DATE 3-22-00

*See Instructions On Reverse Side

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


RECEIVED
DEC 09 1999
BLM
ROSWELL, NM

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

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

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-102
Revised February 10, 1994
Instruction on back
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
		Los Medanos (Wolfcamp, Bone Spring, Delaware)

Property Code	Property Name	Well Number
	JAMES RANCH UNIT	79

OGRID No.	Operator Name	Elevation
001801	BASS ENTERPRISES PRODUCTION COMPANY	3326'

Surface Location

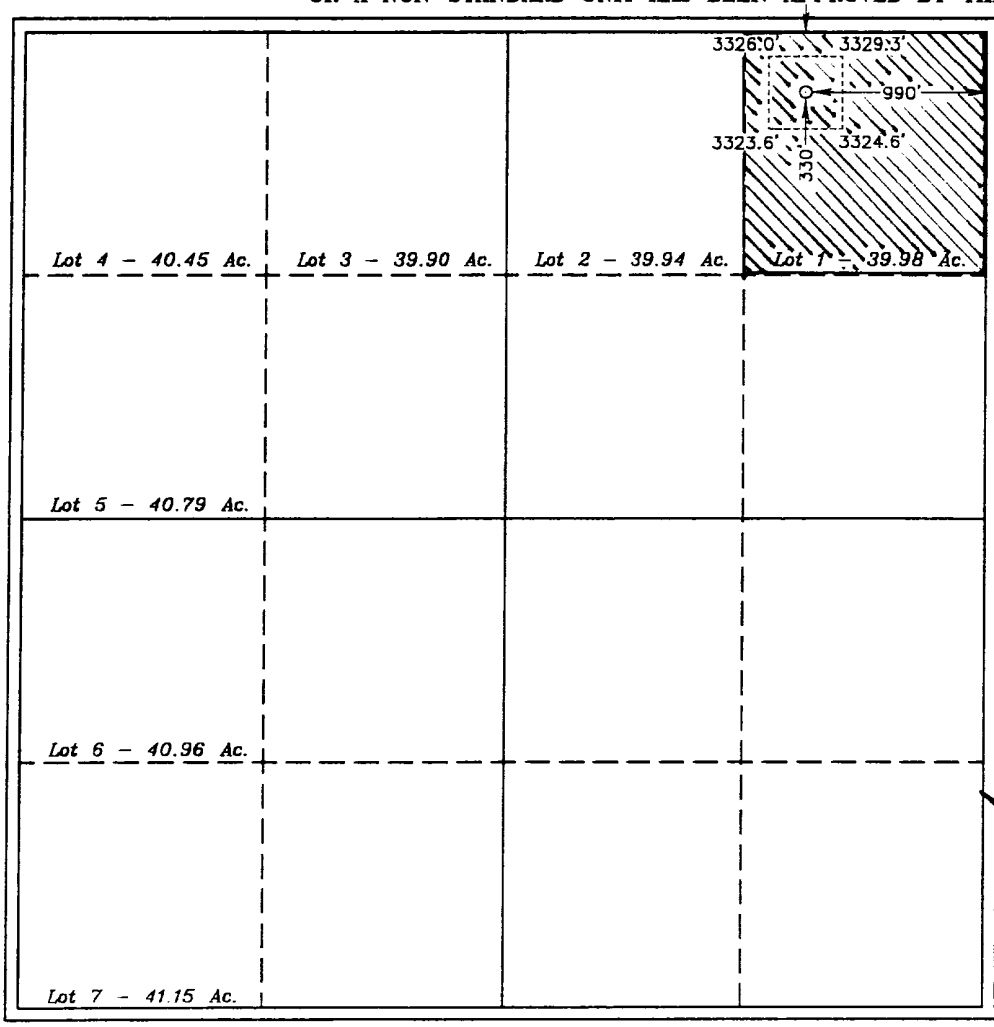
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 1	6	23 S	31 E		330	NORTH	990	EAST	EDDY

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.
40	Y		

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.

William R. Dannels
Signature

William R. Dannels
Printed Name

Division Drilling Supt.
Title

12-7-99
Date

SURVEYOR CERTIFICATION

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

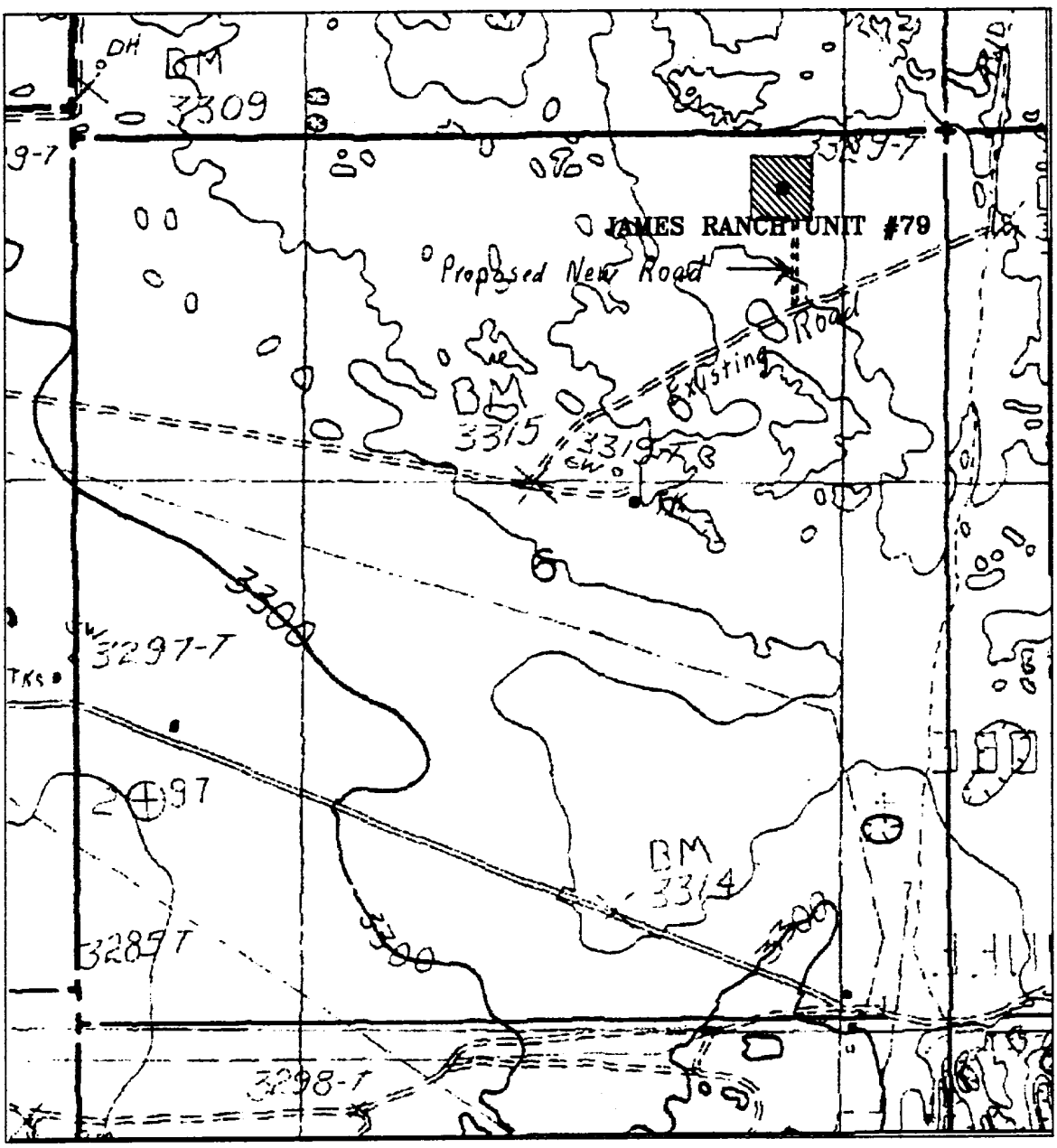
November 5, 1999
Date Surveyed
Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

W.O. No. 9393

Certificate No. Gary L. Jones 7977

BASIN SURVEYS



JAMES RANCH UNIT #79
Located at 330' FNL and 990' FEL
Section 6, Township 23 South, Range 31 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:	9393AA - KJG #122
Survey Date:	11-05-99
Scale:	1" = 1000'
Date:	11-08-99

Bass Enterprises Production Co.

EIGHT POINT DRILLING PROGRAM
BASS ENTERPRISES PRODUCTION CO.

NAME OF WELL: JAMES RANCH UNIT #79

LEGAL DESCRIPTION - SURFACE: 330' FNL & 990' FEL, Section 6, T-23-S, R-31-E, Eddy County, New Mexico.

POINT 1: ESTIMATED FORMATION TOPS

(See No. 2 Below)

POINT 2: WATER, OIL, GAS AND/OR MINERAL BEARING FORMATIONS

Anticipated Formation Tops: KB 3340' (est)
GL 3326'

FORMATION	ESTIMATED TOP FROM KB	ESTIMATED SUBSEA TOP	BEARING
T/Rustler	325'	+3015'	Barren
T/Salt	751'	+2589'	Barren
B/Salt	3747'	- 407'	Barren
T/Lamar	3987'	- 647'	Barren
T/ Lwr Brushy Canyon	7585'	- 4245'	Oil/Gas
T/ 3rd Bone Spring	10,995'	- 7655'	Oil/Gas
T/Wolfcamp	11,120'	- 7780'	Oil/Gas
TD	11,500'	- 8160'	

POINT 3: CASING PROGRAM

TYPE	INTERVALS	PURPOSE	CONDITION
16"	0' - 40'	Conductor	New
11-3/4", 42#, WC-40, STC	0' - 700'	Surface	New
8-5/8", 28#, WC-50, LTC	0' - 3,000'	Intermediate	New
8-5/8", 32#, WC-50, LTC	3,000' - 4,000'	Intermediate	New
5-1/2", 17#, P110, LTC	0' - 11,500'	Production	New

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM)

A BOP equivalent to Diagram 1 will be nippled up on the surface casing head. A BOP equivalent to Diagram 2 will be nippled up prior to drilling the production hole. The BOP stack, choke, kill lines, kelly cocks, inside BOP, etc. will be hydro-tested to the lowest rated working pressure of the equipment being tested. In addition to the rated working pressure test, a low pressure (200 psi) test will be required. These tests will be performed:

a) Upon installation
b) After any component changes
c) Fourteen days after a previous test
d) As required by well conditions

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM) Continued...

A function test of annular, pipe and blind rams to insure that the preventers are operating correctly will be performed on each trip. A function test is required only a minimum of once every 24 hours. See the attached diagrams for the minimum criteria for the choke manifold.

POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 700'	FW Spud Mud	8.4 - 9.0	32-38	NC	NC	NC	10.0
700' - 4,000'	BW	9.8 -10.2	29	NC	NC	NC	10.0-10.5
4,000' - 7,500'	FW Mud	8.4 - 8.6	28-30	NC	NC	NC	9.5-10.0
7,500' - 11,500'	FW Mud	8.6 - 9.2	28-40	4	10	<100	9.5-10.0

POINT 6: TECHNICAL STAGES OF OPERATION

A) TESTING

None anticipated.

B) LOGGING

GR-CNL-LDT-AIT from TD to 8-5/8" casing.
GR-CNL from 8-5/8" casing shoe to surface.

C) CONVENTIONAL CORING

None anticipated.

D) CEMENT

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT^3/SX
SURFACE						
LEAD						
0-400'	200 (100% excess circ to surface)	410	35/65 Poz C + 4% gel +2% $CaCl_2$ + 1/4#/sk Cellophane	9.17	13.5	1.74
TAIL						
400-700'	200 (100% excess circ to surface)	300	Class "C" + 2% $CaCl_2$	6.36	14.8	1.34
INTERMEDIATE						
LEAD						
0-3500'	725 (100% excess circ to surface)	3500	50/50 Poz C +10% gel + 5% Salt + 1/4#/sk Cellophane	12.59	12.1	2.24
TAIL						
3500'-4000'	190 (100% excess circ to surface)	500	Class C + 1% $CaCl_2$	6.32	14.8	1.34
PRODUCTION						
1st Stage						
LEAD						
5700-7100'	150 (50% excess tie back to int csg)	1400	Infill H + 1/4# Cellophane	14.28	11.9	2.46
TAIL						
7100-11,500'	700 (50% excess)	4400	Super H + 0.4% CFR-3 + 0.5% Halad 344 + 1#/sx Salt	8.17	13.0	1.66

D) CEMENT – Con't...

2nd Stage
LEAD:

Interval	Amount	Ft of Fill	Type	Gal/sk	PPG	Ft3/sk
0-5200'	920 sx	5200	Interfill C + 1/4# Celloflake	14.28	11.09	2.46

TAIL:

Interval	Amount	Ft of Fill	Type	Gal/sk	PPG	Ft3/sk
5200-5700'	100 sx	500	Premium Plus + 0.6% Halad 9	6.25	14.80	1.32

E) DIRECTIONAL DRILLING

No directional services anticipated.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout the Delaware section. The Bone Spring expected BHP is 6000 (max) or an equivalent mud weight of 10.0 ppg @ TD. Due to the tight nature of the reservoir rock (high pressure, low volume), the well will be drilled under balanced utilizing a rotating head. The expected BHT at TD is 170°F. Prior to penetrating the abnormal pressures in the Bone Spring and Wolfcamp, mud monitoring equipment will be installed and operative. No H_2S is anticipated.

POINT 8: OTHER PERTINENT INFORMATION

A) Auxiliary Equipment

Upper and lower kelly cocks. Full opening stab in valve on the rig floor.

B) Anticipated Starting Date

Upon approval

25 days drilling operations

10 days completion operations

BGH/mac
12/7/99

MULTI-POINT SURFACE USE PLAN

NAME OF WELL: JAMES RANCH UNIT #79

LEGAL DESCRIPTION - SURFACE: 330' FNL & 990' FEL, Section 6, T-23-S, R-31-E, Eddy County, New Mexico.

POINT 1: EXISTING ROADS

A) Proposed Well Site Location:

See Exhibits "A" & "B".

B) Existing Roads:

From Jal, NM go west on Hwy 128 approximately 47 miles (10 miles east of intersection of Hwy 31 & Hwy 128). Go North on paved (WIPP) road for 1 mile. Turn east and go 0.9 miles. Turn left and to 0.4 miles and turn north to location.

C) Existing Road Maintenance or Improvement Plan:

See Survey Plat and Exhibit "B".

POINT 2: NEW PLANNED ACCESS ROUTE

A) Route Location:

See Survey Plat and Exhibit "B". A new road will be constructed from the existing road, 200' south of location.

B) Width

12'.

C) Maximum Grade

Not applicable.

D) Turnout Ditches

None.

E) Culverts, Cattle Guards, and Surfacing Equipment

None.

POINT 3: LOCATION OF EXISTING WELLS

Exhibit "A" indicates existing wells within the surrounding area.

POINT 4: LOCATION OF EXISTING OR PROPOSED FACILITIES

A) Existing facilities within one mile owned or controlled by lessee/operator:

Oil/Gas production facilities are located 1850' southwest at James Ranch Unit #7 location. (See Exhibit A)

B) New Facilities in the Event of Production:

None, production will be piped along roadway southeast to James Ranch Unit #7 Battery. (See Exhibit A)

C) Rehabilitation of Disturbed Areas Unnecessary for Production:

Following the construction of production facilities, those access areas required for continued production will be graded to provide drainage and minimize erosion. The areas unnecessary for use will be graded to blend in with the surrounding topography (See Point 10).

POINT 5: LOCATION AND TYPE OF WATER SUPPLY

A) Location and Type of Water Supply

Brine water will be trucked from Bass' James Ranch Unit #29 and James Ranch Unit #19 Production Facilities. If necessary, additional brine water will be hauled from commercial facilities. Fresh water will be pumped from a well located on the J. C. Mills Ranch in Sec. 6, T23S, R31E.

B) Water Transportation System

A poly pipeline will be connected from the J. C. Mills Ranch water well.

Water hauling to the location will be over existing and proposed roads.

POINT 6: SOURCE OF CONSTRUCTION MATERIALS

A) Materials

If not found on location, source of caliche will be the nearest open pit approved by BLM.

B) Land Ownership

Federally owned.

C) Materials Foreign to the Site

No construction materials foreign to this area are anticipated for this drill site.

D) Access Roads

See Exhibit "B".

POINT 7: METHODS FOR HANDLING WASTE MATERIAL

A) Cuttings

Cuttings will be contained in the plastic lined reserve pit.

B) Drilling Fluids

Drilling fluids will be contained in the plastic lined reserve pit.

C) Produced Fluids

Water production will be contained in the plastic lined reserve pit.

Hydrocarbon fluid or other fluids that may be produced during testing will be retained in test tanks. Prior to cleanup operations, any hydrocarbon material in the reserve pit will be removed by skimming or burning as the situation would dictate.

D) Sewage

Current laws and regulations pertaining to the disposal of human waste will be complied with.

E) Garbage

Portable containers will be utilized for garbage disposal during the drilling of this well.

F) Cleanup of Well Site

Upon release of the drilling rig, the surface of the drilling pad will be graded to accommodate a completion rig if electric log analysis indicate potential productive zones. In any case, the "mouse" hole and the "rat" hole will be covered. The reserve pit will be fenced and the fence maintained until the pit is backfilled. Reasonable cleanup will be performed prior to the final restoration of the site.

POINT 8: ANCILLARY FACILITIES

None.

POINT 9: WELL SITE LAYOUT

A) Rig Orientation and Layout

Exhibit "C" shows the dimensions of the well pad and reserve pits, and the location of major rig components. Only minor leveling of the well site will be required. No significant cuts or fills will be necessary.

B) Locations of Pits and Access Road

See Exhibit "C".

C) Lining of the Pits

The reserve pits will be lined with plastic.

POINT 10: PLANS FOR RESTORATION OF THE SURFACE

A) Reserve Pit Cleanup

The pits will be fenced immediately after spudding and shall be maintained until they are backfilled. The pits will be netted immediately after the drilling rig moves off location. Previous to backfill operations, any hydrocarbon material on the pits' surfaces shall be removed. The fluids and solids contained in the pits shall be backfilled with soil excavated from the site and soil adjacent to the reserve pits. The restored surface of the pits shall be contoured to prevent impoundment of surface water flow. Water-bars will be constructed as needed to prevent excessive erosion. Topsoil, as available, shall be placed over the restored surface in a uniform layer. The area will be seeded according to the Bureau of Land Management stipulations during the appropriate season following restoration.

B) Restoration Plans - Production Developed

Reserve pits will be backfilled and restored as described above under Item A. In addition, those areas not required for production will be graded to blend with the surrounding topography. Topsoil, as available, will be placed upon those areas and seeded. The portion of the site required for production will be graded to minimize erosion and provide access during inclement conditions. Following depletion and abandonment of the site, restoration procedures will be those that follow under Item C.

C) Restoration Plans - No Production Developed

Reserve pits will be restored as described above. With no production developed, the entire surface disturbed by construction of the well site will be restored. The site will be contoured to blend with the surrounding topography and provide drainage of surface water. The topsoil, as available, shall be replaced in a uniform layer and seeded according to the Bureau of Land Management's stipulations.

D) Rehabilitations Timetable

Upon completion of drilling operations, the initial cleanup of the site will be performed as soon as weather and site conditions allow economic execution of the work.

POINT 11: OTHER INFORMATION

A) Terrain

Relatively flat.

B) Soil

Caliche and sand.

C) Vegetation

Sparse, primarily grasses and mesquite with very little grass.

D) Surface Use

Primarily grazing.

E) Surface Water

There are no ponds, lakes, streams or rivers within several miles of the wellsite.

F) Water Wells

There is a water well located on the J. C. Mills Ranch in Section 6, T23S, R31E.

G) Residences and Buildings

Mills Ranch house is approximately 1.6 miles south of location.

H) Historical Sites

None observed.

I) Archeological Resources

An archeological survey will be obtained for this well site. The BLM should notify operator when the BLM potash group had approved the location so the operator can order survey.

J) Surface Ownership

The well site and new access road is on federally owned land.

K) Well signs will be posted at the drilling site.

L) Open Pits

All pits containing liquid or mud will be fenced.

POINT 12: OPERATOR'S FIELD REPRESENTATIVE

(Field personnel responsible for compliance with development plan for surface use).

DRILLING
William R. Dannels
Box 2760
Midland, Texas 79702
(915) 683-2277

PRODUCTION
Mike Waygood
3104 E. Green St.
Carlsbad, New Mexico 88220
(505) 887-7329

Keith E. Bucy
Box 2760
Midland, Texas 79702
(915) 683-2277

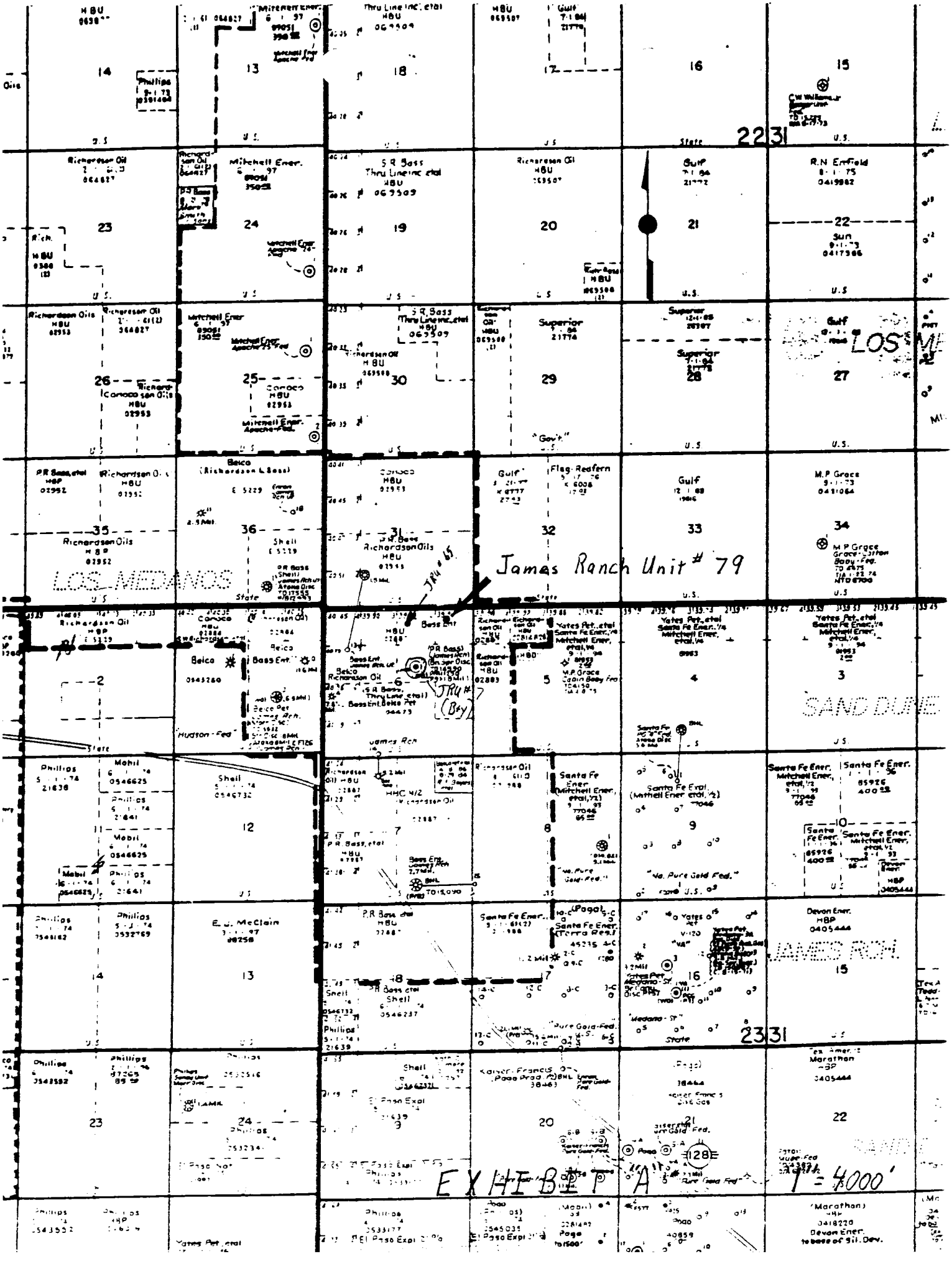
POINT 13: CERTIFICATION

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 currently exist; that the statements made in the plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Bass Enterprises Production Co. and it's contractors and subcontractors 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.

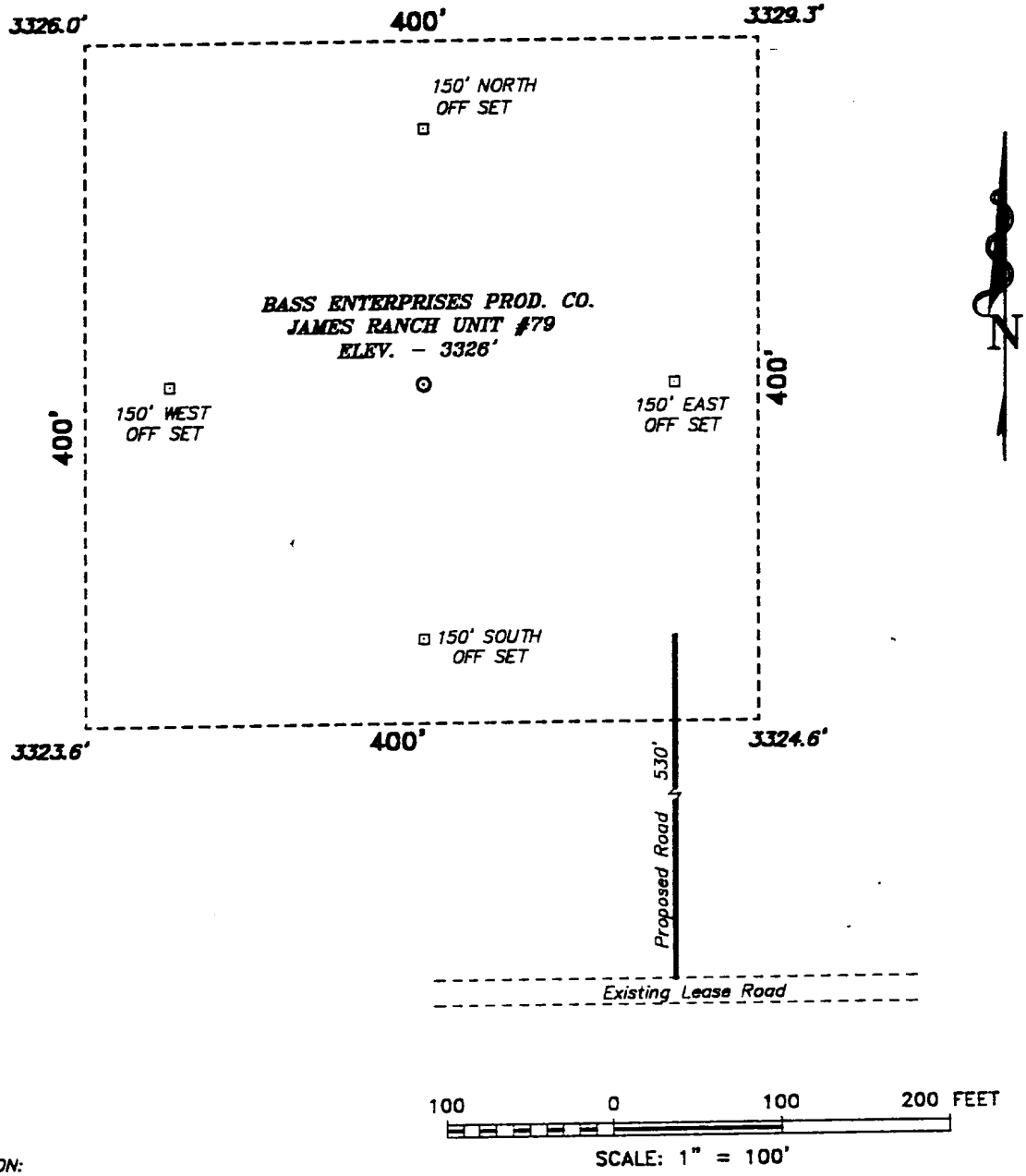
12-1-99
Date

William R. Dannels
William R. Dannels

WRD/BGH:mac


James Ranch Unit # 79
JRU # 65
JRU # 7 (Bty)
LOS MEDANOS
SAND DUNE
JAMES RCH
EXHIBIT A
1" = 4000'
2231
2331
2331
128E

SECTION 6, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



DIRECTIONS TO LOCATION:

FROM THE JUNCTION OF STATE HWY 128 AND COUNTY ROAD 802 (WIPP ROAD), GO NORTH ON CO. RD 802 APPROX. 2 MILES TO A POINT WHICH LIES APPROX. 0.5 MILE EAST OF LOCATION.

EXHIBIT "B"

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

W.O. Number: 9393	Drawn By: K. GOAD
Disk: KJG #122 – 9393A.DWG	Survey Date: 11-05-99

BASS ENTERPRISES PROD. CO.

REF: James Ranch Unit No. 79 / Well Pad Topo

THE JAMES RANCH UNIT No. 79 LOCATED 330' FROM THE NORTH LINE AND 990' FROM THE EAST LINE OF SECTION 6, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

Sheet 1 of 1 Sheets

JAMES RANCH UNIT #79

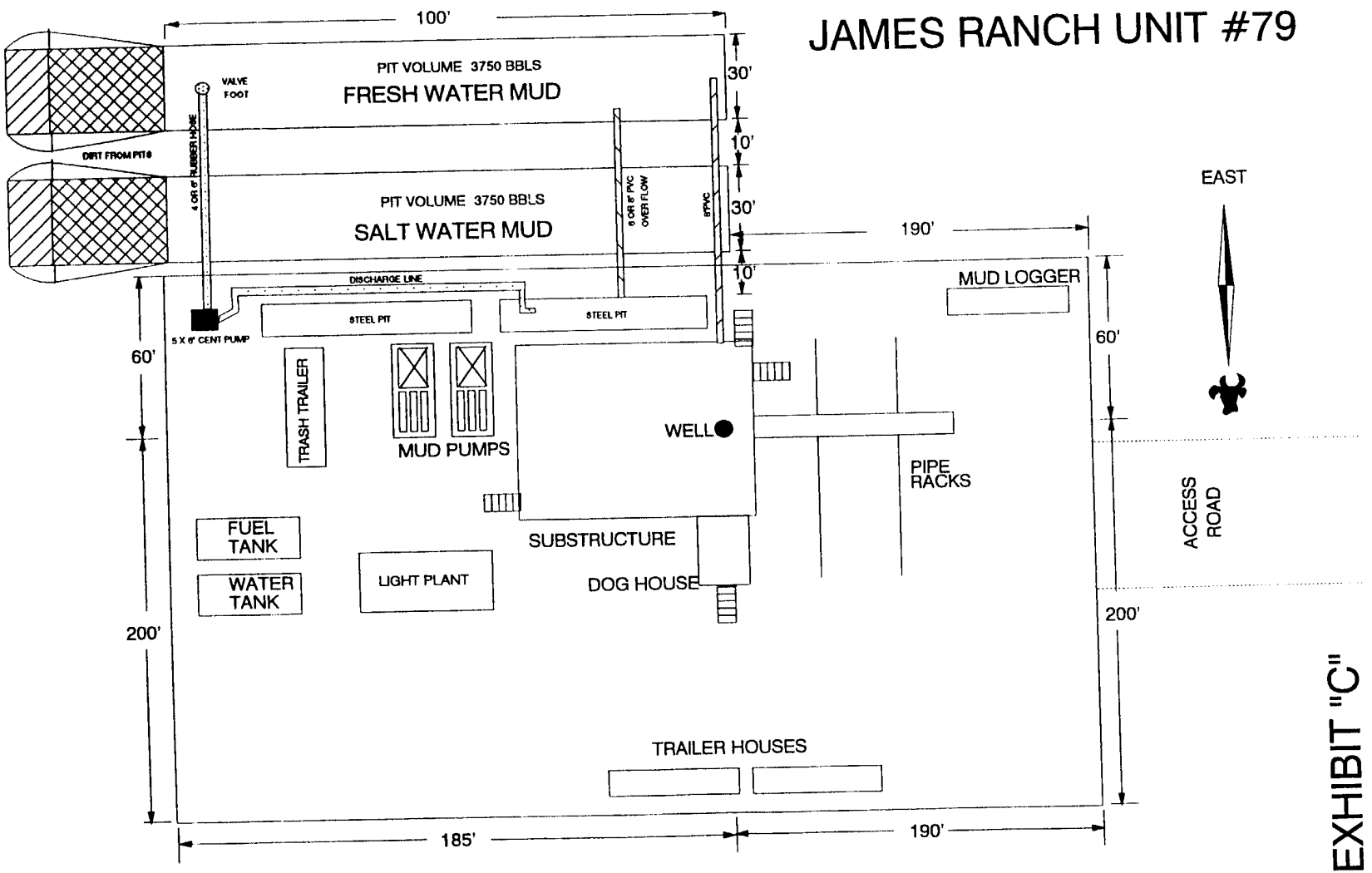
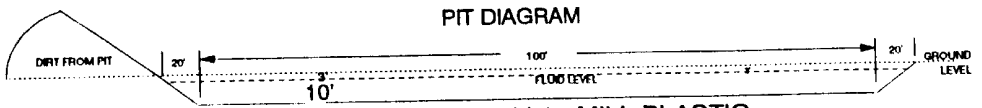


EXHIBIT "C"

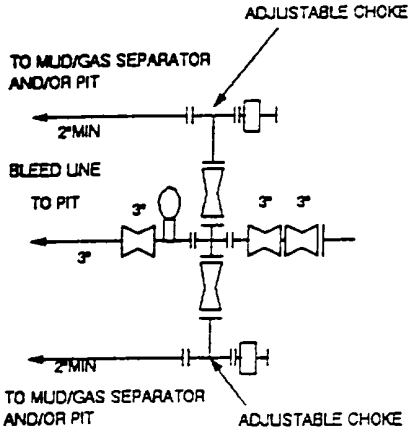
PIT DIAGRAM

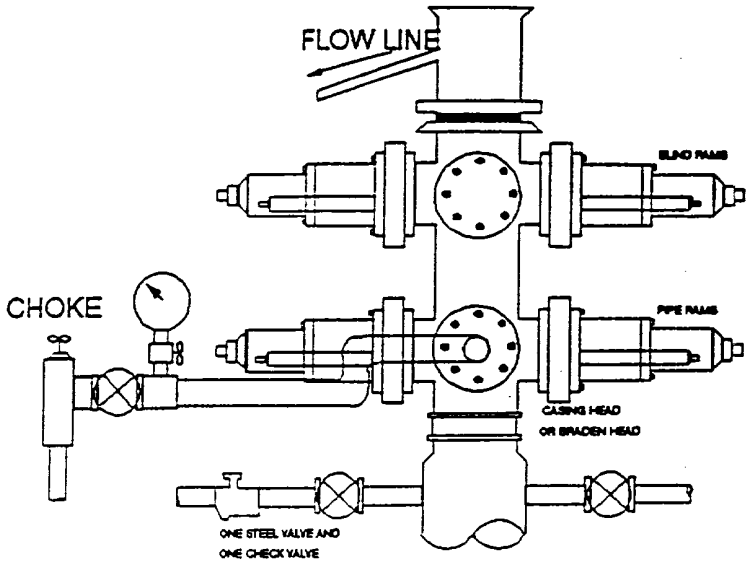


LINE PITS WITH 10 MILL PLASTIC

11-16-99 BGH

3000 PSI WP





THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

A. One double gate blowout preventer with lower rams for pipe and upper rams blind, all hydraulically controlled.

B. Opening on preventers between rams to be flanged, studded or clamped and at least two inches in diameter.

C. All connections from operating manifold to preventers to be all steel hose or tube a minimum of one inch in diameter.

D. The available closing pressure shall be at least 15% in excess of that required with sufficient volume to operate (close, open, and re-close) the preventers.

E. All connections to and from preventers to have a pressure rating equivalent to that of the BOP's.

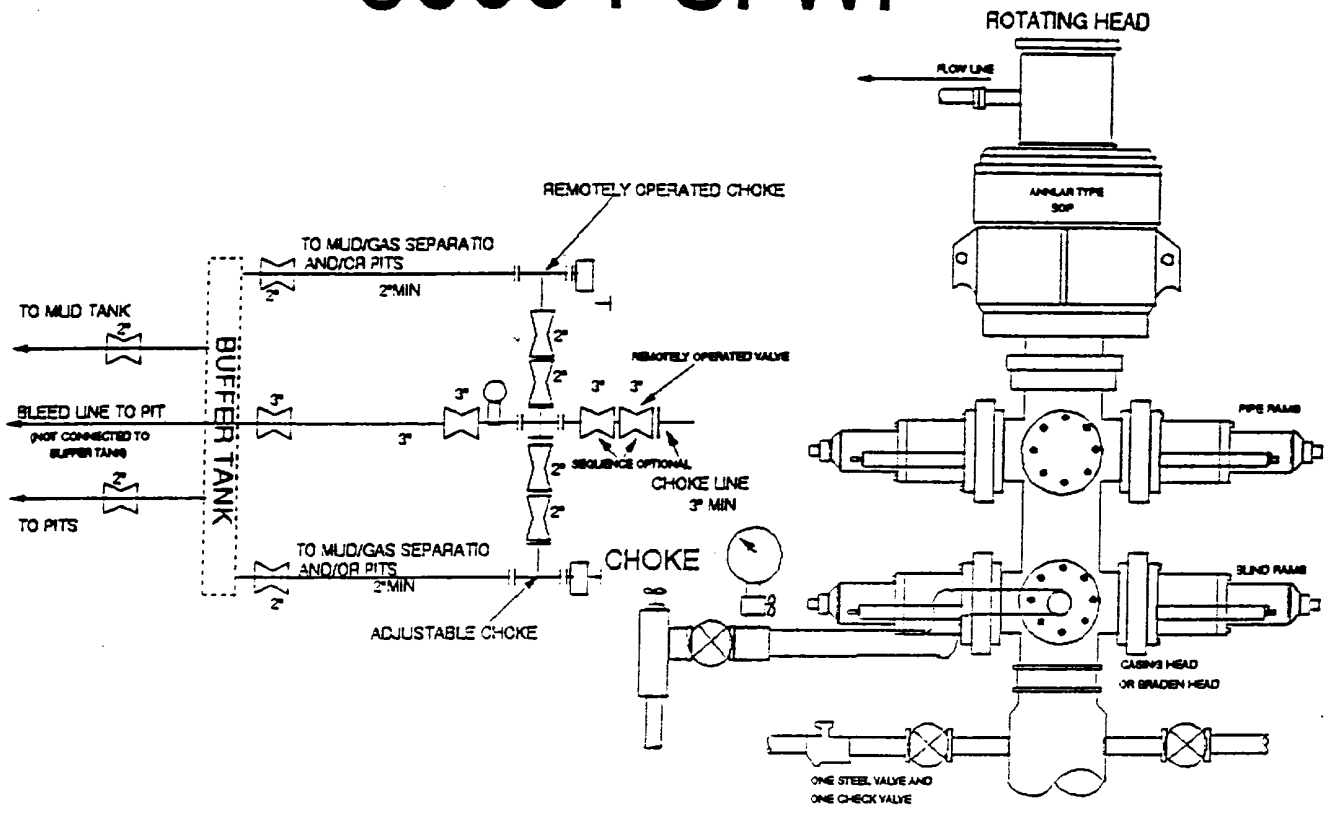
F. Manual controls to be installed before drilling cement plug.

G. Valve to control flow through drill pipe to be located on rig floor.

H. All chokes will be adjustable. Choke spool may be used between rams.

DIAGRAM 1

5000 PSI WP



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A. One double gate blowout preventer with lower rams for pipe and upper rams blind, all hydraulically controlled.

B. Opening on preventers between rams to be flanged, studded or clamped and at least two inches in diameter.

C. All connections from operating manifold to preventers to be all steel hose or tube a minimum of one inch in diameter.

D. The available closing pressure shall be at least 15% in excess of that required with sufficient volume to operate (close, open, and re-close) the preventers.

E. All connections to and from preventers to have a pressure rating equivalent to that of the BOP's.

F. Manual controls to be installed before drilling cement plug.

G. Valve to control flow through drill pipe to be located on rig floor.

H. All chokes will be adjustable. Choke spool may be used between rams.

DIAGRAM 2