N.M. Oil Cons. DIV-Dist. 2

1301 W. Grand SUBMITTING TRIPLICATE.

FORM APPROVED

	DEPARTMENT			MA 882	retfise si	de)	Ex	omb no. pires: Febr	12 ry 28,	1995
	5. LEASE 1	ERIGNATION	AND R	ERIAL NO.						
	BUREAU OF	LAND MANA	GEMEN"	Γ			<u>NM</u> -	15303		
APPL	ICATION FOR PI	ERMIT TO I	DRILL	OR DEE	PEN		G. IF INDI.	N. ALLOTTE	E OR TE	IBE NAME
PE OF WORK	11 EV	DEEDELL					7 UNIT W	CREEMENT		
b. Tire of well	ILL 🛚	DEEPEN		BJECT TO						ارده
oit.	VELL OTHER	. 0	A.	PROVAL I	BĂ"ŽTĀ		E. FARM OR I	EAGI HANIR W	I'LL NO.	159
2. NAME OF OPERATOR	1	7891					BRADLEY	"13" I	FED.	# 5-H
POGO PRODUCI	NG COMPANY (RIC	CHARD WRIGH	T 432-	-685-8140) .		D. WI WILL	NO.		
3. ADDRESS AND TELEPHIONE HO	40 MIDLAND, TEX	74C 70702-7	240 /	(432–685–	81001		30-0	715 - 7	>43	58
1.0. BOX 103	eport location clearly and	AS 79702-7	340 ((432-00)-		1511/5	10. FIELD			-
At surface	eport location clearly and	in accordance wi	10 407 511	ate requiremen			آت ۱۳۰۰ مآ	DRAW-DI	LAWA	RE, We
	2310' FWL SECTIO	N 13 T25S-F	R29E 1	EDDY CO.		2 3 2005	AND	JEVEY OR A	RLK.	3365
At proposed prod. zor	e 330' FWL SECTION	1.3. T25c_T	2205 1	בחחע כח		AHITES	SECTI	ON 13		-R29E
4. DISTANCE IN MILES	AND DIRECTION FROM NEAR	LEST TOWN OR PUS	T OFFICE	EDDI CO.	INPI		12. COUNTY			STATE.
Approximatel	ly 10 miles Sout	heast of Ma	alaga l	New Mexic	:0		EDDY			Mexic
15. DISTANCE FROM PROPE LOCATION TO NEARES	USEU*			OF ACRES IN		17. NO. O	F ACKEN ASS		TIVEW	Mexic
PROPERTY OR LEASE ! (Also to menrest dri)	LINE, FT.	330']	640		TOTI	IIS WELL.	80		
S. DISTANCE FROM PROI	OSED LOCATION*		1	POSED DEPTH		20. ROTAL	T OR CABLE	Touls		
OR APPLIED FOR, ON TH		990'	TVD 58	800'MD 6	360'	ROTAR	Y			
1. ELEVATIONS (Show wh	ether DF, RT, GR, etc.)	3131' GR.						OX, DATE WO		.I. START*
							WHEN .	APPROVE	.D	
23.		PROPOSED CASI	NG AND	CEMENTING I	PROGRAM					
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER F	00т	SETTING DE	PTIL		QUANTI	TY OF CEME	NT TR	
	Conductor 20"	NA		40 '		Redi-m:	ix ceme	nt to s	urfa	ce
<u> </u>	H-40 13 3/8"	48# w	VITNE	SS 750'		750 Sx	. circu	late ce	ment	TS
11"	J-55 8 5/8"	32#		3250 '		900 Sx			11	T.F
7 7/8"	N-80 & J-55 51"	17#	1	MD-6370'		800 Sx	. estim	ate TO(250	0'
								5		
1 Drill 2	6" hole to 40!	C /01 -5	2011		· · · · ·	,			<u> </u>	
Redi-mi	%' hole to 40'.	set 40 or	20 60	nauctor p	ns agic An	IC Cemer	ot to su CONTROLI	riace v	vitn Topov	
			==0							
2. DEIII 1 with 75	7½" hole to 750' 0 Sx. of Class "	. Kun and s	et /ɔU .27 C-	or 13 3	5/8" 48 7100-7	6# H-40	ST&C ca	sing. (lemen	t
With /J	O DA. OF CIESS	o, cement T	2% CZ	O1, T 1"	rincel	e/2X.	circulat	e cemer	it to	

- surface.
- 3. Drill 11" hole to 3250'. Run and set 3250' of 8 5/8" 32% J-55 ST&C casing. Cement with 900 Sx. of Class "C" cement + additives, circulate cement to surface.
- 4. Drill 7 7/8" hole to 5800'. Run Gyro and log well, plug hole back to 4860'±. Start drilling curve and drill lateral to a measured depth of 6370±', TVD of 5030±'. Run and set 6370' of 5;" casing sas follows: 1570' of $5\frac{1}{2}$ " 17# L-80 BTC, 4800' of $5\frac{1}{2}$ " 17# J-55 LT&C casing. Cement with 800 Sx. of Class "C" cement + additives estimate top of cement 2500' from surface.

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

e (en micenomin), Brogation	
1. 7	APPROVAL SUBJECT TO Agent GENERAL REQUIREMENTS / 01/05
SHONED HOLL JERNING TITE	Agent GENERAL REQUIREMEN 109/01/05
	CHAI CTIPLII ATIONS
(This space for Federal or State office use)	AND SPECIAL STIPULATIONS
	ATTACHED
PELAIT 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:

/s/ Joe G. Lara 9.5 SE TO BY

ACTINGFIELD MANAGER

SEP 2 2 2005

DATE

State of New Mexico

Energy, Minerals and Natural Resources Department

ARTESIA, NM 88210

Ш

OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

Property Name

BRADLEY 13 FEDERAL

CORRAL DRAW-

Pool Code

<u> 365</u>

Form C-102 Revised JUNE 10, 2003 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

Pool Name

Delawara, West

☐ AMENDED REPORT

Well Number

5H

Brazos Rd., Aztec, NM 87410

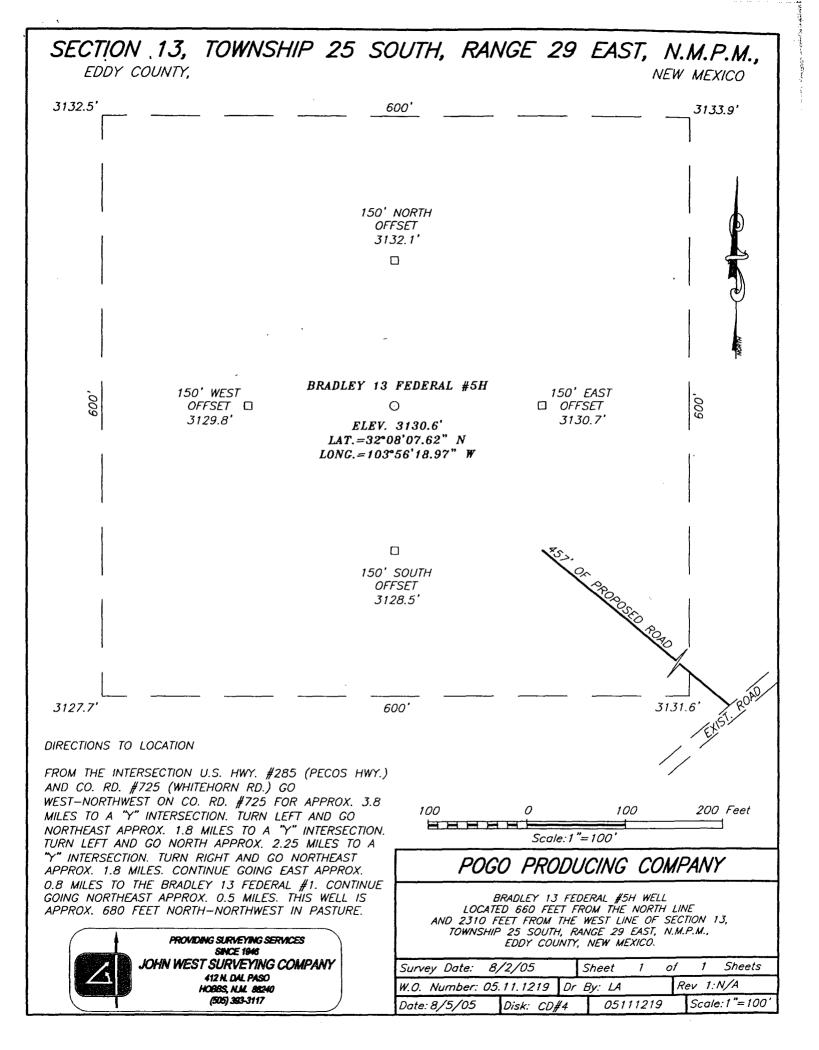
1220 S. ST. FRANCIS DR., SANTA PR. NM 87505

Property Code

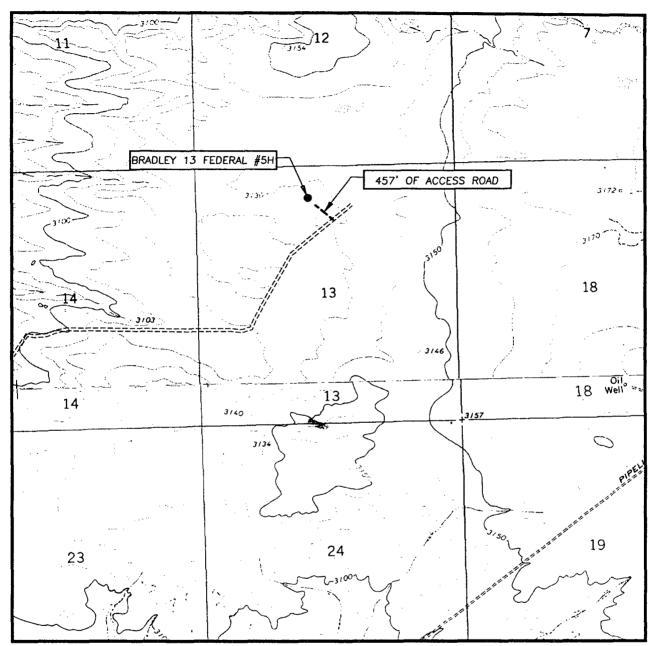
API Number

DISTRICT IV

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17891						1				
				 -	Surface Loca				· · · · · · · · · · · · · · · · · · ·	
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
С	13	25-S	29-E		660	NORTH	2310	WEST	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	
D	13	25-S	29-E		660	NORTH	330	WEST	EDDY	
Dedicated Acre 80	Dedicated Acres Joint or Infill Consolidation Code Order No.									
NO ALLO	OWABLE V					UNTIL ALL INTER APPROVED BY		EEN CONSOLIDA	ATED	
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330, B.H.	$-\frac{HD}{2} = \frac{1}{2}$		S.L. 00				11 -	vledge and belief.		
	2310'		600,				$\parallel / / \parallel$			
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			GEO	DETIC COC	ORDINATES		Joe T.	Janica		
BOTTOM HO	DLE LOCAT 196.9 N	TION		NAD 27	NME	•	Printed Nam	е		
	204.9 E		Sl	<i>JRFACE LO</i> Y=41322			Agent			
				X=62218			09/01/0	05		
	1		14	r.=32 * 08 * 0	07.62" N		Date			
			LONG. = 103.56'18.97" W					R CERTIFICAT	TON	
 				 				M CENTIFICAT	·IOI	
	i			1	'		11	, that the well locat as plotted from field	9	
	1			1	1		actual surveys	made by me or	under my	
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	l ,			i	1			25.11.121.9		
							Certificate N	o. CARY EIESON	12641	
	1			1	·		interpretation PRO	OFESSION RESERVED		
L				L	<u></u>		<u></u>			



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

SEC. <u>13</u> TWP. <u>25-S</u> RGE. <u>29-E</u>
SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 660' FNL & 2310' FWL

ELEVATION 3131'

OPERATOR POGO PRODUCING COMPANY

LEASE BRADLEY 13 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP PIERCE CANYON, ROSS RANCH, N.M. CONTOUR INTERVAL: 10' PIERCE CANYON, N.M. ROSS RANCH, N.M.



PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

APPLICATION TO DRILL

POGO PRODUCING COMPANY
BRADLEY "13" FEDERAL # 5
SHL UNIT "C" SECTION 13
BHL UNIT "D" SECTION 13
T25S-R29E EDDY CO. NM

In response to questions asked under Section II of Bulletin NTL-6 the following information on the above well is provided for your consideration.

- 1. Location of well: 660' FNL & 2310' FWL SECTION 13 T25S-R29E
- 2. Ground Elevation above Sea Level: 3131' GR.
- 3. Geological age of surface formation: Quaternary Deposits:
- 4. Drilling tools and associated equipment: Conventional rotary drilling rig using drilling mud as a circulating medium to remove solids from hole.
- 5. Proposed drilling depth: MD-6370' TVD-5800'
- 6. Estimated tops of geological markers:

Basal Anhydrite	3100'	Cherry Canyon `	4240'
Delaware Lime	3320	Brushy Canyon	55501
Bell Canyon	3350'	TD	5800' MD

7. Possible mineral bearing formations:

Brushy Canyon

Oil

8. Casing Program:

Hole Size	Interval	OD of Casing	Weight	Thread	Collar	Grade
26"	0-40	20"	NA	NA	NA	Conductor
17½"	0 - 750 '	13 3/8"	48#	8-R	ST&C	H-40
11**	0-3250	8 5/8"	32#	8-R	ST&C	J-55
7 7/8"	0-6370 MD	5½"	17#	BUTRESS 8-R	BTC LT&C	L-80 J-55

APPLICATION TO DRILL

POGO PRODUCING COMPANY
BRADLEY "13" FEDERAL # 5
SHL UNIT "C" SECTION 13
BHL UNIT "D" SECTION 13
T25S-R29E EDDY CO. NM

9. CEMENTING & CASING SETTING DEPTHS:

20"	Conductor	Set 40' of 20" conductor and cement to surface with Redi-mix.
13 3/8"	Surface	Set 750' of 13 3/8" H-40 48# ST&C casing. Cement with 750 Sx. of Class "C" cement + 2% CaCl, + $\frac{1}{4}$ # Flocele/Sx. Circulate cement to surface.
8 5/8"	Intermediate	Set 3250' of 8 5/8" 32# J-55 ST&C casing. Cement with 900 Sx. of Class "C" cement + additives, circulate cement to surface.
5½"	Production	Set 6370 ' of $5\frac{1}{2}$ " casing as follows: 1570 ' of $5\frac{1}{2}$ " $17\#$ BTC L-80, 4800 ' of $17\#$ J-55 LT&C casing. Cement with 800 Sx. of Class "C" cement + additives, estimate TOC 2500' from surface.

10. PRESSURE CONTROL EQUIPMENT:

Exhibit "E" shows a 2000 PSI working pressure B.O.P., consisting of a stripper head instead of an annular preventor, blind rams, and pipe rams. This B.O.P. stack is being used because of Substructure height limitations of the drilling rig being used to drill this well. Pressures encountered during drilling are not expected to exceed 2000 PSI at total depth. Pogo requests permission to 3rd party test of the B.O.P., after setting intermediate casing at 3250'. The B.O.P. will be tested acccording to API specifications. Exhibit "E-1" shows a manually operated choke manifold, as no remote B.O.P. equipment will be necessary.

11. PROPOSED MUD CIRCULATING SYSTEM:

		•		
DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD
			-	
40 - 750 '	8.4-8.7	29-34	NC	Fresh water Spud Mud use paper to control seepage.
750-3250'	10.0-10.2	29–38	NC	Brine water use paper to control seepage and high viscosity sweeps to clean hole.
3250-6370'	8.3-8.7	29-40	NC*	Fresh water mud system fresh water Gel to control viscosity use
	run logs and cas: if this is neces ter loss.	_	-	high viscosity sweeps to clean hole,Polymer system to control WL

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

APPLICATION TO DRILL

POGO PRODUCING COMPANY
BRADLEY "13" FEDERAL # 5
SHL UNIT "C" SECTION 13
BHL UNIT "D" SECTION 13
T25S-R29E EDDY CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

- A. Open hole logs: Dual Induction, CNL, LDT, MICROSFL, Gamma Ray, Caliper from 5800' back to 8 5/8" casing shoe, run gyro. Run gamma ray to surface.
- B. No DST's or Cores are planned at this time.
- C. Mud logger may be placed on the hole at the Geologist's advice.

13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of ${\rm H^2S}$ in this area. If ${\rm H^2S}$ 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 $2400\pm$ PSI, and Estimated BHT 140°

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 40 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 <u>Bryshy Canyon</u> formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialed as an oil well.

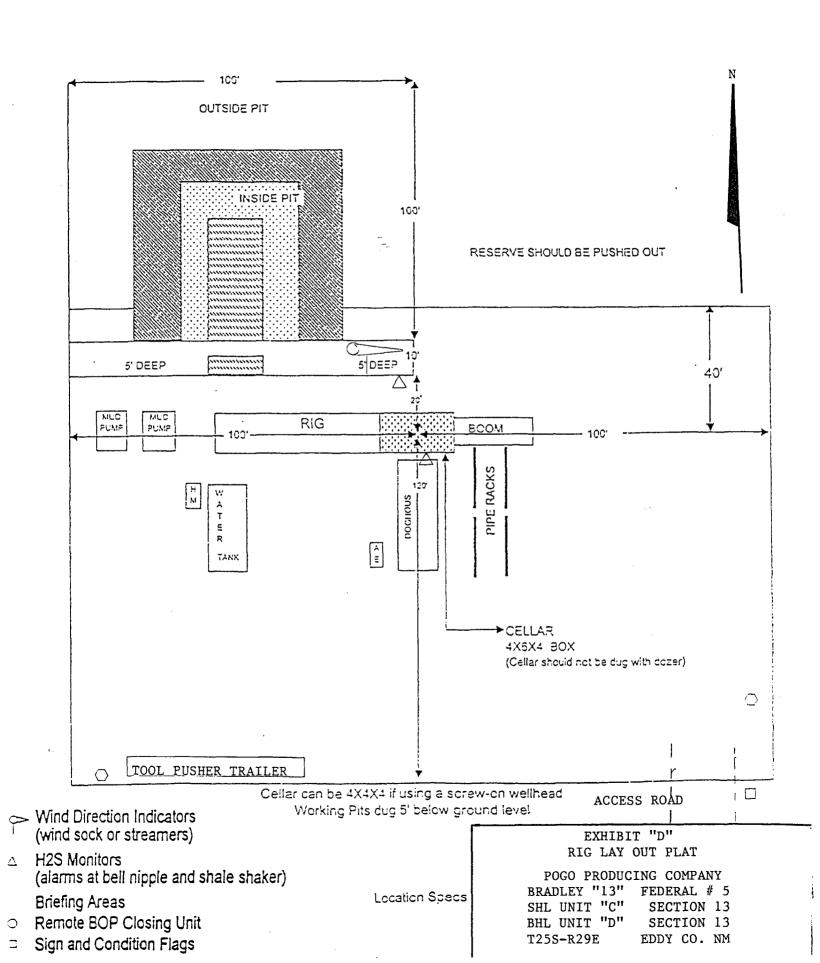
HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

- 1. All Company and Contract personnel admitted on location must be trained by a qualified H_2S safety instructor to the following:
 - A. Characteristics of H₂S
 - B. Physical effects and hazzards
 - C. Proper use of safety equipment and life support systems.
 - D. Principle and operation of H2S detectors, warning system and briefing areas.
 - E. Evacuation procedure, routes and first aid.
 - F. Proper use of 30 minute pressure demand air pack.
- 2. H₂S Detection and Alarm Systems
 - A. H₂S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
- 3. Windsock and/or wind streamers
 - A. Windsock at mudpit area should be high enough to be visible.
 - B. Windsock at briefing area should be high enough to be visible.
 - C. There should be a windsock at entrance to location.
- 4. Condition Flags and Signs
 - A. Warning sign on access road to location.
 - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H2S present in dangerous concentration. Only emergency personnel admitted to location.
- 5. Well control equipment
 - A. See exhibit "E"
- 6. Communication
 - A. While working under masks chalkboards will be used for communication.
 - B. Hand signals will be used where chalk board is inappropriate.
 - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephoned will be available at most drilling foreman's trailer or living quarters.
- 7. Drillstem Testing
 - A. Exhausts will be watered.
 - B. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
 - C. If location is near any dwelling a closed D.S.T. will be performed.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

- 8. Drilling contractor supervisor will be required to be familiar with the effects $\rm H_2S$ has on tubular goods and other mechanical equipment.
- 9. If H_2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with H_2S scavengers if necessary.

LOCATION SPECIFICATIONS AND RIG LAYOUT FOR EARTH PITS



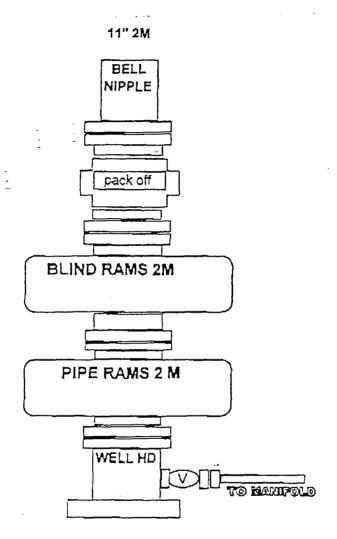


EXHIBIT "E"

SKETCH OF B.O.P. TO BE USED ON

POGO PRODUCING COMPANY

PRODUCING TO THE PRODUCT A SECOND AND A SECOND A SE

BRADLEY "13" FEDERAL # 5
SHL UNIT "C" SECTION 13
BHL UNIT "D" SECTION 13
T25S-R29E EDDY CO. NM

CHOKE MANIFOLD

3000 PSI WP

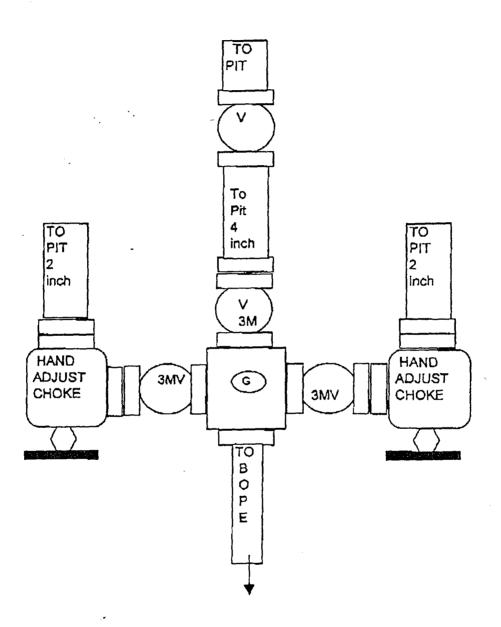


EXHIBIT "E-1"
CHOKE MANIFOLD & CLOSING UNIT

POGO PRODUCING COMPANY
BRADLEY "13" FEDERAL # 5
SHL UNIT "C" SECTION 13
BHL UNIT "D" SECTION 13
T25S-R29E EDDY CO. NM

AFE BRADLEY 13 FD # 5 HORIZI ds

MITCHELL ENGINEERING PROGRAMS

COPYRIGHT 1990 MITCHELL ENGINEERING, PO BOX 1492, GOLDEN, CO. 80402, USA (303) 273 3744

LONG'S METHOD OF SURVEY COMPUTATION

OBL	OBLIQUE CIRCULAR ARC INTERPOLATION DISTANCE TABLE								
	5800	MD OF I	AD OF INTERPOLATION DEPTH, (feet) STATION A STATION B						
	5340.08	TVDCCC	VD COORDINATE OF THE DEPTH (feet) 400.00 600.00						
	0.00	N/S COO	VS COORDINATE OF DEPTH (feet) 300.00 400.00						
	-667.37	EW COC	POINATE	OF DEPTH (fee	ef)		100.00	300.00	
			ft						
3 D DISTANCE BETWEEN STATION, A AND STATION B TABLE OF SURVEY STATIONS							Calculator =		
STA	ΔMD	INCL	AZIM	MD	מעז	N+/S-	E+/W-	DLS	
-	R	deg	deg	t	Ř	ft	R	deg/100FT	
1	TE POINT =>	0	0	4860.00	4860.00	0.00	0.00	-	
2	100	12	270	4960.00	4959.27	0.00	-10.43	12.00	
3	100	24	270	5060.00	5054.20	0.00	-41.28	12.00	
4	100	36	270	5160.00	5140.65	0.00	-91.19	12.00	
5	100	48	270	5260.00	5214.83	0.00	-157.98	12.00	
6	100	60	270	5360.00	5273.50	0.00	-238.73	12.00	
7	100	72	270	5460.00	5314.10	0.00	-329.92	12.00	
8	100	84	270	5560.00	5334.85	0.00	-427.56	12.00	
9	100	90	270	5660.00	5340.08	0.00	-527.37	6.00	
10	100	90	270	5768.80	5340.08	0.00	-627.37	0.00	
11	100	90	270	5860.00	5340.08	0.00	-727.37	0.06	
12	100	90	270	5960.00	5340.08	0.00	-827.37	0.00	
13	100	90	270	6060.00	5340.08	0.00	-927.37	0.00	
14	100	90	270	6160.00	5340.08	0.00	-1027.37	0.00	
15	100	90	270	6260.00	5340.08	0.00	-1127.37	0.00	
16	100	90	270	6360.00	5340.08	0.00	-1227.37	0.00	
17	100	90	270	6460.00	5340.08	0.00	-1327.37	0.00	
18	100	90	270	6560.00	5340.0B	0.00	-1427.37	0.00	
19	100	90	270	6660.00	5340.08	0.00	-1527.37	0.00	
20	100	90	270	6760.00	5340.08	0.00	-1627.37	0.00	
21	160	90	270	6860.D0	5340.08	0.00	-1727.37	0.00	
22	100	90	270	6960.00	5340.08	0.00	-1827.37	0.00	
23	100	90	270	7060.00	5340.08	0.00	-1927.37	0.00	
24	52	90	270	7112.00	5340.08	0.00	-1979.37	0.00	

BRADLEY 13 FED # 5 HORIZONTAL

PROCEDURE:

STEP DESCRIPTION

1	MIRU DRILLING TOOLS.
2	SET 13 3/8" SURFACE CASING @ ± 750'. CEMENT TO SURFACE.
3	SET 8 5/8" INTERMEDIATE CASING @ ± 3250'. CEMENT TO SURFACE.
	DRILL 7 7/8" HOLE TO KOP @ ± 5800'. LOG WELL. RUN GYRO. TIH OPEN
4	ENDED TO CEMENT.
5	SPOT CEMENT PLUG FROM TO TO ± 4500
6	TIH W/ DRILLING TOOLS & DRESS CEMENT TO KOP OF ± 4860. POH
7	P/U DIRECTIONAL TOOLS. TIH W/ SAME TO KOP OF 4860'.
	DRILL CURVE W/ BUILD 12° PER 100' TO TV'D ± 5030'. POH. P/U 7 7/8" BIT
8	DRILL LATERAL ± 1550'.
}	POH W/ DIRECTIONAL TOOLS & RUN 5 1/2" PRODUCTION CASING TO
9	END OF LATERAL. USE RIDGID CENTRALIZERS ON CASING.
10	CEMENT CASING AS PER RECOMMENDATION.
11	R/D M/O DRILLING TOOLS. MIRU WELL SERVICE UNIT.
	RIH W/ 2 3/8" TUBING TO END OF LATERAL. CIRCULATE 2% KCL FW &
12	SPOT ACEDIC ACID. POH.
	RIH W/ TCP GUN. PERF & ACIDIZE LATERAL AS SHOWN BY
13	GEOLOGICAL / ELY SELECTIONS. POH.
14	N/D BOP'S. N/U FRAC VALVE. PREP TO FRAC.
	R/U FRAC EQUIPMENT & FRAC WELL DOWN 5 1/2" CASING AS PER ELY
15	RECOMMENDATION.
16	FLOW BACK FRAC AS PER ELY RECOMMENDATION.
	IF WELL FAILS TO FLOW. RIH W/ NOTCHED COLLAR & 2 3/8" TUBING &
17	CLEAN OUT TO TOE.
	P/U EOT TO KOP. SWAB TEST FOR EVALUATION. PUT WELL ON ROD
18	PUMP.

CONDITIONS OF APPROVAL - DRILLING

Operator's Name:

POGO Producing Company

Well Name & No.

Bradley 13 Federal #5H

SH Location: BH Location:

660' FNL, 2310' FWL, Section 13, T. 25 S., R. 29 E., Eddy County, New Mexico 660' FNL, 330' FWL, Section 13, T. 25 S., R. 29 E., Eddy County, New Mexico

Lease:

NM-15303

I. DRILLING OPERATIONS REQUIREMENTS:

- 1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County in sufficient time for a representative to witness:
 - A. Well spud
 - B. Cementing casing: <u>13-3/8</u> inch <u>8-5/8</u> inch <u>5-1/2</u> inch
 - C. BOP tests
- 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. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15-day time frame.
- 4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

II. CASING:

- 1. The <u>13-3/8</u> inch surface casing shall be set at <u>approximately 750 feet</u> and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.
- 2. The minimum required fill of cement behind the <u>8-5/8</u> inch intermediate casing is <u>to be circulated to the surface</u>.
- 3. The minimum required fill of cement behind the <u>5-1/2</u> inch production casing is <u>to reach at least 500 feet</u> above the top of the uppermost hydrocarbon productive interval.

III. PRESSURE CONTROL:

- 1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the <u>8-5/8</u> inch intermediate casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
- 2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi.
- 3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.