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

Form C-102
Revised July 16, 2010
Submit to Appropriate District Office

☐AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-39764	58040	Tamano-Bone Springs

Property Code	Property Name	Well Number
305063	TAYLOR DEEP 12 FEDERAL	9

OGRID No.	Operator Name	Elevation
258462	NADEL AND GUSSMAN HEYCO, LLC	3776'

Surface Location

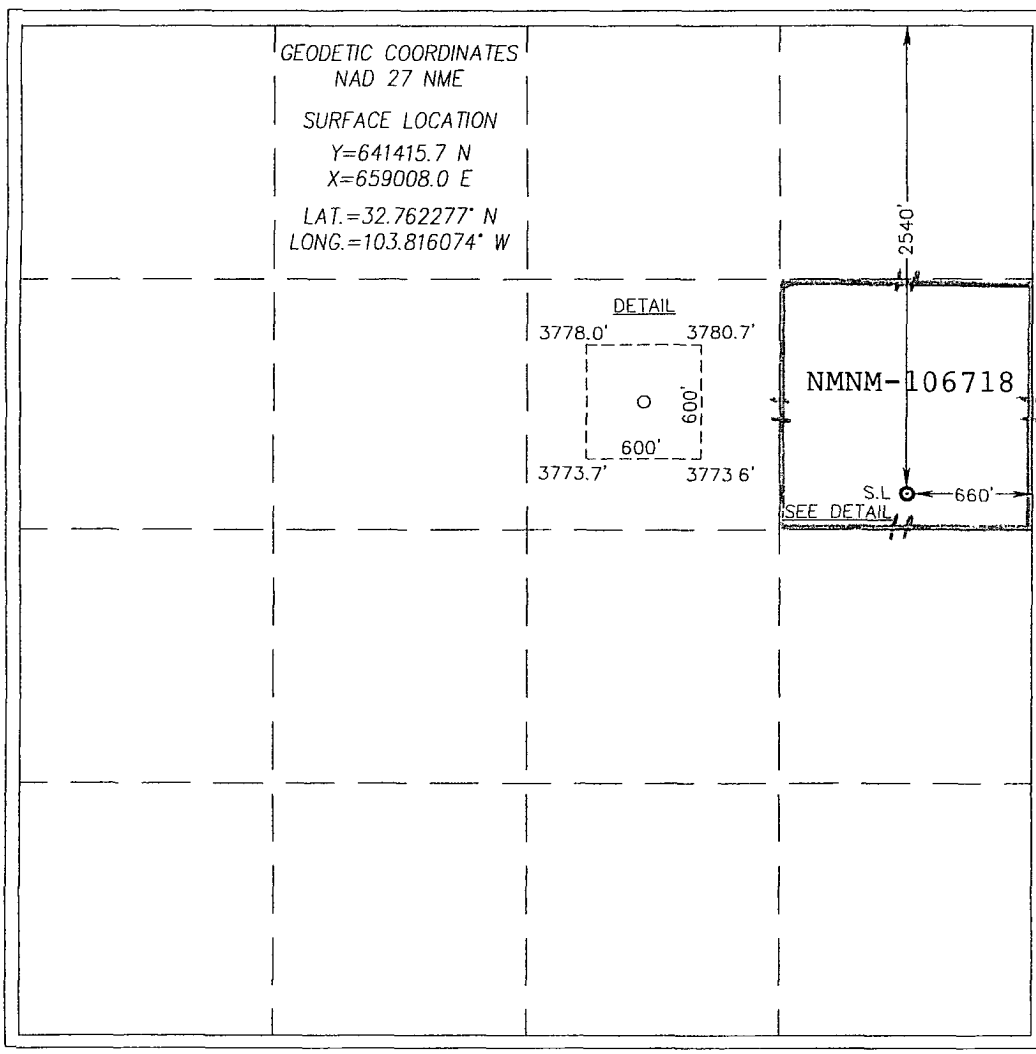
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	12	18-S	31-E		2540	NORTH	660	EAST	EDDY

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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.

Signature Date

Keith Cannon
Printed Name

kcannon@heycoenergy.com
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.

AUGUST 5, 2011
Date of Survey
Signature & Seal of Professional Surveyor:

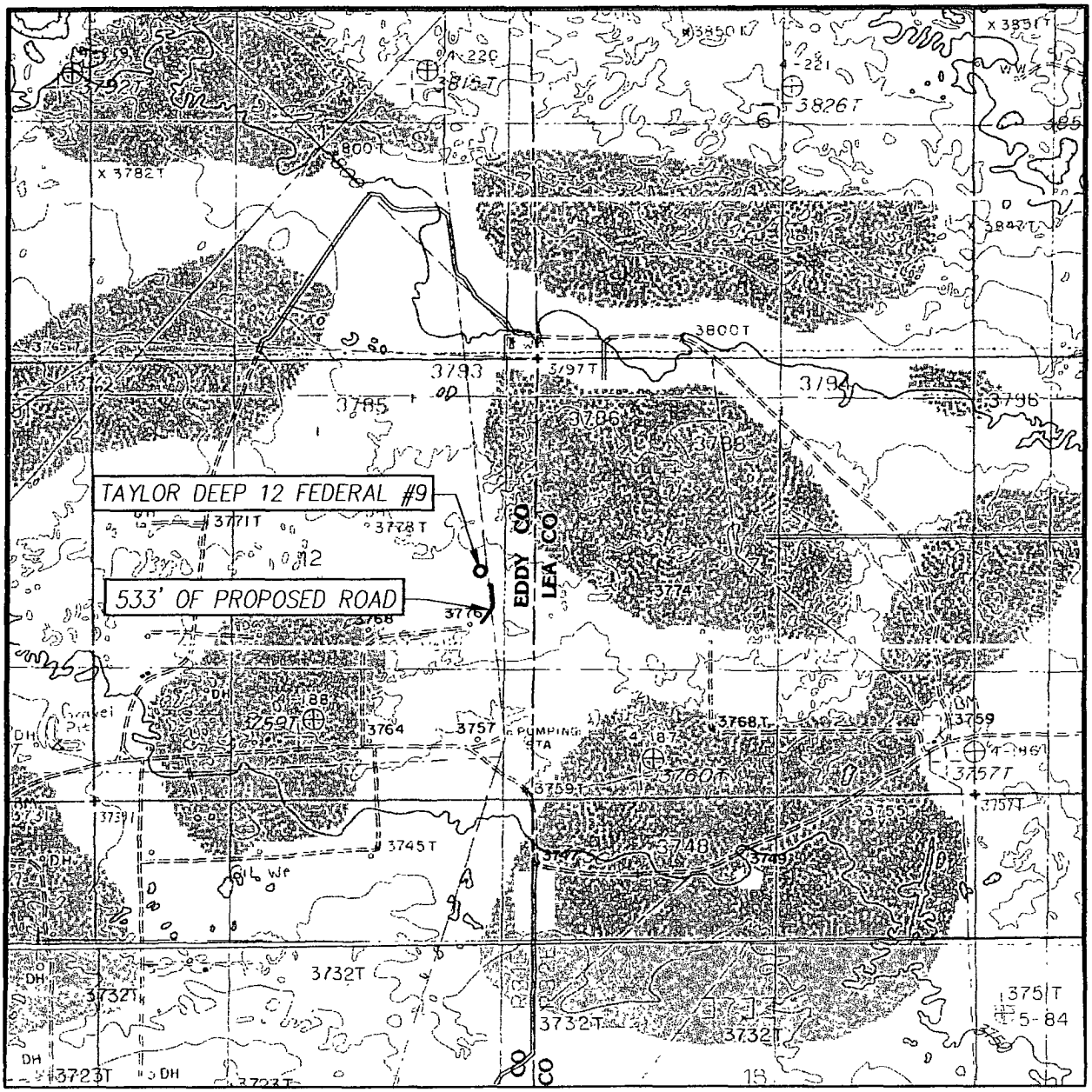
RONALD J. EIDSON NEW MEXICO 3239

8/16/2011

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

LA JWSC W.O 11 11 1696

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
MALJAMAR, N.M. – 10'
GREENWOOD LAKE, N.M. – 10'

SEC. 12 TWP. 18-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 2540' FNL & 660' FEL

ELEVATION 3776'

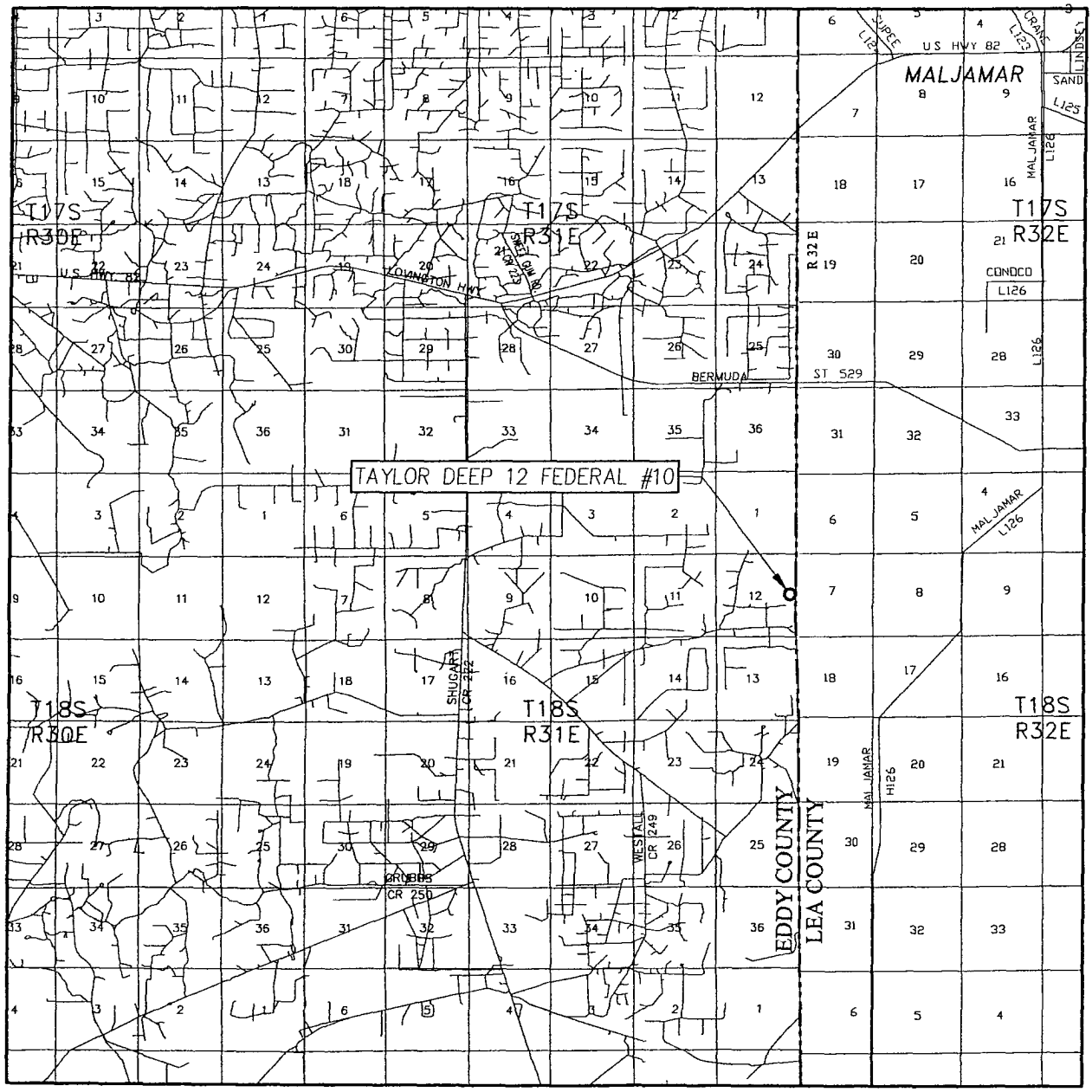
OPERATOR NADEL AND GUSSMAN HEYCO, LLC

LEASE TAYLOR DEEP 12 FEDERAL

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

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

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 12 TWP. 18-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 2540' FNL & 660' FEL

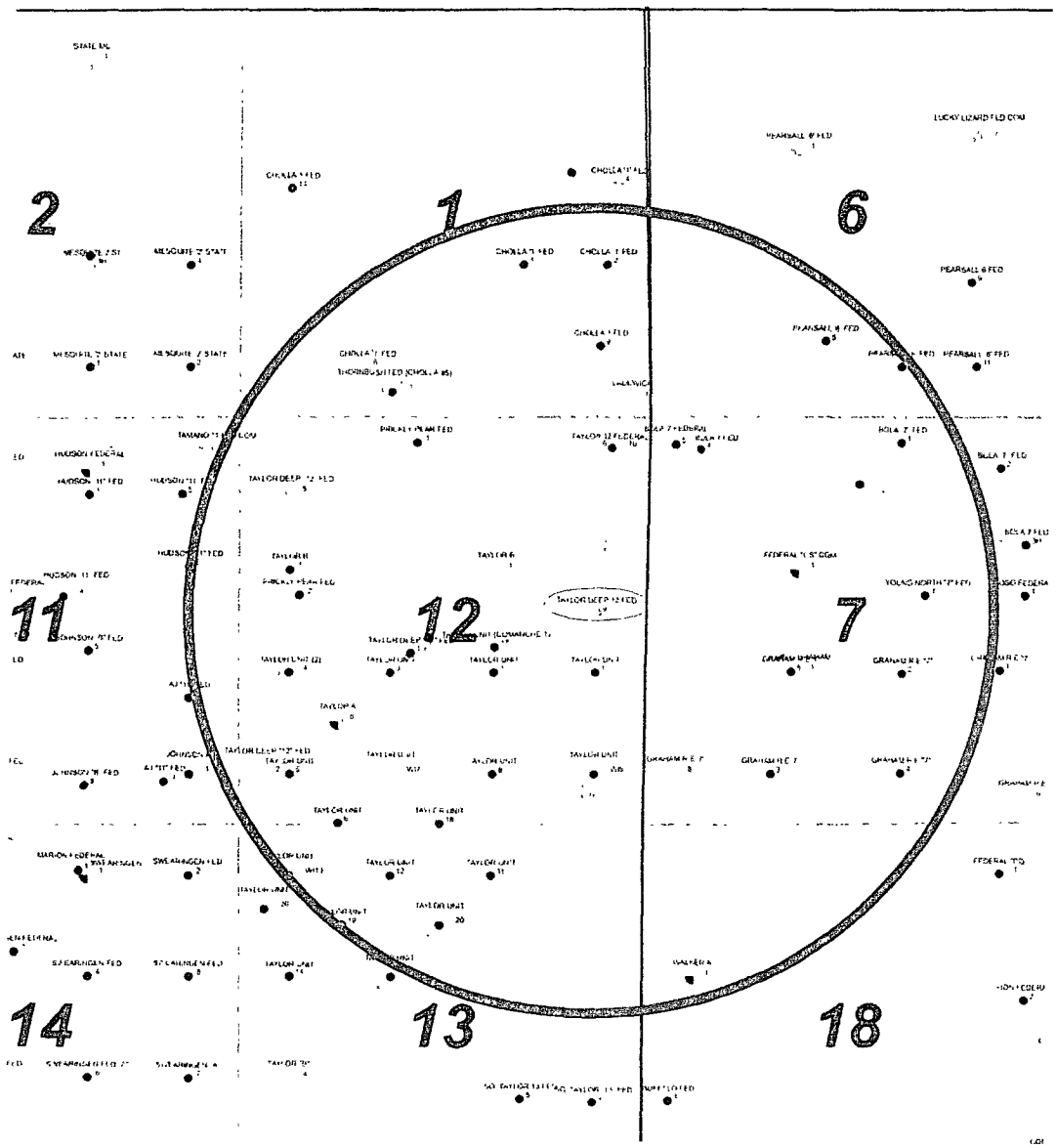
ELEVATION 3776'

OPERATOR NADEL AND GUSSMAN HEYCO, LLC

LEASE TAYLOR DEEP 12 FEDERAL

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

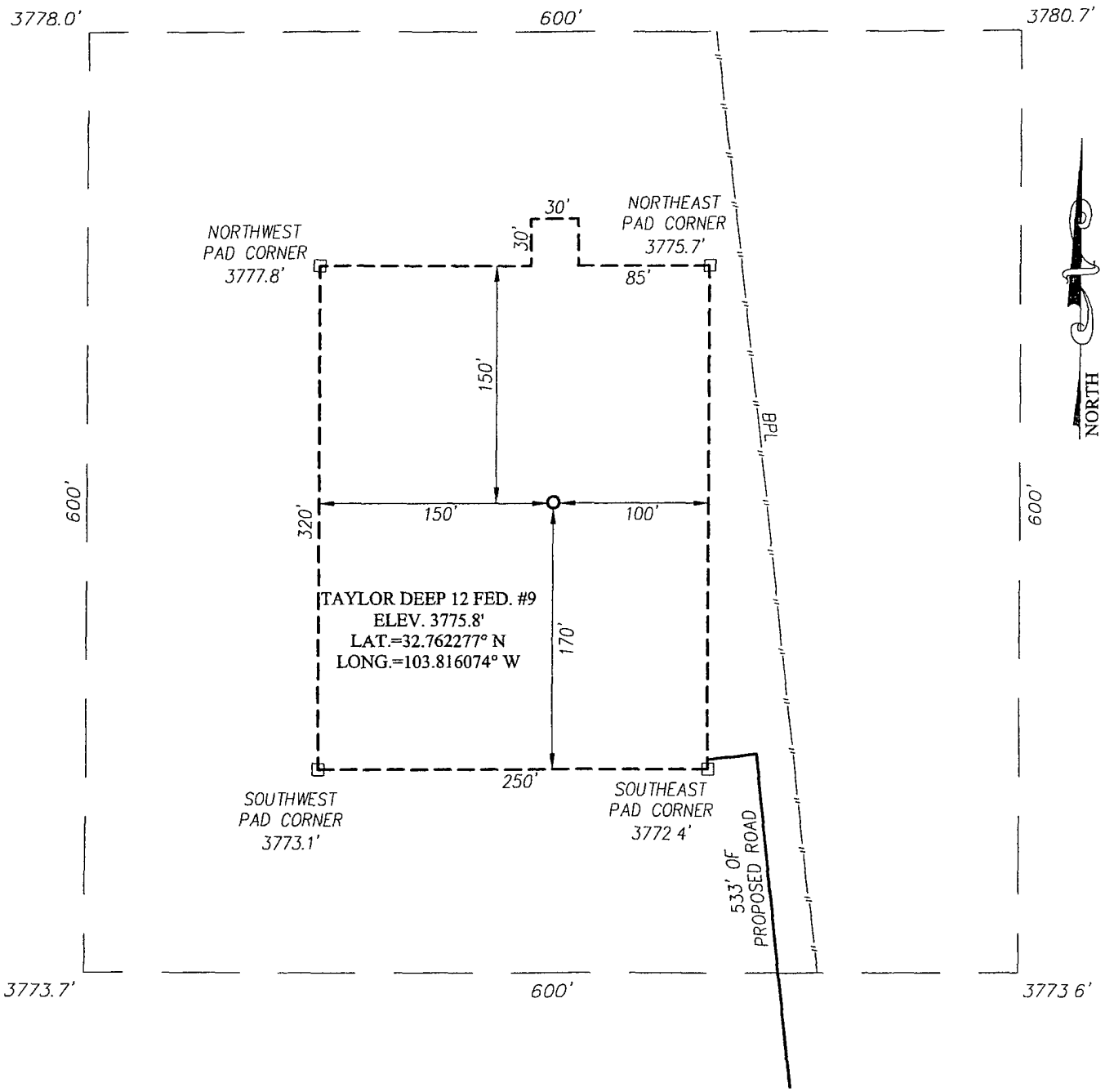
Taylor Deep 12 Federal #9
T-18-S, R-31-E, Section 12



1 mi radius from surface location

SECTION 12, TOWNSHIP 18 SOUTH, RANGE 31 EAST, N.M.P.M.

EDDY COUNTY NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OG CO. RD. #222 AND CO. RD. #249, GO SOUTHEAST ON CO. RD. #249 APPROX. 1.4 MILES. TURN LEFT AND GO NORTHEAST APPROX. 2.6 MILES TURN LEFT AND GO NORTH APPROX. 0.2 MILES. TURN RIGHT AND GO EAST APPROX 0 2 MILES TO THE TAYLOR FED. #1 WELL PAD. FROM THE NORTHEAST CORNER FOLLOW ROAD STAKES NORTH 533 FEET TO THE 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

NADEL AND GUSSMAN HEYCO, LLC

TAYLOR DEEP 12 FEDERAL #9 WELL
LOCATED 2540 FEET FROM THE NORTH LINE
AND 660 FEET FROM THE EAST LINE OF SECTION 12,
TOWNSHIP 18 SOUTH, RANGE 31 EAST, N.M P M,
EDDY COUNTY, NEW MEXICO.

Survey Date: 8/5/11	Sheet 1 of 1 Sheets		
W.O Number 11.11.1696	Dr By: LA	Rev 1	
Date 8/13/11		11111696	Scale: 1"=100'

Application
Nadel and Gussman Heyco, LLC
Taylor Deep 12 Federal #9
UL- H, Sec 12, T18S, R32E
2540' FNL & 660' FEL
Eddy County, New Mexico

In conjunction with Form 3160-3, Application For Permit To Drill Or Deepen subject well, Nadel and Gussman Heyco, LLC submits the following ten items of pertinent information in accordance with Onshore Oil & Gas Order No. 10.

1. **Geologic Name of Surface Formation:**
   PERMIAN

2. **Estimated Tops of Significant Geologic Markers:**

Formation	Depth				
Rustler	945'	Water	U. Brushy Canyon Mkr.	5,450'	Oil
Salado	1,135'		Bone Spring Ls	5,940'	Oil
BX (BASE OF SALT)	2,200'		A – Zone Carb	7,710'	Oil
Yates	2,435'		Bone Spring 1st Sand	7,795'	Oil
Seven Rivers	2,835'	Oil	B – Zone Carb	8,075'	Oil
Bowers	3,300'	Oil	Bone Spring 2nd Sand	8,515'	Oil
Queen	3,555	Oil	C Bench Pay	8,815'	Oil
Penrose	3,790'	Oil	C – zone Carb	9,040'	Oil
Grayburg	4,090'	Oil	Bone Spring 3rd Sand	9,270'	Oil
Loco Hills	4,135'	Oil	PTD	9,375'	
Metex	4,335'	Oil			
Premier Sand	4,480'	Oil			
San Andres	4,540'	Oil			
Delaware (CRCN Toungue)	4,840'	Oil			
Brushy Canyon	5,070'	Oil			

No other formations are expected to yield oil, gas, or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13 3/8" casing at ~~960'~~ 1000 and circulating Cement back to surface. All other intervals will be isolation by setting 9 5/8"Casing at 2250' and circulating cement back to surface. Bone Spring intervals will be isolation by setting 5 ½" casing to total depth and circulating cement 200' up into 9 5/8" casing.

3. Casing Program:

	Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used
See COA	17 1/2"	0' – ~~960'~~ 1000	13 3/8"	54.5#	ST&C	J-55	New
	12 1/4"	0'– 2250'	9 5/8"	36#	ST&C	J-55	New
	7 7/8"	0' – 9375'	5 /12"	17#	LT&C	L-80	New

Safety factors: Burst 1.0 Collapse 1.125 Tension 1.8

4. Cement Program: (Note yields; and dv tool depths if multiple stages)

a. 13 3/8" Surface — Cement to surface with: **100% excess over calculated**
Lead - 700 sx 35:65 Poz C, 5% Salt, 0.25# Celloflake , 6% Bentonite, 12.8 ppg and 0.25% Defoamer, 1.89 cu.ft./sk yield, TOC @ surface.
Tail – 200 sx C and 0.25% Defoamer, 14.8 ppg, 1.32 cu.ft./sk yield, TOC @ 782'.

b. 9 5/8" Intermediate — Cement to surface with: **50% excess over calculated**
Lead - 550 sx 35:65 Poz C, 5% Salt, 0.25# Celloflake, 6% Bentonite and 0.25% Defoamer, 12.4 ppg, 2.09 cu.ft./sk yield, TOC @ surface.
Tail – 200 sx C and 0.25% Defoamer, 14.8 ppg, 1.32 cu.ft./sk yield, TOC @ 1576'.

c. 5 1/2" Production — Cement to 2050' with: **40% excess over open hole caliper**
Lead - 750 sx 50:50 Poz H, 5% Salt, 10% Bentonite, 0.25% Celloflake, 0.2% Fluid Loss Agent and 0.25% Defoamer, 11.9 ppg, 2.37 cu.ft./sk yield, TOC @ 2050'.
Tail – 550 sx H, 0.6% Fluid Loss Agent, 0.25% Suspension Aid, 03% Gilsonite, 3% Salt and 0.25% Defoamer, 13.22 ppg, 1.60 cu.ft./sk yield, TOC @ 5500'.

The above volumes, additives and depths may be revised based on open hole logs, conditions encountered while drilling and on cement field blend tests. The top of cement for the production string is designed to reach approximately 1000' above the 9 5/8" casing shoe.

5. Proposed Mud Circulation System

Depth	Mud Wt.	Visc	Fluid Loss	Type System
0' – 960' 1000	8.4 – 8.8	80 - 55	NC	Fresh Water
960' – 2250'	9.8 – 10.0	28 - 30	NC	Brine Water
2250' – 9375'	8.8 – 9.4	28 - 32	NC	Cut Brine Water

The necessary mud products for weight addition and fluid loss control will be on location at all times.

6. Pressure Control Equipment:

The blowout preventor equipment (BOPE) shown in Exhibit #1 will consist of a (2m system) for the intermediate 12 ¼" hole w/ Double ram type (3000psi WP) preventor. A (3m system) w/ double ram type 3000psi preventor for the 7 7/8" production hole, and a bag type (hydril) preventor (3000psi WP)
Both unit will be hydraulically operated and the ram type preventor will be equipped with blind rams on top, 4 ½" drill pipe rams on bottom. The BOP's and Hydrill will be tested as per BLM Drilling Operations Order #2.
Pipe rams will be Operated and checked each 24hr period and each time drill pipe is out of the hole.
These functional Test will be documented on the daily driller log. A flex hose will be use from BOP to choke manifold, (see specification attached), a 2" kill line and 3" choke line will be incorporated In the drilling spool below the ram-type BOP.

Other accessory BOP equipment will include a Kelly Cock, floor safety valve, choke line and choke manifold having a 3000psi wp rating.

7. **Auxiliary Equipment:**
   a. A Kelly Cock will be in the drill string at all times.
   b. A full opening drill pipe stabbing valve having the appropriate Connections will be on the rig floor at all times.
   c. Hydrogen Sulfide detection equipment will be in operation after drilling Out the 9 5/8" casing shoe unit the 5 ½" casing is cemented. Breathing Equipment will be on location upon drilling the 9 5/8" shoe unit total Depth is reached.
   d. A flex hose from the BOPE to the manifold (specification attached)

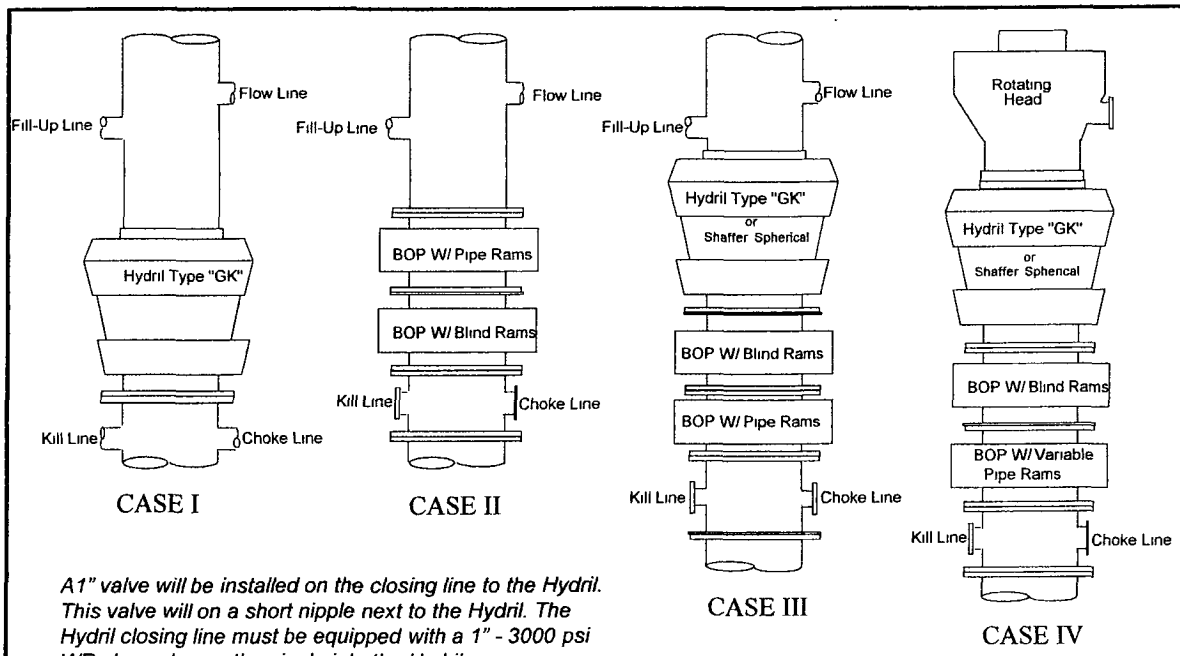
8. **Testing, Logging, & Coring Program:** see COA

   a. Mud logging unit from the base intermediate casing to depth 10' samples will be caught by loggers
   b. Possible rotary sidewall cores
   e. Platform express (GR / LDT – CNL – PE / DLL – MCFL / NGT)

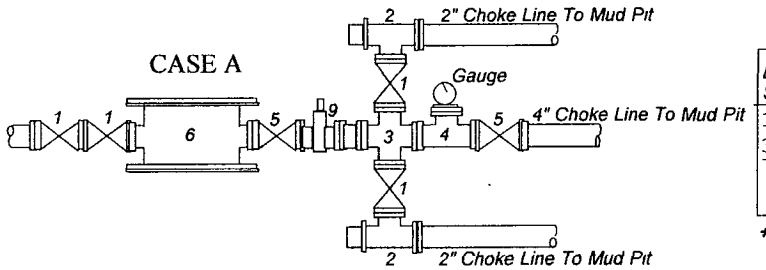
9. **Abnormal Conditions, Pressures, Temperature, or Potential Hazards:**
No abnormal conditions are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No 6. Lost circulation might occur in the Capitan Reef. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 4700 psi and estimated BHT 180 F. No H2S is anticipated to be encountered.

10. **Anticipated Starting Date & Duration of Operation:**
Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 30 days. If production casing is run then an additional 15 days will be needed to complete well And construct surface facilities and/or lay flow line in order to place well on production.

Nadel and Gussman Heyco, LLC
MINIMUM BLOWOUT PREVENTER REQUIREMENTS

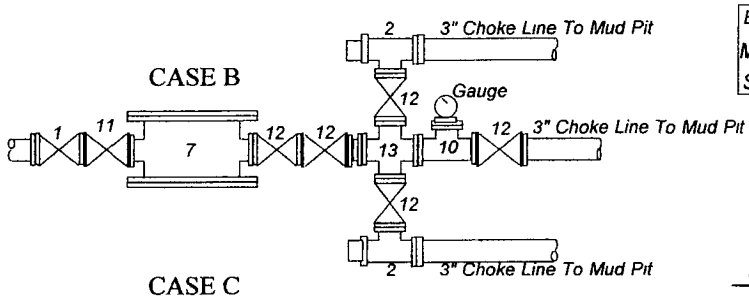


A1" valve will be installed on the closing line to the Hydril. This valve will on a short nipple next to the Hydril. The Hydril closing line must be equipped with a 1" - 3000 psi WP plug valve on the nipple into the Hydril.

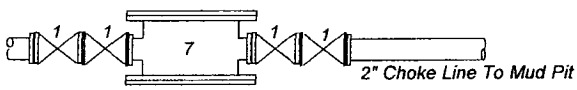


BOP SIZE	BOP CASE	WORKING PRESSURE	CHOKE CASE
13-3/8"	II	2000 psi	B
11"	III	3000 psi	B

**Rotating head required*



Bradenhead :
Mfr: _____
Size: _____ *Type:* _____



Notes

Choke manifold may be located in any convenient position. Use all steel fittings throughout. Make 90° turns with bull plugged tees only. No field welding will be permitted on any of the components of the choke manifold and related equipment upstream of the chokes. The choke spool and all lines and fittings must be at least equivalent to the test pressure of the preventers required. Independent closing control unit with clearly marked controls to be located on derrick floor near driller's position.

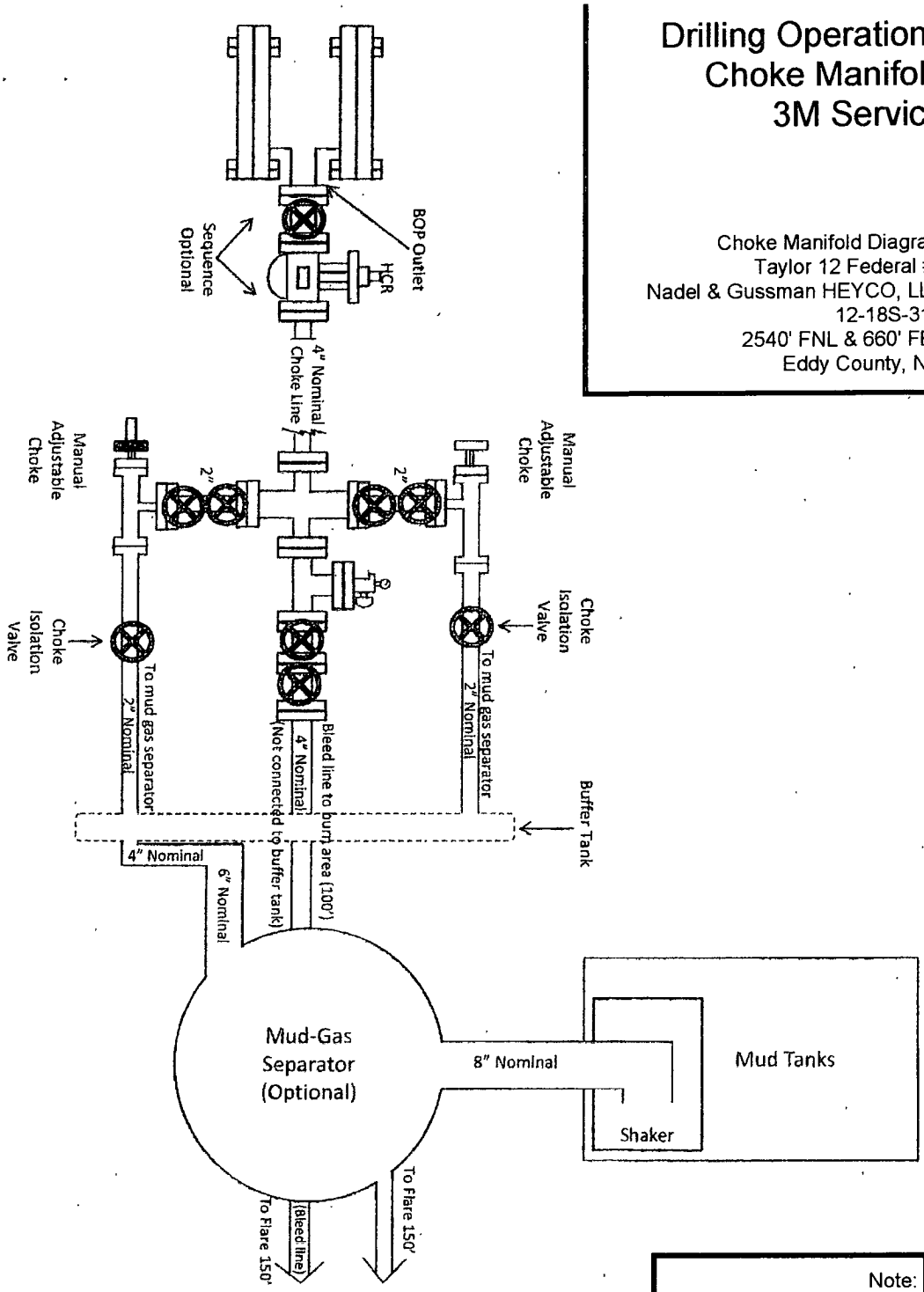
Legend

1. *2" flanged all steel valve must be either Cameron "F", Halliburton Low Torque or Shaffer Flo-Seal.*
2. *3" flanged adjustable chokes, min 1" full opening & equiped with hard trim.*
3. *4" x 2" flanged steel cross.*
4. *4" flanged steel tee.*
5. *4" flanged all steel valve (Type as in no. 1).*
6. *Drilling Spool with 2" x 4" flanged outlet*
7. *Drilling Spool with 2" Flanged Kill inlet, & 3" flanged choke outlet.*
8. *2" x 2" flanged steel cross.*
9. *4" pressure operated gate valve.*
10. *3" flanged steel tee.*
11. *2" Flanged check valve*
12. *3" flanged all steel valve must be either Cameron "F", Halliburton Low Torque or Shaffer Flo-Seal*
13. *3" x 3" flanged steel cross.*

(10-31-96) WTXBOPS.PPT

Drilling Operations
Choke Manifold
3M Service

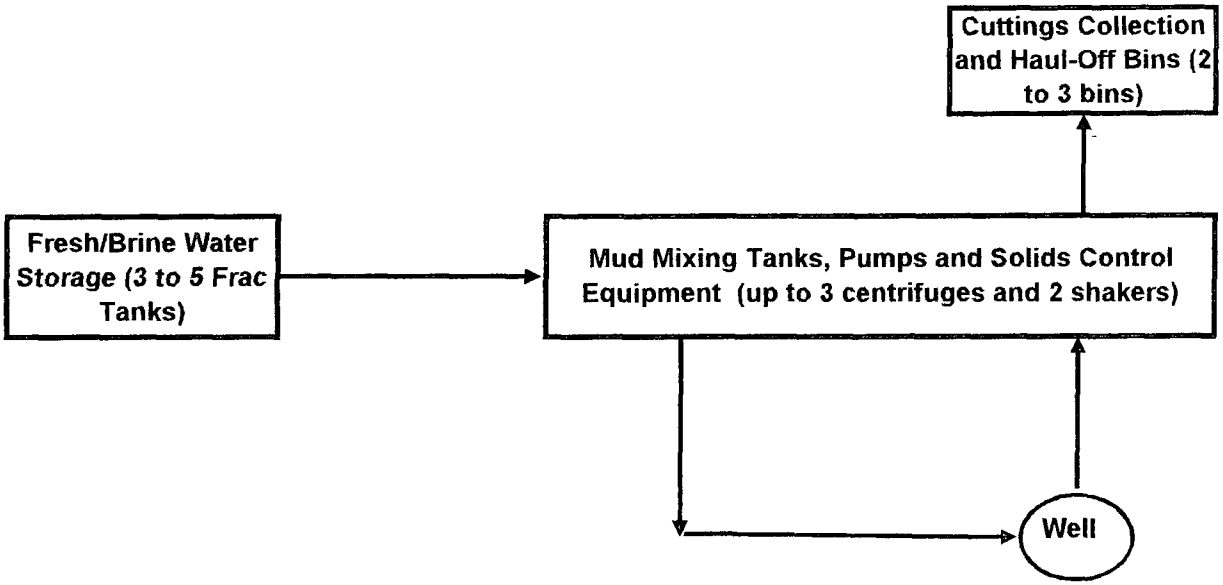
Choke Manifold Diagram
Taylor 12 Federal #9
Nadel & Gussman HEYCO, LLC
12-18S-31E
2540' FNL & 660' FEL
Eddy County, NM



Note:
If H2S is encountered, Over 25ppm mud gas separator, and all necessarry equipment will be placed into service including H2S scavengers

CLOSED-LOOP SYSTEM

Design Plan:



Operating and Maintenance Plan:

During drilling operations, third party service companies will utilize solids control equipment to remove cuttings from the drilling fluid and collect it in haul-off bins. Equipment will be closely monitored at all times while drilling by the derrick man and the service company employees.

Closure Plan:

During drilling operations, third party service companies will haul-off drill solids and fluids to an approved disposal facility as noted on the C-144 form. At the end of the well, all closed loop equipment will be removed from the location.

NADEL AND GUSSMAN HEYCO, L.L.C.
P.O. BOX 1936
ROSWELL N.M. 88202
(575) 623-6601 (Office)
(575) 624-5321 (Fax)

Re: Taylor Deep 12 Federal #9
2540' FNL & 660' FEL
Unit H, Sec. 12, T18S, R31E
Eddy, NM
Rule 118 H2S Exposure

Dear Mr. Ingram

Nadel and Gussman Heyco, LLC have evaluated this well and we do not expect to encounter hydrogen sulfide. However, we will employ a third party monitoring system. We will begin monitoring prior to drilling out the intermediate casing and will continue monitoring the remainder of the well.

Please contact me if you have any additional questions.

Sincerely,

Keith Cannon
Drilling superintendent