#### SUBMIT IN TRIPLICATE\*

(Other fastruct ons on geverse side)

Form approved, fouget Sureau No. 42 B1425.

#### UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

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Contract				287		
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	1.5				TOTAL TOTAL	

DATE \_

APPLICATION	FOR PERMIT TO	O DRILL, DEEPI	EN, OR PLUG EA	ACK	of Mark as Averagon based Same Jicarilla Apache	
b. Type of Wkill	R OTHER	DEEPEN 2	PLUG BAC	ĸ □ ├□	Puerto Chiquito Manco	
Benson-Mont	in-Greer Dril		Line and the second of the control o	7	39 <del>(3-21)</del>	
4. LUCATION OF WELL (Re	um Center Bui	n accordance with any	State requirements.*1	7401	Puerto Chiquito Manco Ti. sec., T., B., M., OR BIK. AND SURVEY OR AREA	
At proposed prod. zone	•				Sec 21, T-27N, R-1E	
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	ely 10 north		O. OF ACRES IN LEASE	17 80	OF ACRES ASSISTED	
15. DISTANCE FROM PROPO- LOCATION TO NEAREST PROPERTY OR LEASE L. (Also to nearest drig.	INE, FT.			TU T	HIS WELL 160	
18. DISTANCE FROM PROPORTO NEAREST WELL, DR	OSED LOCATION®	19. ri	ROPOSED DEPTH	20. ROTA	Determination	
OR APPLIED FOR, ON THE	S LEASE, PT.		3500'		Rotary  22. APPROX. DATE WORK WILL START*	
21. ELEVATIONS (Show whe					as soon as approved	
6915 G		ROPOSED CASING AN	D CEMENTING PROGRA	м		
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH		QUANTITY OF CEMENT	
15"	10 3/4"	40 <b>.</b> 5#	100'	100		
8 3/4"	7"	23.0 <i>‡</i>	2300'	300	sacks	
6 1/4"	4 1/2" (liner)	10.5#	2000'-3500'	150	sacks	
				•		
The produ	cing section	will be san	d-oil fractur	ed.		
	(178)			RI		
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in above space describe zone. If proposal is to preventer program, if an	drill or deepen directional	proposal is to deepen or lly, give pertinent data			ductive sode and proposed new productive and the vertical depths. Give blowout	
and MyV	1. Tun	TITLE _	Vice-Presid	ent	PATE NOV. 4, 1980	
(This space for Rede	A R CLV ED USE)					

APPROVED BY DURY WARNAY
CONDITIONS OF ARTISMES F. SIMS
DISTRICT FROM DISTRICT ENGINEER

AS AMENDED

\*See Instructions On Reverse Side

All distances must be for a the cuter boundaries of the Section. Well No. C), elotor 39 (E-21) 287 BENSON-MONTIN-GREER DRG. CORP. County Section RIO ARRIBA 27 North I must Found to eather of Well; 610 teet to mithe WEST 1.ne and 1855 Lee familie 7 201 East Puerto Chiquito Niobrara 160.00 1. Outline the acreage dedicated to the subject well by colored pencil or hachuse marks on the plat below. 2. If more than one leave is dedicated to the well, ortline each and identify the ewpership thereof (both as to working interest and revalty). 3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc? If answer is "yes," type of consolidation [ ] Yes [ ] No If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)\_\_\_\_ No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commis-CERTIFICATION I hereby certify that the information some toined herein is tone and complete to the best of my knowledge and believe Virgil L. Stoabs **Ecstion** Vice-President - 10ص Ссиц эту Benson-Montin-Greer Drilling Corp. November 7 Lettly that the well vocation Fanthis platops plotted from field Date Surveyed October 20, 1980 Registered Professional Englader James P. Leese place visit the beautiful the second of the

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#### NTL-6 ENVIRONMENTAL PROTECTION STATEMENT

Operator: Benson-Montin-Greer Drilling Corp.

Well No. and Lease: East Puerto Chiquito Mancos Unit #39 (E-21)

Location: SW/4 NW/4 Section 21, T-27N, R-1E

County and State: Rio Arriba County, New Mexico

Date: November 7, 1980

TO: District Engineer, U. S. Geological Survey, Bureau of Land Management and/or U. S. Forest Service

#### I. General

The following information is provided in order that the environmental impact of proposed operations on subject leasehold may be evaluated. Oil and gas operations by this operator will be totally systemized between management and operations personnel to ameliorate and minimize any adverse effect on the environment. Operator plans to conduct operations in such a fashion that will:

- (A) Result in diligent development and efficient resource recovery.
- (B) Afford adequate safeguard for the environment.
- (C) Result in proper rehabilitation of disturbed land.
- (D) Assure protection of public health and safety.
- (E) Conform with best available oil field practice.

### II. Drilling Operations

### A. Preliminary Environmental Review

Request for permission to stake well location and submission of topo map has been done previously.

### B. Application for Permit to Drill, Deepen, or Plug Back

(1) Form 9-331C (Application for Permit to Drill, Deepen, or Plug Back) is attached.

- (2) Multi-Point Surface Use and Operations Plan is attached.
- (3) If private surface is involved, Rehabilitation Agreement is attached (see Exhibit I-A).
- (4) Form 9-331C
  - 1. Location see 9-331C
  - Elevation gl see 9-331C
  - Geologic name of surface formation see 9-331C
  - 4. Type drilling tools see 9-331C
  - 5. Proposed TD see 9-331C
  - 6. Estimated tops of important geologic markers see Exhibit I
  - 7. Estimated depth anticipated water, oil, gas, or other mineral bearing form - see Exhibit II
  - 8. Proposed casing program (size, grade, wgt., N or U) - see 9-331C
  - 9. Proposed setting depth each string (amt., type cmt. and additives) see 9-331C
  - 10. Operator's planned minimum specs for pressure control equipment, schematic, sizes and pressure ratings (API series), testing procedures and frequency see Exhibit III
  - 11. Type and characteristics of circulating medium (quantities and types of mud and weighting material to be maintained) see Exhibit IV
  - 12. Testing, logging, and coring program w/provision for flexibility, auxiliary equipment- see Exhibit V
  - 13. Any anticipated abnormal presures, temperatures, or hazardous gases (H<sub>2</sub>S), and mitigating plans if necessary see Exhibit VI
  - 14. Anticipated starting date and duration of operation see Exhibit VII
  - 15. Extraneous facets of proposed operation see Exhibit VIII
- (5) Provide copy of approved Application for Permit to Drill at wellsite see dog house wall.

## EXHIBIT I (TO ACCOMPANY FORM 9-331C)

### (4-6) Estimated tops of important geologic markers:

Lewis Shale	surface
Mesa Verde	790'
Point Lookout	1030'
Mancos	1235'
Niobrara	2145'
Niobrara Zone A	2360'
Niobrara Zone B	2400'
Niobrara Zone C	2470'
Sanostee	2840'
Greenhorn	3140'
Graneros	3205'
Dakota	3395!
TD	3500'
10	

## EXHIBIT II (TO ACCOMPANY FORM 9-331C)

(4-7) Estimated depths anticipated water, oil, gas or other mineral bearing formations:

Niobrara (oil & gas)	2145'
Graneros (possible oil & gas)	3205'
Dakota (possible oil & gas)	3395'

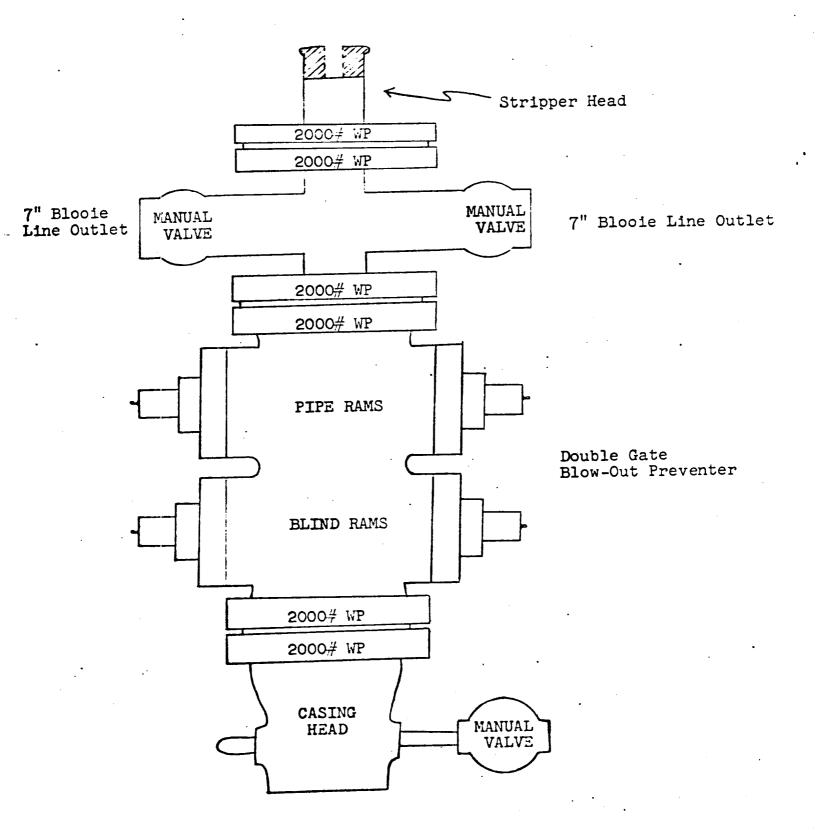
## (TO ACCOMPANY FORM 9-331C)

(4-10) Planned pressure control, planned testing, frequency and procedures:

Testing procedure of pressure control equipment and frequency will be conducted in accordance with approved API procedures and/or best oil field practice in area concerned.

- (a) Visual inspection will be made of its equipment before installation.
- (b) After installation, equipment will be tested at manufacturer's rated, equipment pressure, or at least to 1000 psig.
- (c) Pressure control equipment will be operationally tested each trip for bit, but not more than once per day.

# EXHIBIT III SCHEMATIC DRAWING OF BLOW-OUT PREVENTER STACK



## EXHIBIT IV (TO ACCOMPANY FORM 9-331C)

(4-11) Planned types and characteristics of circulating medium:

Depth	Mud Weight	Viscosity
0-90'	8.5 - 9.0	30 - 40

Spud with fresh water gel slurry. Adjust viscosity as needed to keep hole clean and remove cuttings.

Base of surface to intermediate seating depth:

Operator proposes to drill this footage with compressed air and air mist as circulating medium. Air volume will be adequate to keep hole clean and remove cuttings. In event water is encountered, air mist circulating medium will be used.

Base of surface to TD:

Operator proposes to drill this footage with compressed air as circulating medium.

## EXHIBIT V (TO ACCOMPANY FORM 9-331C)

(4-12) Planned testing, logging, and coring program (with provision for flexibility):

DST's planned: None

Cores planned: None

Logs planned: Suitable Resistivity, Reciprocal Conductivity,

and SP log in fluid filled hole; Gamma Ray

Induction if hole dry.

Suitable porosity log if tools available, GR Comp. Den. and/or Comp. Neut with caliper.

All logs in API units.

If circumstances arise, will consider a selected DST and/or core if additional reservoir information desired.

### (4-12) Auxiliary Equipment:

1. Kelly Cock

2. Float at the bit

3. Visual monitoring of the mud system while in use drilling surface hole.

4. Full opening stabbing valve on derrick floor at all times.

## (TO ACCOMPANY FORM 9-331C)

- (4-13) Anticipated abnormal pressures, temperatures, or hazardous gases  $(H_2S)$ :
  - (a) Anticipated abnormal pressures: None
  - (b) Anticipated abnormal temperatures: None
  - (c) Anticipated hazardous gases (H2S): None

If any of the foregoing are unexpectedly encountered, suitable steps will be taken to mitigate.

## (TO ACCOMPANY FORM 9-331C)

- (4-14) Anticipated starting date and duration of operation:
  - (a) Anticipated starting date: as soon as approved.
  - (b) Duration of operation: 30 days.
  - (c) Depending on weather and rig availability, will either complete well with the drilling rig on the hole or in the logistical alternative, subsequently use a completion rig. Unless operational problems are encountered, expect to perf, frac, run tubing and clean up well in approximately 60 additional days.

## (TO ACCOMPANY FORM 9-331C)

- (4-15) Extraneous facets of proposed operation:
  - (a) None.

### NTL-6 ENVIRONMENTAL PROTECTION STATEMENT

Operator: Benson-Montin-Greer Drilling Corp.

Well No. and Lease: East Puerto Chiquito Mancos Unit #39 (E-21)

Location: SW/4 NW/4 Section 21, T-27N, R-1E

County and State: Rio Arriba County, New Mexico

Date: November 7, 1980

### III. Multi-Point Surface Use and Operations Plan

Plan submitted is in sufficient detail to permit complete appraisal of environmental effects associated with proposed project. Submitted six copies to USGS District Engineer along with form 9-331C.

### A-l. Existing Roads (see Exhibit A)

- (a) Topo or county road map.
- (b) Proposed route shown including distances to highway or county road.
- (c) Proposed access roads labeled.
- (d) Wildcat all existing roads within 3-mile radius. Development well - all existing roads within 1-mile radius.
- (e) Improvement and/or maintenance of existing roads will be only as necessary and normally consist of minor blade work.

### A-2. Planned Access Roads (see Exhibit A)

- (a) Identify permanent and temporary access roads.
  - Planned data on newly constructed access roads (see Exhibit A-1).
    - a. Width
    - b. Maximum grade
    - c. Turnouts
    - d. Drainage design
    - e. Location and size of culverts

- f. Surfacing material
- g. CL staked or flagged
- h. Where existing fence to be cut
- i. Gates or cattleguard to be cut
- j. Any existing gates to be replaced
- k. Any existing cattleguards to be replaced

### A-3. Location of Existing Wells (see Exhibit B)

- (a) Wildmat all wells within 2-mile radius (include water wells use topo)
- (b) Development well all wells within 1-mile radius (include water wells use topo)
- A-4. Location of Existing and/or Proposed Facilities tank

  batteries, production facilities, and production, gathering
  and service lines (see Exhibit C)
  - (a) Existing facilities within 1-mile radius of location owned or controlled by operator to be shown on a plat or map.
  - (b) There are existing facilities owned by operator within 1-mile radius of proposed location.
  - (c) Protective measures to functionally minimize or ameliorate hazards to livestock, waterfowl and other wildlife will be accomplished by fencing permanent or temporary pits as considered necessary.
  - (d) New facilities will be flocated on drillsite pad of new well.
  - (e) All production facilities will be located on the drillsite in optimum positions with due organizational regard to traffic mobility and pipeline options and flexibility.
  - (f) All disturbed areas not needed for operation and maintenance will be reseeded, as required by surface jurisdictional and management agencies or fee land owner.
  - (g) Future prospects for additional development of this leasehold have been functionally considered in this plan.

### A-5. Location and Type of Water Supply (see Exhibit D)

(a) Location of water for drilling purposes and method and route of transportation are stated in above mentioned Exhibit.

### A-6. Source of Construction Materials (see Exhibit E)

(a) Location of proposed source of sand, gravel, stone, soil, or construction materials and transportation route are described in above mentioned Exhibit.

### A-7. Method of Handling Waste Disposal (see Exhibit F)

(a) A brief written narrative description of method and location for safe containment and disposal of each type of waste material which results from drilling of proposed well and eventual disposal of drilling fluids and any produced oil or water recovered during testing operations are described in above mentioned Exhibit.

### A-8. Arcillary Facilities (see Exhibit G)

(a) Plans and maps for camps, airstrips, location and land area required, and methods and standards of construction are detailed in above mentioned Exhibit. Center lines of camps and airstrips shall be staked on the ground.

### A-9. Well-Site Layout (see Exhibit H)

(a) A proposed plat of well-site layout showing cuts and fills and relation to topography is provided, including cross sections. The proposed location of mud tanks, pits (reserve, burn and trash), pipe racks, access roads, turn-around areas, living facilities, soil material stockpiles (if necessary), and orientation of rig are indicated. Plans to line pit are noted.

### A-10. Plans for Restoration of Surface (see Exhibit I)

(a) Proposed program for surface restoration upon completion of operation is outlined in above mentioned Exhibit. Waste disposal is outlined in Exhibit F. Proposed timetable for commencement and completion of rehabilitation operations is also provided.

### A-11. Other Information (see Exhibit J)

- (a) General description of topography.
- (b) Soil characteristics.
- (c) Formation lithologies.
- (d) Geologic features.
- (e) Flora.
- (f) Fauna.
- (g) Surface use activities.
- (h) Surface ownership at well location.
- (i) Surface ownership lands crossed by newly constructed or upgraded roads.
- (j) Any other information considered to be useful by operator to USGS and BLM and/or Forest Service.

- Proximity to steep hillsides. (k)
- Proximity to steep gullies. (1)
- Proximity to water wells (see Exhibit B). (m)
- Proximity to ponds. (n)
- Proximity to streams. (o)
- Proximity to other facilities. (p)
- Proximity to occupied dwellings. (q)
- Proximity to archeological sites. (r)
- Proximity to historical sites. (s)
- Proximity to cultural sites. (t.)
- Information concerning cuts and fills of roads (see Exhibit (U:)
- Information concerning cuts and fills of location (see (V) Exhibit H).
- Construction practices necessary to accommodate potential (W) geologic hazards.

#### Operator's Representative (see Exhibit K) A-12.

Name, address and phone number of operator's field representative(s).

#### Certification (see Exhibit L) A-13.

Signed by field representative. (a)

#### Environmental Analysis Requirements IV.

If preliminary inspection is not made prior to staking, an on-site inspection will normally be required by representatives of District Engineer (USGS), Operator, and Federal Surface Management Agency.

#### Approval of Subsequent Operations v.

- Must be done on 9-331A or 9-331C and approval obtained before work started.
- Operator must submit for approval suitable plan prior to В. any new construction or alteration of any existing facilities, including roads, dams and production facilities.

#### Agreement for Rehabilitation of Privately-Owned Surface (see VI. Exhibit K, if applicable)

- Form 9-331C shall contain information landowner's A. rehabilitation requirements.
- Written agreement or letter must be furnished.
- If landowner's requirements are impossible or impractical, a letter describing situation will be acceptable.

D. If no arrangements made, USGS will request appropriate Federal agency to recommend surface restoration requirements.

### VII. Well Abandonment (see Exhibit L, if applicable)

- A. No well abandonment operations will be commenced without prior approval of the District Engineer.
- B. Upon completion of abandonment or rehabilitation operations, District Engineer to be notified by Sundry Notice.

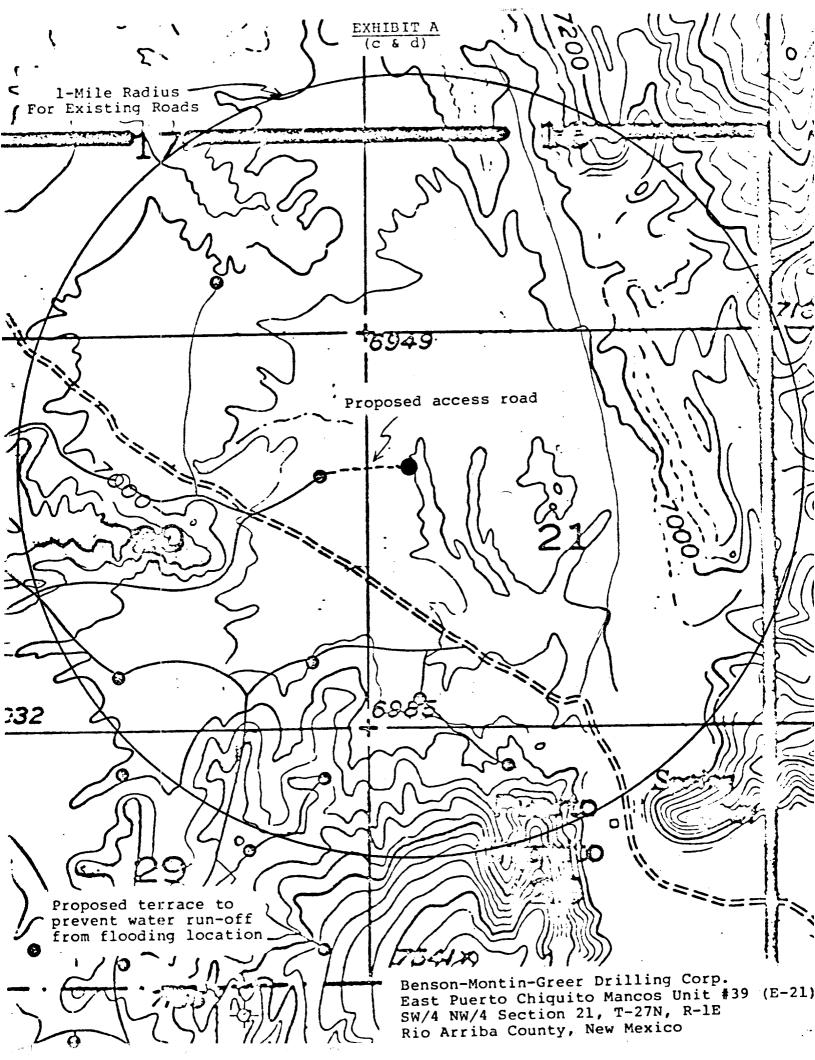
### VIII. Water Well Conversion (see Exhibit M, if applicable)

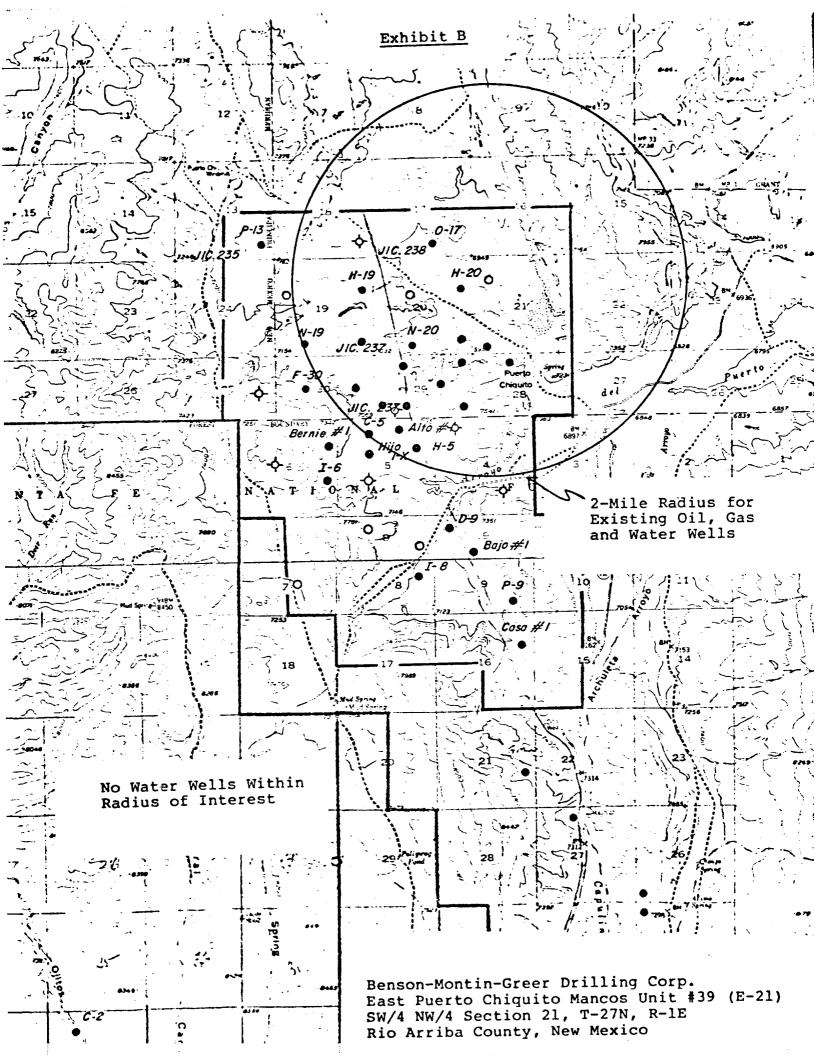
- A. Well that encounters usable fresh water will not be approved if Federal Surface Management Agency wants to acquire well.
- B. If Federal Surface Management Agency elects to acquire well, it will reimburse operator for cost of any recoverble casing or well-head equipment which it requests to be left in or on the hole.
- C. Operator completes cleanup.

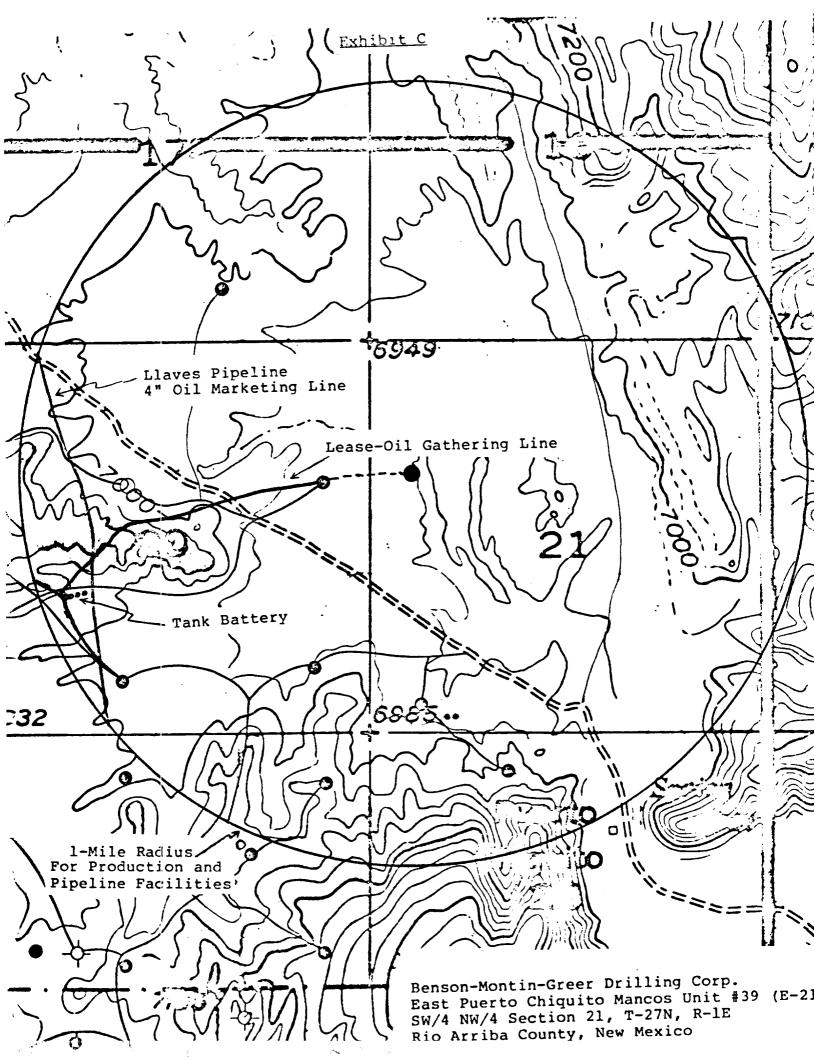
## EXHIBIT A-1 TO ACCOMPANY EXHIBIT A (a & b)

(III-A-2-1)	Planned data on newly constructed a	access roads:
(a)	Width	20'
(b)	Maximum grade	88
(c)	Turnouts	None
(ð)	Drainage design	Natural
(e)	Location and size of culverts	None
(f)	Surfacing material	None
(ci)	CL staked or flagged	Yes
(h)	Where existing fence to be cut	None
(i.)	Gates or cattleguard to be used	None
	Any existing gates to be replaced	None
(j)		
(k)	Any existing cattleguards to be replaced	None

State Highway 112 to Regina 22 miles







#### EXHIBIT D

- (III-A-5) Location, route and method of transportation, and type of water supply:
  - (a) Location: Drilling water will be hauled from East Puerto Chiquito Mancos Unit Battery #2.
  - (b) Route of transportation: 1 mile southwest of location to loading point.
  - (c) Method of transportation: Water trucks.
  - (d) Type of water supply: Fresh water.

#### EXHIBIT E

(III-A-6) Source of construction materials:

(a) Sand: None

(b) Gravel: None

(c) Stone: None

(d) Soil: None

- (e) Lumber will be purchased from suppliers in the Farmington area and will use transportation route as shown on Exhibit A (a & b).
- (f) Planned transportation route will be on suitable public or private roads.

#### EXHIBIT F

- (III-A-7) Method of handling waste material:
  - (a) Drill cuttings will be buried in reserve pit.
  - (b) Drilling fluids will be collected in reserve pit, allowed to evaporate and dry, and buried when dry.
  - (c) Small amounts of produced fluids will be collected in reserve pit, allowed to evaporate, and buried when dry.
  - (d) Any sewage will be covered and buried when portable toilet removed.
  - (e) Any garbage, cans, and general trash will be burned in burn pit and covered when reserve pit covered. Other general debris and waste material, such as junk iron, wire line, cans, and bags will either be burned or buried in reserve pit.
  - (f) Drilling crews, under the supervision of contractor or operator, will control and dispose of waste material during drilling operations.
  - (g) Roustabout or completion crews will dispose of trash after well is completed or abandoned. After drying of reserve pit, a general cleanup and covering of the pit along with leveling of location or drillsite will take place.

#### EXHIBIT G

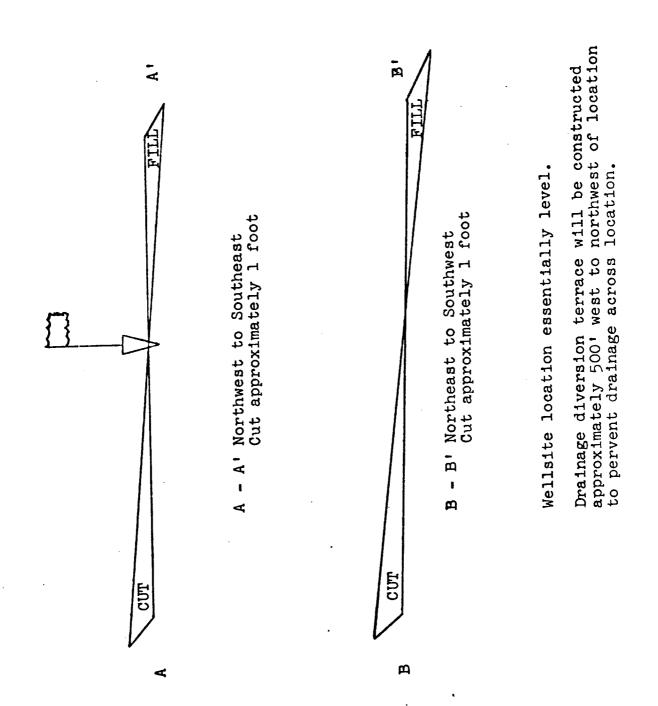
### (III-A-8) Ancillary facilities:

- (a) Camps planned: None (may have small house trailer on location for tool pusher).
- (b) Airstrips planned: None.
- (c) Area and land required for above: None.

East Puerto Chiquito Mancos Unit #39 (E-21) SW/4 NW/4 Section 21, T-27N, R-1E Rio Arriba County, New Mexico

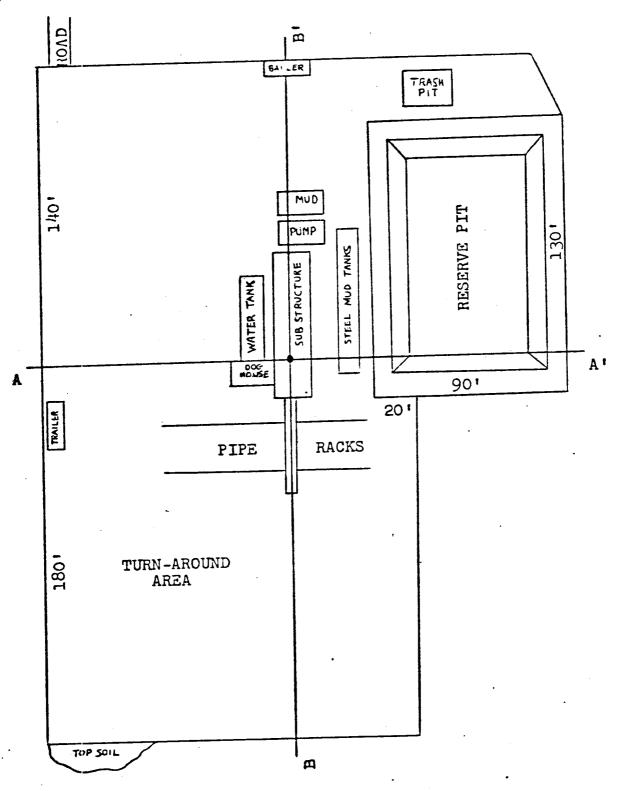
#### EXHIBIT H

(III-A-9) Planned wellsite layout:



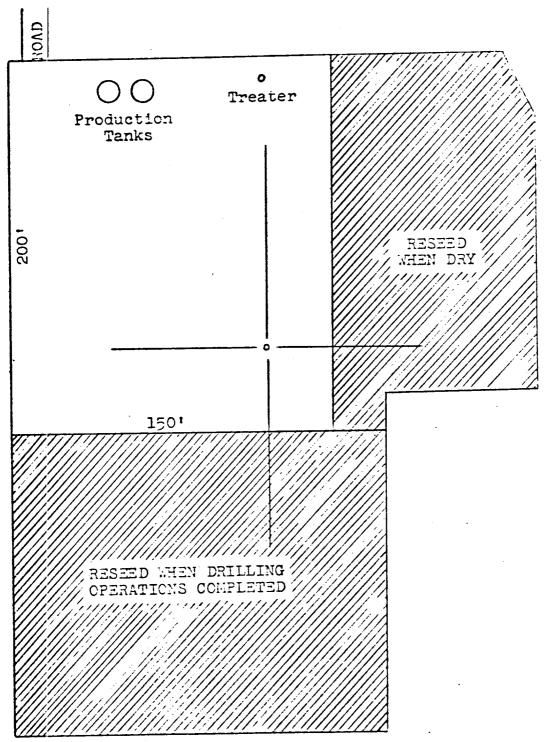
#### EXHIBIT H

(III-A-9) Planned wellsite layout:



Reserve pit will be unlined.

# EXHIBIT I (III-A-10) Planned restoration of surface:



- (A) Waste disposal outlined in Exhibit F.
- (B) Rehabilitation commencement of wellsite surface will take place when well is completed and reserve pit is dry. Work will be completed 2 1/2 days after commencement.
- (C) Reseeding will take place within one week of completion of foregoing.

#### EXHIBIT J

### (III-A-11) Other information:

- (a) Area is rolling with occasional mesa-valley topography developed. Area drained by streams and washes.
- (b) Soil characteristics: sandy-shale and clayey loam, where bare rock and shale exposed, no soil profile is developed.
- (c) Surface formation lothologies are sandstone, siltstone, and shale.
- (d) No unusual geologic features are present. Surface geomorphic features are described in (a).
- (e) Flora: Normal mountain grasses are present, shrubs such as sagebrush, Mormon tea, and occasional yucca are present.
- (f) Fauna: Rabbit, coyotes, deer and elk are known. Domestic cattle, horses, and sheep occasionally graze the area. Small dry land mammals, rodents and reptiles are present. It is doubtful that the peregrine falcon and the blackfooted ferret exist in the area. A normal suite of birds, such as the pinon jay, raven, and an occasional hawk have been seen.
- (g) Surface use as grazing for domestic livestock.
- (h) Surface ownership at well location: Jicarilla Apache Tribe, Dulce, New Mexico.
- (i) Surface ownership lands crossed by newly constructed or upgraded roads: Jicarilla Apache Tribe.
- (j) No other information.
- (k) No steep hillsides nearby.
- (1) No strep gullies; except to east of location.
- (m) Proximity to water wells: see Exhibit B.
- (n) No ponds nearby.
- (o) Streams nearby: Arroyo del Puerto Chiquito 2 miles southeast.
- (p) No other facilities nearby.
- (q) No occupied dwellings nearby.
- (r) No archaeological sites in area.

## EXHIBIT J (continued)

- (s) No historical sites in area.
- (t) No cultural sites in area.
- (u) Information concerning cuts and fills of roads, see Exhibit A-1.
- (v) Information concerning cuts and fills of location, see Exhibit H.
- (w) Construction practices necessary to accommodate potential geologic hazards: None.

#### EXHIBIT K

(III-A-12) Operator's representatives:

(a) Virgil L. Stoabs
221 Petroleum Center Building
Farmington, NM 87401

Office: (505) 325-8874 Residence: (505) 325-9772

(b) Albert R. Greer
221 Petroleum Center Building
Farmington, NM 87401

Office: (505) 325-8874 Residence: (505) 325-2674

(c) John Pool 706 Lovers Lane Aztec, NM 87410

Residence: (505) 334-6616

(d) M. P. York
725 W. Animas
Farmington, NM 87401

Residence: (505) 325-9714

(e) E. A. Templeman 520 Park Avenue Aztec, NM 87410

Residence: (505) 334-9197

#### EXHIBIT L

(III-A-13) Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Benson-Montin-Greer Drilling Corp. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

November	7,	1980	
Dat	te		

Virgil L. Stoabs, Vice-President