ATS-09-485

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Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No. **NM-0560353**	
6 If Indian, Allotee or Tribe Name	
7 If Unit or CA Agreement, Name and No.	
8. Lease Name and Well No **Munchkin Federal, Well No. 19** (27108)	
9 API Well No **30-015-37886**	
10 Field and Pool, or Exploratory **Benson Delaware** (97083)	
11 Sec , T R M or Blk and Survey or Area **Sec. 11-T19S-R30E**	
12 County or Parish **Eddy**	13 State **NM**

1a Type of work ☑ DRILL ☐ REENTER **R-111-POTASH**

1b Type of Well ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

2 Name of Operator **Chi Operating, Inc.** (4378)

3a Address **P.O. Box 1799, Midland, TX 79702**

3b Phone No. *(include area code)* **432-685-5001**

4 Location of Well *(Report location clearly and in accordance with any State requirements *)*

At surface **2300' FNL & 400' FEL** Unit H

At proposed prod zone **1300' FNL & 1000' FEL** Unit A UNORTHODOX LOCATION

14 Distance in miles and direction from nearest town or post office*
16 road miles south of Loco Hills, NM.

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) **400'**	16 No of acres in lease **2,160.32**	17 Spacing Unit dedicated to this well **40**	
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft **122'**	19 Proposed Depth TVD 5,500' MD 5775' RBH 8/20/09	20 BLM/BIA Bond No on file **NM-1616**	
21 Elevations (Show whether DF, KDB, RT, GL, etc) **3426' GL**	22 Approximate date work will start* **10/05/2009**	23 Estimated duration **30 dzys**	

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall 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 shall 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 authorized officer.

25 Signature George R. Smith	Name *(Printed/Typed)* **George R. Smith**	Date **08/14/2009**
Title **POA agent for Chi Operating, Inc.**		
Approved by *(Signature)* /s/ Robert A. Casias	Name *(Printed/Typed)* /s/ Robert A. Casias	Date 4/28/2010
Title Acting For **STATE DIRECTOR**	Office **NM STATE 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

**(Instructions on page 2)*

Capitan Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

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 and Natural Resources Department

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
30-015-37886	97083	Benson Delaware

Property Code	Property Name	Well Number
27108	MUNCHKIN FEDERAL	19

OGRID No.	Operator Name	Elevation
4378	CHI OPERATING	3426'

Surface Location

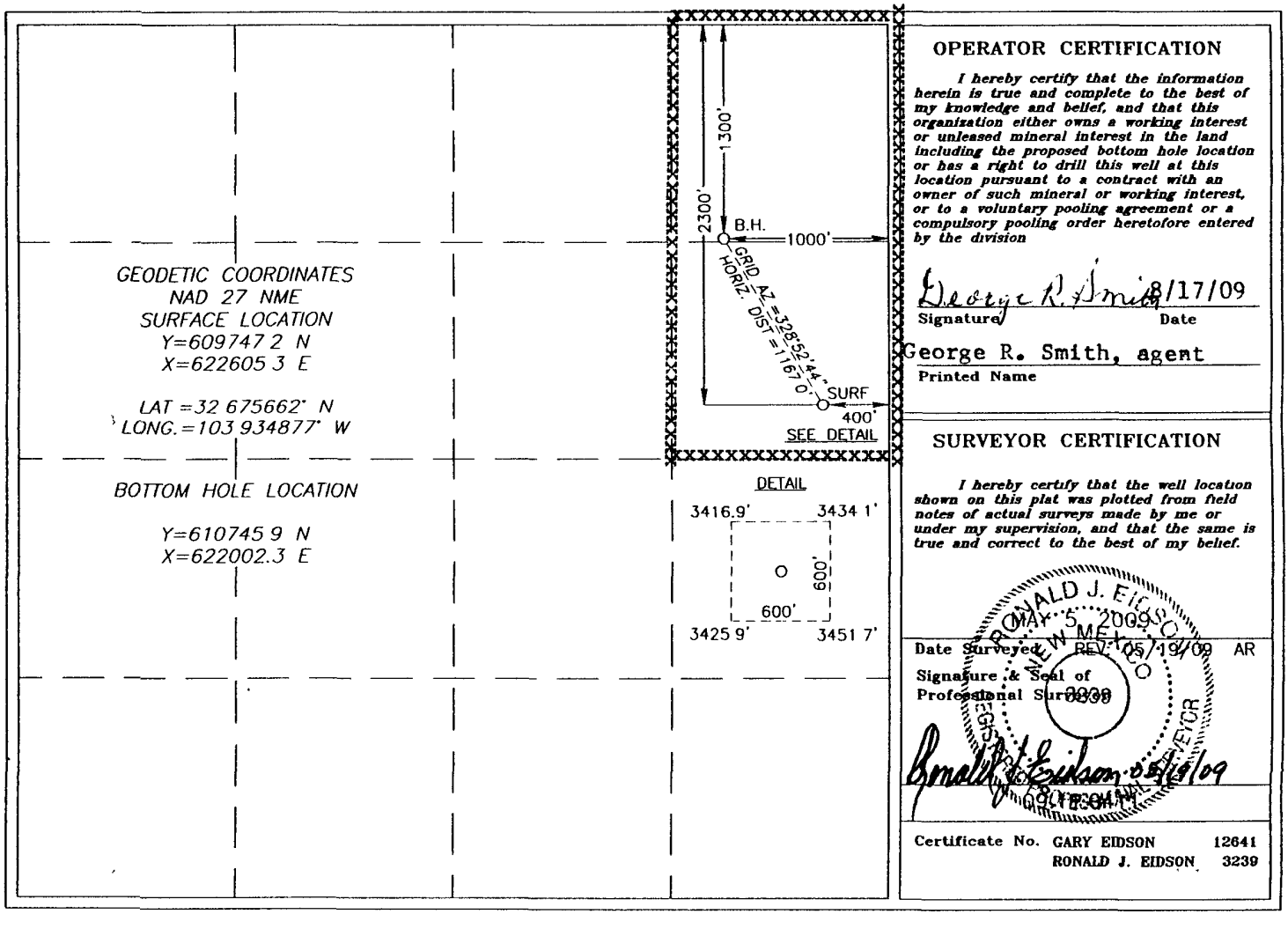
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	11	19-S	30-E		2300	NORTH	400	EAST	EDDY

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
A	11	19-S	30-E		1300	NORTH	1000	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40 80			

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

George R. Smith 8/17/09
Signature Date

George R. Smith, agent
Printed Name

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.

RONALD J. EIDSON
MAY 5, 2009
NEW MEXICO

Date Surveyed REV: 05/19/09 AR
Signature & Seal of Professional Surveyor
Ronald J. Eidson 05/19/09

Certificate No. GARY EIDSON 12641
RONALD J. EIDSON 3239

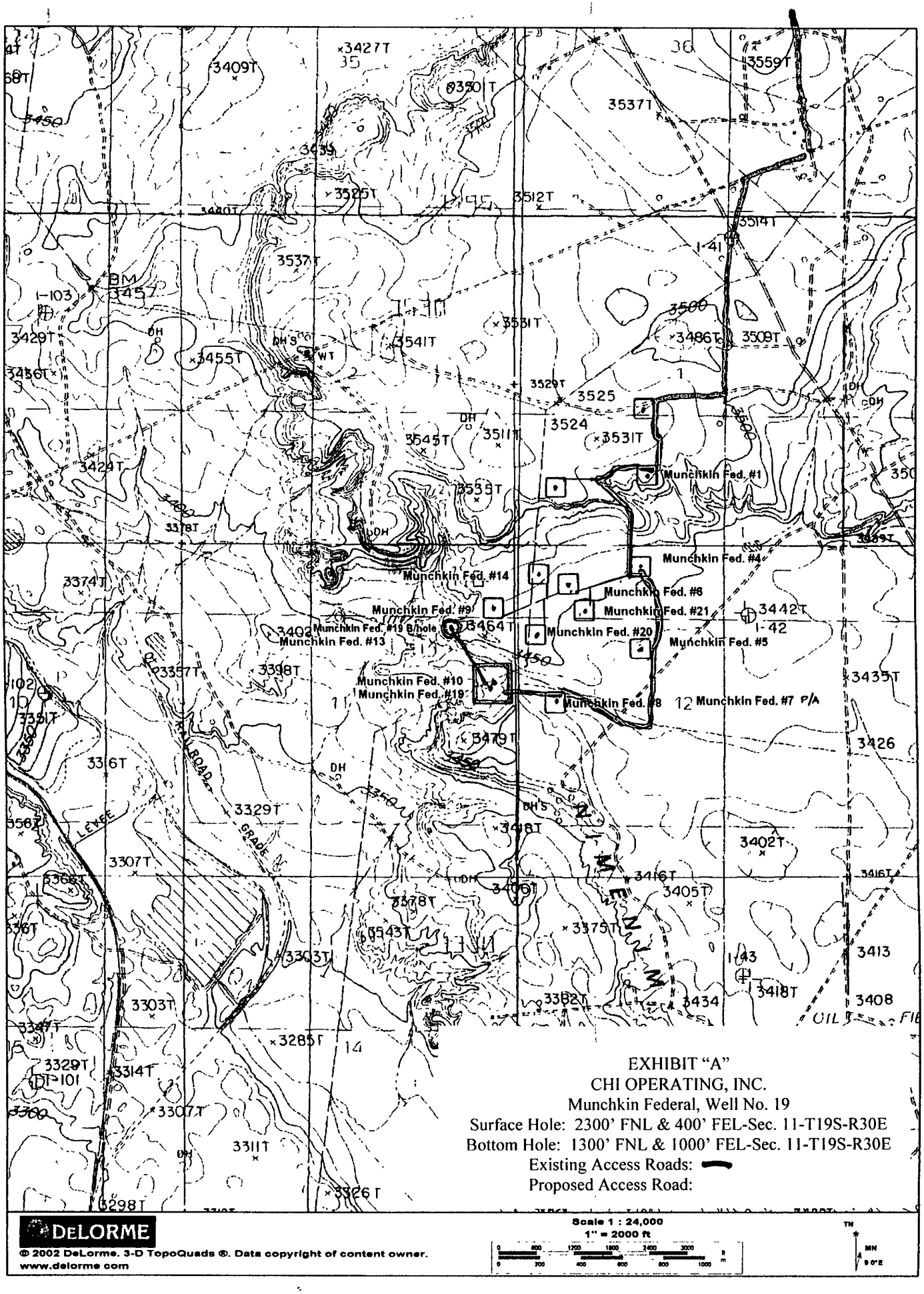


EXHIBIT "A"
CHI OPERATING, INC.
Munchkin Federal, Well No. 19
Surface Hole: 2300' FNL & 400' FEL-Sec. 11-T19S-R30E
Bottom Hole: 1300' FNL & 1000' FEL-Sec. 11-T19S-R30E
Existing Access Roads:
Proposed Access Road:

Scale 1 : 24,000
1" = 2000 ft

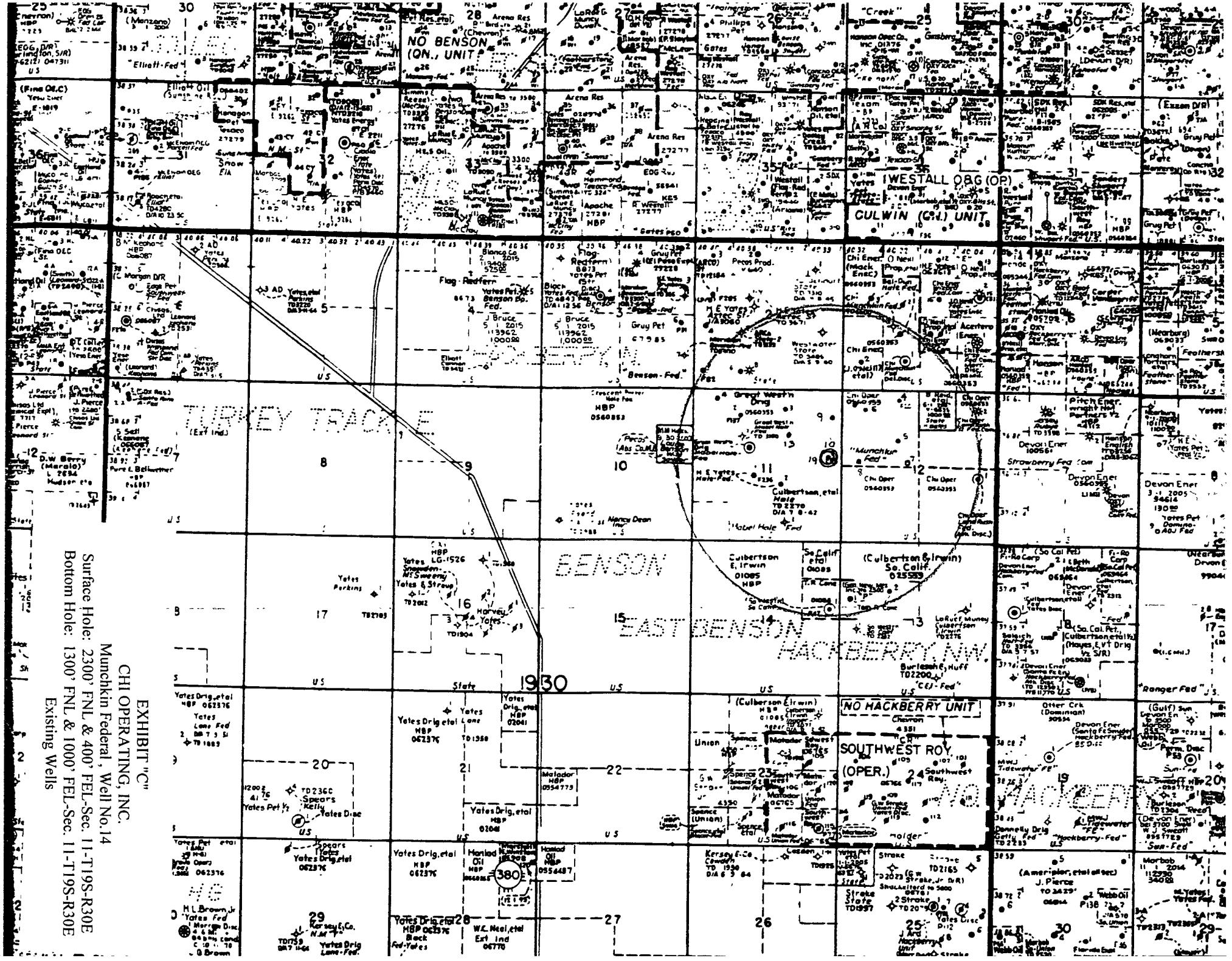


EXHIBIT "C"

CHI OPERATING, INC.

Munchkin Federal, Well No.14

Surface Hole: 2300' FNL & 400' FEL-Sec. 11-T19S-R30E

Bottom Hole: 1300' FNL & 1000' FEL-Sec. 11-T19S-R30E

Existing Wells

APPLICATION FOR DRILLING

CHI OPERATING, INC.
Munchkin Federal, Well No. 19
Surface Hole: 2300' FNL & 400' FEL-Sec. 11-T19S-R30E
Bottom Hole: 1300' FNL & 1000' FEL-Sec. 11-T19S-R30E
Eddy County, New Mexico
Lease No.: NM-0560353
(Development Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Chi Operating, Inc. submits the following items of pertinent information in accordance with BLM requirements:

1. The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.

2. The estimated tops of geologic markers are as follows:

Anhydrite	400'	Delaware	4170'
Yates	2128'	Cherry Canyon	4450'
Seven Rivers	2430'	Lower Brushy	5275'
Queen	3050'	T.D.	5500'
Penrose	3360'		

3. The estimated depths at which water, oil or gas formations are anticipated to be encountered:

Water: Surface water between 100' - 300'.
Oil Possible in the Queen, Delaware.
Gas: Possible in the Delaware

4. **Proposed New Casing Program.**

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH FACTOR	COLLAPSE DESIGN FACTOR	BURST DESIGN FACTOR	TENSION DESIGN FACTOR
17 ½"	13 3/8"	48.0#	H-40	ST&C	500'	2.42	8.79	SF>10
11"	8 5/8"	32.0#	K-55	ST&C	2,050'	1.94	4.61	7.23
7 7/8"	5 ½"	15.5#	K-55	LT&C	5,500' V 5775' M	1.16	2.22	3.31

5. **Cement Program** See COA

CASING	SETTING DEPTH	QUANITY OF CEMENT	TOC	YIELD
13 3/8"	500'	Est. 400 sx "C" plus additives	Surface	1.34
8 5/8"	2,050'	Est. 375 sx "C" lite & 150 sx "C" plus add.	"	1.34
5 1/2"	~~8,950'~~ 5775' M	Stage 1: 276 sx "C" plus add.	"	1.55
5 1/2"	" 5500' V	Stage 2: 325 sx (35:65) POZ: Prem Plus "C" plus add.	"	2.10
5 1/2"	"	50 sx Prem. Plus "C" plus add.	"	1.34

Note: DV tool @ +/- 3700' if necessary.

See COA

6. Proposed Control Equipment: A 10" 3000 psi wp Shaffer Type E double gate hydraulic ram BOP will be installed on the 13 3/8" casing. Casing and BOP will be tested ~~to 500 psi~~ before drilling out with the 11". Prior to drilling out the 8 5/8" casing shoe, the BOP will be tested as per Onshore Oil & Gas Order #2. The pipe rams will be operated and checked daily, plus each time drill pipe is out of hole. This will be documented on driller's log. See Exhibit "E".

7. **MUD PROGRAM** See COA

MUD PROGRAM DEPTH	MUD	MUD WEIGHT	VIS.	W/L CONTROL
0-500'	Fresh water mud:	8.4 - 8.7 ppg	32 - 34	No W/L control
500'-2050'	Brine	10 ppg	29	NC
2050-5500'	Cut brine or Fresh water *	9.2 ppg	29	NC
5500		9.2 ppg	29	<15 cc @TD for logs
*NOTE:	Switch to fresh water mud if loose circulation			

8. Auxiliary Equipment: Blowout Preventer, gas detector, Kelly cock, pit level monitor, flow sensors and stabbing valve.

9. Testing, Logging, and Coring Program: See COA
   Drill Stem Tests: As deemed necessary.
   Open Hole Logs: T.D thru pay: GR-CAL-CNL-LDT-GR-Cal-DLL-Micro CMR
   T D. to Surface: GR-Neutron
   Coring: Rotary Sidewall: as dictated by logs

   Mud Logging: 10' samples-2000' to TD (2 sets of samples).

10. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to increase the mud weight. Estimated evacuated BHP = 2,393 psi with a temperature of 115°.

11. H_2S: None expected. None in the previous drilling of wells in area, but the Mud Log Unit will be cautioned to use a gas trap to detect H_2S and if any is detected the mud weight will be increased along with H_2S inhibitors sufficient to control the gas. This well is being drilled in a close proximity to other wells. The well will be shut down until a mud separator and flare line can be installed on the choke manifold if H_2S is detected.

12. Anticipated starting date: October 5, 2009
    Anticipated completion of drilling operations: Approximately 30 days.

Weatherford®

Drilling Services

PROPOSAL

MUNCHKIN FEDERAL #19

EDDY COUNTY, NEW MEXICO

WELL FILE: **PLAN 1**

JULY 30, 2009

Weatherford Drilling Services
P.O. Box 61028
Midland, Texas 79711 USA
+1.432.561.8892 Main
+1.432.561.8895 Fax
www.weatherford.com

MUNCHKIN FEDERAL #19
EDDY COUNTY, NEW MEXICO

Weatherford

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0 00	0 00	328.88	0 00	0 00	0.00	0.00	0 00	0 00	
2	2860 00	0.00	328 88	2860.00	0 00	0 00	0.00	0 00	0.00	
3	3807.08	28 41	328.88	3768.74	196 94	-118.91	3 00	328 88	230.05	
4	5775.44	28 41	328 88	5500.00	998 70	-603 00	0 00	0 00	1166.62	PBHL

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	5500.00	998.70	-603.00	610745.90	622002.30	32°40'42.289N	103°56'12.570W	Point

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#19	0 00	0 00	609747.20	622605.30	32°40'32.384N	103°56'05.559W	N/A

FIELD DETAILS

Eddy Co., NM

Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico, Eastern Zone
Magnetic Model: igrf200510

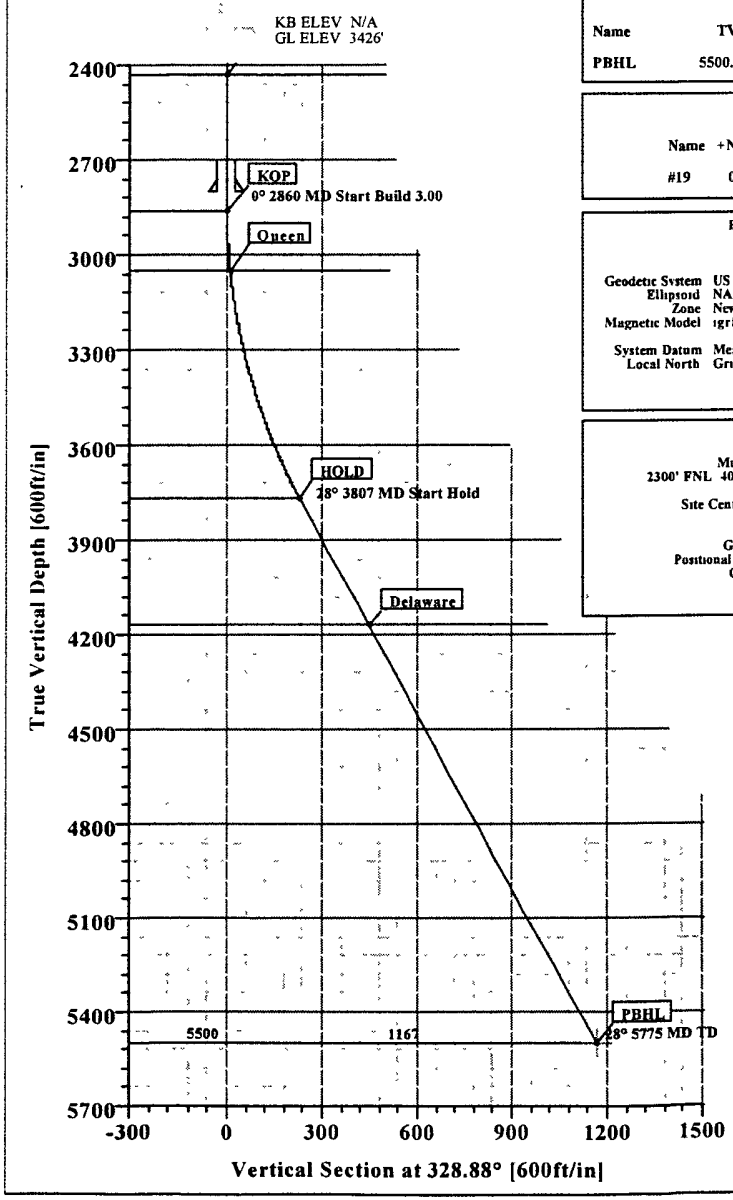
System Datum: Mean Sea Level
Local North: Grid North

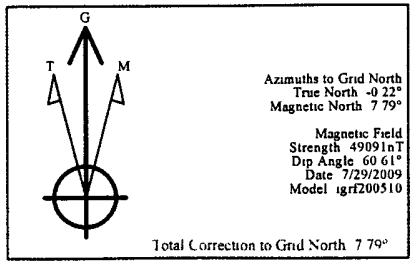
SITE DETAILS

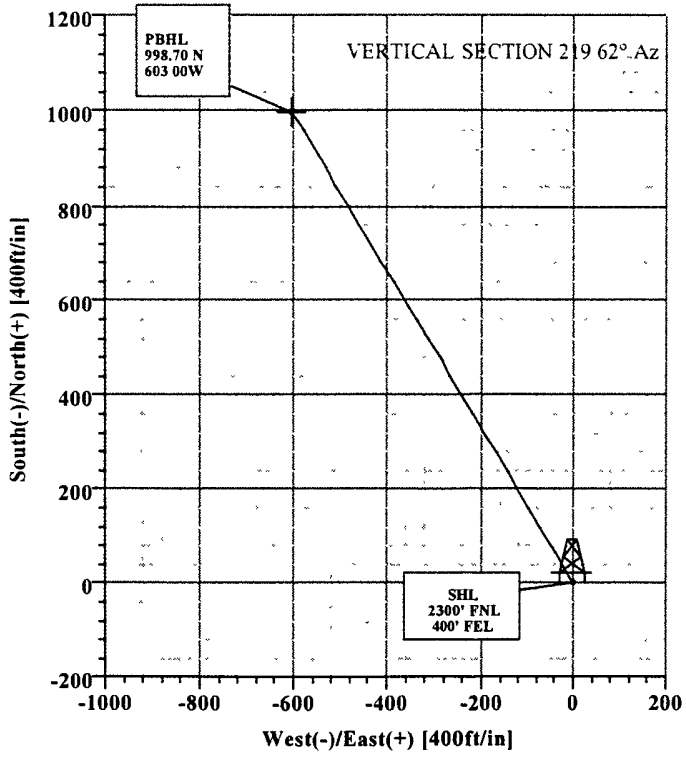
Munchkin Federal #19
2300' FNL 400' FEL of SEC 11 T19S R30E

Site Centre Northing: 609747 20
Easting: 622605 30

Ground Level: 3426 00
Positional Uncertainty: 0 00
Convergence: 0 22







Plan Plan #1 (#19/1)

Created By Lindsey Maddux Date 7/30/2009

Weatherford International, Inc.
Proposal Plan Report

Weatherford

Company:	Chi Energy	**Date:** 7/30/2009	**Time:** 11.55.13	**Page:**	1
Field:	Eddy Co., NM	**Co-ordinate(NE) Reference:**	Well. #19, Grid North		
Site:	Munchkin Federal #19	**Vertical (TVD) Reference:**	SITE 0 0		
Well:	#19	**Section (VS) Reference:**	Well (0.00N,0.00E,328.88Azi)		
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Sybase

Plan:	Plan #1	**Date Composed:**	7/29/2009
		Version:	1
Principal:	Yes	**Tied-to:**	From Surface

Field: Eddy Co , NM

Map System:	US State Plane Coordinate System 1927	**Map Zone:**	New Mexico, Eastern Zone
Geo Datum:	NAD27 (Clarke 1866)	**Coordinate System:**	Well Centre
Sys Datum:	Mean Sea Level	**Geomagnetic Model:**	igrf200510

Site: Munchkin Federal #19

2300' FNL 400' FEL of SEC 11 T19S R30E

Site Position:		**Northing:**	609747 20 ft	**Latitude:**	32	40	32.384	N
From:	Map	**Easting:**	622605 30 ft	**Longitude:**	103	56	5 559	W
Position Uncertainty:	0 00 ft			**North Reference:**			Grid	
Ground Level:	3426 00 ft			**Grid Convergence:**			0 22	deg

Well: #19 **Slot Name:**

Well Position:	+N/-S	0 00 ft	**Northing:**	609747 20 ft	**Latitude:**	32	40	32 384 N
	+E/-W	0 00 ft	**Easting :**	622605 30 ft	**Longitude:**	103	56	5 559 W
Position Uncertainty:		0 00 ft						

Wellpath: 1

Drilled From:	Surface				
Tie-on Depth:	0 00 ft				
Current Datum:	SITE	**Height**	0 00 ft	**Above System Datum:**	Mean Sea Level
Magnetic Data:	7/29/2009			**Declination:**	8 00 deg
Field Strength:	49091 nT			**Mag Dip Angle:**	60.61 deg

Vertical Section:	**Depth From (TVD)** ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
	0 00	0 00	0 00	328.88

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0 00	328 88	0 00	0 00	0 00	0 00	0.00	0 00	0 00	
2860 00	0 00	328 88	2860 00	0 00	0 00	0 00	0 00	0 00	0.00	
3807 08	28 41	328 88	3768 74	196 94	-118 91	3 00	3 00	0 00	328 88	
5775.44	28 41	328 88	5500 00	998 70	-603 00	0 00	0 00	0 00	0 00	PBHL

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	Build deg/100ft	Turn deg/100ft	DLS deg/100ft	TFO deg	Comment
2800 00	0.00	328 88	2800 00	0.00	0 00	0.00	0 00	0.00	0 00	328 88	Surf. Csg.
2860.00	0.00	328 88	2860 00	0 00	0 00	0.00	0 00	0.00	0.00	328 88	KOP
2900.00	1 20	328.88	2900 00	0.36	-0.22	0.42	3.00	0.00	3 00	0 00	
3000.00	4 20	328.88	2999.87	4.39	-2 65	5.13	3.00	0.00	3.00	0.00	
3050 31	5 71	328 88	3050 00	8 11	-4 90	9 47	3.00	0 00	3 00	360 00	Queen
3100 00	7 20	328.88	3099 37	12 89	-7 78	15 06	3 00	0 00	3 00	0.00	
3200.00	10 20	328 88	3198 21	25 84	-15.60	30 18	3 00	0 00	3.00	0 00	
3300 00	13 20	328 88	3296 12	43 20	-26 08	50 46	3 00	0 00	3.00	0 00	
3400 00	16 20	328 88	3392 83	64 92	-39 20	75.83	3 00	0 00	3 00	0 00	
3500 00	19.20	328 88	3488 09	90 94	-54 91	106 23	3 00	0 00	3 00	0 00	
3600 00	22 20	328.88	3581 62	121 20	-73 18	141 58	3 00	0.00	3.00	0 00	
3700.00	25 20	328 88	3673 18	155 60	-93 95	181 77	3 00	0 00	3 00	0 00	
3807 08	28.41	328.88	3768.74	196.94	-118.91	230.05	3.00	0.00	3.00	0 00	HOLD
3900 00	28 41	328 88	3850 47	234 79	-141 76	274 26	0 00	0 00	0 00	0.00	
4000 00	28 41	328 88	3938.42	275 52	-166 35	321.84	0 00	0.00	0 00	0 00	
4100.00	28 41	328 88	4026.38	316 25	-190.95	369 43	0.00	0 00	0.00	0.00	
4200 00	28.41	328.88	4114 33	356.98	-215.54	417.01	0.00	0.00	0 00	0 00	

Weatherford International, Inc.
Proposal Plan Report

Weatherford

Company:	Chi Energy	**Date:** 7/30/2009 **Time:** 11.55.13	**Page:** 2
Field:	Eddy Co , NM	**Co-ordinate(NE) Reference:**	Well #19, Grid North
Site:	Munchkin Federal #19	**Vertical (TVD) Reference:**	SITE 0.0
Well:	#19	**Section (VS) Reference:**	Well (0 00N,0.00E,328.88Azi)
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature **Db:** Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	Build deg/100ft	Turn deg/100ft	DLS deg/100ft	TFO deg	Comment
4263 29	28 41	328 88	4170 00	382 77	-231 11	447 12	0 00	0.00	0 00	0 00	Delaware
4300 00	28 41	328 88	4202 28	397 72	-240 14	464.59	0 00	0 00	0 00	0 00	
4400.00	28 41	328 88	4290 24	438 45	-264 73	512 17	0 00	0 00	0 00	0 00	
4500 00	28 41	328 88	4378 19	479 18	-289 32	559 75	0 00	0 00	0 00	0 00	
4600 00	28 41	328 88	4466 15	519 91	-313 92	607 33	0 00	0 00	0 00	0 00	
4700 00	28 41	328 88	4554 10	560 65	-338 51	654 91	0 00	0 00	0 00	0 00	
4800 00	28 41	328.88	4642 06	601 38	-363 10	702 50	0 00	0 00	0 00	0 00	
4900 00	28 41	328 88	4730 01	642 11	-387 70	750 08	0 00	0 00	0 00	0 00	
5000 00	28 41	328 88	4817.97	682 84	-412 29	797 66	0 00	0 00	0 00	0 00	
5100 00	28 41	328 88	4905 92	723 58	-436 88	845 24	0 00	0 00	0 00	0 00	
5200 00	28 41	328 88	4993 88	764 31	-461 48	892 82	0 00	0 00	0 00	0 00	
5300.00	28 41	328 88	5081 83	805 04	-486 07	940.40	0 00	0 00	0 00	0 00	
5400.00	28 41	328 88	5169.79	845 77	-510 67	987 98	0 00	0 00	0.00	0.00	
5500.00	28.41	328 88	5257 74	886 51	-535 26	1035 57	0 00	0 00	0.00	0 00	
5600 00	28 41	328 88	5345 69	927 24	-559.85	1083.15	0.00	0 00	0 00	0 00	
5700 00	28 41	328 88	5433 65	967 97	-584 45	1130 73	0 00	0 00	0 00	0.00	
5775 44	28.41	328 88	5500 00	998 70	-603 00	1166 62	0 00	0 00	0 00	0 00	PBHL

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ----> Deg Min Sec	<--- Longitude ---> Deg Min Sec
PBHL -Plan hit target			5500 00	998 70	-603 00	610745 90	622002 30	32 40 42 289 N	103 56 12 570 W

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
400 00	400 00	T Anhydrite		0 00	0 00
2128 00	2128 00	Yates		0 00	0 00
2430 00	2430 00	7 Rivers		0.00	0 00
3050 31	3050 00	Queen		0 00	0 00
4263 29	4170 00	Delaware		0.00	0 00

Annotation

MD ft	TVD ft	
2860 00	2860 00	KOP
3807.08	3768 74	HOLD
5775.43	5499.99	PBHL

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
2800 00	2800.00	0 000	0 000	Surf Csg

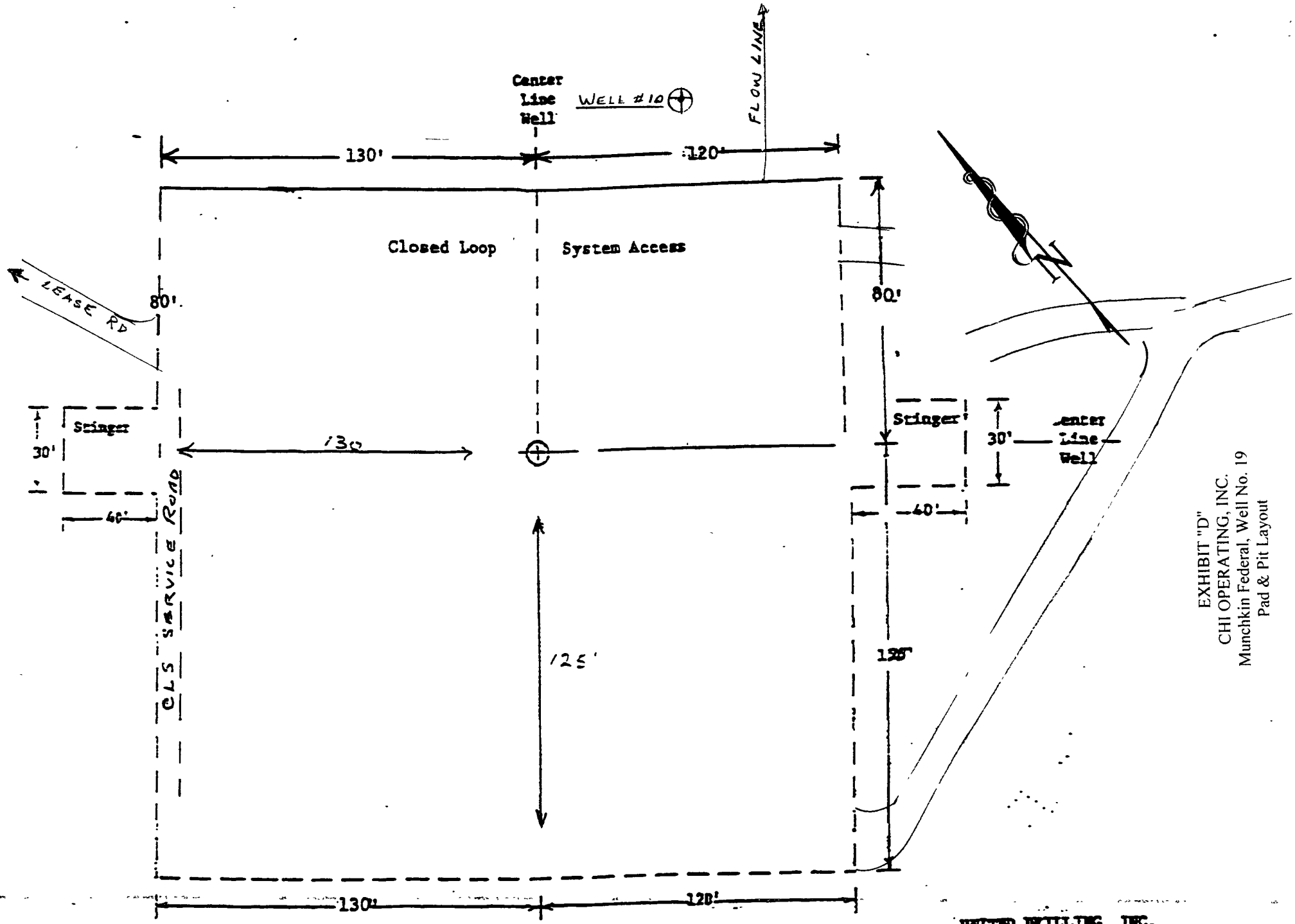
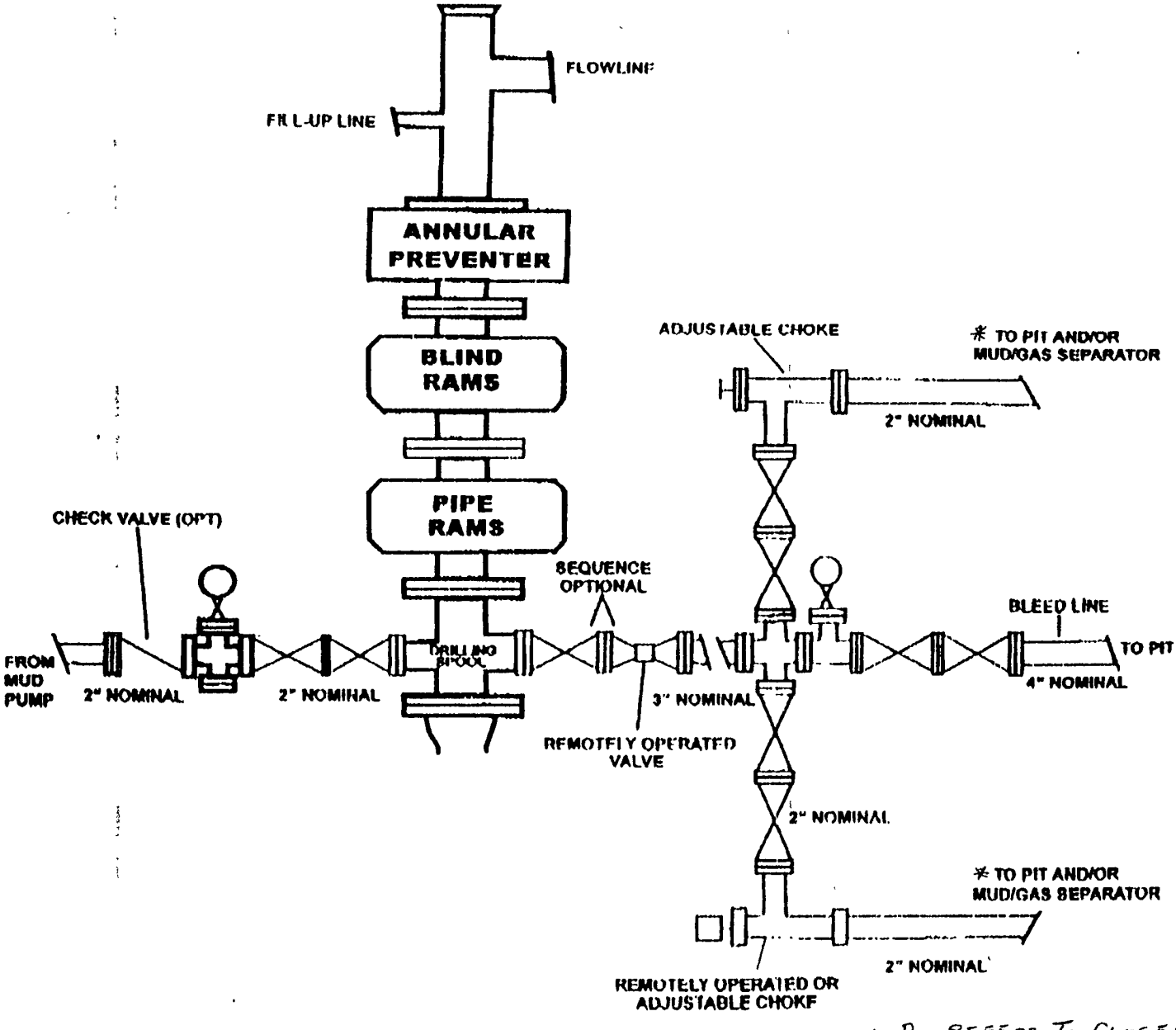


EXHIBIT "D"
CHI OPERATING, INC.
Munchkin Federal, Well No. 19
Pad & Pit Layout

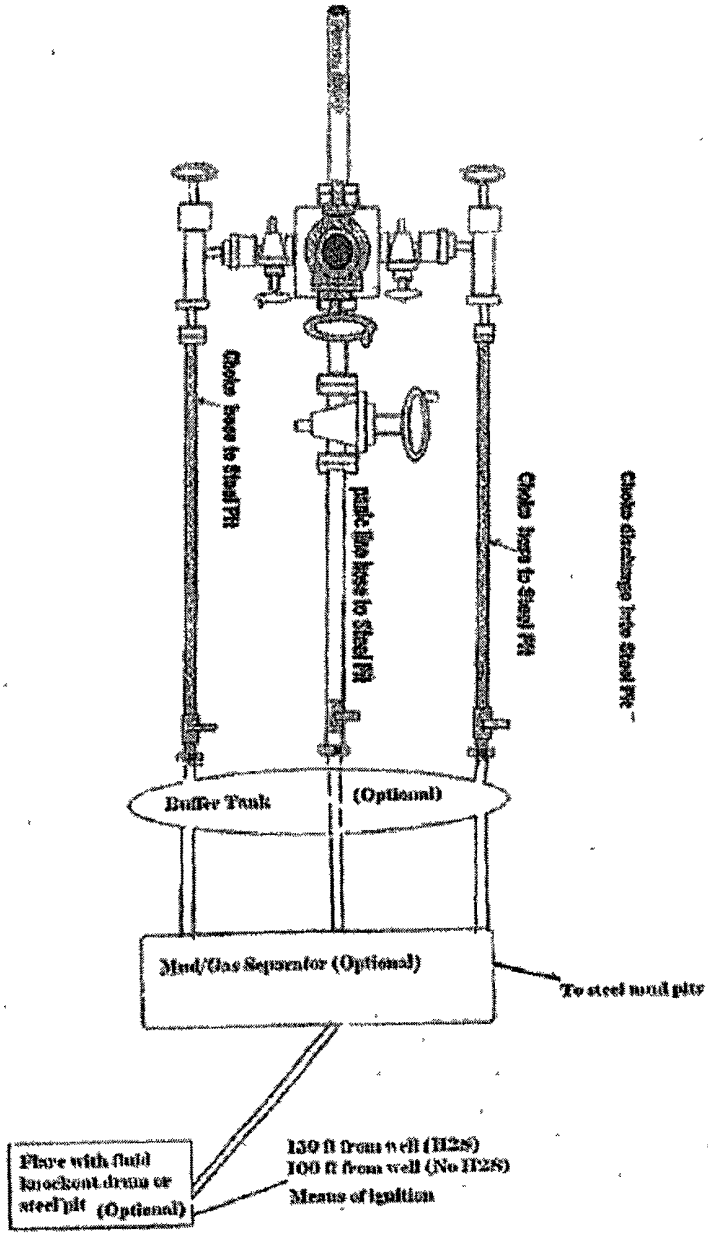
UNITED DRILLING, INC.
LOCATION PLAT
RIG

BOP DIAGRAM
3000# SYSTEM



* PIT REFERS TO CLOSED LOOP SYSTEM

EXHIBIT "E"
CHI OPERATING, INC.
Munchkin Federal, Well No. 19
BOP Specifications



2000-3000 psi Choke Manifold

Chi Operating , Inc., Munchkin Federal, Well No. 19
API: 30--

Sec. 11, T19S-R30E: 2300' FNL & 400' FEL Eddy Co., NM

DESIGN: Closed Loop System with roll-off steel bins (pits)

CLS/Carlsbad will supply (2) bins ( ) volume, rails and transportation relating to the Close Loop system. Specifications of Close Loop System attached.

Contacts: Tommy Wilson 575-748-6367 Cell Office # 575-885-3996

Closed Loop Specialties: Supervisor: Curtis: 575-706-4605 - Carlsbad Cell
Monitoring 24 hour service
Equipment:
2-Centrifuges (brand): Swaco
2-Rig Shakers (brand): Mongoose
Air pumps on location for immediate remediation process
Layout of Close Loop System with bins, centrifuges and shakers attached.

Cuttings and associated liquids will be hauled to a State regulated third party disposal site: CRI (Controlled Recovery, Inc) Disposal Facility Permit # R-9166

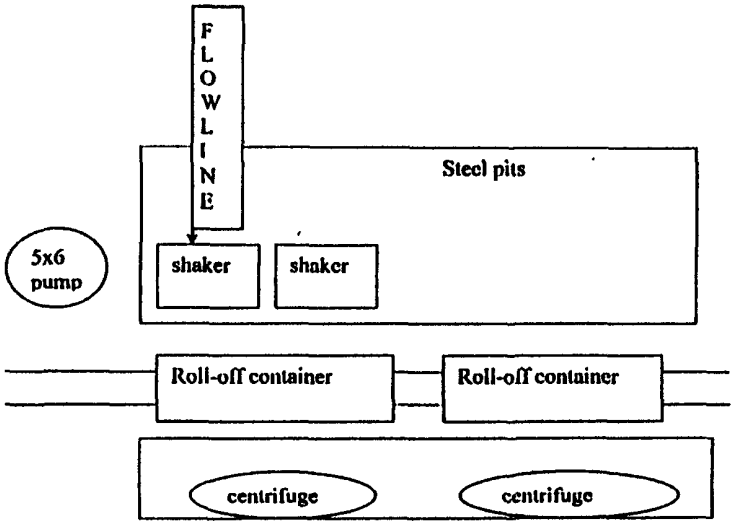
2- CLS Bins with track system
1 500 bbl tank for fresh water

OPERATIONS:

Closed Loop equipment will be inspected daily by each tour and any necessary maintenance performed.
Any leak in system will be repaired and or/contained immediately
OCD will be notified within 48 hours of the spill.
Remediation process started immediately

CLOSURE:

During drilling operations all liquids, drilling fluids and cuttings will be hauled off by CLS (Closed Loop Specialties) to disposal facility, Controlled Recovery, Inc. Permit # R-9166



This will be maintained by 24 hour solids control personnel that stay on location.

TOMMY WILSON
CLS
CLOSED LOOP SPECIALTY
Office: 575.746.1689 Cell: 575.748.6367

MULTI POINT SURFACE USE AND OPERATIONS PLAN

CHI OPERATING, INC
Munchkin Federal, Well No.14
Surface Hole: 2300' FNL & 400' FEL, Sec. 11 -T19S-R30E
Bottom Hole: 1300' FNL & 1000' FEL-Sec. 11-T19S-R30E
Eddy County, New Mexico
Lease No.: NM-0560353
(Development Well)

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities and operations plan, to be followed in rehabilitating the surface environmental effects associated with the operations.

1. EXISTING ROADS:

A. Exhibit "A" is a portion of a BLM Hackberry Lake Topo map showing the location of the proposed well as staked. The well site location is approximately 37 road miles southeast of Artesia, NM. Traveling east of Artesia on U.S. Highway 82, NM Hwy 360 and county roads No. 250 and 251, there will be 33 miles of paved highway, plus 4 miles of existing gravel oilfield roads.

B. Directions: Travel east from U. S. Highway #285 in Artesia, NM on U. S. Highway 82 for approximately 14 miles, turn southeast on NM Hwy 360 for approximately 13 miles to paved County Rd #251. Turn north on #251 for 1.8 mile to County Rd. # 250, then turn right on #250 for 3.8 miles to top of Nimenim Ridge. Turn south onto a gravel oilfield road just west of a cattle guard with a pipeline buried near the road. Continue south for .8 mile to a large tank battery and water injection pump house; turn right (west) for .25 mile to a pump jack, then south (left) for .63 mile to a P/A well site with a gas line tap. Turn right (west) for .3 mile, then south .25 mile to the Munchkin Fed. #1 well site. Turn west, north of the #1, for .2 mile to the access road on the left (south) side. Follow this road southeast then south to the southwest corner of the Munchkin Fed. #4 well pad. Take the access road in the middle of the pad on the south side and continue southeast for 1,000 feet to the southeast corner of the Munchkin Fed. #5 well pad. Continue south for 900'crossing pipeline and then turn west for 2,300' to the Munchkin Fed. #10 well site. The proposed well is located 122' SW of the No. 10 well on the same well pad.

2. PLANNED ACCESS ROAD:

A. Length and Width: The proposed access road will be constructed to a width of 12 feet and on the existing well pad area. The proposed and existing roads are color coded on Exhibit "A".

B. Construction: The existing access road will be will be constructed to service both the #10 well and the #19 well with the closed loop system.

C. Turnouts: None required.

D. Culverts: None required

E. Cuts and Fills: None required.

F. Gates, Cattle guards: None required.

G. Off Lease ROW: An off lease ROW No. NM-102279 was issued with a previous APD covering the existing access road in the E2 of Sec. 1-T19S-R30E.

3. LOCATION OF EXISTING WELLS:

A. Existing wells within a one-mile radius are shown on Exhibit "C".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES;

A. Chi Operating, Inc. has production facilities on the lease and the #10 well pad at this time.

B. If the well proves to be commercial, the necessary production facilities and gas production-process equipment will be installed on the drilling pad to be used with the existing equipment and storage tanks. The production will be processed and stored on the well #10 well pad and facilities.

5. LOCATION AND TYPE OF WATER SUPPLY:

A It is planned to drill the proposed well with fresh water that will be obtained from private or commercial sources and will be transported over the existing and proposed access roads

6. SOURCE OF CONSTRUCTION MATERIALS:

A. Caliche for surfacing proposed access road and construction of the well site pad will be obtained from a BLM approved pit on the drill site for the Wizard Federal #3 in the NW¼SE¼, Sec. 1-T19S-R30E. The archaeologist has cleared this pit. No surface materials will be disturbed except those necessary for actual grading and leveling of the drill site and access roads.

7. METHODS OF HANDLING WASTE DISPOSAL:

A. Drill cuttings and liquids will be stored in steel tanks of the closed loop mud system during the drilling operation and delivered to CRI, Permit No. R-9166, as needed and at closure.

B. There are no mud pits to be fenced.

C. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or a separate disposal application will be submitted to the BLM for approval.

D. Oil produced during operations will be stored in tanks until sold.

E Current laws and regulations pertaining to the disposal of human waste will be complied with.

F. Trash, waste paper, garbage and junk will be contained in trash bins to prevent scattering by the wind and will be removed for deposit in an approved sanitary landfill within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES:

A. None required.

9. WELL SITE LAYOUT:

A. Exhibit "D" shows the relative location and dimensions of the well pad, closed loop mud system, and major rig components. The pad and pit area was originally staked and flagged, 600' X 600'.

B Mat Size: 250' X 125', plus 80' X 250' closed loop area on the northeast.

C Cut & Fill: The location will require a 1 - 2 foot cut on the south with fill to the west. Additional fill will be required on the west This will enlarge and level the additional pad to the original pad

D. The surface will be topped with compacted caliche.

10. PLANS FOR RESTORATION OF THE SURFACE:

A. After completion of drilling and/or completion operations, all equipment and other material not required for operations will be removed. The location will be cleaned of all trash and junk to leave the well site in an aesthetically pleasing a condition as possible.

B. There will be no unguarded pits containing fluids.

C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible. The will be no pits to be filled.

11. OTHER INFORMATION:

A. Topography: The proposed location and access roads are located in an area on top of and east of the Niminem Ridge. The location has an overall 1-2% slope to the southeast from an elevation of 3426' GL.

B. Soil: The topsoil at the well site is a brownish red colored sandy loam with some caliche scatter on the surface. The soil is of the Berino loamy fine sands series.

C. Flora and Fauna: The vegetation cover is a fair to poor grass cover of threeawn, grama, dropseed, fluff grass and bush muhly along with plants of mesquite, creosote bush, broomweed, yucca, cacti and miscellaneous weeds and wildflowers. The wildlife consists of rabbits, coyotes, antelope, rattlesnakes, lizards, dove, quail and other wildlife typical of the semi-arid desert land.

D. Ponds and Streams: None in the area.

E. Residences and Other Structures: None in the area except oil field equipment and tank batteries and the Conoco Phillips pipeline to the north.

F. Land Use: Cattle grazing.

G. Surface Ownership: The proposed well site and access road is on Federal surface and minerals.

H. There is some evidence of archaeological, historical or cultural sites in the area. Archaeological Survey Consultants, P. O. Box D, Roswell, NM 88202 have conducted an archaeological survey and submitted their report to the appropriate government agencies on May 8, 2006, ASC report # 05-040.

12. OPERATOR'S REPRESENTATIVE:

A. The field representative for assuring compliance with the approved use and operations plan is as follows:

John Qualls
Chi Operating, Inc
P. O. Box 1799
Midland, Texas 79701
Office Phone: (432) 685-5001
Cell Phone: (432) 557-8774

Gary Womack
Chi Operating, Inc
P. O. Box 1799
Midland, Texas 79701
432) 685-5001
432-634-8958

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CHI OPERATING, INC.
LEASE NO.:	NM0560353
WELL NAME & NO.:	MUNCHKIN FEDERAL # 19
SURFACE HOLE FOOTAGE:	2300' FNL & 400' FEL
BOTTOM HOLE FOOTAGE	1300' FNL & 1000' FEL
LOCATION:	Section 11, T. 19 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Surface Disturbance Restriction

The construction area of the well pad will be limited to previous disturbance.

Drilling Special Requirements – Spacing Constraint

Due to the proximity of the well bore to the quarter-quarter line, the perforated interval is limited to 5726' MD to 5775' MD; if the casing is perforated above 5726' MD, the well becomes unorthodox and a new dedication plat must be submitted.

Hackberry ORV Area -

Due to the close proximity of the well pad and infrastructure to approved and unapproved trails in the Hackberry ORV Area:

- Pipelines and cables shall be buried a minimum of 24 inches under all roads, "two-tracks," and trails.
- Burial of the pipe or cable will continue for 20 feet on each side of each crossing.
- The condition of the road or trail, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.
- Open ditches shall be signed to notify trail users of construction.
- Chemical and other hazard signage will be prominently displayed.
- All vehicle and equipment operators will observe speed limits and practice responsible defensive driving habits.

EXHIBIT NO. 1

Date of Issue: 8/28/2009

Bureau of Land Management, Carlsbad Field Office
620 E. Greene Street Carlsbad, NM 88220

Cultural and Archaeological Resources

BLM Report No. 06-NM-523-822

NOTICE OF STIPULATIONS

Historic properties in the vicinity of this project are protected by federal law. In order to ensure that they are not damaged or destroyed by construction activities, the project proponent and construction supervisors shall ensure that the following stipulations are implemented.

Project Name:	**Munchkin Federal, Well #19**
Required	***1). A 3-day preconstruction call-in notification.*** Contact BLM archaeologist Bruce Boeke at 575-234-5917.
Required	***2. Professional archaeological monitoring***. Contact your project archaeologist, or BLM's Cultural Resources Section at (575) 234- 5917, 5967,or 5986, for assistance.
A. ☒	These stipulations must be given to your monitor at least **5 days** prior to the start of construction.
B. ☒	No construction, including vegetation removal or other site prep may begin prior to the arrival of the monitor.
	3. Cultural site barrier fencing. (Your monitor will assist you).
A. ☐	**A temporary site protection barrier(s)** shall be erected prior to all ground-disturbing activities. The minimum barrier(s) shall consist of upright wooden survey lath spaced no more than ten (10) feet apart and marked with blue ribbon flagging or blue paint. There shall be no construction activities or vehicular traffic past the barrier(s) at any time.
B. ☐	**A permanent, 4-strand barbed wire fence** strung on standard "T-posts" shall be erected prior to all ground-disturbing activities. No construction activities or vehicle traffic are allowed past the fence
Required	***4. The archaeological monitor shall:***
A. ☐	Ensure that all site protection barriers are located as indicated on the attached map(s).
B. ☒	**Observe all ground-disturbing activities within 200 feet of cultural site no. LA 153375 that is located within the southeastern quadrant of the original 600 foot by 600 foot survey block. A portion of this site was originally required to have been fenced off with barbed wire. Ensure that there is no new surface disturbance and the construction activity remains outside of LA 153375.**
C. ☐	Ensure that all reroutes are adhered to avoid cultural site no.(s) LA
D. ☐	Ensure the proposed is/are located as shown on the attached map(s).
E. ☒	Submit a brief monitoring report within 30 days of completion of monitoring.
	If subsurface cultural resources are encountered during the monitoring, all activities shall cease and a BLM-CFO archaeologist shall be notified immediately
Other:	

Site Protection and Employee Education: It is the responsibility of the project proponent and his construction supervisor to inform all employees and subcontractors that cultural and archaeological sites are to be avoided by all personnel, vehicles, and equipment; and that it is illegal to collect, damage, or disturb cultural resources on Public Lands.

For assistance, contact BLM Cultural Resources: Martin Stein (575) 234-5967 Bruce Boeke (575) 234-5917 George MacDonell (575)

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. RESERVE PITS

Closed Loop System: v-door southeast

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the
Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

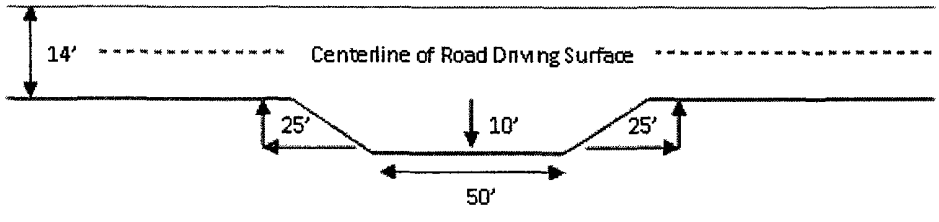
Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

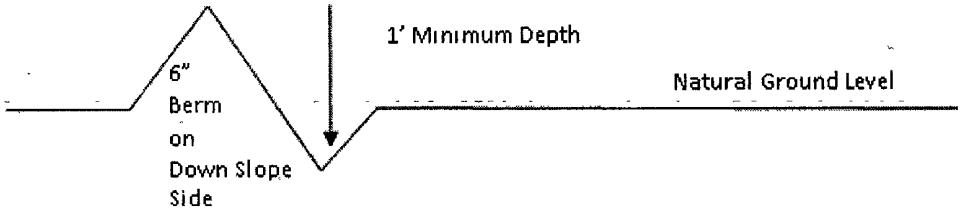
Standard Turnout – Plan View



Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section Of Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: 400'/4% + 100' = 200' lead-off ditch interval

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

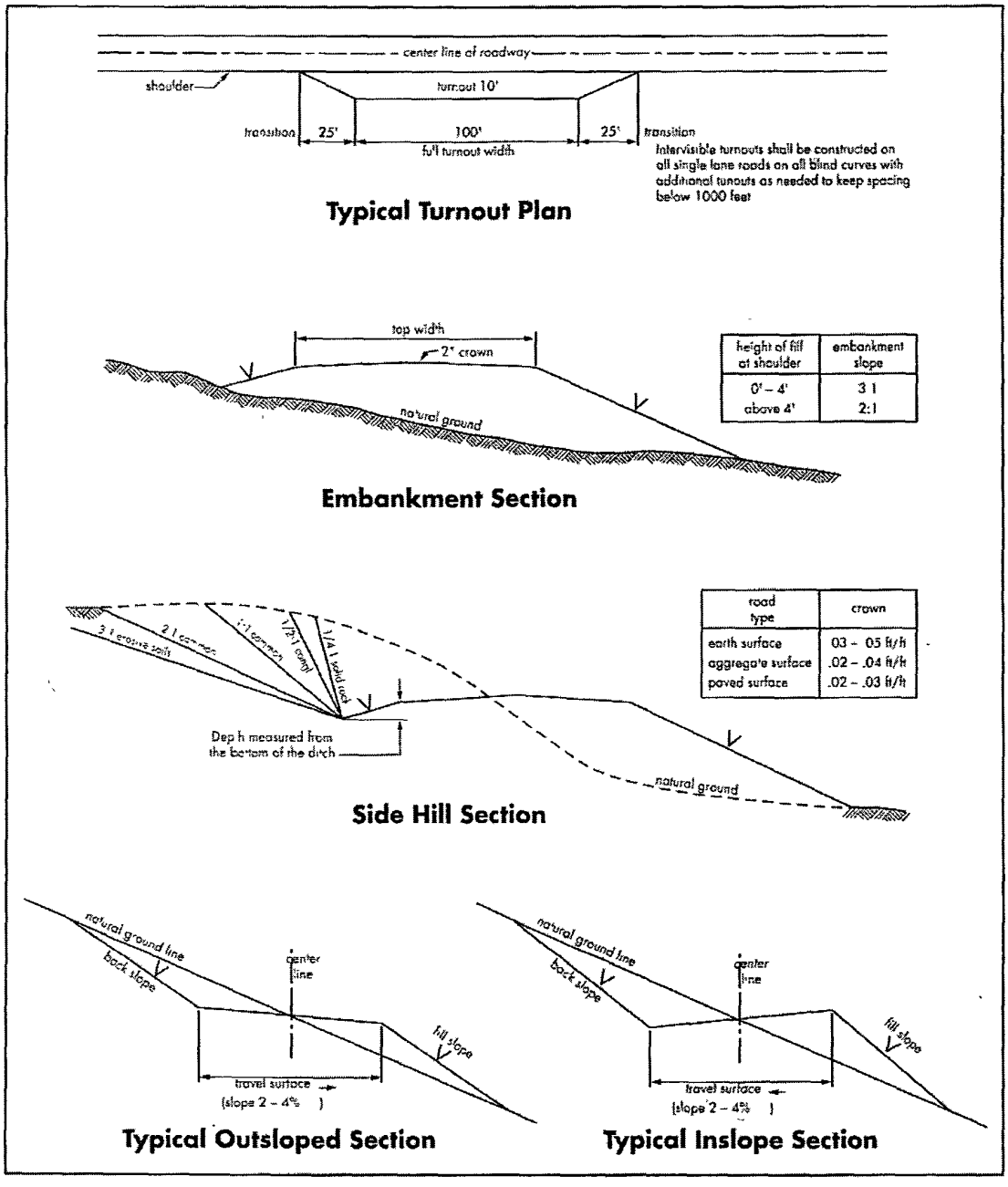
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

R-111 Potash.
Possible water flows in the Salado and Artesia Groups.
Possible lost circulation in the Artesia Group.
Possible lost circulation in the Capitan Reef if encountered.

1. The **13-3/8** inch surface casing shall be set **at approximately 500 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **8-5/8"** inch intermediate casing is:

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Casing is to be set in the Fletcher Anhydrite or Tansil Formation. Additional cement may be required, as the excess calculated to 9%. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

3. The minimum required fill of cement behind the **5-1/2"** inch production casing is:

   ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Additional cement may be required, as excess calculated to 16%.**

If a DV tool is used the required fill of cement behind the production casing is:

   a. First stage to DV tool, cement shall:

   ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. **Additional cement may be required, as excess calculated to 15%.**

   b. Second stage above DV tool, cement shall:

   ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Additional cement may be required, as excess calculated to 17%.**

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

5. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000(3M)** psi.

   a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. Casing cut-off and BOP installation will not be initiated until the cement has had 4-6 hours of setup time in a water basin and 12 hours in the potash areas. This time will start after the cement plug is bumped. Testing the BOP/BOPE against a plug can commence after meeting the above conditions plus the BOP installation time.

    b. The tests shall be done by an independent service company utilizing a test plug.

    c. The results of the test shall be reported to the appropriate BLM office.

    d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

    e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

    f. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

CRW092109

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.

b. Activities of other parties including, but not limited to:

(1) Land clearing.
(2) Earth-disturbing and earth-moving work.
(3) Blasting.
(4) Vandalism and sabotage.

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder

of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of **25** feet.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of **24** inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

(March 1989)

C. ELECTRIC LINES

IX. INTERIM RECLAMATION & RESEEDING PROCEDURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

The operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RESEEDING PROCEDURE

Once the well is drilled, all completion procedures accomplished, and all trash removed, reseed the location and all surrounding disturbed areas as follow:

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.