

Form 3160-3
(March 2012)

R-11 ~~INDEX~~ ~~SOOD~~
~~STASH~~

JUN 15 2015

ATS-14-1030

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

 $\langle H \rangle$

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER RECEIVED

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. <u>31497</u> Battle 34 Federal #3H	
2. Name of Operator BC Operating, Inc. <u>160825</u>		9. API Well No. <u>30-025 42635</u>	
3a. Address P.O. Box 50820 Midland, Texas 79710	3b. Phone No. (include area code) 432-684-9696	10. Field and Pool, or Exploratory <u>6</u> <u>979</u> WC-025 G-06 S21332D; Bone Spring	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 64' FSL & 2280' FWL, Unit Letter 'N', Section 27, T-21S, R-33E At proposed prod. zone 240' FSL & 2280' FWL, Unit Letter 'N', Section 34, T-21S, R-33E		11. Sec., T. R. M. or Blk. and Survey or Area Section 27, T-21S, R-33E Section 34, T-21S, R-33E	
14. Distance in miles and direction from nearest town or post office* 25 miles West of Eunice		12. County or Parish Lea	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330'	16. No. of acres in lease 320	17. Spacing Unit dedicated to this well 160 - E/2 W/2 of Section 34	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. None	19. Proposed Depth <u>12,330</u> 12,330' TD-Pilot Hole 11,725' TVD/16,601'MD Lat	20. BLM/BIA Bond No. on file NM2572	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3693' GL	22. Approximate date work will start* 12/01/2014	23. Estimated duration 45 days	
24. Attachments			

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

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

25. Signature <i>Pam Stevens</i>	Name (Printed/Typed) Pam Stevens	Date 07/09/2014
Title Regulatory Analyst		
Approved by (Signature) Steve Caffey	Name (Printed/Typed)	Date JUN 8 20
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

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

APPROVAL FOR TWO YEARS

APPROVAL FOR TWO YEARS

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

(Continued on page 2)

*(Instructions on page 2)

Capitan Controlled Water Basin

**Approval Subject to General Requirements
& Special Stipulations Attached**

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

JUN 16 2015

JUN 15 2015

1. Geologic Formations

RECEIVED

TVD of target	11725	Pilot hole depth	12200
MD at TD:	16601	Deepest expected fresh water:	550

Capitan

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1805		
Top Salt	1905		
Base Salt	3740		
Yates	3800		
Seven Rivers	3965		
Capitan	4105		
Capitan Base	5250		
Lamar	5300		
Cherry Canyon	5840	Oil/Gas	
Brushy Canyon	7075	Oil/Gas	
Bone Spring Lime	8740	Oil/Gas	
1 st Bone Spring Sand	10000	Oil/Gas	
2 nd Bone Spring Sand	10575	Oil/Gas	
3 rd Bone Spring Sand	11700	Horiz. Target 11725'	
Wolfcamp	11970	Oil/Gas	
TD Pilot Hole	12200		

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
24"	0	1700 1725	20"	133.0	K55	LTC	1.91	1.53	6.43
16"	0	3850 3750	13.375"	72	N80	STC	1.34	2.12	3.75
12.25"	0	5300	9.625"	40	L80	LTC	1.22	1.43	3.43
8.75"	0	16601	5.5"	17	P110	Semi- Buttr.	1.44	1.39	2.01
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing. See attached semi-premium buttress connection Specs.

BC Operating, Inc., Battle 34 Federal #3H

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	Y
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	Y
If yes, are the first three strings cemented to surface?	Y
Is 2 nd string set 100' to 600' below the base of salt?	Y
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	1230	13.5	1.757	9.0 9	10	Lead: ExtendaCem + 2 lbm Kol-Seal + 0.125 lbm Poly-E-Flake
	1150	14.8	1.345	6.2 3	8	Tail: HalCem + 2 lbm Kol-Seal + 0.125 lbm Poly-E-Flake + 1% Calcium Chloride - flake
Inter.	970	12.6	1.934	10. 36	15	Lead: EconoCem + 0.25 lbm Poly-E-Flake + 0.60% Halad®-9 + 3 lbm Kol-Seal
	1660	14.8	1.339	6.1 3	11	Tail: HalCem + 3 lbm Kol-Seal + 0.25 lbm Poly-E-Flake
Int2.	1430	13.5	1.757	9.0 9	10	Lead: ExtendaCem + 2 lbm Kol-Seal + 0.125 lbm Poly-E-Flake
	700	14.8	1.345	6.2 3	8	Tail: HalCem + 2 lbm Kol-Seal + 0.125 lbm Poly-E-Flake + 1% Calcium Chloride - flake

BC Operating, Inc., Battle 34 Federal #3H

Prod.	1600	11.9	2.303	13. 19	24	Lead: VersaCem + 10% Bentonite + 2 lbm Kol-Seal + 0.25 lbm D-Air 5000 + 0.50% HR-601
	700	15	2.625	11. 40	10	Tail: SoluCem + 0.25 lbm D-Air 5000 + 0.80% HR-601 (Acid Soluble Cement)

Not Proposed Optional DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. ~~Optional DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe.~~ Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate and Inter. #2	0'	100%
Production	0'	30%

Include Pilot Hole Cementing specs: (Optional pilot on subsequent wells in section.)

Pilot hole depth 12200

KOP 11204

Plug top	Plug Bottom	% Excess	No. Sacks	Wt. lb/gal	Yld ft3/sack	Water gal/sk	Slurry Description and Cement Type
11200	11750	10	210	15.6	1.204	5.36	PlugCem System
11870	12200	10	125	15.6	1.204	5.36	PlugCem System

4. Pressure Control Equipment

A variance is requested for the use of a 30" diverter on the surface casing. See attached for schematic.
--

BC Operating, Inc., Battle 34 Federal #3H

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
16"	20"	2M	Annular	X	50% of working pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other*		
12-1/4"	13-5/8"	2M	Annular	X	50% testing pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other*		
8-3/4"	11"	5 M	Annular	X	5 M
			Blind Ram	X	
			Pipe Ram	X	
			Double Ram		
			Other*		

*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
Y	Are anchors required by manufacturer?
	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. Provide description here: See attached schematic.

per
Deane Durkin
6/4/15
CRW

BC Operating, Inc., Battle 34 Federal #3H

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. shoe	FW Gel	8.4-8.9	28-34	N/C
Surf csg	Int shoe	Saturated Brine	9.8-10.0	28-34	N/C
Int shoe	Int2 shoe	Cut Brine FW	8.4-9.2	30-36	<12
Int2 shoe	TD	CutBrine/FWgel	8.4-8.9	30-36	<12

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
---	-----------------------------

6. Logging and Testing Procedures

Logging, Coring and Testing.	
Y	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
N	Drill stem test? If yes, explain
N	Coring? If yes, explain

Additional logs planned	Interval
Y	Resistivity
Y	Density
Y	CBL (Optional)
Y	Mud log
	PEX

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4105 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
	H2S is present
Y	H2S Plan attached

BC Operating, Inc., Battle 34 Federal #3H

8. Other facets of operation

Is this a walking operation? No. If yes, describe.

Will be pre-setting casing? No. If yes, describe.

Attachments

☒ Directional Plan

☒ Other, describe

- Improved 5.5" casing thread design example
- 30" diverter
- 20" annular
- 13-5/8" annular
- 11" BOPE
- Flexible hose specs and test chart

The **ULTRA-DGX** Threaded & Coupled Drilling with Casing Connection for High RPM Rotating & Drilling

The performance properties given in these tables are calculated per API 5C3. **Yield Load** is based upon minimum material values and nominal pipe body dimensions. **Parting Load** is based upon minimum ultimate strength of the material and the API Buttress formula. Neither Minimum Yield or Parting Load include any Design or Safety Factors.

The ULTRA thread concept was originally invented by Erich F. Klementhous, DE, FASME, SPE.

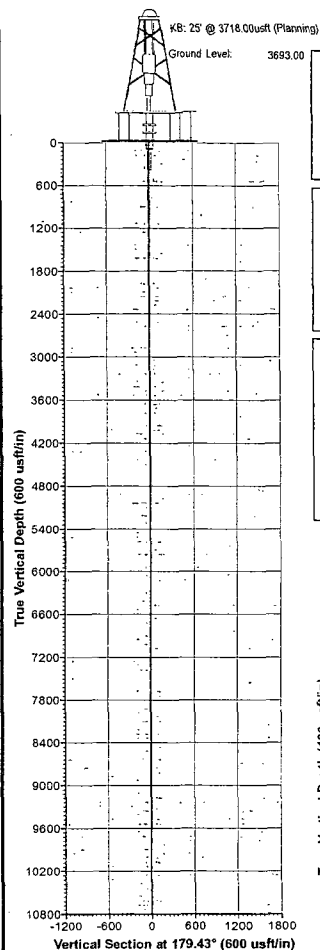
Project: Lea County, NM (NAD27)
 Site: Battle 34 Federal
 Well: #3H
 Wellbore: Wellbore #1 Job #1411255
 Design: Plan #1 07-11-14
 Rig: Planning



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Azimuths to Grid North
 True North: -0.41°
 Magnetic North: 6.80°
 Magnetic Field
 Strength: 48439.5nT
 Dip Angle: 60.31°
 Date: 2014/07/11
 Model: IGRF2010_14



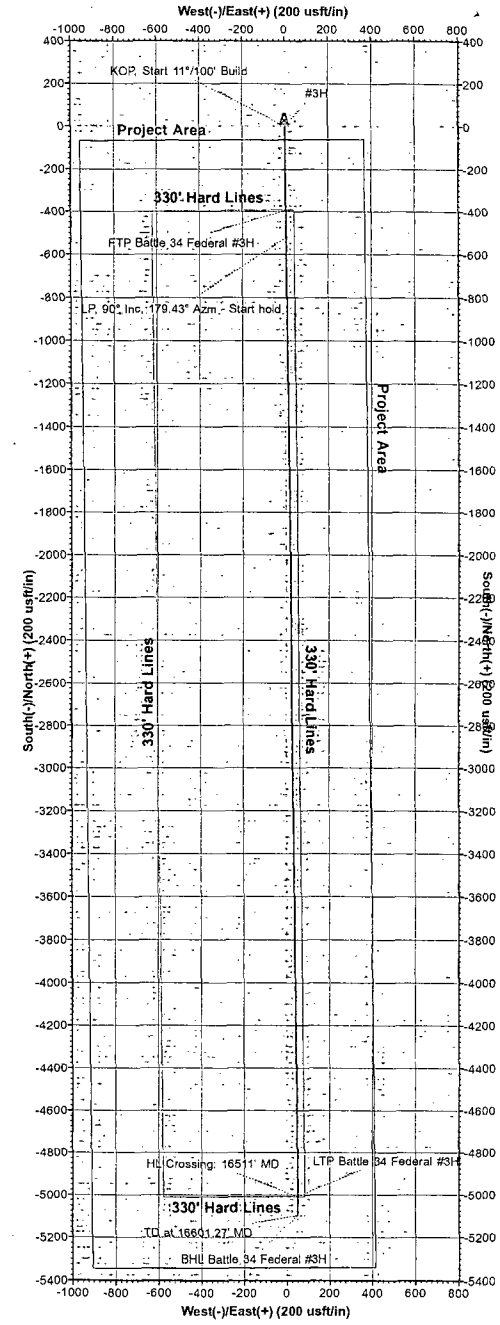
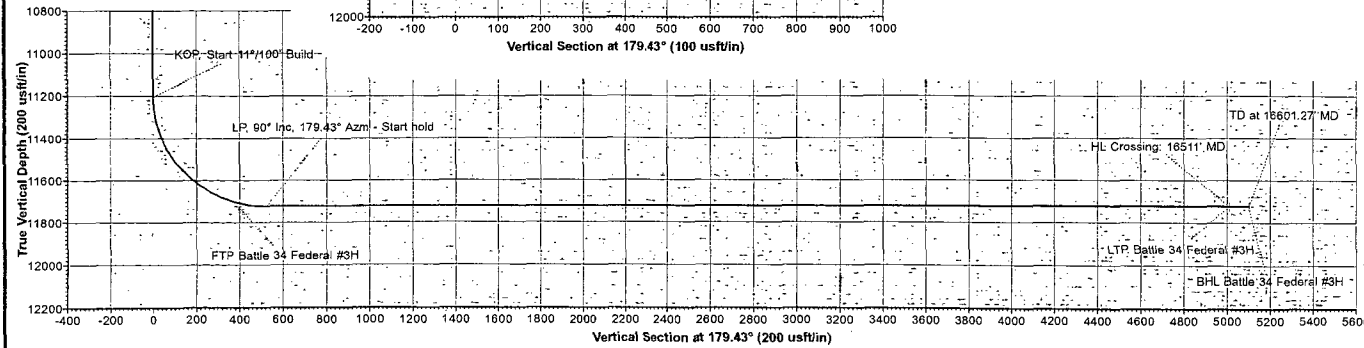
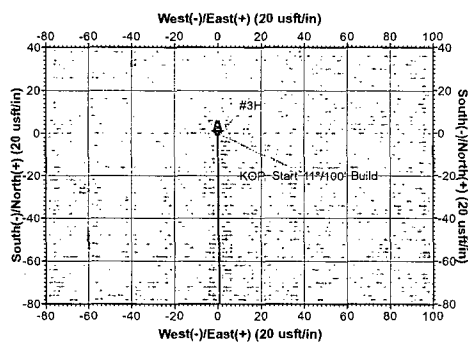
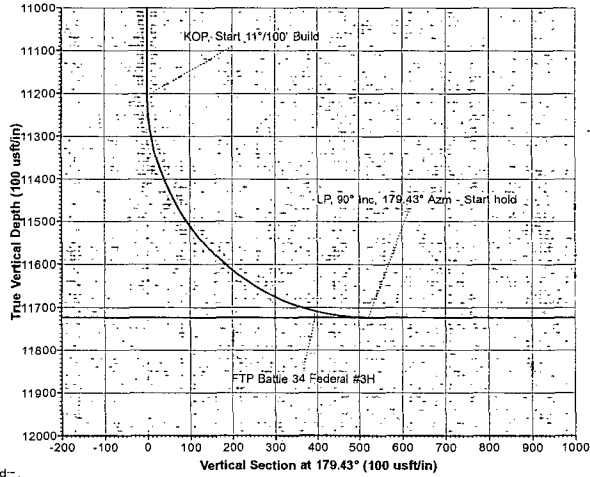
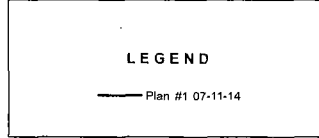
WELL DETAILS						
+N-S	+E-W	Northing	Ground Level	Latitude	Longitude	
0.00	0.00	525599.65	3693.00 738250.29	32° 26' 33.42596 N	103° 33' 39.77261 W	

SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	Vsect	Target	
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	11204.13	0.00	0.00	11204.13	0.00	0.00	0.00	0.00	0.00		KOP, Start 11°/100' Build
3	12022.31	90.00	179.43	11725.00	-520.84	5.19	11.00	179.43	520.87		LP, 90° Inc, 179.43° Azm - Start hold
4	16601.27	90.00	179.43	11725.00	-5099.58	50.86	0.00	0.00	5099.83	BHL Battle 34 Federal #3H	TD at 16601.27 MD

DESIGN TARGET DETAILS										
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape		
BHL Battle 34 Federal #3H11725.00	-5099.58	50.86	520500.07	738301.15	32° 25' 42.96124 N	103° 33' 39.60939 W	Point			
-plan hits target center										
FTP Battle 34 Federal #3H11725.00	-393.50	3.92	525206.15	738254.21	32° 26' 29.53194 N	103° 33' 39.76002 W	Point			
-plan misses target center by 15.36usft at 11896.07usft MD (11710.25 TVD, -307.79 N, 3.97 E)										
LTP Battle 34 Federal #3H11725.00	-5009.57	49.96	520590.08	738300.25	32° 25' 43.85192 N	103° 33' 39.51227 W	Point			
-plan misses target center by 11.26usft at 16500.00usft MD (11725.00 TVD, -4898.31 N, 49.85 E)										

Map System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone Name: New Mexico East 3001
 Local Origin: Well #3H, Grid North
 Latitude: 32° 26' 33.42596 N
 Longitude: 103° 33' 39.77261 W
 Grid East: 738250.29
 Grid North: 525599.65
 Scale Factor: 1.000
 Geomagnetic Model: IGRF2010_14
 Sample Date: 11-Jul-14
 Magnetic Declination: 7.22°
 Dip Angle from Horizontal: 60.31°
 Magnetic Field Strength: 48439

To convert a Magnetic Direction to a Grid Direction, Add 6.80°
 To convert a Magnetic Direction to a True Direction, Add 7.22° East
 To convert a True Direction to a Grid Direction, Subtract 0.41°





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TECHNOLOGY SERVICES

BC Operating, Inc.

Lea County, NM (NAD27)

Battle 34 Federal

#3H

Wellbore #1 Job #1411255

Plan: Plan #1 07-11-14

Planning Report

11 July, 2014

BC  PERATING, INC.



Phoenix Technology Services
Planning Report



Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well #3H
Project:	Lea County, NM (NAD27)	TVD Reference:	KB: 25' @ 3718.00usft (Planning)
Site:	Battle 34 Federal	MD Reference:	KB: 25' @ 3718.00usft (Planning)
Well:	#3H	North Reference:	Grid
Wellbore:	Wellbore #1 Job #1411255	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1 07-11-14	Database:	Compass 5000 GCR-DB

Project	Lea County, NM (NAD27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Battle 34 Federal		
Site Position:		Northing:	525,599.65 usft
From:	Map	Easting:	738,250.29 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 26' 33.42596 N
		Longitude:	103° 33' 39.77261 W
		Grid Convergence:	0.41 °

Well		#3H				
Well Position	+N/-S	0.00 usft	Northing:	525,599.65 usft	Latitude:	32° 26' 33.42596 N
	+E/-W	0.00 usft	Easting:	738,250.29 usft	Longitude:	103° 33' 39.77261 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,693.00 usft	

Wellbore	Wellbore #1 Job #1411255				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	2014/07/11	7.22	60.31	48,439

Design	Plan #1 07-11-14			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.43

Survey Tool Program	Date	2014/07/11		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	16,601.27	Plan #1 07-11-14 (Wellbore #1 Job #14112	MWD	MWD - Standard



Phoenix Technology Services
Planning Report



Company: BC Operating, Inc.
Project: Lea County, NM (NAD27)
Site: Battle 34 Federal
Well: #3H
Wellbore: Wellbore #1 Job #1411255
Design: Plan #1 07-11-14

Local Co-ordinate Reference: Well: #3H
TVD Reference: KB: 25' @ 3718.00usft (Planning)
MD Reference: KB: 25' @ 3718.00usft (Planning)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR DB

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLeg (°/100usft)
0.00	0.00	0.00	-3,718.00	0.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
100.00	0.00	0.00	-3,618.00	100.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
200.00	0.00	0.00	-3,518.00	200.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
300.00	0.00	0.00	-3,418.00	300.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
400.00	0.00	0.00	-3,318.00	400.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
500.00	0.00	0.00	-3,218.00	500.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
600.00	0.00	0.00	-3,118.00	600.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
700.00	0.00	0.00	-3,018.00	700.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
800.00	0.00	0.00	-2,918.00	800.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
900.00	0.00	0.00	-2,818.00	900.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
1,000.00	0.00	0.00	-2,718.00	1,000.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
1,100.00	0.00	0.00	-2,618.00	1,100.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
1,200.00	0.00	0.00	-2,518.00	1,200.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
1,300.00	0.00	0.00	-2,418.00	1,300.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
1,400.00	0.00	0.00	-2,318.00	1,400.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
1,500.00	0.00	0.00	-2,218.00	1,500.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
1,600.00	0.00	0.00	-2,118.00	1,600.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
1,700.00	0.00	0.00	-2,018.00	1,700.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
1,800.00	0.00	0.00	-1,918.00	1,800.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
1,900.00	0.00	0.00	-1,818.00	1,900.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
2,000.00	0.00	0.00	-1,718.00	2,000.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
2,100.00	0.00	0.00	-1,618.00	2,100.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
2,200.00	0.00	0.00	-1,518.00	2,200.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
2,300.00	0.00	0.00	-1,418.00	2,300.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
2,400.00	0.00	0.00	-1,318.00	2,400.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
2,500.00	0.00	0.00	-1,218.00	2,500.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
2,600.00	0.00	0.00	-1,118.00	2,600.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00



Phoenix Technology Services
Planning Report



Company: BC Operating, Inc.
Project: Lea County, NM (NAD27)
Site: Battle 34 Federal
Well: #3H
Wellbore: Wellbore #1 Job #1411255
Design: Plan #1 07-11-14

Local Co-ordinate Reference: Well #3H
TVD Reference: KB: 25' @ 3718.00usft (Planning)
MD Reference: KB: 25' @ 3718.00usft (Planning)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR DB

Planned Survey

MD (usft)	Inc (°)	Azi.(azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLeg (°/100usft)
2,700.00	0.00	0.00	-1,018.00	2,700.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
2,800.00	0.00	0.00	-918.00	2,800.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
2,900.00	0.00	0.00	-818.00	2,900.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
3,000.00	0.00	0.00	-718.00	3,000.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
3,100.00	0.00	0.00	-618.00	3,100.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
3,200.00	0.00	0.00	-518.00	3,200.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
3,300.00	0.00	0.00	-418.00	3,300.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
3,400.00	0.00	0.00	-318.00	3,400.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
3,500.00	0.00	0.00	-218.00	3,500.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
3,600.00	0.00	0.00	-118.00	3,600.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
3,700.00	0.00	0.00	-18.00	3,700.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
3,800.00	0.00	0.00	82.00	3,800.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
3,900.00	0.00	0.00	182.00	3,900.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
4,000.00	0.00	0.00	282.00	4,000.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
4,100.00	0.00	0.00	382.00	4,100.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
4,200.00	0.00	0.00	482.00	4,200.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
4,300.00	0.00	0.00	582.00	4,300.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
4,400.00	0.00	0.00	682.00	4,400.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
4,500.00	0.00	0.00	782.00	4,500.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
4,600.00	0.00	0.00	882.00	4,600.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
4,700.00	0.00	0.00	982.00	4,700.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
4,800.00	0.00	0.00	1,082.00	4,800.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
4,900.00	0.00	0.00	1,182.00	4,900.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
5,000.00	0.00	0.00	1,282.00	5,000.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
5,100.00	0.00	0.00	1,382.00	5,100.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
5,200.00	0.00	0.00	1,482.00	5,200.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
5,300.00	0.00	0.00	1,582.00	5,300.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00



Phoenix Technology Services
Planning Report



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Site: Battle 34 Federal
Well: #3H
Wellbore: Wellbore #1 Job #1411255
Design: Plan #1 07-11-14

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Database: Compass 5000 GCR.DB

Planned Survey

MD (usft)	Inc (")	Azi (azimuth) (")	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLeg ("/100usft)
5,400.00	0.00	0.00	1,682.00	5,400.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
5,500.00	0.00	0.00	1,782.00	5,500.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
5,600.00	0.00	0.00	1,882.00	5,600.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
5,700.00	0.00	0.00	1,982.00	5,700.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
5,800.00	0.00	0.00	2,082.00	5,800.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
5,900.00	0.00	0.00	2,182.00	5,900.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
6,000.00	0.00	0.00	2,282.00	6,000.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
6,100.00	0.00	0.00	2,382.00	6,100.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
6,200.00	0.00	0.00	2,482.00	6,200.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
6,300.00	0.00	0.00	2,582.00	6,300.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
6,400.00	0.00	0.00	2,682.00	6,400.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
6,500.00	0.00	0.00	2,782.00	6,500.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
6,600.00	0.00	0.00	2,882.00	6,600.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
6,700.00	0.00	0.00	2,982.00	6,700.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
6,800.00	0.00	0.00	3,082.00	6,800.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
6,900.00	0.00	0.00	3,182.00	6,900.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
7,000.00	0.00	0.00	3,282.00	7,000.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
7,100.00	0.00	0.00	3,382.00	7,100.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
7,200.00	0.00	0.00	3,482.00	7,200.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
7,300.00	0.00	0.00	3,582.00	7,300.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
7,400.00	0.00	0.00	3,682.00	7,400.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
7,500.00	0.00	0.00	3,782.00	7,500.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
7,600.00	0.00	0.00	3,882.00	7,600.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
7,700.00	0.00	0.00	3,982.00	7,700.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
7,800.00	0.00	0.00	4,082.00	7,800.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
7,900.00	0.00	0.00	4,182.00	7,900.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
8,000.00	0.00	0.00	4,282.00	8,000.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00



Phoenix Technology Services
Planning Report



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Site: Battle 34 Federal
Well: #3H
Wellbore: Wellbore #1 Job #1411255
Design: Plan #1 07-11-14

Local Co-ordinate Reference: Well #3H
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Database: Compass 5000 GCR DB

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLeg (°/100usft)
8,100.00	0.00	0.00	4,382.00	8,100.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
8,200.00	0.00	0.00	4,482.00	8,200.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
8,300.00	0.00	0.00	4,582.00	8,300.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
8,400.00	0.00	0.00	4,682.00	8,400.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
8,500.00	0.00	0.00	4,782.00	8,500.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
8,600.00	0.00	0.00	4,882.00	8,600.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
8,700.00	0.00	0.00	4,982.00	8,700.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
8,800.00	0.00	0.00	5,082.00	8,800.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
8,900.00	0.00	0.00	5,182.00	8,900.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
9,000.00	0.00	0.00	5,282.00	9,000.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
9,100.00	0.00	0.00	5,382.00	9,100.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
9,200.00	0.00	0.00	5,482.00	9,200.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
9,300.00	0.00	0.00	5,582.00	9,300.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
9,400.00	0.00	0.00	5,682.00	9,400.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
9,500.00	0.00	0.00	5,782.00	9,500.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
9,600.00	0.00	0.00	5,882.00	9,600.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
9,700.00	0.00	0.00	5,982.00	9,700.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
9,800.00	0.00	0.00	6,082.00	9,800.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
9,900.00	0.00	0.00	6,182.00	9,900.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
10,000.00	0.00	0.00	6,282.00	10,000.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
10,100.00	0.00	0.00	6,382.00	10,100.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
10,200.00	0.00	0.00	6,482.00	10,200.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
10,300.00	0.00	0.00	6,582.00	10,300.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
10,400.00	0.00	0.00	6,682.00	10,400.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
10,500.00	0.00	0.00	6,782.00	10,500.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
10,600.00	0.00	0.00	6,882.00	10,600.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
10,700.00	0.00	0.00	6,982.00	10,700.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00



Phoenix Technology Services
Planning Report



Company: BC Operating, Inc.
Project: Lea County, NM (NAD27)
Site: Battle 34 Federal
Well: #3H
Wellbore: Wellbore #1 Job #1411255
Design: Plan #1 07-11-14

Local Co-ordinate Reference: Well #3H
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Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLeg (°/100usft)
10,800.00	0.00	0.00	7,082.00	10,800.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
10,900.00	0.00	0.00	7,182.00	10,900.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
11,000.00	0.00	0.00	7,282.00	11,000.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
11,100.00	0.00	0.00	7,382.00	11,100.00	0.00	0.00	525,599.65	738,250.29	0.00	0.00
11,204.13	0.00	0.00	7,486.13	11,204.13	0.00	0.00	525,599.65	738,250.29	0.00	0.00
KOP, Start 11°/100' Build										
11,250.00	5.05	179.43	7,531.94	11,249.94	-2.02	0.02	525,597.63	738,250.31	2.02	11.00
11,300.00	10.55	179.43	7,581.46	11,299.46	-8.80	0.09	525,590.85	738,250.38	8.80	11.00
11,350.00	16.05	179.43	7,630.10	11,348.10	-20.29	0.20	525,579.36	738,250.49	20.29	11.00
11,400.00	21.55	179.43	7,677.42	11,395.42	-36.39	0.36	525,563.26	738,250.65	36.40	11.00
11,450.00	27.05	179.43	7,722.97	11,440.97	-56.96	0.57	525,542.69	738,250.86	56.96	11.00
11,500.00	32.55	179.43	7,766.34	11,484.34	-81.79	0.82	525,517.86	738,251.11	81.80	11.00
11,550.00	38.05	179.43	7,807.14	11,525.14	-110.67	1.10	525,488.98	738,251.39	110.68	11.00
11,600.00	43.55	179.43	7,844.97	11,562.97	-143.32	1.43	525,456.33	738,251.72	143.33	11.00
11,650.00	49.05	179.43	7,879.51	11,597.51	-179.45	1.79	525,420.20	738,252.08	179.46	11.00
11,700.00	54.55	179.43	7,910.42	11,628.42	-218.73	2.18	525,380.92	738,252.47	218.74	11.00
11,750.00	60.05	179.43	7,937.42	11,655.42	-260.78	2.60	525,338.87	738,252.89	260.80	11.00
11,800.00	65.55	179.43	7,960.27	11,678.27	-305.23	3.04	525,294.42	738,253.33	305.25	11.00
11,850.00	71.05	179.43	7,978.76	11,696.76	-351.67	3.51	525,247.98	738,253.80	351.69	11.00
11,900.00	76.55	179.43	7,992.71	11,710.71	-399.66	3.99	525,199.99	738,254.28	399.68	11.00
11,950.00	82.05	179.43	8,001.99	11,719.99	-448.77	4.48	525,150.88	738,254.77	448.79	11.00
12,000.00	87.55	179.43	8,006.52	11,724.52	-498.54	4.97	525,101.11	738,255.26	498.57	11.00
12,022.31	90.00	179.43	8,007.00	11,725.00	-520.84	5.19	525,078.81	738,255.48	520.87	11.00
LP, 90° Inc, 179.43° Azm - Start hold										
12,100.00	90.00	179.43	8,007.00	11,725.00	-598.53	5.97	525,001.12	738,256.26	598.56	0.00
12,200.00	90.00	179.43	8,007.00	11,725.00	-698.52	6.97	524,901.13	738,257.26	698.56	0.00
12,300.00	90.00	179.43	8,007.00	11,725.00	-798.52	7.96	524,801.13	738,258.25	798.56	0.00



Phoenix Technology Services
Planning Report



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12,400.00	90.00	179.43	8,007.00	11,725.00	-898.51	8.96	524,701.14	738,259.25	898.56	0.00
12,500.00	90.00	179.43	8,007.00	11,725.00	-998.51	9.96	524,601.14	738,260.25	998.56	0.00
12,600.00	90.00	179.43	8,007.00	11,725.00	-1,098.50	10.96	524,501.15	738,261.25	1,098.56	0.00
12,700.00	90.00	179.43	8,007.00	11,725.00	-1,198.50	11.95	524,401.15	738,262.24	1,198.56	0.00
12,800.00	90.00	179.43	8,007.00	11,725.00	-1,298.50	12.95	524,301.15	738,263.24	1,298.56	0.00
12,900.00	90.00	179.43	8,007.00	11,725.00	-1,398.49	13.95	524,201.16	738,264.24	1,398.56	0.00
13,000.00	90.00	179.43	8,007.00	11,725.00	-1,498.49	14.94	524,101.16	738,265.23	1,498.56	0.00
13,100.00	90.00	179.43	8,007.00	11,725.00	-1,598.48	15.94	524,001.17	738,266.23	1,598.56	0.00
13,200.00	90.00	179.43	8,007.00	11,725.00	-1,698.48	16.94	523,901.17	738,267.23	1,698.56	0.00
13,300.00	90.00	179.43	8,007.00	11,725.00	-1,798.47	17.94	523,801.18	738,268.23	1,798.56	0.00
13,400.00	90.00	179.43	8,007.00	11,725.00	-1,898.47	18.93	523,701.18	738,269.22	1,898.56	0.00
13,500.00	90.00	179.43	8,007.00	11,725.00	-1,998.46	19.93	523,601.19	738,270.22	1,998.56	0.00
13,600.00	90.00	179.43	8,007.00	11,725.00	-2,098.46	20.93	523,501.19	738,271.22	2,098.56	0.00
13,700.00	90.00	179.43	8,007.00	11,725.00	-2,198.45	21.93	523,401.20	738,272.22	2,198.56	0.00
13,800.00	90.00	179.43	8,007.00	11,725.00	-2,298.45	22.92	523,301.20	738,273.21	2,298.56	0.00
13,900.00	90.00	179.43	8,007.00	11,725.00	-2,398.44	23.92	523,201.21	738,274.21	2,398.56	0.00
14,000.00	90.00	179.43	8,007.00	11,725.00	-2,498.44	24.92	523,101.21	738,275.21	2,498.56	0.00
14,100.00	90.00	179.43	8,007.00	11,725.00	-2,598.43	25.92	523,001.22	738,276.21	2,598.56	0.00
14,200.00	90.00	179.43	8,007.00	11,725.00	-2,698.43	26.91	522,901.22	738,277.20	2,698.56	0.00
14,300.00	90.00	179.43	8,007.00	11,725.00	-2,798.42	27.91	522,801.23	738,278.20	2,798.56	0.00
14,400.00	90.00	179.43	8,007.00	11,725.00	-2,898.42	28.91	522,701.23	738,279.20	2,898.56	0.00
14,500.00	90.00	179.43	8,007.00	11,725.00	-2,998.41	29.90	522,601.24	738,280.19	2,998.56	0.00
14,600.00	90.00	179.43	8,007.00	11,725.00	-3,098.41	30.90	522,501.24	738,281.19	3,098.56	0.00
14,700.00	90.00	179.43	8,007.00	11,725.00	-3,198.40	31.90	522,401.25	738,282.19	3,198.56	0.00
14,800.00	90.00	179.43	8,007.00	11,725.00	-3,298.40	32.90	522,301.25	738,283.19	3,298.56	0.00
14,900.00	90.00	179.43	8,007.00	11,725.00	-3,398.39	33.89	522,201.26	738,284.18	3,398.56	0.00
15,000.00	90.00	179.43	8,007.00	11,725.00	-3,498.39	34.89	522,101.26	738,285.18	3,498.56	0.00



Phoenix Technology Services
Planning Report



Company: BC Operating, Inc.
Project: Lea County, NM (NAD27)
Site: Battle 34 Federal
Well: #3H
Wellbore: Wellbore #1 Job #1411255
Design: Plan #1 07-11-14

Local Co-ordinate Reference: Well #3H
TVD Reference: KB: 25' @ 3718.00usft (Planning)
MD Reference: KB: 25' @ 3718.00usft (Planning)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR DB

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLeg (°/100usft)
15,100.00	90.00	179.43	8,007.00	11,725.00	-3,598.38	35.89	522,001.27	738,286.18	3,598.56	0.00
15,200.00	90.00	179.43	8,007.00	11,725.00	-3,698.38	36.89	521,901.27	738,287.18	3,698.56	0.00
15,300.00	90.00	179.43	8,007.00	11,725.00	-3,798.37	37.88	521,801.28	738,288.17	3,798.56	0.00
15,400.00	90.00	179.43	8,007.00	11,725.00	-3,898.37	38.88	521,701.28	738,289.17	3,898.56	0.00
15,500.00	90.00	179.43	8,007.00	11,725.00	-3,998.36	39.88	521,601.29	738,290.17	3,998.56	0.00
15,600.00	90.00	179.43	8,007.00	11,725.00	-4,098.36	40.87	521,501.29	738,291.16	4,098.56	0.00
15,700.00	90.00	179.43	8,007.00	11,725.00	-4,198.35	41.87	521,401.30	738,292.16	4,198.56	0.00
15,800.00	90.00	179.43	8,007.00	11,725.00	-4,298.35	42.87	521,301.30	738,293.16	4,298.56	0.00
15,900.00	90.00	179.43	8,007.00	11,725.00	-4,398.34	43.87	521,201.31	738,294.16	4,398.56	0.00
16,000.00	90.00	179.43	8,007.00	11,725.00	-4,498.34	44.86	521,101.31	738,295.15	4,498.56	0.00
16,100.00	90.00	179.43	8,007.00	11,725.00	-4,598.33	45.86	521,001.32	738,296.15	4,598.56	0.00
16,200.00	90.00	179.43	8,007.00	11,725.00	-4,698.33	46.86	520,901.32	738,297.15	4,698.56	0.00
16,300.00	90.00	179.43	8,007.00	11,725.00	-4,798.32	47.86	520,801.33	738,298.15	4,798.56	0.00
16,400.00	90.00	179.43	8,007.00	11,725.00	-4,898.32	48.85	520,701.33	738,299.14	4,898.56	0.00
16,500.00	90.00	179.43	8,007.00	11,725.00	-4,998.31	49.85	520,601.34	738,300.14	4,998.56	0.00
16,511.26	90.00	179.43	8,007.00	11,725.00	-5,009.57	49.96	520,590.08	738,300.25	5,009.82	0.00
HL Crossing: 16511' MD										
16,601.27	90.00	179.43	8,007.00	11,725.00	-5,099.58	50.86	520,500.07	738,301.15	5,099.83	0.00
TD at 16601.27' MD										

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
11,204.13	11,204.13	0.00	0.00	KOP, Start 11°/100' Build
12,022.31	11,725.00	-393.50	3.92	LP, 90° Inc, 179.43° Azm - Start hold
16,511.26	11,725.00	-520.84	5.19	HL Crossing: 16511' MD
16,601.27	11,725.00	-5,009.57	49.96	TD at 16601.27' MD



Phoenix Technology Services
Planning Report

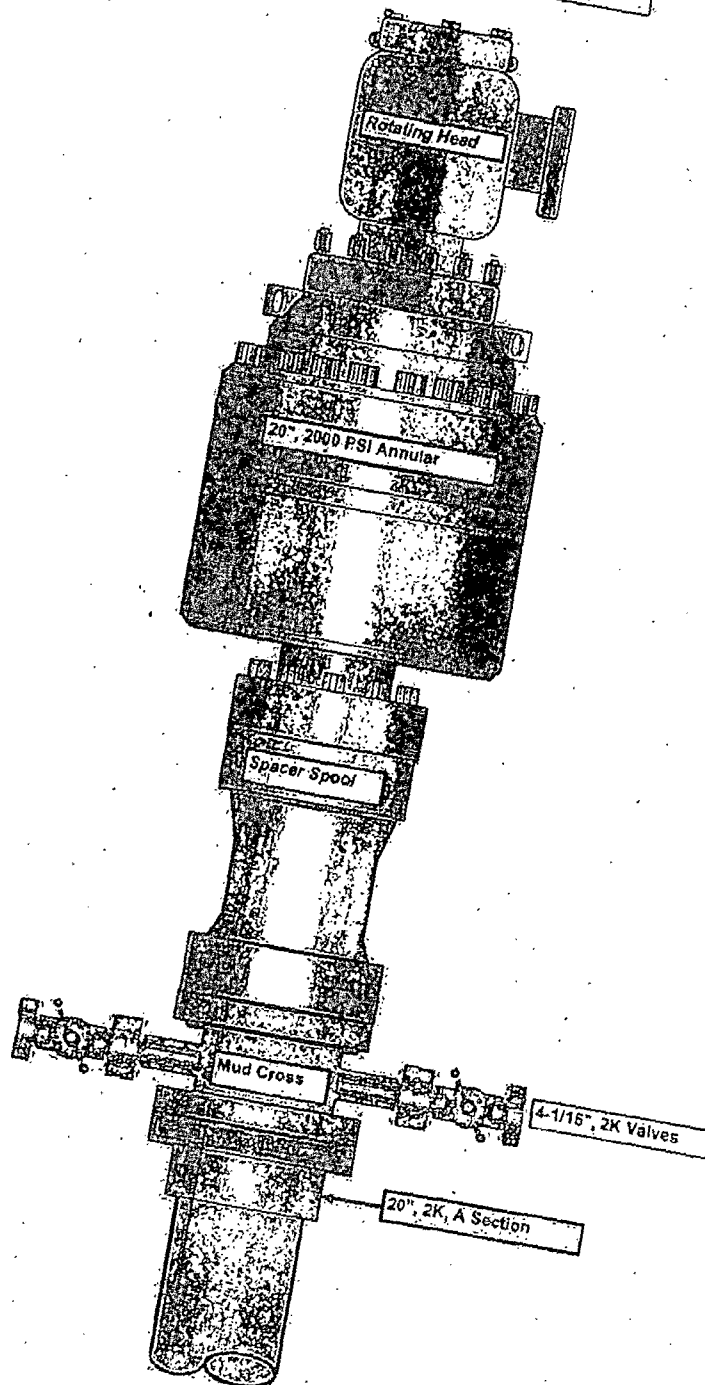


Company: BC Operating, Inc.
Project: Lea County, NM (NAD27)
Site: Battle 34 Federal
Well: #3H
Wellbore: Wellbore #1 Job #1411255
Design: Plan #1 07-11-14

Local Co-ordinate Reference: Well #3H
TVD Reference: KB: 25' @ 3718.00usft (Planning)
MD Reference: KB: 25' @ 3718.00usft (Planning)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR DB

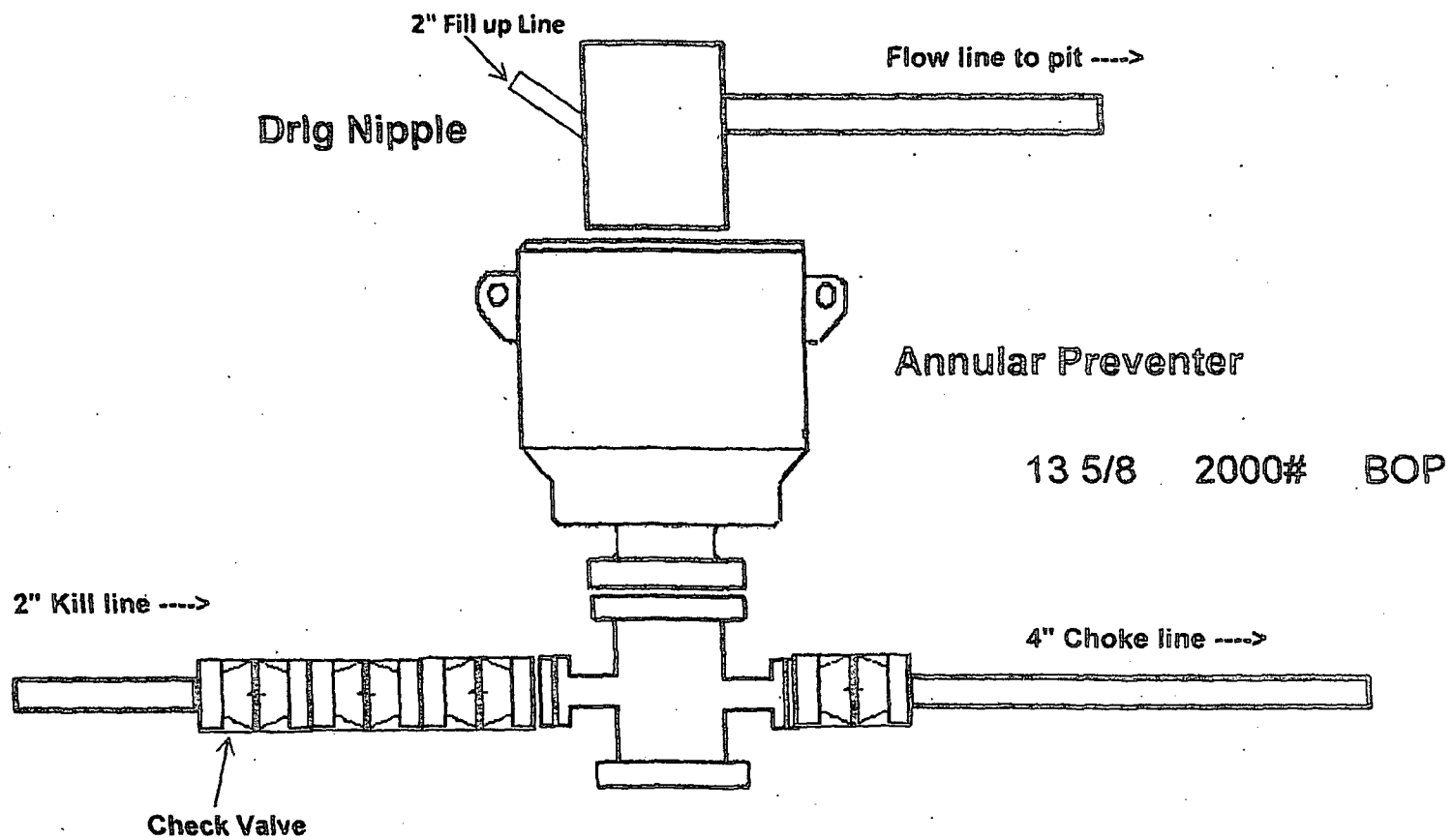
Checked By: _____ Approved By: _____ Date: _____

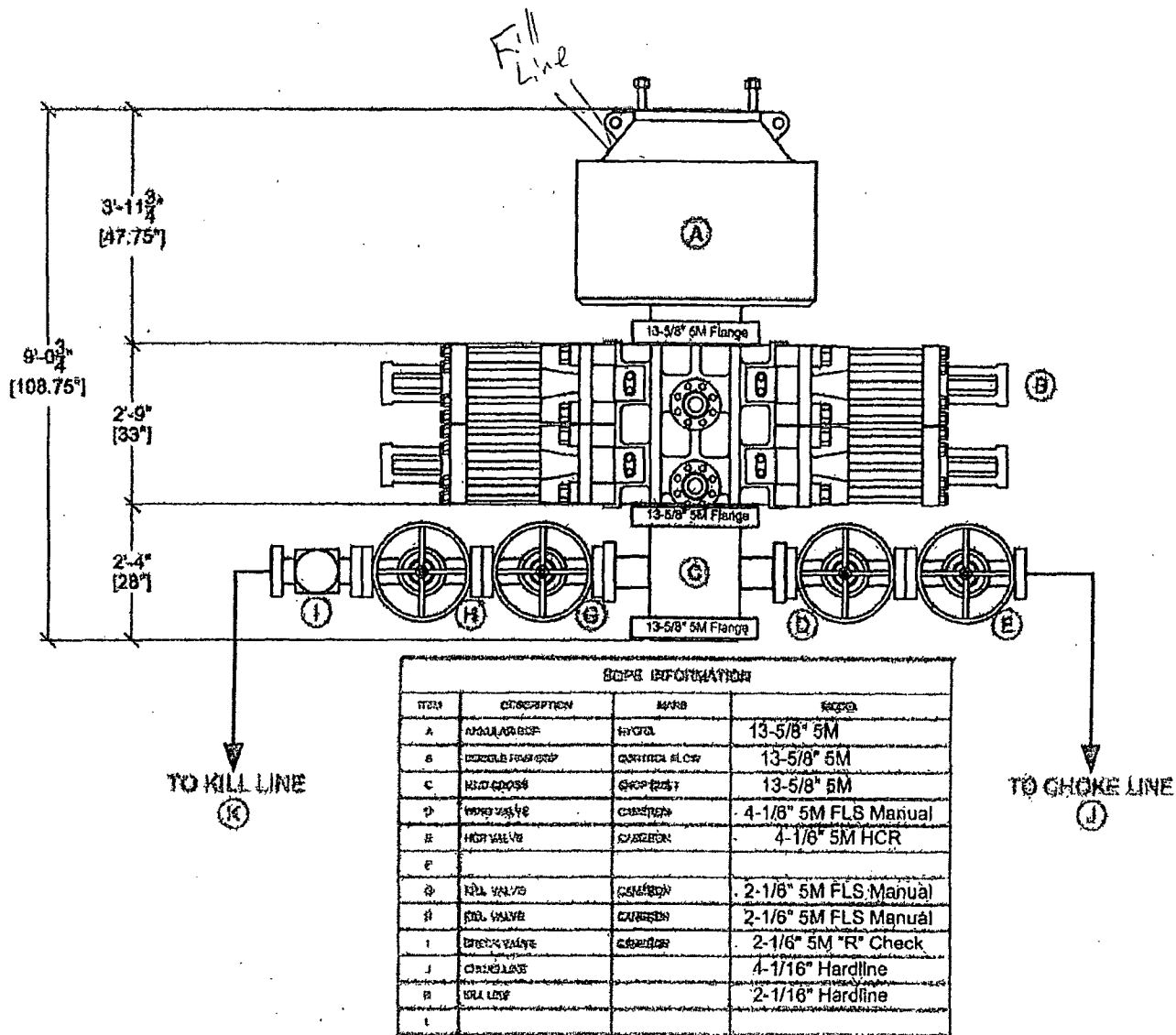
20" 2K Annular



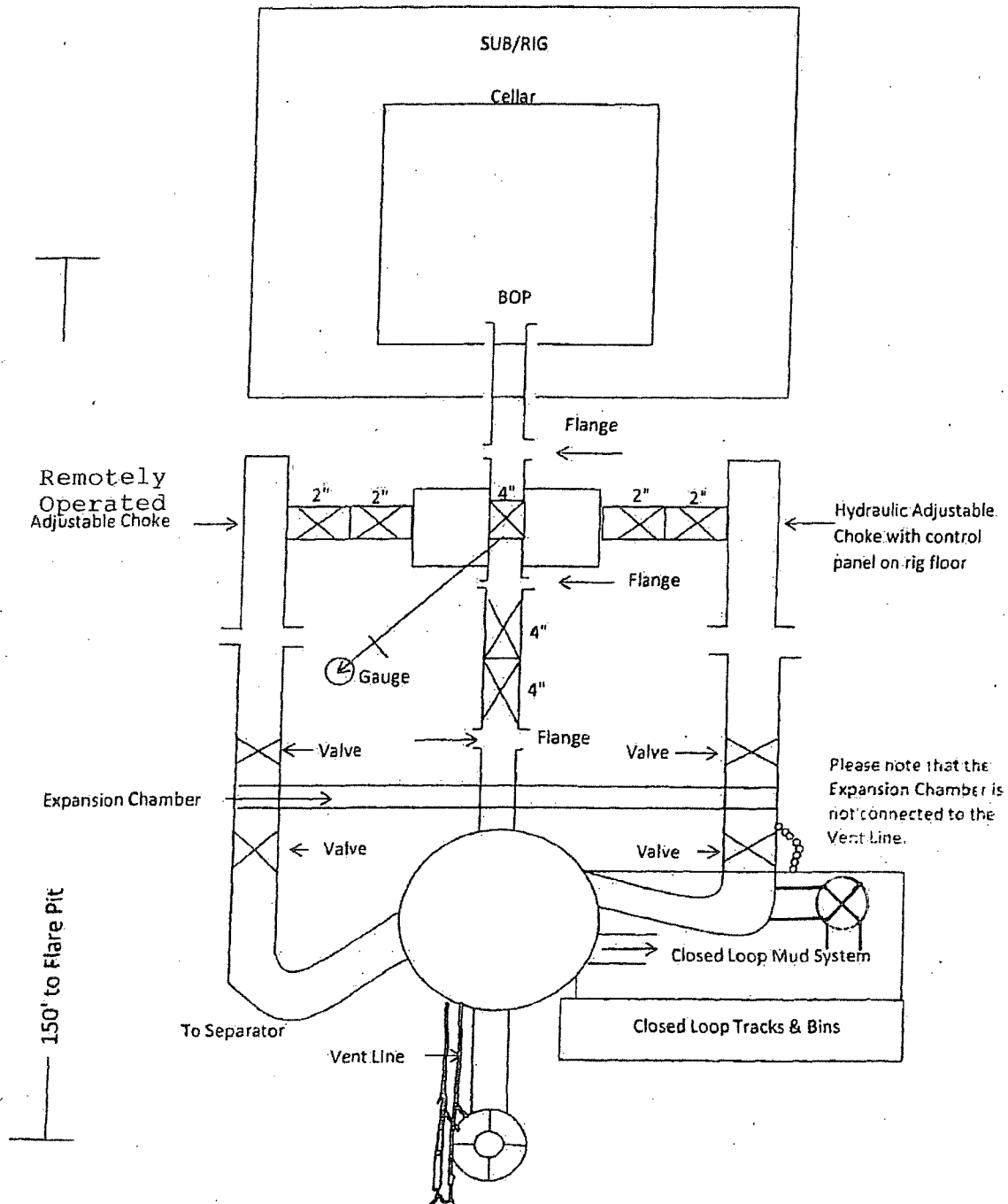
BC Operating, Inc.
Exhibit 1

2,000 psi BOP Schematic





3M Choke Manifold Equipment





QUALITY CONTROL	No.: QC-DB- 89 / 2011
	Page : 1 / 54
Hose No.: 60313, 60314, 60315, 60316	Revision : 0
	Date: 07. March 2011.
	Prepared by: <i>Madara</i>
	Appr. by: <i>Yacn</i>

CHOKE AND KILL HOSES

id.: 3" 68,9 MPa x (25 ft) 7,62 m 1 pc
x (45 ft) 13,72 m 3 pcs

DATA BOOK

Purchaser:

Purchaser Order No.:

ContiTech Rubber Order No.: 493934

ContiTech Beattie Co. Order No.: 004795

ASSET 66-0638, 66-0639, 66-0640, 66-0641

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 246	
PURCHASER: ContiTech Beattie Co.				P.O. N°: 004795	
CONTITECH ORDER N°: 493934		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 60313		NOMINAL / ACTUAL LENGTH: 7,62 m / 7,63 m			
W.P. 68,9 MPa 10000 psi		T.P. 103,4 MPa 15000 psi		Duration: 60 min.	
Pressure test with water at ambient temperature See attachment. (1 page) ↑ 10 mm = 10 Min. → 10 mm = 20 MPa					
COUPLINGS Type	Serial N°	Quality	Heat N°		
3" coupling with	324 320	AISI 4130	H0434		
4 1/16" Swivel Flange end		AISI 4130	31742		
Hub		AISI 4130	B2297A		
ASSET NO.: 66-0638			API Spec 16 C Temperature rate: "B"		
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.					
COUNTRY OF ORIGIN HUNGARY/EU					
Date:	Inspector	Quality Control			
01. March 2011.		ContiTech Rubber Industrial Kft. Quality Control Dept. 			

ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE

No: 246, 249

Page: 1 / 1

Back
ContiTech Rubber
Industrial Kft.
Quality Control Dept.
(1)

20	10	20	30	40	50	60	70	80	90	100
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99	10	20	30	40	50	60	70	80	90	100
100	10	20	30	40	50	60	70	80	90	100

CONTITECH RUBBER Industrial Kft.	No: QC-DB- 89 / 2011
	Page: 9 / 54



Hose Data Sheet

CRI Order No.	493934
Customer	ContiTech Beattie Co.
Customer Order No	PO4795, PBC10685
Item No.	3.
Hose Type	Flexible Hose
Standard	API SPEC 16 C
Inside dia in inches	3
Length	25 ft
Type of coupling one end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGEC/W BX155 ST/ST INLAID RING GR
Type of coupling other end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE C/W BX155 ST/ST INLAID RING GR
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St steel outer wrap
Internal stripwound tube	No
Lining	OIL RESISTANT
Safety clamp	Yes
Lifting collar	Yes
Element C	Yes
Safety chain	No
Safety wire rope	Yes
Max.design temperature [°C]	100
Min.design temperature [°C]	-20
MBR operating [m]	1,60
MBR storage [m]	1,40
Type of packing	WOODEN CRATE ISPM-15

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144 CLEZ
Revised August 1, 2011

For closed-loop systems that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, submit to the appropriate NMOCD District Office.

Closed-Loop System Permit or Closure Plan Application

(that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

Type of action: ☒ Permit ☐ Closure

Instructions: Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1. Operator: BC Operating, Inc. OGRID #: 160825
Address: P.O. Box 50820 Midland, Texas 79710
Facility or well name: Battle 34 Federal #3H
API Number: _____ OCD Permit Number: _____
U/L or Qtr/Qtr N Section 27 Township 21S Range 33E County: Lea
Center of Proposed Design: Latitude _____ Longitude _____ NAD: ☐ 1927 ☐ 1983
Surface Owner: ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

2. ☒ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
Operation: ☒ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) ☐ P&A
☐ Above Ground Steel Tanks or ☒ Haul-off Bins

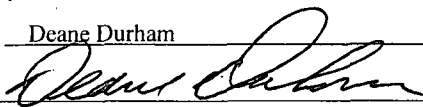
3. **Signs:** Subsection C of 19.15.17.11 NMAC
☒ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
☐ Signed in compliance with 19.15.16.8 NMAC

4. **Closed-loop Systems Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.
☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ Closure Plan (Please complete Box 5) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
☒ Previously Approved Design (attach copy of design) API Number: 30-025-40235
☒ Previously Approved Operating and Maintenance Plan API Number: 30-025-40235

5. **Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)
Instructions: Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name: R360 Disposal Facility Permit Number: NM-01-0006
Disposal Facility Name: _____ Disposal Facility Permit Number: _____
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future service and operations?
☐ Yes (If yes, please provide the information below) ☒ No

Required for impacted areas which will not be used for future service and operations:
☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

6. **Operator Application Certification:**
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Name (Print): Deane Durham Title: Drilling Engineer
Signature:  Date: 07/29/2014
e-mail address ddurham@bcoperating.com Telephone: 432-684-9696

7. **OCD Approval:** ☐ Permit Application (including closure plan) ☐ Closure Plan (only)

OCD Representative Signature: _____ **Approval Date:** _____

Title: _____ **OCD Permit Number:** _____

8. **Closure Report (required within 60 days of closure completion):** Subsection K of 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ **Closure Completion Date:** _____

9. **Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**

Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: _____ **Disposal Facility Permit Number:** _____

Disposal Facility Name: _____ **Disposal Facility Permit Number:** _____

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

- ☐ Site Reclamation (Photo Documentation)
- ☐ Soil Backfilling and Cover Installation
- ☐ Re-vegetation Application Rates and Seeding Technique

10. **Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): _____ **Title:** _____

Signature: _____ **Date:** _____

e-mail address: _____ **Telephone:** _____

BC Operating, Inc. Closed Loop System

Design Plan

Equipment List

- 2 – 414 MI Swaco *Centrifuges*
- 2 – MI Swaco 4 screen *Moongoose Shale Shakers*
- 2 – double screen *Shakers* with rig inventory
- 2 – CRI *Haul off bins* with track system
- 2 – additional 500bbl *Frac tanks* for fresh and brine water
- 2 – 500bbl *water tanks* with rig inventory

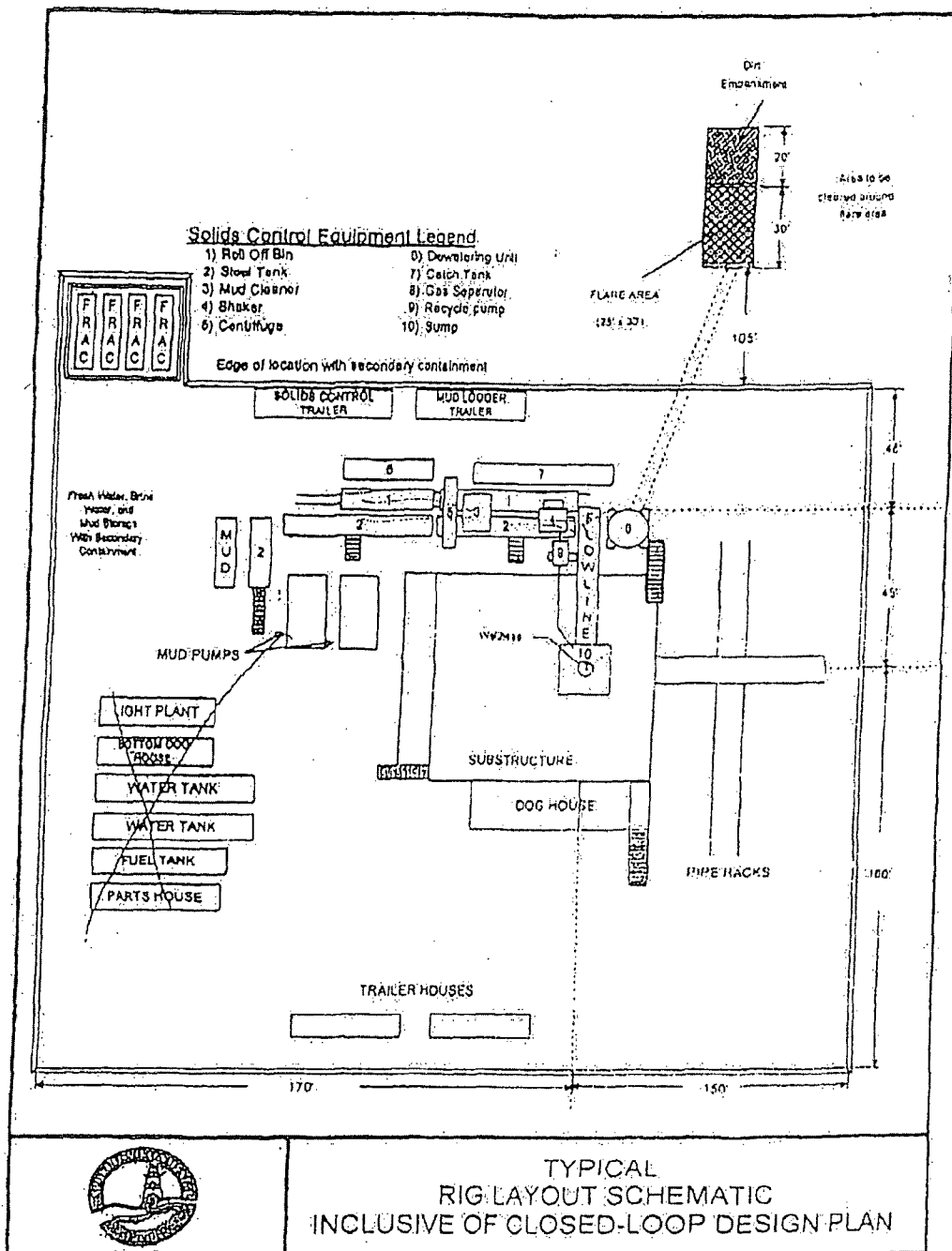
**Equipment manufactures may vary due to availability but components will not.*

Operation and Maintenance

The system along with equipment will be inspected numerous times a day by each tour to make sure all equipment is operating correctly. Routine maintenance will be done to keep system running properly. Any leak in system will be repaired and/or contained immediately and the OCD notified within 48 hours of the remediation process start.

Closure Plan

While drilling, all cuttings and fluids associated with drilling will be hauled off and disposed of via Controlled Recovery Incorporated Facilities Permit NM01-0006.



TYPICAL
RIG LAYOUT SCHEMATIC
INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Serial Number
NMNM 132068

OFFER TO LEASE AND LEASE FOR OIL AND GAS

The undersigned (page 2) offers to lease all or any of the lands in item 2 that are available for lease pursuant to the Mineral Lands Leasing Act of 1920, as amended and supplemented (30 U.S.C. 181 et seq.), the Mineral Leasing Act for Acquired Lands of 1947, as amended (30 U.S.C. 351-359), the Attorney General's Opinion of April 2, 1941 (40 Op. Atty. Gen 41), or the Combined Hydrocarbon Leasing Act of 1981 (95 Stat 1070).

READ INSTRUCTIONS BEFORE COMPLETING

1. Name CROWN OIL PARTNERS V LP
Street PO BOX 50820
City, State, Zip Code MIDLAND, TX 79710

2. This application/offer/lease is for: (Check Only One) ☒ PUBLIC DOMAIN LANDS ☐ ACQUIRED LANDS (percent U.S. interest _____)

Surface managing agency if other than Bureau of Land Management (BLM): _____ Unit/Project _____

Legal description of land requested: *Parcel No.: _____ *Sale Date (mm/dd/yyyy): _____

***See Item 2 in Instructions below prior to completing Parcel Number and Sale Date.**

T. _____ R. _____ Meridian _____ State _____ County _____

Amount remitted: Filing fee \$ _____ Rental fee \$ _____ Total acres applied for _____
Total \$ _____

DO NOT WRITE BELOW THIS LINE

3. Land included in lease:

T. 0210S R. 0330E Meridian NMPM State NM County Lea
Sec. 034 W2;

Total acres in lease 320.00
Rental retained \$ 480.00

This lease is issued granting the exclusive right to drill for, mine, extract, remove and dispose of all the oil and gas (except helium) in the lands described in Item 3 together with the right to build and maintain necessary improvements thereupon for the term indicated below, subject to renewal or extension in accordance with the appropriate leasing authority. Rights granted are subject to applicable laws, the terms, conditions, and attached stipulations of this lease, the Secretary of the Interior's regulations and formal orders in effect as of lease issuance, and to regulations and formal orders hereafter promulgated when not inconsistent with lease rights granted or specific provisions of this lease.

NOTE: This lease is issued to the high bidder pursuant to his/her duly executed bid form submitted under 43 CFR 3120 and is subject to the provisions of that bid and those specified on this form.

Type and primary term:

☐ Noncompetitive lease (ten years)

☒ Competitive lease (ten years)

☐ Other _____

THE UNITED STATES OF AMERICA

by Lourdes B. Ortiz
(BLM)

LAND LAW EXAMINER, FLUIDS ADJUDICATION TEAM

(Title)

MAY 16 2014

(Date)

EFFECTIVE DATE OF LEASE

JUN 01 2014

BC PERATING, INC.

P.O. Box 50820
Midland, Texas 79710

4000 N. Big Spring Street, Suite 310
Midland, Texas 79705
(432) 684-9696
Fax (432) 686-0600

July 29, 2014

Bureau of Land Management
620 E. Greene St.
Carlsbad, NM 88220

RE: Surface Use Agreement
Battle 34 Federal #3H & #4H

To Whom It May Be Concerned:

BC Operating, Inc., as Operator for Crown Oil Partners V, LP and Crump Energy Partners II, LLC, hereinafter referred to as "BC", has acquired a private surface use agreement from The Merchant Livestock Co., Inc., hereinafter referred to as "Merchant", whose address is P.O. Box 1105, Eunice, NM 88231. This agreement covers all of Merchant's land, including, but not limited to, the proposed surface locations of the Battle 34 Federal #3H and Battle 34 Federal #4H.

The SHL for the Battle 34 Federal #3H is 64' FSL & 2280' FWL, Section 27, T21S-R33E, NMPM, Lea County, New Mexico.

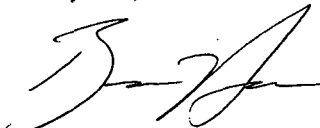
The SHL for the Battle 34 Federal #4H is 191' FSL & 960' FWL, Section 27, T21S-R33E, NMPM, Lea County, New Mexico.

The agreement allows the Operator, BC, to build roads, locations, facilities, and any other modifications needed in order to conduct drilling and subsequent operations on the lands. The agreement shall terminate only when the Oil and Gas Lease(s) terminate, the Operator ceases its operations on the Land, or upon Operator's notification to Merchant of Operator's intention to cease operations.

The Agreement is effective as of the 12th day of June, 2014.

Should you require any further information, please do not hesitate to contact the undersigned.

All my best,



Brian Hall
Landman