AFS-10-491
EA-10-880

OCD-ARTESIA

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SECRETARY'S POTASH

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NMLC-063613 BAL: NMO560353 CR

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

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

8. Lease Name and Well No. (27989)
Wizard Federal Com,, Well No. 5

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

9. API Well No.
30-015-38315

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

3b. Phone No. *(include area code)*
43-685-5001

10. Field and Pool, or Exploratory
HACKBERRY BONE SPRING NORTH
Benson Bone Spring (97056)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **10' FNL & 370' FEL (Horizontal)**
At proposed prod. zone **330' FSL & 330' FEL**

11. Sec., T. R. M. or Blk. and Survey or Area
Sec. 1-T19S-R30E

14. Distance in miles and direction from nearest town or post office*
36 miles SE of Artesia, NM

12. County or Parish
Eddy

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	17. Spacing Unit dedicated to this well
10' / 330'	280	160
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
898'	TVD 8613' MD 13,414'	NM-1616
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3517' GL	08/01/2010	5 - 6 weeks

RECEIVED
SEP 21 2010
NMOCD ARTESIA

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	Name *(Printed/Typed)*	Date
George R. Smith	George R. Smith	6/23/10

Title: **POA agent for Chi Operating, Inc.**

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/S/ Robert A Casias		SEP 14 2010
Title: **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)

Approval Subject to General Requirements & Special Stipulations Attached

Capitan Controlled Water Basin

Kz 12/14/10

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
1300 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1300 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
30-015-38315	~~5200~~ 97056	HACKBERRY; ~~Benson~~ Bone Spring, NORTH

Property Code	Property Name	Well Number
27989	WIZARD FEDERAL COM	5

OGRID No.	Operator Name	Elevation
4378	CHI OPERATING	3517'

Surface Location

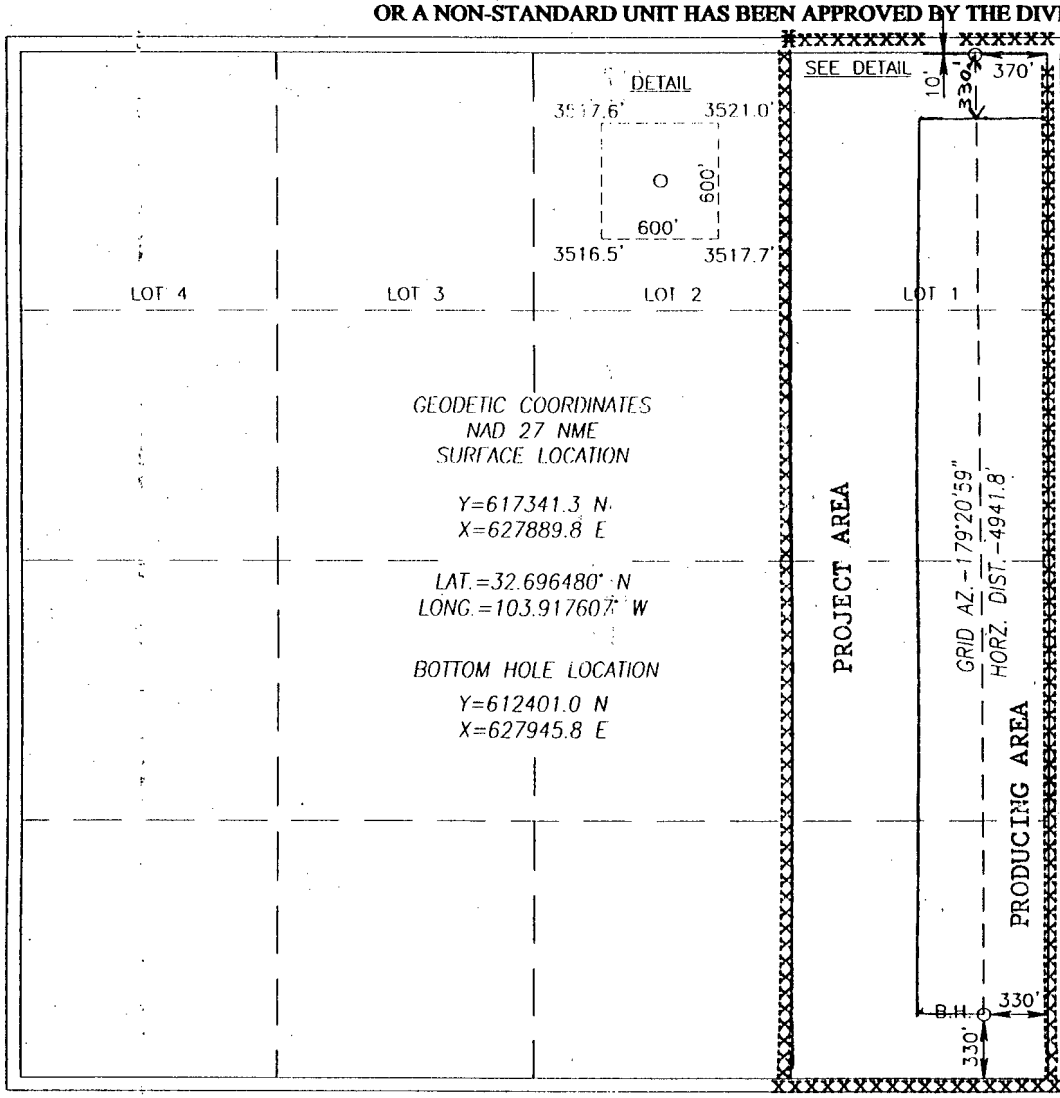
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	1	19-S	30-E		10	NORTH	370	EAST	EDDY

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
P	1	19-S	30-E		330	SOUTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160		Com	

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 6/23/10
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.

APRIL 19, 2010
Date Surveyed LA REV: 5/4/10

Signature & Seal of Professional Surveyor

Gary G. Eidson 5/4/10

10.11.0559

Certificate No. GARY G. EIDSON 12641
RONALD J. EIDSON 3239

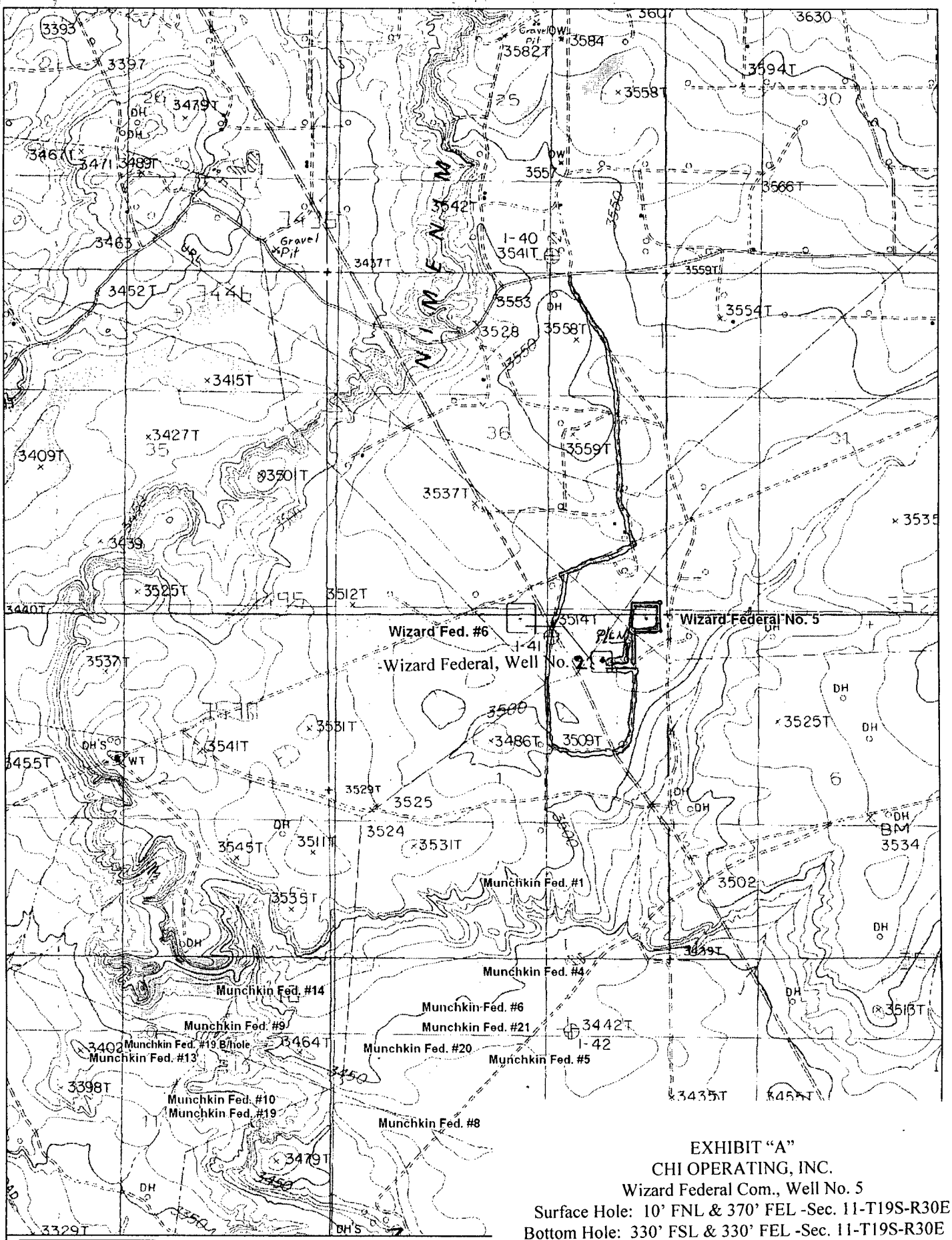


EXHIBIT "A"
CHI OPERATING, INC.
Wizard Federal Com., Well No. 5
Surface Hole: 10' FNL & 370' FEL -Sec. 11-T19S-R30E
Bottom Hole: 330' FSL & 330' FEL -Sec. 11-T19S-R30E
Existing Access Roads:
Proposed Access Road:

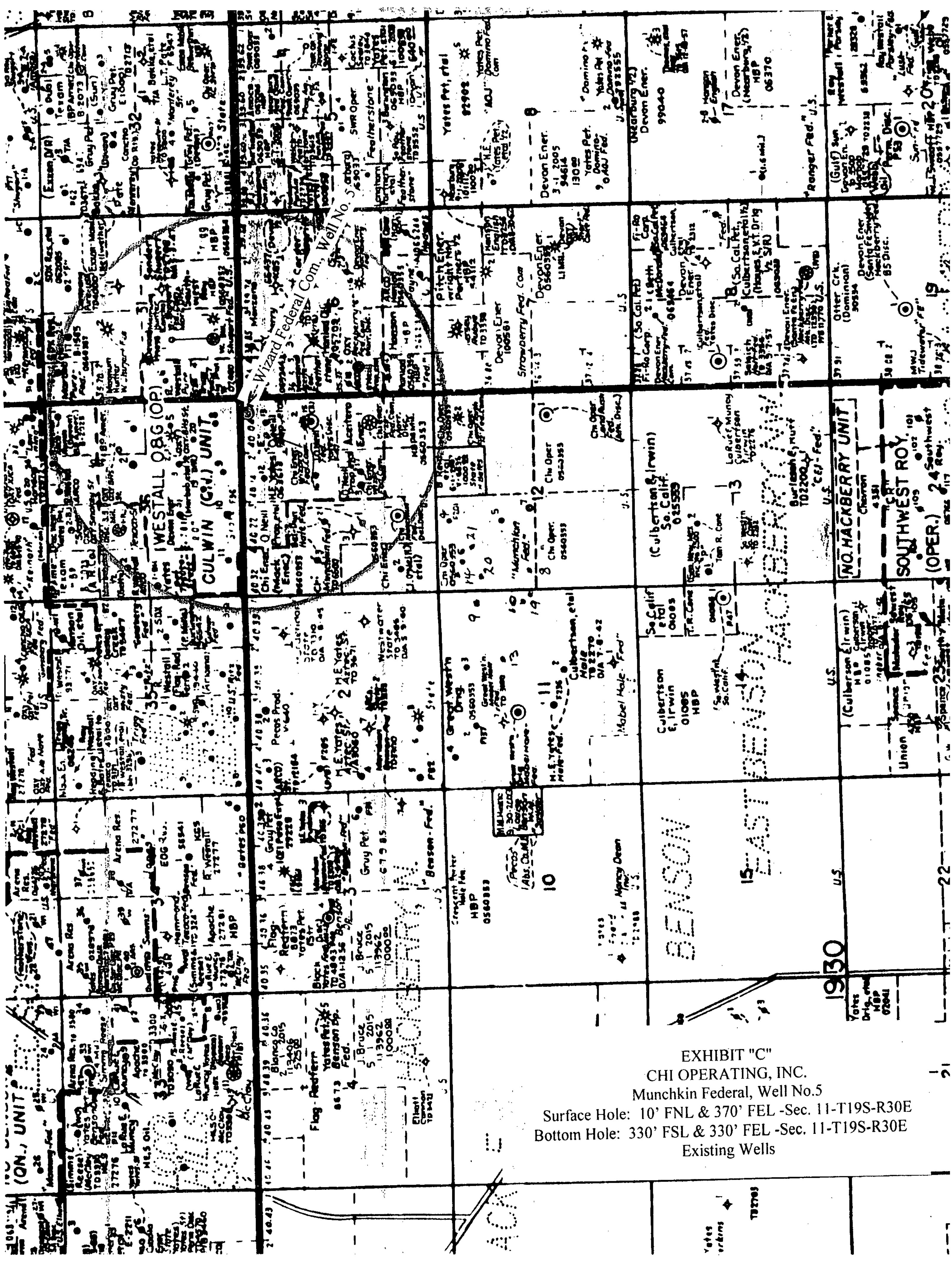


EXHIBIT "C"
CHI OPERATING, INC.
Munchkin Federal, Well No.5
Surface Hole: 10' FNL & 370' FEL -Sec. 11-T19S-R30E
Bottom Hole: 330' FSL & 330' FEL -Sec. 11-T19S-R30E
Existing Wells

APPLICATION FOR DRILLING

CHI OPERATING, INC.
Wizard Federal Com., Well No. 5
Surface Hole: 10' FNL & 370' FEL -Sec. 1-T19S-R30E
Bottom Hole: 330' FSL & 330' FEL -Sec. 1-T19S-R30E (horizontal drill)
Eddy County, New Mexico
Lease No.: LC-063613
(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'	Bone Spring	6130'
Yates	2235	1st Bone Spring	7600'
Seven Rivers	2430'	2nd Bone Spring	8530'
Queen	3100'	TVD.	8688'
Delaware	4050'		

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 Delaware, and the Bone Spring.
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
171/2"	13 3/8"	48.0#	H-40	ST&C	515'	2.88	6.46	15.32
12 1/4"	8 5/8"	32.0#	K-55	ST&C	2,050'	2.41	3.75	7.33
8 3/4"	No Csg				8,950'	Open hole	For logging	
8 3/4"	7"	26.0#	P-110	LT&C	8,200'	1.46	2.34	3.43
6 1/8"	4 1/2"	11.6#	P-110	LT&C	8M-13414'	1.67	.2.36	3.35

5. **Cement Program**

CASING	SETTING DEPTH	QUANITY OF CEMENT	TOC	YIELD
13 3/8"	515'	600 sx Premium Plus +3% salt + 2%CaCl2 (wt. 14.8)	Surface	1.34
8 5/8"	2,050'	Lead:360 sx EconoCem + 3% salt + 2%CaCl2+3 lbm/sk Gilsonite Tail: 650 sx Premium Plus + 1% CaCl 2	"	2.06 1.34
7"	8,200' csg 8950 hole	Lead: 360 sx EconoCem + 3% salt + 5 lbm/sk gilsonite Tail: 365 sx Halcem	"	1.71 1.34
2 7/8" tubing fiberglass	8200'to 8950'	Tubing used to circulate cement to surface		
4 1/2" lateral		.No cement required. Open hole completion assembly		

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

6. Proposed Control Equipment: A 13 3/8" 5000 psi wp Shaffer Type E double gate hydraulic ram BOP with an annular preventer will be installed on the 13 3/8" casing. Casing and BOP will be tested to 500 psi before drilling out with the 12 1/4". Prior to drilling out the 8 3/4" casing shoe, the BOP will be tested as per Onshore Oil & Gas Order #2, with a 3,000 psi test.. 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. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head as needed. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the floor. BOP will be tested by an independent service company to 250 psi low and 3,000 psi high. The hydrill will be tested to 250 psi low and 1500 psi high. See Exhibit "E".

7. **MUD PROGRAM**

MUD PROGRAM DEPTH	MUD	MUD WEIGHT	VIS.	W/L CONTROL
0' - 515'	Fresh water mud:	8.4 - 8.6 ppg	28	No W/L control
515' - 2050'	Brine water	10 ppg	30-32	NC
2050' - 8950'	Brine, Fresh water *	8.4 - 9.5 ppg	30-32	NC
8688 – 13415MD	2% KCl	8.4 ppg	28-32	NC
*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:
   Drill Stem Tests: None
   Open Hole Logs: 8950' to 6300': GR-CAL-CNL-LDT-GR-CAL-DLL-Micro
   8950'. to Surface:GR-Neutron
   Coring: Rotary Sidewall: None Planned
   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 = 3,795 psi with a temperature of 147° and surface pressure of 2,960 psi.

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 the H_2S gas monitor continues to rise and approaches 10.

12. Anticipated starting date: August 1, 2010
    Anticipated completion of drilling operations: Approximately 5-6 weeks.

Weatherford®

Drilling Services

Proposal

WIZARD FEDERAL #5H

EDDY COUNTY, NM

WELL FILE: **PLAN 2**

MAY 4, 2010

Weatherford International, Ltd.
P.O. Box 61028
Midland, TX 79711 USA
+1.432.561.8892 Main
+1.432.561.8895 Fax
www.weatherford.com

Wizard Federal #5H
Eddy Co, NM

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	179.35	0.00	0.00	0.00	0.00	0.00	0.00	
2	8287.74	0.00	179.35	8287.74	0.00	0.00	0.00	0.00	0.00	
3	8793.44	89.07	179.35	8613.00	-320.00	3.63	17.61	179.35	320.02	Lp
4	13414.55	89.07	179.35	8688.00	-4940.20	56.00	0.00	0.00	4940.52	Pbhl

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Wizard Federal #5H	0.00	0.00	617341.30	627889.80	32°41'47.330N	103°55'03.385W	N/A

TARGET DETAILS

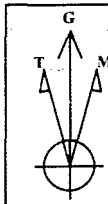
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Lp	8613.00	-320.00	3.63	617021.30	627893.43	Point
Pbhl	8688.00	-4940.20	56.00	612401.10	627945.80	Point

SITE DETAILS

Wizard Federal #5H

Site Centre Northing: 617341.30
Easting: 627889.80

Ground Level: 3517.00
Positional Uncertainty: 0.00
Convergence: 0.22



Azimuths to Grid North
True North: -0.22°
Magnetic North: 7.69°

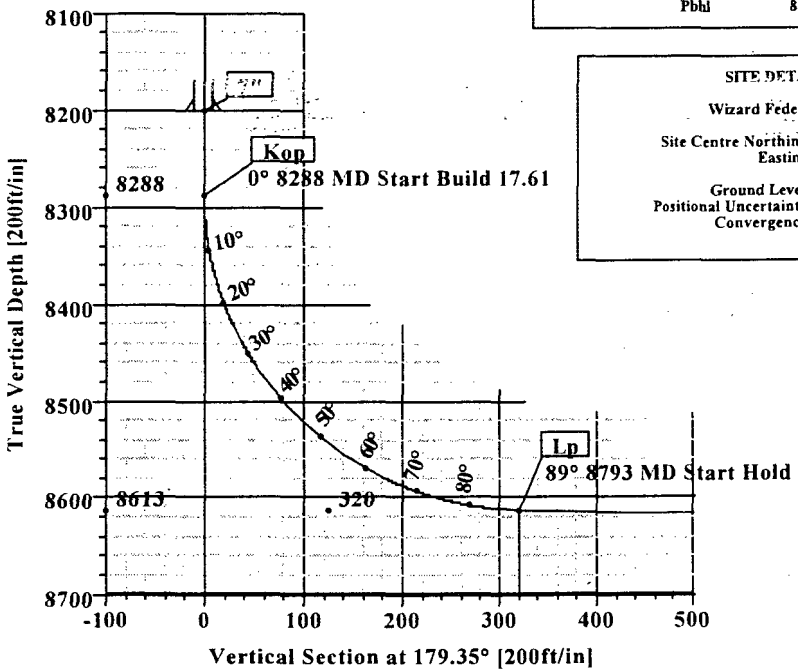
Magnetic Field
Strength: 48997nT
Dip Angle: 60.59°
Date: 5/15/2010
Model: IGRF2010

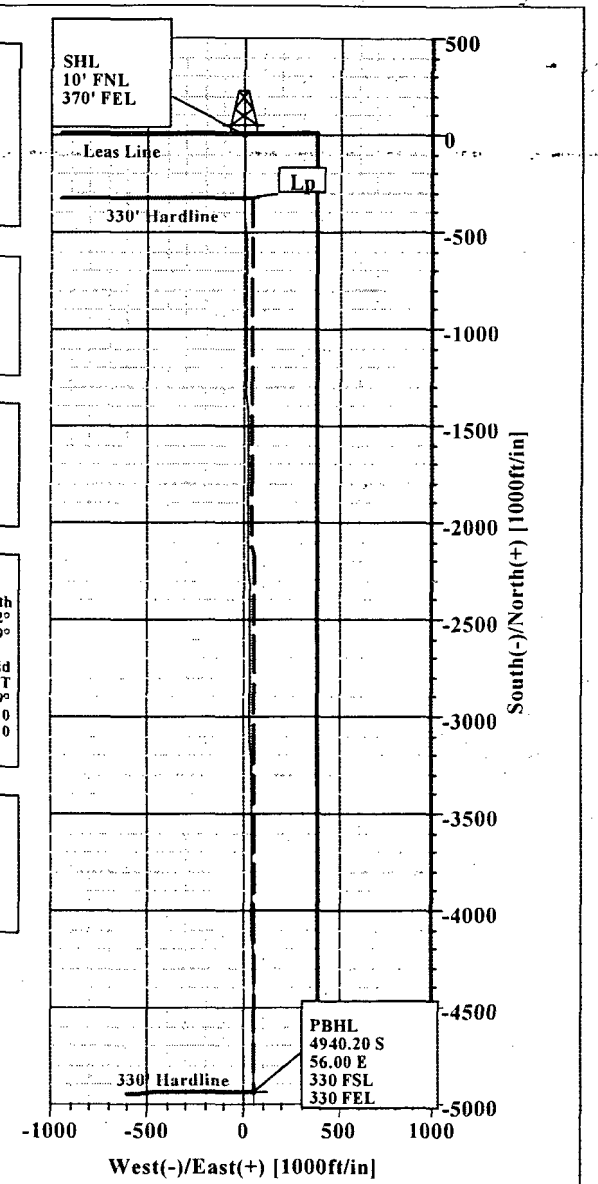
Total Correction To Grid North 7.69°

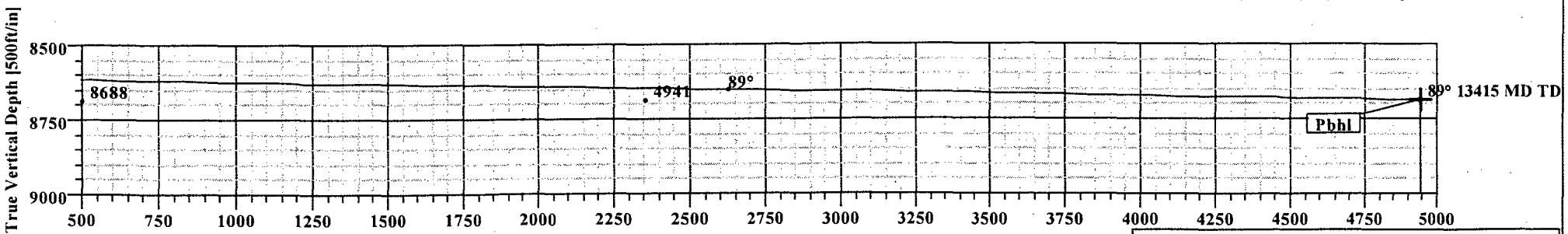
CASING DETAILS

No.	TVD	MD	Name	Size
1	8200.00	8200.00	7"	7.000

KB ELEV: NA
GL ELEV: 3517







Weatherford

Plan: Plan #2 (Wizard Federal #5H/1)

Created By: Russell W Joyner Date: 5/4/2010

Weatherford International Ltd.

WFT Plan Report - X & Y's

Weatherford

Company:	Chi Energy	**Date:** 5/4/2010	**Time:** 08:38:35	**Page:**	1
Field:	Eddy Co., NM	**Co-ordinate(NE) Reference:**	Well: Wizard Federal #5H, Grid North		
Site:	Wizard Federal #5H	**Vertical (TVD) Reference:**	SITE 0.0		
Well:	Wizard Federal #5H	**Section (VS) Reference:**	Well (0.00N,0.00E,179.35Azi)		
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Sybase

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:**	IGRF2010

Site: Wizard Federal #5H

Site Position:		**Northing:**	617341.30 ft	**Latitude:**	32	41	47.330	N
From:	Map	**Easting:**	627889.80 ft	**Longitude:**	103	55	3.385	W
Position Uncertainty:	0.00 ft			**North Reference:**			Grid	
Ground Level:	3517.00 ft			**Grid Convergence:**			0.22	deg

Well: Wizard Federal #5H **Slot Name:**

Well Position:	+N/-S 0.00 ft	**Northing:**	617341.30 ft	**Latitude:**	32	41	47.330	N
	+E/-W 0.00 ft	**Easting:**	627889.80 ft	**Longitude:**	103	55	3.385	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:	5/15/2010		**Declination:**	7.92	deg
Field Strength:	48997 nT		**Mag Dip Angle:**	60.59	deg

Vertical Section:	**Depth From (TVD)** ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
	0.00	0.00	0.00	179.35

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	179.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8287.74	0.00	179.35	8287.74	0.00	0.00	0.00	0.00	0.00	0.00	
8793.44	89.07	179.35	8613.00	-320.00	3.63	17.61	17.61	0.00	179.35	Lp
13414.55	89.07	179.35	8688.00	-4940.20	56.00	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	DLS deg/100ft	MapN ft	MapE ft	Comment
8200.00	0.00	179.35	8200.00	0.00	0.00	0.00	0.00	617341.30	627889.80	7"
8287.74	0.00	179.35	8287.74	0.00	0.00	0.00	0.00	617341.30	627889.80	Kop
8300.00	2.16	179.35	8300.00	-0.23	0.00	0.23	17.61	617341.07	627889.80	
8400.00	19.77	179.35	8397.79	-19.18	0.22	19.18	17.61	617322.12	627890.02	
8500.00	37.39	179.35	8485.26	-66.82	0.76	66.83	17.61	617274.48	627890.56	
8600.00	55.00	179.35	8554.21	-138.70	1.57	138.71	17.61	617202.60	627891.37	
8700.00	72.61	179.35	8598.18	-228.07	2.59	228.09	17.61	617113.23	627892.39	
8793.44	89.07	179.35	8613.00	-320.00	3.63	320.02	17.61	617021.30	627893.43	Lp
8800.00	89.07	179.35	8613.11	-326.56	3.70	326.58	0.00	617014.74	627893.50	
8900.00	89.07	179.35	8614.73	-426.54	4.84	426.56	0.00	616914.76	627894.64	
9000.00	89.07	179.35	8616.35	-526.52	5.97	526.55	0.00	616814.78	627895.77	
9100.00	89.07	179.35	8617.98	-626.50	7.11	626.54	0.00	616714.80	627896.91	
9200.00	89.07	179.35	8619.60	-726.48	8.24	726.52	0.00	616614.82	627898.04	
9300.00	89.07	179.35	8621.22	-826.46	9.38	826.51	0.00	616514.84	627899.18	
9400.00	89.07	179.35	8622.84	-926.44	10.51	926.50	0.00	616414.86	627900.31	
9500.00	89.07	179.35	8624.47	-1026.42	11.64	1026.48	0.00	616314.88	627901.44	
9600.00	89.07	179.35	8626.09	-1126.40	12.78	1126.47	0.00	616214.90	627902.58	
9700.00	89.07	179.35	8627.71	-1226.38	13.91	1226.46	0.00	616114.92	627903.71	
9800.00	89.07	179.35	8629.34	-1326.36	15.05	1326.44	0.00	616014.94	627904.85	
9900.00	89.07	179.35	8630.96	-1426.34	16.18	1426.43	0.00	615914.96	627905.98	

Weatherford International Ltd.

WFT Plan Report - X & Y's

Weatherford

Company:	Chi Energy	**Date:** 5/4/2010 **Time:** 08:38:35	**Page:** 2
Field:	Eddy Co., NM	**Co-ordinate(NE) Reference:**	Well: Wizard Federal #5H, Grid North
Site:	Wizard Federal #5H	**Vertical (TVD) Reference:**	SITE 0.0
Well:	Wizard Federal #5H	**Section (VS) Reference:**	Well (0.00N,0.00E,179.35Azi)
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	DLS deg/100ft	MapN ft	MapE ft	Comment
10000.00	89.07	179.35	8632.58	-1526.32	17.31	1526.42	0.00	615814.98	627907.11	
10100.00	89.07	179.35	8634.21	-1626.30	18.45	1626.41	0.00	615715.00	627908.25	
10200.00	89.07	179.35	8635.83	-1726.28	19.58	1726.39	0.00	615615.02	627909.38	
10300.00	89.07	179.35	8637.45	-1826.26	20.72	1826.38	0.00	615515.04	627910.52	
10400.00	89.07	179.35	8639.08	-1926.24	21.85	1926.37	0.00	615415.06	627911.65	
10500.00	89.07	179.35	8640.70	-2026.22	22.98	2026.35	0.00	615315.08	627912.78	
10600.00	89.07	179.35	8642.32	-2126.20	24.12	2126.34	0.00	615215.10	627913.92	
10700.00	89.07	179.35	8643.95	-2226.18	25.25	2226.33	0.00	615115.12	627915.05	
10800.00	89.07	179.35	8645.57	-2326.16	26.39	2326.31	0.00	615015.14	627916.19	
10900.00	89.07	179.35	8647.19	-2426.14	27.52	2426.30	0.00	614915.16	627917.32	
11000.00	89.07	179.35	8648.81	-2526.12	28.66	2526.29	0.00	614815.18	627918.46	
11100.00	89.07	179.35	8650.44	-2626.10	29.79	2626.27	0.00	614715.20	627919.59	
11200.00	89.07	179.35	8652.06	-2726.09	30.92	2726.26	0.00	614615.21	627920.72	
11300.00	89.07	179.35	8653.68	-2826.07	32.06	2826.25	0.00	614515.23	627921.86	
11400.00	89.07	179.35	8655.31	-2926.05	33.19	2926.23	0.00	614415.25	627922.99	
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13100.00	89.07	179.35	8682.90	-4625.71	52.47	4626.01	0.00	612715.59	627942.27	
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13400.00	89.07	179.35	8687.77	-4925.65	55.88	4925.97	0.00	612415.65	627945.68	
13414.55	89.07	179.35	8688.00	-4940.20	56.00	4940.52	0.00	612401.10	627945.80	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
Lp			8613.00	-320.00	3.63	617021.30	627893.43	32	41	44.164 N	103	55	3.357 W
Pbhl			8688.00	-4940.20	56.00	612401.10	627945.80	32	40	58.443 N	103	55	2.956 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
8200.00	8200.00	7.000	8.500	7"

Weatherford International Ltd.

WFT Plan Report - X & Y's

Weatherford

Company:	Chi Energy	**Date:** 5/4/2010	**Time:** 08:38:35	**Page:**	3
Field:	Eddy Co., NM	**Co-ordinate(NE) Reference:**	Well: Wizard Federal #5H, Grid North		
Site:	Wizard Federal #5H	**Vertical (TVD) Reference:**	SITE 0.0		
Well:	Wizard Federal #5H	**Section (VS) Reference:**	Well (0.00N,0.00E,179.35Azi)		
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Sybase

Annotation

MD ft	TVD ft	
8287.74	8287.74	Kop
8793.44	8613.00	Lp
13414.54	8688.00	Pbhl

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

Weatherford Drilling Services

GeoDec v5.03

Report Date:	April 28, 2010
Job Number:	
Customer:	Chi Energy
Well Name:	Wizard Federal #5H
API Number:	
Rig Name:	
Location:	Eddy Co., NM
Block:	
Engineer:	R Joyner

US State Plane 1927	Geodetic Latitude / Longitude
System: New Mexico East 3001 (NON-EXACT)	System: Latitude / Longitude
Projection: SPC27 Transverse Mercator	Projection: Geodetic Latitude and Longitude
Datum: NAD 1927 (NADCON CONUS)	Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866	Ellipsoid: Clarke 1866
North/South 617341.300 USFT	Latitude 32.6964806 DEG
East/West 627889.800 USFT	Longitude -103.9176070 DEG
Grid Convergence: .22°	
Total Correction: +7.70°	

Geodetic Location WGS84	Elevation = 0.0 Meters	
Latitude =	32.69648° N	32° 41 min 47.330 sec
Longitude =	103.91761° W	103° 55 min 3.385 sec

Magnetic Declination =	7.92°	[True North Offset]	
Local Gravity =	.9988 g	CheckSum =	6713
Local Field Strength =	48993 nT	Magnetic Vector X =	23828 nT
Magnetic Dip =	60.59°	Magnetic Vector Y =	3313 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z =	42680 nT
Spud Date =	May 15, 2010	Magnetic Vector H =	24058 nT

Signed:_____ Date:_____

JW DRILLING INC. Oil Well Drilling Contractor

Post Office Box 160 • Artesia, NM 88211-0160 • Office (505) 748-8704 • Fax (505) 748-8719

RIGS 1, 2, 3, & 5

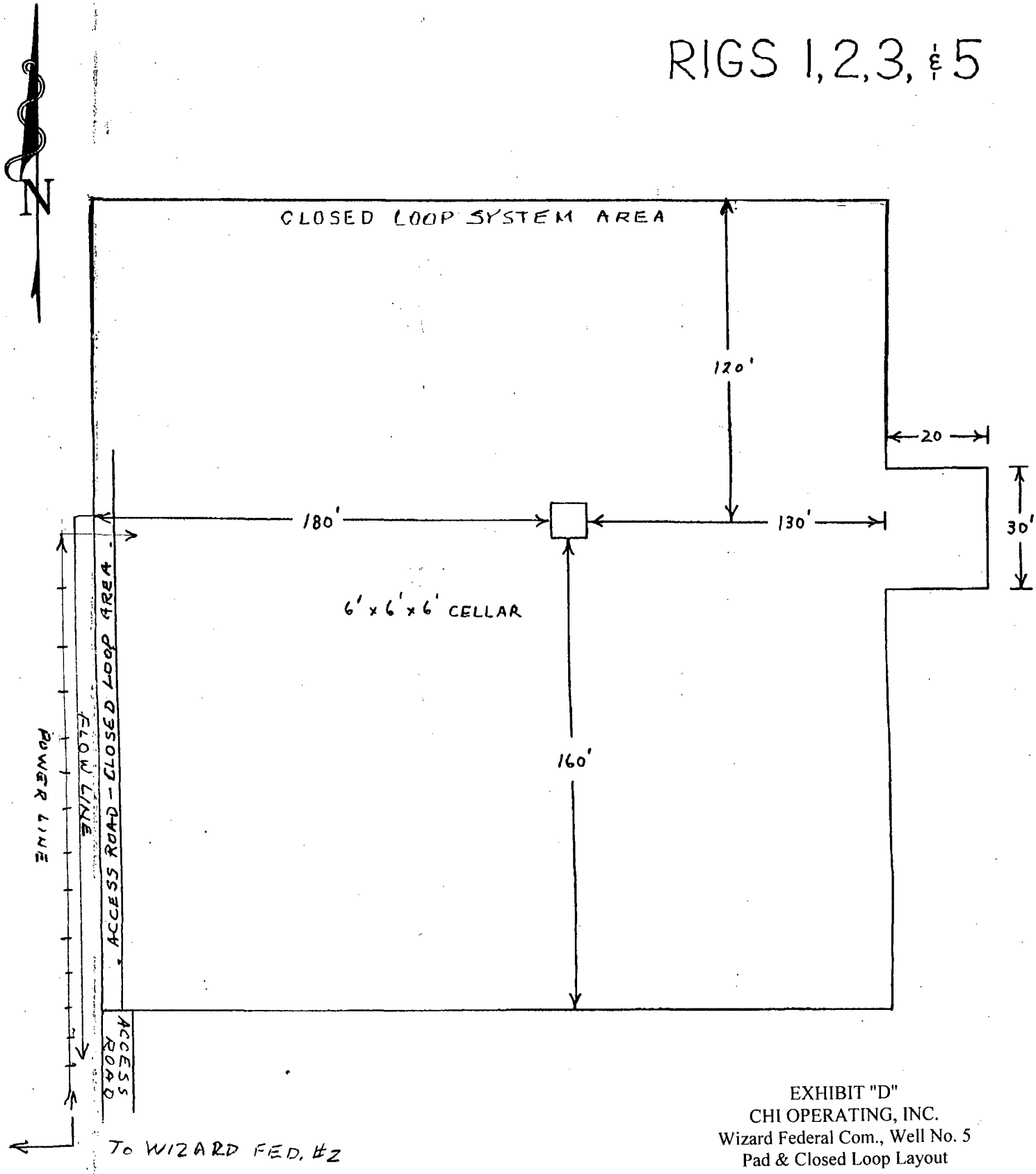
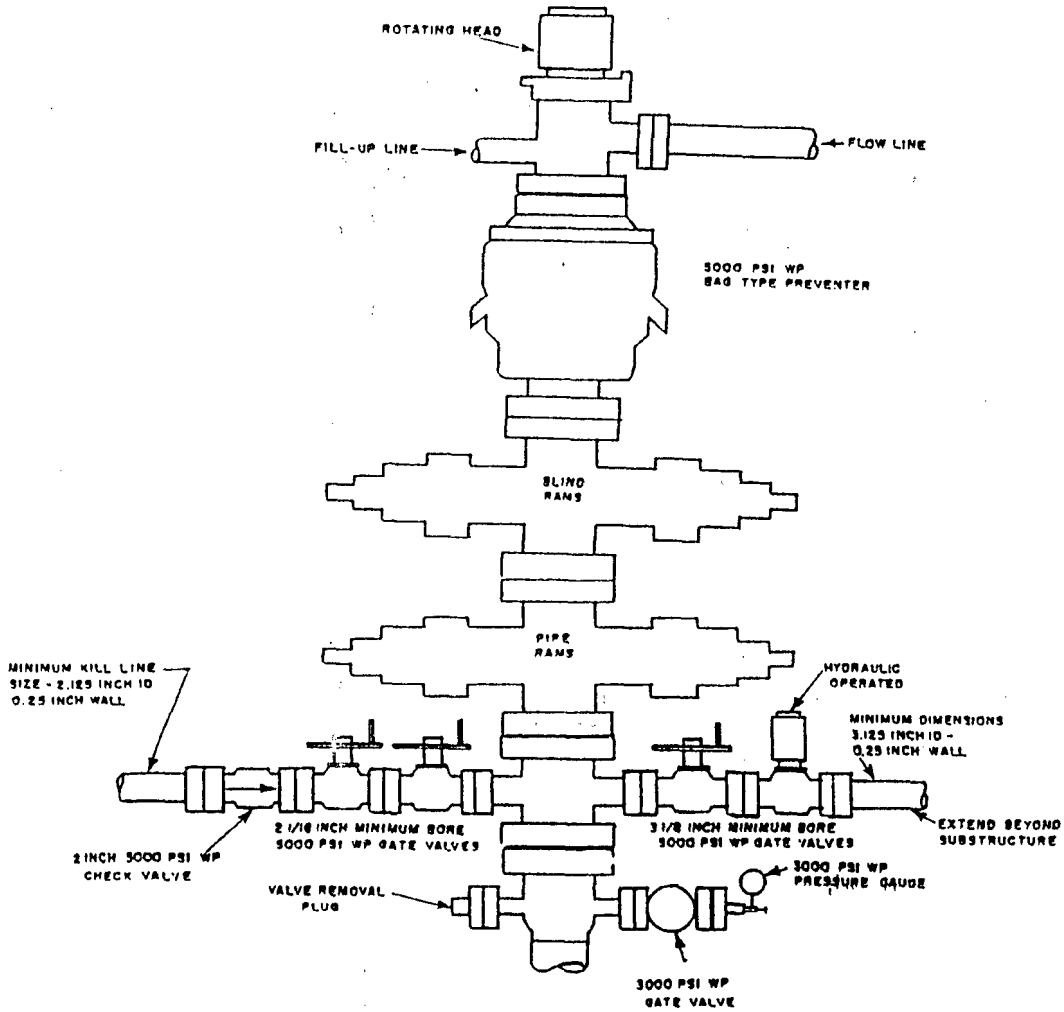
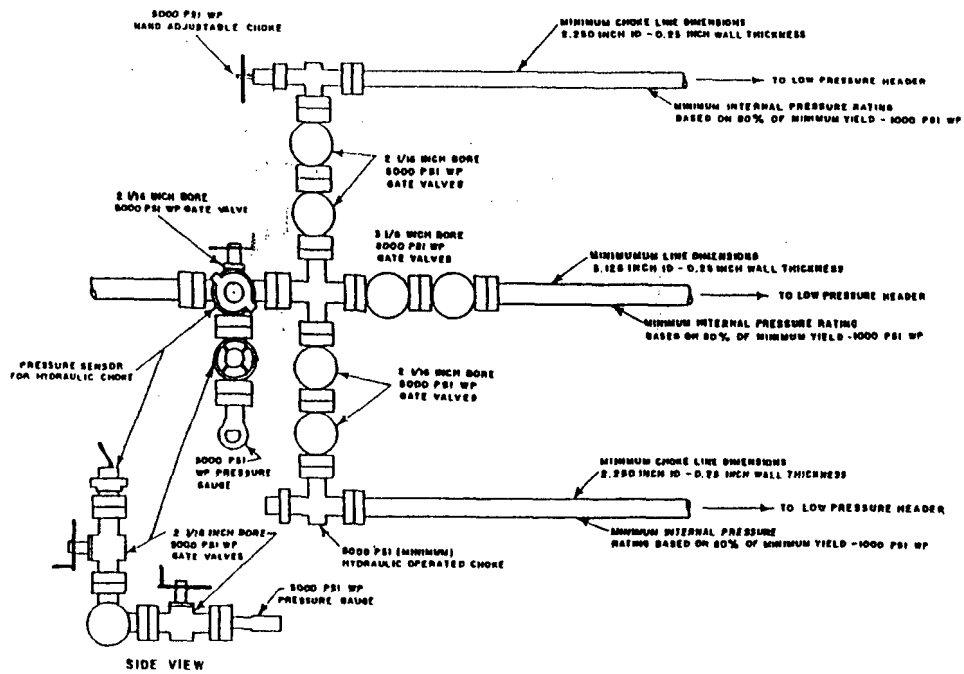


EXHIBIT "D"
CHI OPERATING, INC.
Wizard Federal Com., Well No. 5
Pad & Closed Loop Layout

5000 PSI WORKING PRESSURE BLOWOUT PREVENTER STACK

EXHIBIT C-1





5000 PSI WORKING PRESSURE CHOKE MANIFOLD

EXHIBIT C-2

EXHIBIT "E"
CHI OPERATING, INC.
Wizard Federal Com., Well No. 5
BOP Specifications

EXHIBIT
CHI OPERATING, INC.
Wizard Federal Com., Well No. 5

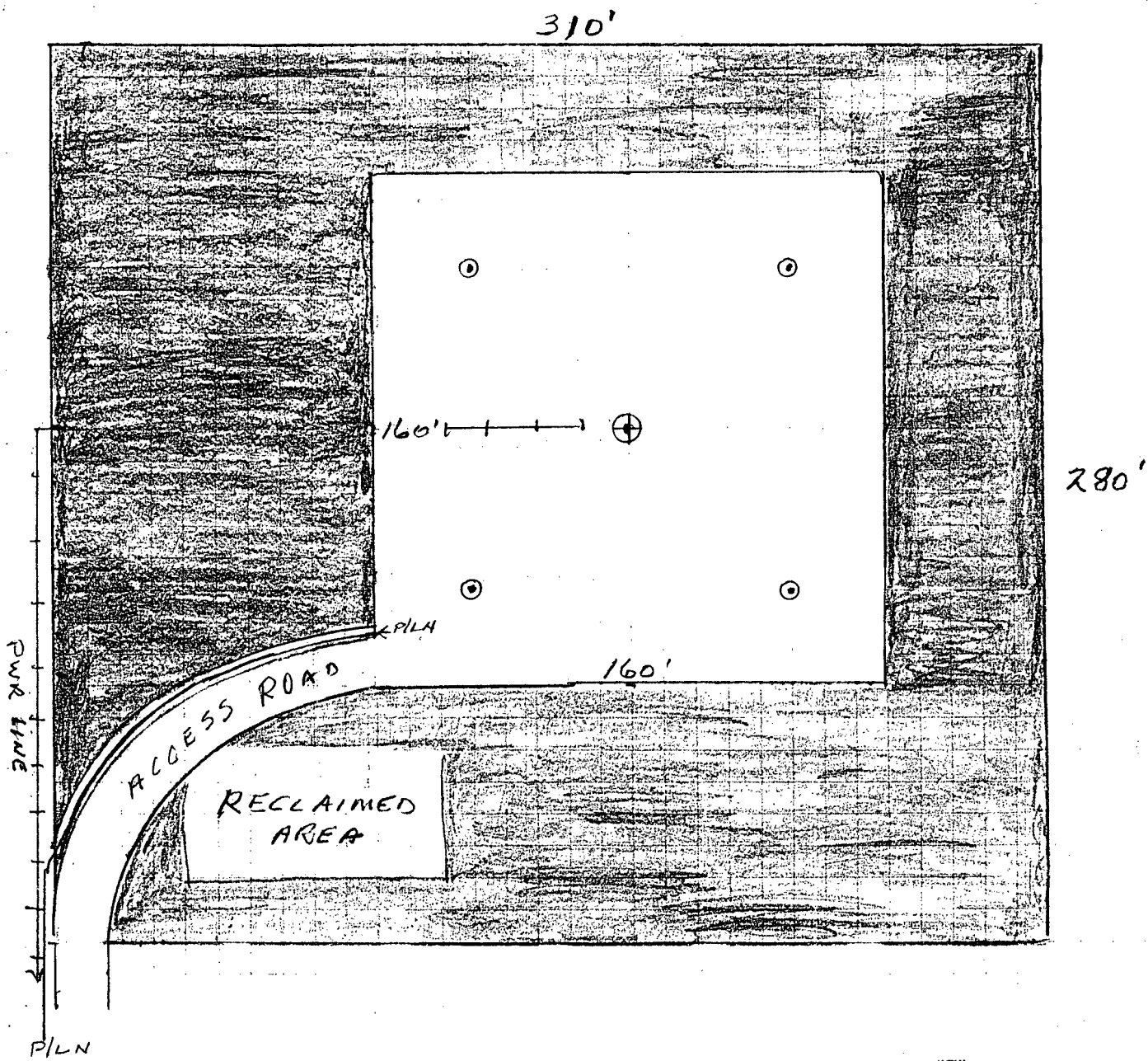
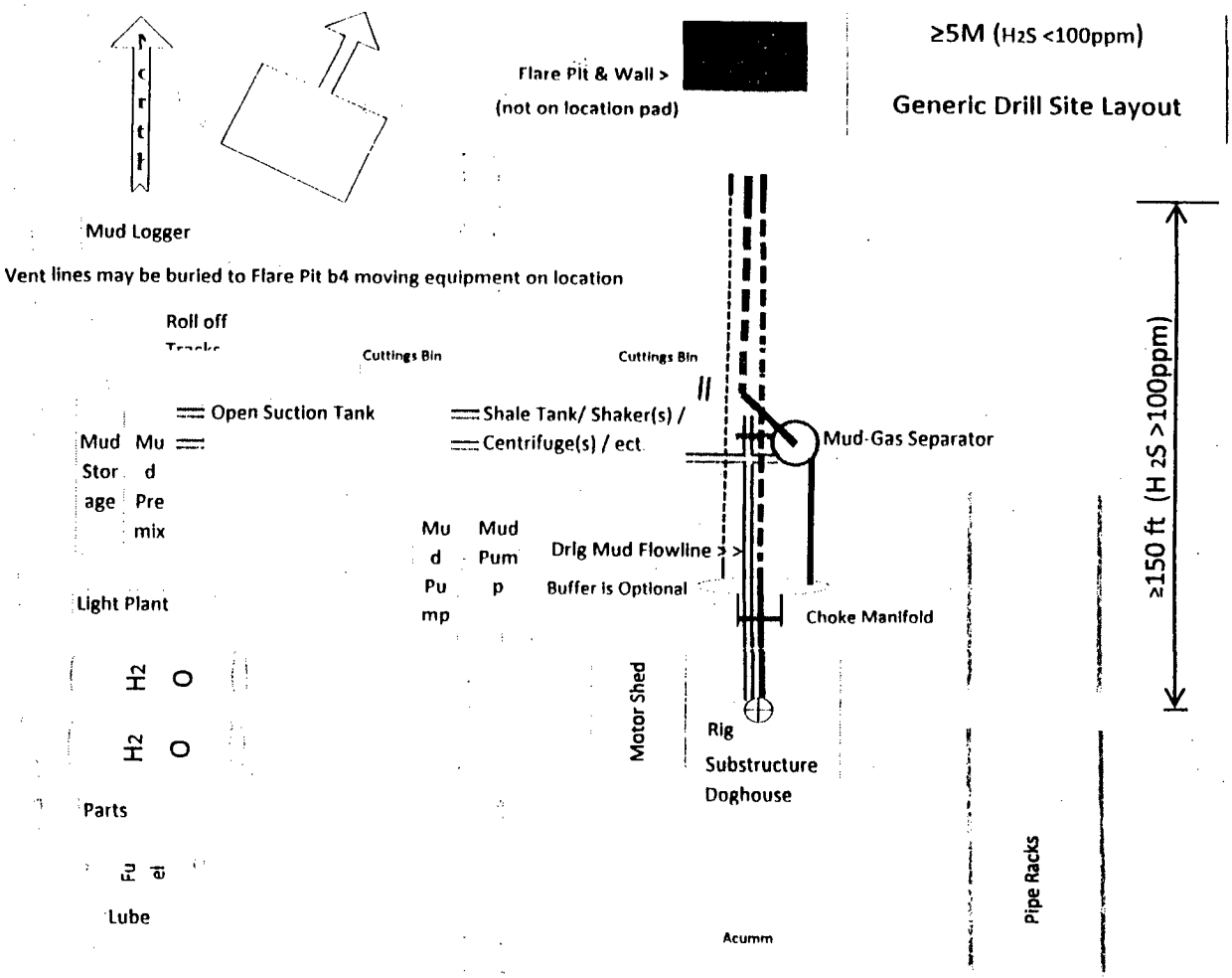


EXHIBIT "F"
CHI OPERATING, INC.
Wizard Federal Com., Well No. 5
Pad After Reclamation



Preplanning reasonable accommodations to achieve necessary and useable "Closed Loop" drillsite features is challenging. Specific considerations must be custom fitted to each well site. This generic plat was prepared to emphasize desired APD planning elements for higher pressured wells with little to no potential for H_2S gas. As a minimum the location plat should show: a north arrow, prevailing wind direction, access road and flare location. Include truck routing for removal of cuttings bins . Consider an overpressured situation, with the BOPE (& mud flowline) closed. Show locations for choke manifold, mud gas separator, and a piping system to vent overpressured fluid and gas to the flare. Also consider the normal drilling need for fluid/gas separation, with the fluid discharged to mud tanks and the gas being vented to a flare. OPTIONAL

Tool Pusher Housing

Company man Housing

MULTI POINT SURFACE USE AND OPERATIONS PLAN

CHI OPERATING, INC
Wizard Federal Com., Well No. 5
Surface: 10' FNL & 370' FEL, Sec. 1 -T19S-R30E
Bottom Hole: 330' FSL & 330' FEL, Sec. 1-T19S-R30E (horizontal)
Eddy County, New Mexico
Lease No.: NMLC-063613
(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 36 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 3 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 .5 mile to another pump jack. Turn left (east) for .25 mile circling around to the north of a producing well and pump jack for .3 mile to the start of the access road which will run north to the southwest corner of the proposed Wizard Federal Com., Well No. 5 well pad.

2. PLANNED ACCESS ROAD:

A. Length and Width: The proposed access road will be constructed to a width of 12 feet (24' Max.) and approximately 506 feet in length. The proposed and existing roads are color coded on Exhibit "A".

B. Construction: The new access road will be constructed by grading and topping with compacted caliche.

C. Turnouts: None required.

D. Culverts: None required.

E. Cuts and Fills: There will be minor cuts of the hummocky leveling across the surface areas.

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. A State ROW is required for the north half of the drilling pad.

3. LOCATION OF EXISTING WELLS:

A. Existing wells within a two-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 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. A utility corridor will be set up on the west side of the access road from the Wizard Federal Com., #2 to run north to the Wizard Federal Com., #5 to service a 3" SDR 7 surface poly flow line plus an electric service line. The oil storage tanks will be located on the Wizard Federal, Well No. 2 well pad.

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 the proposed access road and well site pad will be obtained from an 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. The surface soil will be stored in a berm near the east side of the pad for future rehabilitation.

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. Drill cuttings will be delivered to CRI, Permit No. R-9166, as needed, and at closure. Drilling liquids will be hauled to a separate approved disposal system.

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 for the closed loop system, and major rig components. The pad and pit area has been staked and flagged, 600' X 600'.

B. Mat Size: 310' X 160', plus 120' X 310' closed loop area on the north, which will be on State surface. A State ROW will be required.

C Cut & Fill: The location does not require cutting except to level and smooth surface.

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. The pad area will be reclaimed to leave an area of 160' X 160' working pad.

B. All produced mud and fluids of the closed loop mud system will be removed to authorized disposal sites.

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.

11. OTHER INFORMATION:

A. Topography: The proposed location and access road is located in an area on top of and east of the Niminem Ridge. The location has an overall .7% slope to the southwest from an elevation of 3517.1' GL.

B. Soil: The topsoil at the well site is a reddish-brown colored calcareous loam with some caliche scatter and is underlain with caliche. The soil is of the Simona Gravelly Fine Sandy Loam series.

C. Flora and Fauna: The vegetation cover is a fair to sparse grass cover of grama, threeawn, dropseed, fluff grass and ring muhly along with plants of mesquite, creosote, sage 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.

F. Land Use: Cattle grazing.

G. Surface Ownership: The south half of the proposed well site and access road is on Federal surface and minerals and the north half is on State surface, which will require a State right of way.

H. There is no evidence of archaeological, historical or cultural sites in the area. Boone Archaeological Services, LLC, 2030 N. Canal, Carlsbad, NM 88220 has conducted an archaeological survey, and their report has been submitted to the appropriate government agencies.

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
PO Box 1799
Midland, Texas 79701
Office Phone: (432) 685-5001
Cell Phone: (432) 557-8774

Gary Womack
Chi Operating, Inc
PO Box 1799
Midland, Texas 79701
(432) 685-5001
(432) 634-8958

CERTIFICATION:

I hereby certify that I have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in the plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Chi Operating, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

June 24, 2010

George R. Smith

George R. Smith
Agent for: Chi Operating, Inc.

POWER OF ATTORNEY

DESIGNATION OF AGENT

CHI OPERATING, INC., hereby names the following person as its agent:

Name of Agent: George R. Smith d/b/a Energy Administrative Services Company

Agent's Address: P.O. Box 458, Roswell, NM 88202

Agent's Telephone Number: (575) 623-4940

GRANT OF SPECIAL AUTHORITY

CHI OPERATING, INC., grants its agent the authority to act for it with respect to the following only:

1. Executing forms required to be filed with the Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department.

2. Executive forms required to be filed with the Bureau of Land Management of the Department of Interior of the United States of America.

EFFECTIVE DATE

This power of attorney is effective immediately.

RELIANCE ON THIS POWER OF ATTORNEY

Any person, including the agent, may rely upon the validity of this power of attorney or a copy of it unless that person knows it has terminated or is invalid.

SIGNATURE AND ACKNOWLEDGMENT

CHI OPERATING, INC.

By: _____

Name: John W. Qualls

Title: Vice President

Date: November 3, 2008

Address: 212 N. Main Street, Suite 200, Midland, Texas 79701

Telephone: (432) 685-5001

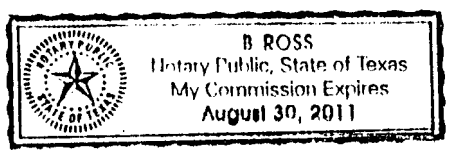
STATE OF TEXAS

COUNTY OF MIDLAND

This instrument was acknowledged before me on November 3, 2008 by John W. Qualls, of CHI OPERATING, INC., acting on behalf of said corporation.

Signature of notary: _____

My commission expires: 08/30/2011



PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CHI OPERATING, INC.
LEASE NO.:	BHL: NM0560353
WELL NAME & NO.:	WIZARD FEDERAL COM # 5
SURFACE HOLE FOOTAGE:	0010' FNL & 0370' FEL
BOTTOM HOLE FOOTAGE	0330' FSL & 0330' FEL
LOCATION:	Section 1, 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)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

Communitization Agreement: A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

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. V-DOOR DIRECTION: east

C. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used for interim and final reclamation.

There is no measurable soil on this well pad to stockpile. No topsoil stockpile is required.

D. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

E. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call theCarlsbad Field Office at (575) 234-5972.

F. 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.

G. 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.

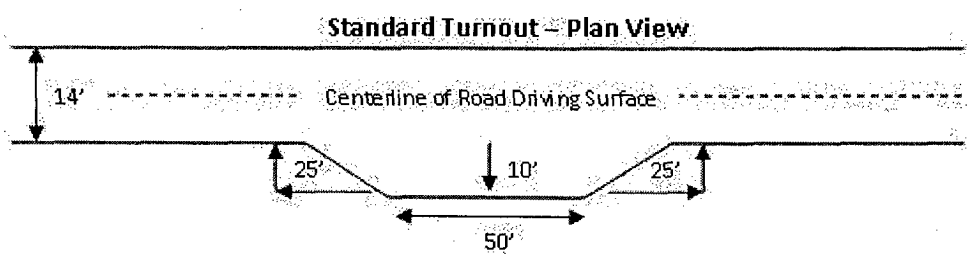
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

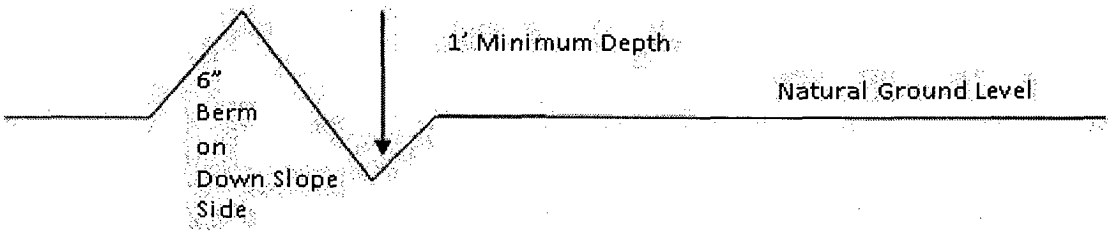
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



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 a 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:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

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.

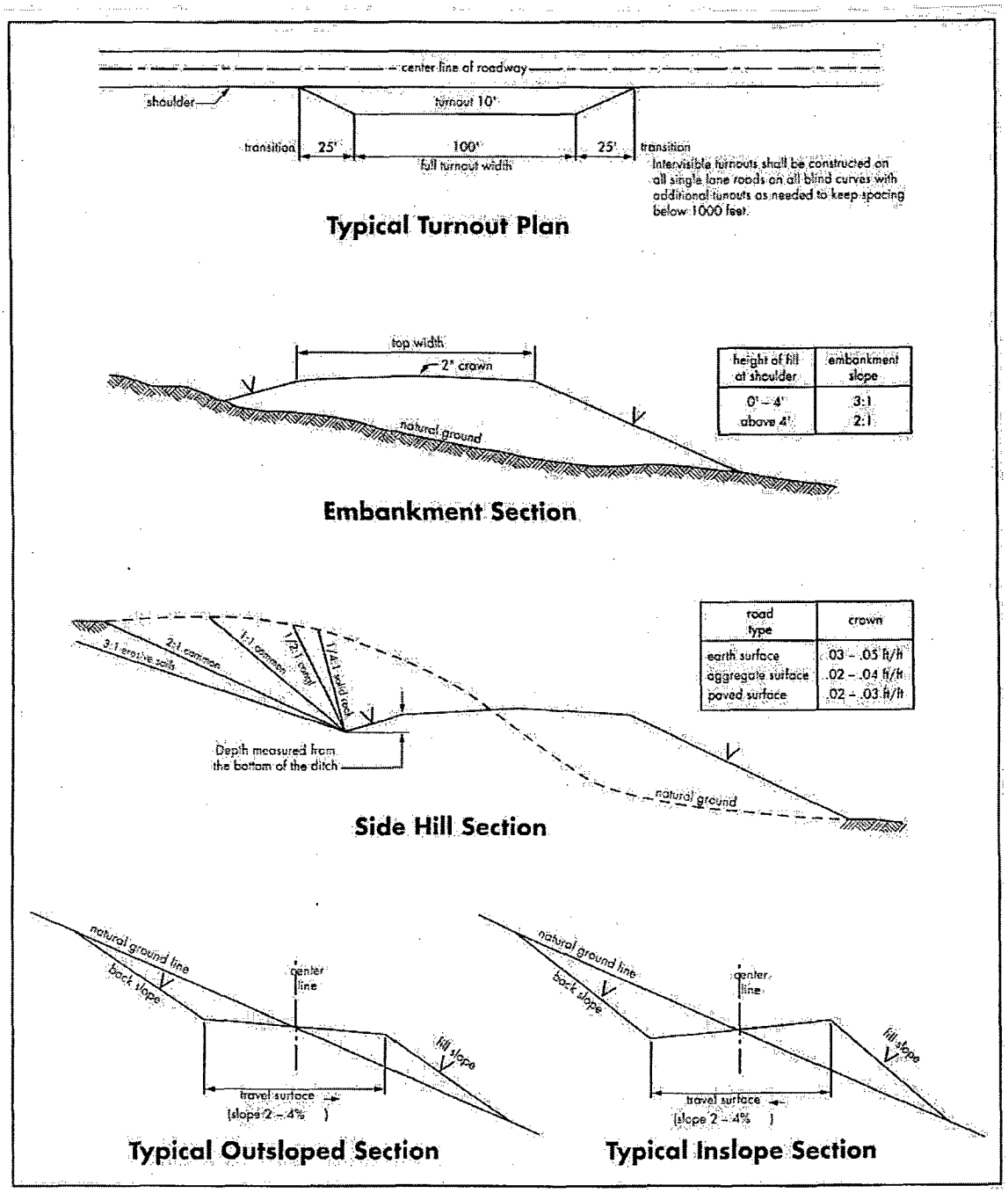
A gate shall be constructed and fastened securely to H-braces.

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. **Due to recent H2S encounters in the salt formation, it is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide prior to drilling out the surface shoe. If Hydrogen Sulfide is encountered, please report measurements 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

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 is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) 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.

Secretary's Potash
Possible brine/water flows in the Salado and Artesia groups.
Possible lost circulation in the Artesia group.

1. The **13-3/8** inch surface casing shall be set at **approximately 515 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 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. **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 **7** inch production casing is:

    ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Additional cement may be required as the excess calculates to 2%. A sundry must be submitted prior to use if a DV tool is to be used.**

4. The minimum required fill of cement behind the **4-1/2** inch production liner is:

   ☒ No cement required; operator is using an open hole completion assembly.

5. 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.

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. **Operator is using a 5M and testing as a 3M.**

   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. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.

   b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) prior to initiating the test.

   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.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

RGH 081910

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

C. ELECTRIC LINES

IX. 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.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation 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 that is free of contaminants 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.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared; these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

In order to improve the probability of maintaining a stable lesser prairie-chicken population low profile plugged and abandoned well markers will be installed. The well marker will be approximately 2 inches above ground level and contain the following information: operator name, lease name, and well number and location, including unit letter, section, township, and range. The previous listed information will be welded, stamped, or otherwise permanently engraved into the metal of the marker.

Seed Mixture for LPC Sand/Shinnery 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
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A
**Four-winged Saltbush	5lbs/A

* This can be used around well pads and other areas where caliche cannot be removed.

*Pounds of pure live seed:

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