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ATS-15-4161

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCT 07 2015

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NM 14492
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name ---
2. Name of Operator BTA Oil Producers, LLC <260297>		7. If Unit or CA Agreement, Name and No. ---
3a. Address 104 S. Pecos Midland, TX 79701		8. Lease Name and Well No. Mesa 8105 JV-P #19H <305301>
3b. Phone No. (include area code) (432) 682-3753		9. API Well No. 30-025 42854
4. Location of Well (Report location clearly and in accordance with any State requirements) At surface 310' FSL & 410' FEL SESE Sec. 1 UL -P- At proposed prod. zone 230' FNL & 410' FEL NENE Sec. 1 UL -A- NORTHDOX LOCATION		10. Field and Pool, or Exploratory Jennings; Upper Bone Spring Shale <97838>
14. Distance in miles and direction from nearest town or post office* 25 miles west from Jal, NM		11. Sec., T, R. M. or Blk and Survey or Area Sec. 1, T26S-R32E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 230'	16. No. of acres in lease 1960	17. Spacing Unit dedicated to this well 160 acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 885' BHL to BHL*	19. Proposed Depth 14,143' MD 9,520' TVD	20. BLM/BIA Bond No. on file NM1195 NMB000849
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3311' GL	22. Approximate date work will start* 07/01/2015	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 Kayla McConnell	Name (Printed Typed) Kayla McConnell	Date 02/19/2015
Title Production Assistant		Email: kmcconnell@btaoil.com

Approved by (Signature) Steve Caffey	Name (Printed Typed)	Date OCT - 6 2015
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

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

*(Instructions on page 2)

Carlsbad Controlled Water Basin

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

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

OCT 09 2015

COPY

BTA Oil Producers LLC, Mesa 8105 JV-P #19H

Attachment to APD
BTA Oil Producers, LLC
Mesa 8105 JV-P #19H
Sec 1, T26S, R32E
Lea County, NM

1. Geologic Formations

TVD of target	9520	Pilot hole depth	N/A
MD at TD:	14143	Deepest expected fresh water:	175

HOBBS OGD

Basin

OCT 07 2015

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	788	Water	
Top of Salt	1478	Salt	
Base of Salt	4478	Salt	
Delaware	4773	Oil/Gas	
Cherry Canyon	6068	Oil/Gas	
Brushy Canyon	7478	Oil/Gas	
Bone Spring	8998	Oil/Gas	
Atoka			
Morrow			
Barnett Shale			
Woodford Shale			
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

RECEIVED

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

2. Casing Program

See COA

Hole Size	Casing Interval		Csg.Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
17.5"	0	818 880	13.375"	54.5	J55	STC	1.43	1.26	2.59
12.25"	0	4743	9.625"	40	J55	LTC	1.19	1.89	2.1
8.75"	0	9793	5.5"	17	P110	LTC	1.56	1.6	2.63
7.875"	9793	14143	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

BTA Oil Producers LLC, Mesa 8105 JV-P #19H

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 3 rd 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 2 nd 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 ₂ O 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	1 st stage Lead: Class C Blend
	250	14.8	1.33	8	10	1 st stage Tail: Class C, circ to surf, 65% excess
Prod.	1000	11.3	2.92	8	14	1 st Lead: 50:50 Blend Class H
	950	14.4	1.22	8	10	1 st Tail: 50:50 Blend Class H

BTA Oil Producers LLC, Mesa 8105 JV-P #19H

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	4243'	20%

Include Pilot Hole Cementing specs:

Pilot hole depth N/A

KOP 9043

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

No	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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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*		

BTA Oil Producers LLC, Mesa 8105 JV-P #19H

*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.
No	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?
No	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.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	818 880'	FW Spud	8.5-8.8	35-45	N/C
818	4743	Saturated Brine	10.0-10.2	28-34	N/C
4743	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
---	-----------------------------

See COA

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
	PEX
	Intermediate shoe to TD

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4130 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 (H ₂ S) monitors will be installed prior to drilling out the surface shoe. If H ₂ S 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.	
	H ₂ S is present
X	H ₂ S 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



BTA Oil Producers

Lea County, NM

Sec 1, T26S, R32E

Mesa 8105 JV-P 19H

Wellbore #1

Design #1

DDC Anticollision Report

19 August, 2015





HP Anticollision Report



Company:	BTA Oil Producers	Local Co-ordinate Reference:	Well Mesa 19H
Project:	Lea County, NM	TVD Reference:	Well @ 3311.0usft
Reference Site:	Sec 1, T26S, R32E	MD Reference:	Well @ 3311.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Mesa 19H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Compass
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference	Design #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	8/19/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	14,142.7	Design #1 (Wellbore #1)	MWD default	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Sec 1, T26S, R32E						
8105 JV-P Mesa 1 - Wellbore #1 - Wellbore #1	10,985.6	9,523.7	132.0	73.6	2.260	CC, ES, SF

Offset Design		Sec 1, T26S, R32E - 8105 JV-P Mesa 1H - Wellbore #1 - Wellbore #1								Offset Site Error:		0.0 usft
Survey Program:		248-MWD default								Offset Well Error:		0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-9.15	1,667.6	-268.7	1,689.1			
100.0	100.0	101.8	101.8	0.1	0.1	-9.14	1,667.6	-268.3	1,689.1	1,688.8	7,411.389	
200.0	200.0	203.6	203.6	0.3	0.2	-9.10	1,667.6	-267.2	1,688.9	1,688.3	2,973.559	
300.0	300.0	304.1	304.1	0.6	0.4	-9.05	1,667.6	-265.5	1,688.7	1,687.7	1,760.524	
400.0	400.0	403.8	403.7	0.8	0.6	-8.99	1,667.7	-264.0	1,688.4	1,687.0	1,214.691	
500.0	500.0	503.4	503.4	1.0	0.8	-8.95	1,667.7	-262.5	1,688.2	1,686.4	927.172	
600.0	600.0	603.2	603.2	1.2	1.0	-8.90	1,667.7	-261.2	1,688.0	1,685.8	749.142	
700.0	700.0	703.2	703.2	1.5	1.2	-8.86	1,667.7	-259.9	1,687.8	1,685.2	627.963	
800.0	800.0	803.2	803.1	1.7	1.4	-8.81	1,667.7	-258.6	1,687.7	1,684.5	539.104	
900.0	900.0	903.2	903.1	1.9	1.7	-8.77	1,667.7	-257.2	1,687.5	1,683.9	471.870	
1,000.0	1,000.0	1,003.2	1,003.1	2.1	1.9	-8.72	1,667.8	-255.9	1,687.3	1,683.3	419.538	
1,100.0	1,100.0	1,103.2	1,103.1	2.4	2.1	-8.68	1,667.8	-254.6	1,687.1	1,682.6	377.647	
1,200.0	1,200.0	1,203.2	1,203.1	2.6	2.3	-8.64	1,667.8	-253.3	1,686.9	1,682.0	343.356	
1,300.0	1,300.0	1,303.0	1,302.8	2.8	2.5	-8.59	1,667.8	-252.0	1,686.7	1,681.4	315.291	
1,400.0	1,400.0	1,402.6	1,402.5	3.0	2.7	-8.56	1,667.8	-250.9	1,686.6	1,680.8	291.775	
1,500.0	1,500.0	1,502.2	1,502.1	3.3	3.0	-8.52	1,667.8	-249.9	1,686.5	1,680.2	271.524	
1,600.0	1,600.0	1,601.9	1,601.8	3.5	3.2	-8.49	1,667.8	-249.1	1,686.3	1,679.7	253.901	
1,700.0	1,700.0	1,701.5	1,701.4	3.7	3.4	-8.47	1,667.8	-248.4	1,686.2	1,679.2	238.427	
1,800.0	1,800.0	1,801.2	1,801.1	3.9	3.6	-8.45	1,667.9	-247.8	1,686.2	1,678.7	224.733	
1,900.0	1,900.0	1,901.1	1,901.0	4.2	3.8	-8.44	1,667.9	-247.4	1,686.1	1,678.2	212.488	
2,000.0	2,000.0	2,001.1	2,001.0	4.4	4.0	-8.42	1,667.9	-247.0	1,686.1	1,677.7	201.500	
2,100.0	2,100.0	2,101.1	2,101.0	4.6	4.2	-8.41	1,667.9	-246.5	1,686.0	1,677.2	191.592	
2,200.0	2,200.0	2,201.1	2,201.0	4.8	4.4	-8.39	1,667.9	-246.1	1,685.9	1,676.7	182.612	
2,300.0	2,300.0	2,301.1	2,301.0	5.1	4.6	-8.38	1,667.9	-245.7	1,685.9	1,676.2	174.436	
2,400.0	2,400.0	2,401.1	2,401.0	5.3	4.8	-8.36	1,667.9	-245.2	1,685.8	1,675.7	166.960	
2,500.0	2,500.0	2,501.1	2,501.0	5.5	5.0	-8.35	1,667.9	-244.8	1,685.8	1,675.2	159.986	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



HP Anticollision Report



Company:	BTA Oil Producers	Local Co-ordinate Reference:	Well Mesa 19H
Project:	Lea County, NM	TVD Reference:	Well @ 3311.0usft
Reference Site:	Sec 1, T26S, R32E	MD Reference:	Well @ 3311.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Mesa 19H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Compass
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Sec 1, T26S, R32E - 8105 JV-P Mesa 1 - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 usft
Survey Program: 248-MWD default													
Reference Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
2,600.0	2,600.0	2,601.1	2,601.0	5.7	5.2	-8.33	1,667.9	-244.4	1,685.7	1,674.7	153.521		
2,700.0	2,700.0	2,701.1	2,701.0	6.0	5.5	-8.32	1,667.9	-243.9	1,685.6	1,674.2	147.558		
2,800.0	2,800.0	2,801.1	2,801.0	6.2	5.7	-8.31	1,667.9	-243.5	1,685.6	1,673.7	142.040		
2,900.0	2,900.0	2,901.1	2,901.0	6.4	5.9	-8.29	1,667.9	-243.0	1,685.5	1,673.2	136.920		
3,000.0	3,000.0	3,001.1	3,001.0	6.6	6.1	-8.28	1,667.9	-242.6	1,685.5	1,672.7	132.156		
3,100.0	3,100.0	3,101.1	3,101.0	6.9	6.3	-8.26	1,667.9	-242.2	1,685.4	1,672.2	127.702		
3,200.0	3,200.0	3,201.1	3,201.0	7.1	6.6	-8.25	1,667.9	-241.7	1,685.4	1,671.7	123.531		
3,300.0	3,300.0	3,301.1	3,301.0	7.3	6.8	-8.23	1,667.9	-241.3	1,685.3	1,671.2	119.623		
3,400.0	3,400.0	3,401.3	3,401.2	7.5	7.0	-8.22	1,667.9	-240.9	1,685.2	1,670.7	115.948		
3,500.0	3,500.0	3,502.0	3,501.8	7.8	7.2	-8.19	1,667.9	-240.2	1,685.1	1,670.2	112.474		
3,600.0	3,600.0	3,602.7	3,602.5	8.0	7.5	-8.16	1,668.0	-239.2	1,685.0	1,669.6	109.199		
3,700.0	3,700.0	3,703.0	3,702.9	8.2	7.7	-8.12	1,668.0	-237.9	1,684.9	1,669.0	106.108		
3,800.0	3,800.0	3,803.0	3,802.8	8.4	7.9	-8.07	1,668.0	-236.6	1,684.7	1,668.4	103.188		
3,900.0	3,900.0	3,903.0	3,902.8	8.7	8.1	-8.03	1,668.0	-235.3	1,684.5	1,667.7	100.424		
4,000.0	4,000.0	4,003.3	4,003.1	8.9	8.3	-7.98	1,668.0	-233.9	1,684.3	1,667.1	97.797		
4,100.0	4,100.0	4,103.6	4,103.4	9.1	8.6	-7.93	1,668.0	-232.4	1,684.1	1,666.5	95.300		
4,200.0	4,200.0	4,203.9	4,203.7	9.3	8.8	-7.87	1,668.1	-230.7	1,683.9	1,666.8	92.925		
4,300.0	4,300.0	4,303.9	4,303.7	9.6	9.0	-7.82	1,668.1	-229.0	1,683.7	1,666.1	90.665		
4,400.0	4,400.0	4,403.9	4,403.6	9.8	9.2	-7.76	1,668.1	-227.2	1,683.5	1,665.4	88.512		
4,500.0	4,500.0	4,503.9	4,503.8	10.0	9.5	-7.70	1,668.1	-225.5	1,683.3	1,663.8	86.458		
4,600.0	4,600.0	4,603.8	4,603.6	10.2	9.7	-7.64	1,668.1	-223.7	1,683.1	1,663.2	84.497		
4,700.0	4,700.0	4,703.8	4,703.5	10.5	9.9	-7.58	1,668.2	-222.0	1,682.9	1,662.5	82.623		
4,800.0	4,800.0	4,803.8	4,803.5	10.7	10.1	-7.52	1,668.2	-220.2	1,682.7	1,661.8	80.829		
4,900.0	4,900.0	4,903.8	4,903.5	10.9	10.4	-7.46	1,668.2	-218.5	1,682.4	1,661.2	79.110		
5,000.0	5,000.0	5,003.8	5,003.4	11.1	10.6	-7.40	1,668.2	-216.8	1,682.2	1,660.5	77.462		
5,100.0	5,100.0	5,103.7	5,103.4	11.4	10.8	-7.34	1,668.2	-215.0	1,682.0	1,659.9	75.896		
5,200.0	5,200.0	5,203.5	5,203.1	11.6	11.0	-7.29	1,668.3	-213.4	1,681.8	1,659.3	74.445		
5,300.0	5,300.0	5,303.2	5,302.8	11.8	11.2	-7.24	1,668.3	-211.8	1,681.7	1,658.6	73.050		
5,400.0	5,400.0	5,403.0	5,402.6	12.0	11.4	-7.19	1,668.3	-210.4	1,681.5	1,658.1	71.706		
5,500.0	5,500.0	5,502.9	5,502.5	12.2	11.6	-7.14	1,668.3	-209.1	1,681.4	1,657.5	70.409		
5,600.0	5,600.0	5,602.9	5,602.5	12.5	11.8	-7.10	1,668.3	-207.8	1,681.2	1,656.9	69.156		
5,700.0	5,700.0	5,702.9	5,702.5	12.7	12.0	-7.06	1,668.3	-206.5	1,681.1	1,656.3	67.948		
5,800.0	5,800.0	5,802.9	5,802.4	12.9	12.2	-7.01	1,668.3	-205.2	1,680.9	1,655.7	66.781		
5,900.0	5,900.0	5,902.8	5,902.4	13.1	12.4	-6.97	1,668.4	-203.9	1,680.8	1,655.2	65.653		
6,000.0	6,000.0	6,002.8	6,002.4	13.4	12.7	-6.92	1,668.4	-202.6	1,680.6	1,654.6	64.530		
6,100.0	6,100.0	6,102.8	6,102.4	13.6	12.9	-6.88	1,668.4	-201.3	1,680.5	1,654.0	63.433		
6,200.0	6,200.0	6,202.8	6,202.4	13.8	13.1	-6.83	1,668.4	-199.9	1,680.3	1,653.4	62.372		
6,300.0	6,300.0	6,302.8	6,302.3	14.0	13.3	-6.79	1,668.4	-198.6	1,680.2	1,652.8	61.346		
6,400.0	6,400.0	6,402.8	6,402.3	14.3	13.6	-6.74	1,668.4	-197.3	1,680.1	1,652.2	60.352		
6,500.0	6,500.0	6,502.8	6,502.3	14.5	13.8	-6.70	1,668.5	-196.0	1,679.9	1,651.6	59.389		
6,600.0	6,600.0	6,602.8	6,602.3	14.7	14.0	-6.66	1,668.5	-194.7	1,679.8	1,651.1	58.457		
6,700.0	6,700.0	6,702.8	6,702.3	14.9	14.2	-6.61	1,668.5	-193.4	1,679.7	1,650.5	57.553		
6,800.0	6,800.0	6,802.8	6,802.3	15.2	14.5	-6.57	1,668.5	-192.1	1,679.5	1,649.9	56.677		
6,900.0	6,900.0	6,902.8	6,902.2	15.4	14.7	-6.52	1,668.5	-190.8	1,679.4	1,649.3	55.826		
7,000.0	7,000.0	7,002.8	7,002.2	15.6	14.9	-6.48	1,668.5	-189.5	1,679.3	1,648.7	55.001		
7,100.0	7,100.0	7,102.7	7,102.2	15.8	15.1	-6.43	1,668.5	-188.2	1,679.1	1,648.1	54.200		
7,200.0	7,200.0	7,202.7	7,202.2	16.1	15.4	-6.39	1,668.6	-186.9	1,679.0	1,647.6	53.422		
7,300.0	7,300.0	7,302.7	7,302.2	16.3	15.6	-6.35	1,668.6	-185.5	1,678.9	1,647.0	52.666		
7,400.0	7,400.0	7,402.7	7,402.2	16.5	15.8	-6.30	1,668.6	-184.2	1,678.7	1,646.4	51.930		
7,500.0	7,500.0	7,502.7	7,502.1	16.7	16.0	-6.26	1,668.6	-182.9	1,678.6	1,645.8	51.215		
7,600.0	7,600.0	7,602.7	7,602.1	17.0	16.2	-6.21	1,668.6	-181.6	1,678.5	1,645.2	50.518		
7,700.0	7,700.0	7,702.7	7,702.1	17.2	16.5	-6.17	1,668.6	-180.3	1,678.3	1,644.7	49.840		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



HP Anticollision Report



Company:	BTA Oil Producers	Local Co-ordinate Reference:	Well Mesa 19H
Project:	Lea County, NM	TVD Reference:	Well @ 3311.0usft
Reference Site:	Sec 1, T26S, R32E	MD Reference:	Well @ 3311.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Mesa 19H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Compass
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design Sec 1, T26S, R32E - 8105 JV-P Mesa 1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 248-MWD default												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
7,800.0	7,800.0	7,802.7	7,802.1	17.4	16.7	-8.12	1,668.8	-179.0	1,678.2	1,644.1	49.180		
7,900.0	7,900.0	7,902.7	7,902.1	17.6	16.9	-8.08	1,668.7	-177.7	1,678.1	1,643.5	48.537		
8,000.0	8,000.0	8,002.7	8,002.1	17.9	17.1	-8.03	1,668.7	-176.4	1,678.0	1,643.0	47.911		
8,100.0	8,100.0	8,102.7	8,102.0	18.1	17.4	-5.99	1,668.7	-175.1	1,677.9	1,642.4	47.301		
8,200.0	8,200.0	8,202.6	8,202.0	18.3	17.6	-5.94	1,668.7	-173.8	1,677.7	1,641.8	46.705		
8,300.0	8,300.0	8,302.6	8,302.0	18.5	17.8	-5.90	1,668.7	-172.5	1,677.6	1,641.2	46.125		
8,400.0	8,400.0	8,402.6	8,402.0	18.8	18.0	-5.86	1,668.7	-171.1	1,677.5	1,640.7	45.559		
8,500.0	8,500.0	8,503.0	8,502.4	19.0	18.3	-5.81	1,668.8	-169.7	1,677.4	1,640.1	45.004		
8,600.0	8,600.0	8,603.3	8,602.6	19.2	18.5	-5.75	1,668.8	-168.0	1,677.2	1,639.5	44.463		
8,700.0	8,700.0	8,703.3	8,702.6	19.4	18.7	-5.69	1,668.8	-166.3	1,677.1	1,638.9	43.934		
8,800.0	8,800.0	8,803.2	8,802.5	19.7	18.9	-5.63	1,668.8	-164.5	1,676.9	1,638.3	43.417		
8,900.0	8,900.0	8,903.2	8,902.5	19.9	19.2	-5.57	1,668.8	-162.8	1,676.8	1,637.7	42.913		
9,000.0	9,000.0	9,003.2	9,002.5	20.1	19.4	-5.51	1,668.9	-161.0	1,676.6	1,637.1	42.420		
9,042.5	9,042.5	9,045.7	9,045.0	20.2	19.5	-5.49	1,668.9	-160.3	1,676.5	1,636.8	42.214		
9,050.0	9,050.0	9,053.2	9,052.5	20.2	19.5	-4.83	1,668.9	-160.2	1,676.5	1,636.7	42.181		
9,075.0	9,075.0	9,078.2	9,077.4	20.3	19.6	-4.83	1,668.9	-159.7	1,675.4	1,635.6	42.123		
9,100.0	9,099.9	9,103.1	9,102.3	20.3	19.6	-4.84	1,668.9	-159.3	1,673.0	1,633.3	42.143		
9,125.0	9,124.6	9,127.8	9,127.0	20.4	19.7	-4.88	1,668.9	-158.9	1,669.3	1,629.8	42.242		
9,150.0	9,149.1	9,152.3	9,151.5	20.4	19.7	-4.93	1,668.9	-158.4	1,664.4	1,625.1	42.422		
9,175.0	9,173.3	9,176.5	9,175.7	20.5	19.8	-5.00	1,668.9	-158.0	1,658.2	1,619.3	42.686		
9,200.0	9,197.2	9,200.4	9,199.6	20.6	19.8	-5.09	1,668.9	-157.6	1,650.7	1,612.3	43.038		
9,225.0	9,220.6	9,223.9	9,223.1	20.6	19.9	-5.20	1,668.9	-157.2	1,641.9	1,604.2	43.484		
9,250.0	9,243.5	9,246.8	9,246.1	20.7	19.9	-5.33	1,668.9	-156.7	1,632.0	1,595.0	44.031		
9,275.0	9,265.9	9,269.3	9,268.5	20.7	20.0	-5.50	1,668.9	-156.3	1,620.9	1,584.6	44.688		
9,300.0	9,287.7	9,291.1	9,290.3	20.8	20.0	-5.69	1,668.9	-155.9	1,608.6	1,573.3	45.465		
9,325.0	9,308.8	9,312.2	9,311.4	20.8	20.1	-5.91	1,668.9	-155.5	1,595.3	1,560.9	46.374		
9,350.0	9,329.2	9,332.6	9,331.8	20.9	20.1	-6.17	1,668.9	-155.1	1,580.8	1,547.5	47.432		
9,375.0	9,348.8	9,352.2	9,351.5	20.9	20.2	-6.48	1,668.9	-154.7	1,565.3	1,533.1	48.654		
9,400.0	9,367.5	9,371.0	9,370.2	21.0	20.2	-6.83	1,668.9	-154.3	1,548.8	1,517.9	50.062		
9,425.0	9,385.4	9,388.9	9,388.1	21.1	20.3	-7.25	1,668.9	-154.0	1,531.4	1,501.7	51.678		
9,450.0	9,402.3	9,405.9	9,405.1	21.1	20.3	-7.75	1,668.9	-153.6	1,513.0	1,484.7	53.524		
9,475.0	9,418.2	9,421.8	9,421.0	21.2	20.3	-8.34	1,668.9	-153.3	1,493.8	1,466.9	55.622		
9,500.0	9,433.1	9,436.7	9,435.9	21.3	20.4	-9.04	1,668.9	-153.0	1,473.8	1,448.3	57.985		
9,525.0	9,447.0	9,450.6	9,449.8	21.4	20.4	-9.89	1,668.9	-152.7	1,453.0	1,429.0	60.603		
9,550.0	9,469.7	9,463.3	9,462.5	21.5	20.4	-10.92	1,669.0	-152.4	1,431.6	1,409.0	63.412		
9,575.0	9,471.3	9,474.9	9,474.1	21.6	20.5	-12.21	1,669.0	-152.2	1,409.5	1,388.2	66.242		
9,600.0	9,481.7	9,485.4	9,484.6	21.7	20.5	-13.85	1,669.0	-152.0	1,386.8	1,366.6	68.714		
9,625.0	9,490.9	9,494.6	9,493.8	21.8	20.5	-15.96	1,669.0	-151.8	1,363.7	1,344.2	70.112		
9,650.0	9,498.9	9,502.6	9,501.7	21.9	20.5	-18.79	1,669.0	-151.6	1,340.1	1,320.8	69.326		
9,675.0	9,505.6	9,509.3	9,508.5	22.1	20.5	-22.71	1,669.0	-151.4	1,316.1	1,295.9	65.186		
9,700.0	9,511.0	9,514.8	9,513.9	22.2	20.6	-28.39	1,669.0	-151.3	1,291.8	1,269.3	57.258		
9,725.0	9,515.2	9,518.9	9,518.1	22.3	20.6	-37.09	1,669.0	-151.2	1,267.3	1,240.3	48.854		
9,750.0	9,518.1	9,521.8	9,521.0	22.5	20.6	-51.00	1,669.0	-151.2	1,242.6	1,208.6	36.531		
9,775.0	9,519.6	9,523.4	9,522.6	22.6	20.6	-72.57	1,669.0	-151.1	1,217.8	1,176.3	29.316		
9,792.5	9,520.0	9,523.7	9,522.9	22.8	20.6	-91.26	1,669.0	-151.1	1,200.4	1,156.8	27.509		
9,800.0	9,520.0	9,523.7	9,522.9	22.8	20.6	-91.26	1,669.0	-151.1	1,193.0	1,149.3	27.304		
9,900.0	9,520.0	9,523.7	9,522.9	23.5	20.6	-91.26	1,669.0	-151.1	1,093.6	1,049.1	24.584		
10,000.0	9,520.0	9,523.7	9,522.9	24.4	20.6	-91.26	1,669.0	-151.1	994.4	949.0	21.907		
10,100.0	9,520.0	9,523.7	9,522.9	25.3	20.6	-91.26	1,669.0	-151.1	895.4	849.0	19.296		
10,200.0	9,520.0	9,523.7	9,522.9	26.3	20.6	-91.26	1,669.0	-151.1	796.6	749.1	16.768		
10,300.0	9,520.0	9,523.7	9,522.9	27.4	20.6	-91.26	1,669.0	-151.1	698.2	649.5	14.338		
10,400.0	9,520.0	9,523.7	9,522.9	28.6	20.6	-91.26	1,669.0	-151.1	600.3	550.4	12.016		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



HP Anticollision Report



Company:	BTA Oil Producers	Local Co-ordinate Reference:	Well Mesa 19H
Project:	Lea County, NM	TVD Reference:	Well @ 3311.0usft
Reference Site:	Sec 1, T26S, R32E	MD Reference:	Well @ 3311.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Mesa 19H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Compass
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design Sec 1, T26S, R32E - 8105 JV-P Mesa 1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 248-MWD default												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
10,500.0	9,520.0	9,523.7	9,522.9	29.9	20.6	-91.26	1,669.0	-151.1	503.3	452.0	9.813		
10,600.0	9,520.0	9,523.7	9,522.9	31.2	20.6	-91.26	1,669.0	-151.1	407.6	354.9	7.740		
10,700.0	9,520.0	9,523.7	9,522.9	32.5	20.6	-91.27	1,669.0	-151.1	314.7	260.6	5.817		
10,800.0	9,520.0	9,523.7	9,522.9	33.9	20.6	-91.27	1,669.0	-151.1	227.8	172.2	4.099		
10,900.0	9,520.0	9,523.7	9,522.9	35.4	20.6	-91.27	1,669.0	-151.1	157.4	100.3	2.757		
10,985.6	9,520.0	9,523.7	9,522.9	36.6	20.6	-91.27	1,669.0	-151.1	132.0	73.6	2.260	CC, ES, SF	
11,000.0	9,520.0	9,523.7	9,522.9	36.9	20.6	-91.27	1,669.0	-151.1	132.8	74.2	2.265		
11,100.0	9,520.0	9,523.7	9,522.9	38.4	20.6	-91.27	1,669.0	-151.1	174.7	114.5	2.901		
11,200.0	9,520.0	9,523.7	9,522.9	39.9	20.6	-91.27	1,669.0	-151.1	251.8	190.0	4.073		
11,300.0	9,520.0	9,523.7	9,522.9	41.4	20.6	-91.27	1,669.0	-151.1	341.0	277.5	5.375		
11,400.0	9,520.0	9,523.7	9,522.9	43.0	20.6	-91.27	1,669.0	-151.1	434.9	369.8	6.682		
11,500.0	9,520.0	9,523.7	9,522.9	44.6	20.6	-91.27	1,669.0	-151.1	531.0	464.3	7.955		
11,600.0	9,520.0	9,523.7	9,522.9	46.2	20.6	-91.27	1,669.0	-151.1	628.4	560.0	9.182		
11,700.0	9,520.0	9,523.7	9,522.9	47.8	20.6	-91.27	1,669.0	-151.1	726.5	656.3	10.357		
11,800.0	9,520.0	9,523.7	9,522.9	49.5	20.6	-91.27	1,669.0	-151.1	825.0	753.2	11.481		
11,900.0	9,520.0	9,523.7	9,522.9	51.1	20.6	-91.27	1,669.0	-151.1	923.9	850.3	12.555		
12,000.0	9,520.0	9,523.7	9,522.9	52.8	20.6	-91.27	1,669.0	-151.1	1,022.9	947.6	13.581		
12,100.0	9,520.0	9,523.7	9,522.9	54.5	20.6	-91.27	1,669.0	-151.1	1,122.2	1,045.1	14.561		
12,200.0	9,520.0	9,523.7	9,522.9	56.2	20.6	-91.27	1,669.0	-151.1	1,221.5	1,142.7	15.497		
12,300.0	9,520.0	9,523.7	9,522.9	57.8	20.6	-91.27	1,669.0	-151.1	1,321.0	1,240.4	16.391		
12,400.0	9,520.0	9,523.7	9,522.9	59.5	20.6	-91.27	1,669.0	-151.1	1,420.5	1,338.2	17.247		
12,500.0	9,520.0	9,523.7	9,522.9	61.3	20.6	-91.27	1,669.0	-151.1	1,520.1	1,436.0	18.066		
12,600.0	9,520.0	9,523.7	9,522.9	63.0	20.6	-91.27	1,669.0	-151.1	1,619.8	1,533.8	18.850		
12,700.0	9,520.0	9,523.7	9,522.9	64.7	20.6	-91.27	1,669.0	-151.1	1,719.5	1,631.7	19.601		
12,800.0	9,520.0	9,523.7	9,522.9	66.4	20.6	-91.27	1,669.0	-151.1	1,819.2	1,729.7	20.321		
12,900.0	9,520.0	9,523.7	9,522.9	68.1	20.6	-91.27	1,669.0	-151.1	1,918.9	1,827.6	21.012		
13,000.0	9,520.0	9,523.7	9,522.9	69.9	20.6	-91.27	1,669.0	-151.1	2,018.7	1,925.6	21.675		
13,100.0	9,520.0	9,523.7	9,522.9	71.6	20.6	-91.28	1,669.0	-151.1	2,118.5	2,023.5	22.312		
13,200.0	9,520.0	9,523.7	9,522.9	73.4	20.6	-91.28	1,669.0	-151.1	2,218.3	2,121.5	22.925		
13,300.0	9,520.0	9,523.7	9,522.9	75.1	20.6	-91.28	1,669.0	-151.1	2,318.1	2,219.6	23.514		
13,400.0	9,520.0	9,523.7	9,522.9	76.9	20.6	-91.28	1,669.0	-151.1	2,418.0	2,317.6	24.081		
13,500.0	9,520.0	9,523.7	9,522.9	78.6	20.6	-91.28	1,669.0	-151.1	2,517.8	2,415.6	24.627		
13,600.0	9,520.0	9,523.7	9,522.9	80.4	20.6	-91.28	1,669.0	-151.1	2,617.7	2,513.6	25.154		
13,700.0	9,520.0	9,523.7	9,522.9	82.1	20.6	-91.28	1,669.0	-151.1	2,717.6	2,611.7	25.661		
13,800.0	9,520.0	9,523.7	9,522.9	83.9	20.6	-91.28	1,669.0	-151.1	2,817.5	2,709.7	26.151		
13,900.0	9,520.0	9,523.7	9,522.9	85.6	20.6	-91.28	1,669.0	-151.1	2,917.4	2,807.8	26.624		
14,000.0	9,520.0	9,523.7	9,522.9	87.4	20.6	-91.28	1,669.0	-151.1	3,017.3	2,905.8	27.080		
14,100.0	9,520.0	9,523.7	9,522.9	89.2	20.6	-91.28	1,669.0	-151.1	3,117.2	3,003.9	27.522		
14,142.7	9,520.0	9,523.7	9,522.9	89.9	20.6	-91.28	1,669.0	-151.1	3,159.8	3,045.7	27.705		

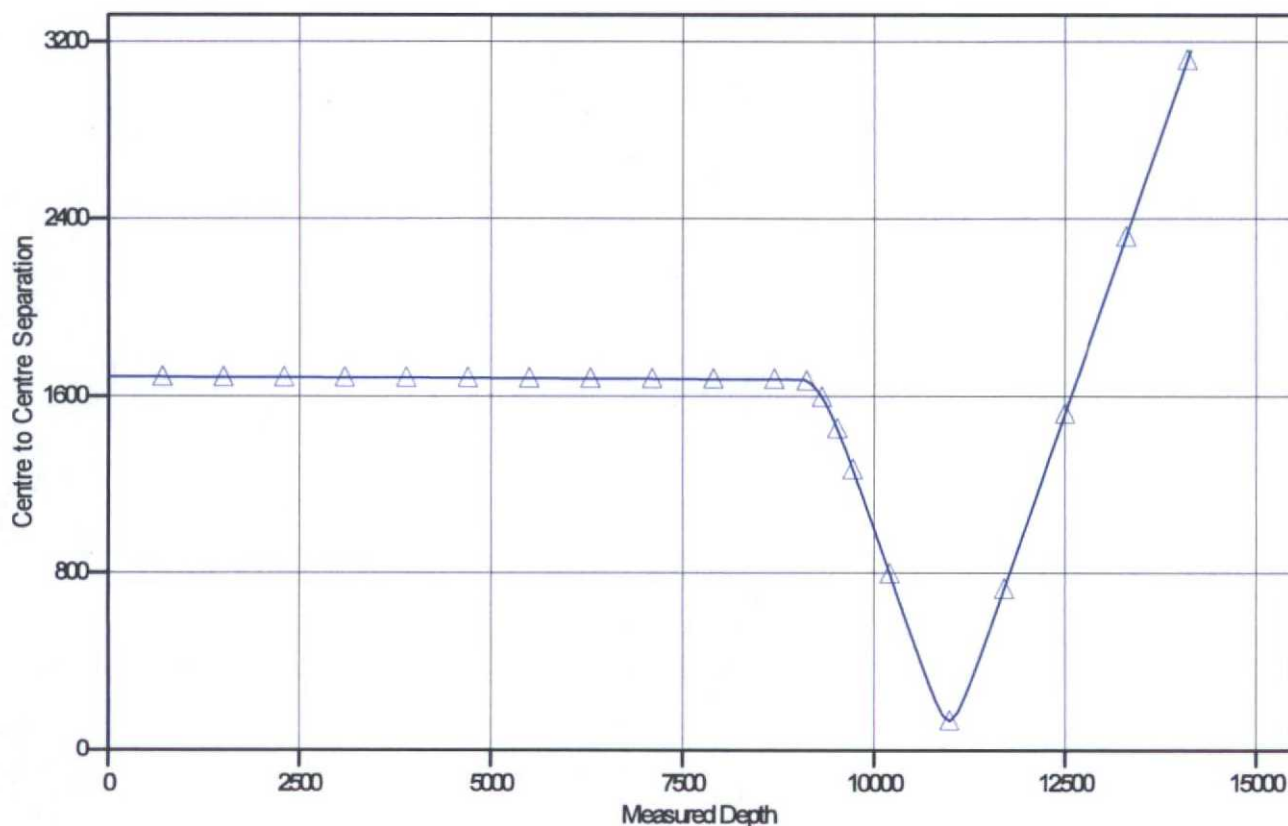


Company:	BTA Oil Producers	Local Co-ordinate Reference:	Well Mesa 19H
Project:	Lea County, NM	TVD Reference:	Well @ 3311.0usft
Reference Site:	Sec 1, T26S, R32E	MD Reference:	Well @ 3311.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Mesa 19H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Compass
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to Well @ 3311.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Mesa 19H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.38°

Ladder Plot



LEGEND

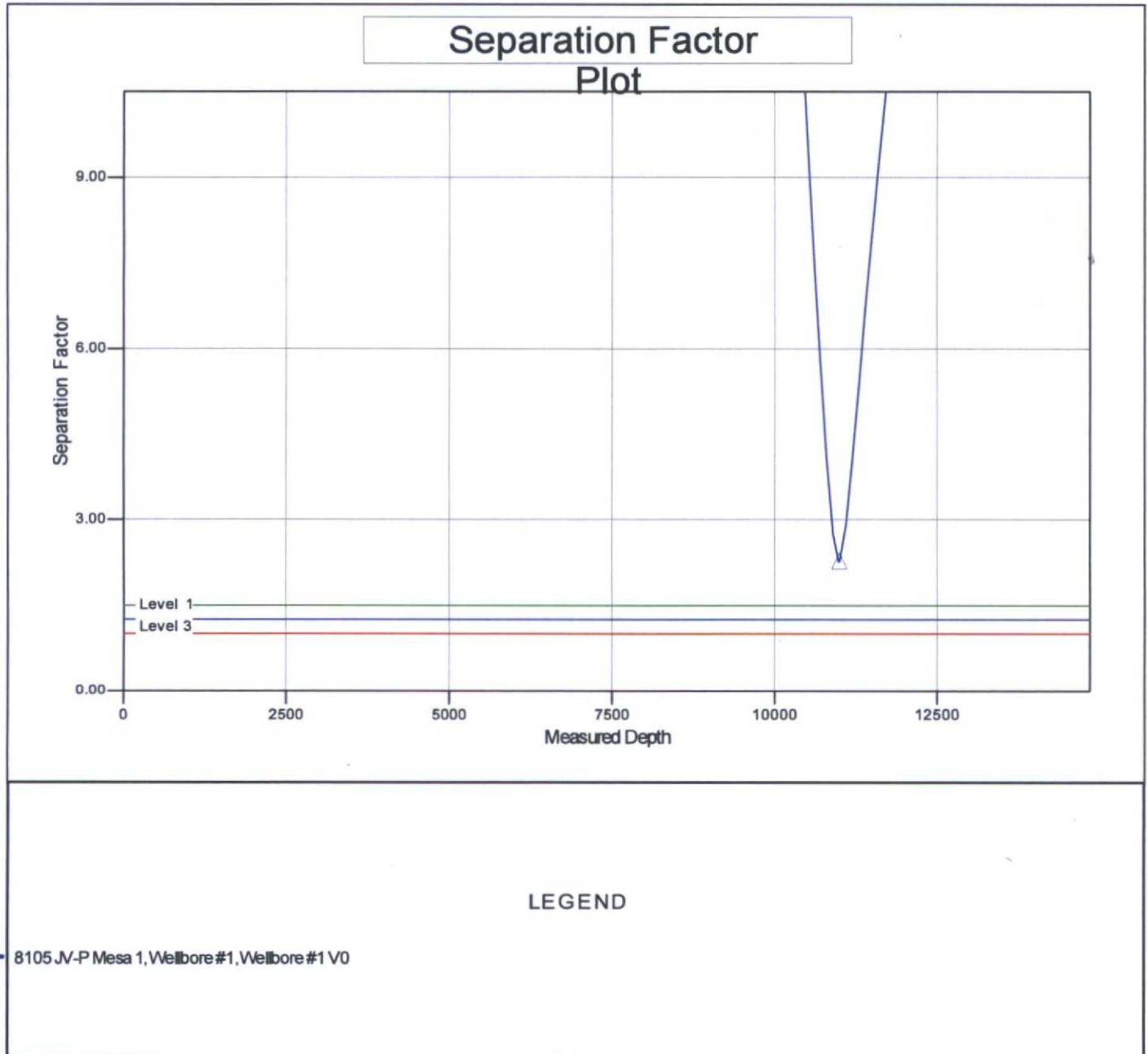
8105 JV-P Mesa 1, Wellbore #1, Wellbore #1 V0



Company:	BTA Oil Producers	Local Co-ordinate Reference:	Well Mesa 19H
Project:	Lea County, NM	TVD Reference:	Well @ 3311.0usft
Reference Site:	Sec 1, T26S, R32E	MD Reference:	Well @ 3311.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Mesa 19H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Compass
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to Well @ 3311.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Mesa 19H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.38°



COPY

BTA Oil Producers, LLC

Lea County, NM

Sec 1 & 12, T26S, R32E (Mesa)

Mesa #19H

Wellbore #1

Plan: Design #1

Standard Planning Report

05 December, 2014

Attachment to APD
BTA Oil Producers, LLC
Mesa 8105 JV-P #19H
Sec 1, T26S, R32E
Lea County, NM

BTA Planning Report

Database: EDM 5000 1 Single User Db
 Company: BTA Oil Producers, LLC
 Project: Lea County, NM
 Site: Sec 1 & 12, T26S, R32E (Mesa)
 Well: Mesa #19H
 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference: Well Mesa #19H
 TVD Reference: GL @ 3311.0usft (Original Well Elev)
 MD Reference: GL @ 3311.0usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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		

Site	Sec 1 & 12, T26S, R32E (Mesa)				
Site Position:		Northing:	388,357.80 usft	Latitude:	32° 3' 56.723 N
From:	Map	Easting:	718,031.00 usft	Longitude:	103° 37' 46.202 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.37 °

Well	Mesa #19H					
Well Position	+N/-S	26.8 usft	Northing:	388,384.60 usft	Latitude:	32° 3' 56.811 N
	+E/-W	2,735.7 usft	Easting:	720,766.70 usft	Longitude:	103° 37' 14.409 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,311.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	9/5/2014	7.20	59.98	48,244

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	359.34	

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	
9,042.5	0.00	0.00	9,042.5	0.0	0.0	0.00	0.00	0.00	0.00	
9,792.5	90.00	359.34	9,520.0	477.4	-5.5	12.00	12.00	0.00	359.34	
14,142.7	90.00	359.34	9,520.0	4,827.3	-55.3	0.00	0.00	0.00	0.00	Mesa #19H PBHL

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
9,042.5	0.00	0.00	9,042.5	0.0	0.0	0.0	0.00	0.00	0.00	0.00
9,792.5	90.00	359.34	9,520.0	477.4	-5.5	477.5	12.00	12.00	0.00	0.00

BTA

Planning Report

Database: EDM 5000.1 Single User Db
 Company: BTA Oil Producers, LLC
 Project: Lea County, NM
 Site: Sec 1 & 12, T26S, R32E (Mesa)
 Well: Mesa #19H
 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference: Well Mesa #19H
 TVD Reference: GL @ 3311.0usft (Original Well Elev)
 MD Reference: GL @ 3311.0usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Design Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Mesa #19H PBHL	0.00	0.01	9,520.0	4,827.3	-55.3	393,211.90	720,711.40	32° 4' 44.585 N	103° 37' 14.682 W
- plan misses target center by 4350.2usft at 9792.5usft MD (9520.0 TVD, 477.4 N, -5.5 E)									
- Point									

COPY

Attachment to APD
BTA Oil Producers, LLC
Mesa 8105 JV-P #19H
Sec 1, T26S, R32E
Lea County, NM

WELL DETAILS: Mesa #19H

+N/-S	+E/-W	Northing	Ground Level:	3311.0	Latitude	Longitude
0.0	0.0	388384.60	Easting	720766.70	32° 3' 56.811 N	103° 37' 14.409 W

BTA Oil Producers, LLC

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

No casing data is available

SITE DETAILS: Sec 1 & 12, T26S, R32E (Mesa)

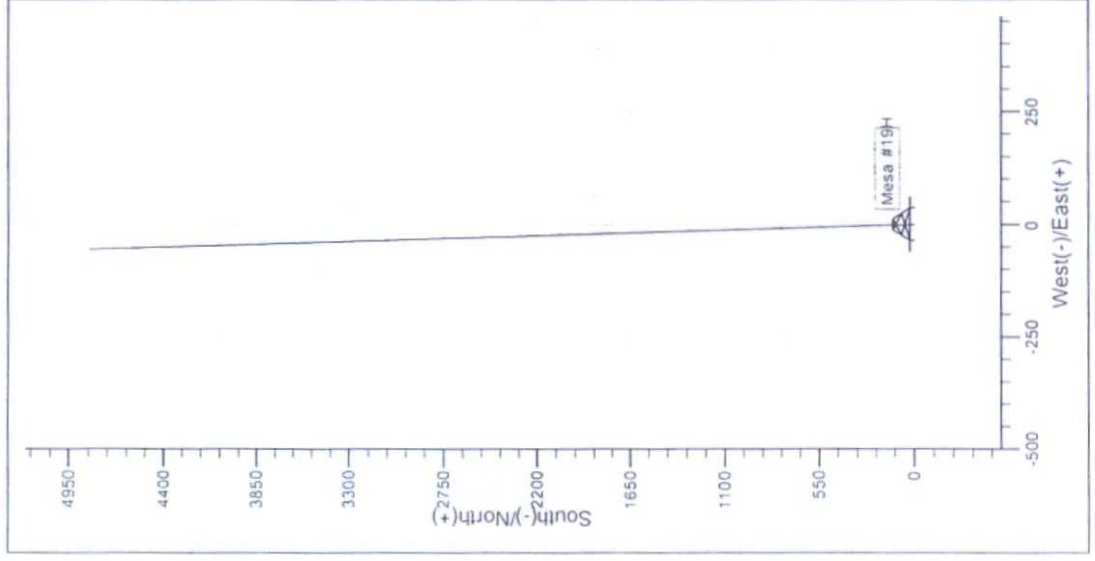
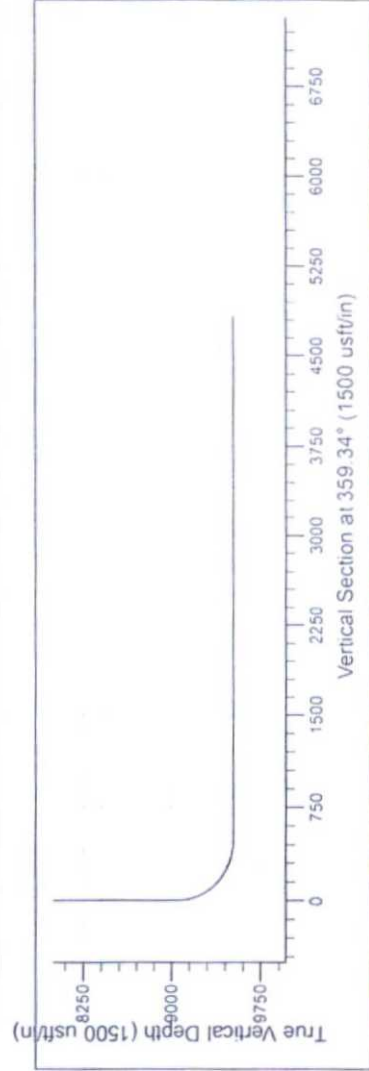
Site Centre Northing: 388357.80
Easting: 718031.00

Positional Uncertainty: 0.0
Convergence: 0.37
Local North: Grid

Azimuths to Grid North
True North: -0.38°
Magnetic North: 6.82°
Magnetic Field
Strength: 48244.0snT
Dip Angle: 59.98°
Date: 9/5/2014
Model: IGRF200510

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
9042.5	0.00	0.00	9042.5	0.0	0.0	0.00	0.00	0.0	
9792.5	90.00	359.34	9520.0	477.4	-5.5	12.00	359.34	477.5	
14142.7	90.00	359.34	9520.0	4827.3	-55.3	0.00	0.00	4827.6	Mesa #19H PBHL



COPY

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.

COPY

3,000 psi BOP Schematic

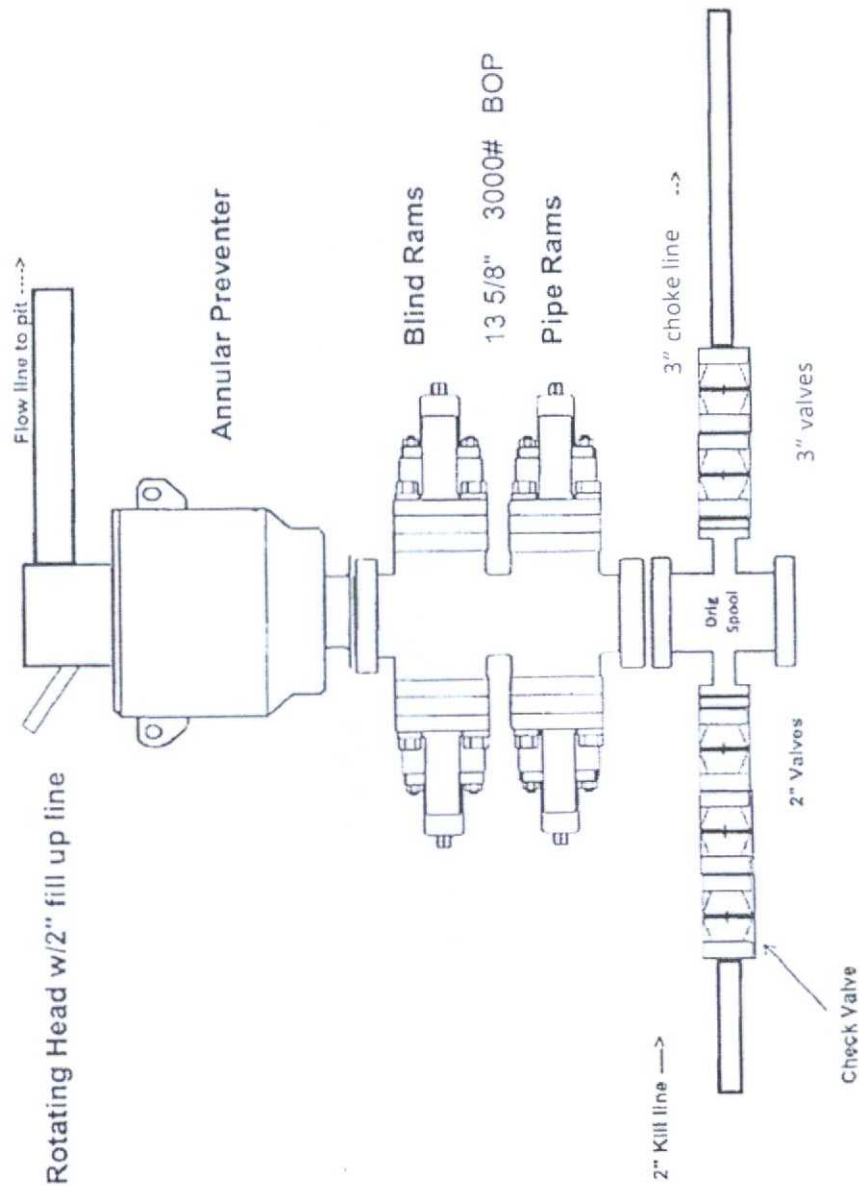
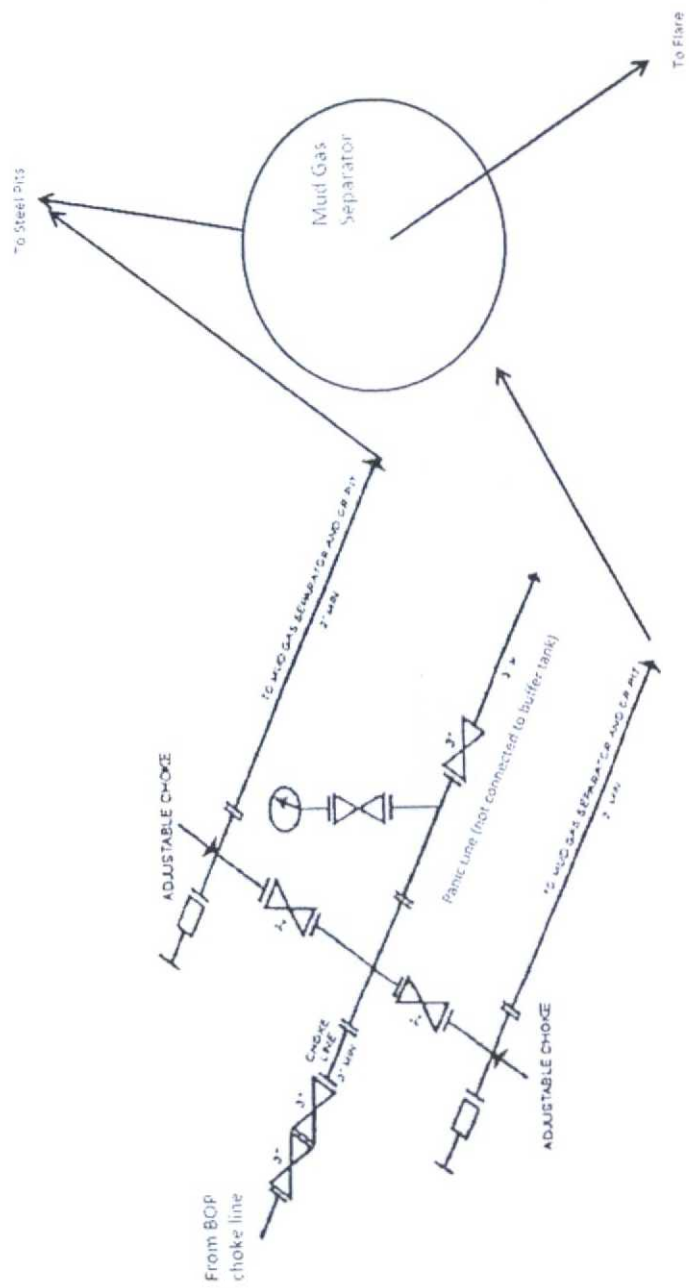


Exhibit A

Attachment to APD
BTA Oil Producers, LLC
Mesa 8105 JV-P #19H
Sec 1, T26S, R32E
Lea County, NM

COPY



3M choke manifold design

Exhibit A1

Attachment to APD
BTA Oil Producers, LLC
Mesa 8105 JV-P #19H
Sec 1, T26S, R32E
Lea County, NM