TCS 8-7-2014

Form 3160-3
(April 2004)

Operator Copy

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NM-0560353

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
Benson Delaware Unit NM126412 X

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

8. Lease Name and Well No.
Benson Delaware Unit No. 23 <38663>

2. Name of Operator
Chi Operating, Inc. <4378>

9. API Well No.
30-015-42566

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

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

10. Field and Pool, or Exploratory
Benson Delawae <97083>

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **990' FNL & 150' FEL**
At proposed prod. zone **330' FNL & 330' FEL**

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

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

12. County or Parish
Eddy

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. **150'**
(Also to nearest drlg. unit line, if any) **150'**

16. No. of acres in lease
2160.32

17. Spacing Unit dedicated to this well
40 (10)

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. **57'**

19. Proposed Depth
TVD 5200' MVD 5258"

20. BLM/BIA Bond No. *on file*
NM-1616

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3464.8' GL

22. Approximate date work will start*
07/23/2012

23. Estimated duration
3-4 weeks

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: **05/21/2012**

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

Approved by *(Signature)*: Jesse J. Juen — Name *(Printed/Typed)*: Jesse J. Juen — Date: 8/4/12

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)

Capitan Controlled Water Basin

Cannot Produce until Non Standard Proration Unit is Approved. TCS

NM OIL CONSERVATION
ARTESIA DISTRICT
AUG 06 2014
RECEIVED

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 & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 15,2009
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-015-42566	97083	Benson Delaware

4 Property Code	5 Property Name	6 Well Number
~~27108~~ 38663	BENSON DELAWARE UNIT	23

7 OGRID No.	8 Operator Name	9 Elevation
4378	CHI OPERATING, INC.	3464.8

10 Surface Location

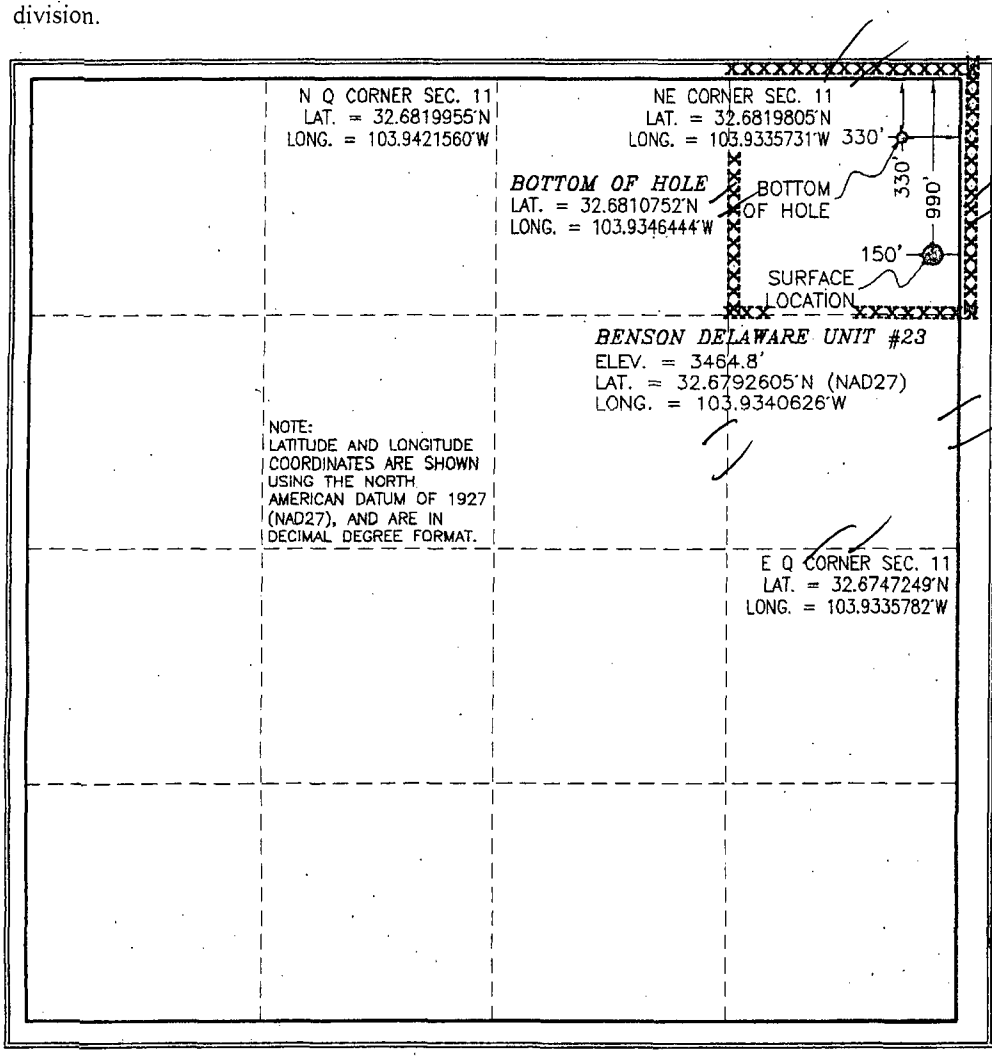
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	11	19 S	30 E		990	NORTH	150	EAST	EDDY

11 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		330	NORTH	330	EAST	EDDY

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
~~40~~ 80			NSP-required

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.



17 OPERATOR CERTIFICATION

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

George R Smith 5/23/12
Signature Date

Printed Name
George R. Smith POA agent

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

MAY 18, 2012
Date of Survey

Signature and Seal of Professional Surveyor:
Certificate Number: FILIMON F. JARAMILLO, PLS 12797
SURVEY NO. 875A

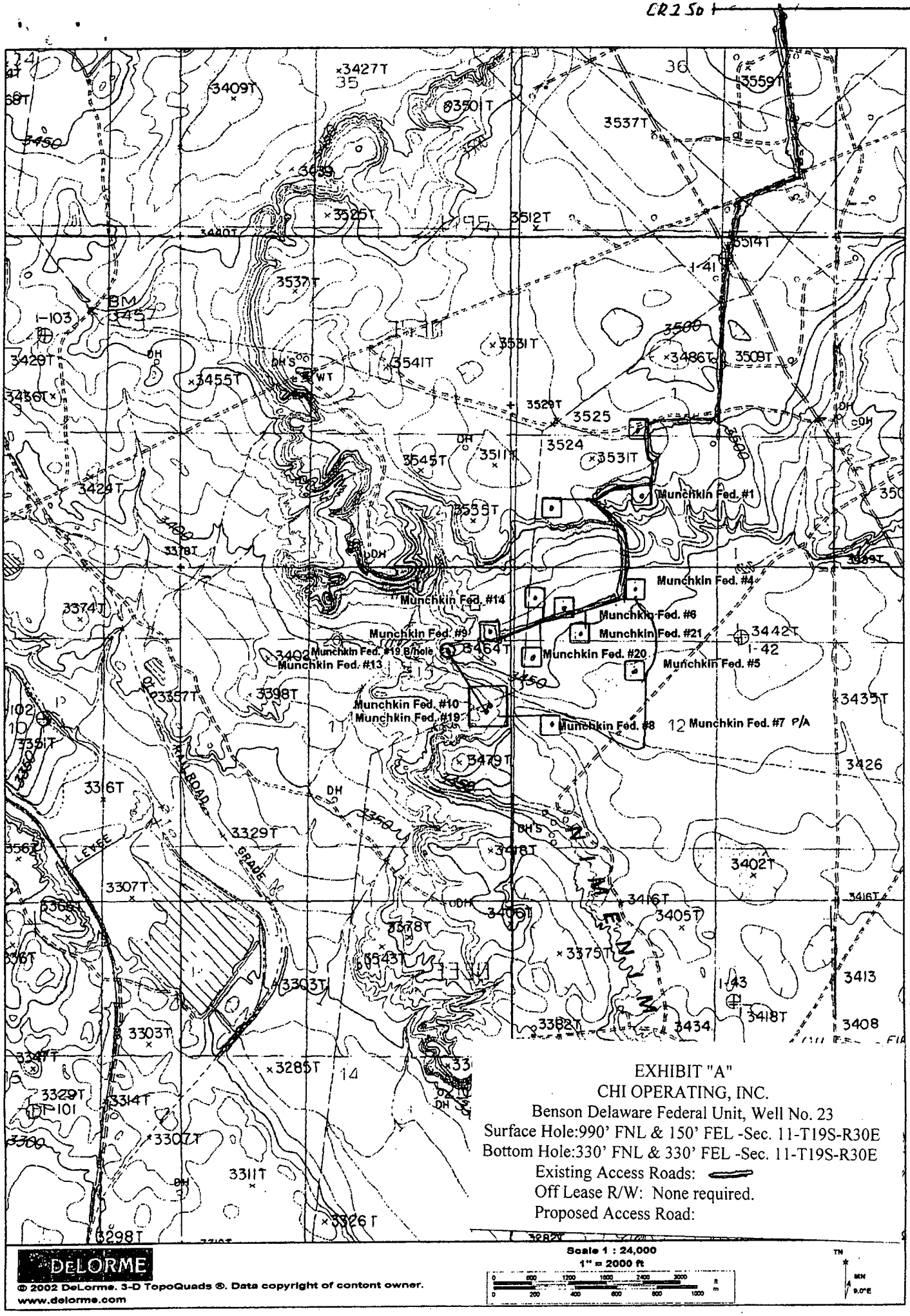


EXHIBIT "A"
CHI OPERATING, INC.
Benson Delaware Federal Unit, Well No. 23
Surface Hole:990' FNL & 150' FEL -Sec. 11-T19S-R30E
Bottom Hole:330' FNL & 330' FEL -Sec. 11-T19S-R30E
Existing Access Roads:
Off Lease R/W: None required.
Proposed Access Road:

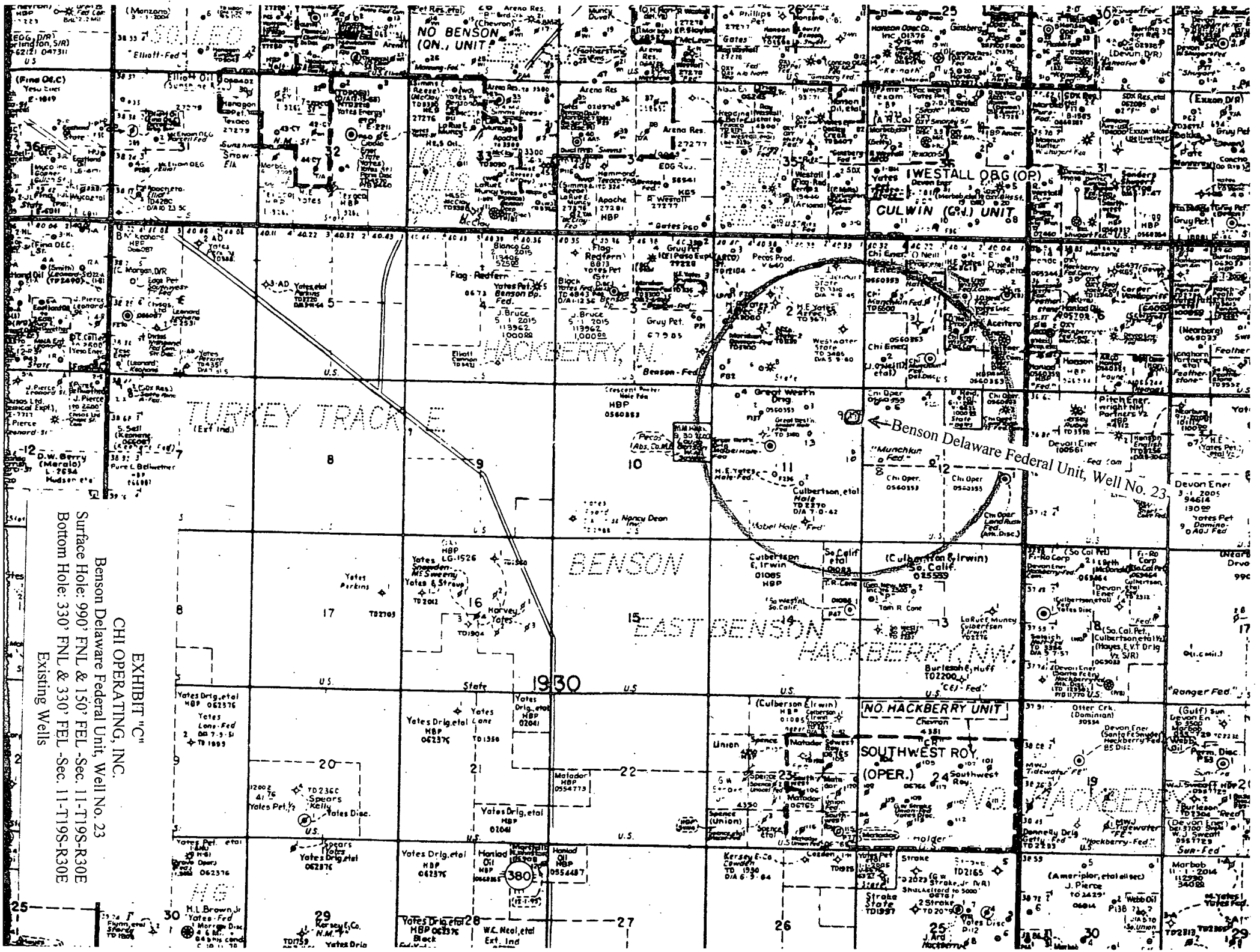


EXHIBIT "C"

CHI OPERATING, INC.

Benson Delaware Federal Unit, Well No. 23

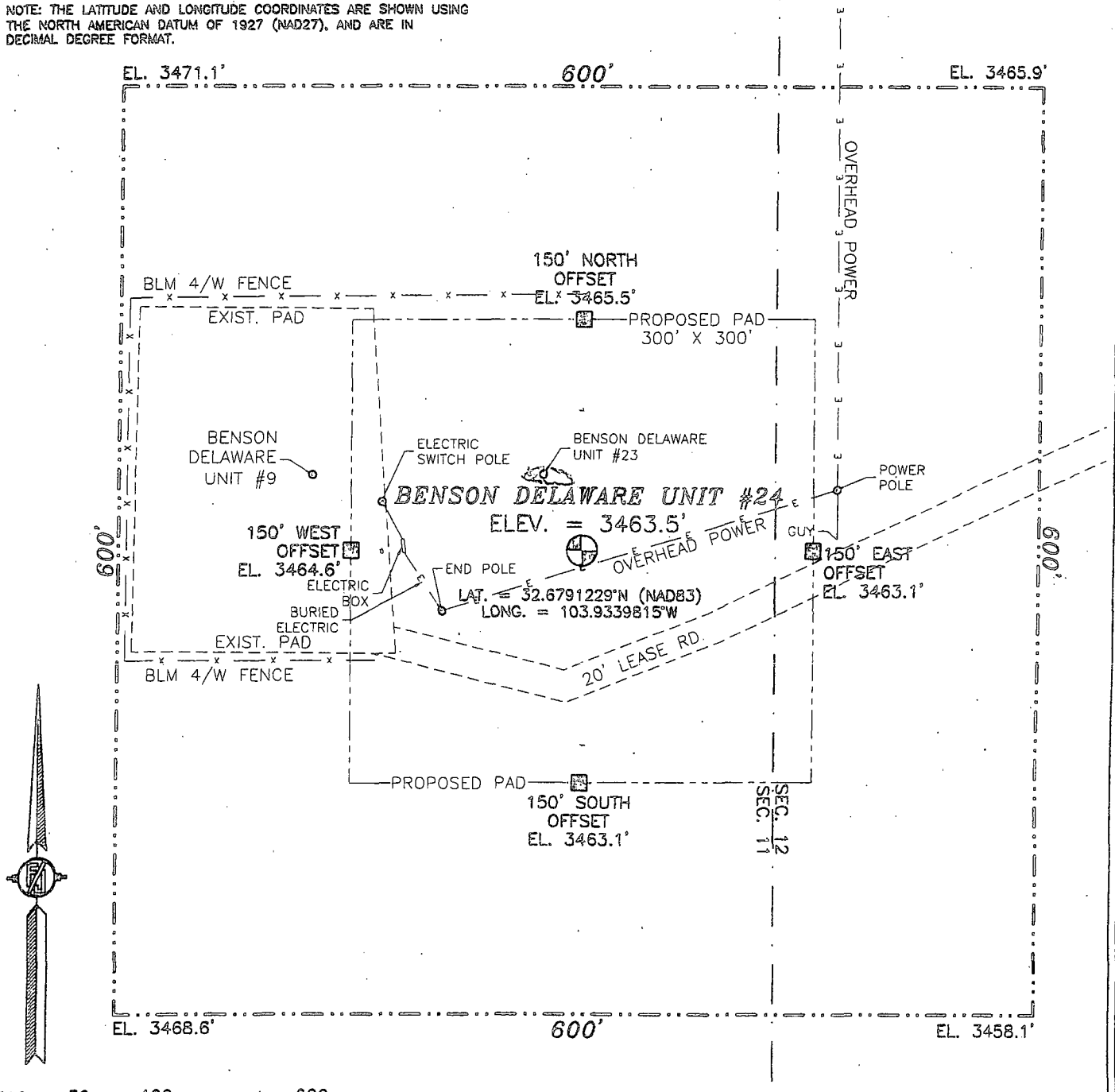
Surface Hole: 990' FNL & 150' FEL -Sec. 11-T19S-R30E

Bottom Hole: 330' FNL & 330' FEL -Sec. 11-T19S-R30E

Existing Wells

SECTION 11, TOWNSHIP 19 SOUTH, RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

NOTE: THE LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1927 (NAD27), AND ARE IN DECIMAL DEGREE FORMAT.



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CO. RD. #222 (SHUGART) AND CO. RD. 250 (GRUBBS) GO W-SW ON 250 FOR APPROX. 2.3 MILES TURN SOUTH-SOUTHEAST ON GOOD CALICHE LEASE ROAD AND GO APPROX. 0.85 OF A MILE THEN WEST APPROX. 0.2 OF A MILE, THEN SOUTH APPROX. 0.65 OF A MILE THEN WEST APPROX. 0.25 OF A MILE, THEN SOUTH APPROX. 0.2 OF A MILE THEN WEST APPROX 0.2 OF A MILE THEN SE APPROX 0.2 OF A MILE THEN SOUTH APPROX 0.2 OF A MILE THEN SW APPROX 0.3 OF A MILE TO LOCATION APPROX 100' NORTH

CHI OPERATING, INC.
BENSON DELAWARE UNIT #24
LOCATED 1040 FT. FROM THE NORTH LINE AND 125 FT. FROM THE EAST LINE OF SECTION 11, TOWNSHIP 19 SOUTH, RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 20, 2012

SURVEY NO. 876

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

APPLICATION FOR DRILLING

CHI OPERATING, INC.
Benson Delaware Federal Unit, Well No. 23
Surface Hole: 990' FNL & 150' FEL -Sec. 11-T19S-R30E
Bottom Hole 330' FNL & 330' FEL -Sec.11-T19S-R30E (directional drill)
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'	Seven Rivers	2430'
Top of Salt	1300'	Queen	3050'
Base of Salt	1950'	Delaware	4170'
Yates	2240	T.D	5200'

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
Gas: Possible in the Delaware

4. **Proposed New Casing Program**:

See COA

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	~~500'~~ 460	2.425	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	5.200'	1.16	2.23	3.31

5. **Cement Program**
Excess Cement = 25%

See COA

CASING	SETTING DEPTH	QUANITY OF CEMENT 30% excess on cement	TOC	YIELD
13 3/8"	~~500'~~	400 sx "C"+4%gel + 2%CaCl2 + 25pps CF + 1 pps Gil	Surface	1.34
8 5/8"	2,050'	375 sx "C" Lite/POZ (35:65) + 10% Salt =1pps Gil & 150 sx "C" 1% CaCl2 = .25 lb/sk Cello Flake	"	1.34
5 ½"	5,200' Lead	~~Stage~~ 1: 400 sx Class "C" + 4..0% gel (Bentonite) + 2% CaCl2 + 2 pps Gilsonite .. Mixed @ 13..6 ppg.	"	1.55
	Tail	~~Stage~~ 2: 325 sx :Cl "C" + 2% CaCl2 + ..25lb/sk cello flake. Mixed @ 14.8 ppg..	"	~~2.10~~ 1.34
		per operator 6/28/12	"	

6. Proposed Control Equipment: A 13 5/8" 2000 psi wp Shaffer double gate hydraulic ram BOP will be installed on the 13 3/8" casing. Casing and BOP will be tested as per Onshore Oil & Gas Order No. 2. 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**

MUD PROGRAM DEPTH	MUD	MUD WEIGHT	VIS.	W/L CONTROL
0' - ~~500'~~ 460	Fresh water mud:	8.4 - 8.7 ppg	32-34	No W/L control
~~500'~~ - 2050'	Brine water	10 ppg	30-32	NC
2050' - 5200'	Brine, Fresh water *	8.4 - 9.5 ppg	30-32	<15cc@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:
   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: None Planned
   Mud Logging: 10' samples-2000' to TD (2 sets of samples).

   See COA

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 = 2,434 psi with a temperature of 112° and surface pressure of 1,290 psi.

11. H2S: None expected. None in the previous drilling of wells in the area, but the Mud Log Unit will be cautioned to use a gas trap to detect H_2S along with a monitor and if any is detected the mud weight will be increased along with H_2S inhibitors sufficient to control the gas. If the H2S monitor approaches #10, will prepare to shut-in well and also activate the H_2S gas contingency program. This well is being drilled in a close proximity to other wells that did not have a H2S problem.

12. Anticipated starting date: July 23, 2012
    Anticipated completion of drilling operations: Approximately 5-6 weeks.

EXHIBIT "A"

Weatherford

Drilling Services

Proposal

BENSON DELAWARE UNIT #23

EDDY COUNTY, NEW MEXICO

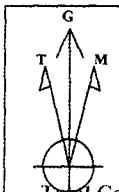
WELL FILE: **PLAN 3**

MARCH 2, 2012

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

Weatherford

Chi Energy
Benson Delaware Unit #23
Eddy Co., NM



Azimuths to Grid North
True North: -0.22°
Magnetic North: 7.45°

Magnetic Field
Strength: 48776nT
Dip Angle: 60.52°
Date: 6/15/2012
Model: IGRF2010

Total Correction To Grid North 7.45°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	341.45	0.00	0.00	0.00	0.00	0.00	0.00	
2	2300.00	0.00	341.45	2300.00	0.00	0.00	0.00	0.00	0.00	
3	2696.66	11.90	341.45	2693.81	38.91	-13.06	3.00	341.45	41.04	
4	5257.89	11.90	341.45	5200.00	539.59	-181.09	0.00	0.00	569.17	Pbhl

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Pbhl	5200.00	539.59	-181.09	611596.68	622670.04	Point

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
BDU #23	0.00	0.00	611057.09	622851.13	32°40'45.337N	103°56'02.625W	N/A

LEGEND

- BDU #24 (1)
- I
- Plan #3

SITE DETAILS

Benson Delaware Unit #23

Site Centre Latitude: 32°40'45.337N
Longitude: 103°56'02.625W

Ground Level: 3464.00
Positional Uncertainty: 0.00
Convergence: 0.22

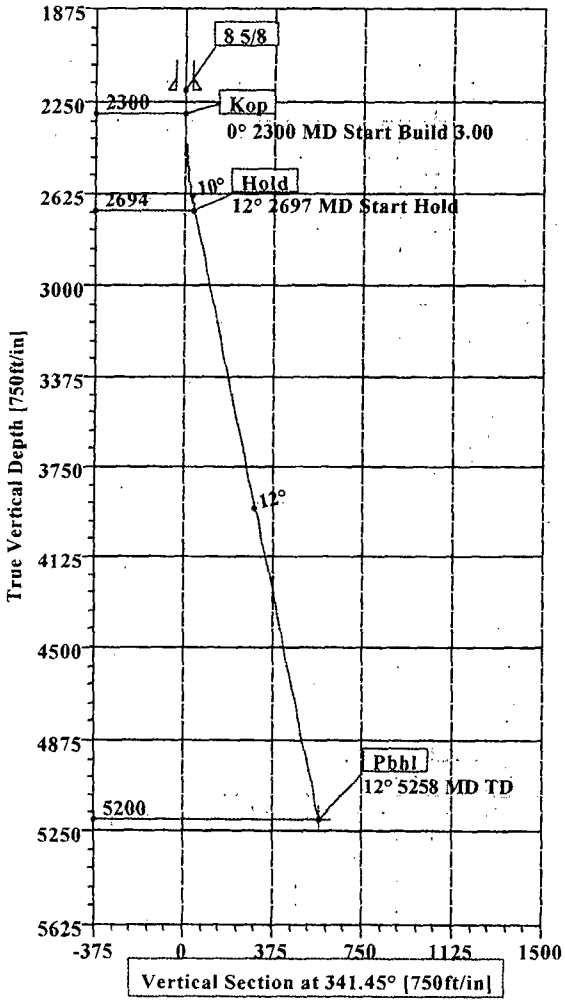
FIELD DETAILS

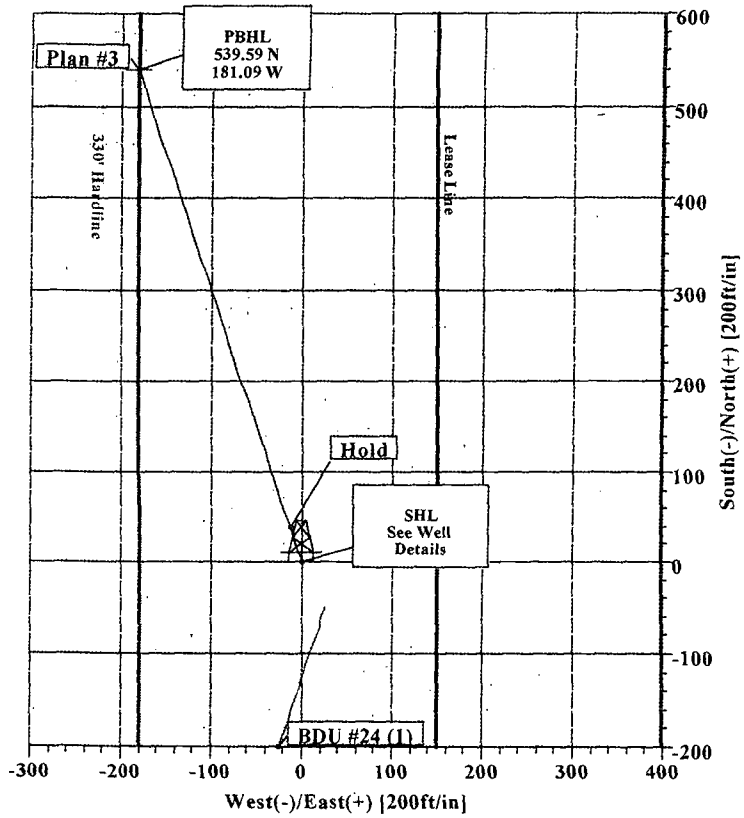
Eddy Co., NM (Nad 27)

Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico, Eastern Zone
Magnetic Model: IGRF2010

System Datum: Mean Sea Level
Local North: Grid North

KB ELEV: N/A
GL ELEV: 3464





Plan: Plan #3 (BDU #23/1)

Created By: Russell W. Joyner Date: 3/2/2012

Weatherford International Ltd.

WFT Plan Report - X & Y's

Weatherford

Company:	Chi Energy	**Date:** 3/2/2012	**Time:** 09:53:07	**Page:**	1
Field:	Eddy Co., NM (Nad 27)	**Co-ordinate(NE) Reference:**	Well: BDU #23, Grid North		
Site:	Benson Delaware Unit #23	**Vertical (TVD) Reference:**	SITE 0.0		
Well:	BDU #23	**Section (VS) Reference:**	Well (0.00N,0.00E,341.45Azi)		
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Sybase

Plan:	Plan #3	**Date Composed:**	7/14/2011
		Version:	1
Principal:	Yes	**Tied-to:**	From Surface

Field: Eddy Co., NM (Nad 27)

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: Benson Delaware Unit #23

Site Position:		**Northing:**	611057.09 ft	**Latitude:**	32 40 45.337 N		
From:	Geographic	**Easting:**	622851.13 ft	**Longitude:**	103 56 2.625 W		
Position Uncertainty:	0.00 ft			**North Reference:**	Grid		
Ground Level:	3464.00 ft			**Grid Convergence:**	0.22 deg		

Well: BDU #23 **Slot Name:**

Well Position:	**+N/-S**	0.00 ft	**Northing:**	611057.09 ft	**Latitude:**	32 40 45.337 N	
	+E/-W	0.00 ft	**Easting :**	622851.13 ft	**Longitude:**	103 56 2.625 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:	6/15/2012			**Declination:**	7.67 deg
Field Strength:	48776 nT			**Mag Dip Angle:**	60.52 deg

Vertical Section:	**Depth From (TVD)** ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
	0.00	0.00	0.00	341.45

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	341.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2300.00	0.00	341.45	2300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2696.66	11.90	341.45	2693.81	38.91	-13.06	3.00	3.00	0.00	341.45	
5257.89	11.90	341.45	5200.00	539.59	-181.09	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
2300.00	0.00	341.45	2300.00	0.00	0.00	0.00	0.00	611057.09	622851.13	Kop
2400.00	3.00	341.45	2399.95	2.48	-0.83	2.62	3.00	611059.57	622850.30	
2500.00	6.00	341.45	2499.63	9.92	-3.33	10.46	3.00	611067.01	622847.80	
2600.00	9.00	341.45	2598.77	22.29	-7.48	23.51	3.00	611079.38	622843.65	
2696.66	11.90	341.45	2693.81	38.91	-13.06	41.04	3.00	611096.00	622838.07	Hold
2700.00	11.90	341.45	2697.08	39.56	-13.28	41.73	0.00	611096.66	622837.86	
2800.00	11.90	341.45	2794.93	59.11	-19.84	62.35	0.00	611116.20	622831.30	
2900.00	11.90	341.45	2892.78	78.66	-26.40	82.97	0.00	611135.75	622824.73	
3000.00	11.90	341.45	2990.64	98.21	-32.96	103.59	0.00	611155.30	622818.17	
3100.00	11.90	341.45	3088.49	117.76	-39.52	124.21	0.00	611174.85	622811.61	
3200.00	11.90	341.45	3186.34	137.31	-46.08	144.83	0.00	611194.40	622805.05	
3300.00	11.90	341.45	3284.19	156.85	-52.64	165.45	0.00	611213.95	622798.49	
3400.00	11.90	341.45	3382.04	176.40	-59.20	186.07	0.00	611233.50	622791.93	
3500.00	11.90	341.45	3479.89	195.95	-65.76	206.69	0.00	611253.04	622785.37	
3600.00	11.90	341.45	3577.74	215.50	-72.32	227.31	0.00	611272.59	622778.81	
3700.00	11.90	341.45	3675.59	235.05	-78.88	247.93	0.00	611292.14	622772.25	
3800.00	11.90	341.45	3773.44	254.60	-85.44	268.55	0.00	611311.69	622765.69	

Weatherford International Ltd.

WFT Plan Report - X & Y's

Weatherford

Company:	Chi Energy	**Date:** 3/2/2012	**Time:** 09:53:07	**Page:**	2
Field:	Eddy Co., NM (Nad 27)	**Co-ordinate(NE) Reference:**	Well: BDU #23, Grid North		
Site:	Benson Delaware Unit #23	**Vertical (TVD) Reference:**	SITE 0.0		
Well:	BDU #23	**Section (VS) Reference:**	Well (0.00N,0.00E,341.45Azi)		
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
3900.00	11.90	341.45	3871.29	274.14	-92.00	289.17	0.00	611331.24	622759.13	
4000.00	11.90	341.45	3969.15	293.69	-98.56	309.79	0.00	611350.79	622752.57	
4100.00	11.90	341.45	4067.00	313.24	-105.13	330.41	0.00	611370.33	622746.01	
4200.00	11.90	341.45	4164.85	332.79	-111.69	351.03	0.00	611389.88	622739.45	
4300.00	11.90	341.45	4262.70	352.34	-118.25	371.65	0.00	611409.43	622732.89	
4400.00	11.90	341.45	4360.55	371.89	-124.81	392.27	0.00	611428.98	622726.33	
4500.00	11.90	341.45	4458.40	391.44	-131.37	412.89	0.00	611448.53	622719.77	
4600.00	11.90	341.45	4556.25	410.98	-137.93	433.51	0.00	611468.08	622713.21	
4700.00	11.90	341.45	4654.10	430.53	-144.49	454.13	0.00	611487.62	622706.64	
4800.00	11.90	341.45	4751.95	450.08	-151.05	474.75	0.00	611507.17	622700.08	
4900.00	11.90	341.45	4849.80	469.63	-157.61	495.37	0.00	611526.72	622693.52	
5000.00	11.90	341.45	4947.66	489.18	-164.17	515.99	0.00	611546.27	622686.96	
5100.00	11.90	341.45	5045.51	508.73	-170.73	536.61	0.00	611565.82	622680.40	
5200.00	11.90	341.45	5143.36	528.27	-177.29	557.23	0.00	611585.37	622673.84	
5257.89	11.90	341.45	5200.00	539.59	-181.09	569.17	0.00	611596.68	622670.04	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			5200.00	539.59	-181.09	611596.68	622670.04	32	40	50.683 N	103	56	4.720 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
2200.00	2200.00	0.000	0.000	8 5/8

Annotation

MD ft	TVD ft	
2300.00	2300.00	Kop
2696.66	2693.81	Hold
5257.88	5199.99	Pbhl

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

Weatherford International Ltd.

Anticollision Report

Weatherford

Company:	Chi Energy	**Date:** 3/2/2012	**Time:** 09:52:10	**Page:**	1
Field:	Eddy Co., NM (Nad 27)				
Reference Site:	Benson Delaware Unit #23	**Co-ordinate(NE) Reference:**	Well: BDU #23, Grid North		
Reference Well:	BDU #23	**Vertical (TVD) Reference:**	SITE 0.0		
Reference Wellpath:	1			**Db:**	Sybase

NO GLOBAL SCAN: Using user defined selection & scan criteria		**Reference:**	Plan: Plan #3
Interpolation Method:	MD **Interval:** 30.00 ft	**Error Model:**	ISCWSA Ellipse
Depth Range:	0.00 to 5257.89 ft	**Scan Method:**	Closest Approach 3D
Maximum Radius:	10000.00 ft	**Error Surface:**	Ellipse

Plan:	Plan #3	**Date Composed:**	7/14/2011
		Version:	1
Principal:	Yes	**Tied-to:**	From Surface

Summary

<Offset Wellpath> Site	Well	Wellpath	Reference MD ft	Offset MD ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
Benson Delaware Unit	BDU #24	1 V0 Plan: Plan #3 V1	2340.00	2339.17	56.61	46.32	5.50	

Site: Benson Delaware Unit #24
Well: BDU #24
Wellpath: 1 V0 Plan: Plan #3 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	153.27	-49.93	25.15	55.90			No Data
30.00	30.00	30.00	30.00	0.03	0.03	153.27	-49.93	25.15	55.90	55.84	825.63	
60.00	60.00	60.00	60.00	0.07	0.07	153.27	-49.93	25.15	55.90	55.77	414.04	
90.00	90.00	90.00	90.00	0.10	0.10	153.27	-49.93	25.15	55.90	55.70	276.30	
120.00	120.00	120.00	120.00	0.16	0.16	153.27	-49.93	25.15	55.90	55.59	177.65	
150.00	150.00	150.00	150.00	0.22	0.22	153.27	-49.93	25.15	55.90	55.45	124.36	
180.00	180.00	180.00	180.00	0.29	0.29	153.27	-49.93	25.15	55.90	55.32	95.66	
210.00	210.00	210.00	210.00	0.36	0.36	153.27	-49.93	25.15	55.90	55.18	77.72	
240.00	240.00	240.00	240.00	0.43	0.43	153.27	-49.93	25.15	55.90	55.05	65.45	
270.00	270.00	270.00	270.00	0.49	0.49	153.27	-49.93	25.15	55.90	54.91	56.53	
300.00	300.00	300.00	300.00	0.56	0.56	153.27	-49.93	25.15	55.90	54.78	49.74	
330.00	330.00	330.00	330.00	0.63	0.63	153.27	-49.93	25.15	55.90	54.64	44.41	
360.00	360.00	360.00	360.00	0.70	0.70	153.27	-49.93	25.15	55.90	54.51	40.12	
390.00	390.00	390.00	390.00	0.76	0.76	153.27	-49.93	25.15	55.90	54.37	36.58	
420.00	420.00	420.00	420.00	0.83	0.83	153.27	-49.93	25.15	55.90	54.24	33.61	
450.00	450.00	450.00	450.00	0.90	0.90	153.27	-49.93	25.15	55.90	54.10	31.09	
480.00	480.00	480.00	480.00	0.97	0.97	153.27	-49.93	25.15	55.90	53.97	28.92	
510.00	510.00	510.00	510.00	1.03	1.03	153.27	-49.93	25.15	55.90	53.84	27.03	
540.00	540.00	540.00	540.00	1.10	1.10	153.27	-49.93	25.15	55.90	53.70	25.38	
570.00	570.00	570.00	570.00	1.17	1.17	153.27	-49.93	25.15	55.90	53.57	23.92	
600.00	600.00	600.00	600.00	1.24	1.24	153.27	-49.93	25.15	55.90	53.43	22.61	
630.00	630.00	630.00	630.00	1.30	1.30	153.27	-49.93	25.15	55.90	53.30	21.44	
660.00	660.00	660.00	660.00	1.37	1.37	153.27	-49.93	25.15	55.90	53.16	20.39	
690.00	690.00	690.00	690.00	1.44	1.44	153.27	-49.93	25.15	55.90	53.03	19.43	
720.00	720.00	720.00	720.00	1.51	1.51	153.27	-49.93	25.15	55.90	52.89	18.56	
750.00	750.00	750.00	750.00	1.57	1.57	153.27	-49.93	25.15	55.90	52.76	17.77	
780.00	780.00	780.00	780.00	1.64	1.64	153.27	-49.93	25.15	55.90	52.62	17.04	
810.00	810.00	810.00	810.00	1.71	1.71	153.27	-49.93	25.15	55.90	52.49	16.36	
840.00	840.00	840.00	840.00	1.78	1.78	153.27	-49.93	25.15	55.90	52.35	15.74	
870.00	870.00	870.00	870.00	1.84	1.84	153.27	-49.93	25.15	55.90	52.22	15.17	
900.00	900.00	900.00	900.00	1.91	1.91	153.27	-49.93	25.15	55.90	52.08	14.63	
930.00	930.00	930.00	930.00	1.98	1.98	153.27	-49.93	25.15	55.90	51.95	14.13	
960.00	960.00	960.00	960.00	2.05	2.05	153.27	-49.93	25.15	55.90	51.81	13.67	
990.00	990.00	990.00	990.00	2.11	2.11	153.27	-49.93	25.15	55.90	51.68	13.23	
1020.00	1020.00	1020.00	1020.00	2.18	2.18	153.27	-49.93	25.15	55.90	51.54	12.82	
1050.00	1050.00	1050.00	1050.00	2.25	2.25	153.27	-49.93	25.15	55.90	51.41	12.44	

Weatherford International Ltd.

Anticollision Report

Weatherford

Company:	Chi Energy	**Date:** 3/2/2012	**Time:** 09:52:10	**Page:**	2
Field:	Eddy Co., NM (Nad 27)				
Reference Site:	Benson Delaware Unit #23	**Co-ordinate(NE) Reference:**	Well: BDU #23, Grid North		
Reference Well:	BDU #23	**Vertical (TVD) Reference:**	SITE 0.0		
Reference Wellpath:	1			**Db:**	Sybase

Site: Benson Delaware Unit #24
Well: BDU #24
Wellpath: 1 V0 Plan: Plan #3 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
1080.00	1080.00	1080.00	1080.00	2.32	2.32	153.27	-49.93	25.15	55.90	51.27	12.07	
1110.00	1110.00	1110.00	1110.00	2.38	2.38	153.27	-49.93	25.15	55.90	51.14	11.73	
1140.00	1140.00	1140.00	1140.00	2.45	2.45	153.27	-49.93	25.15	55.90	51.00	11.41	
1170.00	1170.00	1170.00	1170.00	2.52	2.52	153.27	-49.93	25.15	55.90	50.87	11.10	
1200.00	1200.00	1200.00	1200.00	2.58	2.58	153.27	-49.93	25.15	55.90	50.73	10.81	
1230.00	1230.00	1230.00	1230.00	2.65	2.65	153.27	-49.93	25.15	55.90	50.60	10.54	
1260.00	1260.00	1260.00	1260.00	2.72	2.72	153.27	-49.93	25.15	55.90	50.46	10.28	
1290.00	1290.00	1290.00	1290.00	2.79	2.79	153.27	-49.93	25.15	55.90	50.33	10.03	
1320.00	1320.00	1320.00	1320.00	2.85	2.85	153.27	-49.93	25.15	55.90	50.19	9.79	
1350.00	1350.00	1350.00	1350.00	2.92	2.92	153.27	-49.93	25.15	55.90	50.06	9.57	
1380.00	1380.00	1380.00	1380.00	2.99	2.99	153.27	-49.93	25.15	55.90	49.92	9.35	
1410.00	1410.00	1410.00	1410.00	3.06	3.06	153.27	-49.93	25.15	55.90	49.79	9.14	
1440.00	1440.00	1440.00	1440.00	3.12	3.12	153.27	-49.93	25.15	55.90	49.65	8.95	
1470.00	1470.00	1470.00	1470.00	3.19	3.19	153.27	-49.93	25.15	55.90	49.52	8.76	
1500.00	1500.00	1500.00	1500.00	3.26	3.26	153.27	-49.93	25.15	55.90	49.38	8.58	
1530.00	1530.00	1530.00	1530.00	3.33	3.33	153.27	-49.93	25.15	55.90	49.25	8.40	
1560.00	1560.00	1560.00	1560.00	3.39	3.39	153.27	-49.93	25.15	55.90	49.12	8.24	
1590.00	1590.00	1590.00	1590.00	3.46	3.46	153.27	-49.93	25.15	55.90	48.98	8.08	
1620.00	1620.00	1620.00	1620.00	3.53	3.53	153.27	-49.93	25.15	55.90	48.85	7.92	
1650.00	1650.00	1650.00	1650.00	3.60	3.60	153.27	-49.93	25.15	55.90	48.71	7.77	
1680.00	1680.00	1680.00	1680.00	3.66	3.66	153.27	-49.93	25.15	55.90	48.58	7.63	
1710.00	1710.00	1710.00	1710.00	3.73	3.73	153.27	-49.93	25.15	55.90	48.44	7.49	
1740.00	1740.00	1740.00	1740.00	3.80	3.80	153.27	-49.93	25.15	55.90	48.31	7.36	
1770.00	1770.00	1770.00	1770.00	3.87	3.87	153.27	-49.93	25.15	55.90	48.17	7.23	
1800.00	1800.00	1800.00	1800.00	3.93	3.93	153.27	-49.93	25.15	55.90	48.04	7.11	
1830.00	1830.00	1830.00	1830.00	4.00	4.00	153.27	-49.93	25.15	55.90	47.90	6.99	
1860.00	1860.00	1860.00	1860.00	4.07	4.07	153.27	-49.93	25.15	55.90	47.77	6.87	
1890.00	1890.00	1890.00	1890.00	4.14	4.14	153.27	-49.93	25.15	55.90	47.63	6.76	
1920.00	1920.00	1920.00	1920.00	4.20	4.20	153.27	-49.93	25.15	55.90	47.50	6.65	
1950.00	1950.00	1950.00	1950.00	4.27	4.27	153.27	-49.93	25.15	55.90	47.36	6.55	
1980.00	1980.00	1980.00	1980.00	4.34	4.34	153.27	-49.93	25.15	55.90	47.23	6.44	
2010.00	2010.00	2010.00	2010.00	4.41	4.41	153.27	-49.93	25.15	55.90	47.09	6.34	
2040.00	2040.00	2040.00	2040.00	4.47	4.47	153.27	-49.93	25.15	55.90	46.96	6.25	
2070.00	2070.00	2070.00	2070.00	4.54	4.54	153.27	-49.93	25.15	55.90	46.82	6.16	
2100.00	2100.00	2100.00	2100.00	4.61	4.61	153.27	-49.93	25.15	55.90	46.69	6.07	
2130.00	2130.00	2130.00	2130.00	4.68	4.68	153.27	-49.93	25.15	55.90	46.55	5.98	
2160.00	2160.00	2160.00	2160.00	4.74	4.74	153.27	-49.93	25.15	55.90	46.42	5.89	
2190.00	2190.00	2190.00	2190.00	4.81	4.81	153.27	-49.93	25.15	55.90	46.28	5.81	
2220.00	2220.00	2220.00	2220.00	4.88	4.88	153.27	-49.93	25.15	55.90	46.15	5.73	
2250.00	2250.00	2250.00	2250.00	4.94	4.94	153.27	-49.93	25.15	55.90	46.01	5.65	
2280.00	2280.00	2280.00	2280.00	5.01	5.01	153.27	-49.93	25.15	55.90	45.88	5.58	
2310.00	2310.00	2309.80	2309.80	5.08	5.08	171.84	-49.95	25.14	55.95	45.79	5.51	
2340.00	2340.00	2339.17	2339.17	5.15	5.15	172.17	-50.31	25.02	56.61	46.32	5.50	
2370.00	2369.98	2368.50	2368.49	5.22	5.21	172.85	-51.09	24.76	58.07	47.64	5.57	
2400.00	2399.95	2397.74	2397.70	5.28	5.28	173.84	-52.30	24.36	60.34	49.78	5.71	
2430.00	2429.90	2426.85	2426.76	5.35	5.35	175.06	-53.93	23.82	63.43	52.74	5.93	
2460.00	2459.81	2455.80	2455.63	5.42	5.41	176.44	-55.96	23.15	67.37	56.54	6.22	
2490.00	2489.69	2484.55	2484.26	5.49	5.48	177.90	-58.39	22.34	72.15	61.19	6.58	
2520.00	2519.51	2513.07	2512.63	5.55	5.55	179.38	-61.20	21.41	77.80	66.70	7.01	
2550.00	2549.29	2541.32	2540.68	5.62	5.61	180.83	-64.38	20.35	84.30	73.07	7.51	
2580.00	2579.00	2569.27	2568.38	5.69	5.68	182.22	-67.92	19.18	91.66	80.30	8.07	

Weatherford International Ltd.

Anticollision Report

Weatherford

Company:	Chi Energy	**Date:** 3/2/2012	**Time:** 09:52:10	**Page:**	3
Field:	Eddy Co., NM (Nad 27)				
Reference Site:	Benson Delaware Unit #23	**Co-ordinate(NE) Reference:**	Well: BDU #23, Grid North		
Reference Well:	BDU #23	**Vertical (TVD) Reference:**	SITE 0.0		
Reference Wellpath:	1			**Db:**	Sybase

Site: Benson Delaware Unit #24
Well: BDU #24
Wellpath: 1 V0 Plan: Plan #3 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
2610.00	2608.64	2596.89	2595.70	5.76	5.75	183.52	-71.79	17.89	99.87	88.38	8.69	
2640.00	2638.21	2624.16	2622.60	5.83	5.82	184.73	-75.98	16.50	108.92	97.30	9.37	
2670.00	2667.69	2651.03	2649.06	5.91	5.89	185.84	-80.46	15.02	118.81	107.06	10.11	
2700.00	2697.08	2677.50	2675.05	5.98	5.96	186.86	-85.22	13.44	129.50	117.62	10.90	
2730.00	2726.44	2703.63	2700.63	6.06	6.03	187.76	-90.26	11.77	140.74	128.73	11.72	
2760.00	2755.79	2729.48	2725.87	6.14	6.10	188.59	-95.57	10.01	152.33	140.19	12.55	
2790.00	2785.15	2755.36	2751.06	6.22	6.18	189.37	-101.20	8.14	164.28	152.01	13.39	
2820.00	2814.50	2782.74	2777.68	6.30	6.26	190.11	-107.28	6.12	176.36	163.96	14.22	
2850.00	2843.86	2810.13	2804.31	6.39	6.34	190.76	-113.36	4.10	188.47	175.93	15.04	
2880.00	2873.21	2837.51	2830.93	6.47	6.43	191.32	-119.44	2.09	200.59	187.92	15.83	
2910.00	2902.57	2864.90	2857.56	6.56	6.52	191.83	-125.52	0.07	212.73	199.92	16.61	
2940.00	2931.93	2892.28	2884.18	6.65	6.60	192.28	-131.60	-1.95	224.88	211.94	17.37	
2970.00	2961.28	2919.66	2910.81	6.74	6.69	192.68	-137.68	-3.96	237.04	223.96	18.12	
3000.00	2990.64	2947.05	2937.43	6.83	6.78	193.04	-143.76	-5.98	249.21	235.99	18.85	
3030.00	3019.99	2974.43	2964.06	6.92	6.88	193.37	-149.84	-8.00	261.39	248.03	19.57	
3060.00	3049.35	3001.82	2990.68	7.01	6.97	193.68	-155.92	-10.01	273.57	260.07	20.27	
3090.00	3078.70	3029.20	3017.31	7.11	7.06	193.95	-162.00	-12.03	285.76	272.12	20.95	
3120.00	3108.06	3056.59	3043.93	7.21	7.16	194.20	-168.07	-14.05	297.96	284.18	21.62	
3150.00	3137.41	3083.97	3070.55	7.30	7.26	194.44	-174.15	-16.06	310.16	296.24	22.28	
3180.00	3166.77	3111.35	3097.18	7.40	7.35	194.65	-180.23	-18.08	322.36	308.30	22.92	
3210.00	3196.12	3138.74	3123.80	7.50	7.45	194.85	-186.31	-20.10	334.57	320.36	23.54	
3240.00	3225.48	3166.12	3150.43	7.60	7.55	195.04	-192.39	-22.11	346.78	332.43	24.16	
3270.00	3254.83	3193.51	3177.05	7.70	7.65	195.21	-198.47	-24.13	358.99	344.50	24.76	
3300.00	3284.19	3220.89	3203.68	7.80	7.76	195.37	-204.55	-26.15	371.21	356.57	25.35	
3330.00	3313.54	3248.27	3230.30	7.90	7.86	195.52	-210.63	-28.16	383.43	368.64	25.92	
3360.00	3342.90	3275.66	3256.93	8.01	7.96	195.66	-216.71	-30.18	395.65	380.71	26.49	
3390.00	3372.25	3303.04	3283.55	8.11	8.07	195.80	-222.79	-32.20	407.87	392.79	27.04	
3420.00	3401.61	3330.43	3310.18	8.21	8.18	195.92	-228.87	-34.21	420.09	404.86	27.58	
3450.00	3430.97	3357.81	3336.80	8.32	8.28	196.04	-234.95	-36.23	432.32	416.94	28.11	
3480.00	3460.32	3385.19	3363.42	8.42	8.39	196.15	-241.02	-38.25	444.55	429.02	28.63	
3510.00	3489.68	3412.58	3390.05	8.53	8.50	196.26	-247.10	-40.26	456.77	441.10	29.14	
3540.00	3519.03	3439.96	3416.67	8.64	8.60	196.36	-253.18	-42.28	469.00	453.18	29.64	
3570.00	3548.39	3467.35	3443.30	8.75	8.71	196.46	-259.26	-44.29	481.23	465.26	30.13	
3600.00	3577.74	3494.73	3469.92	8.85	8.82	196.55	-265.34	-46.31	493.47	477.34	30.61	
3630.00	3607.10	3522.12	3496.55	8.96	8.93	196.63	-271.42	-48.33	505.70	489.42	31.07	
3660.00	3636.45	3549.50	3523.17	9.07	9.04	196.72	-277.50	-50.34	517.93	501.51	31.53	
3690.00	3665.81	3576.88	3549.80	9.18	9.16	196.79	-283.58	-52.36	530.17	513.59	31.98	
3720.00	3695.16	3604.27	3576.42	9.29	9.27	196.87	-289.66	-54.38	542.40	525.67	32.43	
3750.00	3724.52	3631.65	3603.05	9.40	9.38	196.94	-295.74	-56.39	554.64	537.76	32.86	
3780.00	3753.87	3659.04	3629.67	9.52	9.49	197.01	-301.82	-58.41	566.87	549.84	33.28	
3810.00	3783.23	3686.42	3656.29	9.63	9.61	197.07	-307.89	-60.43	579.11	561.93	33.70	
3840.00	3812.58	3713.80	3682.92	9.74	9.72	197.14	-313.97	-62.44	591.35	574.01	34.11	
3870.00	3841.94	3741.19	3709.54	9.85	9.84	197.20	-320.05	-64.46	603.59	586.10	34.51	
3900.00	3871.29	3768.57	3736.17	9.96	9.95	197.26	-326.13	-66.48	615.83	598.18	34.90	
3930.00	3900.65	3795.96	3762.79	10.08	10.07	197.31	-332.21	-68.49	628.07	610.27	35.29	
3960.00	3930.01	3823.34	3789.42	10.19	10.18	197.37	-338.29	-70.51	640.31	622.35	35.66	
3990.00	3959.36	3850.72	3816.04	10.31	10.30	197.42	-344.37	-72.53	652.55	634.44	36.04	
4020.00	3988.72	3878.11	3842.67	10.42	10.41	197.47	-350.45	-74.54	664.79	646.52	36.40	
4050.00	4018.07	3905.49	3869.29	10.54	10.53	197.51	-356.53	-76.56	677.03	658.61	36.76	
4080.00	4047.43	3932.88	3895.92	10.65	10.65	197.56	-362.61	-78.58	689.27	670.70	37.11	
4110.00	4076.78	3960.26	3922.54	10.77	10.77	197.61	-368.69	-80.59	701.51	682.78	37.45	

Weatherford International Ltd.

Anticollision Report

Weatherford

Company:	Chi Energy	**Date:** 3/2/2012	**Time:** 09:52:10	**Page:**	4
Field:	Eddy Co., NM (Nad 27)				
Reference Site:	Benson Delaware Unit #23	**Co-ordinate(NE) Reference:**	Well: BDU #23, Grid North		
Reference Well:	BDU #23	**Vertical (TVD) Reference:**	SITE 0.0		
Reference Wellpath:	1			**Db:**	Sybase

Site: Benson Delaware Unit #24
Well: BDU #24
Wellpath: 1 V0 Plan: Plan #3 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
4140.00	4106.14	3987.65	3949.16	10.88	10.88	197.65	-374.77	-82.61	713.75	694.87	37.79	
4170.00	4135.49	4015.03	3975.79	11.00	11.00	197.69	-380.84	-84.63	726.00	706.96	38.13	
4200.00	4164.85	4042.41	4002.41	11.12	11.12	197.73	-386.92	-86.64	738.24	719.04	38.45	
4230.00	4194.20	4069.80	4029.04	11.23	11.24	197.77	-393.00	-88.66	750.48	731.13	38.77	
4260.00	4223.56	4097.18	4055.66	11.35	11.36	197.81	-399.08	-90.68	762.73	743.21	39.09	
4290.00	4252.91	4124.57	4082.29	11.47	11.48	197.84	-405.16	-92.69	774.97	755.30	39.40	
4320.00	4282.27	4151.95	4108.91	11.58	11.60	197.88	-411.24	-94.71	787.22	767.39	39.70	
4350.00	4311.62	4179.33	4135.54	11.70	11.72	197.91	-417.32	-96.73	799.46	779.47	40.00	
4380.00	4340.98	4206.72	4162.16	11.82	11.84	197.95	-423.40	-98.74	811.70	791.56	40.30	
4410.00	4370.33	4234.10	4188.79	11.94	11.96	197.98	-429.48	-100.76	823.95	803.65	40.58	
4440.00	4399.69	4261.49	4215.41	12.06	12.08	198.01	-435.56	-102.78	836.19	815.73	40.87	
4470.00	4429.05	4288.87	4242.03	12.18	12.20	198.04	-441.64	-104.79	848.44	827.82	41.15	
4500.00	4458.40	4316.25	4268.66	12.29	12.32	198.07	-447.71	-106.81	860.68	839.91	41.42	
4530.00	4487.76	4343.64	4295.28	12.41	12.44	198.10	-453.79	-108.83	872.93	851.99	41.69	
4560.00	4517.11	4371.02	4321.91	12.53	12.57	198.13	-459.87	-110.84	885.18	864.08	41.96	
4590.00	4546.47	4398.41	4348.53	12.65	12.69	198.15	-465.95	-112.86	897.42	876.17	42.22	
4620.00	4575.82	4425.79	4375.16	12.77	12.81	198.18	-472.03	-114.88	909.67	888.25	42.48	
4650.00	4605.18	4453.18	4401.78	12.89	12.93	198.21	-478.11	-116.89	921.91	900.34	42.73	
4680.00	4634.53	4480.56	4428.41	13.01	13.05	198.23	-484.19	-118.91	934.16	912.43	42.98	
4710.00	4663.89	4507.94	4455.03	13.13	13.18	198.25	-490.27	-120.92	946.41	924.51	43.23	
4740.00	4693.24	4535.33	4481.66	13.25	13.30	198.28	-496.35	-122.94	958.65	936.60	43.47	
4770.00	4722.60	4562.71	4508.28	13.37	13.42	198.30	-502.43	-124.96	970.90	948.68	43.70	
4800.00	4751.95	4590.10	4534.91	13.49	13.55	198.32	-508.51	-126.97	983.15	960.77	43.94	
4830.00	4781.31	4617.48	4561.53	13.62	13.67	198.35	-514.59	-128.99	995.39	972.86	44.17	
4860.00	4810.66	4644.86	4588.15	13.74	13.79	198.37	-520.66	-131.01	1007.64	984.94	44.39	
4890.00	4840.02	4672.25	4614.78	13.86	13.92	198.39	-526.74	-133.02	1019.89	997.03	44.62	
4920.00	4869.37	4699.63	4641.40	13.98	14.04	198.41	-532.82	-135.04	1032.14	1009.12	44.84	
4950.00	4898.73	4727.02	4668.03	14.10	14.16	198.43	-538.90	-137.06	1044.38	1021.20	45.05	
4980.00	4928.09	4754.40	4694.65	14.22	14.29	198.45	-544.98	-139.07	1056.63	1033.29	45.27	
5010.00	4957.44	4781.78	4721.28	14.34	14.41	198.47	-551.06	-141.09	1068.88	1045.37	45.48	
5040.00	4986.80	4809.17	4747.90	14.47	14.54	198.49	-557.14	-143.11	1081.13	1057.46	45.68	
5070.00	5016.15	4836.55	4774.53	14.59	14.66	198.50	-563.22	-145.12	1093.37	1069.55	45.89	
5100.00	5045.51	4863.94	4801.15	14.71	14.79	198.52	-569.30	-147.14	1105.62	1081.63	46.09	
5130.00	5074.86	4891.32	4827.78	14.83	14.91	198.54	-575.38	-149.16	1117.87	1093.72	46.28	
5160.00	5104.22	4918.71	4854.40	14.96	15.04	198.56	-581.46	-151.17	1130.12	1105.80	46.48	
5190.00	5133.57	4946.09	4881.02	15.08	15.16	198.57	-587.53	-153.19	1142.37	1117.89	46.67	
5220.00	5162.93	4973.47	4907.65	15.20	15.29	198.59	-593.61	-155.21	1154.61	1129.98	46.86	
5250.00	5192.28	5000.86	4934.27	15.32	15.41	198.61	-599.69	-157.22	1166.86	1142.06	47.05	
5257.89	5200.00	5008.06	4941.27	15.36	15.45	198.61	-601.29	-157.75	1170.08	1145.24	47.10	

Weatherford Drilling Services

GeoDec v5.03

Report Date:	March 02, 2012
Job Number:	
Customer:	Chi Energy
Well Name:	Benson Delaware Unit #23
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 611057.090 USFT	Latitude 32.6792603 DEG
East/West 622851.130 USFT	Longitude -103.9340625 DEG
Grid Convergence: .22°	
Total Correction: +7.45°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.67926° N	32° 40 min 45.337 sec
Longitude =	103.93406° W	103° 56 min 2.625 sec

Magnetic Declination =	7.67°	[True North Offset]	
Local Gravity =	.9988 g	CheckSum =	6605
Local Field Strength =	48772 nT	Magnetic Vector X =	23786 nT
Magnetic Dip =	60.52°	Magnetic Vector Y =	3202 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z =	42458 nT
Spud Date =	Jun 15, 2012	Magnetic Vector H =	24001 nT

Signed:_____ Date:_____

2000 psi System

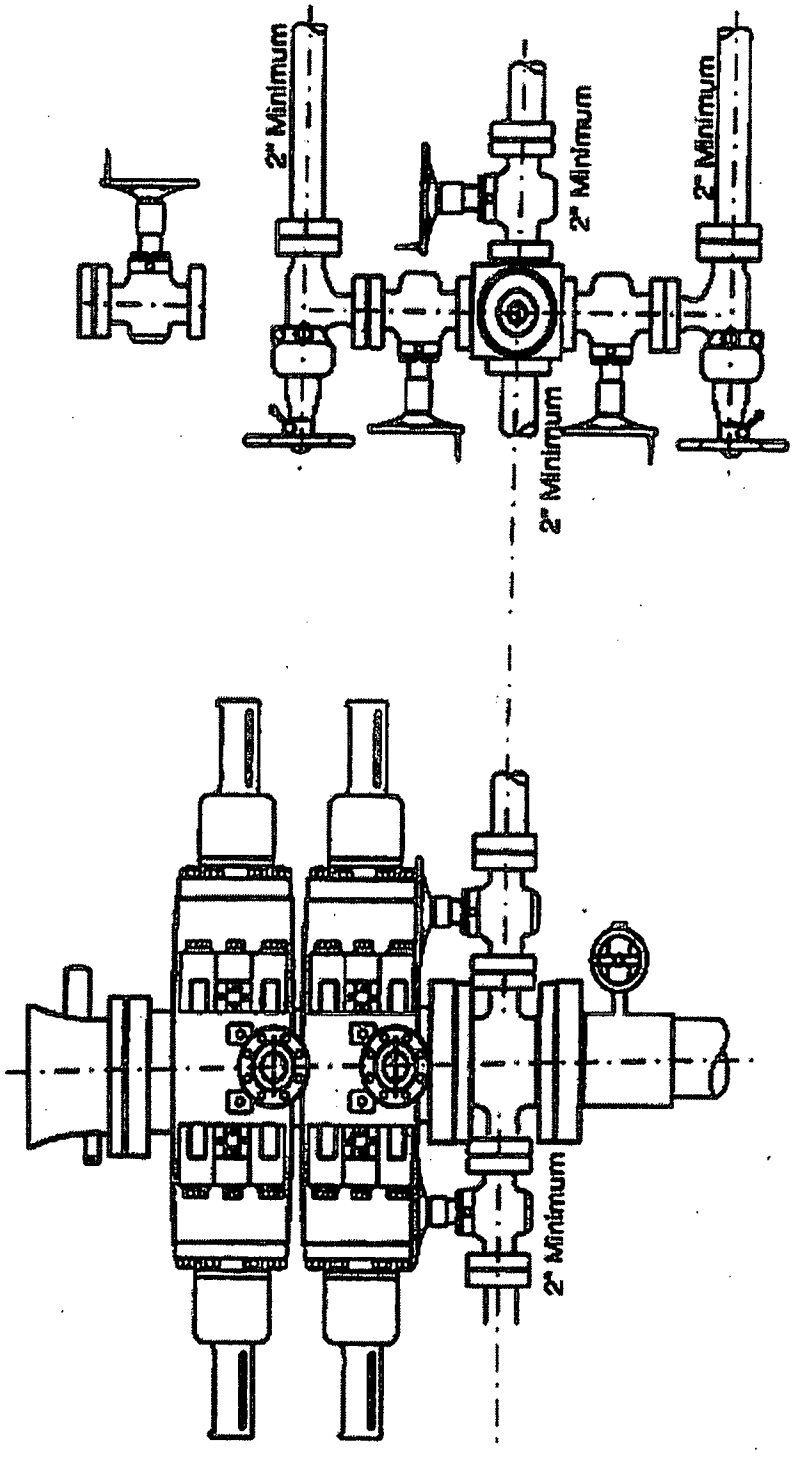
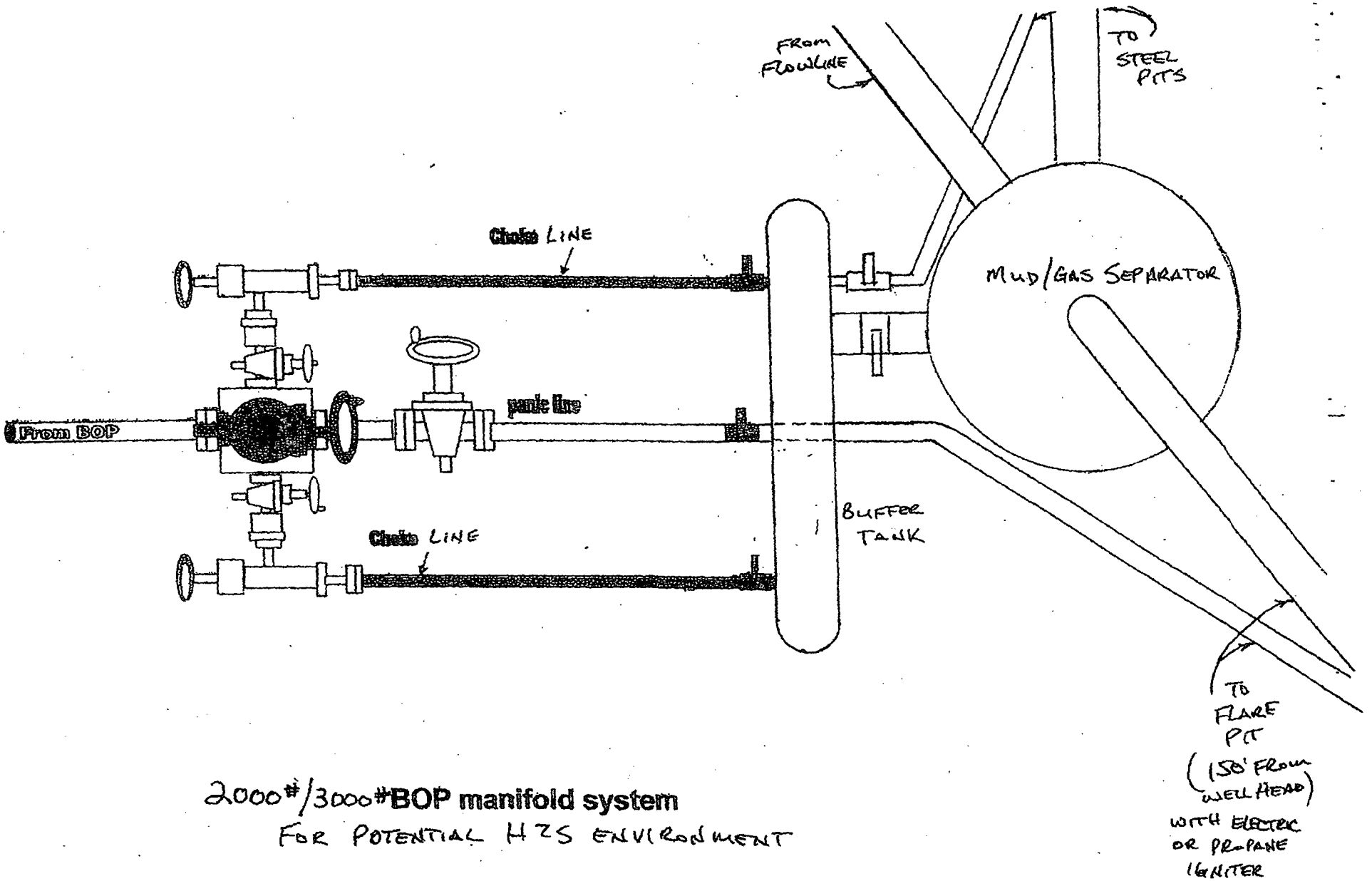


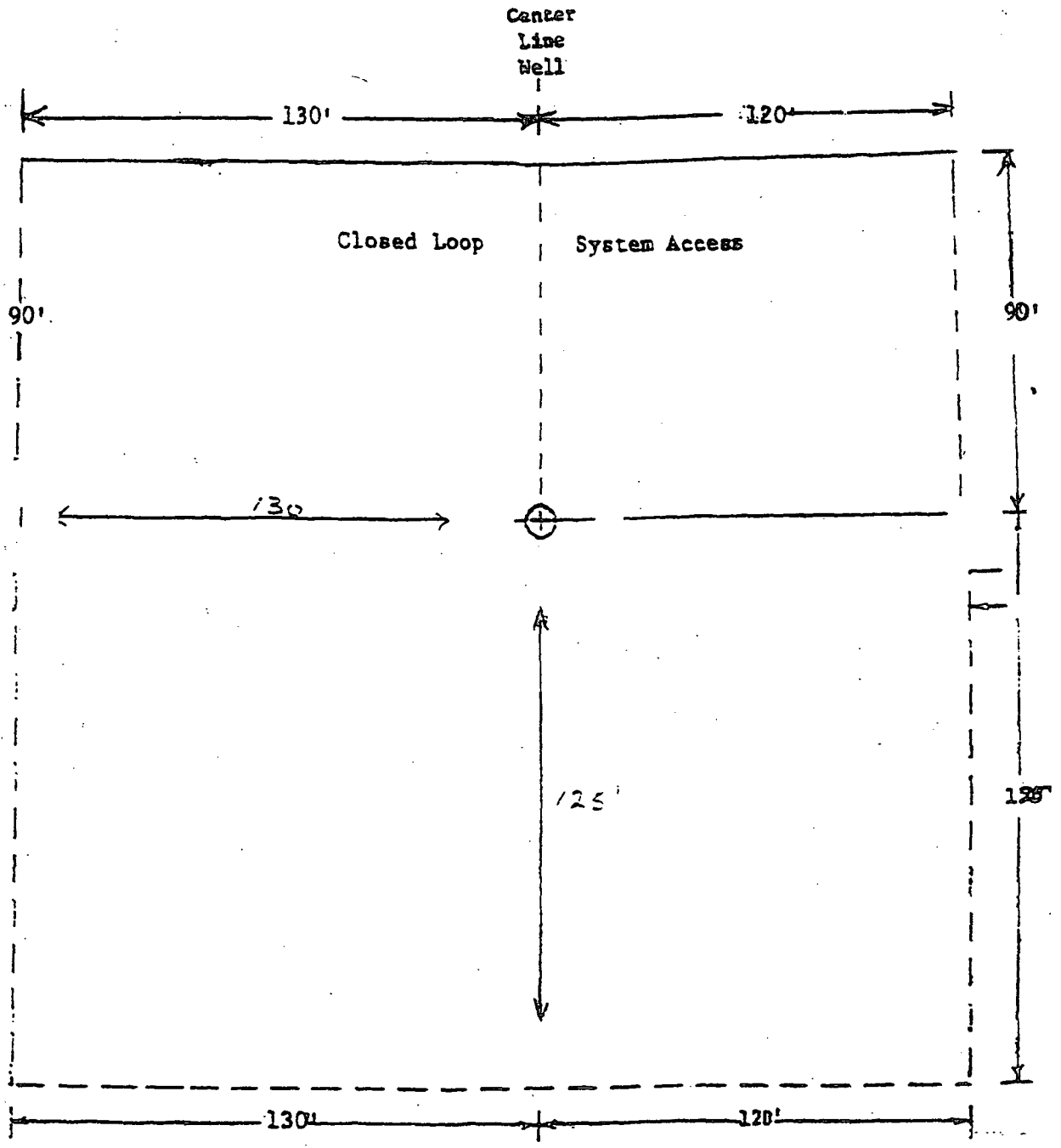
Figure 3-1

EXHIBIT "E"
CHI OPERATING, INC.
Benson Delaware Federal Unit, Well No. 23
BOP Specifications



2000#/3000# **BOP manifold system**

FOR POTENTIAL H2S ENVIRONMENT


Center
Line
Well
130'
120'
Closed Loop
System Access
90'
90'
130'
125'
125'
130'
120'
N

CHI OPERATING, INC., BENSON DELAWARE FEDERAL UNIT, WELL NO. 23
API: 30-.

A- Sec. 11, T19S-R30E: 990' FNL & 150' FEL Eddy Co., NM

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

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

Contacts: Gary Wallace 432-638-4076 Office # 575-393-1079

Scomi Oil Tool: Supervisor: Armando Soto – 432-553-7978 Hobbs, NM
Monitoring 24 hour service
Equipment:
Centrifuges (brand): Derrick
Rig Shakers (brand): Brandt
D-watering Unit
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 # R9166

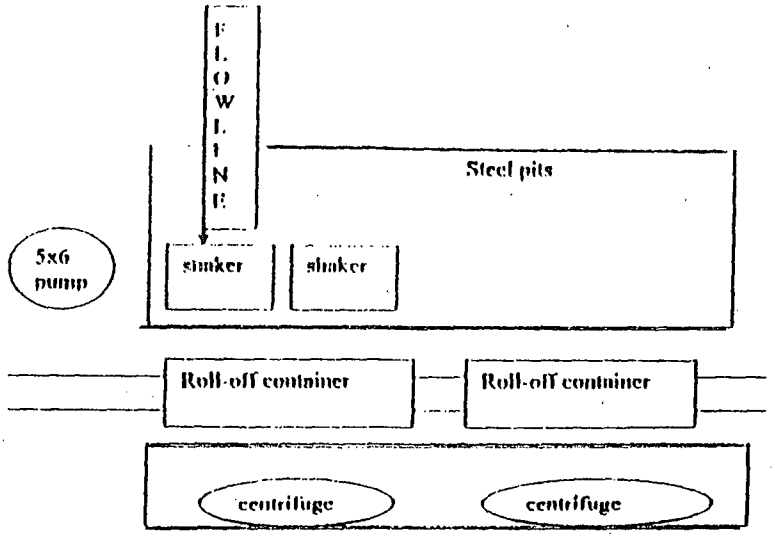
2-250 bbl tanks to hold fluid
2- CRI Bins with track system
2- 500 bbl frac tanks for fresh water
2-500 bbl frac tanks for brine water

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 via CRI (Controlled Recovery Incorporated) Disposal Facility Permit # R9166



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

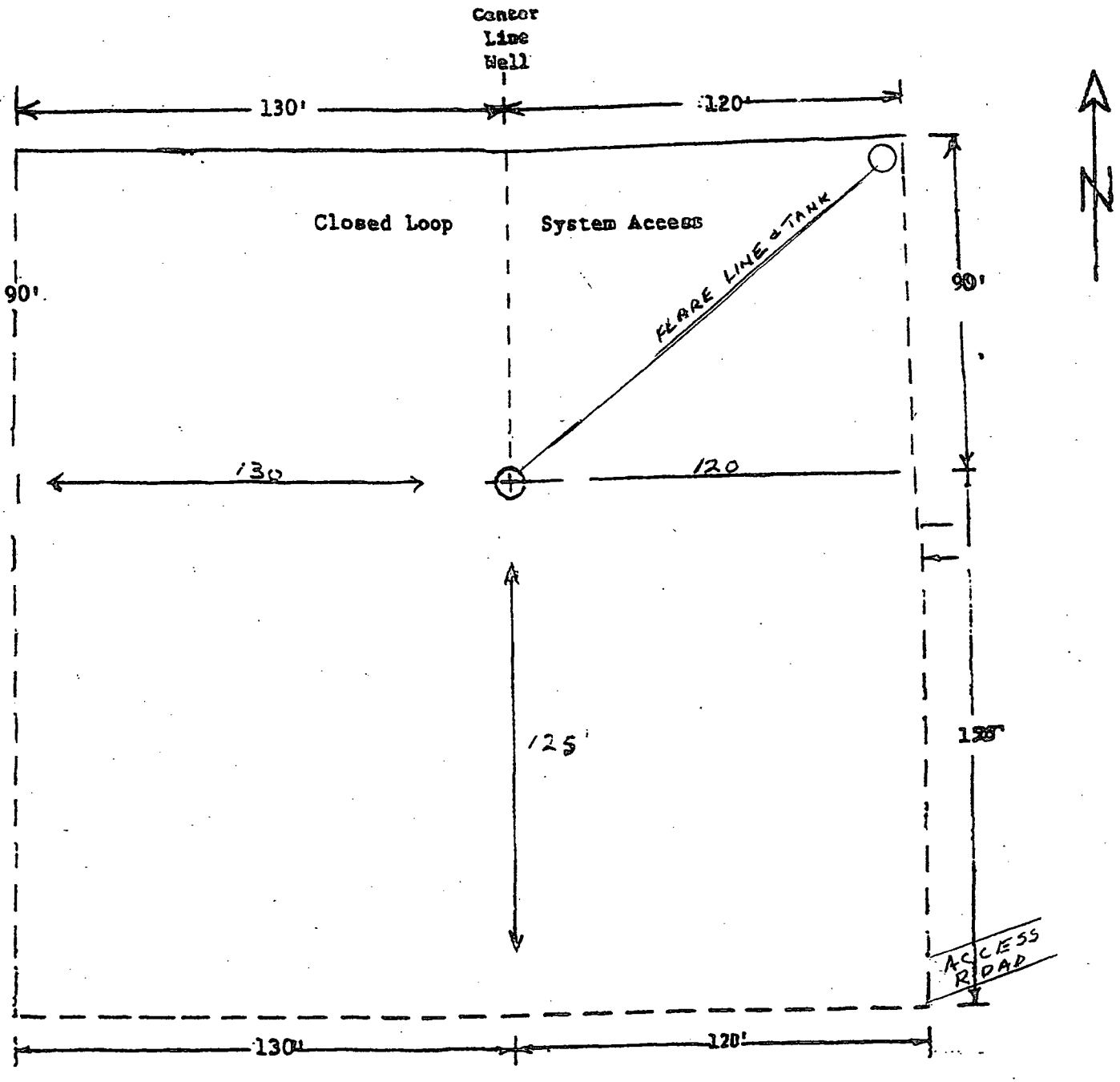
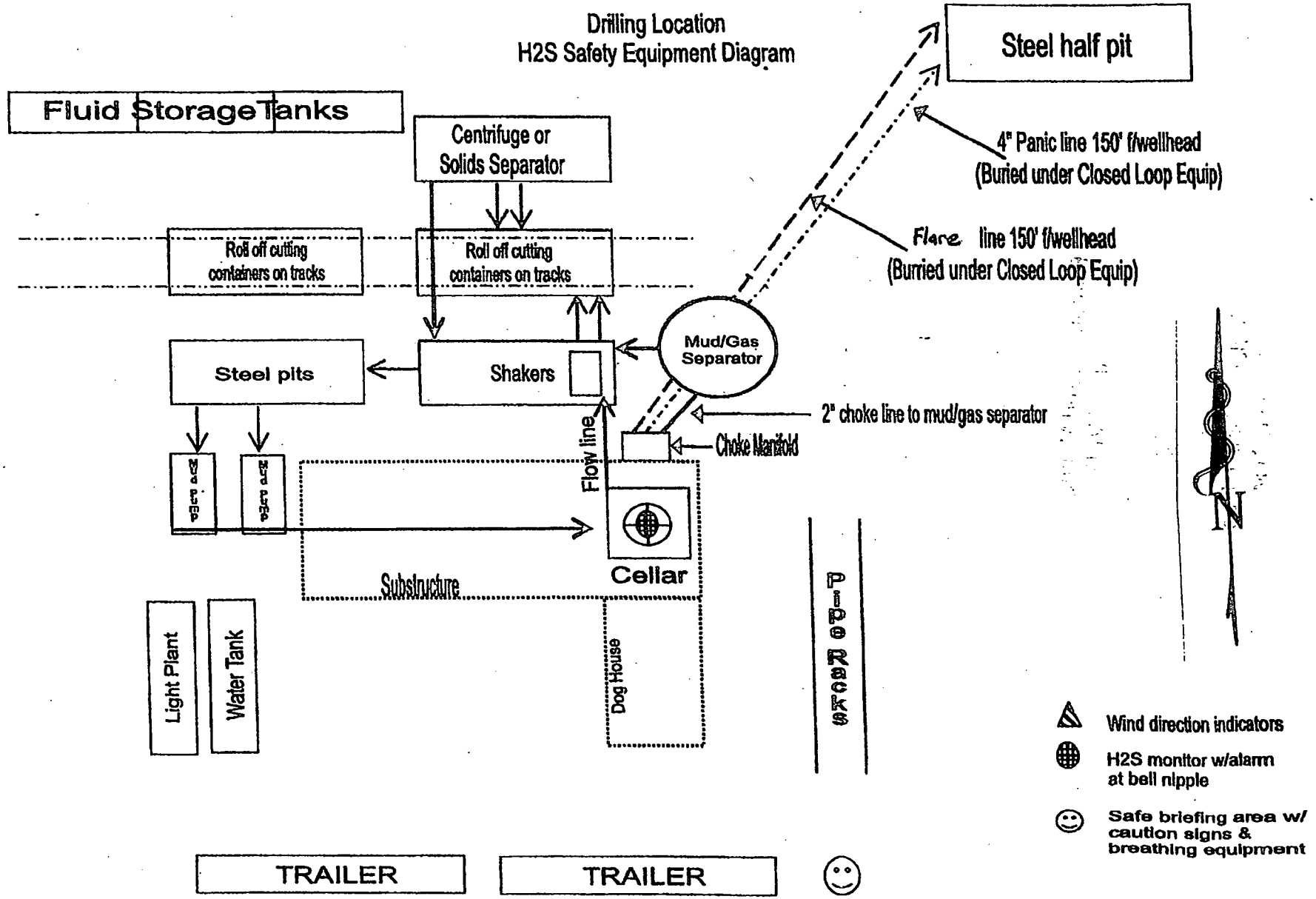


EXHIBIT "D"
CHI OPERATING, INC.
Benson Delaware Federal Unit, Well No. 23
Pad & Closed Loop Layout

Drilling Location
H2S Safety Equipment Diagram



WIND DIRECTION

EXHIBIT "F"

Chi Operating, Inc.

H_2S DRILLING CONTINGENCY PLAN

I. HYDROGEN SULFIDE TRAINING

All key personnel whether regularly assigned, contracted or employed on an unscheduled basis will receive or represent that they have received training in accordance with the general training requirements outlined in the API RP49 for safe drilling of wells containing hydrogen sulfide, Section 2.

In addition, supervisory personnel will be trained in the following areas:

1. The corrective action and shut-in procedures when drilling or reworking a well, and blowout prevention in well control procedures.
2. The contents and requirements of the H_2S drilling operations plan.

II. H_2S SAFETY EQUIPMENT AND SYSTEMS

1. **Well Control Equipment:**
   a. Choke manifold with a minimum of one choke.
   b. Blind rams and pipe rams and pipe rams to accommodate all drill pipe sizes with a properly sized closing unit.
2. **Protective Equipment:**
   a. Proper protective breathing apparatus shall be readily accessible to all essential personnel on the drill site.
3. **H_2S and Monitoring Equipment:**
   a. Three portable H_2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens.
4. **Visual Warning Systems:**
   a. Wind direction indicators as shown on well site diagram.
   b. Caution/Danger signs shall be posted on roads providing direct access to location.
5. **Mud Program:**
   The mud program has been designed to minimize the volume of H_2S circulated to the surface. 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. If the gas monitor approaches #10, will prepare to shut-in well and at #10 will shut-in well and install 150' of flare line from the choke manifold to the mud separator and flare pit.

III. Emergency Procedures

* In the event of a release of gas containing H_2S, the first responder (s) must
* Evacuate any public places encompassed by the 100 ppm ROE
* Be equipped with H_2S monitors and air packs in order to control the release..
* Use thee "Buddy System" to ensure no injuries occur during the response
* Take precautions to avoid personal injury during the response.
* Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
* Have received training in the :
  - **O** Detection of H_2S, and
  - **O** Measures for protection against the gas,
  - **O** Equipment used for protection and emergency response.

IV Communications

Company Office: Chi Operating, Inc 432-685-5001

Key Personnel

Gary Womack Production Engineer 432-685-5001

Cell Phone 432-634-8958

a. Cell phone communication available in all vehicles and at the drilling site.

b. **EMERGENCY PHONE NUMBERS:**

ARTESIA

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
New Mexico Oil Conservation Dept.	575 748-1283

CARLSBAD

Ambulance.	911
State Police No.	575-885-2111
City Police No.	575-221-7551
Fire Dept.:	575-887-3798
US Bureau of Land Management	575-234-5972

6. **Well Testing:**

a. Drillstem testing, if required, will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. When drillstem testing intervals known to or reasonably expected to contain 100 ppm or more H_2S, the drillstem test will be conducted during daylight hours and formation fluids will not be flowed to the surface.

To whom it may it concern:

Chi Operating, Inc. will probably need the entire drilling pads for future use to service the three wells on the pad. Therefore there will not be any recovery plan at the present. The total size will be approximately the equivalent to 1.5 times the size of a normal pad, which is less than three times the normal reclaimed size.

George R. Smith
POA agent for Chi Operating, Inc.

MULTI POINT SURFACE USE AND OPERATIONS PLAN

CHI OPERATING, INC
Benson Delaware Unit, Well No. 23
990' FNL & 150' FEL, Sec. 11 -T19S-R30E
Bottom Hole Location: 330' FNL & 330' FEL
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 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 .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 Benson Delaware Unit 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 Benson Delaware Fed. Unit #4 well pad. Turn southwest to the Benson Delaware Unit Fed. #9 well pad. The proposed access road will start on the southeast corner of this well pad and run northwest for 50' to the southwest corner of the proposed well pad.

2. PLANNED ACCESS ROAD:

A. Length and Width: The proposed new access road will be constructed to a width of 12 feet (24' Max.) and approximately 50 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 and leveling across small dune areas.

F. Gates, Cattle guards: One cattleguard exists at the existing fence.

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 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 3" poly flow line currently runs northeast, parallel to the access road, to a flow line hook-up at the Benson Delaware Unit Fed. #6 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. 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. 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, reserve pits, and major rig components. The pad and pit area has been staked and flagged, 600' X 600'.

B. Mat Size: 250' X 205' including closed loop pits on the north. This utilizes a large portion of the original pad for the Benson Delaware Federal Unit, Well No. 9

C Cut & Fill: The location will require a 1 foot cut on the north and fill to the south- SE.. There are undulating sand dunes 3 – 4 feet high that will need to be leveled.

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 and the location 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..

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 2% slope to the southeast from an elevation of 3463.5" 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 Largo loamy fine sands series.

C. Flora and Fauna: The vegetation cover is a poor to fair grass cover of threeawn, dropseed, fluff grass and ring 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.

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 2285, Roswell, NM 88202 has conducted an archaeological survey, and their report was submitted to the appropriate government agencies on July 3, 2005.

12. OPERATOR'S REPRESENTATIVE:

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

Gary Womack
Chi Operating, Inc.
P. O. Box 1799
Midland, Texas 79701
Office Phone: (915) 685-5001
Cell Phone: (915) 634-8958

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CERTIFICATION:

I hereby certify that I have inspected the proposed drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have knowledge of State and Federal laws applicable to this operation; that the statements made in the APD package are, to the best of my knowledge, true and correct, and, that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions which it is approved. I also certify that I, or the company I represent, am/is responsible for the operations conducted under this application. These statements are subject to the provisions of. 18 U.S.C.. 1001 for the filing of a false statement.

May 18, 2012

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

POWER OF ATTORNEY

DESIGNATION OF AGENT

LRE Operating, LLC. 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

LRE Operating, LLC grants its agent the authority to act for it with the 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 ACKNOWLEDGEMENT

LRE Operating, LLC

By: _____

Name: Charles Adcock

Title: Managing Director – Lime Rock Resources, G.P.

Date: 03/07/2012

Address: 1111 Bagby Street, Suite 4600, Houston, TX 77002

Telephone Number: (713)292-9512

State of TEXAS
County of HARRIS

This instrument was acknowledged before me on March 7th, 2012 by Charles Adcock, Managing Director of LRE Operating, LLC acting on behalf of said limited partnership.

Signature of notarial officer: Aubrey Cunningham
My commission expires: 07/26/2014

NOTARY PUBLIC STATE OF TEXAS
Aubrey Cunningham
My Commission Expires
07/26/2014

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Chi Operating Inc.
LEASE NO.:	NM-0560353
WELL NAME & NO.:	Benson Delaware Federal Unit #23
SURFACE HOLE FOOTAGE:	990' FNL & 150' FEL
BOTTOM HOLE FOOTAGE	450' FNL & 330' FEL
LOCATION:	Section 11, T. 19 S., R. 30 E., NMPM
COUNTY:	Eddy County, New Mexico

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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 of combined well pad limited to 90 feet north from proposed Benson Delaware Federal Unit #23 well bore in order to avoid archeological site.

OHV Recreation area

Pipelines (including surface lines) shall be buried 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. Power poles and associated ground structures (poles, guy wires) will not be placed within 20 feet of recreation trails. Guy wires must be equipped with a sleeve, tape or other industry approved apparatus that is highly visible during the day and reflective at night. Appropriate safety signage will be in place during all phases of the project. Upon completion of construction, the road shall be returned to pre-construction condition with no bumps or dips. All vehicle and equipment operators will observe speed limits and practice responsible defensive driving habits.

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) 234-6235 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 in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 4 inches in depth. The topsoil will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

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

Payment shall be made to the BLM prior to removal of any federal mineral materials. 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 twenty (20) 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.

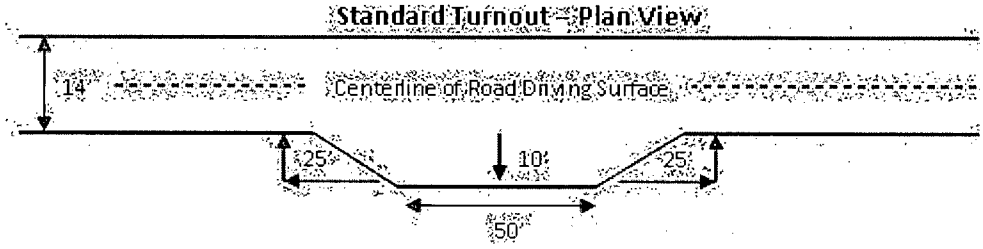
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

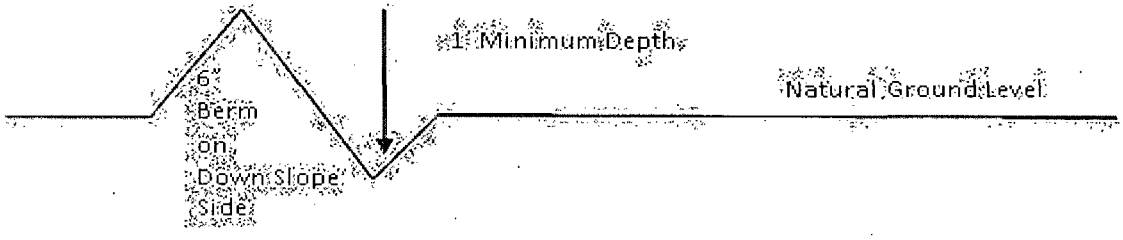
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



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

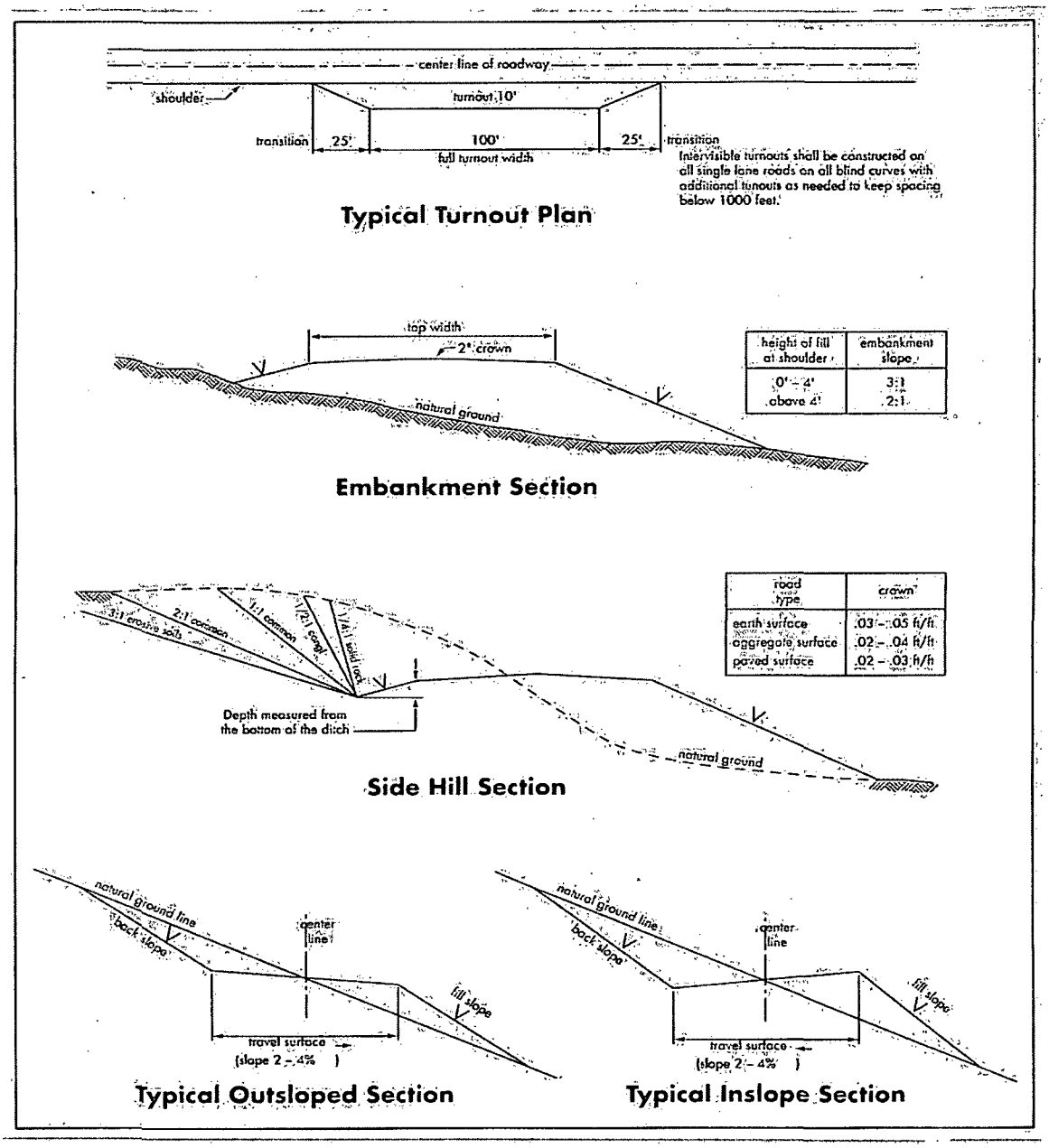
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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. **The record of the drilling rate along with the GR/N well log run from TD to surface shall 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 program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

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

Wait on cement (WOC) time prior to drilling out 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. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. 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 460 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Additional cement may be required. Excess calculates to only 46%.**

    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. Additional cement may be required. Excess cement calculates to negative 21%.**

3. The minimum required fill of cement behind the **5-1/2** 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 cement calculates to 15%.**

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.

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 **2000 (2M)** 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. 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) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

   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.

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.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

CRW 081412

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 (not applied for)

C. ELECTRIC LINES (not applied for)

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).

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