

### 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.

HOBBS OCD

AUG 07 2013

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AUG 16 2013



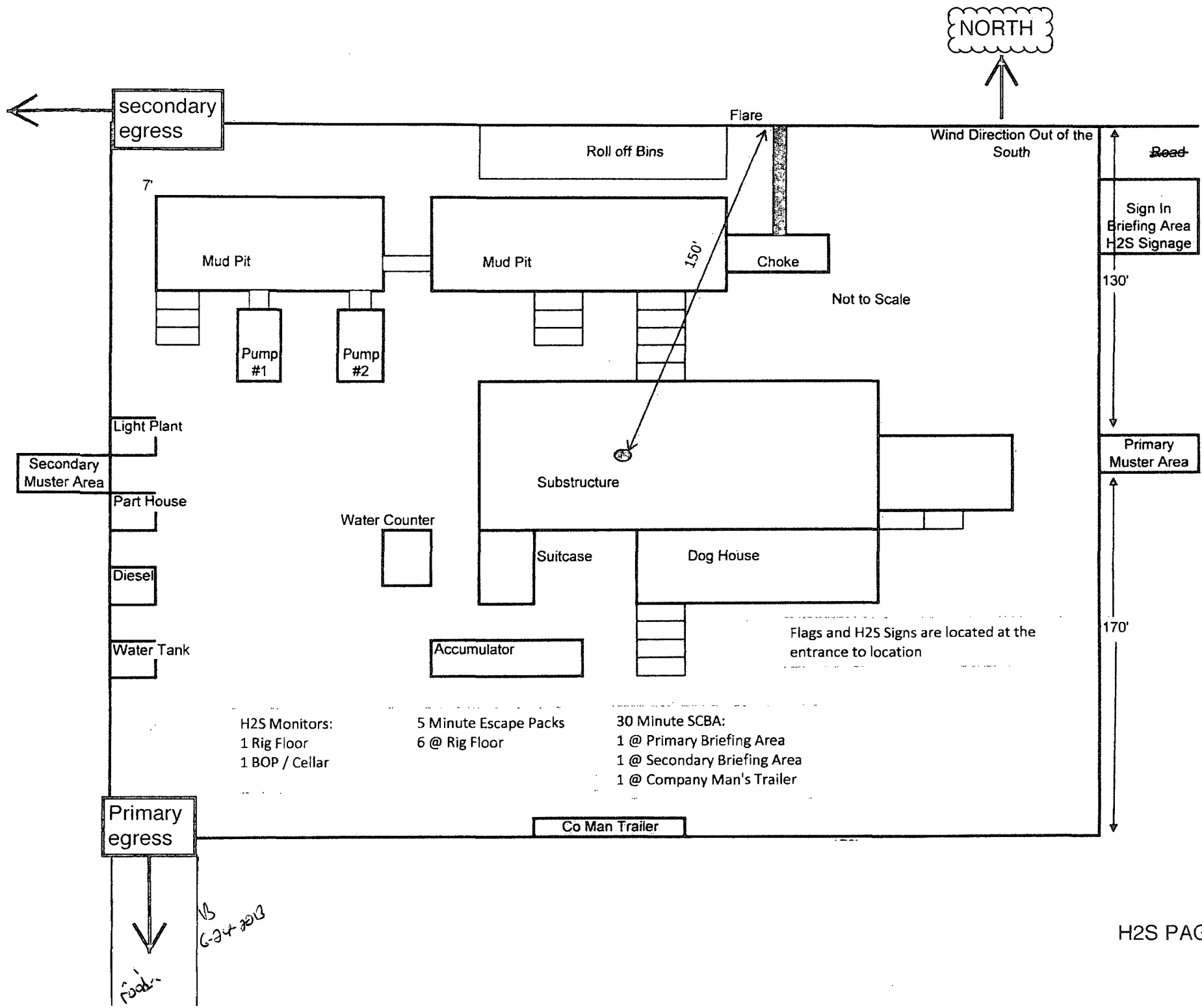
Company Contact List:

<u>New Mexico Operations:</u>	<u>Name:</u>	<u>Cellular:</u>	<u>Office:</u>
Drilling Superintendent	Howard Smith	903-262-0001	432-400-2395
Asst. Drilling Superintendent	Keith Pagett	806-317-5159	432-400-2395
Drilling Manager	Jonathan Nix	432-296-8956	432-688-3127
HSE Manager	David Carrillo	432-664-2095	432-688-3391
Project Manager	Malcolm Kintzing	432-212-2628	432-688-3125
Drilling Engineer	Michael Mataalii	432-271-2230	432-688-3392

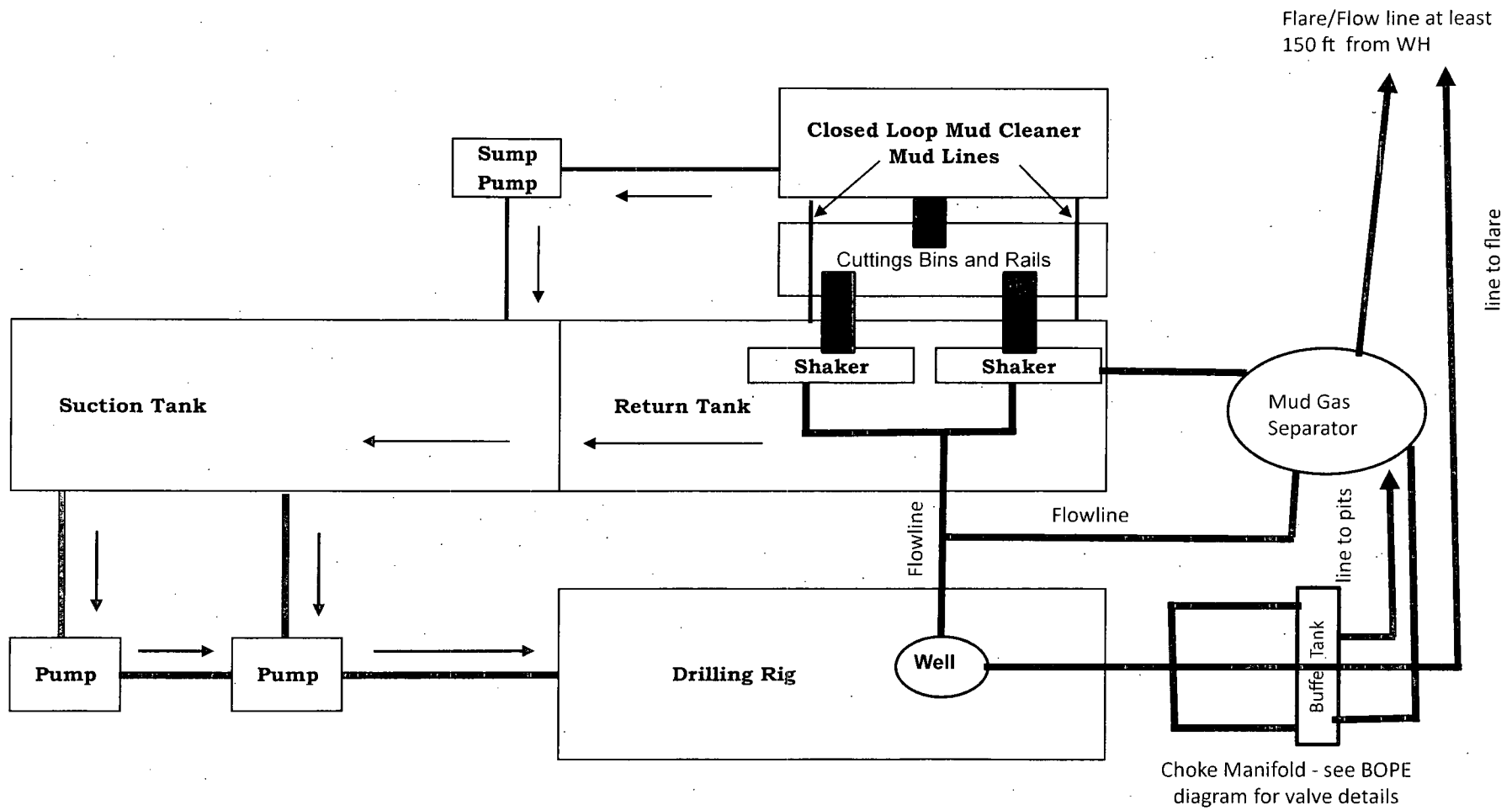
<u>Lea County (Hobbs):</u>	<u>Contact Number:</u>
State Police	575-392-5588
City Police	575-397-9265
Sheriff's Office	575-393-2515
Ambulance	911
Fire Department	575-397-9308
Local Emergency Planning Committee	575-393-2870
NMOCD	575-393-6161
US Bureau of Land Management	575-393-3612

<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



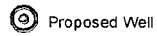
## Choke Manifold Schematic for Closed Loop System



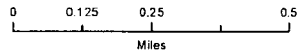


ESDU #31  
H<sub>2</sub>S Contingency Plan:  
1 Mile Radius Map

Section 19, Township 18S, Range 32E  
Lea County, New Mexico



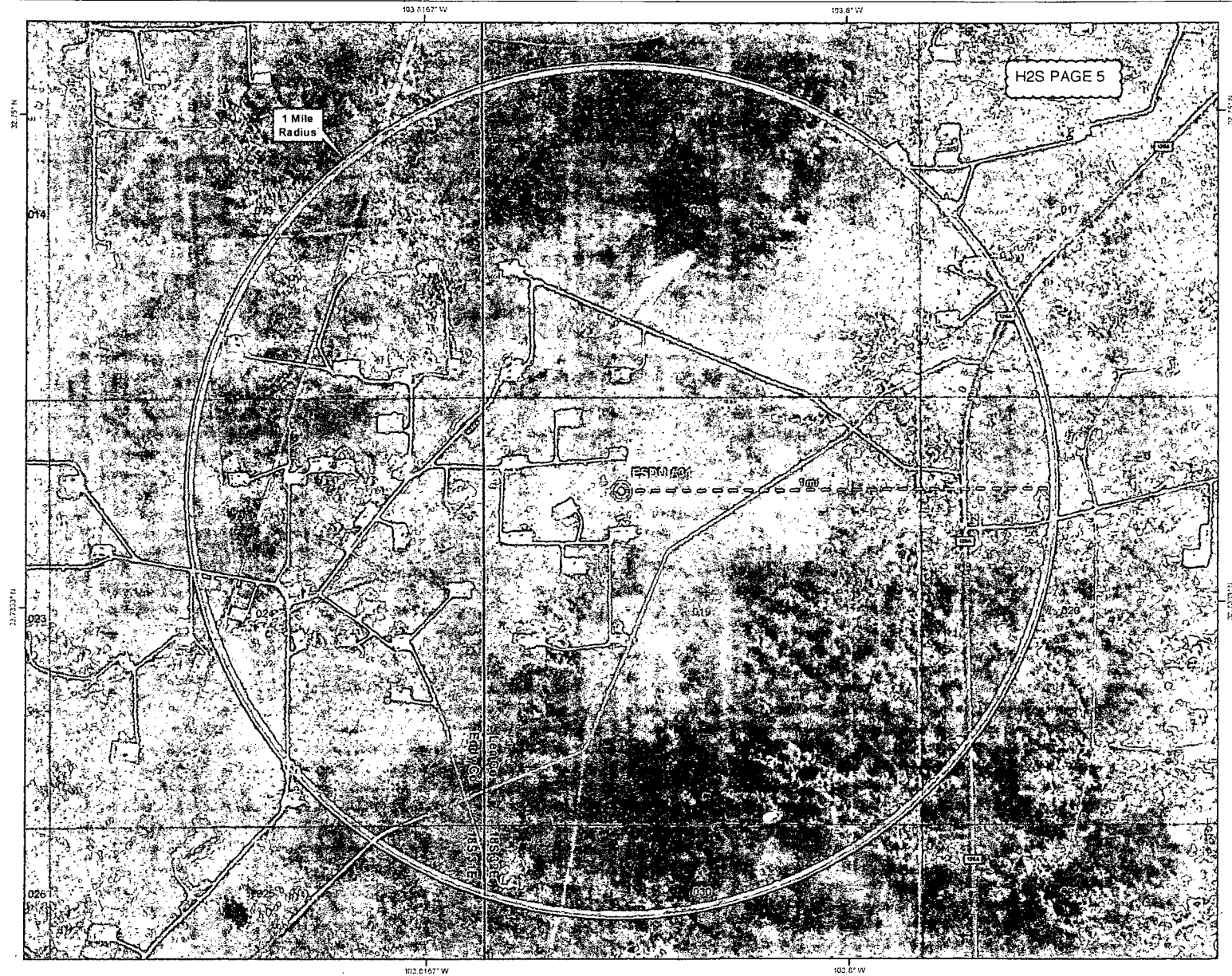
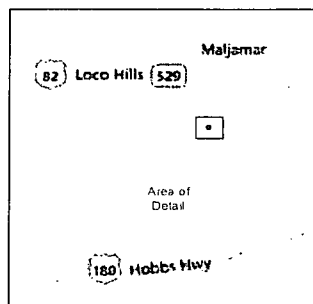
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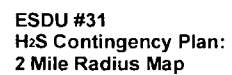


NAD 1927 New Mexico State Plane East  
FIPS 3001 Feet

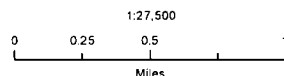
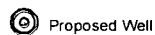


Prepared by Permits West, Inc., June 14, 2013  
for SM Energy Company





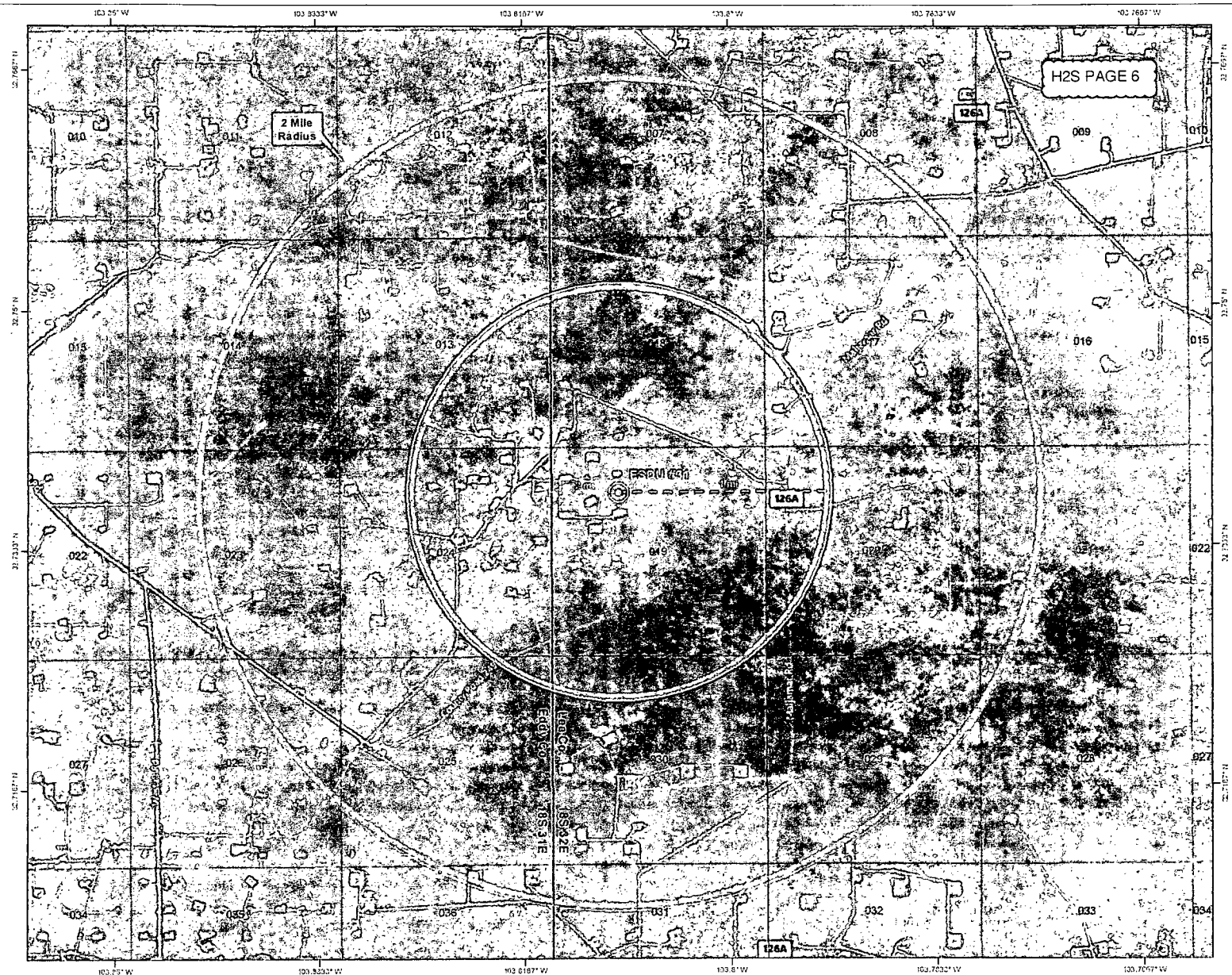
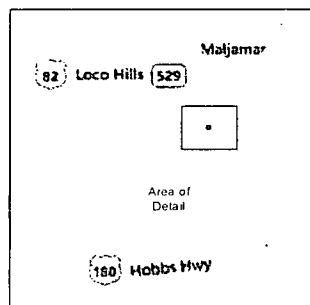
Section 19, Township 18S, Range 32E  
Lea County, New Mexico



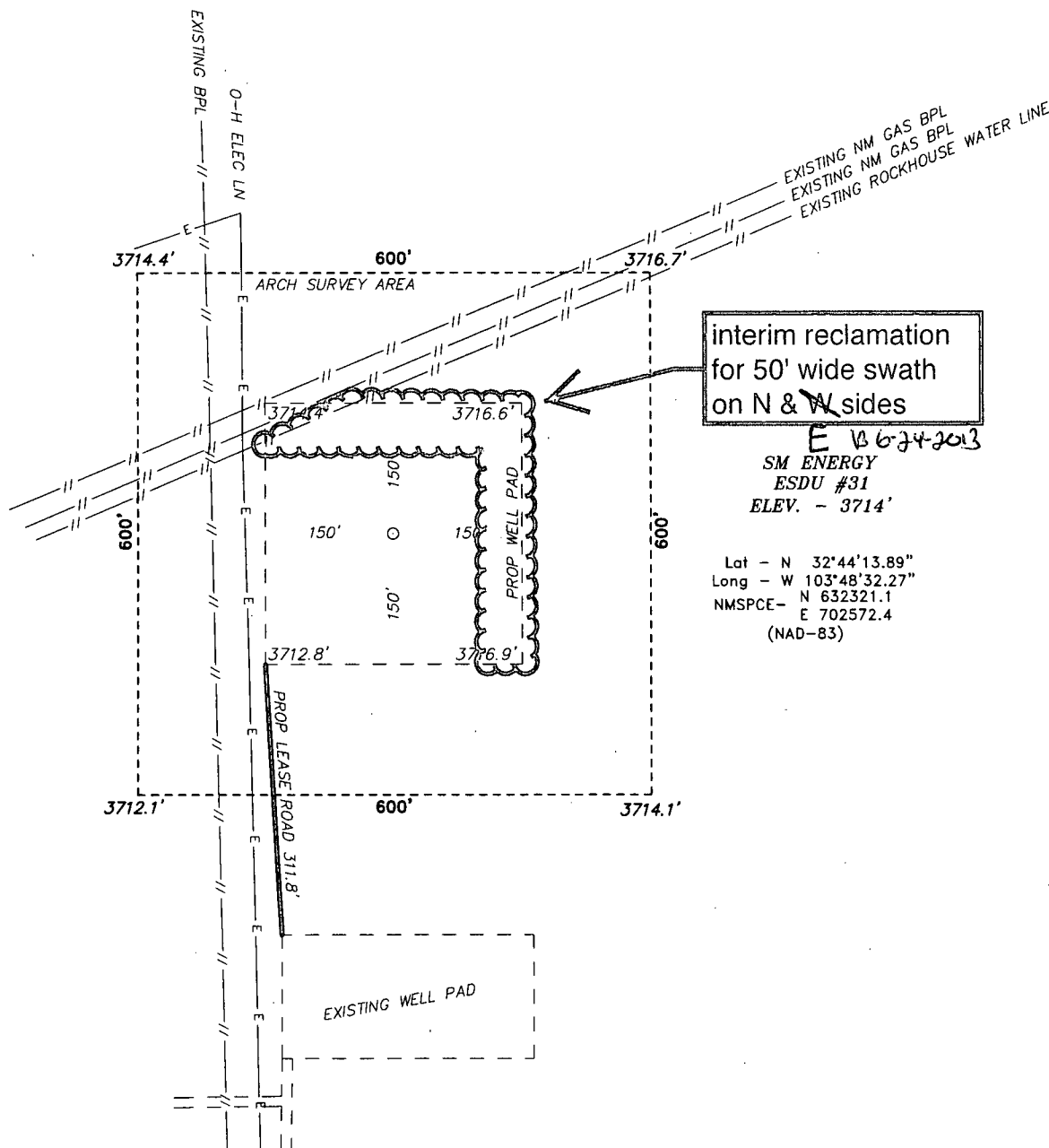
NAD 1927 New Mexico State Plane East  
FIPS 3001 Feet

PERMITS WEST, INC.

Prepared by Permits West, Inc., June 14, 2013  
for SM Energy Company



SECTION 19, TOWNSHIP 18 SOUTH, RANGE 32 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.

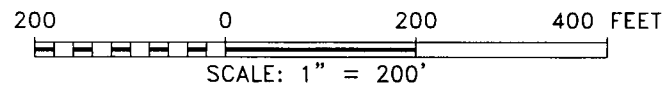


interim reclamation  
for 50' wide swath  
on N & W sides

E 10624-2013  
SM ENERGY  
ESDU #31  
ELEV. - 3714'

Lat - N 32°44'13.89"  
Long - W 103°48'32.27"  
NMSPCE- N 632321.1  
E 702572.4  
(NAD-83)

LOCO HILLS IS ±11 MILES TO THE NORTHWEST OF LOCATION.



Directions to Location:

FROM HWY 529 AND MALJAMAR ROAD, GO SOUTH ON MALJAMAR FOR 4.1 MILES TO LEASE ROAD, GO WEST ON LEASE ROAD 1.1 MILES TURNING SOUTH 0.5 MILES THENCE SOUTHEAST 0.3 MILES TURNING EAST AGAIN FOR 0.3 MILES TO WELL PAD AND PROPOSED LEASE ROAD.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 28704	Drawn By: J. SMALL
Date: 06-03-2013	Disk: JMS 28704

<b>SM ENERGY</b>	
REF: ESDU #31 / WELL PAD TOPO	
THE ESDU #31 LOCATED 1150'	
FROM THE NORTH LINE AND 1675' FROM THE WEST LINE OF	
SECTION 19, TOWNSHIP 18 SOUTH, RANGE 32 EAST,	
N.M.P.M., LEA COUNTY, NEW MEXICO.	
Survey Date: 05-17-2013	Sheet 1 of 1 Sheets