CONTACTING AUTHORITIES FOR EMERGENCY SITUATIONS

H2S Contingency Plan

30-005-29176

Marshall and Winston Inc.

Agencies will ask for information about the release such as: Type, Volume, Wind Direction, Location, etc. Be prepared with all information available. This response plan must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

Ambulance	Ambulance	911
Marshall and Winston	Otis Holt (Well Site Supervisor)	(325) 206-1528 (c)
Marshall and Winston	Gabe Herrera (Engineer)	(432) 684-6373 (o)
"	"	(432) 260-8650 (c)
Marshall and Winston	Tom Brandt (Operations)	(432) 684-6373 (o)
"	"	(432) 553 -9747 (c)
Marshall and Winston	George Watters	(432) 684-6373 (o)
"	"	(432) 631-2051 (c)

Artesia

Ambulance	911
State Police	(575) 746-2703
City Police	(575) 746-2703
Sheriff's Office	(575) 746-9888
Fire Department	(575) 746-2701
Local Emergency Planning Committee	(575) 746-2122
New Mexico Oil Conservation Division	(575) 748-1283

Santa Fe

N.M. Emergency Response Commission (Santa Fe) 24 hrs	(505) 476-9600
NM State Emergency Operations Center	(505) 476 9635

National

National Energy Response Center (Washington)	(800) 424-8802

Medical

Flight for Life 4000 24th St. Lubbock, TX	(806) 743-9911
Aero care –R3, Box 49F, Lubbock, TX	(806) 747-8923
Med Flight Air Amb, 2301 Yale Blvd S.E. Alb,, NM	(505) 842-4433
SB Air Med Service, 2505 Clark Loop S.E., Alb., NM	(505) 843-4949

Other

Boots and Coots Wildcat Service	(800) 256-9688
Cudd Pressure Control	(432) 699-0139
Halliburton	(575) 746-2757
B.J. Services	(575) 746 3569

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN
PERMIAN BASIN

This Hydrogen Sulfide Drilling Operations Plan shall be implemented prior to drilling out from under casing (surface or intermediate) set above potential H_2S bearing formations.

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 and characteristics of hydrogen sulfide (H_2S).
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H_2S 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 H_2S on metal components. If high tensile tubulars are to be used, personnel will 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 H_2S Drilling Operations Plan and the Public Protection Plan.

All personnel entering a location posted with the potential of Hydrogen Sulfide shall be required to carry documentation that they have received the proper training. (Training certificate typically valid for 1 year after training)

II. Site Specific Information:

Upon installation of H2S Safety Equipment and Systems on a well, and prior to drilling out of casing above potential Hydrogen Sulfide bearing formations a briefing with all personnel on location shall be held. The briefing should include a review of H_2S Drilling Operations Plan and the Public Protection Plan. This briefing should include site specific elements such as;

- Identification of the briefing areas.
- Discussion of rig orientation and prevailing wind direction.

- Identification of access roads, including secondary egress.
- Confirmation that all personnel have current training.
- Formation tops of potential H2S bearing formations.

The H_2S Drilling Operations Plan and the Public Protection Plan shall be available at the well site.

III. H_2S Safety Equipment and Systems

1. Well Control Equipment that will be installed prior to drilling out of casing above potential Hydrogen Sulfide bearing formations:
   A. Choke manifold with a minimum of one adjustable choke.
   B At least one choke line must be directed away from the drilling unit and secured at the end. (For closed-loop operations this should be directed to containment bin at the back edge of the location.)
   C Blind rams and pipe rams to accommodate all pipe sizes
   D Annular preventor
   E Properly sized closing unit.

1.1 Well control equipment to be available to install as needed should H2S be encountered;
   .A Flare line with electronic igniter or continuous pilot.
   B Mud gas separator
   C Flare gun with flares.
   D One portable S02 monitor positioned near flare line.

2. Protective equipment for essential personnel:
   A. 30-minute air pack units located in the dog house and at briefing areas.

3. H_2S detection and monitoring equipment:
   A. Two portable H_2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H_2S levels of 20 ppm are reached.

4. Visual warning systems:
   A. Wind direction indicators.
   B. Caution/Danger signs 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.

5. Mud program:
   A. The mud program shall be designed to minimize the volume of H_2S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H_2S scavengers will minimize hazards when penetrating H_2S-bearing zones.
   B. A mud-gas separator and an H_2S gas buster will be utilized as required if H2S is encountered.

6. Metallurgy:
   A. All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H_2S service.
   B. All elastomers used for packing and seals shall be H_2S trim.

7. Communication:
   A. Communications shall be available on the rig site and in company vehicles. Communications equipment may include one or more of the following; land lines, satellite phones, cellular telephone and 2-way radios.

PUBLIC PROTECTION PLAN FOR HYDROGEN SULFIDE (H_2S)
(For use in conjunction with Hydrogen Sulfide Drilling Operations Plan)

100 ppm H_2S concentration shall trigger activation of this plan.
Assumed 100 ppm Radius of Exposure (ROE) = 3000'

Emergency Procedures

In the event of a release of gas containing 100 ppm H_2S, the first responder(s) must;

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H_2S monitors and air packs in order to safely conduct efforts to control the release.
- Use the "buddy system" to ensure no injuries during the response operations.
- Take precautions to avoid personal injury during the operation.
- Contact operator and/or local officials to aid in operations. See list of phone numbers attached.
- Have received training in the
    a. Detection of H_2S
    b. Measures for protection against H_2S gas
    c. Equipment used for protection and emergency response to H_2S gas

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the New Mexico State Police may be involved. The New Mexico State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of gas.

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = 1.0	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1.0	2 ppm	N/A	1000 ppm

Contacting Authorities

Apache Corporation's personnel must liaison with local and state agencies to ensure proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours after the release. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Apache Corporation' response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

SURFACE USE PLAN

1. **Existing Roads:**

   Ex A is the OCD Form C-102, Survey Plat, shows the proposed well site as staked.
   Ex B-1 is a reproduction of Lea County, New Mexico, General Highway map. From the intersection of St. Hwy 249 and St. Hwy 172 (Hagerman/Caprock highways), go south approximately 1.6 miles, turn east-NE and go approximately 0.6 miles, veer east approximately 0.6 miles. The location is staked 1400 feet to the south.
   Ex B-2 is a survey of the anticipated Access Road to the well location. The survey has directions to location. All existing roads will be maintained in a condition to or better than the current conditions. Any new roads will be constructed to BLM specifications.
   Ex C is the Vicinity Map.
   Ex D is an indication of a 1 Mile Radius map in relation to a horizontal wellbore.

2. **Planned Access Roads:** There is 1240 feet of proposed access road onto the arch-survey location.

3. **Locations of Existing Wells in a One-mile radius – Exhibit 'D'**

   1. Water Wells – None known.
   2. Disposal wells – None known.
   3. Drilling wells – None known.
   4. Producing wells- See Exhibit. E.
   5. Abandoned wells – See Exhibit E.

4. **If a completion on this well is a producer**, Marshall & Winston Inc. will furnish maps or plats showing on site facilities or off site facilities if needed. This will be accompanied by a Sundry Notice.

5. **Location and Type of Water Supply:**
   Water will be purchased from the rancher's water wells trucked over the access roads. Other sources of water may be needed, if so, the route access roads will be used.

6. **Source of Construction Material:**
If possible, construction will be obtained from the Kizer Ranch. If additional material is needed, it will be purchased from a local source. Material will be transported over the access route as shown on **Exhibits `B-1 through B-4'**.

7. **Methods of Handling Waste Material:**
A. Drill cuttings will be separated by a series of solids removal equipment and stored in steel containment pits and then hauled to a state- approved disposal facility.
B. All trash, junk and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary land fill.
C. Salts remaining after completion of well will be picked up by supplier including broken sacks.
D. Sewage from any living quarters will drain into holding tanks and be cleaned out periodically. A Porta-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of the well.
E. Drilling fluids will be contained in the steel pits in a closed circulating system. Fluids will be cleaned and reused. Water produced during testing will be contained in the steel pits and disposed of at a state approved disposal facility. The primary anticipated disposal site is Gandy Marley Incorporated, Route 45 Crossroads, Hwy 380. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

8. **Ancillary Facilities:**
A. No camps or airstrips to be constructed.

9. **Well Site Layout:**
A. Exhibit '7 ', Rig Layout.
B. Mud pits in the closed circulating system will be steel pits and the cuttings will be stored in steel containment pits.
C. Cuttings will be stored in steel pits until they are hauled to a state-approved disposal facility
D. If the well is a producer, those areas of the location not essential top production facilities will be reclaimed and seeded per BLM requirements.

10. Plans for Restoration of Surface:

Rehabilitation of the location will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be notified in certain circumstances to prevent inundation of the location's pad and surface facilities.

After the area has been shaped and contoured, topsoil form the spoil pile will be loaced overt the disturbed area to the extent possible. Re-vegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be re-contoured to match the existing terrain. Topsoil will be spread to the extent possible. Re-vegetation will comply with BLM standards.

Should the well be a producer, the previously noted procedures will apply to those areas which are not required form production facilities.

11. Other Information:

A. Topography consists of a sloping plane with loose tan sands. Vegetation is mainly Yucca, Mesquite and Shin Oak.

B. The well site is on the surface owned by Shannon Kizer. The land is used mainly for cattle ranching, horse grazing and oil and gas production.

C. An archaeological survey will be conducted on the location and proposed roads, and this report will be filed with the Bureau of Land Management in the Roswell BLM office.

D. There is no residential dwelling within 1 ½ miles of this location.

12. Surface and Mineral Ownership: The surface is owned by Shannon Kizer, POB 56, Pep, NM 88216, (575) 675-2321. A Surface Owner's Agreement between Mr. Kizer and Marshall and Winston Incorporated has been made. The minerals are owned by the United States and is managed by the BLM.

Proposal No: 556451970A

Marshall & Winston Inc
Cactus Federal 25-1H

Chaves, New Mexico
October 19, 2010

Well Proposal

Prepared for:
Mr. Gabe Herrera

Prepared by:
Michael Beggs
Region Engineer
Midland, Texas

THE BLUE WELLBORE℠
Makes better wells

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

Service Representatives:
Bubba Sullivan
Manager, City Sales
Odessa, Texas

Operator Name:	Marshall & Winston Inc
Well Name:	Cactus Federal 25-1H
Job Description:	13-3/8" Conductor Casing
Date:	October 19, 2010

Proposal No: 556451970A

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
17.500 HOLE	350	350

SUSPENDED PIPES

DIAMETER (in)		WEIGHT	DEPTH(ft)	
O.D.	I.D.	(lbs/ft)	MEASURED	TRUE VERTICAL
13.375	12.715	48	350	350

Float Collar set @	310 ft
Mud Density	10.00 ppg
Mud Type	Brine Based
Est. Static Temp.	82 ° F
Est. Circ. Temp.	80 ° F

VOLUME CALCULATIONS

350 ft	x	0.6946 cf/ft	with	100 %	excess	=	486.2 cf
40 ft	x	0.8818 cf/ft	with	0 %	excess	=	35.3 cf (inside pipe)
			TOTAL SLURRY VOLUME			=	521.5 cf
						=	93 bbls

TOC = 0 ft

Operator Name:	Marshall & Winston Inc
Well Name:	Cactus Federal 25-1H
Job Description:	13-3/8" Conductor Casing
Date:	October 19, 2010

Proposal No: 556451970A

FLUID SPECIFICATIONS

FLUID	VOLUME CU-FT		VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Cement Slurry	522	/	1.35	= 400 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 56.2% Fresh Water
Displacement				48.7 bbls Displacement Fluid

CEMENT PROPERTIES

	SLURRY NO.1
Slurry Weight (ppg)	14.80
Slurry Yield (cf/sack)	1.35
Amount of Mix Water (gps)	6.34
Amount of Mix Fluid (gps)	6.34

Operator: Marshall & Winston Inc
Well Name: Cactus Federal 25-1H
Job Description: 13-3/8" Conductor Casing
Date: October 19, 2010

Proposal No: 556451970A

PRICE ESTIMATE

Product Material

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
400	94lbs	Class C Cement	5,408.00
752	lbs	Calcium Chloride	366.98
100	lbs	Cello Flake	194.00
1	ea	Cement Plug, Rubber, Top 13-3/8 in	468.00
3	gals	FP-6L	119.10
3	lbs	Static Free	46.44
		Product Material Subtotal:	$6,602.52

Service Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	ea	Personnel Per Diem Chrg - Cement Svc	161.50
422	cu ft	Bulk Materials Service Charge	703.90
		Service Charges Subtotal:	$865.40

Equipment

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	4hrs	Cement Pumping, 0 - 1000 ft	1,060.00
1	job	Cement Head	254.00
1	job	Data Acquisition, Cement, Standard	654.00
70	miles	Mileage, Heavy Vehicle	254.80
70	miles	Mileage, Auto, Pick-Up or Treating Van	144.20
		Equipment Subtotal:	$2,367.00

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.
The technical data contained in this proposal is based on the best information available at the time of writing and is subject to further analysis and testing. The pricing data contained in this proposal are estimates only and may vary depending on the work actually performed. Pricing does not include federal, state and local taxes or royalties.
This quotation is based on BJ Services Company being awarded the work on a first call basis and within thirty (30) days of the proposal date. These prices will be subject to review if the work is done after thirty (30) days from the proposal date, or on a second or third call basis.

Operator:	Marshall & Winston Inc
Well Name:	Cactus Federal 25-1H
Job Description:	13-3/8" Conductor Casing
Date:	October 19, 2010

Proposal No: 556451970A

PRICE ESTIMATE

Freight/Delivery Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
673	tonmi	Bulk Delivery, Dry Products	815.68
		Freight/Delivery Charges Subtotal:	$815.68
		TOTAL:	**$10,650.60**

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.
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Operator Name: Marshall & Winston Inc
Well Name: Cactus Federal 25-1H
Job Description: 9-5/8" Intermediate Casing
Date: October 19, 2010

Proposal No: 556451970A

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
12.715 CASING	350	350
12.250 HOLE	3,950	3,950

SUSPENDED PIPES

DIAMETER (in)		WEIGHT	DEPTH(ft)	
O.D.	I.D.	(lbs/ft)	MEASURED	TRUE VERTICAL
9.625	8.921	36	3,950	3,950

Float Collar set @	3,910 ft
Mud Density	*9.50 ppg*
Mud Type	Brine Based
Est. Static Temp.	106 ° F
Est. Circ. Temp.	98 ° F

VOLUME CALCULATIONS

350 ft	x	0.3765 cf/ft	with	0 %	excess	=	131.8 cf
2,800 ft	x	0.3132 cf/ft	with	100 %	excess	=	1753.9 cf
800 ft	x	0.3132 cf/ft	with	50 %	excess	=	375.8 cf
40 ft	x	0.4341 cf/ft	with	0 %	excess	=	17.4 cf (inside pipe)
			TOTAL SLURRY VOLUME			=	2278.8 cf
						=	406 bbls

TOC Lead: 0 ft
TOC Tail: 3150 ft

Operator Name:	Marshall & Winston Inc
Well Name:	Cactus Federal 25-1H
Job Description:	9-5/8" Intermediate Casing
Date:	October 19, 2010

Proposal No: 556451970A

FLUID SPECIFICATIONS

FLUID	VOLUME CU-FT		VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Lead Slurry	1886	/	2.45	= 780 sacks (50:50) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.25 lbs/sack Cello Flake + 5 lbs/sack LCM-1 + 10% bwoc Bentonite + 134.8% Fresh Water
Tail Slurry	393	/	1.34	= 300 sacks Class C Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 56.1% Fresh Water
Displacement				302.3 bbls Displacement Fluid

CEMENT PROPERTIES

	SLURRY NO.1	SLURRY NO.2
Slurry Weight (ppg)	11.80	14.80
Slurry Yield (cf/sack)	2.45	1.34
Amount of Mix Water (gps)	13.57	6.33
Amount of Mix Fluid (gps)	13.57	6.33

Operator: Marshall & Winston Inc
Well Name: Cactus Federal 25-1H
Job Description: 9-5/8" Intermediate Casing
Date: October 19, 2010

Proposal No: 556451970A

PRICE ESTIMATE

Product Material

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
690	94lbs	Class C Cement	9,328.80
282	lbs	Calcium Chloride	137.62
6552	lbs	Bentonite	1,310.40
3900	lbs	LCM-1	1,809.60
270	lbs	Cello Flake	523.80
390	74lbs	Poz (Fly Ash)	2,137.20
4410	lbs	Sodium Chloride	864.36
1	ea	Cement Plug, Rubber, Top 9-5/8 in	153.60
3	gals	FP-6L	119.10
3	lbs	Static Free	46.44
		Product Material Subtotal:	$16,430.92

Service Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	ea	Personnel Per Diem Chrg - Cement Svc	161.50
1350	cu ft	Bulk Materials Service Charge	2,251.80
		Service Charges Subtotal:	$2,413.30

Equipment

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	6hrs	Cement Pumping, 3001 - 4000 ft	1,900.00
1	job	Cement Head	254.00
1	job	Data Acquisition, Cement, Standard	654.00
140	miles	Mileage, Heavy Vehicle	509.60
70	miles	Mileage, Auto, Pick-Up or Treating Van	144.20
1	job	Field Storage Bin, Up To 5 Days	508.00
		Equipment Subtotal:	$3,969.80

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.
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Operator:	Marshall & Winston Inc
Well Name:	Cactus Federal 25-1H
Job Description:	9-5/8" Intermediate Casing
Date:	October 19, 2010

Proposal No: 556451970A

PRICE ESTIMATE

Freight/Delivery Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1910	tonmi	Bulk Delivery, Dry Products	2,314.92
		Freight/Delivery Charges Subtotal:	$2,314.92
		TOTAL:	**$25,128.94**

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.
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This quotation is based on BJ Services Company being awarded the work on a first call basis and within thirty (30) days of the proposal date. These prices will be subject to review if the work is done after thirty (30) days from the proposal date, or on a second or third call basis.

Operator Name: Marshall & Winston Inc
Well Name: Cactus Federal 25-1H
Job Description: 7" Production Casing
Date: October 19, 2010

Proposal No: 556451970A

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
9.001 CASING	3,950	3,950
8.750 HOLE	9,002	8,790

SUSPENDED PIPES

DIAMETER (in)		WEIGHT	DEPTH(ft)	
O.D.	I.D.	(lbs/ft)	MEASURED	TRUE VERTICAL
7.000	6.094	32	9,002	8,790

Float Collar set @	8,962 ft
Mud Density	8.90 ppg
Est. Static Temp.	142 ° F
Est. Circ. Temp.	128 ° F

VOLUME CALCULATIONS

3,950 ft	x	0.1746 cf/ft	with	0 % excess	=	689.8 cf
3,550 ft	x	0.1503 cf/ft	with	50 % excess	=	800.5 cf
1,502 ft	x	0.1503 cf/ft	with	50 % excess	=	338.7 cf
40 ft	x	0.2026 cf/ft	with	0 % excess	=	8.1 cf (inside pipe)
			TOTAL SLURRY VOLUME		=	1837.1 cf
					=	327 bbls

TOC Lead: 0 ft
TOC Tail: 7500 ft

Operator Name: Marshall & Winston Inc
Well Name: Cactus Federal 25-1H
Job Description: 7" Production Casing
Date: October 19, 2010

Proposal No: 556451970A

FLUID SPECIFICATIONS

Pre-Flush

Spacer — 10.0 bbls Fresh Water @ 8.34 ppg

FLUID	VOLUME CU-FT		VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Lead Slurry	1490	/	2.45	= 610 sacks (50:50) Poz (Fly Ash):Class H Cement + 0.125 lbs/sack Cello Flake + 5 lbs/sack LCM-1 + 10% bwoc Bentonite + 0.2% bwoc FL-52A + 136.3% Fresh Water
Tail Slurry	347	/	1.19	= 300 sacks Class H Cement + 1% bwoc FL-62 + 0.4% bwoc FL-52A + 45.8% Fresh Water
Displacement				323.3 bbls Displacement

CEMENT PROPERTIES

	SLURRY NO.1	SLURRY NO.2
Slurry Weight (ppg)	11.60	15.60
Slurry Yield (cf/sack)	2.45	1.19
Amount of Mix Water (gps)	13.73	5.16

SLURRIES WILL BE TESTED BEFORE PUMPING JOB.

Operator: Marshall & Winston Inc
Well Name: Cactus Federal 25-1H
Job Description: 7" Production Casing
Date: October 19, 2010

Proposal No: 556451970A

PRICE ESTIMATE

Product Material

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
605	94lbs	Class H Cement	6,655.00
5124	lbs	Bentonite	1,024.80
3050	lbs	LCM-1	1,415.20
77	lbs	Cello Flake	149.38
305	74lbs	Poz (Fly Ash)	1,671.40
1	ea	Cement Plug, Rubber, Top 7 in	92.80
216	lbs	FL-52A	2,211.84
4	gals	FP-6L	158.80
282	lbs	FL-62	2,312.40
1	gals	S-150	16.00
4	lbs	Static Free	61.92
		Product Material Subtotal:	$15,769.54

Service Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	ea	Personnel Per Diem Chrg - Cement Svc	161.50
1076	cu ft	Bulk Materials Service Charge	1,794.77
		Service Charges Subtotal:	$1,956.27

Equipment

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	8hrs	Cement Pumping, 9001 - 10000 ft	4,480.00
1	job	Cement Head	254.00
1	job	Data Acquisition, Cement, Standard	654.00
70	miles	Mileage, Heavy Vehicle	254.80
70	miles	Mileage, Auto, Pick-Up or Treating Van	144.20
		Equipment Subtotal:	$5,787.00

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.
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This quotation is based on BJ Services Company being awarded the work on a first call basis and within thirty (30) days of the proposal date. These prices will be subject to review if the work is done after thirty (30) days from the proposal date, or on a second or third call basis.

Operator: Marshall & Winston Inc
Well Name: Cactus Federal 25-1H
Job Description: 7" Production Casing
Date: October 19, 2010

Proposal No: 556451970A

PRICE ESTIMATE

Freight/Delivery Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1543	tonmi	Bulk Delivery, Dry Products	1,870.12
		Freight/Delivery Charges Subtotal:	$1,870.12
		TOTAL:	**$25,382.93**

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Operator Name:	Marshall & Winston Inc
Well Name:	Cactus Federal 25-1H
Job Description:	4-1/2" Liner
Date:	October 19, 2010

Proposal No: 556451970A

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
6.094 CASING	9,002	8,790
6.125 HOLE	13,252	8,790

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
4.500	4.000	11.6	13,252	8,700

Drill Pipe 3.5 (in) OD, 2.764 (in) ID, 13.3 (lbs/ft) set @	8,850 ft
Drill Pipe 4.5 (in) OD, 4.0 (in) ID, 11.6 (lbs/ft) set @	13,252 ft
Depth to Top of Liner	8,850 ft
Float Collar set @	13,252 ft
Mud Density	8.80 ppg
Mud Type	Water Based
Est. Static Temp.	146 ° F
Est. Circ. Temp.	129 ° F

VOLUME CALCULATIONS

850 ft	x	0.2026 cf/ft	with	0 % excess	=	172 cf
152 ft	x	0.0921 cf/ft	with	0 % excess	=	14 cf
4,250 ft	x	0.0942 cf/ft	with	110 % excess	=	840 cf
				TOTAL SLURRY VOLUME	=	1,027 cf
					=	183 bbls

TOC: 8000 ft

Operator Name:	Marshall & Winston Inc
Well Name:	Cactus Federal 25-1H
Job Description:	4-1/2" Liner
Date:	October 19, 2010

Proposal No: 556451970A

FLUID SPECIFICATIONS

Pre-Flush

Spacer — 10.0 bbls Fresh Water @ 8.34 ppg

FLUID	VOLUME CU-FT		VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Cement Slurry	1027	/	1.33	= 775 sacks (50:50) Poz (Fly Ash):Class H Cement + 3% bwow Sodium Chloride + 0.1% bwoc R-3 + 0.2% bwoc CD-32 + 2% bwoc Bentonite + 0.3% bwoc Sodium Metasilicate + 0.5% bwoc FL-52A + 61.2% Fresh Water

Displacement — 134.1 bbls Displacement

CEMENT PROPERTIES

	SLURRY NO.1
Slurry Weight (ppg)	14.00
Slurry Yield (cf/sack)	1.33
Amount of Mix Water (gps)	6.16
Estimated Pumping Time - 70 BC (HH:MM)	3:15
Free Water (mls) @ ° F @ 45 ° Angle	0.0
Fluid Loss (cc/30min) at 1000 psi and 145 ° F	212.0

RHEOLOGIES

FLUID		TEMP	600	300	200	100	6	3
Cement Slurry	@	80 ° F	142	92	73	52	15	10
Cement Slurry	@	145 ° F	105	78	62	46	16	10

Conduct Field Blend tests prior to the job. Email resullts to Mike Beggs.

Customer has requested:

-Thickening time range: 3-3.5 hrs

-0 Free water

-Fluid Loss: 200-500 cc's

Operator: Marshall & Winston Inc
Well Name: Cactus Federal 25-1H
Job Description: 4-1/2" Liner
Date: October 19, 2010

Proposal No: 556451970A

PRICE ESTIMATE

Product Material

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
388	94lbs	Class H Cement	4,268.00
1302	lbs	Bentonite	260.40
196	lbs	Sodium Metasilicate	305.76
66	lbs	R-3	92.14
388	74lbs	Poz (Fly Ash)	2,126.24
1194	lbs	Sodium Chloride	234.02
326	lbs	FL-52A	3,338.24
131	lbs	CD-32	662.86
4	gals	FP-6L	158.80
1	gals	S-150	16.00
4	lbs	Static Free	61.92
		Product Material Subtotal:	$11,524.38

Service Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	ea	Personnel Per Diem Chrg - Cement Svc	161.50
832	cu ft	Bulk Materials Service Charge	1,387.78
		Service Charges Subtotal:	$1,549.28

Equipment

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	8hrs	Cement Pumping, 13001 - 14000 ft	10,400.00
1	job	Cement Head	254.00
1	job	Data Acquisition, Cement, Standard	654.00
140	miles	Mileage, Heavy Vehicle	509.60
70	miles	Mileage, Auto, Pick-Up or Treating Van	144.20
		Equipment Subtotal:	$11,961.80

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Operator: Marshall & Winston Inc
Well Name: Cactus Federal 25-1H
Job Description: 4-1/2" Liner
Date: October 19, 2010

Proposal No: 556451970A

PRICE ESTIMATE

Freight/Delivery Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1195	tonmi	Bulk Delivery, Dry Products	1,448.34
		Freight/Delivery Charges Subtotal:	$1,448.34
		TOTAL:	**$26,483.80**

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PRODUCT DESCRIPTIONS

Bentonite
Commonly called gel, it is a clay material used as a cement extender and to control excessive free water.

CD-32
A patented, free-flowing, water soluble polymer that is an efficient and effective dispersant for primary and remedial cementing.

Calcium Chloride
A powdered, flaked or pelletized material used to decrease thickening time and increase the rate of strength development.

Cello Flake
Graded (3/8 to 3/4 inch) cellophane flakes used as a lost circulation material.

Class C Cement
Intended for use from surface to 6000 ft., and for conditions requiring high early strength and/or sulfate resistance.

Class H Cement
Class H cement is an API type, all purpose oil well cement which is used without modification in wells up to 8,000 ft. It possesses a moderate sulfate resistance. With the use of accelerators or retarders, it can be used in a wide range of well depths and temperatures.

FL-52A
A water soluble, high molecular weight fluid loss additive used in medium to low density slurries. It is functional from low to high temperature ranges.

FL-62
A patented dry blend of water soluble polymers that are formulated to control the loss of fluid during cementing operations. A dispersant and bonding additive are proportioned to deliver consistent performance and control fluid loss in primary and squeeze cementing applications at low to moderate temperatures.

LCM-1
A graded (8 to 60 mesh) naturally occurring hydrocarbon, asphaltite. It is used as a lost circulation material at low to moderate temperatures and will act as a slurry extender. Cement compressive strength is reduced.

Poz (Fly Ash)
A synthetic pozzolan, (primarily Silicon Dioxide). When blended with cement, Pozzolan can be used to create lightweight cement slurries used as either a filler slurry or a sulfate resistant completion cement.

R-3
A low temperature retarder used in a wide range of slurry formulations to extend the slurry thickening time.

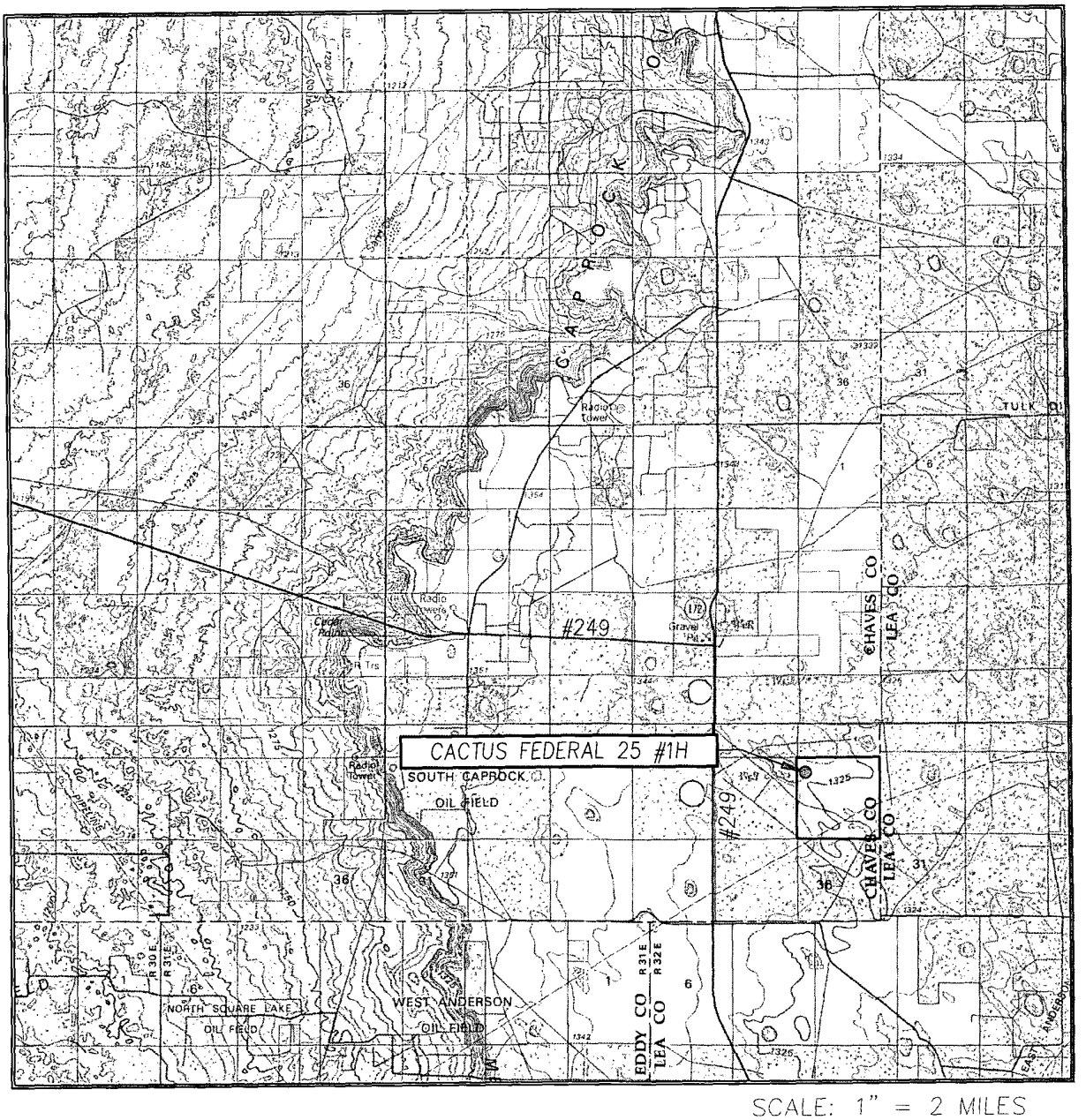
S-150
A blend of amphoteric and nonionic surfactants, recommended for use in water based stimulation treatments.

PRODUCT DESCRIPTIONS (Continued)

Sodium Chloride
At low concentrations, it is used to protect against clay swelling. At high concentrations, it is used to increase the

Sodium Metasilicate
An extender used to produce an economical, low density cement slurry.

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 25 TWP. 15-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY CHAVES STATE NEW MEXICO

DESCRIPTION 735' FNL & 330' FWL

ELEVATION 4359'

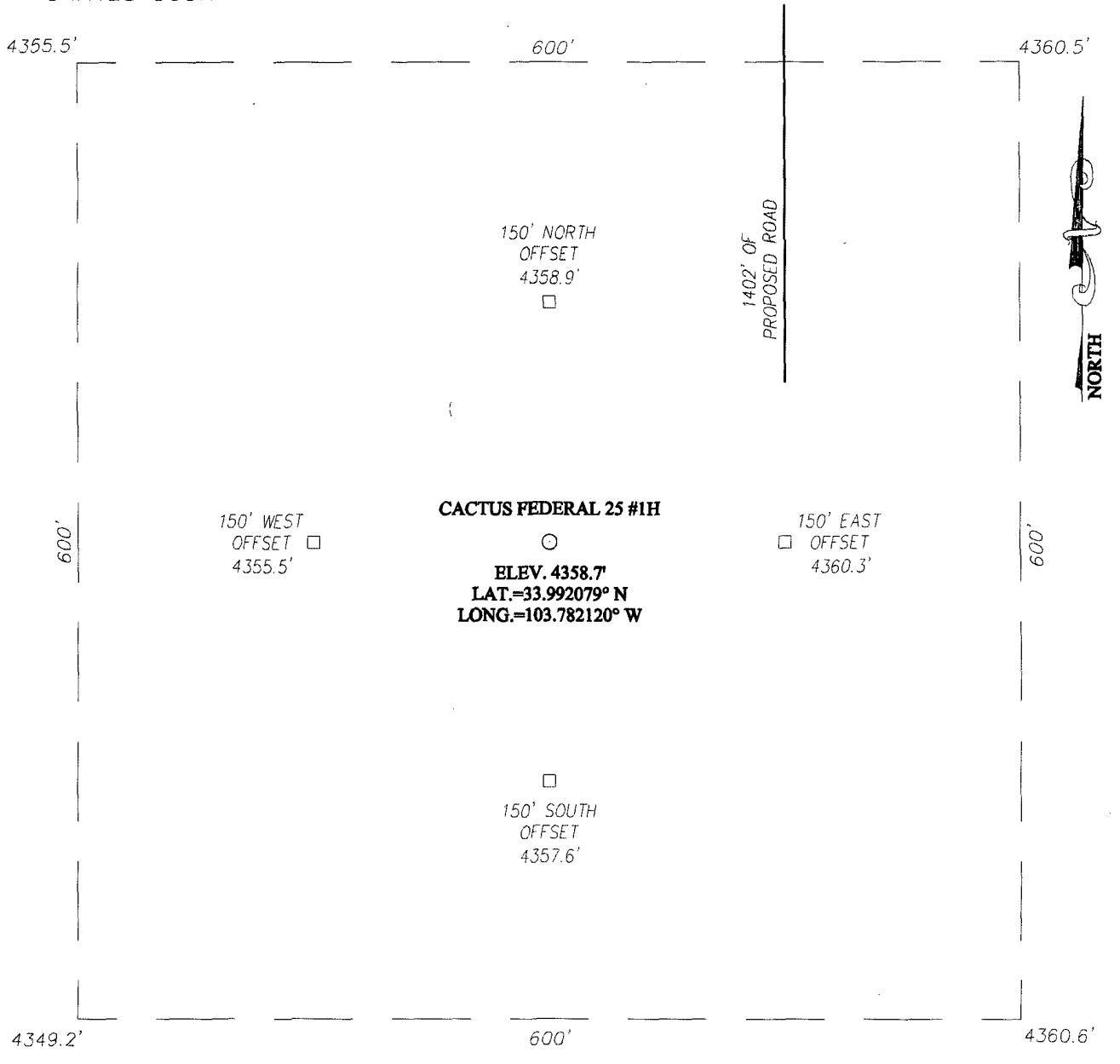
OPERATOR MARSHALL & WINSTON, INC.

LEASE CACTUS FEDERAL 25

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117

SECTION 25, TOWNSHIP 15 SOUTH, RANGE 31 EAST, N.M.P.M.

CHAVES COUNTY NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #249 AND ST. HWY. #172, GO SOUTH ON HWY. #172 APPROX. 1.6 MILES. TURN EAST-NORTHEAST AND GO APPROX. 0.6 MILES. VEER EAST APPROX. 0.6 MILES TO A PROPOSED ROAD SURVEY. FOLLOW PROPOSED ROAD SURVEY 1402 FEET SOUTH TO THIS LOCATION.

100 0 100 200 Feet

Scale: 1"=100'

PROVIDING SURVEYING SERVICES SINCE 1946

JOHN WEST SURVEYING COMPANY

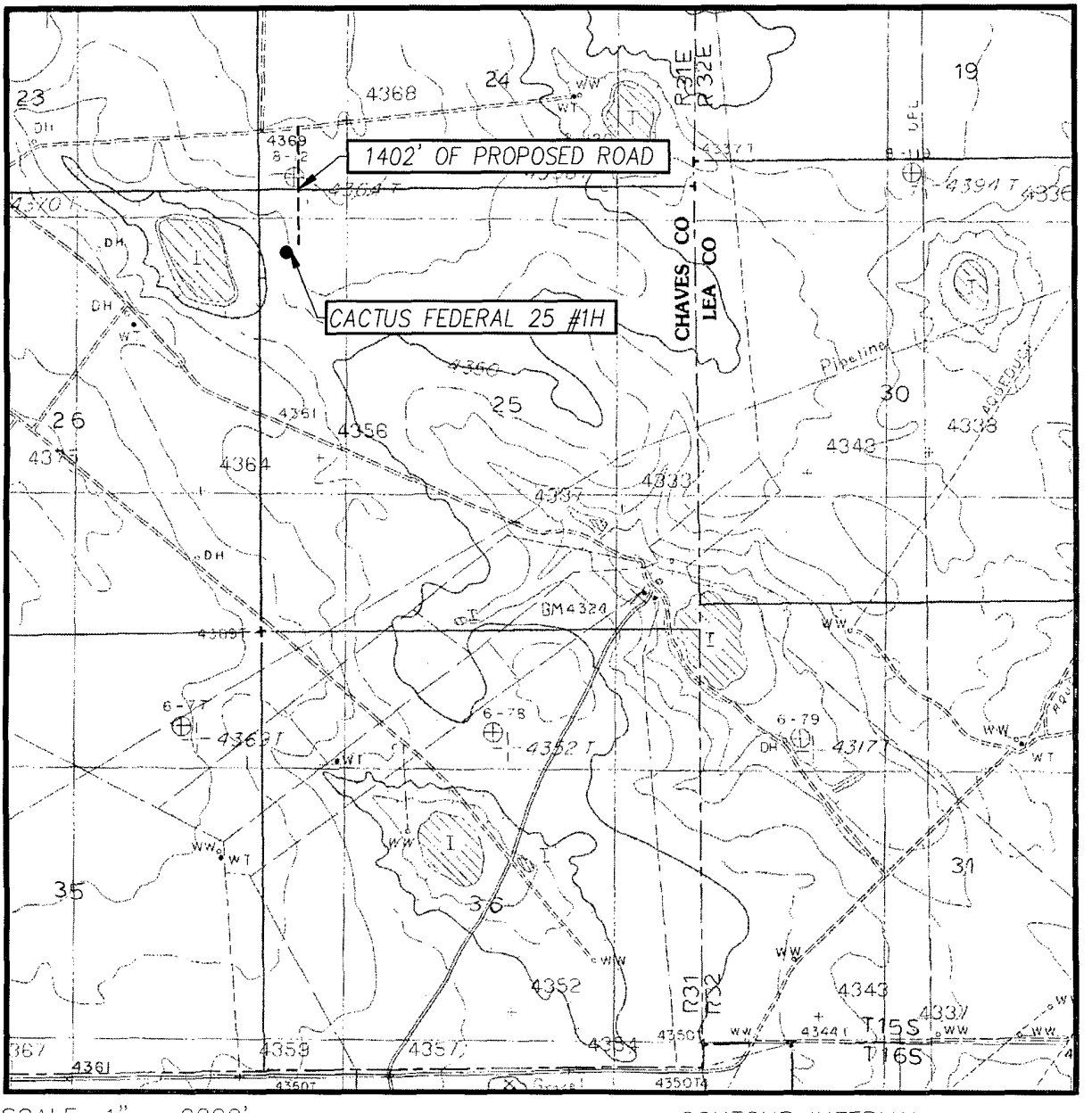
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117

MARSHALL & WINSTON, INC.

CACTUS FEDERAL 25 #1H WELL
LOCATED 735 FEET FROM THE NORTH LINE
AND 330 FEET FROM THE WEST LINE OF SECTION 25,
TOWNSHIP 15 SOUTH, RANGE 31 EAST, N.M.P.M.,
CHAVES COUNTY, NEW MEXICO

Survey Date: 12/21/10	Sheet 1 of 1 Sheets	
W.O. Number: 10.11.1892	Dr. By: LA	Rev 1: .
Date: 12/29/10	10111892	Scale: 1"=100'

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
MALJAMAR NE, N.M. – 10'
SUPPLEMENTAL CONTOUR – 5'

SEC. 25 TWP. 15-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY CHAVES STATE NEW MEXICO

DESCRIPTION 735' FNL & 330' FWL

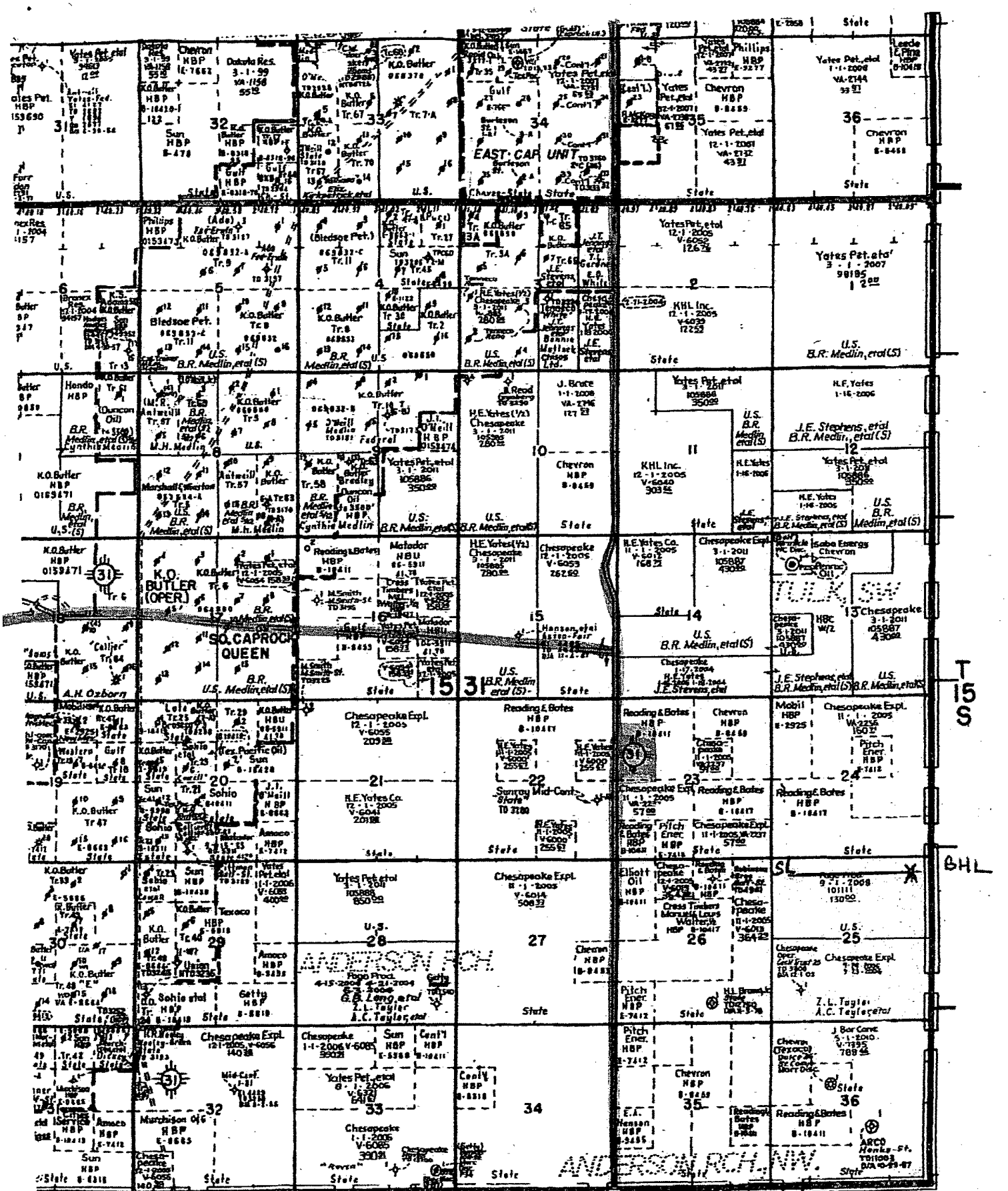
ELEVATION 4359'

OPERATOR MARSHALL & WINSTON, INC.

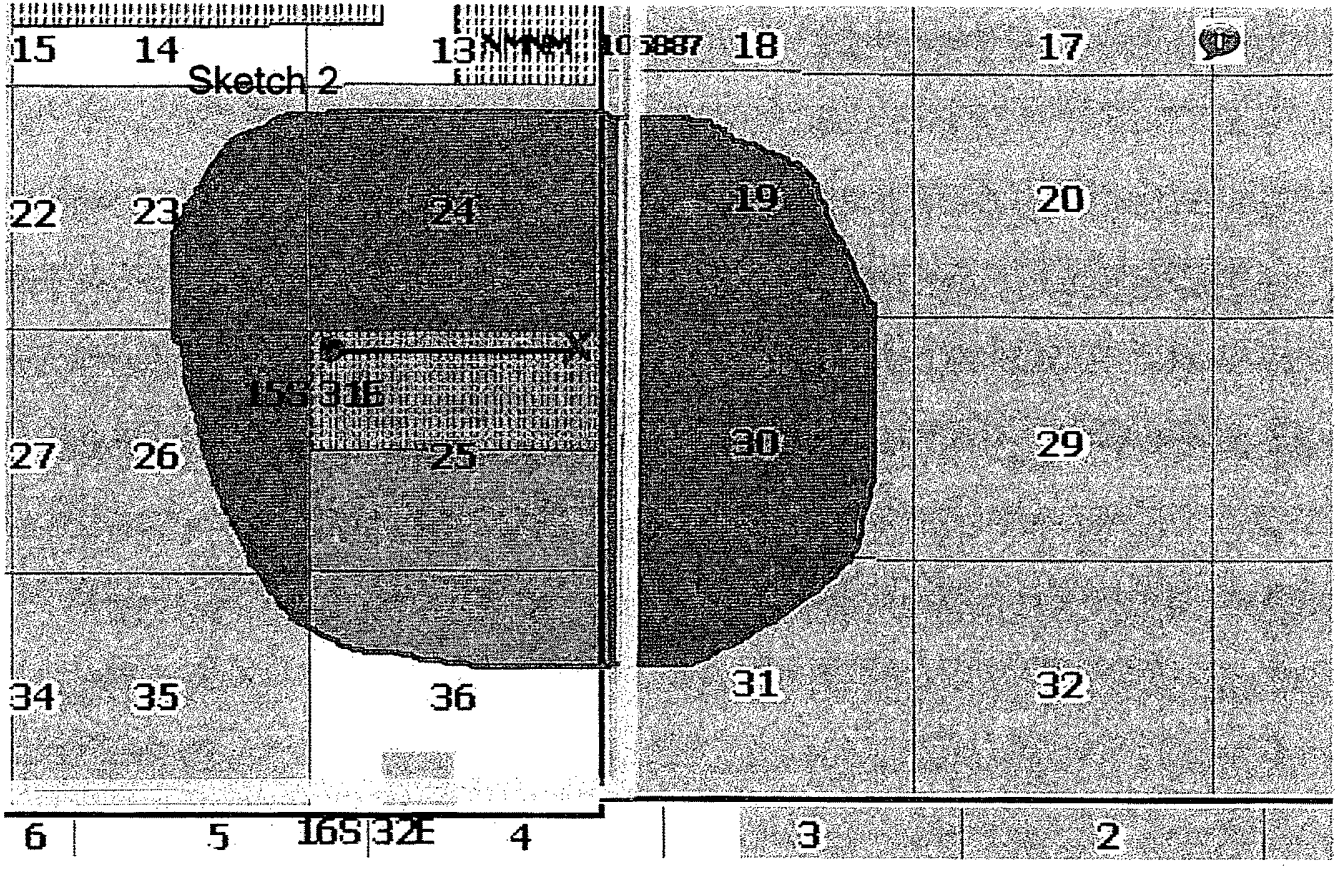
LEASE CACTUS FEDERAL 25

U.S.G.S. TOPOGRAPHIC MAP
MALJAMAR NE, N.M.

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117



Regional Map, EXHIBIT D-1



Estimated one-mile radius.

EXHIBIT D 2