APPROVED BY __

CONDITIONS OF APPROVAL, IF ANY:

SUBMIT IN TRIPLICATE*

Form approved. Budget Bureau No. 42-R1425.

DATE _March 31, 1977

DATE ___

(May 1963)	HMI	TED STATES			instruc verse si	tions on de)	-	ouuget Dures		
DEPARTMENT OF THE INTERIOR 5. LEASE DESIGNATION AND SERIAL NO.							445			
	GEOLOGICAL SURVEY									L NO.
								78316A		N. J. Com.
APPLICATION	ON FOR PERMIT	TO DRILL, D	EEPE	N, OR PLI	UG B	<u>ACK</u>	0. 18 131	JIAN, ALLUITE	L OK TRIBE	NAME
1a. TYPE OF WORK							7. UNIT	AGREEMENT	NAME	
b. TYPE OF WELL	ORILL &	DEEPEN [PLUC	J DAG	.N [_]				
OIL	GAS WELL, & OTHER		811 ZO	NGLE X	MULTIPI	LE	8. FARM	OR LEASE NA	ME	
2. NAME OF OPERATOR							Quig	ley		
	Natural Gas Co	ompany					9. WELL			
3. ADDRESS OF OPERAT							1A			
PO Box 9	90, Farmington	n, NM 8740	01	 			10. FIELI	AND POOL,	OR WILDCA	r
4. LOCATION OF WELL At surface	(Report location clearly an		any S	tate requirements	3. *)			co Mes		de
	1700'N, 83	30'W					AND	T., R., M., OR SURVEY OR A	REA	
At proposed prod.	zone						1	6,T-30	-N,R-	9-W
14 DISTANCE IN MILL	ES AND DIRECTION FROM NE	AREST TOWN OR POST	OFFICE	•			NMPM	TY OR PARISI	1 13 STAT	r P
21. 21. 21. 21. 21. 21. 21. 21. 21. 21.	_						San		NI	
15. DISTANCE FROM PE			16. NO.	. OF ACRES IN LE	ASE		OF ACRES A		l INI	<u></u>
PROPERTY OR LEAS	E LINE, FT.					тот	HIS WELL		2	99.87
18. DISTANCE FROM P			19. PRO	OPOSED DEPTH		20. ROTA	RY OR CABI	LE TOOLS		
OR APPLIED FOR, ON	., DRILLING, COMPLETED, THIS LEASE, FT.			5895'		Rotar	У			
	whether DF, RT, GR, etc.)						22. API	PROX. DATE W	ORK WILL S	TART*
6527'GL										
23.		PROPOSED CASIN	G AND	CEMENTING F	PROGRA	M				
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FO	от	SETTING DEP	тн		QUANTITY OF CEMENT			
13 3/4"	9 5/8"	32.3#		200'		224 0	cu.ft. to circulate		te	
8 3/4"	7"	20.0#		3655'		380 cu.ft. to cover Ojo				
6 1/4"	4 1/2"	10.5#		3505-589						
	ľ	1	I		İ					
Selectiv	ely perforate	and sand v	wate	r fractu	re t	he Me	sa Ve	rde fo	rmatio	on.
7 2000	- :		a	1.3				. ,		
	si WP and 6000 d pipe rams wi									1
DIIIId all	a bibe rams wi	it be used	1 10	T DIOW O	ut p	rever.	CIOII	Oil Cill	s wel.	L •
This gas	is dedicated.									
								· · · · · · · · · · · · · · · · · · ·		
					_	_		- ;	\	
The $W/2$	of Section 6 a	and the NW,	/4 o	f Sectio	n 7	are d	ledica	ted to	this	well.
								*	į.	
AN ABOUT ENGINEERS	tibe proposed program: If	proposal is to doors	an //= *1	lug back oine de	ta on n-	opant nec	luotina =a=	and neones	ed now nea	duativo
	to drill or deepen direction									

(This space for Federal or State office use)

PERMIT NO. _______ APPROVAL DATE _______

Drilling Clerk

TITLE __

TITLE _

NEW MEXICO OIL CONSERVATION COMMISSION WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102 Supersedes C-128 Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator		Lec	200	the section.	Well No.	
-	PASO NATURAL	•	QUIGLEY	(SF-078316-A)	LA	
Unit Letter F	Section 6	Tewnship 30-N	Hange 9-W	County SAN JUAN	SAN JUAN	
Actual Footage Loc. 1700	ation of Well: feet from the NOF	TH line and	30 _{fee}	WEST	line	
Ground Level Elev. 6527	Producing Form	A VERDE Poo	BLANCO MES	SA VERDE	Dedicated Acreage; 299.87 Acres	
1. Outline the	e acreage dedicat	ed to the subject well l	by colored pencil o	r hachure marks on the		
2. If more th interest an		dedicated to the well, or	utline each and ide	ntify the ownership the	reof (both as to working	
		fferent ownership is dedi nitization, force-pooling.		have the interests of a	ıll owners been consoli-	
Yes	No If an	swer is "yes;" type of co	nsolidation		A C	
	s "no;" list the o	wners and tract descript	ions which have ac	tually been consolidat	ed. (Use reverse side of	
No allowab	le will be assigne	d to the well until all int or until a non-standard un				
	#1 O F SF- SF- SF-	078316-A 6 0801134		I hereby can tained here best of my land Drigin D. Name Position Company Date I hereby conshown on the notes of accounter my so	certification riffy that the information con- in is true and complete to the knowledge and belief. in Significably G. Brisso ertify that the well location his plat was plotted from field itual surveys made by me or opervision, and that the same if correct to the best of my and belief.	
					ARCH 17, 1977 otessional Engineer	
	Scale: 1" =	2,000'		Certificate No	1760	



P. O. BOX 990 FARMINGTON, NEW MEXICO: 87491 PHONE: 505-325-2841

Multi-Point Surface Use Plan Quigley #1A

- 1. Existing Road Please refer to Map No. 1 which shows the existing roads. New roads which will be required have been marked on this map.

 All existing and new roads will be properly maintained during the duration of this project.
- Planned Access Roads Please refer to Map No. 1. The grade of the access roads will be consistent with that of the local terrain. The road surface will not exceed thirty feet (30') in width. Upon completion of the project, the access road will be adequately drained to control soil erosion. Drainage facilities may include ditches, water bars, culverts or any other measure deemed necessary by trained Company personnel to insure proper drainage. Gates and/or cattleguards will be installed if necessary.
- 3. Location of Existing Wells Please refer to Map No. 2
- 4. Location of Tank Batteries, Production Facilities, and Production Gathering and Service Lines Please refer to Maps No. 1 and No. 2.

 Map No. 2 shows the existing gas gathering lines. Map No. 1 shows the existing roads and new proposed access roads. All known production facilities are shown on these two maps.
- 5. Location and Type of Water Supply Water for the proposed project will be obtained from a water hole located at the San Juan River.
- 6. Source of Construction Materials No additional materials will be required to build either the access road or the proposed location.

- 7. Methods of Handling Waste Materials - All garbage and trash materials will be put into a burn pit shown on the attached Location Plat No. 1. clean-up operations are begun on the proposed project, the burn pit with its refuse will be buried to a depth of at least three feet (3'). A latrine, the location of which is also shown on Plat No. 1 will be provided for human waste. If large amounts of liquids are left in the reserve pit after completion of the project, the pit will be fenced until the liquids have had adequate time to dry. The location clean-up will not take place until such time as the reserve pit can be properly covered over to prevent run-off from carrying any of these materials into the watershed. No earthen pit will be located on natural drainages; all earthen pits will be so constructed as to prevent leakage from occurring.
- 8. Ancillary Facilities No camps or airstrips will be associated with this project.
- 9. Wellsite Layout Please refer to the attached Plat No. 1.
- 10. Plans for Restoration of the Surface After completion of the proposed project, the location will be cleaned and leveled. The location will be left in such a condition that will enable reseeding operations to be carried out. Seed Mixture #2 will be used. The reseeding operation will be performed during the time period set forth by the regulatory body. The location production equipment will be painted green (Federal Standard #595 34127)
- 11. Other Information The terrain is rolling hills and sandstone ledges. It is covered by pinon and cedar trees. Cattle graze the proposed project site.

- 12. Operator's Representative W. D. Dawson, Post Office Box 990, Farmington, New Mexico 87401
- 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 El Paso Natural Gas Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

March 31, 1977

D. R. Read

Division Drilling Engineer

DRR:pb

Operations Plan Quigley #1A

I. Location: 1700'N, 830'W, Section 6, T-30-N, R-9-W, San Juan County, NM

Field: Blanco Mesa Verde <u>Elevation:</u> 6537'DF

II. Geology:

Α.	Formation	Tops:	Surface	San Jose	Lewis	3 4 55 '
		-	Ojo Alamo	1970'	Mesa Verde	4890'
			Kirtland	2080'	Menefee	5080'
			Fruitland	2920 '	Point Lookout	5495'
			Pic.Cliffs	3275'	Total Depth	5895 '

- B. Logging Program: GR-Ind. and GR-Density at Total Depth.
- C. Coring Program: none
- D. Natural Gauges: 4880', 5070', 5485' and at Total Depth.
 Also gauge any noticeable increase in gas. Record all gauges in
 daily drilling report and on morning report.

III. Drilling:

A. Mud Program: mud from surface to 3655'. Gas from intermediate casing to Total Depth.

IV. Materials:

A. Casing Program:	Hole Size	Depth	Casing Size	Wt.&Grade
	13 3/4"	200'	9 5/8"	32.3# H-40
	8 3/4"	3655'	7"	20.0# K-55
	6 1/4"	3505-5895'	4 1/2"	10.5# K-55

B. Float Equipment: 9 5/8" surface casing - Larkin guide shoe (fig. 102)

7" intermediate casing - Dowell guide shoe (fig. 50101) and Dowell self-fill insert float valve (fig. 53003), 5 B&W stabilizers (Prod. No. 637085) every other joint above shoe. Run float two joints above shoe.

- 4 1/2" liner T.I.W. liner hanger with neoprene packoff. Larkin geyser shoe (fig. 222) and Larkin flapper type float collar (fig. 404 M&F).
- C. Tubing: 5895' of 2 3/8", 4.7#, J-55 8rd EUE tubing with a common pump seating nipple above perforated pup joint with bull plugged full joint for mud anchor on bottom.
- D. Wellhead Equipment: 10" 900 x 9 5/8" casing head. 10" 900 x 6" 900 xmas tree.

V. Cementing:

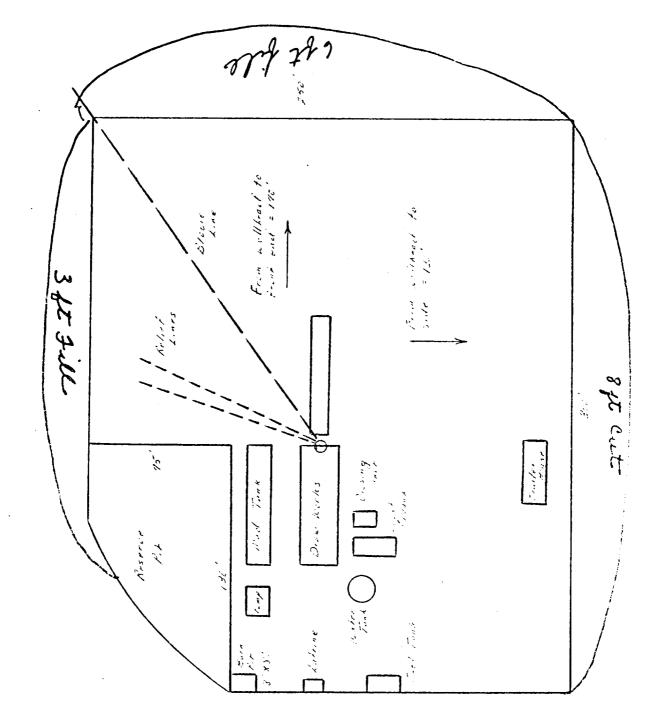
9 5/8" surface casing - use 190 sks. of Class "B" cement with 1/4# gel-flake per sack and 3% calcium chloride (224 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 600#/30 minutes.

7" intermediate casing - use 100 sks. of 65/35 Class "B" Poz with 12% gel (15.52 gallons of water per sack) followed by 100 sks. of Class "B" with 2% calcium chloride (380 cu.ft. of slurry, 50% excess to cover Ojo Alamo). Run temperature survey at 8 hours. WOC 12 hours. Test casing to 1200#/30 minutes.

4 1/2" liner - precede cement with 20 barrels of gel water (2 sks. gel) Cement with 235 sks. of Class "B" cement with 4% gel, 1/4 cu.ft. of fine gilsonite per sack and 0.6% Halad-9 (414 cu.ft. of slurry, 70% excess to circulate liner).

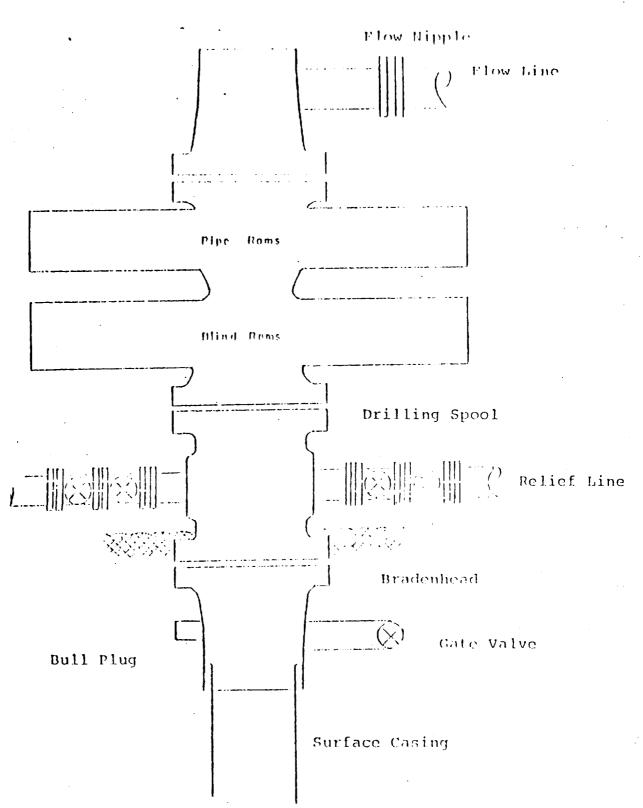
DRR:pb

Typical Lucation Met for Mosa Veride soil Whoka wells



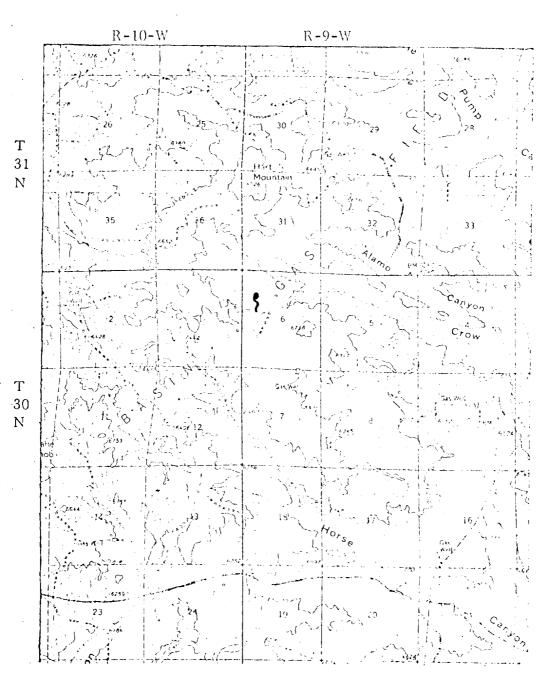
NORTH

Typical B.O.P Installation for Mesa Merde Well



Series 900 Double Gate BOP, rated at 3000 psi Working Pressure When gas drilling operations begin a Shaffer type 50 or equivalent rotating head is installed on top of the flow nipple and the flow line is converted into a blowie line

EL PASO NATURAL GAS COMPANY QUIGLEY #1A NW 6-30-9

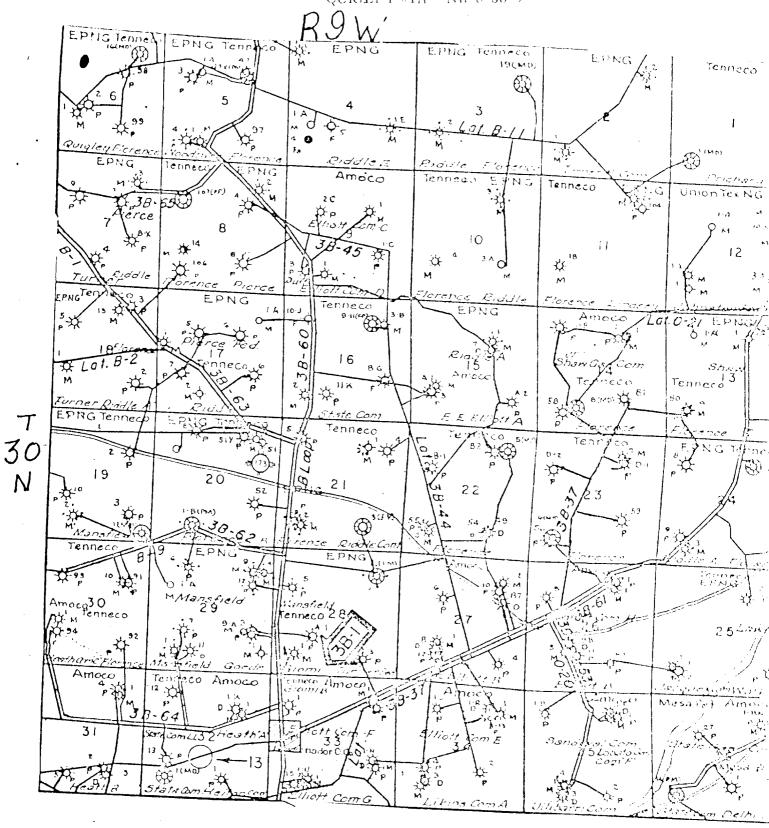


MAP #1

LEGEND OF RIGHT-OF-MAYS

	ROADS	EXISTING
P3 +++	TUPELI	EXIGTIUG
PHT::::::::::::	EGVD 3	EXISTING
	RCADS	TROPOJED
783 + + +	FIRE	PROPOSED
PIPELIE -	ROAD 7	PROPOSED

EL PASO NATURAL GAS COMPANY QUIGLEY #1A - NW 6-30-9



 $MAP^{-\pi 2}$