

AUG 17 2015

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### Hydrogen Sulfide Drilling Operations Plan

1. Company and Contract personnel admitted on location should be trained by a qualified H<sub>2</sub>S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S.
  - B. Physical Effects and Hazards.
  - C. Proper Use of Safety Equipment and Life Support Systems.
  - D. Principle and Operation of H<sub>2</sub>S Detectors, Warning System and Briefing.
  - E. Evacuation Procedure, Routes and First Aid.
  - F. Proper Use of 30 minute Pressure Demand Air Pack.
2. H<sub>2</sub>S Detection and Alarm Systems
  - A. H<sub>2</sub>S 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 Mud Pit 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.
    1. Green Flag, Normal Safe Condition.
    2. Yellow Flag, Indicates Potential Pressure and Danger.
    3. Red Flag, Danger H<sub>2</sub>S Present in Dangerous Concentration  
Only Emergency Personnel Admitted to Location.
5. Well Control Equipment
  - A. See Attached Diagram.
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 or Cell Phone will be Used to Communicate off Location in Case of 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 Igniter or a propane pilot light in case gas reaches the surface.
  - C. If Location is near any Dwelling a Closed DST will be Performed.
8. Drilling Contractor Supervisor will be Required to be Familiar with the Effects H<sub>2</sub>S has on tubular goods and other mechanical equipment.
9. If H<sub>2</sub>S Encountered, Mud system will be Altered if Necessary to Maintain Control of Formation. A Mud Gas Separator will be Brought into Service Along with H<sub>2</sub>S Scavengers if Necessary.

AUG 21 2015



Company Contact List:

New Mexico Operations:      Name:   Cellular:      Office:

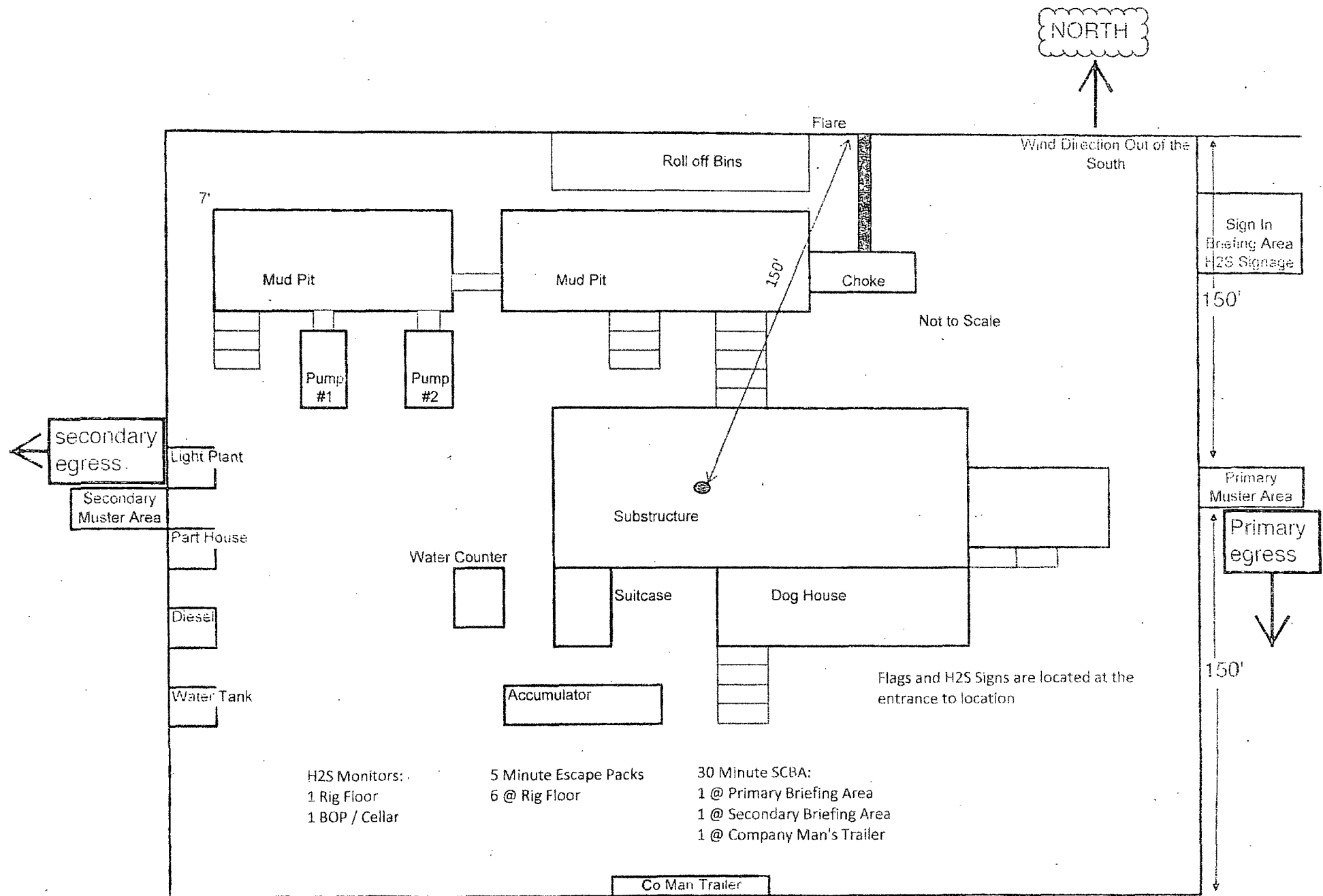
Drilling Superintendent	Chris Bryan	405-538-7458	432-653-1265
Drilling Superintendent	Duane Winkler	970-769-4187	432-653-1265
Drilling Manager	Jonathan Nix	432-296-8956	432-688-3127
HSE Manager	David Carrillo	432-664-2095	432-688-3391
Production Engineer	Nathan Luoma	432-260-5564	432-688-7100
Drilling Engineer	Michael Mataalii	432-271-2230	432-688-3392

<u>Lea County (Hobbs):</u>	<u>Contact Number:</u>
State Police	575-392-5588
City Police	575-397-9265
Sheriff's Office	575-393-2515
Ambulance	911
Fire Department	575-397-9308
Local Emergency Planning Committee	575-393-2870
NMOCD	575-393-6161
US Bureau of Land Management	575-393-3612

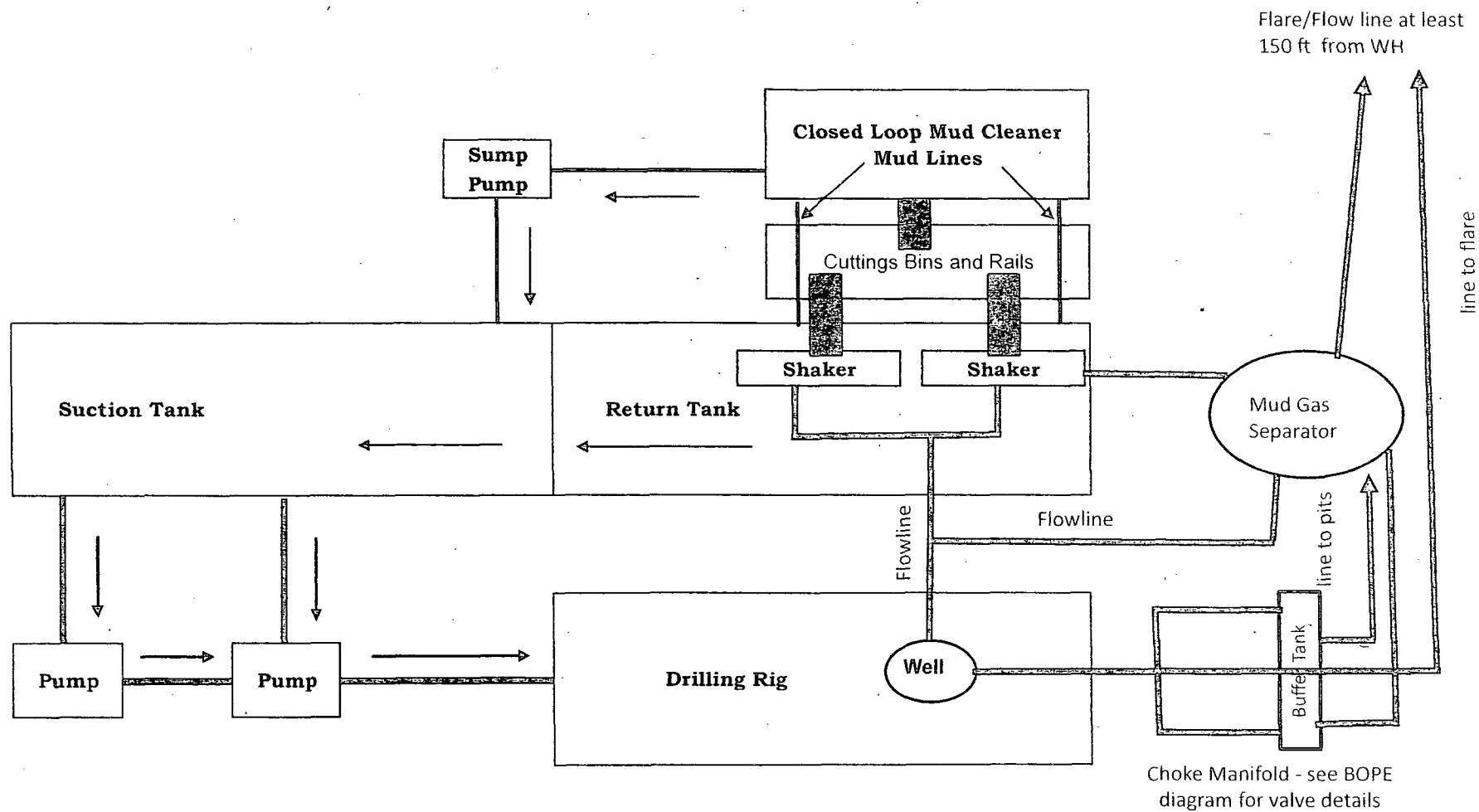
<u>Eddy County (Carlsbad)</u>	<u>Contact Number:</u>
State Police	575-885-3137
City Police	575-855-2111
Sheriff's Office	575-887-7551
Ambulance	911
Fire Department	575-885-2111
Local Emergency Planning Committee	575-887-3798
US Bureau of Land Management	575-887-6544

<u>Emergency Services</u>	<u>Contact Numbers:</u>
Boots & Coots IWC	1-800-256-9688 or 281-931-8884
Cudd Pressure Control	915-699-0139 or 915-563-3356
Halliburton	575-746-2757
B.J. Services	575-746-3569
Flight for Life Lubbock TX	806-743-9911
Aerocare Lubbock TX	806-747-8923
Med Flight Air Ambulance Albuquerque NM	575-842-4433
Lifeguard Air Med Albuquerque NM	575-272-3115

**SM-ESDU-41**

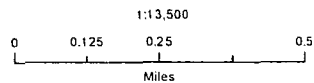
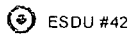


## Choke Manifold Schematic for Closed Loop System



**ESDU #42**  
**H<sub>2</sub>S Contingency Plan:**  
**1 Mile Radius Map**

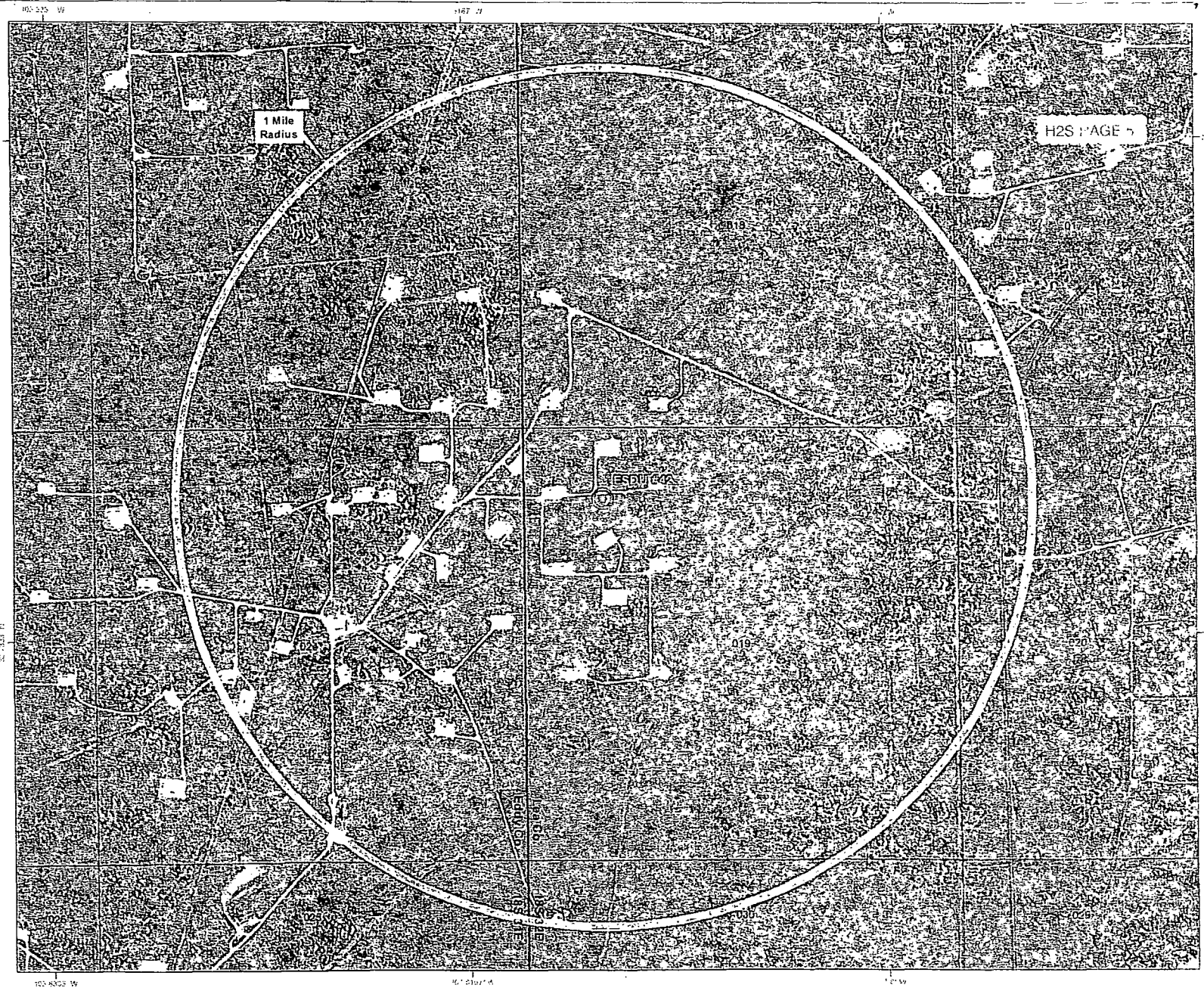
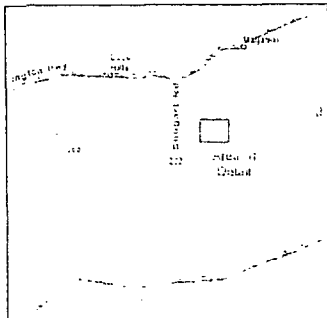
Section 18, Township 18S, Range 32E  
Lea County, New Mexico



NAD 1983 New Mexico State Plane East  
FIPS 3001 Feet

**PERMITS WEST ..**  
(407) 888-1111 (in USA)

Prepared by Permits West, Inc.. July 14, 2014  
for SM Energy Company





**ESDU #42  
H<sub>2</sub>S Contingency Plan:  
2 Mile Radius Map**

Section 18, Township 18S, Range 32E  
Lea County, New Mexico

 ESDU #42

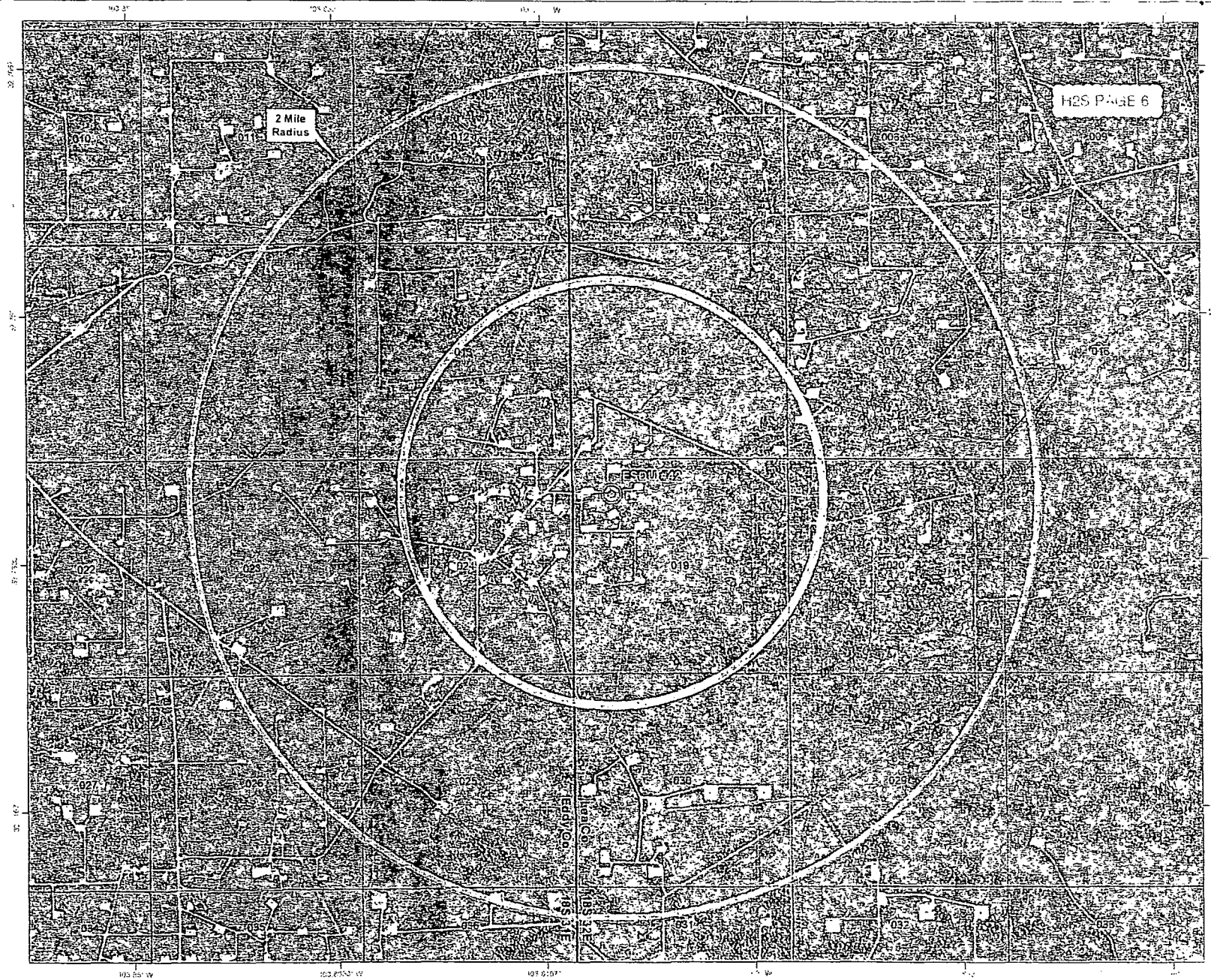
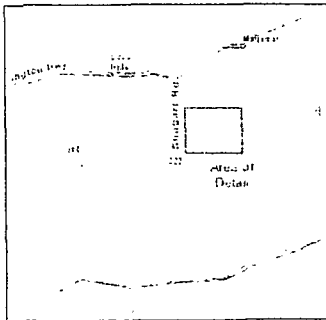
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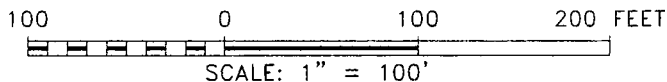
NAD 1983 New Mexico State Plane East  
FIPS 3001 Feet

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INCORPORATED

Prepared by Permits West, Inc., July 14, 2014  
for SM Energy Company



# INTERIM RECLAMATION DIAGRAM



Sheet 1 of 1 Sheets