11-866

Form 3160-3
(August 2007)

OCD Hobbs
HOBBS OCD
JAN 25 2012
RECEIVED

FORM APPROVED
OMB No 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No. NMLC 0067230 SHL and NMLC 0067982B BHL	
6 If Indian, Allotee or Tribe Name N/A	N/A
7 If Unit or CA Agreement, Name and No. N/A	
1a. Type of work: ☑ DRILL ☐ REENTER	
1b Type of Well ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	8. Lease Name and Well No. TJG Federal Com # 3 - 1H 39044
2 Name of Operator Marshall & Winston Inc. 241877	9 API Well No. 30-025-40421
3a Address POB 50880 Midland, TX 79710-0880	3b Phone No. (include area code) (432) 260-8650
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 400' FSL & 330' FEL Unit Letter P FWL JM 4/3 At proposed prod. zone 400' FSL & 330' ~~FEL~~ Unit Letter M	10 Field and Pool, or Exploratory Lusk Bone Springs EAST 41442
	11. Sec., T. R. M. or Blk. and Survey or Area Sec. 3, T. 19 S., R. 32 E
14 Distance in miles and direction from nearest town or post office* Approximately 30 miles West of Hobbs, NM 88240 and 30 miles East of Carlsbad, NM	12 County or Parish Lea / 13 State NM
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any)	16. No. of acres in lease 160 in LC 0067230 200 in LC 0067982B / 17. Spacing Unit dedicated to this well 160 acres
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19 Proposed Depth 9500 TVD PH - 10,700 13,909 MD / 20 BLM/BIA Bond No. on file NM 0877
21 Elevations (Show whether DF, KDB, RT, GL, etc.) 3674' at GL	22. Approximate date work will start* 08/30/2011 / 23. Estimated duration 30 to 45 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office)
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25 Signature Vernon D Dyer	Name (Printed/Typed) Vernon D. Dyer	Date 07/26/2011

Title Agent. Please contact Mr.Dyer at (575)420-0355 or Gary Gourley at (575)623-5880 for any necessary items or questions to complete this APD.

Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed)	Date JAN 23 2012
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

Capitan Controlled Water Basin

K #01126/12

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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
11885 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, New Mexico 87505

HOBBS OCD
JAN 25 2012
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Form C-102
Revised July 16, 2010
Submit to Appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

8/3 per operator

API Number	Pool Code	Pool Name
30-025-40421	41442	LUSK Bone Spring, EAST

Property Code	Property Name	Well Number
39044	TJG FEDERAL COM 3	1H

OGRID No.	Operator Name	Elevation
14187	MARSHALL & WINSTON, INC.	3674'

Surface Location

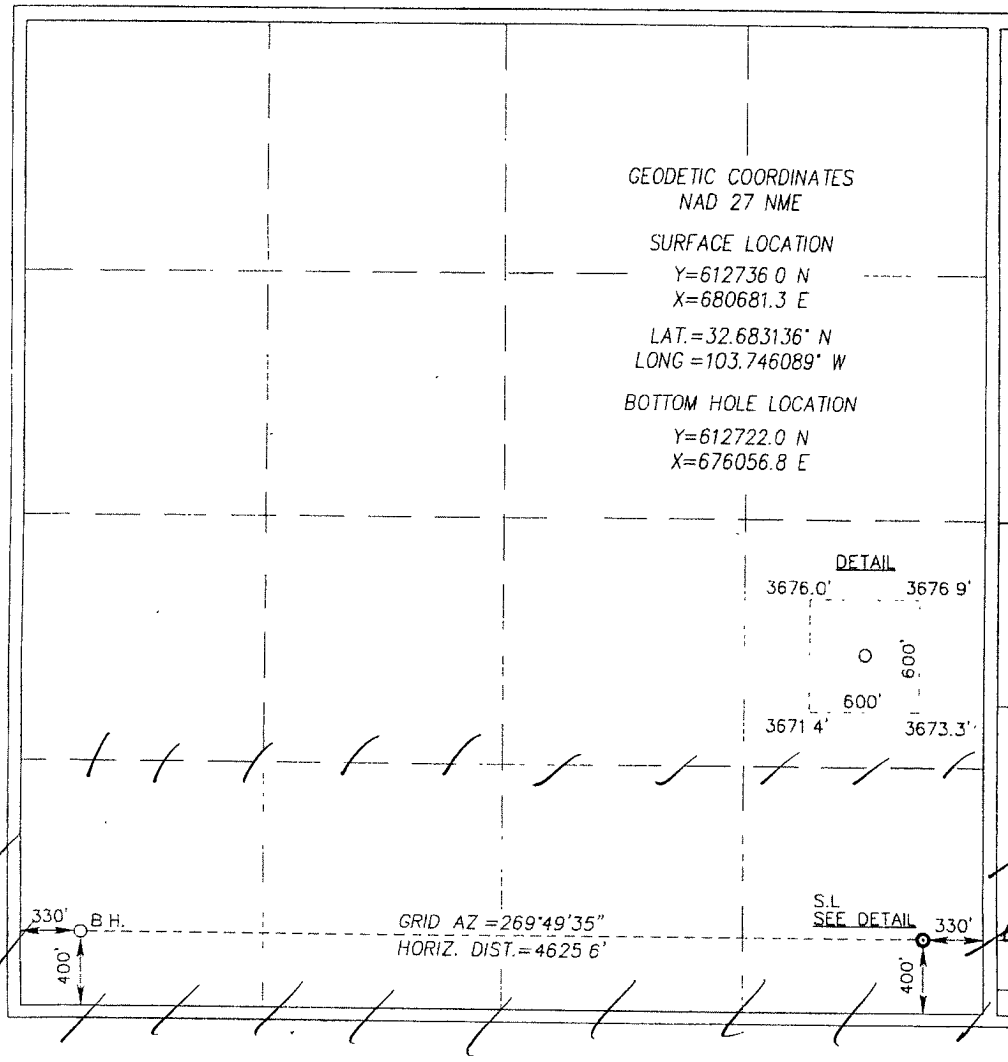
UL or lot No	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	3	19-S	32-E		400	SOUTH	330	EAST	LEA

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
M	3	19-S	32-E		400	SOUTH	330	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	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



OPERATOR CERTIFICATION

I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Vernon D. Dyer 7-26-2011
Signature Date

VERNON D. DYER
Printed Name

Vdyer01@cableone.net
E-mail Address

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.

MAY 23, 2011
Date of Survey

Signature & Seal of Professional Surveyor:

RONALD J. EIDSON NEW MEXICO 3239 REGISTERED PROFESSIONAL SURVEYOR

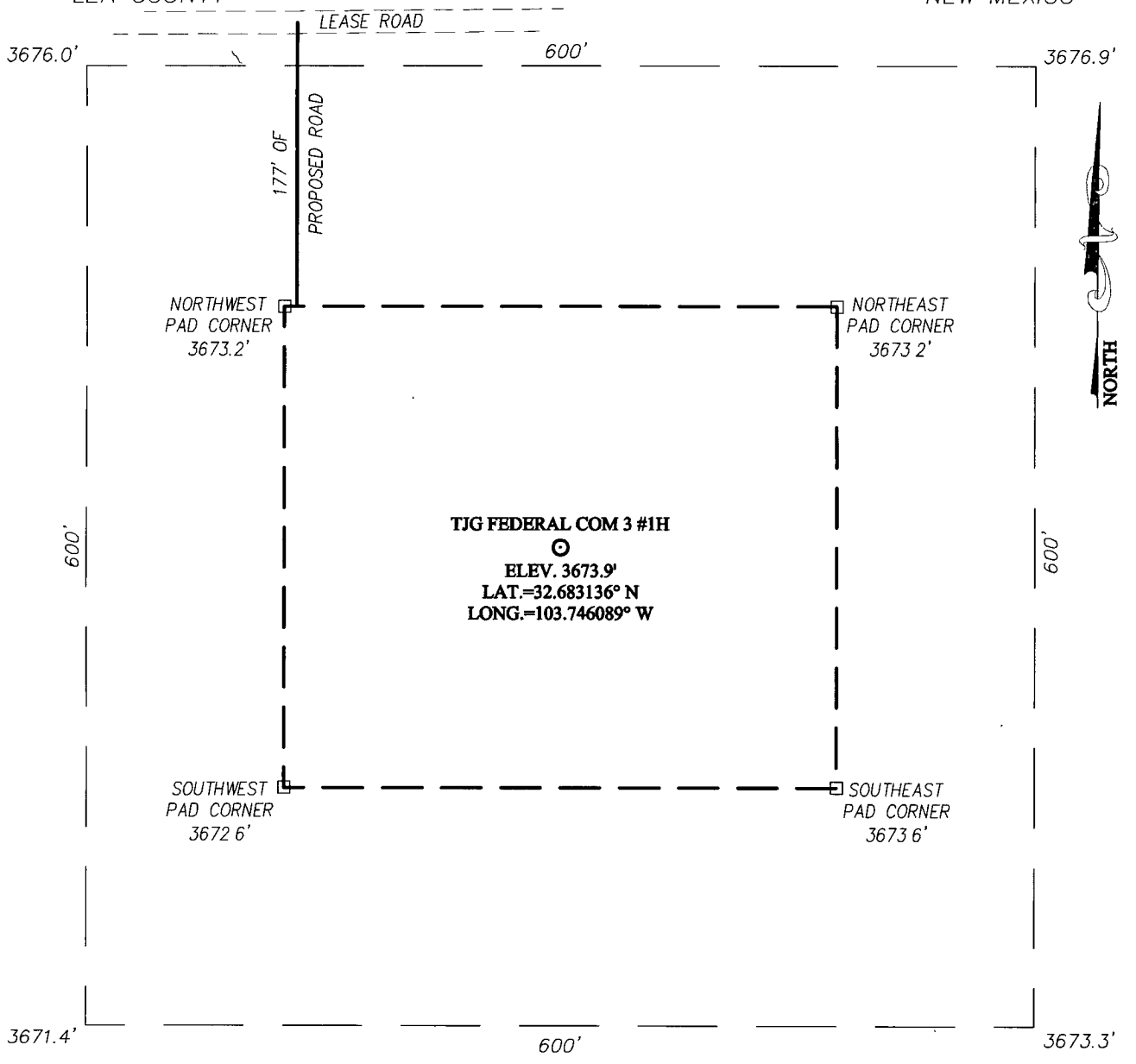
5/26/2011

Certificate Number: Gary G. Eidson 12641
Ronald J. Eidson 3239

DSS JWSC W.O.: 11.11.1057

SECTION 3, TOWNSHIP 19 SOUTH, RANGE 32 EAST, N.M.P.M.

LEA COUNTY NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF HWY #529 AND CO RD #H126 (MALJAMAR RD.), GO SOUTH ON CO. RD. #H126 (MALJAMAR RD.) APPROX. 8.0 MILES. TURN LEFT AND GO NORTHEAST APPROX. 2.6 MILES, TURN RIGHT AND GO SOUTHEAST APPROX. 0.3 MILES. TURN RIGHT AND GO SOUTH APPROX. 0.2 MILES. TURN LEFT AND GO EAST APPROX. 0.3 MILES TO A PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY STAKES SOUTH APPROX. 177 FEET. THIS LOCATION STAKE IS APPROX. 230 FEET SOUTHEAST.

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

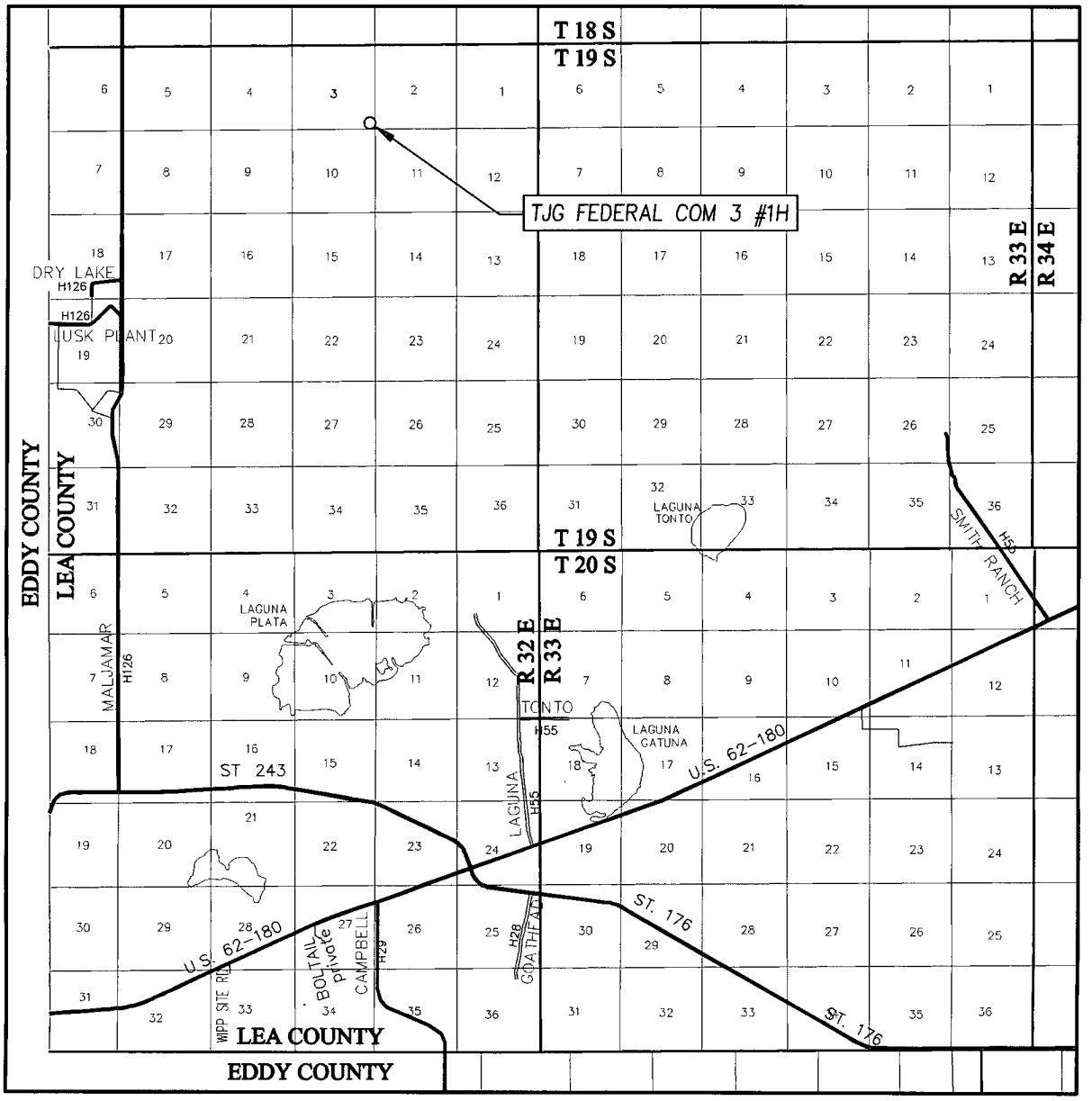
(575) 393-3117

MARSHALL & WINSTON, INC.

TJG FEDERAL COM 3 #1H WELL
LOCATED 400 FEET FROM THE SOUTH LINE
AND 330 FEET FROM THE EAST LINE OF SECTION 3,
TOWNSHIP 19 SOUTH, RANGE 32 EAST, N M P.M.,
LEA COUNTY, NEW MEXICO

Survey Date 5/23/11	Sheet 1 of 1 Sheets		
W.O. Number: 11.11.1057	Dr. By: DSS	Rev 1:	
Date: 5/25/11	Rel WO:	11111057	Scale: 1"=100'

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 3 TWP. 19-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

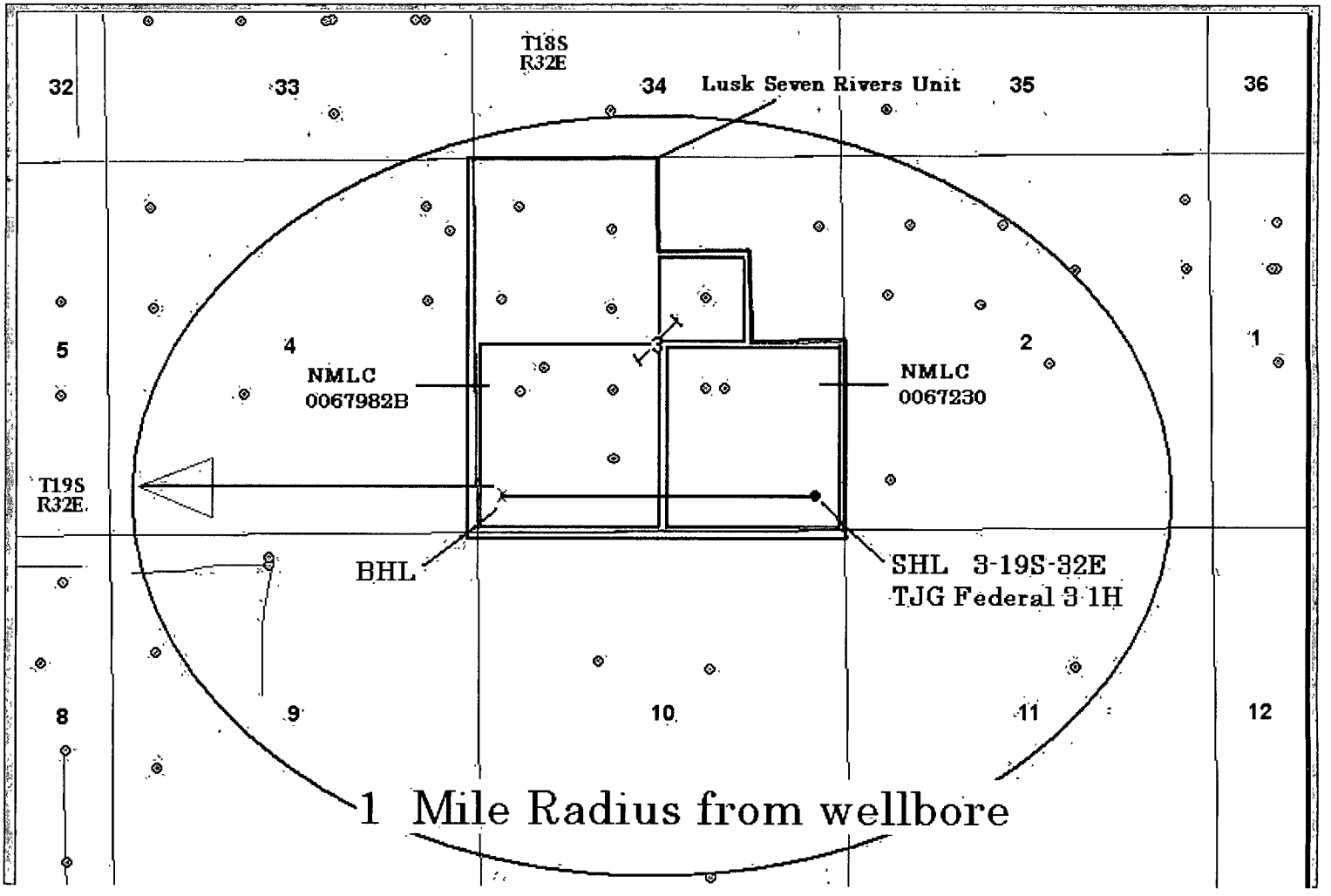
DESCRIPTION 400' FSL & 330' FEL

ELEVATION 3674'

OPERATOR MARSHALL & WINSTON, INC.

LEASE TJG FEDERAL COM 3

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


T18S
R32E
32
33
34
Lusk Seven Rivers Unit
35
36
5
4
3
2
1
NMLC
0067982B
NMLC
0067230
T19S
R32E
BHL
SHL 3-19S-32E
TJG Federal 3 1H
8
9
10
11
12
1 Mile Radius from wellbore

DRILLING PROGRAM
Marshall & Winston Inc.
TGJ Federal Com 3 # 1H
SHL (P) to BHL (M),
Sec. 3, T-19S, R-32E

1. **Geological Name of Surface Formation:**

   a. Permian Quaternary Alluvium Deposits

2. **Anticipated Tops of Geological Markers & Depth of anticipated Fresh Water, Oil or Gas:**

Santa Rosa Sandstone Water	245-270' (possible potable water)
Red Beds	surface to 1225'
Rustler Anhydrite	1237'
Salt and Anhydrite	1480'
Base of Salt	2740'
Yates	2925' (oil or gas)
Seven Rivers	3460' (oil or gas)
Capitan Reef	4693'
Cherry Canyon	4970'
Bone Springs	7232'
1st Bone Springs	8463'
2nd Bone Springs	9240'
2nd Bone Springs Pay	9360' (oil)
Wolfcamp	10,600 (possible H-C)

3. **Casing Program:**

All casing is new and API approved

The top 20 inch surface pipe shall be set at 40 feet and circulated to surface with cement.

A 13 3/8" size casing shall be set at ~~1300'~~ 1395 into the top of the anhydrite with cement circulated to surface.

The 9 5/8" intermediate string is anticipated to be set in the top of the Cherry Canyon at 5020'. The cement will be circulated to surface. However, the edge of the Capitan Reef may exist in this area at about 4693'.

If severe loss circulation is encountered at this depth during the drilling of the Reef, an alternative plan may be necessary. This plan will consist of rigging up an air package to aerate the mud and continue drilling to 50' into the Cherry Canyon at approximatley 5020'. A DV Tool will be incorporated for cementing the casing string if severe loss circulation is encountered. The anticipated depth to set a packer and DV tool will be dictated by the depths of reef found and zones of severe loss circulation.

See COA

If this hole problem exists, run the 9 5/8" casing with a packer set at 4500' and a DV tool set immediately above the packer. Pump cement from 5020' to 4500' and from 4500' to surface as BJ recommendation. Notify the BLM if cement does not circulate to surface. **SEE: Part 4.c. Cement Program.** Sundry required.

See COA

If no severe loss circulation is encountered, upon setting the 9 5/8" into the top of the Cherry Canyon, WOC, drill ahead with a 8 ¾" bit to 10,700' TVD. A drill stem test (DST) in the Bone Springs carbonate is probable. Run open hole logs from 10,700' to the intermediate casing-5020' estimated. An open hole cement plug shall be set (within 50' of the top of the Wolfcamp formation), WOC and tagged.
SEE: Part 4.d. Cement Program.

An open hole whipstock will be set approximately 9,000'. After setting the whipstock, reenter hole with the 8 ¾" BHA directional tool to build an angle and land the curve portion at 9500' true vertical depth (TVD) or 9785' measured depth (MD).

4. Cementing Program:

a. 13 3/8" Surface Casing:

The 13 3/8" surface casing shall be cemented back to the surface (TOC at 0') using a two stage method. The lead mixture consist of Class C cement + 2% bwoc Calcium Chloride + 0.25lbs/sk Cello Flake + 4 % bwoc Bentonite + 81.3% fresh water. The anticipated quantity is 830 sacks, (1445 cu ft.), Weight 13.50 ppg, Yield 1.75 cf/sk. 100% excess from previous submission 9/30/11. JM

The tail slurry will consist of Class C cement + 2% bwoc Calcium Chloride + 0.25 lbs/sk Cello Flake + 56.2% fresh water. The anticipated quantity is 300 sacks (396 cu ft), Weight 14.80ppg, Yield 1.35 cf/sk. 100% excess — see above.

b. 9 5/8" Intermediate Casing String:

The 9 5/8" intermediate casing string shall be cemented back to surface (TOC at 0'). The lead slurry shall consist of (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.
The anticipated quantity is 890 sacks (2173 cu ft), Weight 11.8 ppg, Yield 2.45 cf/sk.
100% excess — see above.
The tail slurry will consist of Class C cement + 1% bwoc Calcium Chloride + 0.25 lbs/sk Cello Flake + 56.1% fresh water. The anticipated quantity is 370 sacks (489 cu ft), Weight 14.80 ppg, Yield 1.34 cf/sk.
50% excess for open hole — see above.

c. **9 5/8" Intermediate Contingency cementing:**

If loss circulation is encountered possibly due to some Capitan reef existence, then a compressor to aerate the mud will be utilized to remove cuttings and clean hole. The 12 ¼" hole shall be drilled at a minimum 50 ft into the top of the Cherry Canyon.

d. **The Pilot Hole Plug** shall consist of (50:50) Poz (Fly Ash) Class C cement + 0.005% bwoc Static Free + 5% bwoc Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.2% bwoc FL-52 + 0.005 gps FP-6L + 6% bwoc Bentonite +0.2% bwoc Sodium Metasilicate+107.8% Fresh Water. The anticipated quantity is 175 sacks (242 cu ft), Weight 13.80 ppg, Yield 1.38 cf/sk.

See COA

not adequate for Class H

Class H required at this depth

e. 7.0 " 2nd Intermediate Casing String:

Upon finishing the 8 ¾" hole, the 7.0" casing string shall be landed for horizontal drilling at 9785' MD (TVD 9500') with cement circulated to surface, (TOC at 0') ~~using a two-stage method. The volume of cement at this time is sufficient to and will fill the pilot hole as well.~~ The lead slurry will consist of 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. The anticipated quantity is 585 sacks (1429 cuft), Weight 11.60 ppg, Yield 2.45cf/sk. 50% excess pursuant to submission of 9/20/2011,

Pilot hole to be plugged prior — cement will not displace

The tail slurry will consist of Class H cement + 0.3% bwoc CD-32 + 1% bwoc FL-62 + 45.7% fresh water. The anticipated quantity is 380 sacks (450 cuft), Weight 15.60 ppg, Yield 1.18 cf/sk.

fluid in pilot hole when done while cementing 7",

f. 4 ½ inch Liner:

The 4 ½" liner will be cemented back to the top of the liner hanger to be set approximately 9635' (150' above the 7.0" shoe -EOC). It will be run to (TD) 13,909'. The cement slurry will consist of 630 sacks (835 cuft) of 50:50 Poz, Fly Ash, Class H Cement + 3% bwoc Sodium Chloride + .01% 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. The anticipated quantity is 630 sacks (835cuft), Weight 14.00 ppg , Yield of 1.33 cf/sk.

5. Pressure Control:

Patterson Rig No.75 will install on the 13 5/8'' surface casing a 3,000 psi rated casing head and BOPE. The choke manifold, lines and valves initially hooked up is 5,000 psi. system. The BOP system will be tested as per BLM Onshore Oil and Gas Order No 02 as a 3M system prior to drilling out of the surface casing shoe using a third party.

A 5M BOP shall be nippled up after running the 9 5/8" intermediate casing. It will consist of one set of blind rams, pipe rams, annular preventer, upper and lower Kelly cock valves, 5 M manifold with one hydraulic remotely controlled choke valve. After (WOC) and prior to drilling out below the 9 5/8" casing, the BOPE shall be tested to 5,000 psi by a third party. Prior to drilling out of 7" casing shoe, the BOPE shall be tested to 5,000 psi. Testing the BOPE shall be done in accordance as per Onshore Orders No. 02.

Additional BOP accessories include a kelly cock and locking handle on floor for immediate use if necessary, hydraulic choke control and floor safety valves on rig floor, drill pipe and collars will be available and ready to use on the rig floor at all times.

The 7" casing shall be run from surface to bottom and circulated back to surface with cement by BJ's recommended method. ~~The pilot hole shall be cemented during this procedure~~. Then drill a 6 1/8" horizontal hole at the TVD of 9500' to TD of 13,909' measured depth (MD). The TVD may vary according to shows.

The final string will be a 4 ½" liner with the hanger set at 9600' MD, approximately 150' above the ~~6 1/8~~ 7" shoe (EOC) with cement tied back to the liner hanger.

Casing Summary:

Hole Size	Interval (ft)	Csg OD	Wt. #/ft	Grade	Type	Casing Strengths (psi) Collapse	Burst	Tension
17 ½"	0 - ~~1300~~ 1395'	13 3/8"	54.5	J-55	STC	1130	2730	514
12 ¼"	0 - 5020'	9 5/8"	40.0	N-80	LTC	3090	5750	737
8 ¾"	0 – 9785'	7.0"	26.0	P-110	LTC	5410	7240	519
6 1/8"	9600–13,909'	4 ½"	11.6	P-110	LTC	7580	10690	279

Casing Design Safety Factors: ~~According to the Onshore Orders 2~~, the Minimum Safety Factors for casing are: Collapse 1.125, Burst 1.0, and Tension 1.8.

Size	Collapse	Burst	Tension
13 3/8"	1.94	1.31	7.72
9 5/8"	1.17	2.18	3.6
7.0"	1.3	4.16	2.78
4.5"	1.70	2.40	5.83

6. Drilling Fluid Program:

	0' to ~~1,300'~~ 1395'	Fresh water	8.4 – 8.6 ppg
	~~1,300'~~ to 5,020'	Brine water	10.0 – 10.1 ppg
(Pilot Hole)	5,020' to 10,700'	Fresh water and Brine	8.4 – 9.5 ppg
(Directional)	9,000' to 9,785'	Duo-Vis with LCM	9.5 – 9.7 ppg
(Horizontal)	9,785' to 13,909'	2 % KCL	8.4 – 8.9 ppg

7. Auxillary Equipment:

An air compressor package may have to be utilized if severe lost circulation is encountered in order to finish the 12 ¼" hole through the reef.

8. Logging Agenda: See COA

The mud logging 2 man unit will begin monitoring at 2500' to TD.
Electrical logs: CNL / LDT / CAL / GR from 8800' to intermediate casing. DLL/ GR from 8800' to intermediate casing.

9. Potential Hazards

No abnormal pressures or temperatures are anticipated. BHP is estimated to be 4200 psi with a BHT of 175 deg F. This area may have a potential for H2S. An H2S contingency plan will be incorporated by a third party ~~prior to drilling out of the intermediate 9 5/8" shoe~~ 500' prior to drilling into the Yate in accordance with Onshore Orders. This includes that:

- All personnel will be H2S trained and qualified.
- H2S alarms and detection systems will be utilized.
- A windsock will be visible at all times.
- Flags or warning signs will be visible for road traffic.

▶ The H2S contingency plan is attached.

10. Anticipated Start Date:

Between August 25 and September 5, 2011.

11. Surface & Minerals Ownership:

The surface is USA, Lease No. NMLC 0067230 bears the SHL, NMLC 0067982B bears the TD location. The subsurface minerals are USA. Lands and minerals are managed by the Bureau of Land Management of New Mexico. A Communitization Agreement shall be filed prior to any reported sales from this well.

COMPANY PERSONNEL:

Shorty Sweeden (Wellsite Supervisor) (432) 634-8722 (c)

Gabe Herrera (Marshall & Winston – Engineer) (432) 684-6373 (o)
(432) 260-8650 (c)

Tom Brandt (Marshall & Winston – Operations) (432) 684-6373 (o)
(432) 553-9747 (c)

George Watters (Marshall & Winston – Geologist) (432) 684-6373 (o)
(432) 631-2051 (c)

Brent May (Marshall & Winston – Geologist) (432) 684-6373 (o)
(432) 254-3525 (c)

Marshall & Winston, Inc.
P.O. Box 50880
Midland, Tx. 79710-0880

(432) 684-6373 Office
(432) 687-2684 Fax

OIL FIELD ASSISTANCE (575) 623-5880

GARY GOURLEY
2810 W. 23RD ST.
ROSWELL, NM 88203

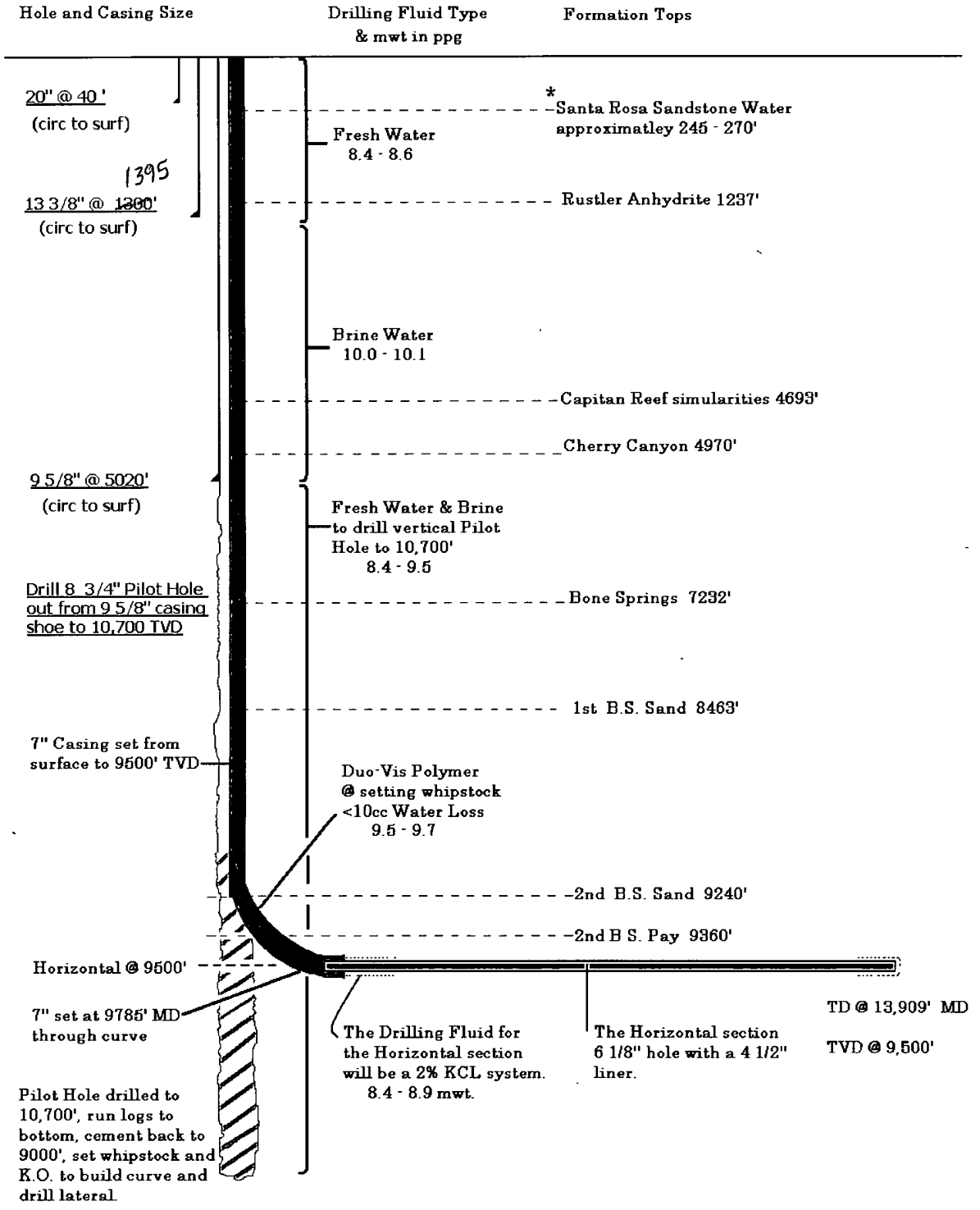
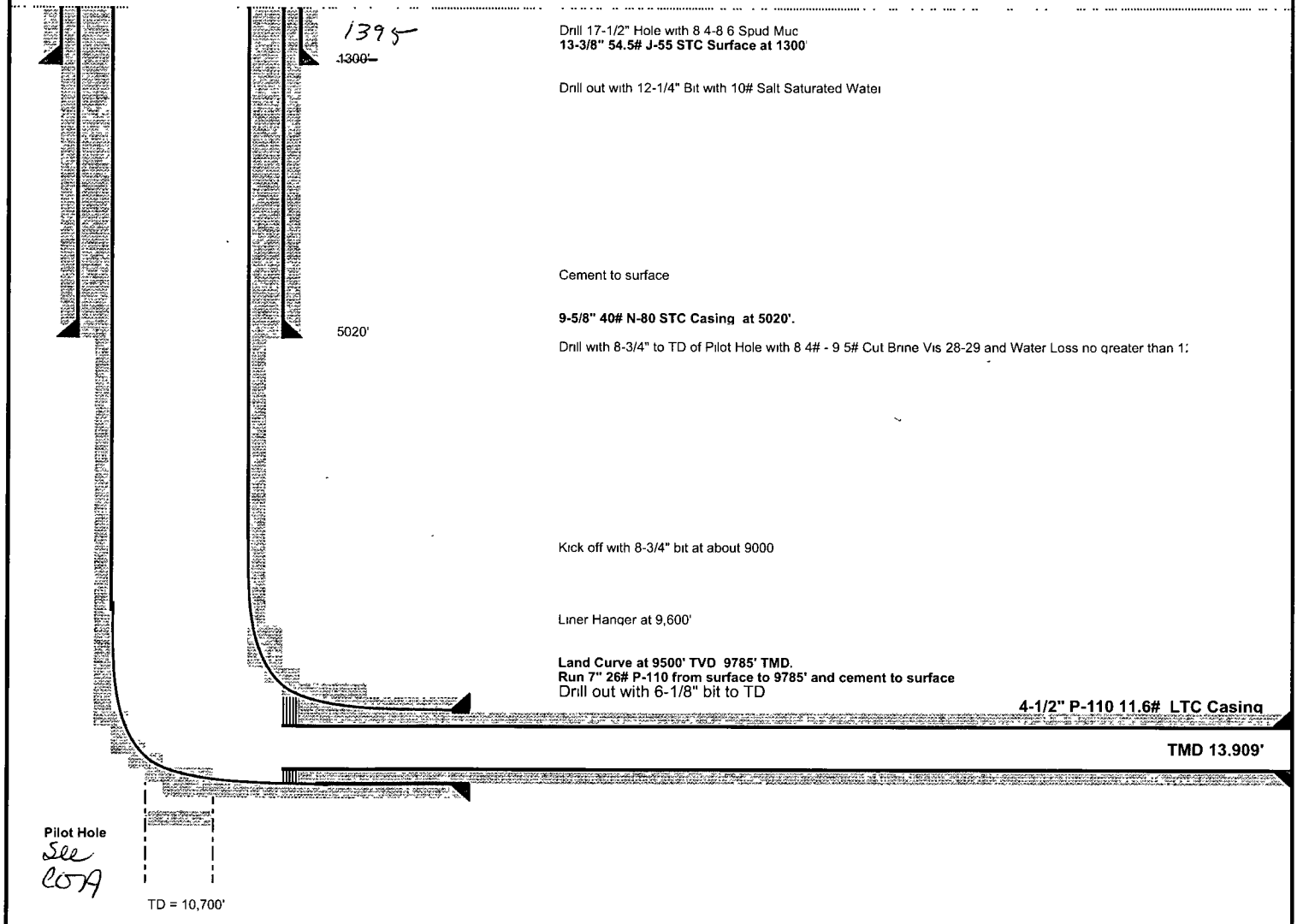


Exhibit 5

Anticipated Hole Design X-Section

* USGS 19S 34E 34.4232 1978 water well resources data

AFE No.	TJG Federal Com 3-1H	AFE Information
API #	Lea County, NM	Dry Hole: Days:
Permit No.		Proposed TD: 13,909' TMD 9,500' TVD
Project No.	Proposed Wellbore Sketch	v



Well Information

Surface Location Lea County, NM T19S R32E Section 3