UNITED STATES DEPARTMENT OF THE INTERIOR

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GEOLOGICAL SURVEY					Contract 237		
APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK					Jicarilla Apach		
In. TYPE OF WORK	TOR TERITOR						st
DRILL & DEEPEN DEEPEN DEEPEN DEEPEN					V Fi.	Puerto Chiquito	
B. TYPE OF WELL OIL GAS DONE ZONE ZONE						S. PARM OR I KASE NAME.	
2. NAME OF OPERATOR	t. OTHER						
Benson-Montin	n-Greer Drill	ing Corp	·			9. WELL NO 40 (E-19)	
T ANDRESS AS CITERATOR				ogton, NM 87	401	10, FIELD AND POOL, OR WILLICAT	East
221 Petroleum	ort incation clearly and i	B #66010#nce wi	,	tate requirements.*)		Puerto Chiquito N	iancos
1980' FN	L, 660' FWL,	Sec. 19,	T-7	27N, R-1E	. •	AND SURVET OR AREA	
At proposed prod. zone Same					Sec. 19, T-27N,	R-1E	
14. DISTANCE IN MILES AN	ND DIRECTION FROM NEARI	ST TOWN OR POS	T OFFIC			Rio Arriba New	
Approximate	ly 10 north o	of Llave:	a New Merico		1 17, 80, 9	F ACRES ASSIGNED	
15. DISTANCE FROM PROPUS	ED.		10). U 2020 III III	TO THIS WELL 160		
PROPERTY OR LEASE LI (Also to nearest drig.	unit line, if any)		19. 81	LOPOSED DEPTH	20. ROTA	BT OR CABLE TOOLS	
18. DISTANCE FROM PROPO TO SEAREST WILL, DR				47001		Rotary	
OR APPLIED FOR, ON THIS 21. ELEVATIONS (Show wheth			<u></u> -			22. APPROX. DATE WORK WILL S	
7115 GR						as soon as appro	
23.	P	ROPOSED CASI	NG AN	D CEMENTING PROGRA	AM.		
	SIZE OF CASING	WEIGHT PER	POOT	SETTING DEPTH		QUANTITY OF CEMENT	
15"	10 3/4"	40.5	#	100'		sacks, circulate	<u>u</u>
8 3/4"	7"	23.0		34001	_	sacks	
6 1/4"	4 1/2"	10.5	#	3200'-4700'	150	Sacks	•
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		اسمد داد		ning hack, give data on	present pr	oductive sone and proposed new proposed new proposed true vertical depths. Give	roductive
IN ABOVE SPACE DESCRIB	z PROPOSED PROGRAM: If	proposal is to d	ent) data	on subsurface locations	and mira	and true vertical depths. Give	Diowout
preventer program, if as	я. 						
24.		1		Vice-Pres	sident	November	4, 19
sicked 114	1 1. 00	was	TITLE	VICE-II CE			=
(This space for Yed	eral or State office use)						
	APPROVED			APPROVAL DATE			
PERMIT NO	S AMENDED						
APIROVED BY			TITLE _			Datis	
CONDITIONS OF APPRO	HHAM1 6 1981 /	_		—s			
+ £ &	JAMES F. SIMS			ý			
, Joh	STRICT ENGINEER	1 *See In:	structio	ns On Reverse Side			
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NEW MEXICO OIL CONSERVATION COMMISSION WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the outer boundaries of the Section 40 (E-19)() erator BENSON-MONTIN-GREER DRG. CORP. County Hange Unil Leller RIO ARRIBA 1 EAST 27 NORTH 19 E Actual Footage Location of Well: Icel Imm the WEST 660 NORTH Dedicated Acresqui 1980 feet from the East Puerto Chiquito Producing Formation Ground Level Elev. 160.00 Mancos Niobrara 1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below. 2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty). 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 If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of 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 comtoined herein is true and complete to the best of my knowledge and belief. Name Virgil L.Stoabs Position Vice-President Company Benson-Montin-Greer Drilling Corp. November 7, 19 his platwos plotted from field October 20, 1980 Registered Professional Engineer <u>James P</u> Conflicate No. 1463

2000

1 300

NTL-6 ENVIRONMENTAL PROTECTION STATEMENT

Operator: Benson-Montin-Greer Drilling Corp.

Well No. and Lease: East Puerto Chiquito Mancos Unit #40 (E-19)

Location: SW/4 NW/4 Section 19, 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
 - Location see 9-331C
 - 2. Elevation gl see 9-331C
 - 3. 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
 - 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 (H₂S), 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.

(TO ACCOMPANY FORM 9-331C)

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

Lewis Shale	surface		
Mesa Verde	1915'		
Point Lookout	2155'		
Mancos	2360'		
Niobrara	3270'		
	3485'		
Niobrara Zone A	3525'		
Niobrara Zone B	3595'		
Niobrara Zone C	3965'		
Sanostee	4265'		
Greenhorn			
Graneros	4330'		
Dakota	4520.		
TD	4700'		

(TO ACCOMPANY FORM 9-331C)

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

Niobrara (oil & gas)	32701
Graneros (possible oil & gas)	4330
Dakota (possible oil & gas)	4520'

(TO ACCOMPANY FORM 9-331C)

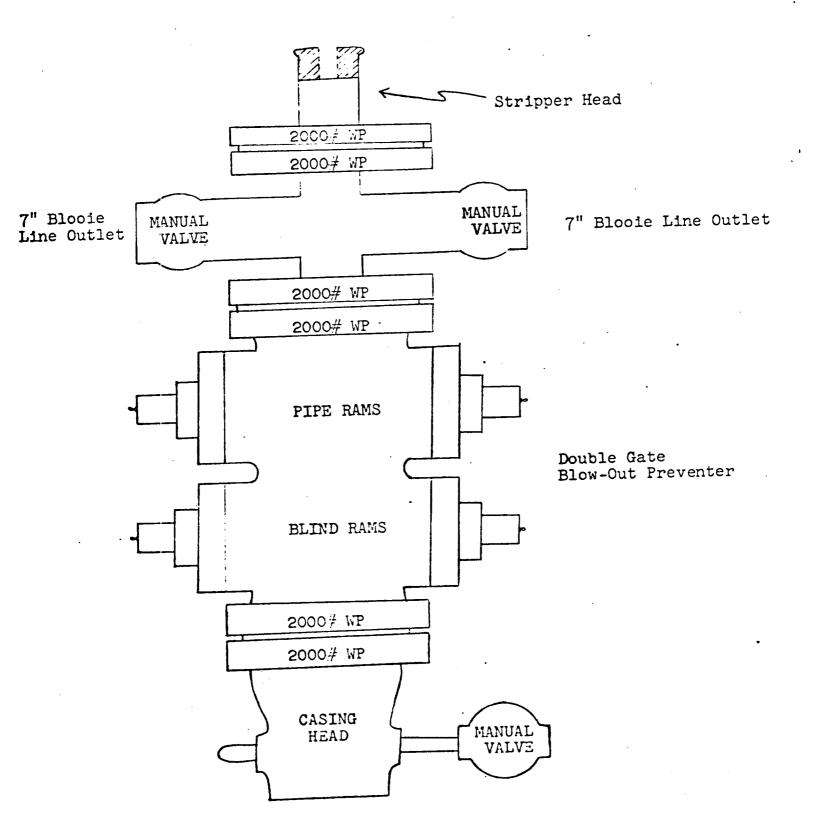
(4-10) Planned pressure control, planned testing, frequency and procedures:

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



(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)

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

> DST's planned: None

Cores planned: None

Suitable Resistivity, Reciprocal Conductivity, Logs planned:

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:

- Kelly Cock
- 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.

EXHIBIT VI (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.

EXHIBIT VII (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 #40 (E-19)

Location: SW/4 NW/4 Section 19, 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-1. 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) Wildcat 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/c: 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 located 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)

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

Method of Handling Waste Disposal (see Exhibit F)

A brief written narrative description of method and location for safe containment and disposal of each type (a) 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.

Ancillary Facilities (see Exhibit G) A-8.

(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.

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

A proposed plat of well-site layout showing cuts and fills and relation to topography is provided, including cross (a) 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)

Proposed program for surface restoration upon completion of operation is outlined in above mentioned Exhibit. (a) 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)

- General description of topography. (a)
- Soil characteristics. (b)
- Formation lithologies. (c)
- Geologic features. (d)
- Flora. (e)
- Fauna. (f)
- Surface use activities. (g)
- Surface ownership at well location. (h)
- Surface ownership lands crossed by newly constructed or (i) upgraded roads.
- Any other information considered to be useful by operator (j) 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)
- (s) Proximity to historical sites.
- (t) Proximity to cultural sites.
- Information concerning cuts and fills of roads (see Exhibit (u)
- Information concerning cuts and fills of location (see (v)
- 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 (al) representative(s).

A-13. Certification (see Exhibit L)

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 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.
- B. Written agreement or letter must be furnished.
- If landowner's requirements are impossible or impractical, a letter describing situation will be acceptable. C.

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

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

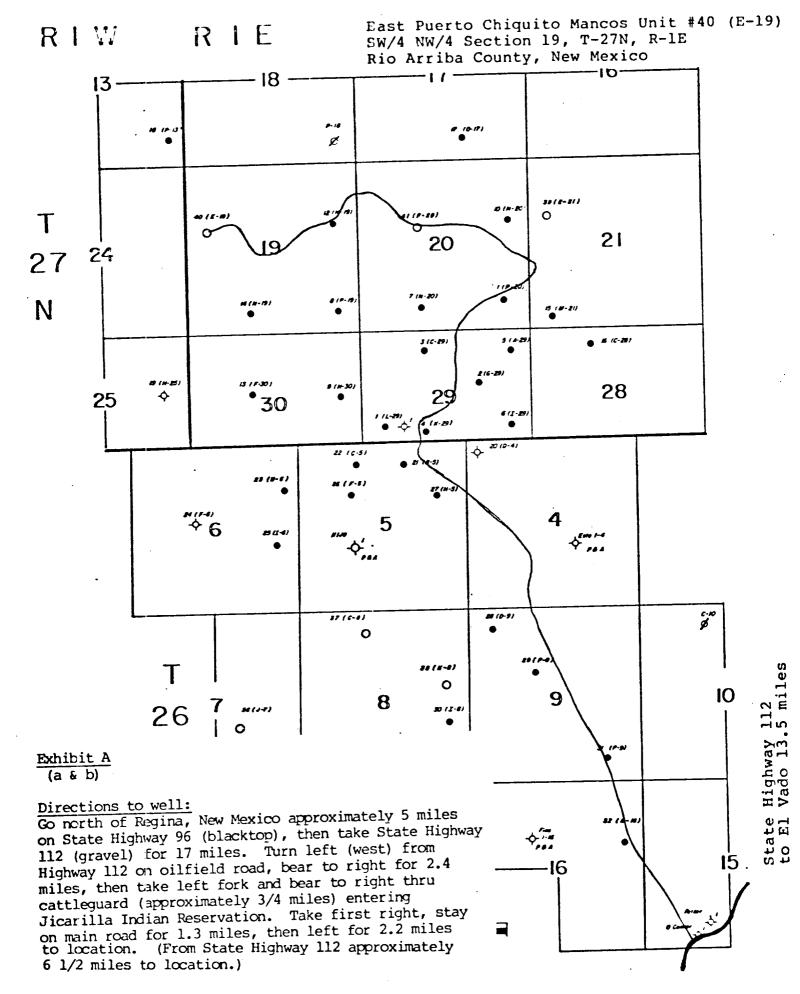
- A. No well abandonment operations will be commenced without prior approval of the District Engineer.
- B. Upon completion of abandonment or rehabilitation operations, District Engineer to be notified by Sundry Notice.

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

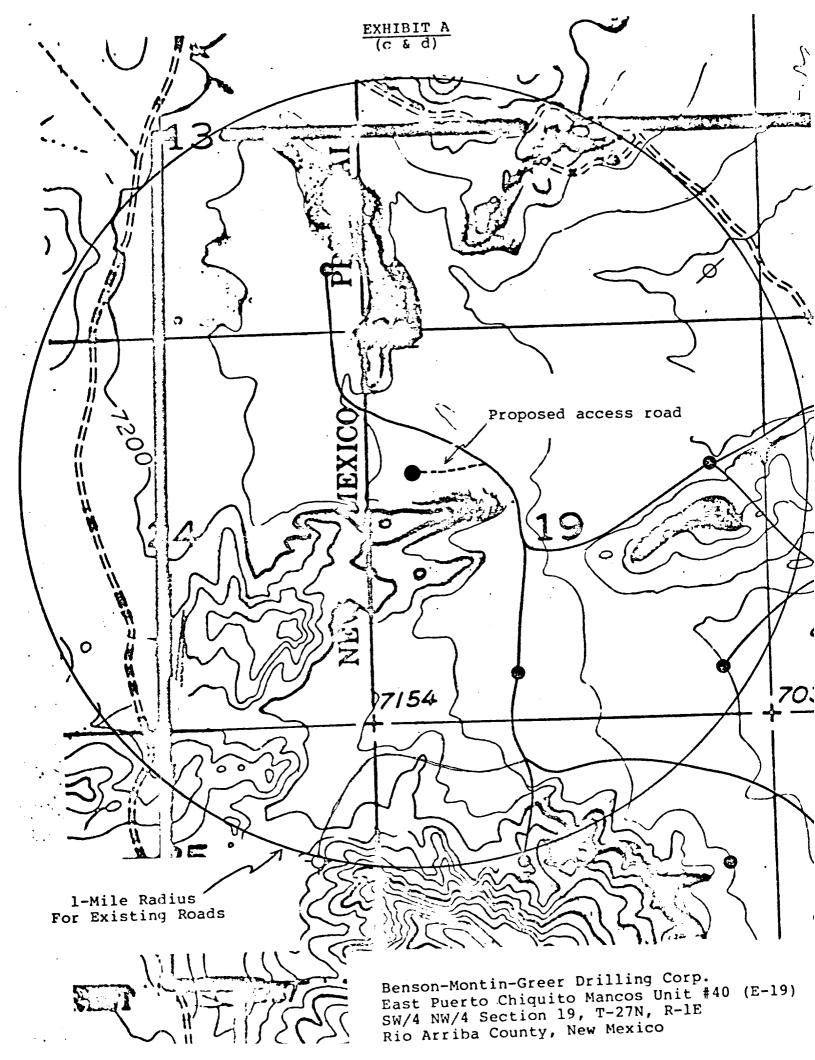
- A. Well that encounters usable fresh water will not be approved if Federal Surface Management Agency wants to acquire well.
- B. If Federal Surface Management Agency elects to acquire well, it will reimburse operator for cost of any recoverble casing or well-head equipment which it requests to be left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

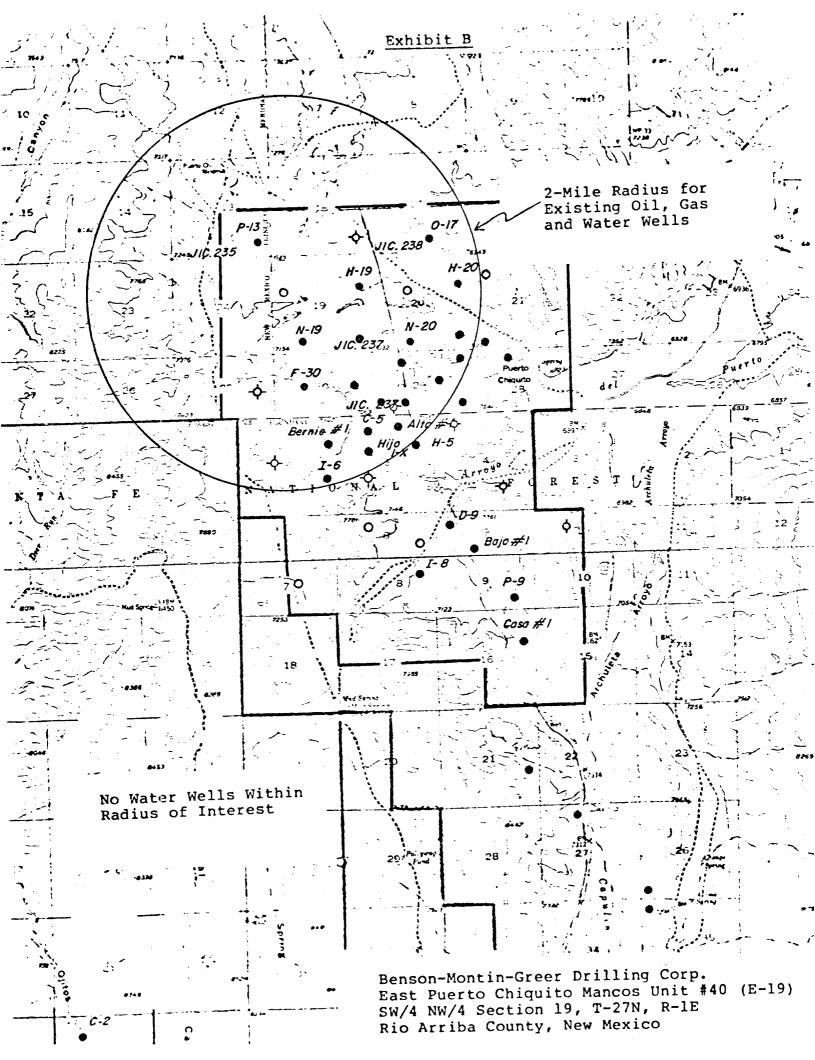
EXHIBIT A-1 TO ACCOMPANY EXHIBIT A (a & b)

/TTT_A-2-11	Planned data on newly constructed a	access roads:
		20'
(a)	Width	88
(b)	Maximum grade	
(c)	Turnouts	None
(b)	Drainage design	Natural
• •	Location and size of culverts	None
(e)		None
(f)	Surfacing material	
(çı)	CL staked or flagged	Yes
-	Where existing fence to be cut	None
(h)		None
(i)	Gates or cattleguard to be used	None
(j)	Any existing gates to be replaced	140116
(k)	Any existing cattleguards to be replaced	None



State Highway 112 to Regina 22 miles





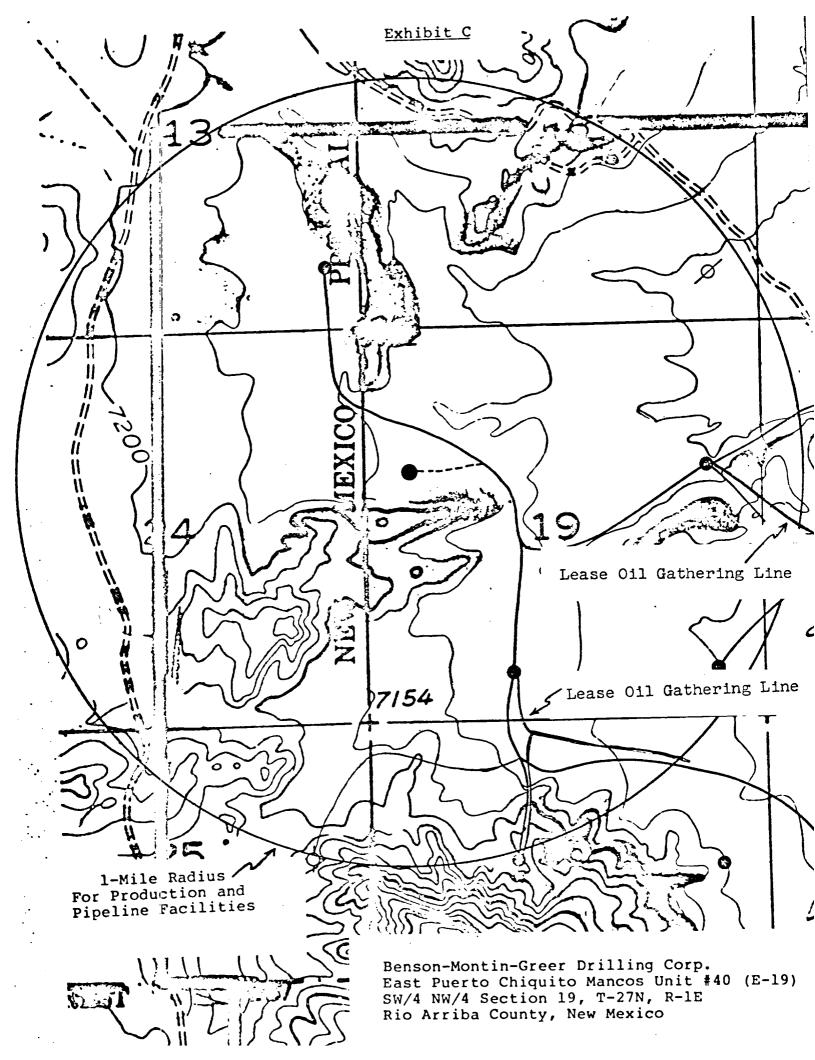


EXHIBIT D

- (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: 1/2 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.

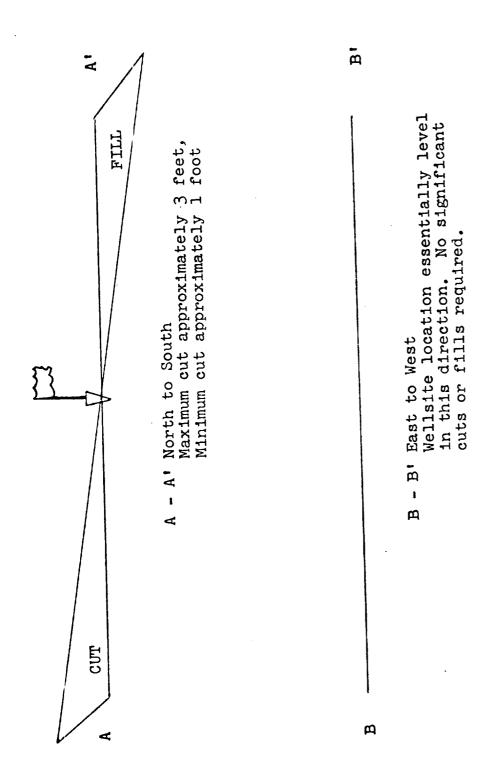
EXHIBIT G

(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.

EXHIBIT H

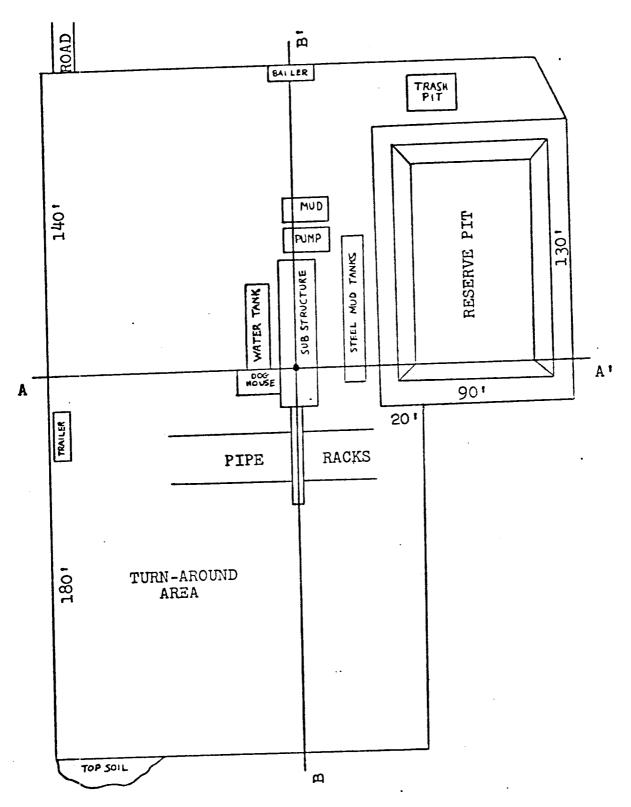
(III-A-9) Planned wellsite layout:



Benson-Monthin-Greet Blancos Unit #40 (E-19) East Puerto Chiquito Mancos Unit #40 (E-19) SW/4 NW/4 Section 19, T-27N, R-1E Rio Arriba County, New Mexico

EXHIBIT H

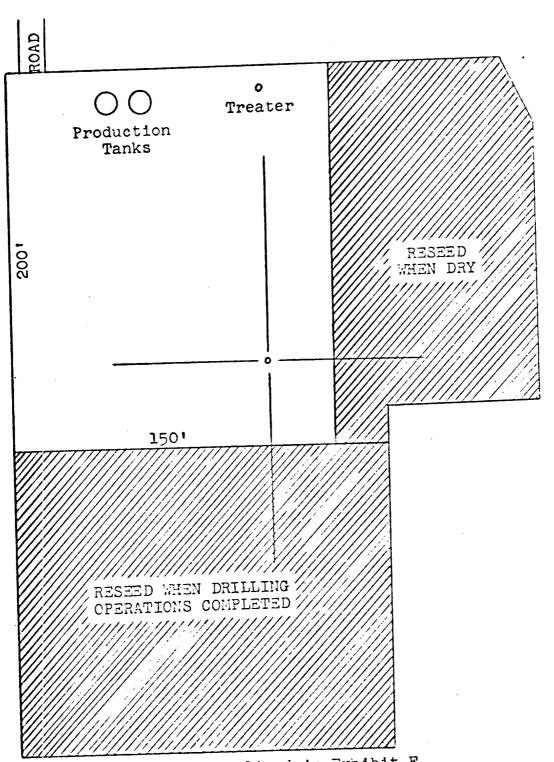
(III-A-9) Planned wellsite layout:



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 steep 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 approximately4 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

Date

Virgin L. Stoabs, Vice-President