District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-101
May 27, 2004

Submit to appropriate District Office

DEC 07 2007

☒ AMENDED REPORT

OCD-ARTESIA

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

[1] Operator Name and Address	[2] OGRID Number
DAN A HUGHES COMPANY, L.P. C/O OIL REPORTS & GAS SERVICES, INC. 1008 W. BROADWAY HOBBS, NM 88240	251054
	[3] API Number 30 – 023 - 20012

[5] Property Code	[5] Property Name	[6] Well No.
36896	HUECO SOUTH UNIT 26 STATE	001

[9] Proposed Pool 1	[10] Proposed Pool 2
97660 WILDCAT ; Percha Shale	

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	26	32S	17W		660	SOUTH	660	WEST	HIDALGO

[8] Proposed 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

Additional Well Information

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
N	G	Rotary	S	4527.68'
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
NO	6600'	PERCHA SHALE	PATTERSON DRLG	12/2007

Depth to Groundwater	Distance from nearest fresh water well	Distance from nearest surface water
200'-240'	1000' OR MORE	1000' OR MORE

Pit: Liner. Synthetic ☐ ____mils thick Clay ☐ Pit Volume:____bbls Drilling Method:

Closed-Loop System ☒ Fresh Water ☐ Brine ☐ Diesel/Oil-based ☐ Gas/Air ☐

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12 ¼" OH	9 5/8"	36# J55 LT &C	500'	250 sx circ	Surf
7 7/8" OH	5 ½"	17# J55 LT&C	6600'	1250 sx circ	Surf

22 Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Amended to change proposed surface casing depth & cement and Depth to Groundwater

Depth to Groundwater change based upon water well drilled 12/05/07 by Dan A. Hughes Company

NOTIFY OCD OF SPUD & TIME TO WITNESS CEMENTING OF SURFACE CASING

R-12853

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that the drilling pit will be constructed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.**

Signature:

Printed name: GAYE HEARD

Title: AGENT

E-mail Address: oilreportsinc@oilreportsinc.com

Date: 12/05/07 Phone: 575-393-2727

OIL CONSERVATION DIVISION

Approved by: BRYAN G. ARRANT

Title: DISTRICT II GEOLOGIST

Approval Date: DEC 18 2007 Expiration Date: DEC 18 2008

Conditions of Approval Attached ☑

Please see STIPS

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-023- 20012	97660	Wildcat Dercha Shale

4 Property Code	5 Property Name	6 Well Number
	Hueco South Unit 26 State	001

7 OGRID No.	8 Operator Name	9 Elevation
251054	Dan A. Hughes Company, L.P.	4527.68

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	~~North~~/South line	Feet from the	~~East~~/West line	County
M	26	32S	17W		660'		660'		Hidalgo

11 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

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
160			

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.

16

660' ○
2,099

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Gaye Heard — 10/29/07
Signature — Date

Gaye Heard
Printed Name

18 SURVEYOR CERTIFICATION

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 supervision, and that the same is true and correct to the best of my belief.

9-26-07
Date of Survey

Signature and Seal of Professional Surveyor

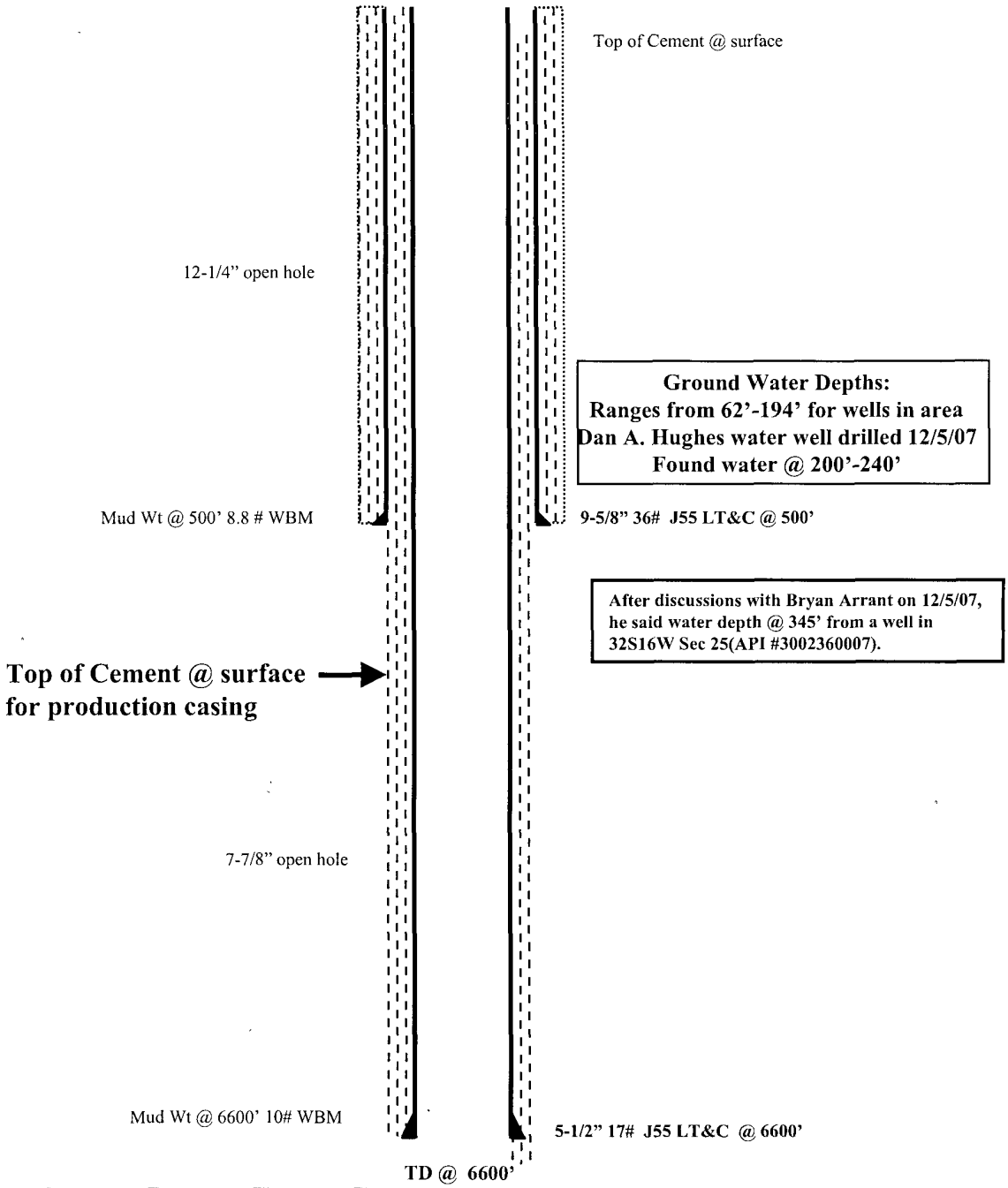
Ira L. Hardin

5252
Certificate Number

REGISTERED ENGINEER & LAND SURVEYOR NO. 5252 NEW MEXICO IRA L. HARDIN

PROPOSED(REVISED 12/5/07)
WELLBORE SCHEMATIC

Elev: 4527 68' GL



DAN A. HUGHES COMPANY, L.P.

HUECO SOUTH UNIT 26 STATE #1 WILDCAT FIELD	HIDALGO COUNTY, NEW MEXICO BY: JEFF ILSENG DATE: 12/5/07

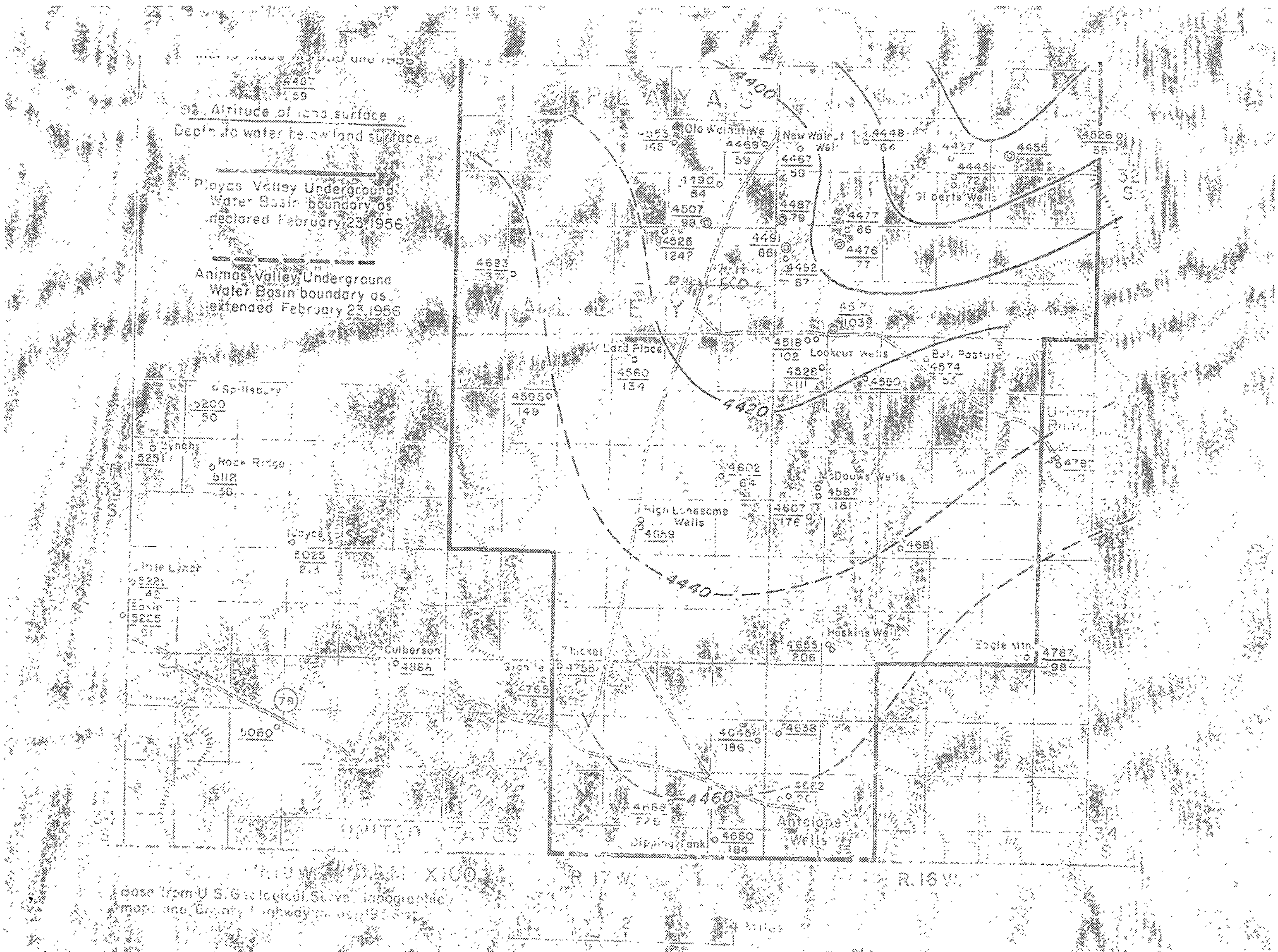
DIRECTIONS: Located Township 32S Range 17W, Section 26, SW/4 SW/4, 660' FSL x 660' FWL

GROUND WATER DEPTHS *

WELL LOCATION	OWNER NAME	SURFACE ELEVATION	DEPTH OF WELL
32S 17W Sec 1	STEEN	4443'	118'
32S 17W Sec 13	OLD WALNUT	4469'	62'
32S 17W Sec 27	FRYE	4525'	194'
33S 17W Sec 3	LARD PLACE	4560'	140'
33S 17W Sec 8	TIMBERLAKE	4595'	172'
32S 17W Sec 26	Dan A. Hughes	4527.8'	240'(Hit sand @ 200') Finished water well 12/5/07

Dan A. Hughes Co. L.P.---Hueco South Unit 26 State #1----32S 17W Sec 26-----Elevation 4527'

*Technical Report 15 ----- New Mexico State Engineer--- "Reconnaissance of Ground Water in Playas Valley" Hidalgo County, New Mexico. Report by Gene C. Doty of the USGS in 1960


Altitude of land surface
Depth to water below land surface
Playas Valley Underground Water Basin boundary as declared February 23, 1956
Animas Valley Underground Water Basin boundary as extended February 23, 1956
4400
4420
4440
4460
Old Walnut Well
New Walnut Well
Gilberts Wells
Lookout Wells
Lard Place
High Lonesome Wells
McDowell Wells
Hoskins Well
Eagle Mtn.
Antelope Wells
Culberson
Thicket
Rock Ridge
Spillsbury
Lynch
R. 17 W.
R. 16 W.

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATIONDIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 14050
ORDER NO. R-12853

APPLICATION OF DAN A. HUGHES, COMPANY, L.P. FOR APPROVAL OF APPLICATION FOR PERMIT TO DRILL, HIDALGO COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing on December 13, 2007 at Santa Fe, New Mexico, before Examiner Richard Ezeanyim.

NOW, on this 17th day of December 2007, the Division Director, having considered the record and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.

(2) The applicant, Dan A. Hughes Company, L.P., ("Applicant") seeks approval for Application for Permit to Drill (APD) its initial test well, namely Hueco South Unit 26 State Well No. 1 in Section 26, Township 32 South, Range 17 West, NMPM, Hidalgo County, New Mexico.

(3) The Hueco South Unit 26 State Well No. 1 is a proposed wildcat well to be drilled in Hidalgo County and its APD was referred to the hearing process to afford the general public the opportunity to provide any comments.

(4) The Applicant presented testimony that demonstrates that:

(a) the Hueco South Unit 26 State Well No. 1 will be drilled to an approximate depth of 6600 feet at a standard well location 660 feet from the South and West lines of Section 26, Township 32 South, Range 17 West, NMPM, Hidalgo County, New Mexico;

(b) the proposed APD has an adequate surface casing program to ensure protection of ground water;

(c) all pertinent information including the Contingency Plan for Drilling Operations has been provided to the Division District II office in Artesia.

(5) No interested party appeared or otherwise objected to the proposed APD.

(6) The approval of the proposed APD will serve to prevent waste and protect correlative rights within the lands assigned to the unit area.

IT IS THEREFORE ORDERED THAT:

(1) The application of Dan A. Hughes Company, L.P. seeking approval for Application for Permit to Drill its Hueco South Unit 26 State Well No. 1 in Section 26, Township 32 South, Range 17 West, NMPM, Hidalgo County, New Mexico, is hereby GRANTED.

(2) The Division District II Office in Artesia is hereby authorized to approve the Application for Permit to Drill (APD) with all necessary and sufficient conditions to Dan A Hughes Company, L.P.

DONE at Santa Fe, New Mexico on the day and year hereinabove designated.

SEAL

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MARK E. FESMIRE, P. E.
Director

Arrant, Bryan, EMNRD

From: William Carr [WCarr@hollandhart.com]
Sent: Tuesday, December 18, 2007 11:35 AM
To: rholder@dahughes.net
Cc: Arrant, Bryan, EMNRD
Subject: FW: Dan A Huges Order

Attachments: Document.pdf

Document.pdf (884 KB)

Robert-
Attached is a copy of the signed and approved Oil Conservation Division Order granting our application to drill the Hueco South Unit 26 State Well No. 1. By copy of this e-mail I am providing a copy of the order to Mr. Arrant in the Artesia District Office. If there are any other delays, call me directly at (505) 988-4421.
Bill

-----Original Message-----
From: HP 4345 MFP [mailto:DSAdmin@hollandhart.com]
Sent: Tuesday, December 18, 2007 5:18 AM
To: William Carr
Cc: Olivia Ita; Kristina Martinez
Subject: Dan A Huges Order

Please open the attached document. This document was digitally sent to you using an HP Digital Sending device.

This inbound email has been scanned by the MessageLabs Email Security System.

HOLLAND&HART
THE LAW OUT WEST

CONFIDENTIALITY NOTICE: This message is confidential and may be privileged. If you believe that this email has been sent to you in error, please reply to the sender that you received the message in error; then please delete this e-mail. Thank you.

STIPS

From: Robert Holder [mailto:rholder@dahughes.net]
Sent: Friday, December 14, 2007 11:54 AM
To: Kristina Martinez
Subject: FW: Dan A. Hughes' Hueco South Unit 26 State # 1

----- Original Message -----
From: Arrant, Bryan, EMNRD
To: oilreportsinc@oilreportsinc.com
Cc: Fesmire, Mark, EMNRD ; Gum, Tim, EMNRD ; Ezeanyim, Richard, EMNRD ; Jones, William V., EMNRD ; Sanchez, Daniel J., EMNRD ; Bratcher, Mike, EMNRD
Sent: Friday, December 14, 2007 11:11 AM
Subject: Dan A. Hughes' Hueco South Unit 26 State # 1

To Whom It May Concern:

Please note that following requirements (in part) pending the approval by hearing in Santa Fe for the above noted well:

Operator to sample from the return flow line chloride readings every 100'.
Results of these readings shall be submitted weekly by fax or e mail to the Artesia District II office.
A cement bond log shall be run on all strings of casing ran.
Operator to submit daily drilling reports (by fax or e-mail) to the Artesia District II office.
Logging company to run what type of electric log that will determine any potential fresh water zones that maybe encountered.

Yours truly,
Bryan G. Arrant
District II Geologist
New Mexico Oil Conservation Division
1301 West Grand Ave.
Artesia, NM 88210
505-748-1283 Ext. 103

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.503 / Virus Database: 269.17.2/1184 - Release Date: 12/14/2007 11:29 AM

This inbound email has been scanned by the MessageLabs Email Security System.

12/17/2007

HOLLAND&HART LLP

William F. Carr
wcarr@hollandhart.com

RECEIVED
2007 NOV 5 PM 3:54

November 2, 2007

VIA HAND DELIVERY

William V. Jones
Hearing Examiner
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505

Re: Case No. 14022: Application of Dan A. Hughes Company, L.P. for approval of a Unit Agreement, Hidalgo County, New Mexico.

Dear Mr. Jones:

Pursuant to your request, we enclose a Stratigraphic Column comparing formations in West Texas and Southwest New Mexico. If you need any other information from Dan A. Hughes Company, LP to assist you with your consideration of this application, please advise.

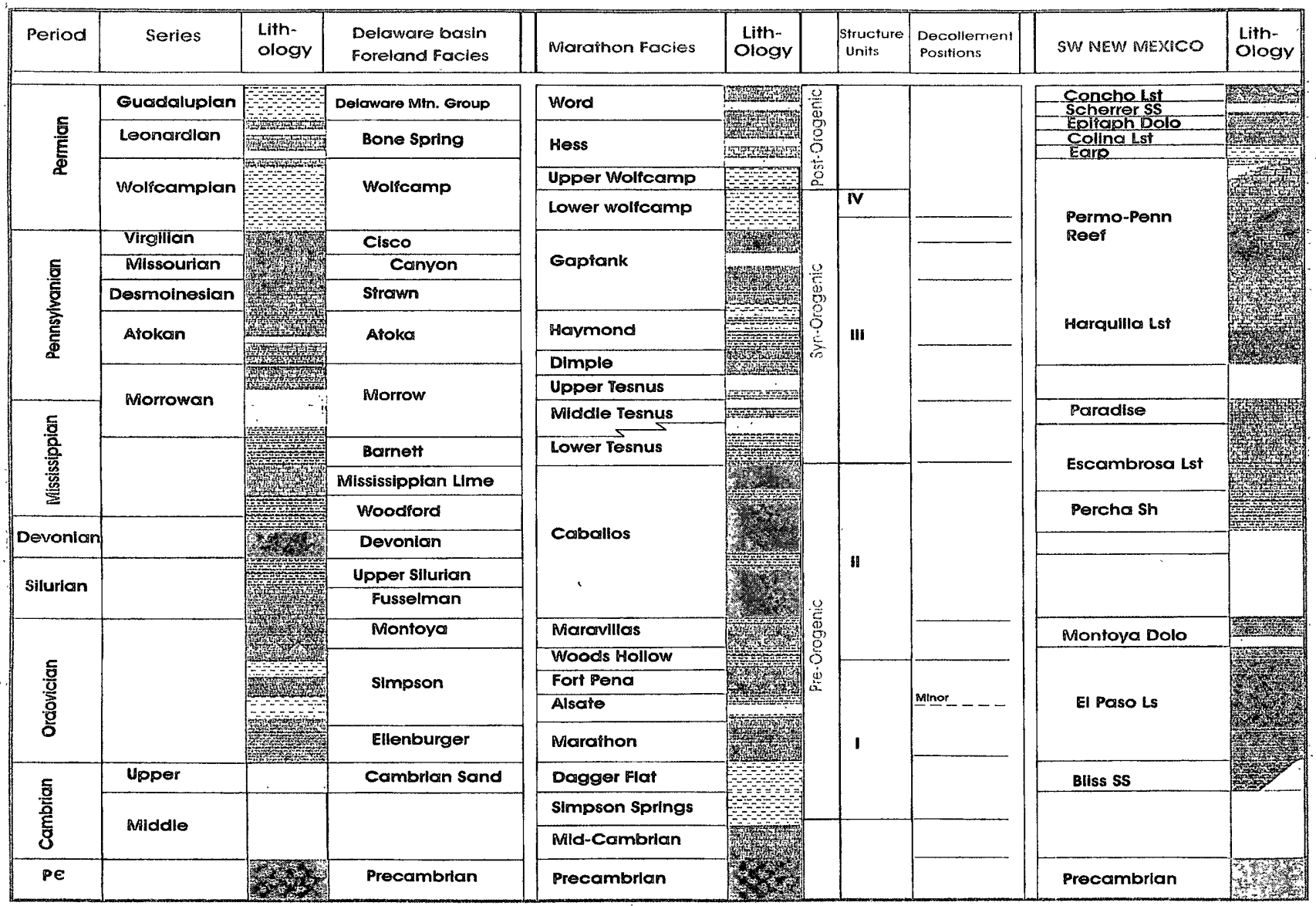
Very truly yours,

William F. Carr

TO: BRYAN ARRANT
COPY

Enclosure
cc: Mr. Larry Hunnicutt
Mr. Gary Kornegay

Stratigraphic Column
West Texas-South West New Mexico



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State of New Mexico
Energy Minerals and Natural Resources

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

Form C-144
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

OCT 30 2007
OCD-ARTESIA

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐
Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: DAN A. HUGHES COMPANY, L.P. Telephone: 575-393-2727 e-mail address: *oilreportsinc@oilreportsinc.com*
Address: *1008 W. BROADWAY, HOBBS, NM 88240*
Facility or well name: HUECO SOUTH UNIT 26 ST. API #: 30-023 U/L or Qtr/Qtr M Sec 26 T 32S R 17W
County: HIDALGO Latitude Longitude NAD: 1927 ☐ 1983 ☐
Surface Owner: Federal ☐ State ☒ Private ☐ Indian ☐

Pit	**Below-grade tank**	
Type: Drilling ☒ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☐ Unlined ☐ Liner type: Synthetic ☐ Thickness ____mil Clay ☐ Pit Volume ____bbl CLOSED LOOP SYSTEM	Volume: ____bbl Type of fluid: ____ Construction material: ____ Double-walled, with leak detection? Yes ☐ If not, explain why not.	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more X	(20 points) (10 points) (0 points) 0
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No X	(20 points) (0 points) 0
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more X	(20 points) (10 points) (0 points) 0
	Ranking Score (Total Points)	0

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if your are burying in place) onsite ☐ offsite ☐ If offsite, name of facility____. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface____ft. and attach sample results (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

I hereby certify that the information above is true and complete to the best of my knowledge and belief **I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.**

Date: 10/29/07
Printed Name/Title GAYE HEARD-AGENT Signature Gaye Heard

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

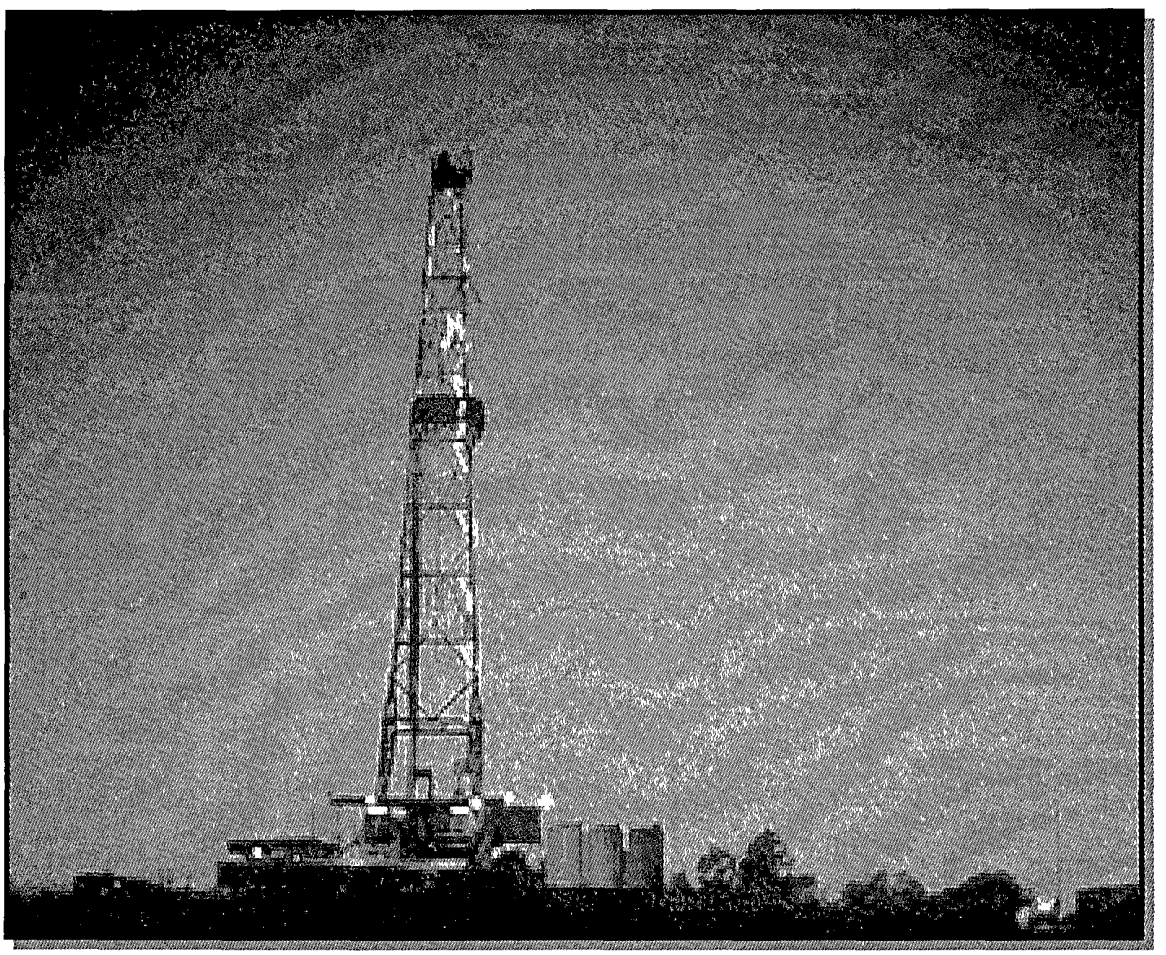
Approval:
Printed Name/Title ____ Signature Signed By Mike Bratcher Date. DEC 14 2007

As a condition of approval, the disposition of drill cuttings from this well bore must be approved by the division.

Earthen pits will not be approved at this site.

Drilling Fluids Proposal

DAN A. HUGHES
HUECO SOUTH UNIT 26 St. #1(Revised#1)
SECTION 26, T-32-S, R-17-W
HIDALGO COUNTY, NEW MEXICO



Prepared For: Mr. Jeff Ilseng

Prepared by: Mike Hammer **December 7, 2007**

M-I LLC
508 West Wall, Suite 750
Midland, Texas 79701
Tel: (432) 683-2065 • Fax: (432) 683-1434

MI SWACO

MI SWACO

M-I L.L.C.

508 West Wall, Suite 750, Midland, Texas 79701 • Tel: (432) 683-2065 • Fax: (432) 683-1434

December 7, 2007

Mr. Jeff Ilseng
DAN A. HUGHES
PO Drawer 669
Beeville, Texas 78104

Dear Mr. Ilseng:

M-I L.L.C would like to thank you for the opportunity to present our recommendations for your **Hueco South Unit 26 St.#1** to be drilled in Section 26, T-32-S, R-17-W, Hidalgo County New Mexico.

We recommend spudding with a **M I Gel/Lime** type drilling fluid, having a 32 - 34 sec/qt viscosity. Drill out below 9-5/8" surface casing with **MI Gel/Poly Pac** for a 32 - 40 sec qt funnel viscosity and a 20 - 25 cc fluid loss. At 6,500', lower fluidloss to 12-15 cc's. Adjustments for rheology can be made with **MI Gel**. This fluid should be sufficient to drill to total depth.

Included in this program are recommended properties and estimated costs. Should you have any questions or require additional information, please let me know.

Very truly yours,

M-I L.L.C.

Mike Hammer
Technical Service Engineer

December 7, 2007

Mr. Jeff Ilseng
Dan A Hughes Company
PO Drawer 669
Beeville, TX 78104

Re: Drilling Fluid Bid for West Texas / New Mexico Wells to January 31, 2008

WATER-BASE MUD PRODUCTS with SERVICE

PRODUCT	SIZE	PRICE
M-I Bulk Bar	ton	$ 173.88
Federal Barite	100 lb	$ 11.25
Federal Bentonite	100 lb	$ 8.70
M-I Gel	50 lb	$ 5.01
M-I Salt Gel	50 lb	$ 9.17
MF-55	5 gal	$ 125.98
Poly-Plus	5 gal	$ 129.20
Polypac	50 lb	$ 189.03
Duo-Vis	25 lb	$ 229.65
Lime	50 lb	$ 6.25
Caustic Soda	50 lb	$ 32.82
Soda Ash	50 lb	$ 11.74
My Lo Jel	50 lb	$ 31.00
Yellow Starch	50 lb	$ 17.60
Cottonseed Hulls	50 lb	$ 10.15
Fiber Plug	40 lb	$ 10.17
Fiber seal	40 lb	$ 19.69
Paper	40 lb	$ 10.75

40% Discount on all other products listed on December 1, 2006 Price List (attached)

Pallets and Shrink Wrap - $15/each
24 Hour Engineering Service - $ 800/Day
Trucking Service at Published Rates Provided by LDI

Thank you for your consideration.

Sincerely,
M-I LLC.

Mike Prewit
Midland Area Manager

M-I LLC
508 West Wall, Suite 750
Midland, Texas 79701
Tel: (432) 683-2065 • Fax: (432) 683-1434

MI SWACO

Executive Summary

Dan A. Hughes

Recommended muds have proven successful in this area. M-I mud engineers are very experienced running these systems.

- **M I Gel/Lime** spud mud to drill surface.
- Drill out below surface casing with **MI Gel/Poly Pac** for a 32-38 sec/qt funnel viscosity and a 20 - 25 cc fluid loss.
- At 6,500' lower fluidloss to 12-15 cc's for logging and casing operations.

- **Total mud related costs are estimated at $45,000 to $50,000. This estimate is based on the M-I L.L.C. pricing proposal contained in this program.**

- **The total estimated drilling time is eighteen to twenty (28-30) days.**

- **Key concerns include the following:**
- Seepage losses in all intervals to be drilled.
- Lost returns in all intervals to be drilled.

This well will be serviced from M-I's facility at Hobbs, New Mexico.

M-I L.L.C.
508 West Wall, Suite 750
Midland, Texas 79701
Tel: (432) 683-2065 • Fax: (432) 683-1434

Key Issues

Dan A. Hughes

Seepage Losses

- Seepage losses can be expected in all intervals to be drilled.
- Control minor and seepage losses with **Drilling Paper**.

Lost Returns

- Lost returns could occur in all intervals to be drilled.
- Bulky fibrous LCM pills or sweeps with **Fiber seal**, **Fiber Plug** or **Mix II**.
- **Mix II** and **Magma Fiber** are the acid soluble products and consideration should be given to using only these products in the production zones.
- Maintain fluid density as low as possible to minimize the problem of lost returns.

Hole Cleaning

- Use **Super Sweep** and **Drilling Paper** sweeps to clean the hole.
- Use viscous mud sweeps to clean the surface hole should dry drilling become necessary.

M-I LLC
508 West Wall, Suite 750
Midland, Texas 79701
Tel: (432) 683-2065 • Fax: (432) 683-1434

MI SWACO

Interval Summary 1

Dan A. Hughes

12-1/4" Open Hole - (0' - 500') - 9-5/8" Casing	
Drilling Fluid System	Native/Lime Spud Mud
Key Products	Lime, Drilling Paper, M-I Gel
Solids Control	Shakers, Desander, Desilter
Potential Problems	Seepage Losses, Lost Returns, Hole Cleaning

Interval Drilling Fluid Properties

Depth Interval (ft)	Mud Weight (lb/gal)	Plastic Viscosity (cp)	Yield Point ($lb/100ft^2$)	API Fluid Loss (ml/30min)	Drill Solids (%)
0 - 500	8.4 - 8.9	2 - 3	2 - 3	N/C	<3

- Spud with a **Native/Lime** fluid with a funnel viscosity of 32 - 34 sec/qt.
- Control minor and seepage losses with **Drilling Paper** and fibrous material **LCM**.
- In the event losses are not easily controlled, it may become necessary to dry drill to casing point.
- Use high viscosity **M-I Gel** sweeps to ensure a clean hole if dry drilling becomes necessary.

M-I L.L.C
508 West Wall, Suite 750
Midland, Texas 79701
Tel: (432) 683-2065 • Fax: (432) 683-1434

MI SWACO

Interval Summary 2

Dan A. Hughes

7-7/8" Open Hole - (500' - 6,600') - 5-1/2" Casing	
Drilling Fluid System	MI Gel/Poly Pac/Thinsmart
Key Products	MI Gel, Drilling Paper, Poly Pac, Caustic Soda, Fiber Seal, Defoam A, Soda Ash
Solids Control	Shale Shakers
Potential Problems	Seepage Losses, Lost Returns, Hole Cleaning

Interval Drilling Fluid Properties

Depth Interval (ft)	Mud Weight (lb/gal)	Plastic Viscosity (cp)	Yield Point ($lb/100ft^2$)	API Fluid Loss (ml/30min)	Drill Solids (%)
500 - 6,500	8.4 - 8.6	4 - 6	5 - 8	20 - 25	<2
6,500 - 6,600	8.6 - 8.8	4 - 6	5 - 8	12 - 15	<5

- Drill out below surface casing with **MI Gel/Poly Pac** for a 34 - 38 sec/qt funnel viscosity and a 20 - 25 cc fluid loss.
- Use **Drilling Paper** and/or **Super Sweep** for sweeps to ensure good hole cleaning.
- Maintain a pH of 9.5-10.0 with **Caustic.**
- Adjust viscosity with **MI Gel** as needed.
- Lower fluidloss to 12 - 15 cc's at 6,500' for logging and casing operations.

NOTE-Lost circulation and bad deviation are possible throughout this interval.

M-I LLC
508 West Wall, Suite 750
Midland, Texas 79701
Tel: (432) 683-2065 • Fax: (432) 683-1434

MI SWACO

Project Summary

Dan A. Hughes

Casing Size (in)	Hole Size (in)	Casing Program	Depth (ft)	Estimated Formation Tops	Mud System	Mud Weight (lb/gal)	Interval Days	Interval Mud Cost
					Spud Mud	8.4 - 8.9		
9-5/8	12-1/4		**500**	**Casing Point**			2	$2,000
						8.4-8.6		
					MI Gel/Poly Pac			
						8.6-8.8		
			6,500	**Lower fluid Loss**				
5-1/2	7-7/8		**6,600**	**Casing Point**			26	$43,000

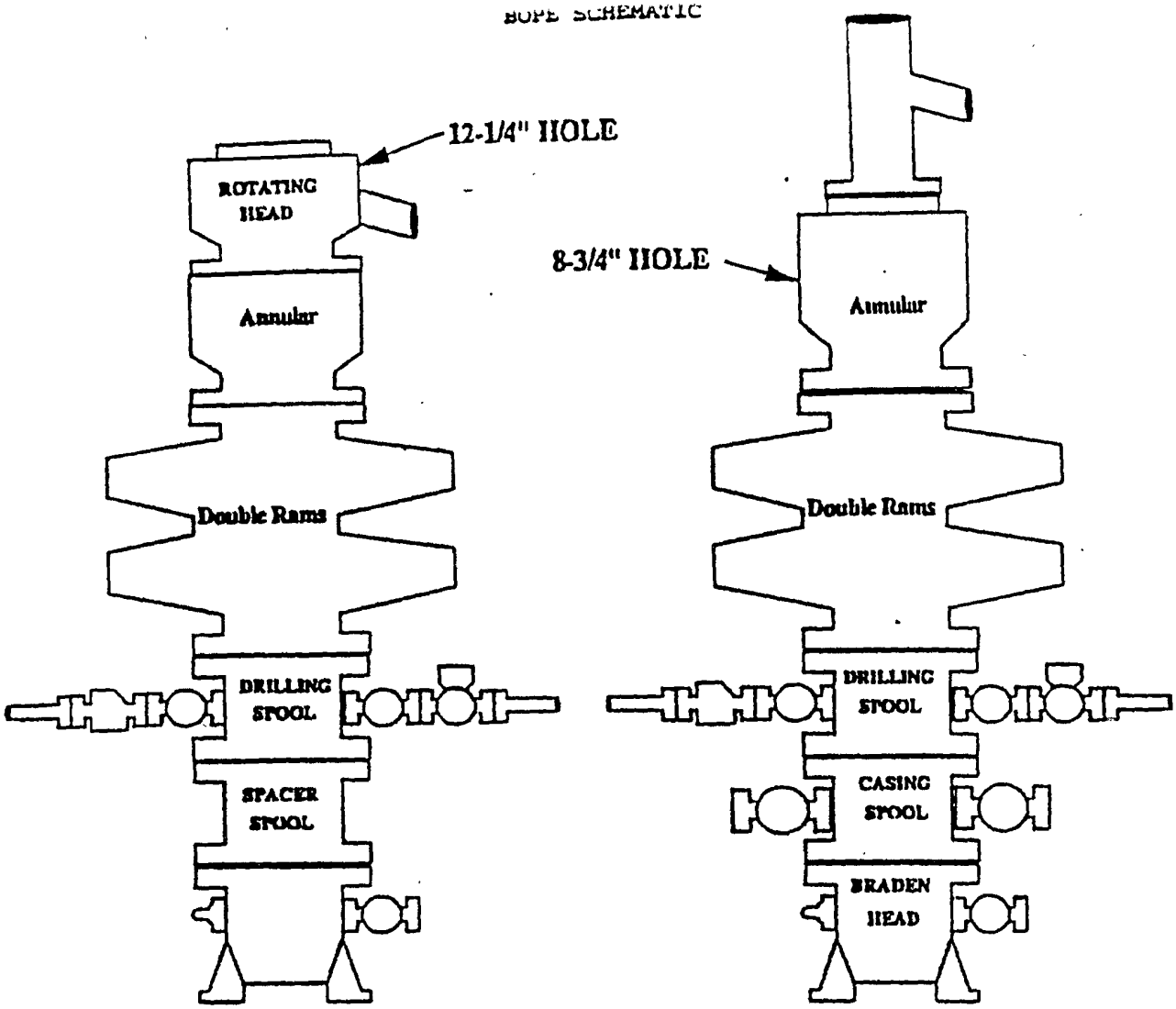
TOTAL DAYS: 28 TOTAL COST: $45,000

- **This estimate does not include extensive lost circulation or major problem incidents.**
- **The cost estimate is based M-I *L.L.C.* pricing proposal contained in this program.**

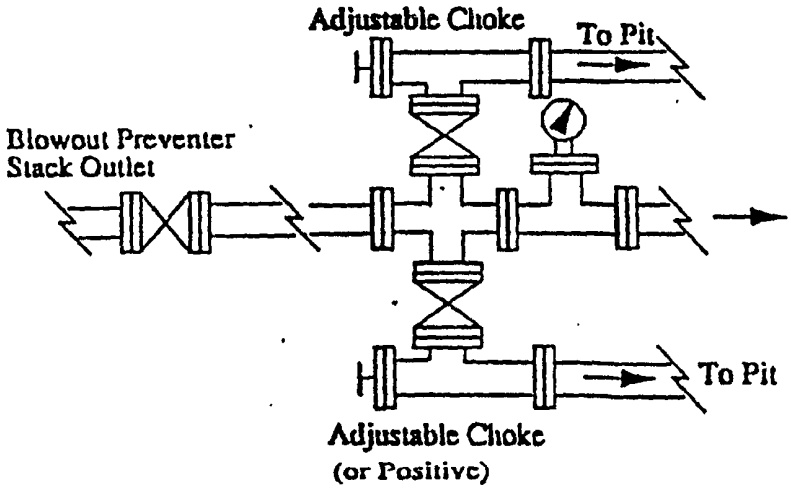
M-I LLC
508 West Wall, Suite 750
Midland, Texas 79701
Tel: (432) 683-2065 • Fax: (432) 683-1434

MI SWACO

BOPE SCHEMATIC



Choke Manifold Requirement (3000 psi WP)



Minimum 4" Nominal choke and kill lines

Operator Name: Dan A. Hughes
Well Name: Hueco South Unit 26 State #1
Job Description: 9-5/8" Surface Casing to 500'
Date: December 6, 2007

Proposal No: 180270033B

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
12.250 HOLE	500	500

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
9.625	8.921	36	500	500

Float Collar set @	480 ft
Mud Density	8.80 ppg
Est. Static Temp.	85 ° F
Est. Circ. Temp.	80 ° F

VOLUME CALCULATIONS

500 ft	x	0.3132 cf/ft	with	100 % excess	=	313.2 cf
20 ft	x	0.4341 cf/ft	with	0 % excess	=	8.7 cf (inside pipe)
				TOTAL SLURRY VOLUME	=	321.9 cf
					=	57 bbls

STIMULATION ◦ CEMENTING ◦ COMPLETION SERVICES ◦ SERVICE TOOLS ◦ COILED TUBING
PRODUCTION CHEMICALS ◦ CASING AND TUBING RUNNING SERVICES ◦ PIPELINE SERVICES ◦ WELL CONTROL

FLUID SPECIFICATIONS

FLUID	VOLUME CU-FT	VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Cement Slurry	322	/ 1.3	= 240 sacks Premium Plus C Cement + 0.125 lbs/sack Cello Flake + 2% bwoc Calcium Chloride + 56.3% Fresh Water
Displacement			37.1 bbls Displacement

CEMENT PROPERTIES

	SLURRY NO. 1
Slurry Weight (ppg)	14.80
Slurry Yield (cf/sack)	1.35
Amount of Mix Water (gps)	6.35

STIMULATION . CEMENTING . COMPLETION SERVICES . SERVICE TOOLS . COILED TUBING
PRODUCTION CHEMICALS . CASING AND TUBING RUNNING SERVICES . PIPELINE SERVICES . WELL CONTROL

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
8.921 CASING	500	500
7.875 HOLE	6,600	6,600

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
5.500	4.892	17	6,600	6,600

Float Collar set @	6,560 ft
Mud Density	10.00 ppg
Est. Static Temp.	146 ° F
Est. Circ. Temp.	117 ° F

VOLUME CALCULATIONS

500 ft	x	0.2691 cf/ft	with	0 % excess	=	134.5 cf
5,100 ft	x	0.1733 cf/ft	with	30 % excess	=	1148.7 cf
1,000 ft	x	0.1733 cf/ft	with	47 % excess	=	254.9 cf
40 ft	x	0.1305 cf/ft	with	0 % excess	=	5.2 cf (inside pipe)
				TOTAL SLURRY VOLUME	=	1543.3 cf
					=	275 bbls

STIMULATION • CEMENTING • COMPLETION SERVICES • SERVICE TOOLS • COILED TUBING
PRODUCTION CHEMICALS • CASING AND TUBING RUNNING SERVICES • PIPELINE SERVICES • WELL CONTROL

FLUID SPECIFICATIONS

FLUID	VOLUME CU-FT	VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Lead Slurry	1283	/ 2.3	= 540 sacks (50:50) Poz (Fly Ash):Premium Plus C Cement + 10% bwoc Bentonite + 3% bwow Sodium Chloride + 135.9% Fresh Water
Tail Slurry	260	/ 1.	= 200 sacks (50:50) Poz (Fly Ash):Premium Plus C Cement + 5% bwow Sodium Chloride + 5 lbs/sack LCM-1 + 2% bwoc Bentonite + 0.5% bwoc FL-52A + 53.4% Fresh Water
Displacement			152.5 bbls Displacement Fluid

CEMENT PROPERTIES

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	11.80	14.20
Slurry Yield (cf/sack)	2.38	1.30
Amount of Mix Water (gps)	13.69	5.37

Proposal No: 180270033B

Dan A. Hughes
Hueco South Unit 26 State #1

Hidalgo County, New Mexico
December 6, 2007

Well Proposal

Prepared for:
Mr. Jeff Ilseng
Email: jeffl@dahughes.net

Prepared by:
Tanya Gonzalez
Specifications Writer

THE BLUE WELLBORE℠
Makes better wells

Service Point:
Artesia
Bus Phone: (505) 746-3140
Fax: (505) 746-2293

Service Representatives:
Harry Garvey
Senior Account Manager
Corpus Christi, Texas
Bus Phone: 210.841.5671
Mobile: 210.260.2790

Reference Wells

Dan A. Hughes

MARSHALL R. YOUNG
Bisbee Hills #1
Sec 11, T-26-S, R-11-W
Luna County, New Mexico

M-I LLC
508 West Wall, Suite 750
Midland, Texas 79701
Tel: (432) 683-2065 • Fax: (432) 683-1434

MI SWACO

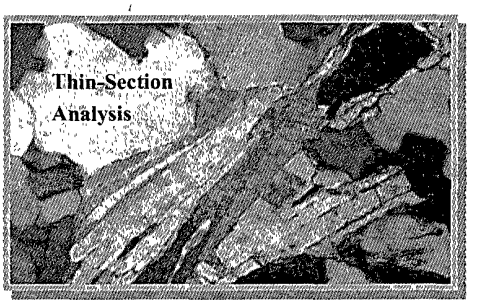
Research & Engineering

Dan A. Hughes

Technology and service are the cornerstones of M-I Drilling Fluids' success at the wellsite. To ensure both are maintained at optimal levels, M-I provides support from the corporate Technical Center in Houston and from international centers in Norway, Colombia, and Scotland.

Key responsibilities include fluids research and development, technical services, drilling research, environmental affairs, and training. Fully equipped laboratories are staffed by professionals representing a wide range of disciplines in the sciences and the drilling fluids industry.

Current technology focus is on HTHP drilling, extended-reach and horizontal wells, deepwater operations, and wells drilled through troublesome formations.



Advancements in drilling fluids technology have provided step improvements for drilling difficult wells with environmentally friendly drilling fluids. NOVAPLUS, NOVADRIL, and NOVALITE synthetic-based fluids have helped achieve record drilling rates and significant savings in drilling costs. M-I's POLY-STAR 450 high-temperature water-based mud system has set the new industry standard in its class.

Concern for costs to produce a barrel of oil led to the development of FLO-PRO drill-in fluids, These rheologically engineered fluids are designed for optimal hole cleaning and minimum formation damage.

M-I's technical support staffs provide effective solutions for difficult well problems using team-oriented concepts involving customer and local operations personnel. Computer software, special and routine laboratory tests, fluid formulations, and engineering trouble shooting are just a few of these important contributions.

M-I LLC
508 West Wall, Suite 750
Midland, Texas 79701
Tel: (432) 683-2065 • Fax: (432) 683-1434

MI SWACO

Personnel

Dan A. Hughes

OPERATIONS MANAGER:

Mike Prewit
Midland, Texas
Office: 432-683-2065
Cell: 432-283-3287

TECHNICAL SERVICE ENGINEER:

Mike Hammer
Midland, Texas
Office: 432-683-2065
Home: 432-687-1912
Cell: 432-894-6820

ENGINEERS:

Fred Flores
Hobbs, New Mexico
Phone: 505-392-8456
Cell: 505-390-3437

Byron Flores
Hobbs, New Mexico
Phone: 505-392-8456
Cell: 505-390-3438

Christian Martin
Midland, Texas
Phone:
Cell: 432-631-9009

Dallas Casey
Monohans, Texas
Phone: 432-943-2403
Cell: 432-238-9562

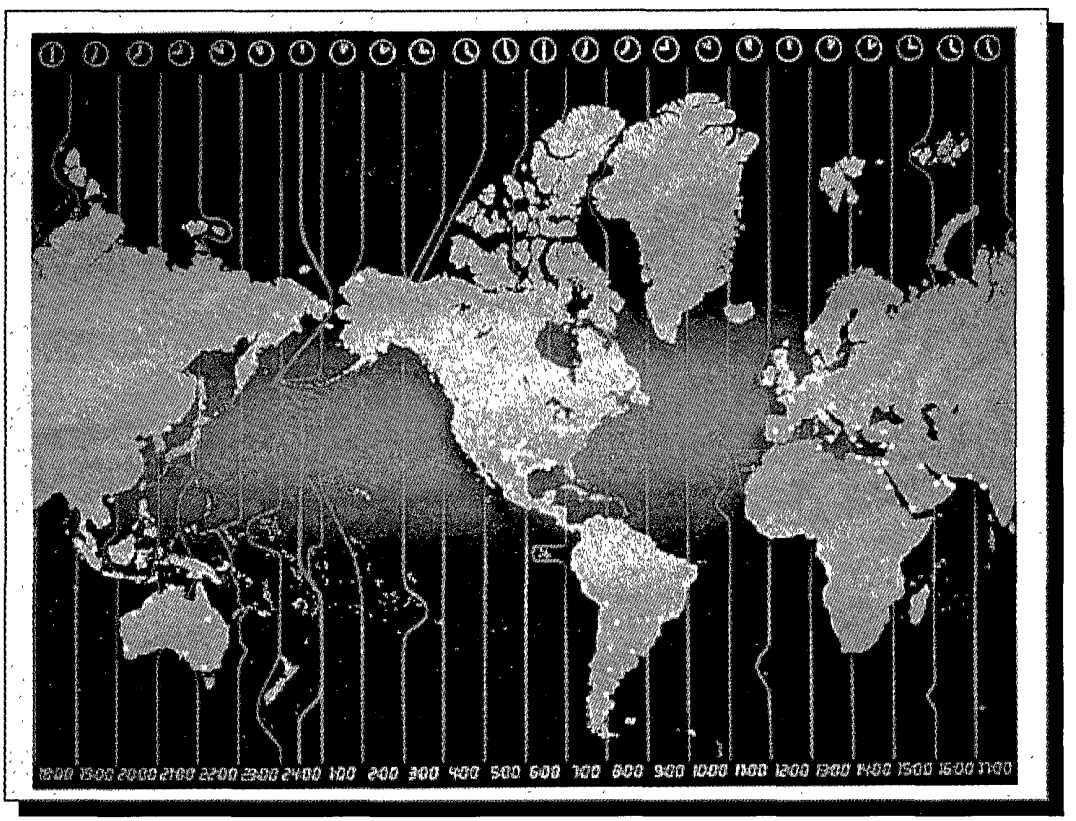
WAREHOUSE:

Hobbs, New Mexico
Phone: 505-392-5586

M-I LLC
508 West Wall, Suite 750
Midland, Texas 79701
Tel: (432) 683-2065 • Fax: (432) 683-1434

MI SWACO

M-I Serves the Petroleum World



This suggested program is advisory only and may be rejected in the sole discretion of any and all parties receiving it. In addition all parties receiving this program recognize, agree, and acknowledge that M-I LLC (M-I) has no care, custody or control of the well, the drilling equipment at the well, nor the premises about the well. Also, there are obviously many conditions within and associated with a well of which M-I can have no knowledge and over which it does not and cannot have control. Therefore, M-I shall not be liable for the failure of any equipment to perform in a particular way or the failure to obtain any particular results from carrying out this program by any party receiving it. Furthermore, the owner and operator of the well and the drilling contractor in consideration of the recommendations contained in this suggested program agree to indemnify and save M-I harmless from all claims and costs for loss, damage or injury to persons or property including, without limitations: subsurface damage, subsurface trespass or injury to the well or reservoir allegedly caused by M-I's operations or reliance by anyone upon this program unless such personal injuries or damage shall be caused by the willful misconduct or gross negligence of M-I.

M-I LLC
508 West Wall, Suite 750
Midland, Texas 79701
Tel: (432) 683-2065 • Fax: (432) 683-1434

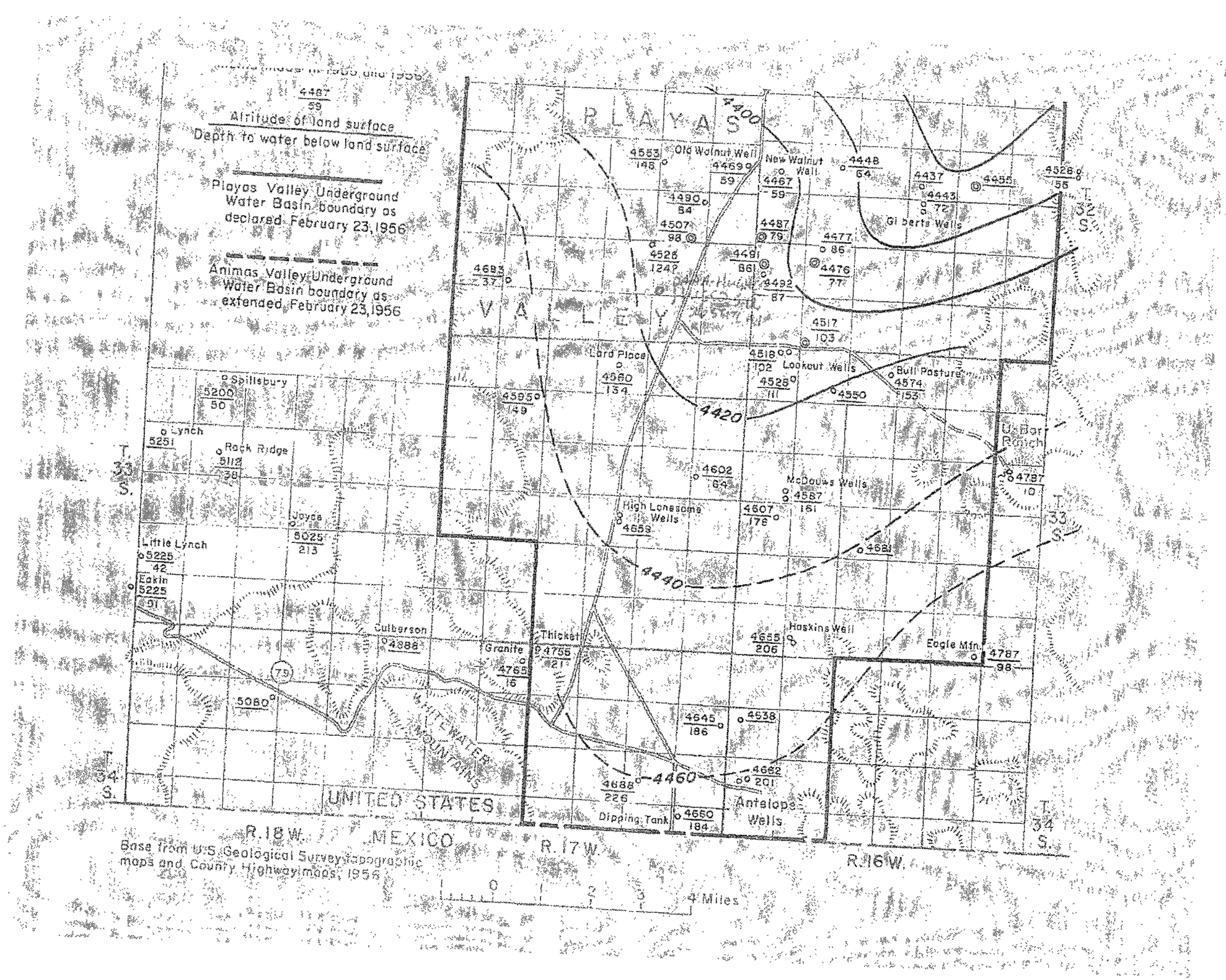
MI SWACO

GROUND WATER DEPTHS *

WELL LOCATION	OWNER NAME	SURFACE ELEVATION	DEPTH OF WELL
32S 17W Sec 1	STEEN	4443'	118'
32S 17W Sec 13	OLD WALNUT	4469'	62'
32S 17W Sec 27	FRYE	4525'	194'
33S 17W Sec 3	LARD PLACE	4560'	140'
33S 17W Sec 8	TIMBERLAKE	4595'	172'

Dan A. Hughes Co. L.P.---Hueco South Unit 26 State #1----32S 17W Sec 26-----Elevation 4527'

*Technical Report 15 ----- New Mexico State Engineer--- "Reconnaissance of Ground Water in Playas Valley" Hidalgo County, New Mexico. Report by Gene C. Doty of the USGS in 1960


1955 and 1956
4487
59
Altitude of land surface
Depth to water below land surface
Playas Valley Underground Water Basin boundary as declared February 23, 1956
Animas Valley Underground Water Basin boundary as extended February 23, 1956
PLAYAS
VALLEY
4400
4420
4440
4460
4553
148
Old Walnut Well
4469
59
New Walnut Well
4448
64
4437
4455
4528
56
4490
84
4507
98
4526
124P
4467
59
4443
72
Gilberts Wells
4487
79
4477
86
4491
86
4476
77
4683
37
4492
87
4517
103
4518
102
Lookout Wells
4528
111
Bull Pasture
4574
153
4550
Lard Place
4560
134
4595
149
Spillsbury
5200
50
Lynch
5251
Rock Ridge
5112
38
4602
64
McDoules Wells
4587
161
4787
10
High Lonesome Wells
4659
4607
176
Joyce
5025
213
Little Lynch
5225
42
Eakin
5225
91
4681
Cutberson
4888
Granite
4765
16
Thicket
4755
21
4655
206
Haskins Well
Eagle Mtn
4787
98
5060
4645
186
4638
4662
201
4688
226
Dipping Tank
4660
184
Antelope Wells
T. 33 S.
T. 34 S.
T. 32 S.
R. 18 W.
R. 17 W.
R. 16 W.
UNITED STATES
MEXICO
Base from U.S. Geological Survey topographic maps and County Highway maps, 1956
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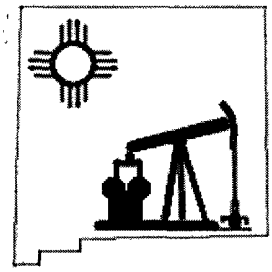


NOV 19 2007
OCD-ARTESIA

OIL REPORTS & GAS SERVICES, INC.
"Supporting The Oil & Gas Industry"

November 16, 2007

Oil Conservation Division
1301 W. Grand Ave.
Artesia, New Mexico 88210

Attention: Bryan Arrant-District II Geologist

Re: Dan A. Hughes Company, L.P.
Hueco South Unit 26 State #1
Unit M, Sec. 26, T32S, R17W
Hidalgo County, New Mexico

Dear Bryan,

A H2S Well Contingency Plan is in the process of being prepared and will be mailed at a later date.

Sincerely,

Gaye Heard-Agent
Dan A. Hughes Company, L.P.

1008 W. Broadway • Hobbs, New Mexico 88240
Phone (505) 393-2727 • Toll Free 1-800-959-8713 • Fax (505)393-5388
e-mail: oilreportsinc@oilreportsinc.com

RECEIVED
NOV 26 2007
Dan A. Hughes Co. L.P.

CONTINGENCY PLAN

NOV 28 2007
OCD-ARTESIA

FOR

DRILLING OPERATIONS

DAN A. HUGHES COMPANY, L.P.

HUBCO SOUTH UNIT 26 STATE #1

SECTION 26, TOWNSHIP 32 SOUTH, RANGE 17 WEST

HIDALGO COUNTY, NEW MEXICO

NOVEMBER 14, 2007

Safety International
a DXP Company
Safety Compliance Rental • Safety Education Specialists
Safety Consultants
HEADQUARTERS TRAINING CENTER • 2348 E. I-20 SOUTH SERVICE RD • ODESSA, TEXAS 79766
MAILING ADDRESS • P.O. BOX 12060-2060
(432) 580-3770 • FAX (432) 332-9223

Safety International

a DXP Company

"Your Total Safety Company"

2148 East I-20, So. Serv. Rd.
Odessa, Texas 79766
432-580-3770

1-800-749-7233

P.O. Box 12060
Odessa, Texas 79768
Fax: 432-332-9223

November 14, 2007

Transmittal Letter

RE: CONTINGENCY PLAN FOR
DAN A. HUGHES COMPANY, L.P.
HUECO SOUTH UNIT 26 STATE #1
HIDALGO COUNTY, NEW MEXICO

Gentleman:

Attached please find the emergency procedures, personnel and equipment plan. In the event of an emergency, the identified individuals should be notified immediately.

Sincerely,

Reggie Phillips
Vice President

CONTINGENCY PLAN

INDEX

SAFETY

It is the DAN A. HUGHES COMPANY, L.P. policy in all operations to do everything possible to insure the safety of its employees and the contractor's employees on the job site; additionally, to provide for the safety and comfort of persons near the operation by protecting the environment to the fullest degree possible.

The primary purpose of the procedures outlined herein is to guide the personnel on location in the event that Hydrogen Sulfide (H_2S) reaches the surface

TO PROTECT THEIR OWN SAFETY AND THE SAFETY OF OTHERS, ALL PERSONNEL ON THE JOB SITE WILL RIGIDLY ADHERE TO THIS PLAN

Initial Suspected Problem Zone:	Unknown (Wildcat)
Potential Open Flow Capacity:	Unknown (Wildcat)
Expected Concentration:	Unknown (Wildcat)

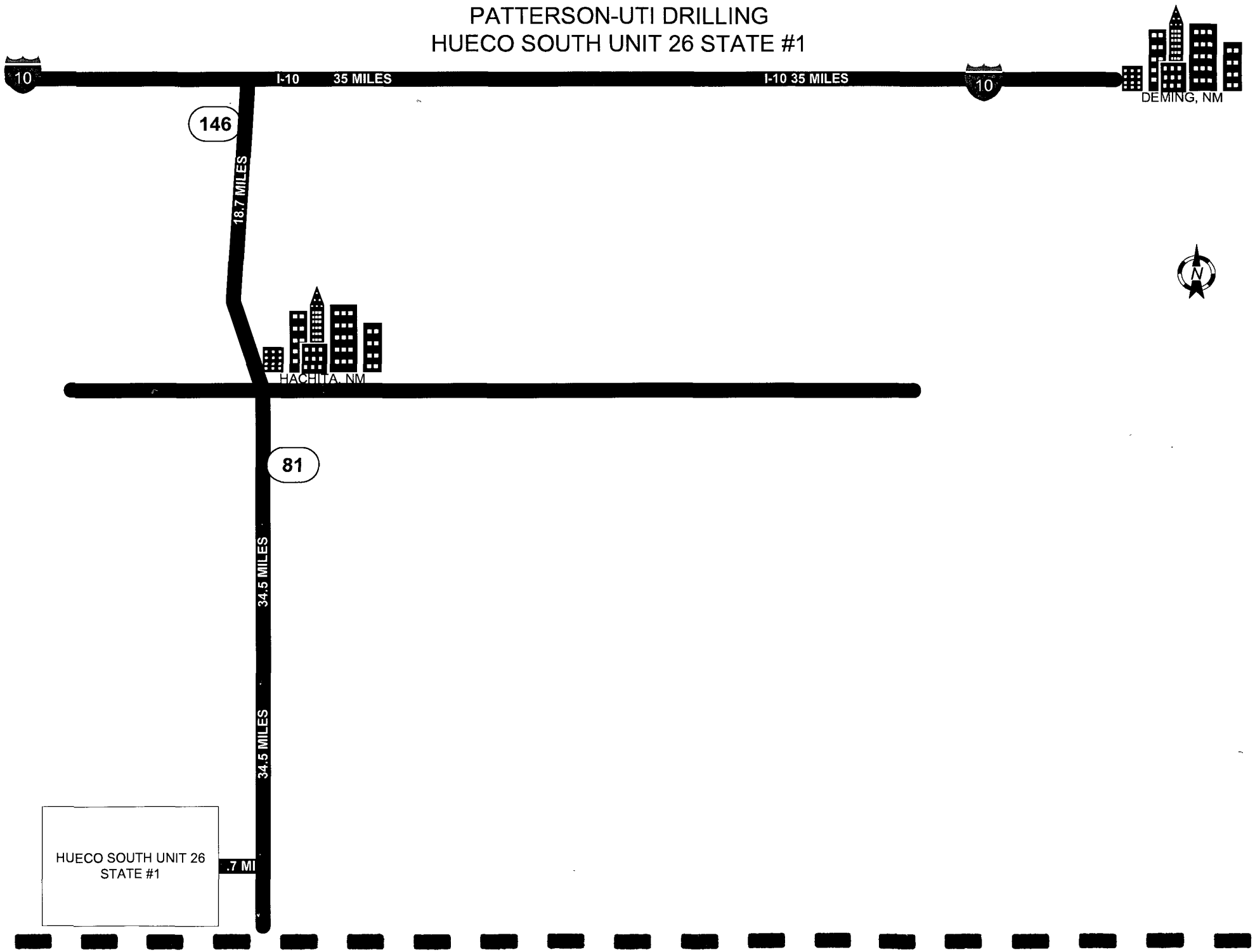
H2S Equipment will be rigged up at Surface.

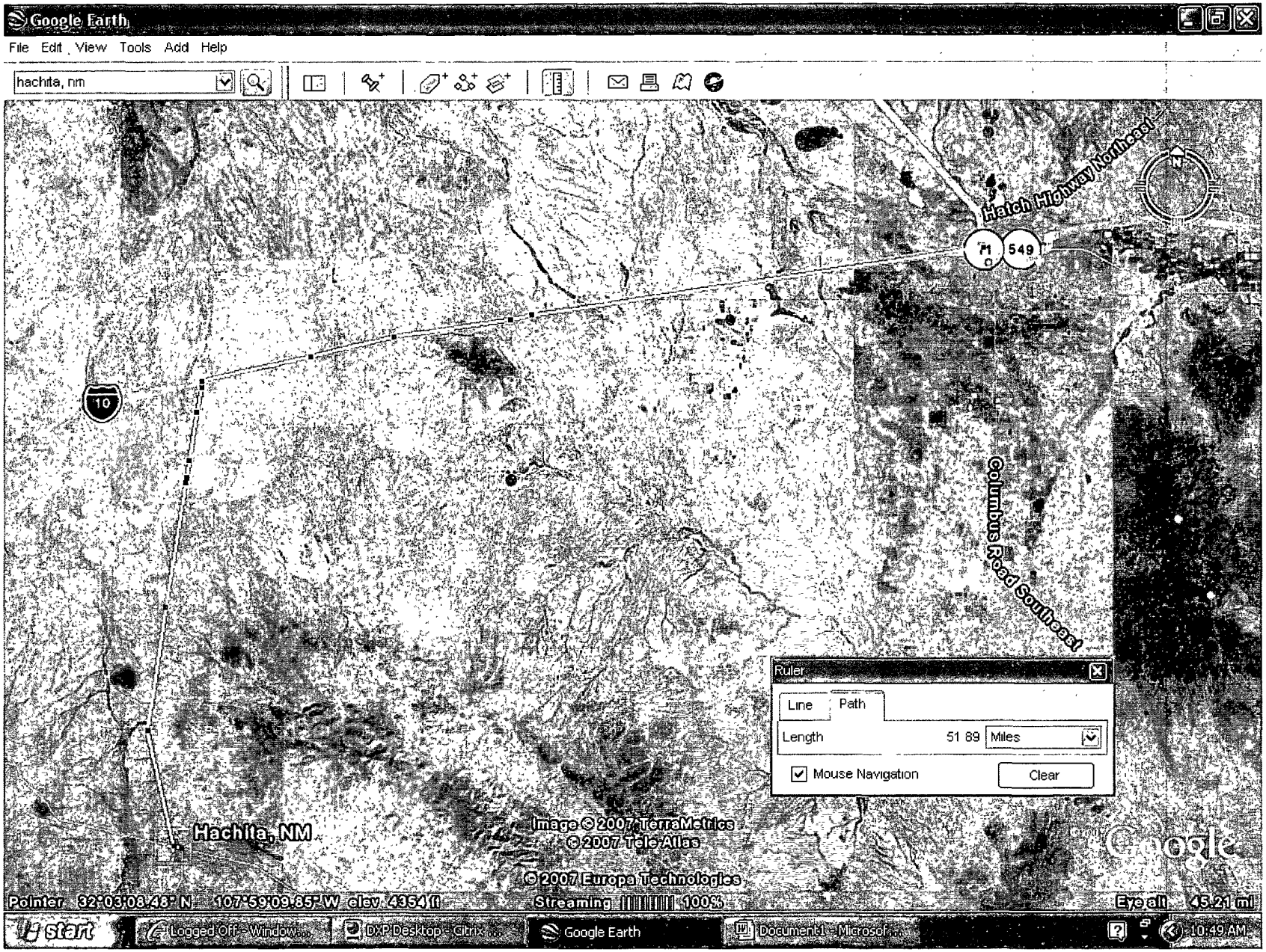
The plan should be implemented before drilling out from under surface.

DIRECTIONS TO LOCATION

FROM DEMING, NEW MEXICO, GO WEST ON I-10 FOR 35 MILES. TURN SOUTH ON HWY 146 (EXIT #49). GO 18.7 MILES TO HACHITA, NM AND CONTINUE SOUTH OUT OF HACHITA ON HWY 81 FOR 34.5 MILES TO GATE ON RIGHT. ENTER GATE TO RIG AHEAD 0.7 MILES.

DAN A HUGHES COMPANY L.P.
PATTERSON-UTI DRILLING
HUECO SOUTH UNIT 26 STATE #1

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© 2007 Tele Atlas
© 2007 Europa Technologies
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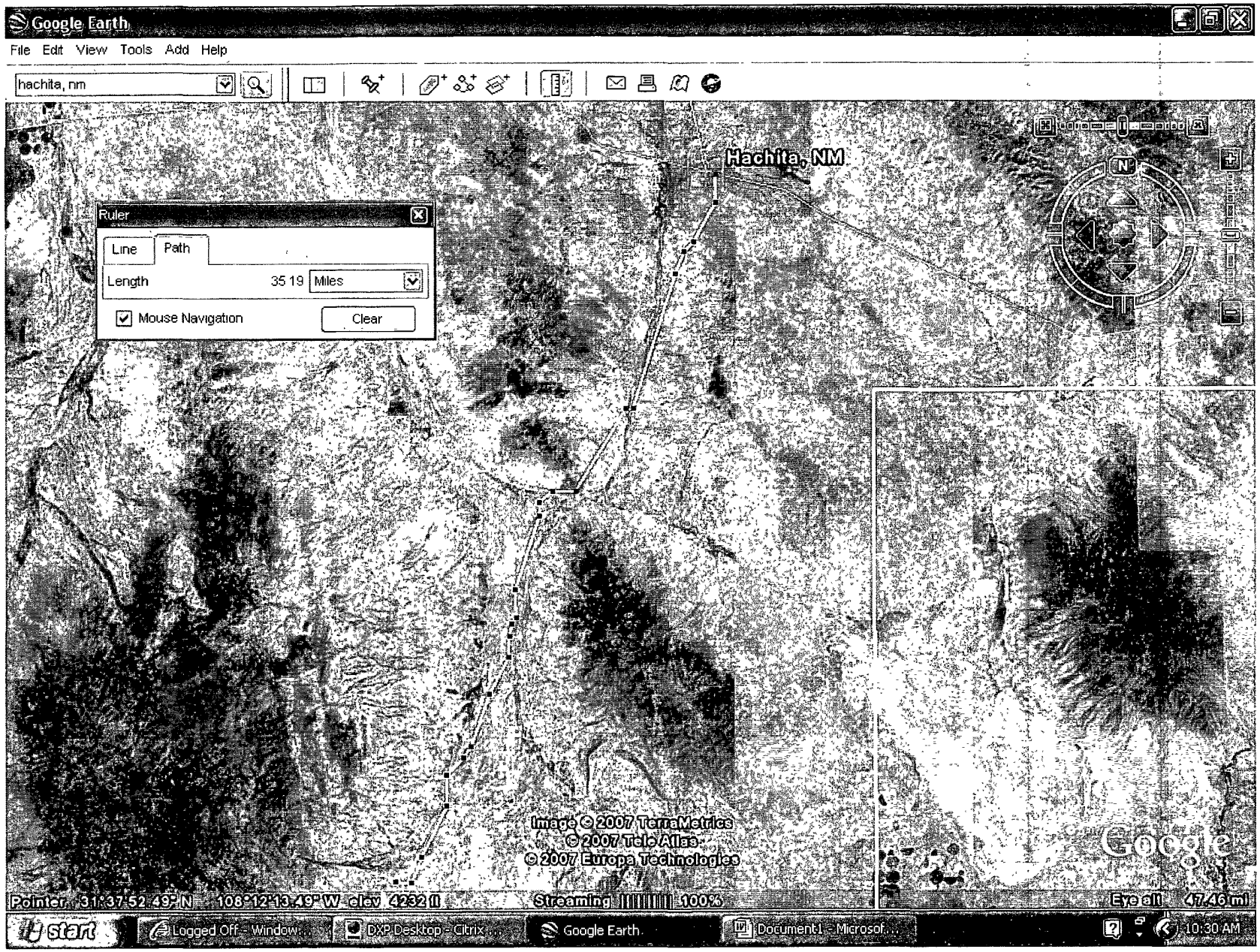
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© 2007 Tele Atlas
© 2007 Europa Technologies
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start
Logged Off - Window...
DXP Desktop - Citrix ...
Google Earth
Document1 - Microsof...
10:30 AM

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name

4 Property Code	5 Property Name	6 Well Number

7 OGRID No.	8 Operator Name	9 Elevation
		4527.68

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	26	32 S	17W		660'		660'		Hidalgo

11 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

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.

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.

16

660' ⊙
660'

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Printed Name

18 SURVEYOR CERTIFICATION

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 supervision, and that the same is true and correct to the best of my belief.

9-26-07
Date of Survey

Signature and Seal of Professional Surveyor

REGISTERED ENGINEER AND SURVEYOR NO. 5252 NEW MEXICO IRA L. HARBIN

5252
Certificate Number

EMERGENCY NOTIFICATION

EVACUATION PLAN

The following general plan has been developed in the event that any public evacuation becomes necessary.

1. DAN A. HUGHES COMPANY, L.P. has requested and has been assured the support of the various public safety entities in the area.

2. Any evacuation will be conducted by the HIDALGO County Sheriff's Department and supported by the New Mexico Department of Public Safety, Highway Patrol Division.

3. Assistance from other public safety entities may be requested if required.

4. The included maps detail the area of the well site including the inventory of the public within the radius of exposure of the well.

5. In the event that there is any suspected problem on the well, the well site supervisor will notify the HIDALGO County Sheriff's Office at 911 or (505-542-8828) for ALERT STATUS.

6. ALERT STATUS will require that available public support personnel will proceed to the HIDALGO County Sheriff's Office in LORDSBURG, NEW MEXCIO and standby for instructions.

7. If isolation and evacuation are necessary, then units will be dispatched to points marked on the map with instructions to maintain roadblocks.

8. Evacuation teams will then proceed to sectors to be evacuated. Evacuation procedure will follow appropriate consideration for wind conditions.

9. Personnel from Safety International, Inc. will establish safe perimeters using H_2S Detectors.

10. The NMOCD and other authorities will be notified as soon as possible.

11. Other supplemental contractors will be contacted and called in as needed.

EMERGENCY CALL LIST

PUBLIC SAFETY

AGENCY	LOCATION	TELEPHONE #
Sheriff's Department	LORDSBURG, NM	911 OR 505/542-8828
	DEMING, NM	911 OR 505/546-2655
Police	LORDSBURG, NM	911 OR 505/542-3505
	DEMING, NM	911 OR 505/546-3011
State Police	LORDSBURG, NM	911 OR 505/542-9585
Fire Department	LORDSBURG, NM	911 OR 505/542-9261
	DEMING, NM	911 OR 505/546-6911
NMOCD 1220 S. St. Francis Dr.	SANTE FE, NM	505/476-3440

EMERGENCY CALL LIST
DAN A. HUGHES COMPANY, L.P.
P.O. DRAWER 669
BEEVILLE, TX 78104

NAME	TITLE	PHONE NUMBERS
JEFFERY R. ILSENG	OPERATIONS MANAGER	MOBIL: 361-362-3304 OFFICE: 361-358-3752 HOME: 361-387-9141

EMERGENCY CALL LIST

MEDICAL SUPPORT

AGENCY	LOCATION	TELEPHONE #
Hospitals	MIMBRES MEMORIAL HOSPITAL DEMING, NM	505/546-5800
Ambulance	LORDSBURG, NM	911 OR 505/542-8272
	DEMING, NM	911 OR 505/544-4241
Air Medical Transport	NEW MEXICO	800-827-0745

EMERGENCY CALL LIST

SUPPLEMENTAL EQUIPMENT

SAFETY COMPANY

SAFETY, INTERNATIONAL

OFFICE: 432/580-3770
1-800-749-7233

EMERGENCY CALL LIST
PATTERSON UTI DRILLING
410 N. LORRAINE
MIDLAND, TX 79701
OFFICE (432) 682-9401

NAME	TITLE	PHONE NUMBERS
CHOYR GILBERT	OPERATIONS MANAGER	MOBIL: 432/894-2444 OFFICE: 432/682-9401

EMERGENCY CALL LIST

RESIDENTS WITHIN 3000 FEET RADIUS OF EXPOSURE FOR (WILDCAT) WELL

THERE ARE NO RESIDENTS IN THE RADIUS OF EXPOSURE

EMERGENCY PROCEDURES

RESPONSIBILITY

In the event of a release of potentially hazardous amounts of H_2S, all personnel will immediately proceed upwind to the nearest designated safe area and don their protective breathing equipment. The DAN A. HUGHES COMPANY, L.P. representative will immediately, upon assessing the situation, set this plan into action by taking the proper procedures to contain the gas and notify the appropriate people and agencies.

If the DAN A. HUGHES COMPANY, L.P. representative is incapacitated or not on Location, this responsibility will fall to the PATTERSON UTI DRILLING Toolpusher.

DAN A. HUGHES COMPANY, L.P.

1. In an emergency situation, the Drilling Foreman on duty will have complete responsibility and will take whatever action is deemed necessary in an emergency situation to insure the personnel's safety, to protect the well and to prevent property damage.

2. Advise the Superintendent when procedures as specified herein have been met, will inform of emergencies and deviation from the plan, and see that procedures are observed at all times.

3. Advise each contractor, service company, and all others entering the site that Hydrogen Sulfide may be encountered and the potential hazards that may exist.

4. Authorize the evacuation of local residents if Hydrogen Sulfide threatens their safety.

5. Keep the number of persons on location to a minimum during hazardous operations.

6. Assess the situation when alarm sounds, and issue work orders. When conditions warrant, order all personnel to "Safe Briefing Areas".

7. Direct corrective actions to control flow of gas.

8. Has full responsibility for the decision to ignite the well. The decision will be made only as a last resort.

PATTERSON UTI DRILLING

1. The Toolpusher will assume all responsibilities of the Drilling Foreman in an emergency situation in the event that the Drilling Foreman becomes incapacitated.

2. The Toolpusher will order the Driller to secure the rig, if time permits.

EMERGENCY PROCEDURES

DRILLING CREW ACTIONS

1. All personnel will don their protective breathing apparatus. The drilling crew will take necessary precaution as indicated in OPERATING PROCEDURES.

2. The "Buddy System" will be implemented. All personnel will act upon directions from the Operator's Representative.

3. If there are nonessential personnel on location, they will move off location.

4. Entrance to the location will be patrolled, and the proper well condition flag will be displayed at the entrance to the location.

IN THE EVENT OF AN ACCIDENTAL RELEASE OF POTENTIALLY HAZARDOUS VOLUME OF H_2S, THE FOLLOWING PROCEDURES WILL BE TAKEN:

1. All personnel on location will be accounted for and emergency search should begin for any missing.

2. All search missions will be conducted under fresh air masks in teams of two. Should the search team need to approach the well, safety harness and rope should be used.

3. All individual companies and agencies should be contacted according to the EMERGENCY CALL LIST.

4. An assigned crewmember will blockade the entrance to the location. No unauthorized personnel will be allowed entry into the location.

5. The Operator's Representative will remain on location and attempt to regain control of the well.

6. The Company's designated representatives will begin evacuation of those persons in immediate danger.

TEMPORARY SERVICE PERSONNEL

All service personnel, such as cementing crews, logging crews, specialists, mechanics and welders will furnish their own safety equipment as required to comply with OSHA and DAN A. HUGHES COMPANY, L.P.

VISITORS

Visitors and nonessential personnel will be prohibited from remaining in, or entering a contaminated area where Hydrogen Sulfide concentration in the atmosphere exceeds 15ppm.

EMERGENCY PROCEDURES

NOTE: WHEN HYDROGEN SULFIDE MIGHT BE ENCOUNTERED, NO PERSONNEL ON LOCATION WILL BE PERMITTED TO SLEEP IN VEHICLES.

INSTRUCTIONS FOR IGNITING THE WELL

THE DECISION TO IGNITE THE WELL IS THE RESPONSIBILITY OF THE **DAN A. HUGHES COMPANY, L.P. REPRESENTATIVE.** In the event he is incapacitated or unavailable, it becomes the responsibility of the **PATTERSON UTI DRILLING RIG SUPERINTENDENT.**

The decision to ignite the well should be made only as a last resort and in the situation where it is clear that:

1. Human life is in danger

2. There is no hope of controlling the well under current conditions.

The DAN A. HUGHES COMPANY, L.P. Corporate Office should be notified as soon as possible. The first phase of evacuation should be initiated immediately.

Once the decision has been made the following procedures should be followed:

1. Four (4) people, wearing self-contained breathing apparatus will be needed for the actual lighting of the well. They must first establish the flammable perimeter by using an explosimeter. This should be established at 30% to 40% of the lower flammable limits.

2. After the flammable perimeter has been established and everyone removed from the area, the ignition team should select a site upwind of the well, from which to ignite. This site should offer the maximum protection and have a clear path for retreat from the area.

3. The ignition team should have safety belts and lanyards attached and manned before attempting ignition. If the leak is not ignited on the first attempt, move in 20 to 30 feet and fire again. Continue to monitor with the explosimeter and never fire from an area with over 75% of the Lower explosive Limit (LL). If having trouble igniting the well, try firing 40 degrees to 90 degrees on either side of the well.

4. After ignition or attempted ignition, the toxic perimeter must be established and evacuation continued until the well is contained.

5. All personnel will act only as directed by the person in charge of the operations.

REMEMBER:

After the well is ignited, burning Hydrogen Sulfide (H_2S) will convert to Sulfur Dioxide (SO_2), which is also a highly toxic gas.

DO NOT ASSUME THE AREA IS SAFE AFTER THE WELL IS IGNITED

DRILLSITE LOCATION

1. The drilling rig should be situated on location such that the prevailing winds blow across the rig toward the reserve pit or at right angles to a line from the rig to the reserve pit.

2. The entrance to the location should be designed so that it can be barricaded if Hydrogen Sulfide emergency conditions arise. An auxiliary exit (or entrance) should be available in case of a catastrophe; a shift in wind direction would not preclude escape from the location. Appropriate warning signs and flags should be placed at all location entrances.

3. Once H_2S safety procedures are established on location, no beards or facial hair which will interfere with face seal or mask will be allowed on location.

4. A minimum of two BRIEFING AREAS will be established, not less than 250 feet from the wellhead and in such location that at least one area will be up-wind from the well at all times. Upon recognition of an emergency situation, all personnel should assemble at the designated briefing areas for instructions.

5. A safety equipment trailer will be stationed at one of the briefing areas.

6. Windsocks will be installed and wind streamers (6 to 8 feet above ground level) placed at the location entrance. Windsocks shall be illuminated for nighttime operations. Personnel should develop wind direction consciousness.

7. The mud-logging trailer will be located so as to minimize the danger from gas that breaks out of the drilling fluid.

8. Shale shaker mud tanks will be located so as to minimize the danger from gas that breaks out of the drilling fluid.

9. Electric power plant(s) will be located as far from the well bore as practical so that it may be used under conditions where it otherwise would have to be shut down.

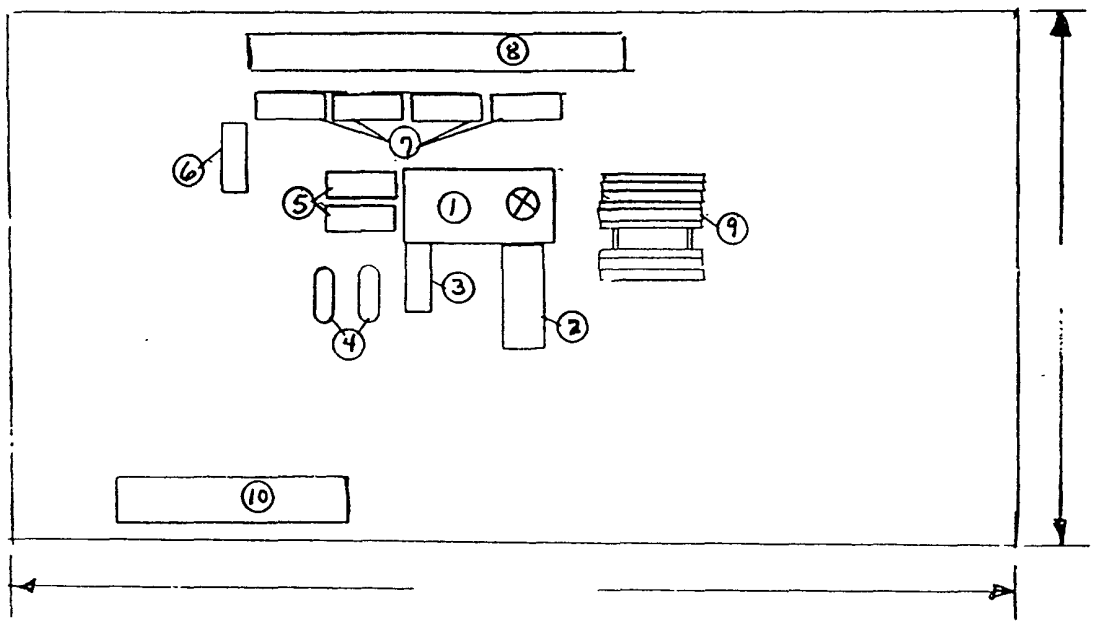
10. When approaching depth where Hydrogen Sulfide may be encountered, appropriate warning signs will be posted on all access roads to the location and at the foot of all stairways to the derrick floor.

11. Appropriate smoking areas will be designated and smoking will be prohibited elsewhere.

COMPANY _____

RIG - _____

LEASE _____



①	FLOOR
②	DOG HOUSE
③	BOTTOM DOGHOUSE
④	WATER TANKS
⑤	PUMPS
⑥	MUD HOUSE
⑦	MUD PITS
⑧	RESERVE PIT
⑨	PIPE RACK
⑩	PUSHERS TRAILER

EQUIPMENT TO BE PROVIDED BY SAFETY INTERNATIONAL

SAFETY TRAILER PACKAGE # 2

1.) One (1) Safety Trailer Containing a 6-Bottle Breathing Air Cascade System.

2.) 750 Feet of Air Line Hose

3.) Four (4) Breathing Air Manifolds

4.) Four (4) 30-Minute Rescue Units

5.) Five (5) Work/Escape Units

6.) Five (5) Escape Capsules

7.) One (1) Filler Hose for the Work/Escape and Rescue Units

8.) One (1) Location Sign with Flags

9.) Two (2) Briefing Area Signs

10.) Two (2) Windsocks

11.) One (1) Electronic Monitor with Three (3) Sensor Heads, Warning Light and Siren

BLOWOUT PREVENTION EQUIPMENT

1. A kill line of ample strength and length will be laid to a safe point to allow pumping into the well in an emergency situation.

2. The closing unit should be located a safe distance from the well bore and positioned for maximum utilization based on the prevailing wind direction.

3. BOP equipment will be tested in accordance with standard company practice.

SPECIAL EQUIPMENT

1. Flare lines should be as long as practical, securely staked.

2. An electronic Hydrogen Sulfide monitor will be installed with a combination visual and audible alarm system located where it can be seen and/or heard throughout the drilling location.

3. The electronic Hydrogen Sulfide monitoring system will be calibrated to actuate the low alarm (visual alarm) at a concentration of 10 ppm Hydrogen Sulfide in the atmosphere and the high alarm at a concentration of 15 ppm Hydrogen Sulfide in the atmosphere.

4. Extra equipment will be available if required to provide adequate respiratory protection for all personnel on location.

DRILL STEM TEST

1. All drill stem tests of Hydrogen Sulfide zones will be approved by the NMOCD.

2. Drill stem testing of Hydrogen Sulfide zones will be permitted only during daylight hours.

3. All nonessential personnel will be moved to "Safe Briefing Area".

4. Put on air mask before formation fluids are expected at the surface and continue "MASKS ON" until flares are lighted and work areas test no more than 10 ppm Hydrogen Sulfide and the area has been declared safe.

TRAINING

Every person working in any capacity on the lease will be required to review the emergency procedures and will participate in the training program.

DAN A. HUGHES COMPANY, L.P. will provide personnel to direct the training program and in doctrinate all authorized persons on the lease in the proper use of the safety equipment.

The training personnel will work individually with each member until they are satisfied that the crew member is familiar with the emergency procedures and the training program. This should be accomplished prior to an individual's work operation.

Training will include hands-on use of all equipment in order to familiarize the trainees with the safety equipment.

SAFETY TRAINING

1. Hydrogen Sulfide Safety Training will be provided to all personnel at 1,000 feet above the expected H_2S formation. The training sessions will cover, but will not be limited to the following

   a. General information on H_2S and SO_2 gas

   b. Hazards of H_2S and SO_2 gas

   c. Safety equipment on location

   d. Proper use and care of personal protective equipment

   e. Operational procedures in dealing with H_2S gas

   f. Evacuation procedures

   g. Chemicals to be used in mud to control H_2S

   h. First aid, reviving an H_2S victim, toxicity, etc.

   I. Designated safe briefing areas (S.B.A.)

   j. Metallurgical considerations

   NOTE: Once H_2S Safety Procedures are established on location, no beards or facial hair which will interfere with face seal or mask will be allowed on location.

2. When H_2S alarm is activated:

   a. Mask up

   b. Raise tool joints above the rotary table and shut down pump

   c. Close in hydril

   d. Go to Safe Briefing Area

SAFETY INTERNATIONAL FIELD SUPERVISOR QUALIFICATIONS

Safety International, Inc. is proud of the training and qualifications of our staff of field personnel. We know that our customers are provided with the best service available in the H_2S safety business. We also know that we have by far, the most rigid requirements for basic qualifications, and the most extensive training program of any H_2S company.

Safety International, Inc. personnel will be qualified in Basic H_2S Safety Training, which includes the maintenance of equipment, training of personnel, and general oil field safety. Specifically, all are trained in Basic First Aid and Cardiopulmonary Resuscitation (CPR).

Safety International, Inc. will provide all needed materials for training of personnel on location as required.

MAIN OFFICE

2348 East I-20
South Service Road
Odessa, TX 79766
OFFICE: (432) 580-3770
FAX: (432) 332-9223

FIELD OFFICE

2412 East I-20
South Service Road
Odessa, TX 79766

EMERGENCY CONDITIONS

Operating Conditions

A. Emergency Procedures and Definition of Warning Flags

1. Condition: YELLOW -- NORMAL OPERATION

2. Condition: ORANGE -- POTENTIAL DANGER, CAUTION

a. **Cause for condition**:

* Circulating up drilling breaks
* Trip gas after trip
* Circulating out gas on choke
* Poisonous gas present, but below threshold concentrations

b. **Safety actions**:

* Check safety equipment and keep it with you
* Be alert for a change in conditions
* Follow instructions

3. **Condition**: RED -- EXTREME DANGER

a. **Cause for condition**:

* Uncontrolled flow from the well with lethal concentrations of H_2S

b. **Safety actions**:

* Masks On. All personnel will have protective breathing equipment with them. All personnel will stay in safe briefing area unless instructed to do otherwise.

* The decision to ignite the well is the responsibility of the company representative and should be made only as a last resort, when it is clear that:

I. Human life is endangered
ii There is no hope of controlling the well under prevailing conditions

* Order evacuation of local people within the danger zone.

THE USE OF SELF CONTAINED BREATHING EQUIPMENT

1. Respirators shall be inspected frequently at random, to insure that they are properly used, cleaned and maintained

2. Anyone who may use the respirators shall be trained in how to insure proper face piece to face seal. They shall wear respirators in normal air and then wear it in a test atmosphere. (Note: such items, as facial hair - beard or sideburns - and eyeglass temple pieces will not allow a proper seal). Anyone who may be reasonably expected to wear respirators should have these items removed before entering a toxic atmosphere. A special mask must be obtained for anyone who must wear eyeglasses. Contact lenses should not be allowed.

3. Maintenance and care of respirators:

   A. A program for maintenance and care of respirators shall include the following:

      * Inspection for defects, including leak checks

      * Cleaning and disinfecting

      * Repair

      * Storage

   B. Inspection: Self contained breathing apparatus for emergency use shall be inspected monthly for the following and a permanent record kept of these inspections.

      * Fully charged cylinders

      * Regulator and warning devise operation

      * Condition of face piece and connections

      * Elastic or rubber parts shall be stretched or massaged to keep them pliable and prevent deterioration.

   C. Routinely used respirators shall be collected, cleaned and disinfected as frequently as necessary to insure proper protection is provided.

4. A person assigned a task that requires use of self contained breathing equipment, should be certified, physically fit for breathing equipment usage by the local physician at least annually.

5. Respirators should be worn:

   A. When breaking out any line where H_2S can reasonably be expected.

   B. When sampling air in areas to determine if toxic concentrations of H_2S exist.

   C. When working in areas where over 15 ppm H_2S has been detected.

   D. At any time there is a doubt as to the H_2S concentration in the zone to be entered.

PHYSICAL EFFECTS OF HYDROGEN SULFIDE POISONING

THE PRINCIPAL HAZARD IS DEATH BY INHALATION

When the amount of gas absorbed into the bloodstream exceeds that which is readily oxidized, systemic poisoning results, with a general action on the nervous system. Labored respiration occurs shortly and respiratory paralysis may follow immediately at concentrations of 700 ppm and above. This condition may be reached almost without warning as the originally detected odor of H_2S may have disappeared due to olfactory paralysis. Death then occurs from asphyxiation unless the exposed person is removed immediately to fresh air and breathing is stimulated by artificial respiration. Other levels of exposure may cause the following symptoms individually or in combination:

1. Headache
2. Dizziness
3. Excitement
4. Nausea or gastro-intestinal disturbances
5. Dryness and sensation of pain in nose, throat, and chest
6. Coughing
7. Drowsiness

All personnel should be alerted to the fact that detection of H_2S solely by sense of smell is highly dangerous, as the sense of smell is rapidly paralyzed by the gas. 10 ppm of H_2S detected should be treated as if it were 700 ppm.

TREATMENT OF HYDROGEN SULFIDE POISONING

INHALATION

As Hydrogen Sulfide in the blood oxidizes rapidly, symptoms of acute poisoning pass off when inhalation of the gas ceases. It is important, therefore, to get the victim of poisoning to fresh air as quickly as possible. He should be kept at rest and chilling should be prevented. If respiration is slow, labored or impaired, artificial respiration may be necessary.

Most persons overcome by Hydrogen Sulfide may be revived if artificial respiration is applied before heart action ceases. Victims of poisoning should be under the care of a physician as soon as possible. Irritation due to subacute poisoning may lead to serious complications such as pneumonia. Under those conditions, treatment by the physician necessarily would be symptomatic. The patient should be kept in fresh air.

CONTACT WITH EYES

Eye contact with liquid and/or gas containing Hydrogen Sulfide will cause painful irritation (conjunctivitis). Keep patient in a darkened room, apply ice compresses to eyes, put ice on forehead, and send for a physician. The irritation caused by exposure to Hydrogen Sulfide requires treatment by a physician, preferably an eye specialist. The prognosis for recovery in these cases is usually good.

CONTACT WITH SKIN

Skin absorption is very low. Skin discoloration is possible after contact with liquids containing Hydrogen Sulfide. If such skin contact is suspected, the area should be thoroughly washed.

CHARACTERISTICS OF HYDROGEN SULFIDE

1. Extremely toxic (Poisonous)

2. Heavier than air and colorless

3. Has the odor of rotten eggs, in small amounts

4. Burns with a blue flame and produces Sulphur Dioxide (SO_2) Gas, which is very irritating to eyes and lungs. The SO_2 is as toxic as H_2S, but the severe discomfort at low concentrations acts as a barrier to human exposure to toxic levels of this gas.

5. H_2S forms explosive mixture with air between 4.3% and 46% by volume

6. H_2S is soluble in water but becomes less soluble as the water temperature increases.

7. The toxicity of Hydrogen Sulfide is second only to Hydrogen Cyanide and is between 5 and 6 times more toxic than Carbon Monoxide.

8. Produces irritation to eyes, throat and respiratory tract.

EFFECTS OF HYDROGEN SULFIDE ON METAL

Hydrogen Sulfide dissolves in water to form a weak acid that can cause some pitting, particularly in the presence of Oxygen and/or Carbon Dioxide. However, the most significant action of H_2S is its contribution to a form of Hydrogen embrittlement known as Sulfide Stress Cracking. Sulfide Stress Cracking is a result of metals being subjected to high stress levels in a corrosive environment where H_2S is present. The metal will often fail in a brittle manner. Sulfide stress cracking of steel is dependent upon and determined by:

1. Strength (hardness) of the steel-the higher the strength, the greater the susceptibility to sulfide stress cracking. Steels having yield strengths up to 95,000 psi and hardness up to Rc22 are generally resistant to sulfide stress cracking. These limitations can be extended slightly higher for properly quenched and tempered materials.

2. Total member stress (load) - higher the stress level (load) the greater the susceptibility to sulfide stress cracking.

3. Corrosive environment - corrosive reactions, acids, bacterial action, thermal degradation of low Ph fluid environment.

Toxicity

Common Name	Chemical Formula	Specific Gravity(SG) Air=1	Threshold [1] Limit	Hazard [2] Limit	Lethal [3] Concentration
Hydrogen Cyanide	**HCN**	0.94	10 ppm	150 ppm/hr	300 ppm
Hydrogen Sulfide	**H_2S**	**1.18**	**10 ppm[4] 15 ppm[5]**	250 ppm/hr	**600 ppm**
Sulfur Dioxide	**SO_2**	2.21	2 ppm	----------	1,000 ppm
Chlorine	**Cl_2**	2.45	1 ppm	4 ppm/hr	1,000 ppm
Carbon Monoxide	**CO**	0.97	50 ppm	400 ppm/hr	1,000 ppm
Carbon Dioxide	**CO_2**	1.52	5,000 ppm	5%	10 %
Methane	**CH_4**	0.55	90,000 ppm	Combustible Above 5% in Air	----------

[1]**Threshold Limit** – Concentration at which it is believed that all workers may be repeatedly exposed day after day without adverse effects.
[2]**Hazardous Limit** – Concentration that may cause death.
[3]**Lethal Concentration** – Concentration that will cause death with short-term exposure.
[4]**Threshold Limit = 10 ppm** – 1972 ACGIH (American Conference of Governmental Industrial Hygienist).
[5]**Threshold Limit = 15 ppm** – 1989 ANSI acceptable Ceiling concentration for eight-hour exposure (based on 40-hour work week) is 15 ppm. OSHA Rules and regulations (Federal Register, Volume 54, No. 12, dated January 19,1989)

PROCEDURAL CHECK LIST

PERFORM EACH TOUR BY THE DRILLING CONTRACTOR PERSONNEL

1. Check fire extinguishers to see that they have the proper charge.
2. Check pressure on breathing air cascade system to make sure they are charged to full volume.
3. Check pump pressure on stand pipe gauge and choke manifold gauge to assure proper communication between gauges and also comparison of pressure reading on each gauge.
4. Make a visual check of H_2S monitoring system.

PERFORM EACH WEEK BY DRILLING CONTRACTOR PERSONNEL:

1. Blowout preventer drills
2. Check nitrogen supply pressure on BOP accumulator standby

PERFORM EACH WEEK BY SAFETY INTERNATIONAL PERSONNEL OR DAILY ON SUPERVISION

1. Check each piece of breathing equipment to make sure that demand regulator is working. This requires that the bottle be opened and the mask assembly be put on tight enough so that when you inhale, you get air.
2. Check butane supply for burn pit for volume and to make sure 1" line is not plugged. Check automatic ignition system.
3. Check all SKA pac units for operation; demand regulator, escape bottle air volume, supply bottle air volume.
4. Check breathing equipment mask assembly to see that straps are loosened and turned back ready to put on.
5. Check pressure on breathing equipment air bottles to make sure they are charged to full volume.
6. Confirm pressure on all supply air bottles
7. Perform breathing equipment drills with onsite personnel.

FOR CONTRACTORS USE ONLY

SURFACE KILL SHEET
PRERECORDED INFORMATION

DATE _____ TIME_____ MUD WEIGHT _____

CASING: SIZE _____ O.D._____ I.D. WEIGHT_____ PPF GRADE_____

SHOE TVD _____ 80% BURST _____

DRILL PIPE: SIZE _____ O.D._____ I.D. WEIGHT _____ PPR GRADE___

CAPACITY _____ BBL/FT

HOLE: SIZE _____

PUMPS: #1 _____ PSI @_____ STKS/MIN _____ BBL/SKT

#2 _____ PSI @ _____ STKS/MIN _____ BBLS/STK

DEPTH; TD _____ TVD_____

MEASURED @ SHUT IN

SHUT IN DRILL PIPE PRESSURE (SIDPP).....____P

SHUT IN CASING PRESSURE.....____P

PIT GAIN.....____B

KILL MUD WEIGHT (KMW)

20 X SIDPP (_____) TVD (_____) + ORIGINAL MUD WEIGHT (OMW) (_____)

= _____ P

INITIAL CIRCULATING PRESSURE (ICP)

KILL RATE PRESSURE (_____) + SIDPP (_____) =_____PSI

FINAL CIRCULATING PRESSURE (FCP)

KRP (_____) X KMW (_____) DMW (_____) =_____PSI

FOR CONTRACTORS USE ONLY

SURFACE TO BIT STROKES (SBS)

DRILL PIPE CAPACITY (BBL/FT) (_____) X TD (_____) BBL/STK (_____)

= _____STKS STKS (_____) SPM (_____) = _____ MIN.

PRESSURE AND DROP CHART (WAIT & WEIGHT)

ICP (_____) - FCP (_____) = _____PSI PRESSURE DROP (PD)

PD (_____) 5 = _____UNITS PRESSURE DROP

SBS (_____) 5 = _____UNITS STKS/PRESSURE DROP

SUBTRACT UNITS PRESSURE DROP FOR EACH LINE		ADD STKS/PRESSURE DROP FOR EACH LINE
CIRCULATING PUMP PRESSURE	@	ACCUMULATED STROKES
(ICP)_____	@	_____STKS
_____	@	_____STKS
_____	@	_____STKS
_____	@	_____STKS
_____	@	_____STKS
(FCP)_____	@ (SBS)	_____STKS