Form 3160; (December 1990)

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be

A_{SUBMIT} IN TRIPLICATE*

(Other Instructions on

Form approved.

Budget Bureau No. 1004-0136

Expires: December 31, 1991

	abas an OC	bit hetilli	t musi	t be :		5. LEASE DESIGNATION AND SERIAL NO.		
	obtained pri	or to pit co	nstruc	ction.		NM-07	74935	
APPL	ICATION FOR PE	RMIT TO	DRIL	L OR DEEPEN		6. IF INDIAN, ALLOTT	EE OR TRIBE NAME	
1a. TYPE OF WORK						T THE A CHEEN TO	NIANER	
b. Type of Well	ILL 🛛	DEEPEN				7. UNIT AGREEMENT	26878	
OIL S	Gas OTHER			INGLE MULTIP	LE	8. FARM OR LEASE NAME, V		
2. NAME OF OPERATOR		427				Electra Fo	ederal #7	
Mack Energy Corp		837		RECEIN	/ED	9. API WELL NO.	*	
3. ADDRESS AND TELEPHONE NO		(= a = \ -			2006	30 - 015 -		
	esia, NM 88211-0960	(505) 7				Loco Hills		
4. LOCATION OF WEL	L (Report location clearly a	nd in accordance	with any	state requirement				
	16	50 FNL & 231	lo FWI		6718	11. SEC., T., R., M., OI AND SURVEY OR	AREA	
At proposed prod. zo	ne			!		Sec 15 T1	7S R30E	
14. DISTANCE IN MILES A	ND DIRECTION FROM NEARI	EST TOWN OR POS	T OFFIC	E*		12. COUNTY OR PAR	ISH 13. STATE	
		theast of Loco				Eddy	NM	
15. DISTANCE FROM PROP			16. NO	. OF ACRES IN LEASE	17. NO	OF ACRES IN LEASE		
PROPERTY OR LEASE	LINE, FT.	330		640	тот	THIS WELL	40	
18. DISTANCE FROM PROP			19. PR	OPOSED DEPTH	20. ROTA	ARY OR CABLE TOOLS		
OR APPLIED FOR, ON T	RILLING, COMPLETED HIS LEASE, FT.	660		6000		Rotary		
21. ELEVATIONS (Show	whether DF, RT, GR, etc.) 3684' GR					22. APPROX. DATE WOI 2/26/		
23.		PROPOSED CAS	ING ANI	CEMENTING PROGRA	м	Roswell Controlled	d Water Basin	
SIZE OF HOLE	GRADE. SIZE OF CASING	WEIGHT PER F	тоот	SETTING DEPTH	1	QUANTITY OF CEM	IENT	
17 1/2	H-40,13 3/8	48		425	WITH	VESS Circ		
12 1/4	J-55, 8 5/8	24		1040		Suff to Cir	c	
7 7/8	J-55, 5 1/2	17		6000		Suff to Cir	c	
will be cemented. If	gy proposes to drill to	ell will be plu	gged ar	nd abandoned in a m	anor con	sistent with federa	_	
	is per Onshore Oil and	Gas Order #1	are ou	itlined in the following	ig attach	iments:		
1. <u>Surveys</u> Exhibit #1- Well	Location Plat	4. <u>Cert</u>	<u>ificatio</u>	<u>n</u>		7. Respons	sibility Statement	
Exhibit #2- Vicin		£ YYa.		outia pullina On	-42 DI -			
	tion Verification Map			Sulfide Drilling Oper H2S Warning Sign				
		EAIII		H2S Safety Equipme		proval sub		
2. Drilling Program	<u>n</u> /	Dani	DIC #G-	1125 Safety Equipme	625	emeral requ		
	1	6. Blow	out Pr	eventers	S f	Pecial Stipu(Lations	
3. Surface Use & C				BOPE Schematic	A	itached		
	Mile Radius Map	Exhi		- Blowout Preventer	Require	ments		
Exhibit #5- Prod Exhibit #6- Loca	luction Facilities Layor Ition Layout	• •		- Choke Manifold	-			
IN ABOVE SPACE DESCRI	BE PROPOSED PROGRAM: If	proposal is to deep	en, give da	ata on present productive zon	e and propo	sed new productive zone. I	f proposal is to drill or	

24.

SIGNED OND CONDITIONS OF APPROVAL, IF ANY:

deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

Production Clerk DATE 1/26/2006

APPROVAL DATE APPROVAL DATE CONDITIONS OF APPROVAL, IF ANY:

ACIO

APPROVED BY /S/ Russell E. Sorensen

FIELD MANAGER

DATE MAR 2 2 2006

State of New Mexico

DISTRICT I 1625 N. FRENCH DR., HOBBS, NM 88240

Energy, Minerals and Natural Resources Department

DISTRICT II

1301 W. GRAND AVENUR, ARTESIA, Nº 88210

1000 Rio Brazos Rd., Aztec, NM 87410

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

Form C-102 Revised JUNE 10, 2003 Submit to Appropriate District Office

State Lease - 4 Copies Fee Lease - 3 Copies

DISTRICT IV

DISTRICT III

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

1220 S. ST. FRANCIS DR., SANTA FE, NM 8750	WELL LOCATION AND	ACREAGE DEDICATION PLAT	☐ AMENDED REPORT		
API Number	Pool Code	Pool Name			
	96718	Loco Hills Paddoc	k [
Property Code	Prop	Property Name			
26878	ELECTR	ELECTRA FEDERAL			
OGRID No.	-	ator Name	Elevation		
013837	MACK ENERG	Y CORPORATION	3684'		

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	15	17-S	30-E		1650	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
Dedicated Acre	Joint o	or Infill Co	nsolidation	Code Or	der No.	<u> </u>	<u> </u>		
40									

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

3697.1' 3690.6' 2310' 860' 3790.7' 3695.2'	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. Signature Jerry W. Sherrell Printed Name Production Clerk Title 1/26/2006 Date SURVEYOR CERTIFICATION
GEODETIC COORDINATES NAD 27 NME Y=668454.9 N X=614565.5 E	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.
LAT. = 32°50′13.61″ N LONG. = 103°57′37.20″ W	JANUARY 4, 2006 Date Surveyed RZB Signature & Seal of Professional Surveyor Author 1/24/06 05.11.2042 Certificate No. GARY EIDSON 12641

District I
1625 N. French Dr., Hobbs, NM 88240
District 11
1301 W. Grand Avenue, Artesia, NM 88210
District III
1 000 Rio Brazos Road, Aztec, NM 8741 0
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

For drilling and production facilities, submit to appropriate NNIOCD District Office.

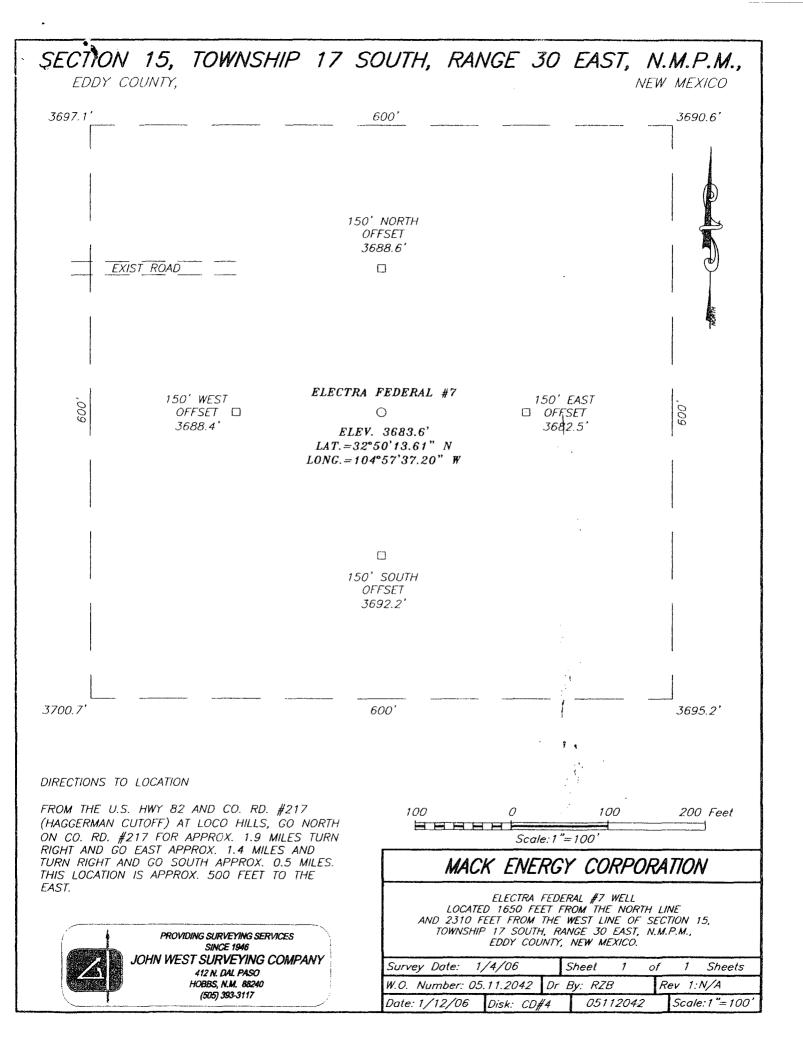
For downstream facilities, submit to Santa Fe office

Fonn C-144 June 1, 2004

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Pit or Below-Grade Tank Registration or Closure
Is pit or below-grade tank covered by a "general plan"? Yes No

Type of action: Registration of a pit of	or below-grade tank 🛛 Closure of a pit	or below-grade tan	k 🗌		
Operator: Mack Energy Corporation Telephon	e: (505) 748-1288 e-mail a	ddress: jerrys@1	mackenergyco	rp.com	
Address: P.o. Box 960 Artesia, NM 88211-0960					
Facility or well name: Electa Federal #7 API #	U/L or Q	tr/Qtr <u>F</u> s	See 15 T 1	7S _R 30E	
County: Eddy Latitude	Longit	ude	NAD:	1927 🔲 1983 🔲	
Surface Owner: Federal 🛛 State 🔲 Private 🔲 Indian 🗍					
Pit	Below-grade tan				
Type. Drilling X Production Disposal	Volume:bbl Type of fluid: _				
Workover Emergency	Construction material:			RECEIVE	
Lined Unlined	Double-walled, with leak detection?	Yes 🔲 If not, expl	ain why not.		
Liner type: Synthetic M Thickness 12 mil Clay				FEB 2 7 201	
Pit Volume 3000 bbl				OULANTE	
Don'th to ground water (wateral distance from bottom of mit to general	Less than 50 feet	(20	points)		
Depth to ground water (vertical distance from bottom of pit to seasonal	50 feet or more, but less than 100 feet	(10	points)		
high water elevation of ground water.)	I 00 feet or more	(0	points) 0 Point	S	
	Yes	(20) points)		
Wellhead protection area: (Less than 200 feet from a private domestic	No	,	(nointe)		
water source, or less than I 000 feet from all other water sources.)	110		(0 points) 0 Points		
Distance to surface water: (horizontal distance to all wetlands, playas,	Less than 200 feet	(20) points)		
irrigation canals, ditches, and perennial and ephemeral watercourses.)	200 feet or more, but less than I 000 fe	,			
migation canals, ditense, and percental and optionical watercoarses.	1000 feet or more	(0	^{points)} 0 Point	s	
	Ranking Score (Total Points)	0 P	oints		
(Sekin in a mit alamana (1) Attack a diagram of the Smilittle showing the mit				and the empite how if	
If this is a pit closure: (1) Attach a diagram of the facility showing the pit your are burying in place) onsite offsite I If offisite, name of facility.					
remediation start date and end date. (4) Groundwater encountered: No		surface	nt. and attach	sample results.	
5) Attach soil sample results and a diagram of sample locations and excava-	itions.				
Additional Comments:					
			 _		
				············	
I hereby certify that the information above is true and complete to the bes has been/will be constructed or closed according to NMOCD guidelin	t ofmy knowledge and belief. I further o	certify that the aborders (ove-described pit (CD-approved pla	or below-grade tank	
•	Za, a general permit , or an (actac	incuj ancinative c	SCD-approved pro	··· []	
Date: 2/27/2006		11 01	00		
Printed Name/Title Jerry W. Sherrell/Production Clerk	Signature Serry U	V. Oh	enoll		
Your certification and NMOCD approval ofthis application/closure does otherwise endanger public health or the environment. Nor does it relieve regulations.	not relieve the operator of liability should	i the contents of the			
Approval: Printed Name/Titlc	Signature		pFf	EB 2 8 2006	
rimed radio/ Hite	Signature		Date: *	-U & U LUUU	



Artached to Form 3160-3 Mack Energy Corporation Electra Federal #7 1650 FNL & 2310 FWL SE/4 NW/4, Sec 15 T178 R30E Eddy County, NM

DRILLING PROGRAM

1. Geologic Name of Surface Formation

Quaternary

2. Estimated Tops of Important Geologic Markers:

Quaternary	Surface
Top of Salt	505'
Base of Salt	1025'
Yates	1600'
Queen	2130'
San Andres	3050'
Glorietta	4320'

3. Estimated Depths of Anticipated Fresh Water, Oil and Gas:

Water Sand	150'	Fresh Water
Grayburg	2580'	Oil/Gas
San Andres	3050'	Oil/Gas
Paddock	3950'	Oil/Gas

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 13 3/8" casing to 425' and circulating cement back to surface will protect the surface fresh water sand. Salt Section will be protected by setting 8 5/8" casing to 1040' and circulating cement back to surface. Any shallower zones above TD, which contain commercial quantities of oil and/or gas, will have cement circulated across them by cementing 5 1/2" production casing, which will be run at TD.

4. Casing Program:

Hole Size	e Interval	OD Casing	Weight, Grade, Jt, Cond., Type
17 ½" 12 ¼"	0-425' 0-1040'	13 3/8" 8 5/8"	48#, H-40, ST&C, New, R-3 24#, J-55, ST&C, New, R-3
7 7/8"	0-TD	5 1/2"	17#, J-55, LT&C, New, R-3

Drilling Program Page 1

Attached to Form 3160-3 Mack Energy Corporation Electra Federal #7 1650 FNL & 2310 FWL SE/4 NW/4, Sec 15 T178 R30E Eddy County, NM

5. Cement Program:

- 13 3/8" Surface Casing: Circulate to Surface with Class C w/2% CaCl2.
- 8 5/8 Intermiate Casing: Circulate to Surface with Class C W/2% CaCl2.
- 5 1/2" Production Casing: Cement Casing with Class C w/6# Salt & 2/10 of 1% CFR-3 per sack. We will run a hole caliper and run sufficient cement to circulate to surface.

6. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #9 will consist of a double ram-type (2000 psi WP) preventer. This unit will be hydraulically operated and the ram type preventer will be equipped with blind rams on top of 4 1/2" drill pipe rams on bottom. The BOP will be nippled up on the 13 3/8" surface casing and tested to 1500 psi by a 3rd party. The BOP will then be nippled up on the 8 5/8" intermediate casing and tested by a 3rd party to 2000 psi and used continuously until TD is reached. All BOP's and accessory equipment will be tested to 2000 psi before drilling out of intermediate casing. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment (Exhibit #10) will include a Kelly cock and floor safety valve and choke lines and choke manifold (Exhibit #11) with 2000 psi WP rating.

7. Types and Characteristics of the Proposed Mud System:

The well will be drilled to TD with a combination of brine, cut brine and polymer mud system. The applicable depths and properties of this system are as follows:

DEPTH	TYPE	WEIGHT	VISCOSITY	WATERLOSS
0-425	Fresh Water	8.5	28	N.C.
425-10407	Brine	10	30	N.C.
1040'-TD	Cut Brine	9.1	29	N.C.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the well site at all times.

8. Auxiliary Well Control and Monitoring Equipment:

- A. Kelly cock will be kept in the drill string at all times.
- B. A full opening drill pipe-stabbing valve with proper drill pipe connections will be on the rig floor at all times.

9. Logging, Testing and Coring Program:

Drilling Program Page 2

Attached to Form 3160-3 Mack Energy Corporation Electra Federal #7 1650 FNL & 2310 FWL SE/4 NW/4, Sec 15 T17S R30E Eddy County, NM

- A. The electric logging program will consist of GR-Dual Laterolog, Spectral Density, Dual Spaced Neutron, CSNG Log and will be ran from T.D. to 8 5/8 casing shoe.
- B. Drill Stem test is not anticipated.
- C. No conventional coring is anticipated.
- D. Further testing procedures will be determined after the 5 1/2" production casing has been cemented at TD based on drill shows and log evaluation.

10. Abnormal Conditions, Pressures, Temperatures and Potential Hazards:

No abnormal pressures or temperatures are anticipated. The estimated bottom hole at TD is 110 degrees and estimated maximum bottom hole pressure is 2300 psig. Low levels of Hydrogen sulfide have been monitors in producing wells in the area, so H2S may be present while drilling of the well a plan is attached to the Drilling program. No major loss of circulation zones has been reported in offsetting wells.

11. Anticipated Starting Date and Duration of Operations:

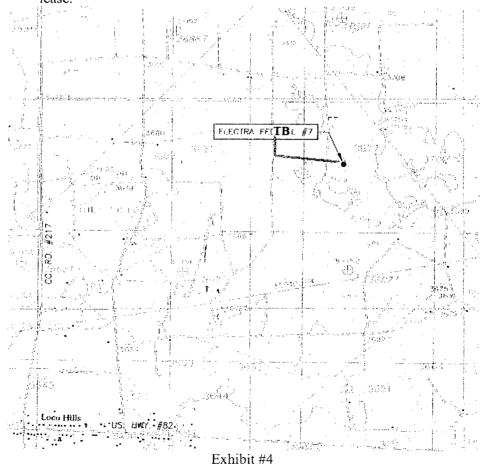
Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is February 26, 2006. Once commenced, the drilling operation should be finished in approximately 10 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made to install permanent facilities.

Attached to Form 3160-3 Mack Energy Corporation Electra Federal #7 1650 FNL & 2310 FWL SE/4 NW/4, Sec 15 T178 R30E Eddy County, NM

SURFACE USE AND OPERATING PLAN

1. Existing & Proposed Access Roads

- A. The well site and elevation plat for the proposed well is shown in Exhibit #1. It was staked by John West Engineering, Hobbs, NM.
- B. All roads to the location are shown in Exhibit below. The existing lease roads are illustrated in Blue and are adequate for travel during drilling and production operations. Upgrading existing roads prior to drilling well will be done where necessary.
- C. Directions to Location: From Loco Hills, go north 1.9 miles on CR 217, turn east 1.4 miles, south 5/10, location is 500° east from this point.
- D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.



Flowline in Green

Attached to Form 3160-3 Mack Energy Corporation Electra Federal #7 1650 FNL & 2310 FWL SE/4 NW/4, Sec 15 T17S R30E Eddy County, N/M

2. Proposed Access Road:

Exhibit #3 shows the 0' of new access road to be constructed. The road will be constructed as follows:

- A. The Maximum width of the running surface will be 14'. The road will be crowned and ditched and constructed of 6" rolled and compacted caliche. Ditches will be at 3:1 slope and 4 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.
- B. The average grade will be less than 1%.
- C. No turnouts are planned.
- D. No culverts, cattleguard, gates, low water crossings or fence cuts are necessary.
- E. Surfacing material will consist of native caliche. Caliche will be obtained from the nearest BLM approved caliche pit or reserve pit area.
- F. The proposed access road as shown in Exhibit #3 has been centerline flagged by John West Engineering, Hobbs, New Mexico.

3. Location of Existing Wells & Proposed flow lines for New Wells:

Exhibit #4 shows all existing wells within a one-mile radius of this well. As shown on this plat there are numerous wells producing from the San Andres and Paddock formations. Proposed flow lines, in green, will follow an archaeologically approved route to the existing battery.

4. Location of Existing and/or Proposed Facilities:

- A. Mack Energy Corporation does operate a production facility on this lease.
- B. If the well is productive, contemplated facilities will be as follows:
 - 1) Paddock Completion: Will be sent to the Electra Federal tank battery. The Facility is shown in Exhibit #5.
 - 2) The tank battery and facilities including all flow lines and piping will be installed according to API specifications.
 - 3) Any additional caliche will be obtained from a BLM approved caliche pit. Any additional construction materials will be purchased from contractors.

Attached to Form 3160-3 Mack Energy Corporation Electra Federal #7 1650 FNL & 2310 FWL SE/4 NW/4, Sec 15 T17S R30E Eddy County, NM

4) It will be necessary to run electric power if this well is productive. Power will be run by CVE and they will send in a separate plan for power.

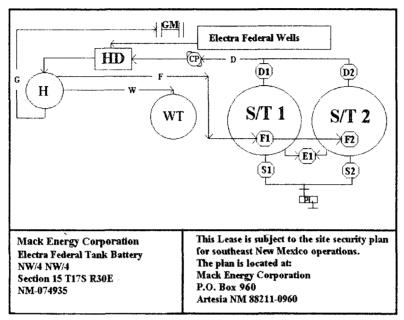


Exhibit #5

- A. If the well is productive, rehabilitation plans are as follows:
 - 1) The reserve pit will be back filled after the contents of the pit are dry (within 120 days after the well is completed).
 - Topsoil removed from the drill site will be used to recontour the pit area to the original natural level, as nearly as possible, and reseeded as per BLM specifications.

5. Location and Type of Water Supply:

The well will be drilled with combination brine and fresh water mud system as outlined in the drilling program. The water will be obtained from commercial water stations in the area and hauled to location by transport truck over the existing and proposed access roads shown in Exhibit #4. If a commercial fresh water source is nearby, fasline may be laid along existing road ROW's and fresh water pumped to the well. No water well will be drilled on the location.

6. Source of Construction Materials:

All caliche required for construction of the drill pad and proposed new access road (approximately 2500 cubic yards) will be obtained from a BLM approved caliche pit or the reserve pit.

Attached to Form 3160-3 Mack Energy Corporation Electra Federal #7 1650 FNL & 2310 FWL SE/4 NW/4, Sec 15 T178 R30E Eddy County, NM

7. Methods of Handling Water Disposal:

- A. Drill cuttings not retained for evaluation purposes will be disposed into the reserve pit.
- B. Drilling fluids will be contained in a lined working pit. The reserve pit will contain any excess drilling fluid or flow from the well during drilling, cementing and completion operations. The reserve pit will be an earthen pit, approximately 125' X 125' X 10' deep with a dividing wall dividing it into two horseshoe style pits and fenced on three sides prior to drilling. It will be fenced on the fourth side immediately following rig removal. The reserve pit will be lined 125' X 125' X 10'. The reserve pit will be lined (12-mil thickness) to minimize loss of drilling fluids and saturation of the ground with brine water.
- C. Water produced from the well during completion may be disposed into the reserve pit or a steel tank (depending on the rates). After the well is permanently placed on production, produced water will be collected in tanks (fiberglass) until pumped to an approved disposal system; produced oil will be collected in steel tanks until sold.
- D. Garbage and trash produced during drilling or completion operations will be collected in a trash bin and hauled to an approved landfill. All water and fluids will be disposed of into the reserve pit. Salts and other chemicals produced during drilling or testing will be disposed into the reserve pit. No toxic waste or hazardous chemicals will be produced by this operation.
- E. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned up within 30 days. The reserve pit will be completely fenced and kept closed until it has dried. When the reserve pit is dry enough to breakout and backfill and reseeded as per BLM specifications as weather permits. In the event of a dry hole only a dry hole marker will remain.

8. Ancillary Facilities:

No airstrip, campsite or other facilities will be built as a result of the operation on this well.

Attached to Form 3160-3 Mack Energy Corporation Electra Federal #7 1650 FNL & 2310 FWL SE/4 NW/4, Sec 15 T17S R30E Eddy County, NM

9. Well Site Layout:

- A. The drill pad layout, with elevations staked by John West Engineering, is shown in Exhibit #6. Dimensions of the pad and pits are shown. Topsoil, if available, will be stockpiled per BLM specifications. Because the pad is almost level no major cuts will be required.
- B. Diagram below shows the proposed orientation of reserve pit, working pit and access road. There is a possibility that the pits will be moved around depending on Caliche in the area. No permanent living facilities are planned, but a temporary foreman/toolpusher's trailer will be on location during the drilling operations.
- C. The reserve pit will be lined with high quality plastic sheeting (12 mil thickness).

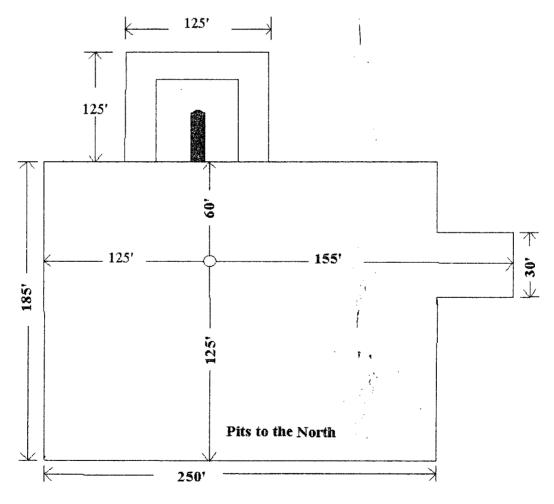


Exhibit #6

Attached to Form 3160-3 Mack Energy Corporation Electra Vederal #7 1650 FNL & 2310 FWL SE/4 NW/4, Sec 15 T17S R30E Eddy County, NM

10. Plans for Restoration of the Surface:

- A. Upon completion of the proposed operations, the pit area, after allowing drying, will be broken out and leveled. The original topsoil will be returned to the pit area, which will be leveled and contoured to as nearly the original topography as possible.
- B. The disturbed area will be revegetated by reseeding during the proper growing season with a seed mixture of native grasses as recommended by the BLM.
- C. Three sides of the reserve pit will be fenced prior to and during drilling operations. At the time that the rig is removed, the reserve pit will be fenced on the rig (fourth) side to prevent livestock from being entrapped. The fencing will remain in place until the pit area is cleaned up and leveled. No oil will be left on the surface of the fluid in the pit.
- D. Upon completion of proposed operations, if the well is completed, the reserve pit area will be treated as outlined above within the same prescribed time. Any additional caliche required for facilities will be obtained from a BLM approved caliche pit. Topsoil removed from the drill site will be used to recontour the pit area to its original natural level and reseeded as per BLM specifications.

11. Surface Ownership:

The well site and lease is located entirely on Federal surface. We have notified the surface lessee of the impending operations. According to BLM the leasee is Charles Martin, P.O. Box 706, Artesia NM 88211.

12. Other Information:

- A. The area around the well site is grassland and the topsoil is sandy. The vegetation is native scrub grass with sagebrush.
- B. There is no permanent or live water in the immediate area.
- C. A Cultural Resources Examination has been requested and will be forwarded to your office in the near future.

13. Lessee's and Operator's Representative:

The Mack Energy Corporation representative responsible for assuring compliance with the surface use plan is as follows:

Jerry W. Sherrell Mack Energy Corporation P.O. Box 960 Artesia, NM 88211-0960 Phone (505) 748-1288 (office)

Attached to Form 3160-3 Mack Energy Corporation Electra Federal #7 1650 FNL & 2310 FWL SE/4 NW/4, Sec 15 T17S R30E Eddy County, NM

CERTIFICATION

I hereby certify that I, or person 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 this plan are to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by Mack Energy Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date: 1-26-2006 Signed: Pry W. Sherrell

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- 1. The hazards an characteristics of hydrogen sulfide (H2S)
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- 3. The proper use of H2S detectors alarms warning systems, briefing areas, evacuation procedures, and prevailing winds.
- 4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- 1. The effects of H2S on metal components. If high tensile tubular are to be used, personnel well be trained in their special maintenance requirements.
- 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- 3. The contents and requirements of the H2S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. The concentrations of H2S of wells in this area from surface to TD are low enough that a contingency plan is not required.

H2S Plan Page 11

II. H2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H2S.

1. Well Control Equipment:

- A. Flare line.
- B. Choke manifold.
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
- D. Auxiliary equipment may include if applicable: annular preventer & rotating head.

2. Protective equipment for essential personnel:

A. Mark II Survive air 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.

3. H2S detection and monitoring equipment:

A. 1 portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 PPM are reached.

4. Visual warning systems:

- A. Wind direction indicators as shown on well site diagram (Exhibit #8).
- B. Caution/Danger signs (Exhibit #7) shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

5. Mud program:

A. The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

H2S Plan Page 12

6. Metallurgy:

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
- B. All elastomers used for packing and seals shall be H2S trim.

7. Communication:

- A. Radio communications in company vehicles including cellular telephone and 2-way radio.
- B. Land line (telephone) communication at Office.

8. Well testing:

- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H2S environment will use the closed chamber method of testing.
- B. There will be no drill stem testing.

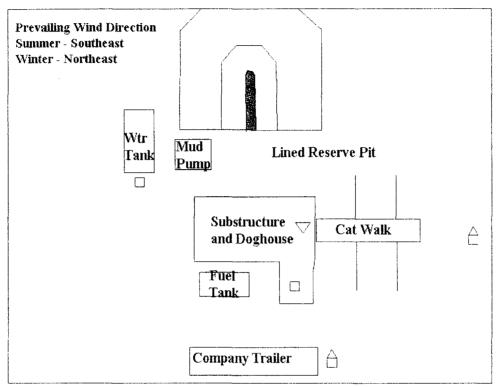
EXHIBIT #7

WARNING YOU ARE ENTERING AN H2S AUTHORIZED PERSONNEL ONLY

- 1. BEARDS OR CONTACT LENSES NOT ALLOWED
- 2. HARD HATS REQUIRED
- 3. SMOKING IN DESIGNATED AREAS ONLY
- 4. BE WIND CONSCIOUS AT ALL TIMES
- 5. CHECK WITH MACK ENERGY FOREMAN AT OFFICE

MACK ENERGY CORPORATION 1-505-748-1288

DRILLING LOCATION H2S SAFTY EQUIPMENT Exhibit # 8



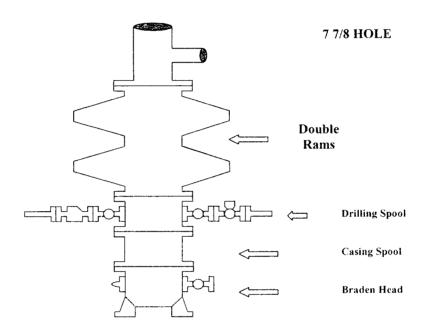
- H2S Monitors with alarms at the bell nipple
- Wind Direction Indicators
- Safe Briefing areas with caution signs and breathing equipment min 150 feet from

Attachment to Exhibit #9 NOTES REGARDING THE BLOWOUT PREVENTERS Electra Federal #7 Eddy County, New Mexico

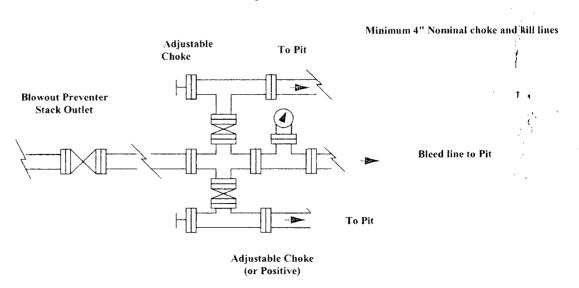
- 1. Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum I.D. equal to preventer bore.
- 2. Wear ring to be properly installed in head.
- 3. Blow out preventer and all fittings must be in good condition, 2000 psi WP minimum.
- 4. All fittings to be flanged.
- 5. Safety valve must be available on rig floor at all times with proper connections, valve to be full 2000 psi WP minimum.
- 6. All choke and fill lines to be securely anchored especially ends of choke lines.
- 7. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
- 8. Kelly cock on Kelly.
- 9. Extension wrenches and hands wheels to be properly installed.
- 10. Blow out preventer control to be located as close to driller's position as feasible.
- 11. Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation all API specifications.

H2S Plan Page 15

Exhibit #9 BOPE Schematic



Choke Manifold Requirement (2000 psi WP) No Annular Required

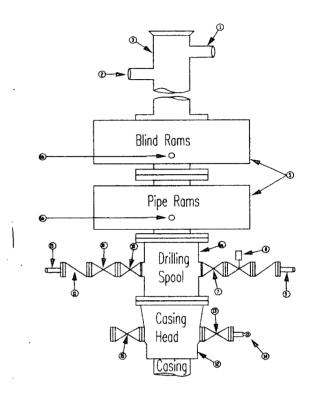


Minimum Blowout Preventer Requirements

2000 psi Working Pressure 2 MWP EXHIBIT #10

Stack Requirements

	Stack Requireme.	HILS	
NO.	Items	Min.	Min.
		1.D.	Nominal
1	Flowline		2"
2	Fill up line		2"
3	Drilling nipple		
4	Annular preventer		
5	Two single or one dual hydraulically operated rams		
6a	Drilling spool with 2" min. kill line and 3" min choke line outlets		2" Choke
6b	2" min. kill line and 3" min. choke line outlets in ram. (Alternate to 6a above)		
7	Valve Gate Plug	3 1/8	
8	Gate valve-power operated	3 1/8	
9	Line to choke manifold		3"
10	Valve Gate Plug	2 1/16	
11	Check valve	2 1/16	
12	Casing head		
13	Valve Gate Plug	1 13/16	
14	Pressure gauge with needle valve		
15	Kill line to rig mud pump manifold		2"



OPTIONAL

	,	· · · · · · · · · · · · · · · · · · ·		
16 Flanged Valve 1 13/16	16 Fla		1 13/16	

CONTRACTOR'S OPTION TO FURNISH:

- All equipment and connections above bradenhead or casinghead. Working pressure of preventers to be 2000 psi minimum.
- Automatic accumulator (80 gallon, minimum) capable of closing BOP in 30 seconds or less and, holding them closed against full rated working pressure.
- BOP controls, to be located near drillers' position.
- 4. Kelly equipped with Kelly cock.
- Inside blowout preventer or its equivalent on derrick floor at all times with proper threads to fit pipe being used.
- Kelly saver-sub equipped with rubber casing protector at all times.
- 7. Plug type blowout preventer tester.
- 8. Extra set pipe rams to fit drill pipe in use on location at all times.
- Type RX ring gaskets in place of Type R.

MEC TO FURNISH:

- 1. Bradenhead or casing head and side valves.
- 2. Wear bushing. If required.

GENERAL NOTES:

- Deviations from this drawing may be made only with the express permission of MEC's Drilling Manager.
- 2. All connections, valves, fittings, piping, etc., subject to well or pump pressure must be flanged (suitable clamp connections acceptable) and have minimum working pressure equal to rated working pressure of preventers up through choke, valves must be full opening, and suitable for high pressure mud service.
- Controls to be of standard design and each marked, showing opening and closing position
- 4. Chokes will be positioned so as not to hamper or delay changing of choke beans.

 Replaceable parts for adjustable choke, or bean

- sizes, retainers, and choke wrenches to be conveniently located for immediate use.
- 5 All valves to be equipped with hand-wheels or handles ready for immediate use.
- Choke lines must be suitably anchored.
- Handwheels and extensions to be connected and ready for use.
- Valves adjacent to drilling spool to be kept open. Use outside valves except for emergency.
- All seamless steel control piping (2000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
- Casinghead connections shall not be used except in case of emergency.
- 11. Do not use kill line for routine fill up operations.

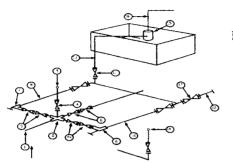
Exhibit #11

MIMIMUM CHOKE MANIFOLD

3,000, 5,000, and 10,000 PSI Working Pressure

2 M will be used or greater

3 MWP - 5 MWP - 10 MWP



Mud Pit

Reserve Pit

* Location of separator optional

Below Substructure

Mimimum requirements

	3,000 MWP 5,000 MWP 10,000 MWP								10,000 MWP	
No.	1	I.D.	NOMINAL	Rating	I.D.	Nominal	Rating	1.D.	Nominal	Rating
1	Line from drilling Spool		3"	3.000		3"	5,000		3"	10,000
2	Cross 3" x 3" x 3" x 2"			3,000			5,000			
2	Cross 3" x 3" x 3" x 2"									10,000
3	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000
4	Valve Gate Plug	1 13/16		3,000	1 13/16		5,000	1 13/16		10,000
4a	Valves (1)	2 1/16		3,000	2 1/16		5,000	2 1/16		10,000
5	Pressure Gauge			3,000			5,000			10,000
6	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000
7	Adjustable Choke (3)	2"		3,000	2"		5,000	2"		10,000
8	Adjustable Choke	1"		3,000	1"		5,000	2"		10,000
9	Line		3"	3,000		3"	5,000		3"	10,000
10	Line		2"	3,000		2"	5,000		2"	10,000
11	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000
12	Line		3"	1,000		3"	1,000		3"	2,000
13	Line		3"	1,000		3"	1.000		3"	2,000
14	Remote reading compound Standpipe pressure quage			3,000			5,000			10,000
15	Gas Separator		2' x5'			2' x5'			2' x5'	
16	Line		4"	1,000		4"	1,000		4"	2,000
17	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000

- (1) Only one required in Class 3M
- (2) Gate valves only shall be used for Class 10 M
- (3) Remote operated hydraulic choke required on 5,000 psi and 10,000 psi for drilling.

EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTION

- 1. All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
- 2. All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
- 3. All lines shall be securely anchored.
- 4. Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
- 5. Choke manifold pressure and standpipe pressure gauges shall be available at the choke manifold to assist in regulating chokes. As an alternate with automatic chokes, a choke manifold pressure gauge shall be located on the rig floor in conjunction with the standpipe pressure gauge.
- Line from drilling spool to choke manifold should bee as straight as possible. Lines downstream from chokes shall make turns by large bends or 90 degree bends using bull plugged tees.

Riginalit Preventors

CONDITIONS OF APPROVAL - DRILLING

Operator's Name:

Mack Energy Corporation

Well Name & No.

Electra Federal #7

Location:

1650' FNL, 2310' FWL, Section 15, T. 17 S., R. 30 E., Eddy County, New Mexico

Lease:

NM-074935

I. DRILLING OPERATIONS REQUIREMENTS:

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: 13-3/8 inch 8-5/8 inch 5-1/2 inch
- C. BOP tests
- 2. A Hydrogen Sulfide (H2S) Drilling Operation Contingency Plan shall be activated prior to drilling into the **Grayburg** formation. A copy of the plan shall be posted at the drilling site.
- 3. 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.
- 4. 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.
- 5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

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II. CASING:

- 1. The 13-3/8 inch surface casing shall be set at approximately 425 feet in the Rustler Anhydrite or in the case that salt occurs at a shallower depth, above the top of the salt. The surface casing shoe shall be set in the anhydrite to ensure adequate sealing. The operator is required to use an excess of 100% cement volume to fill the annulus. If cement does not circulate to the surface, the operator may use ready mix cement to fill the remaining annulus. 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 to be sufficient to circulate to the surface.
- 3. The minimum required fill of cement behind the <u>5-1/2</u> inch production casing is to be sufficient to reach at least 200 feet above the top of the uppermost hydrocarbon bearing interval or to the base of the salt.

III. PRESSURE CONTROL:

- 1. The BOP and related equipment as described in Onshore Order No. 2 shall be installed and operational before drilling below the <u>13-3/8</u> inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced. The blowout preventer assembly shall consist of a minimum of: one annular preventer, or double ram, and two ram preventers with one being blind and one being a pipe ram. Additional equipment should include and upper kelly cock valve with handle available. Safety valves and subs to fit all drill strings in use must be available on the rig floor.
- 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.