Form 3160-5
(August 2007)

HOBBS OCD

AUG 2 2 2016

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

Carlsbad Field Office
OCD Hobbs

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
6. If Indian, Allottee or Tribe Name
7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other	8. Well Name and No. MESA 8105 JV-P 22H
2. Name of Operator BTA OIL PRODUCERS Contact: KAYLA MCCONNELL E-Mail: kmcconnell@btaoil.com	9. API Well No. 30-025-42857-00-X1
3a. Address 104 SOUTH PECOS STREET MIDLAND, TX 79701 3b. Phone No. (include area code) Ph: 432.682.3753	10. Field and Pool, or Exploratory JENNINGS-UPPER BONE SPRING SH
4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)* Sec 11 T26S R32E NENE 330FNL ~~300~~FEL 660	11. County or Parish, and State LEA COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original A PD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

BTA Oil Producers, LLC respectfully requests approval for the following changes to the original approved APD.

Original: 16234' MD 11635' TVD
Change to: 14542' MD 9657' TVD

Original: WC-025 G-08 5253235G;LWR BS
Change to: JENNINGS;UPPER BONE SPRING SHALE

Original: 5M BOP & Choke Manifold
Change to: 3M BOP & Choke Manifold

SEE ATTACHED FOR CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #347756 verified by the BLM Well Information System
For BTA OIL PRODUCERS, sent to the Hobbs
Committed to AFMSS for processing by MUSTAFA HAQUE on 08/16/2016 (16MH0016SE)

Name *(Printed/Typed)* KAYLA MCCONNELL	Title PRODUCTION ASSISTANT
Signature (Electronic Submission)	Date 08/12/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ~~(BLM Approver Not Specified)~~ Mustafa Haque	Title PETROLEUM ENGINEER	Date 08/18/2016
Conditions of approval, if any, are attached. Approval of this notice 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.	Office Hobbs	

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

MJB/OCD 11/16/2016

Additional data for EC transaction #347756 that would not fit on the form

32. Additional remarks, continued

See attached:
Amended Drilling Plan
Revised Directional Well Plan Report
3M BOP & Choke Manifold

A variance is also requested for the following items below:

Choke Hose
-See attached for test chart and specs.

Multi Bowl Wellhead
-Wellhead will be installed on a 13-3/8" casing and tested to onshore order #2.
-See attached Schematic

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**BTA Oil Producers, LLC**
LEASE NO.:	**NMNM-14492**
WELL NAME & NO.:	**Mesa 8105 JV-P 22H**
SURFACE HOLE FOOTAGE:	**0330' FNL & 0600' FEL**
BOTTOM HOLE FOOTAGE	**0230' FSL & 0970' FEL**
LOCATION:	**Section 11, T. 26 S., R 32 E., NMPM**
COUNTY:	**Lea County, New Mexico**

A. CASING

All previous COAs still apply except the following:

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. 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.). The initial wellhead installed on the well will remain on the well with spools used as needed.

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

Wait on cement (WOC) for Water Basin:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. 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.

Medium Cave/Karst
Possible water flows in the Salado and Castile.
Possible lost circulation in the Red Beds, Rustler, and Delaware.
Abnormal pressures may be encountered when penetrating the 3rd Bone Spring Sandstone and all subsequent formations.

1. The **13-3/8** inch surface casing shall be set at approximately **780** feet (**in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt**) and cemented to the surface.

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

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

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

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

Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

   ☒ Cement to surface. If cement does not circulate see A.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

If cement does not circulate to surface on the intermediate casing, the cement on the production casing must come to surface.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

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

   ☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

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.

B. 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. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to

be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.**

    a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
    b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
    c. **Manufacturer representative shall install the test plug for the initial BOP test.**
    d. **Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.**
    e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**

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

    a. In a water basin, 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. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

    c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2

hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

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

e. 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.**

f. 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. This test shall be performed prior to the test at full stack pressure.

MHH08182016

1. Geologic Formations

TVD of target	9491'	Pilot hole depth	N/A
MD at TD:	14542'	Deepest expected fresh water:	175

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	692'	Water	
Top of Salt	1247'	Salt	
Base of Salt	4392'	Salt	
Delaware	4672'	Oil/Gas	
Cherry Canyon	5901'	Oil/Gas	
Brushy Canyon	7331'	Oil/Gas	
Bone Spring	8890'	Oil/Gas	
Upper Avalon	8915'	Oil/Gas	
Lower Avalon	9491'	Oil/Gas	

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

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg.Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17.5"	0	780'	13.375"	54.5	J55	STC	1.43	1.26	2.59
12.25"	0	4635'	9.625"	40	J55	LTC	1.19	1.89	2.1
8.75"	0	9657'	5.5"	17	P110	LTC	1.56	1.6	2.63
7.875"	9657'	14542'	5.5"	17	P110	LTC	1.56	1.6	1.91
			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

	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.	N
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?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	N/A
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-P?	Y
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	Y
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	N/A
Is 2nd string set 100' to 600' below the base of salt?	N/A
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	N/A
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	N/A
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	N/A

3. Cementing Program

Casing	#Sks	Wt. lb/ Gal	Yld ft3/ sack	H_20 gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	570	13.5	1.75	8	10	Lead: Class C
	200	14.8	1.34	8	8	Tail: Class C, circ to surf, 100% excess
Inter.	950	12.7	1.94	8	15	1st stage Lead: Class C Blend
	250	14.8	1.33	8	10	1st stage Tail: Class C, circ to surf, 65% excess
Prod.	1000	11.3	2.92	8	14	1stLead: 50:50 Blend Class H
	950	14.4	1.22	8	10	1stTail: 50:50 Blend Class H

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. 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	0'	65%
Production	4135'	20%

Include Pilot Hole Cementing specs:
Pilot hole depth N/A
KOP 9076

Plug top	Plug Bottom	% Excess	No. Sacks	Wt. lb/gal	Yld ft3/sack	Water gal/sk	Slurry Description and Cement Type

4. Pressure Control Equipment

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

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

The 13-5/8" blowout preventer equipment (BOP) shown in exhibit A will consist of a (3M system) double ram type (3000 psi WP) preventer and a bag type (Hydril) preventer (3000 psi WP). Will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and 4-1/2" drill pipe rams on bottom. The BOP's will be installed don the 13-3/8" casing and utilized continuously until TD is reached. All BOP's and associated equipment will be tested as per BLM drilling operations order No 2.

Pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having a 3000 psi WP rating.

*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.

X	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.
	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 /N 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. • N/A See attached schematic.

SEE COA

SEE COA

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	~~716~~ 780'	FW Spud	8.5-8.8	35-45	N/C
~~716~~	4635	Saturated Brine	10.0-10.2	28-34	N/C
4635	TD	Cut Brine	8.6-9.2	28-34	N/C

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.	
X	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.
X	Drill stem test? If yes, explain – will be run based on geological sample shows
	Coring? If yes, explain

Additional logs planned		Interval
	Resistivity	
	Density	
	CBL	
X	Mud log	Intermediate shoe to TD
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	5400 psi
Abnormal Temperature	Yes/No

Mitigation measure for abnormal conditions. Describe. No abnormal pressures or temperatures are anticipated. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well.

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
X	H2S Plan attached

8. Other facets of operation

Is this a walking operation? If yes, describe.
Will be pre-setting casing? If yes, describe.

Attachments
_x_ Directional Plan
___ Other, describe

Azimuths to Grid North
True North: -0.37°
Magnetic North: 6.81°

Magnetic Field
Strength: 48220.3snT
Dip Angle: 59.97°
Date: 11/24/2014
Model: IGRF200510

WELL DETAILS: 8105 JV-P Mesa #22H

Ground Level: 3257.0

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.0	0.0	387692.20	715263.80	32° 3' 50.314 N	103° 38' 18.408 W

BTA Oil Producers, LLC

SITE DETAILS: Mesa Sec 11, T26S, R32E

Site Centre Northing: 387664.40
Easting: 710948.70

Positional Uncertainity: 0.0
Convergence: 0.36
Local North: Grid

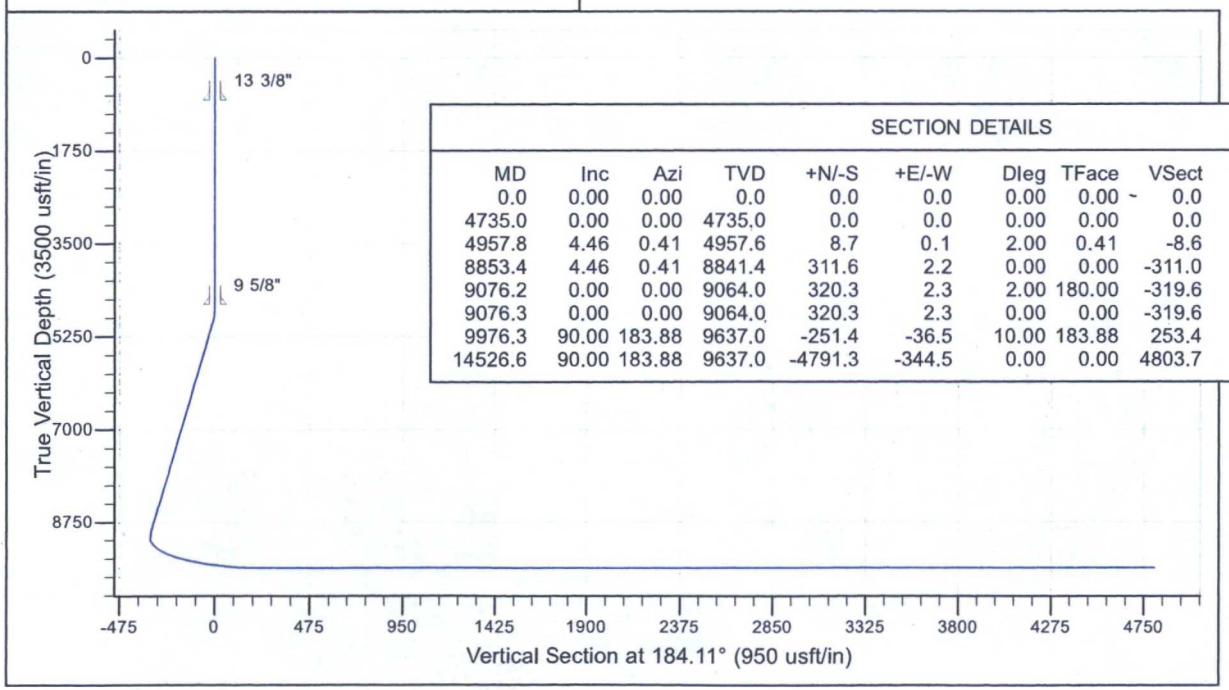
PROJECT DETAILS: Lea County, NM

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001

System Datum: Ground Level

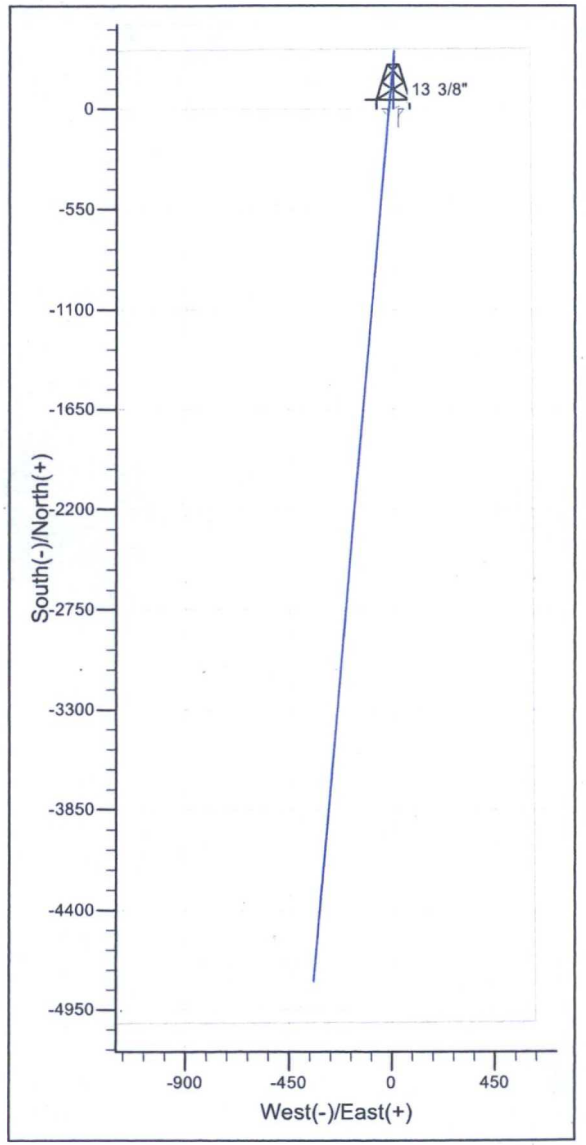
CASING DETAILS

TVD	MD	Name	Size
780.0	780.0	13 3/8"	13-3/8
4635.0	4635.0	9 5/8"	9-5/8



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
4735.0	0.00	0.00	4735.0	0.0	0.0	0.00	0.00	0.0
4957.8	4.46	0.41	4957.6	8.7	0.1	2.00	0.41	-8.6
8853.4	4.46	0.41	8841.4	311.6	2.2	0.00	0.00	-311.0
9076.2	0.00	0.00	9064.0	320.3	2.3	2.00	180.00	-319.6
9076.3	0.00	0.00	9064.0	320.3	2.3	0.00	0.00	-319.6
9976.3	90.00	183.88	9637.0	-251.4	-36.5	10.00	183.88	253.4
14526.6	90.00	183.88	9637.0	-4791.3	-344.5	0.00	0.00	4803.7



BTA Oil Producers, LLC

Lea County, NM
Mesa Sec 11, T26S, R32E
8105 JV-P Mesa #22H

Wellbore #1

Plan: Design #1

Standard Planning Report - Geographic

18 August, 2016

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 8105 JV-P Mesa #22H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	KB @ 3282.0usft (Nomac 94)
Project:	Lea County, NM	**MD Reference:**	KB @ 3282.0usft (Nomac 94)
Site:	Mesa Sec 11, T26S, R32E	**North Reference:**	Grid
Well:	8105 JV-P Mesa #22H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Lea County, NM, Lea County, NM		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Ground Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		Using geodetic scale factor

Site	Mesa Sec 11, T26S, R32E				
Site Position:		**Northing:**	387,664.40 usft	**Latitude:**	32° 3' 50.311 N
From:	Map	**Easting:**	710,948.70 usft	**Longitude:**	103° 39' 8.553 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.36 °

Well	8105 JV-P Mesa #22H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	387,692.20 usft	**Latitude:**	32° 3' 50.314 N
	+E/-W	0.0 usft	**Easting:**	715,263.80 usft	**Longitude:**	103° 38' 18.408 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,257.0 usft

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	11/24/2014	7.18	59.97	48,220

Design	Design #1				
Audit Notes:					
Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**
	0.0	0.0	0.0	184.11

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,735.0	0.00	0.01	4,735.0	0.0	0.0	0.00	0.00	0.00	0.01	
4,957.8	4.46	0.41	4,957.6	8.7	0.1	2.00	2.00	0.00	0.41	
8,853.4	4.46	0.41	8,841.4	311.6	2.2	0.00	0.00	0.00	0.00	
9,076.2	0.00	0.00	9,064.0	320.3	2.3	2.00	-2.00	0.00	180.00	
9,076.3	0.00	0.00	9,064.0	320.3	2.3	0.00	0.00	0.00	0.00	
9,976.3	90.00	183.88	9,637.0	-251.4	-36.5	10.00	10.00	0.00	183.88	
14,526.6	90.00	183.88	9,637.0	-4,791.3	-344.5	0.00	0.00	0.00	0.00	Mesa #22H BHL

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 8105 JV-P Mesa #22H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	KB @ 3282.0usft (Nomac 94)
Project:	Lea County, NM	**MD Reference:**	KB @ 3282.0usft (Nomac 94)
Site:	Mesa Sec 11, T26S, R32E	**North Reference:**	Grid
Well:	8105 JV-P Mesa #22H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
100.0	0.00	0.00	100.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
200.0	0.00	0.00	200.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
300.0	0.00	0.00	300.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
400.0	0.00	0.00	400.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
500.0	0.00	0.00	500.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
600.0	0.00	0.00	600.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
700.0	0.00	0.00	700.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
780.0	0.00	0.00	780.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
13 3/8"									
800.0	0.00	0.00	800.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
900.0	0.00	0.00	900.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
1,100.0	0.00	0.00	1,100.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
1,200.0	0.00	0.00	1,200.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
1,700.0	0.00	0.00	1,700.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
1,900.0	0.00	0.00	1,900.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
2,000.0	0.00	0.00	2,000.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
2,100.0	0.00	0.00	2,100.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
2,200.0	0.00	0.00	2,200.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
2,300.0	0.00	0.00	2,300.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
2,400.0	0.00	0.00	2,400.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
2,500.0	0.00	0.00	2,500.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
2,600.0	0.00	0.00	2,600.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
2,700.0	0.00	0.00	2,700.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
2,800.0	0.00	0.00	2,800.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
2,900.0	0.00	0.00	2,900.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
3,000.0	0.00	0.00	3,000.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
3,100.0	0.00	0.00	3,100.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
3,200.0	0.00	0.00	3,200.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
3,300.0	0.00	0.00	3,300.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
3,400.0	0.00	0.00	3,400.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
3,500.0	0.00	0.00	3,500.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
3,600.0	0.00	0.00	3,600.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
3,700.0	0.00	0.00	3,700.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
3,800.0	0.00	0.00	3,800.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
3,900.0	0.00	0.00	3,900.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
4,000.0	0.00	0.00	4,000.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
4,100.0	0.00	0.00	4,100.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
4,200.0	0.00	0.00	4,200.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
4,300.0	0.00	0.00	4,300.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
4,400.0	0.00	0.00	4,400.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
4,500.0	0.00	0.00	4,500.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
4,600.0	0.00	0.00	4,600.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
4,635.0	0.00	0.00	4,635.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
9 5/8"									
4,700.0	0.00	0.00	4,700.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
4,735.0	0.00	0.01	4,735.0	0.0	0.0	387,692.20	715,263.80	32° 3' 50.314 N	103° 38' 18.408 W
4,800.0	1.30	0.41	4,800.0	0.7	0.0	387,692.94	715,263.80	32° 3' 50.321 N	103° 38' 18.408 W

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 8105 JV-P Mesa #22H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	KB @ 3282.0usft (Nomac 94)
Project:	Lea County, NM	**MD Reference:**	KB @ 3282.0usft (Nomac 94)
Site:	Mesa Sec 11, T26S, R32E	**North Reference:**	Grid
Well:	8105 JV-P Mesa #22H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,900.0	3.30	0.41	4,899.9	4.8	0.0	387,696.95	715,263.83	32° 3' 50.361 N	103° 38' 18.407 W
4,957.8	4.46	0.41	4,957.6	8.7	0.1	387,700.87	715,263.86	32° 3' 50.400 N	103° 38' 18.407 W
5,000.0	4.46	0.41	4,999.6	11.9	0.1	387,704.15	715,263.88	32° 3' 50.432 N	103° 38' 18.406 W
5,100.0	4.46	0.41	5,099.3	19.7	0.1	387,711.92	715,263.94	32° 3' 50.509 N	103° 38' 18.405 W
5,200.0	4.46	0.41	5,199.0	27.5	0.2	387,719.70	715,263.99	32° 3' 50.586 N	103° 38' 18.404 W
5,300.0	4.46	0.41	5,298.7	35.3	0.3	387,727.47	715,264.05	32° 3' 50.663 N	103° 38' 18.402 W
5,400.0	4.46	0.41	5,398.4	43.1	0.3	387,735.25	715,264.10	32° 3' 50.740 N	103° 38' 18.401 W
5,500.0	4.46	0.41	5,498.1	50.8	0.4	387,743.03	715,264.16	32° 3' 50.817 N	103° 38' 18.400 W
5,600.0	4.46	0.41	5,597.8	58.6	0.4	387,750.80	715,264.22	32° 3' 50.894 N	103° 38' 18.399 W
5,700.0	4.46	0.41	5,697.5	66.4	0.5	387,758.58	715,264.27	32° 3' 50.971 N	103° 38' 18.397 W
5,800.0	4.46	0.41	5,797.2	74.2	0.5	387,766.35	715,264.33	32° 3' 51.048 N	103° 38' 18.396 W
5,900.0	4.46	0.41	5,896.9	81.9	0.6	387,774.13	715,264.38	32° 3' 51.125 N	103° 38' 18.395 W
6,000.0	4.46	0.41	5,996.6	89.7	0.6	387,781.90	715,264.44	32° 3' 51.202 N	103° 38' 18.394 W
6,100.0	4.46	0.41	6,096.3	97.5	0.7	387,789.68	715,264.49	32° 3' 51.279 N	103° 38' 18.392 W
6,200.0	4.46	0.41	6,196.0	105.3	0.8	387,797.46	715,264.55	32° 3' 51.356 N	103° 38' 18.391 W
6,300.0	4.46	0.41	6,295.7	113.0	0.8	387,805.23	715,264.60	32° 3' 51.433 N	103° 38' 18.390 W
6,400.0	4.46	0.41	6,395.4	120.8	0.9	387,813.01	715,264.66	32° 3' 51.509 N	103° 38' 18.389 W
6,500.0	4.46	0.41	6,495.1	128.6	0.9	387,820.78	715,264.72	32° 3' 51.586 N	103° 38' 18.388 W
6,600.0	4.46	0.41	6,594.8	136.4	1.0	387,828.56	715,264.77	32° 3' 51.663 N	103° 38' 18.386 W
6,700.0	4.46	0.41	6,694.5	144.1	1.0	387,836.34	715,264.83	32° 3' 51.740 N	103° 38' 18.385 W
6,800.0	4.46	0.41	6,794.2	151.9	1.1	387,844.11	715,264.88	32° 3' 51.817 N	103° 38' 18.384 W
6,900.0	4.46	0.41	6,893.9	159.7	1.1	387,851.89	715,264.94	32° 3' 51.894 N	103° 38' 18.383 W
7,000.0	4.46	0.41	6,993.6	167.5	1.2	387,859.66	715,264.99	32° 3' 51.971 N	103° 38' 18.381 W
7,100.0	4.46	0.41	7,093.3	175.2	1.3	387,867.44	715,265.05	32° 3' 52.048 N	103° 38' 18.380 W
7,200.0	4.46	0.41	7,193.0	183.0	1.3	387,875.21	715,265.11	32° 3' 52.125 N	103° 38' 18.379 W
7,300.0	4.46	0.41	7,292.7	190.8	1.4	387,882.99	715,265.16	32° 3' 52.202 N	103° 38' 18.378 W
7,400.0	4.46	0.41	7,392.4	198.6	1.4	387,890.77	715,265.22	32° 3' 52.279 N	103° 38' 18.377 W
7,500.0	4.46	0.41	7,492.1	206.4	1.5	387,898.54	715,265.27	32° 3' 52.356 N	103° 38' 18.375 W
7,600.0	4.46	0.41	7,591.8	214.1	1.5	387,906.32	715,265.33	32° 3' 52.433 N	103° 38' 18.374 W
7,700.0	4.46	0.41	7,691.5	221.9	1.6	387,914.09	715,265.38	32° 3' 52.510 N	103° 38' 18.373 W
7,800.0	4.46	0.41	7,791.2	229.7	1.6	387,921.87	715,265.44	32° 3' 52.587 N	103° 38' 18.372 W
7,900.0	4.46	0.41	7,890.9	237.5	1.7	387,929.65	715,265.50	32° 3' 52.664 N	103° 38' 18.370 W
8,000.0	4.46	0.41	7,990.6	245.2	1.8	387,937.42	715,265.55	32° 3' 52.741 N	103° 38' 18.369 W
8,100.0	4.46	0.41	8,090.3	253.0	1.8	387,945.20	715,265.61	32° 3' 52.818 N	103° 38' 18.368 W
8,200.0	4.46	0.41	8,190.0	260.8	1.9	387,952.97	715,265.66	32° 3' 52.895 N	103° 38' 18.367 W
8,300.0	4.46	0.41	8,289.7	268.6	1.9	387,960.75	715,265.72	32° 3' 52.971 N	103° 38' 18.365 W
8,400.0	4.46	0.41	8,389.4	276.3	2.0	387,968.52	715,265.77	32° 3' 53.048 N	103° 38' 18.364 W
8,500.0	4.46	0.41	8,489.0	284.1	2.0	387,976.30	715,265.83	32° 3' 53.125 N	103° 38' 18.363 W
8,600.0	4.46	0.41	8,588.7	291.9	2.1	387,984.08	715,265.88	32° 3' 53.202 N	103° 38' 18.362 W
8,700.0	4.46	0.41	8,688.4	299.7	2.1	387,991.85	715,265.94	32° 3' 53.279 N	103° 38' 18.361 W
8,800.0	4.46	0.41	8,788.1	307.4	2.2	387,999.63	715,266.00	32° 3' 53.356 N	103° 38' 18.359 W
8,853.4	4.46	0.41	8,841.4	311.6	2.2	388,003.78	715,266.03	32° 3' 53.397 N	103° 38' 18.359 W
8,900.0	3.53	0.41	8,887.9	314.8	2.3	388,007.03	715,266.05	32° 3' 53.429 N	103° 38' 18.358 W
9,000.0	1.53	0.41	8,987.8	319.2	2.3	388,011.43	715,266.08	32° 3' 53.473 N	103° 38' 18.357 W
9,076.2	0.00	0.00	9,064.0	320.3	2.3	388,012.45	715,266.09	32° 3' 53.483 N	103° 38' 18.357 W
9,076.3	0.00	0.00	9,064.0	320.3	2.3	388,012.45	715,266.09	32° 3' 53.483 N	103° 38' 18.357 W
9,100.0	2.37	183.88	9,087.7	319.8	2.3	388,011.96	715,266.05	32° 3' 53.478 N	103° 38' 18.358 W
9,200.0	12.37	183.88	9,186.8	307.0	1.4	387,999.17	715,265.19	32° 3' 53.352 N	103° 38' 18.369 W
9,300.0	22.37	183.88	9,282.1	277.2	-0.6	387,969.43	715,263.17	32° 3' 53.057 N	103° 38' 18.394 W
9,400.0	32.37	183.88	9,370.8	231.4	-3.7	387,923.62	715,260.06	32° 3' 52.604 N	103° 38' 18.434 W
9,500.0	42.37	183.88	9,450.2	170.9	-7.8	387,863.14	715,255.96	32° 3' 52.006 N	103° 38' 18.486 W
9,600.0	52.37	183.88	9,517.8	97.6	-12.8	387,789.83	715,250.98	32° 3' 51.281 N	103° 38' 18.549 W
9,700.0	62.37	183.88	9,571.7	13.7	-18.5	387,705.91	715,245.29	32° 3' 50.451 N	103° 38' 18.622 W
9,800.0	72.37	183.88	9,610.1	-78.3	-24.7	387,613.94	715,239.05	32° 3' 49.541 N	103° 38' 18.701 W
9,900.0	82.37	183.88	9,631.9	-175.5	-31.3	387,516.71	715,232.45	32° 3' 48.579 N	103° 38' 18.785 W

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 8105 JV-P Mesa #22H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	KB @ 3282.0usft (Nomac 94)
Project:	Lea County, NM	**MD Reference:**	KB @ 3282.0usft (Nomac 94)
Site:	Mesa Sec 11, T26S, R32E	**North Reference:**	Grid
Well:	8105 JV-P Mesa #22H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,976.3	90.00	183.88	9,637.0	-251.4	-36.5	387,440.82	715,227.30	32° 3' 47.829 N	103° 38' 18.851 W
10,000.0	90.00	183.88	9,637.0	-275.0	-38.1	387,417.17	715,225.70	32° 3' 47.595 N	103° 38' 18.871 W
10,100.0	90.00	183.88	9,637.0	-374.8	-44.9	387,317.40	715,218.93	32° 3' 46.608 N	103° 38' 18.957 W
10,200.0	90.00	183.88	9,637.0	-474.6	-51.6	387,217.63	715,212.16	32° 3' 45.621 N	103° 38' 19.043 W
10,300.0	90.00	183.88	9,637.0	-574.4	-58.4	387,117.87	715,205.39	32° 3' 44.634 N	103° 38' 19.130 W
10,400.0	90.00	183.88	9,637.0	-674.1	-65.2	387,018.10	715,198.62	32° 3' 43.647 N	103° 38' 19.216 W
10,500.0	90.00	183.88	9,637.0	-773.9	-71.9	386,918.33	715,191.85	32° 3' 42.661 N	103° 38' 19.302 W
10,600.0	90.00	183.88	9,637.0	-873.7	-78.7	386,818.57	715,185.09	32° 3' 41.674 N	103° 38' 19.388 W
10,700.0	90.00	183.88	9,637.0	-973.4	-85.5	386,718.80	715,178.32	32° 3' 40.687 N	103° 38' 19.474 W
10,800.0	90.00	183.88	9,637.0	-1,073.2	-92.3	386,619.03	715,171.55	32° 3' 39.700 N	103° 38' 19.560 W
10,900.0	90.00	183.88	9,637.0	-1,173.0	-99.0	386,519.27	715,164.78	32° 3' 38.713 N	103° 38' 19.646 W
11,000.0	90.00	183.88	9,637.0	-1,272.7	-105.8	386,419.50	715,158.01	32° 3' 37.726 N	103° 38' 19.732 W
11,100.0	90.00	183.88	9,637.0	-1,372.5	-112.6	386,319.73	715,151.24	32° 3' 36.739 N	103° 38' 19.818 W
11,200.0	90.00	183.88	9,637.0	-1,472.3	-119.3	386,219.97	715,144.47	32° 3' 35.753 N	103° 38' 19.905 W
11,300.0	90.00	183.88	9,637.0	-1,572.1	-126.1	386,120.20	715,137.70	32° 3' 34.766 N	103° 38' 19.991 W
11,400.0	90.00	183.88	9,637.0	-1,671.8	-132.9	386,020.43	715,130.93	32° 3' 33.779 N	103° 38' 20.077 W
11,500.0	90.00	183.88	9,637.0	-1,771.6	-139.6	385,920.67	715,124.17	32° 3' 32.792 N	103° 38' 20.163 W
11,600.0	90.00	183.88	9,637.0	-1,871.4	-146.4	385,820.90	715,117.40	32° 3' 31.805 N	103° 38' 20.249 W
11,700.0	90.00	183.88	9,637.0	-1,971.1	-153.2	385,721.13	715,110.63	32° 3' 30.818 N	103° 38' 20.335 W
11,800.0	90.00	183.88	9,637.0	-2,070.9	-159.9	385,621.37	715,103.86	32° 3' 29.831 N	103° 38' 20.421 W
11,900.0	90.00	183.88	9,637.0	-2,170.7	-166.7	385,521.60	715,097.09	32° 3' 28.845 N	103° 38' 20.507 W
12,000.0	90.00	183.88	9,637.0	-2,270.5	-173.5	385,421.83	715,090.32	32° 3' 27.858 N	103° 38' 20.593 W
12,100.0	90.00	183.88	9,637.0	-2,370.2	-180.3	385,322.06	715,083.55	32° 3' 26.871 N	103° 38' 20.680 W
12,200.0	90.00	183.88	9,637.0	-2,470.0	-187.0	385,222.30	715,076.78	32° 3' 25.884 N	103° 38' 20.766 W
12,300.0	90.00	183.88	9,637.0	-2,569.8	-193.8	385,122.53	715,070.01	32° 3' 24.897 N	103° 38' 20.852 W
12,400.0	90.00	183.88	9,637.0	-2,669.5	-200.6	385,022.76	715,063.25	32° 3' 23.910 N	103° 38' 20.938 W
12,500.0	90.00	183.88	9,637.0	-2,769.3	-207.3	384,923.00	715,056.48	32° 3' 22.923 N	103° 38' 21.024 W
12,600.0	90.00	183.88	9,637.0	-2,869.1	-214.1	384,823.23	715,049.71	32° 3' 21.937 N	103° 38' 21.110 W
12,700.0	90.00	183.88	9,637.0	-2,968.8	-220.9	384,723.46	715,042.94	32° 3' 20.950 N	103° 38' 21.196 W
12,800.0	90.00	183.88	9,637.0	-3,068.6	-227.6	384,623.70	715,036.17	32° 3' 19.963 N	103° 38' 21.282 W
12,900.0	90.00	183.88	9,637.0	-3,168.4	-234.4	384,523.93	715,029.40	32° 3' 18.976 N	103° 38' 21.368 W
13,000.0	90.00	183.88	9,637.0	-3,268.2	-241.2	384,424.16	715,022.63	32° 3' 17.989 N	103° 38' 21.454 W
13,100.0	90.00	183.88	9,637.0	-3,367.9	-247.9	384,324.40	715,015.86	32° 3' 17.002 N	103° 38' 21.541 W
13,200.0	90.00	183.88	9,637.0	-3,467.7	-254.7	384,224.63	715,009.09	32° 3' 16.015 N	103° 38' 21.627 W
13,300.0	90.00	183.88	9,637.0	-3,567.5	-261.5	384,124.86	715,002.33	32° 3' 15.029 N	103° 38' 21.713 W
13,400.0	90.00	183.88	9,637.0	-3,667.2	-268.2	384,025.10	714,995.56	32° 3' 14.042 N	103° 38' 21.799 W
13,500.0	90.00	183.88	9,637.0	-3,767.0	-275.0	383,925.33	714,988.79	32° 3' 13.055 N	103° 38' 21.885 W
13,600.0	90.00	183.88	9,637.0	-3,866.8	-281.8	383,825.56	714,982.02	32° 3' 12.068 N	103° 38' 21.971 W
13,700.0	90.00	183.88	9,637.0	-3,966.6	-288.6	383,725.79	714,975.25	32° 3' 11.081 N	103° 38' 22.057 W
13,800.0	90.00	183.88	9,637.0	-4,066.3	-295.3	383,626.03	714,968.48	32° 3' 10.094 N	103° 38' 22.143 W
13,900.0	90.00	183.88	9,637.0	-4,166.1	-302.1	383,526.26	714,961.71	32° 3' 9.107 N	103° 38' 22.229 W
14,000.0	90.00	183.88	9,637.0	-4,265.9	-308.9	383,426.49	714,954.94	32° 3' 8.121 N	103° 38' 22.315 W
14,100.0	90.00	183.88	9,637.0	-4,365.6	-315.6	383,326.73	714,948.17	32° 3' 7.134 N	103° 38' 22.402 W
14,200.0	90.00	183.88	9,637.0	-4,465.4	-322.4	383,226.96	714,941.40	32° 3' 6.147 N	103° 38' 22.488 W
14,300.0	90.00	183.88	9,637.0	-4,565.2	-329.2	383,127.19	714,934.64	32° 3' 5.160 N	103° 38' 22.574 W
14,400.0	90.00	183.88	9,637.0	-4,664.9	-335.9	383,027.43	714,927.87	32° 3' 4.173 N	103° 38' 22.660 W
14,500.0	90.00	183.88	9,637.0	-4,764.7	-342.7	382,927.66	714,921.10	32° 3' 3.186 N	103° 38' 22.746 W
14,526.6	90.00	183.88	9,637.0	-4,791.3	-344.5	382,901.10	714,919.30	32° 3' 2.924 N	103° 38' 22.769 W

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 8105 JV-P Mesa #22H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	KB @ 3282.0usft (Nomac 94)
Project:	Lea County, NM	**MD Reference:**	KB @ 3282.0usft (Nomac 94)
Site:	Mesa Sec 11, T26S, R32E	**North Reference:**	Grid
Well:	8105 JV-P Mesa #22H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Mesa #22H BHL - plan hits target center - Point	0.00	0.00	9,637.0	-4,791.3	-344.5	382,901.10	714,919.30	32° 3' 2.924 N	103° 38' 22.769 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
780.0	780.0	13 3/8"	13-3/8	17-1/2
4,635.0	4,635.0	9 5/8"	9-5/8	12-1/4

Continental

ContiTech

CONTITECH RUBBER Industrial Kft.	No:QC-DB- 599/ 2014
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Rig 94 Asset 24455

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°:	1592
PURCHASER:	ContiTech Oil & Marine Corp.			P.O. N°:	4500461753
CONTITECH ORDER N°:	539225	HOSE TYPE:	3" ID	Choke & Kill Hose	
HOSE SERIAL N°:	68547	NOMINAL / ACTUAL LENGTH:		7,62 m / 7,66 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 Min.

↑ 50 MPa

COUPLINGS Type	Serial N°		Quality	Heat N°	
3" coupling with	2574	5533	AISI 4130	A1582N	H8672
4 1/16" 10K API Swivel Flange end			AISI 4130	58855	
Hub			AISI 4130	A1199N	A1423N

Not Designed For Well Testing **API Spec 16 C**

Fire Rated **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.

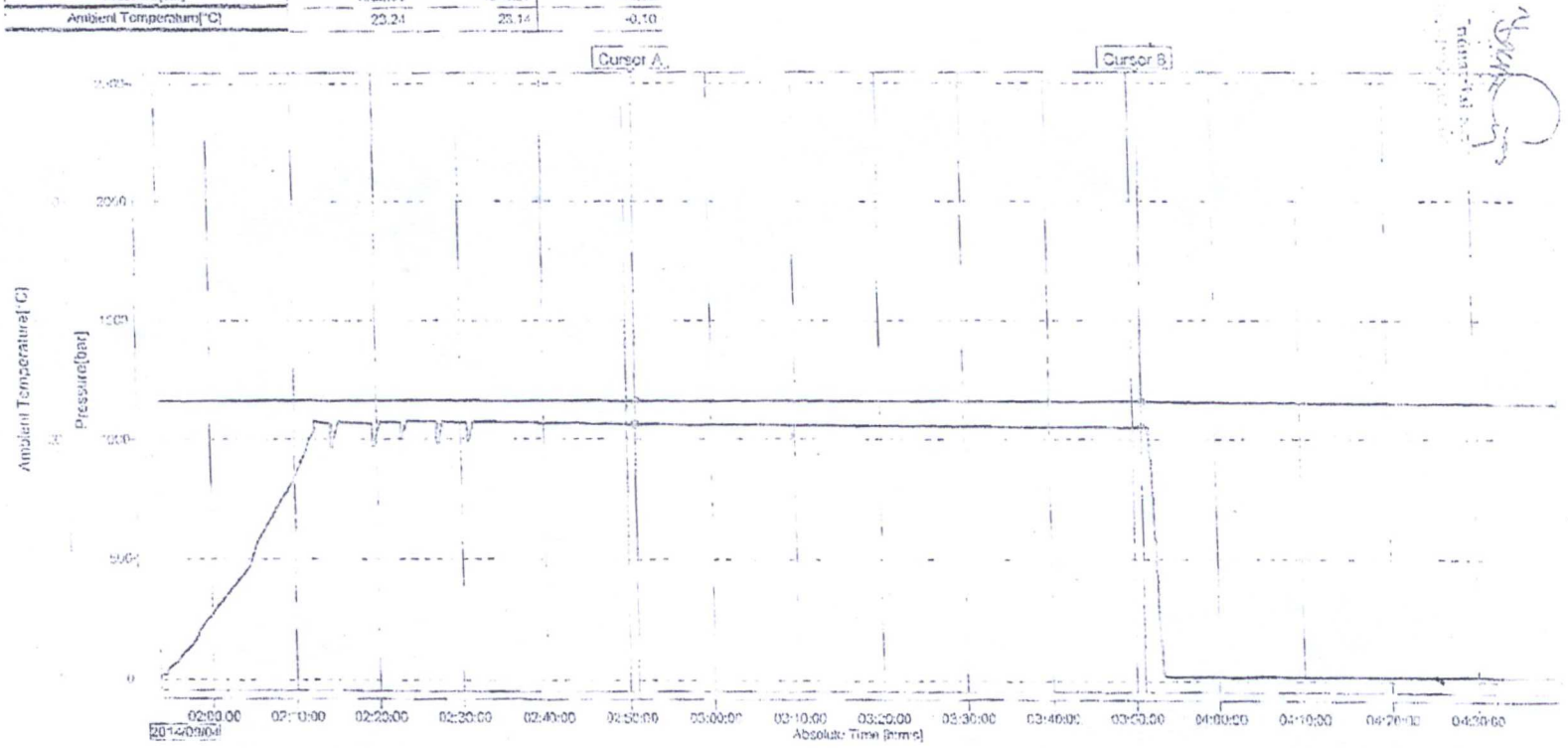
Date:	Inspector	Quality Control
04. September 2014.		ContiTech Rubber Industrial Kft. Quality Control Dept. [signature]

ContiTech Rubber Industrial Kft. | Budapesti út 10. H-6728 Szeged | H-6701 P.O.Box 152 Szeged, Hungary
Phone: +36 62 566 737 | Fax: +36 62 566 738 | e-mail: info@fluid.contitech.hu | Internet: www.contitech-rubber.hu; www.contitech.hu
The Court of Csongrád County as Registry Court | Registry Court No: Cg 06-09-002502 | EU VAT No: HU11087209
Bank data Commerzbank Zrt., Budapest | 14220108-26830003

File Name	: 000220_68543,68545+547.GEV,....,000236_68543,68545+547.GEV
File Message	68543,68545,68547
Device Type	: GX10
Serial No.	: S5P606389
Data Count	: 9046
Print Group	Press-Temp
Print Range	: 2014/09/04 01:53:54.000 - 2014/09/04 04:39:39.000
Comment	

Sampling Int.	1.000 sec
Start Time	2014/09/04 01:53:54.000
Stop Time	2014/09/04 04:39:39.000

	Cursor A	Cursor B	Difference
Data No.	3432	7032	3600
Absolute Time	2014/09/04 02:51:06.000	2014/09/04 03:51:06.000	01:00:00.000
Tag Comment	Value A	Value B	Value B-A
Pressure[bar]	1062.96	1048.57	-14.39
Ambient Temperature[°C]	23.24	23.14	-0.10



ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE No. 1588, 1590, 1592

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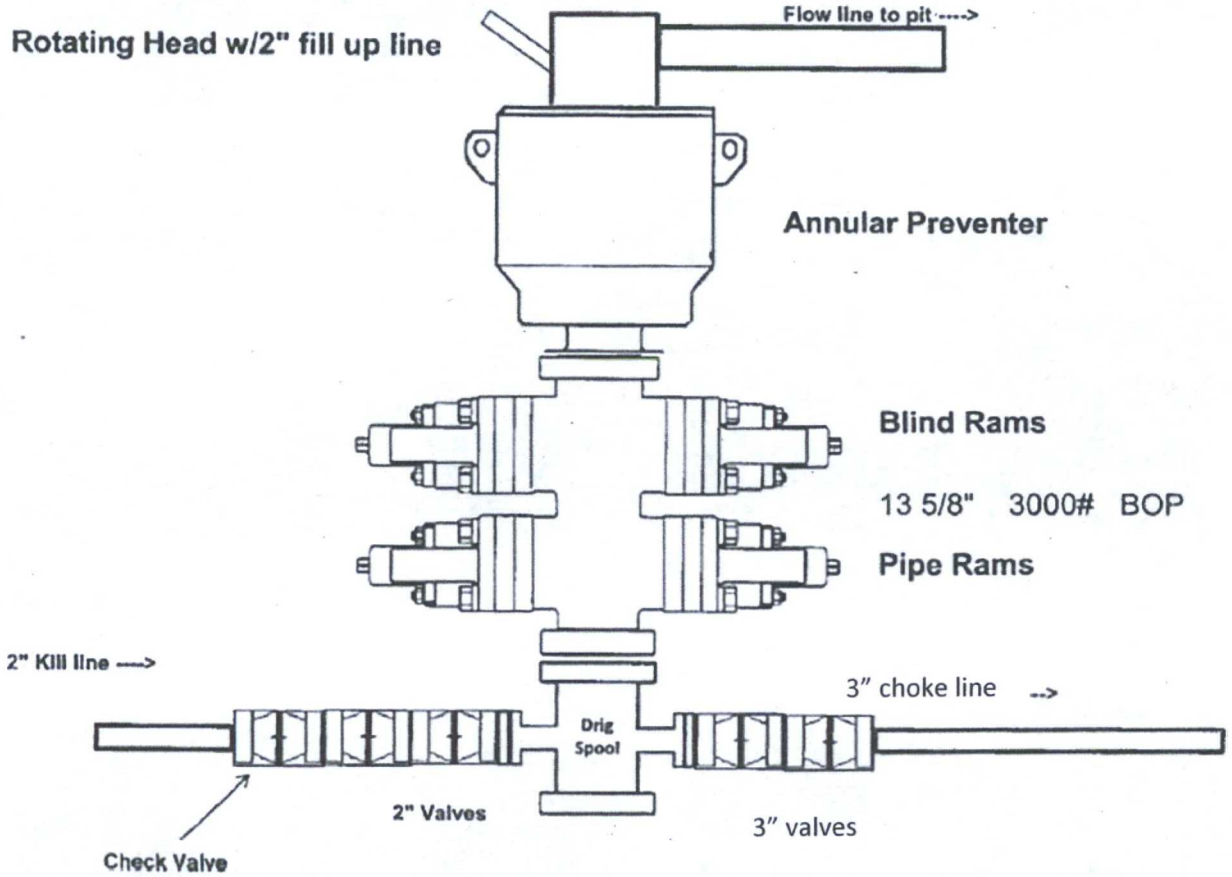
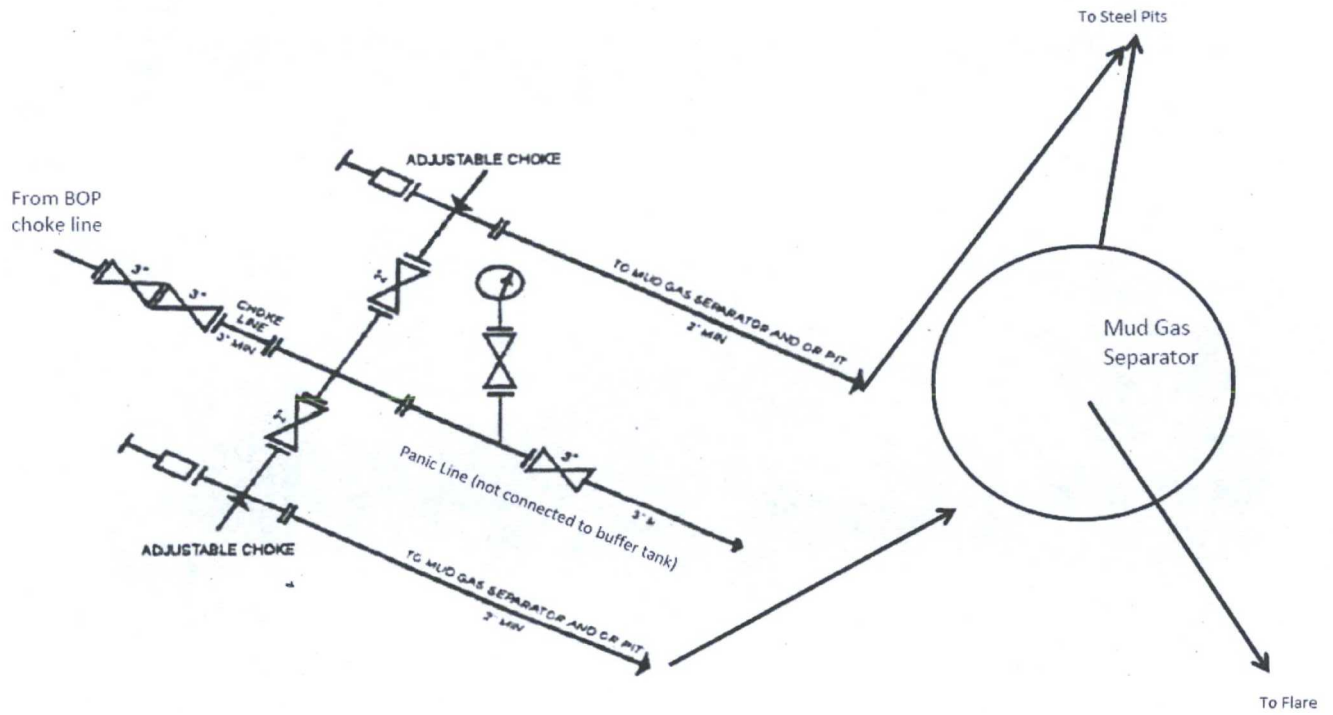
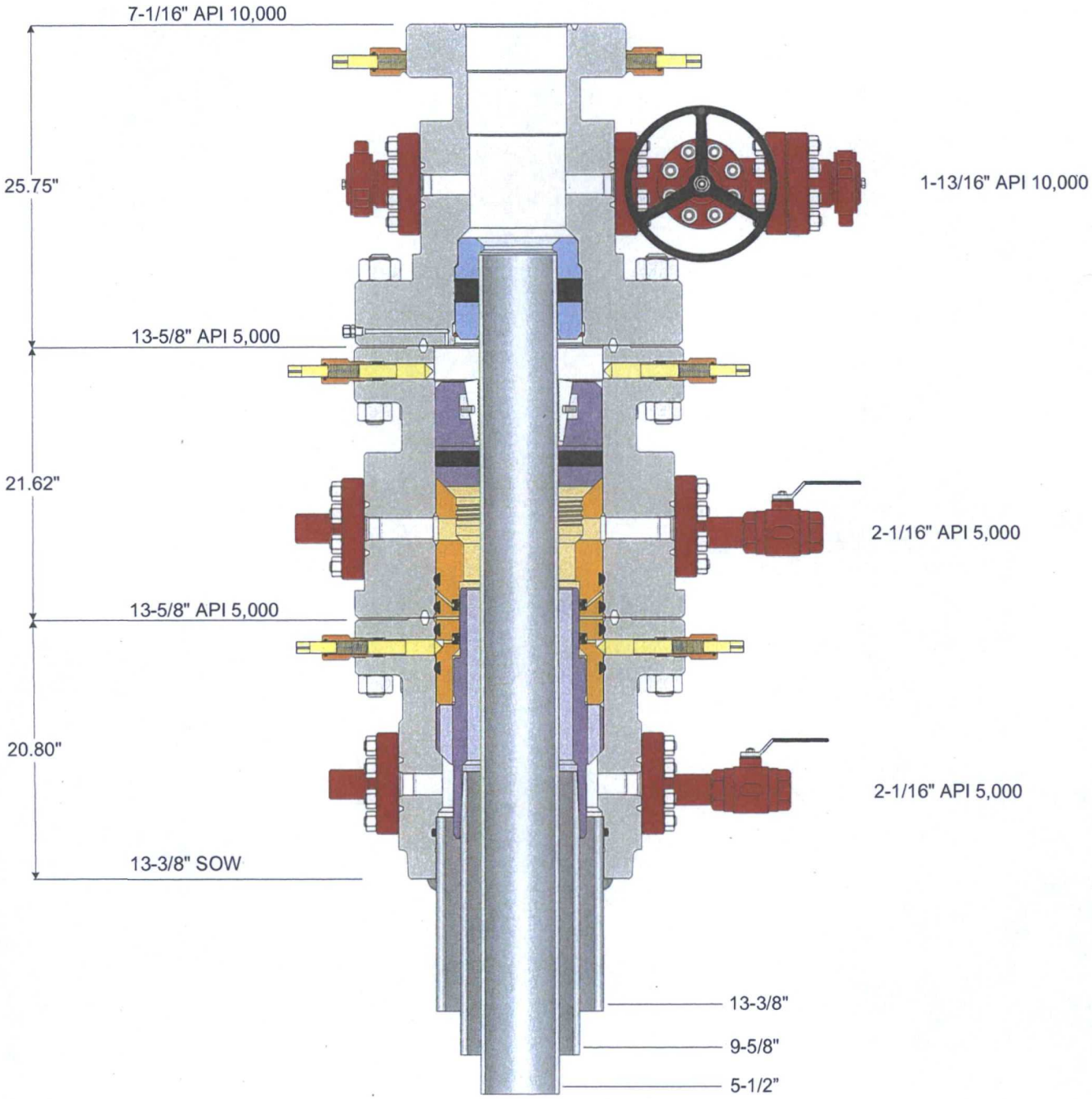
3,000 psi BOP Schematic





3M choke manifold design

NOTE: THIS DRAWING IS NOT TO SCALE. THE DIMENSIONS REFLECTED ON THIS DRAWING ARE ESTIMATED DIMENSIONS AND ARE FOR REFERENCE ONLY.



Weatherford®

Customer: BTA OIL PRODUCERS		Project No.: 146245	Quote No.: 291545 v2
Project Name: WEST TEXAS		Date: 07/06/16	Drawn By: JL