

14-617

Split Estate

OCD Hobbs

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HOBBS OCD

AUG 08 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5. Lease Serial No.
SHLABL: NM/26394

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.
CASCADE 29 FEDERAL #7H

9. API Well No.
30025 -42031

10. Field and Pool, or Exploratory
WC-025 G-06 9253329D; UPPER BS

11. Sec., T. R. M. or Blk. and Survey and Area
(97794)
29, 25S, 33E

12. County or Parish
Lea

13. State
NM

1a. Type of Work ☒ DRILL ☐ REENTER

RECEIVED

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

2. Name of Operator

Cimarex Energy Co.

3a. Address

600 N. Marienfield St. Ste. 600 Midland Tx 79071

3b. Phone No. (include area code)

432-571-7800

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At Surface 340' FNL 864' FEL

At proposed prod. Zone 330' FSL 1310' FEL

Bone Spring

14. Distance in miles and direction from nearest town or post office*

Approximately 24 miles west of Jal, 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

NM/26394=2560.00 acres

17. Spacing Unit dedicated to this well

160.00

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

130' to #4H

19. Proposed Depth

Pilot Hole TD: N/A

14,302 MD

9,875 TVD

20. BLM/BIA Bond No. on File

NM2575; NMB000835

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

3396 GR

22. Approximate date work will start*

6/1/14

23. Estimated duration

35 days

24. Attachments

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

1. Well plat certified by a registered surveyor

2. A Drilling Plan

3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).

5. Operator Certification

6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature

Paula Brunson

Name (Printed/Typed)

Paula Brunson

Date

3/6/14

Title

Steve Caffey

Approved By (Signature)

Name (Printed/Typed)

CARLSBAD FIELD OFFICE

Date

AUG - 5 2014

Title

FIELD MANAGER

Office

Application approval do conduct operations then Conditions of approval,

E-PERMITTING -- New Well Kx
Comp P&A TA

CSNG Loc CHG

ReComp Add New Pool

Cancl Well Create Pool

Title 18 U.S.S. Section States any false, fictitious

(Continued on page 2)

to those rights in the subject lease which would entitle the applicant to

APPROVAL FOR TWO YEARS

knowingly and willfully to make to any department or agency of the United States jurisdiction.

*(Instructions on page 2)

Carlsbad Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

AUG 08 2014

Application to Drill
CASCADE 29 FEDERAL #7H
 Cimarex Energy Co.
 UL: A, Sec. 29, 25S, 33E
 Lea Co., NM

In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

HOBBS OCD

AUG 08 2014

1. Location: SHL 340' FNL 864' FEL
 BHL 330' FSL 1310' FEL

2. Elevation Above Sea Level: 3,396' GR

3. Geologic Name of Surface Formation: Quaternary Alluvium Deposits

RECEIVED

4. Drilling Tools and Associated Equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal

5. Proposed Drilling Depth: 14,302 MD 9,875 TVD Pilot Hole TD: N/A

6. Estimated Tops of Geological Markers:

Formation	Est Top	Bearing
Rustler		995 N/A
Salt		1140 N/A
Castille		3380 N/A
Lamar		4900 N/A
Bell Canyon		4945 N/A
Cherry Canyon		6190 N/A
Brushy Canyon		7485 N/A
Bone Spring		9045 N/A
U. Avalon (Leonard)		9080 N/A
L. Avalon		9680 Hydrocarbons

7. Possible Mineral Bearing Formation: Shown above

7A. OSE Ground Water Estimated Depth: 250'

8. Casing Program:

Name	Casing Depth From (ft)	Casing Setting Depth (ft) MD	Casing Setting Depth (ft) TVD	Open Hole Size (inches)	Casing Size (inches)	Casing Weight (lb/ft)	Casing Grade	Thread	Condition	BHP (psig)	Anticipated Mud Weight (ppg)	Collapse SF at Full Evacuation(1.125)	Collapse SF at 1/3 Evacuation(1.125)	Burst SF (1.125)	Cumulative Air Weight	Cumulative Bouyed Weight (lbs)	Bouyant Tension SF (1.8)
Surface	0	1045	1045	17 1/2	13-3/8"	48.00	H-40	ST&C	New	451	8.3	1.64		3.84	50,160	43,804	7.35
Intermediate	0	4920	4920	12 1/4	9-5/8"	40.00	J-55	LT&C	New	2558	10.0		1.50	1.54	196,800	166,754	3.12
Production	0	9398	9398	8 3/4	5-1/2"	17.00	L-80	LT&C	New	4398	9.0	1.43		1.76	167,875	144,808	2.33
Production	9398	14302	9875	8 3/4	5-1/2"	17.00	L-80	BT&C	New	4621	9.0	1.36		1.67	8,109	6,995	56.76

Note: Operator may drill a 8-1/2" OH from end of curve to TD of the well. This is to reduce the need to ream the conventionally drilled curve to run a RSS assembly into the lateral.

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8A. Casing Design and Casing Loading Assumptions:

Surface	Tension	A 1.8 design factor with effects of buoyancy: 8.30 ppg.
	Collapse	A 1.125 design factor with full internal evacuation and a collapse force equal to a 8.30 ppg mud gradient.
	Burst	A 1.125 design with a surface pressure equal to the fracture gradient at setting depth less gas gradient to surface.
Intermediate	Tension	A 1.8 design factor with effects of buoyancy: 10.00 ppg.
	Collapse	A 1.125 design factor evacuated 1/3 TVD of next casing string with a collapse force equal to a 10.00 ppg mud gradient.
	Burst	A 1.125 design with a surface pressure equal to the fracture gradient at setting depth less gas gradient to surface.
Production and/or Production Completion System	Tension	A 1.8 design factor with effects of buoyancy: 9.00 ppg.
	Collapse	A 1.125 design factor with full internal evacuation of next casing string with a collapse force equal to a 9.00 ppg mud gradient.
	Burst	A 1.125 design with a surface pressure equal to the fracture gradient at setting depth less gas gradient to surface.

9. Cementing Program:

Casing Type	Type	Sacks	Yield	Weight	Cubic Feet	Cement Blend
Surface	Lead	498	1.75	13.50	871	Class C + Bentonite + Calcium Chloride + LCM, 8.829 gps water
	Tail	136	1.34	14.80	181	Class C + LCM, 6.32 gps water
	TOC: 0		45% Excess			Centralizers per Onshore Order 2.III.B.1f
Intermediate	Lead	897	1.88	12.90	1686	35:65 (poz/C) + Salt + Bentonite + LCM + retarder, 9.65 gps water
	Tail	288	1.34	14.80	385	Class C + retarder + LCM, 6.32 gps water
	TOC: 0		44% Excess			
Production	Lead	545	2.40	11.90	1307	35:65 (poz/H) + salt + Sodium Metasilicate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder, 13.80 gps water
	Tail	1212	1.24	14.50	1502	50:50 (poz/H) + Bentonite + Salt + Fluid Loss + Dispersant + LCM + Retarder, 5.55 gps water
	TOC: 4720		16% Excess			No centralizers planned in the lateral section. 1 every jt from EOC to KOP. 1 every 4th joint from KOP to 500' inside previous casing.

Cement volumes will be adjusted depending on hole size

9a. Proposed Drilling Plan:

Pilot Hole TD: No Pilot KOP: 9,398' EOC: 10,148'

Set Surface and Intermediate casing strings. Drill production hole to KOP. Continue drilling lateral through the curve to TD. Run prod casing & cement.

10. Pressure Control Equipment:

Exhibit "E-1". A BOP consisting of two rams with blind rams and pipe rams, and one annular preventer. Below the surface casing, a 2M system will be used. Below the intermediate casing, a 3M system will be used. See attachments for BOP and choke manifold diagrams. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A Rotating head may be installed as needed. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

BOP and associated equipment will be installed, used, maintained, and tested in a manner necessary to assure well control and shall be in place and operational prior to drilling the surface casing shoe. The Annular Preventer shall be functioned at least weekly. The pipe and blind rams will be operated each trip. No abnormal pressure or temperature is expected while drilling.

BOPS will be tested by an independent service company. The ram preventers, choke manifold, and safety valves will be tested as follows: On the surface casing, pressure tests will be made to 250 psi low and 2000 psi high. On the intermediate casing, pressure tests will be made to 250 psi low and 3000 psi high.

The Annular Preventer will be tested to 250 psi low and 1000 psi high on the surface casing, and 250 low and 1500 high on the intermediate casing.

Cimarex Energy Co. of Colorado requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached (please see Exhibit F, F-1, F-2, F-3). The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used.

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11. Proposed Mud Circulating System:

Depth	Mud Weight	Visc	Fluid Loss	Type Mud
0' to 1045'	7.80 - 8.30	28	NC	FW Spud Mud
1045' to 4920'	9.50 - 10.00	30-32	NC	Brine Water
4920' to 14302'	8.50 - 9.00	30-32	NC	FW/Cut Brine

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

The Mud Monitoring System is an electronic Pason System satisfying requirements of Onshore Order 1.

12. Testing, Logging and Coring Program:

- A. Mud logging program: 2 man unit from 4920 to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL /GR -- Inter. Csg to TD
CNL /GR -- Surf to Inter. Csg
- C. No DSTs or cores are planned at this time
- D. CBL w/ CCL from as far as gravity will let it fall to TOC

13. Potential Hazards:

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Cimarex does not anticipate that there will be enough H₂S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of an "H₂S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H₂S Safety package on all wells, attached is an "H₂S Drilling Operations Plan." Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP: 4444 psi

Estimated BHT: 159°

14. Construction and Drilling:

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.

Drilling expected to take: 35 days.

If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15. Other Facets of Operations:

If production casing is run an additional 30 days will be required to complete and construct surface facilities.

L. Avalon pay will be perforated and stimulated.

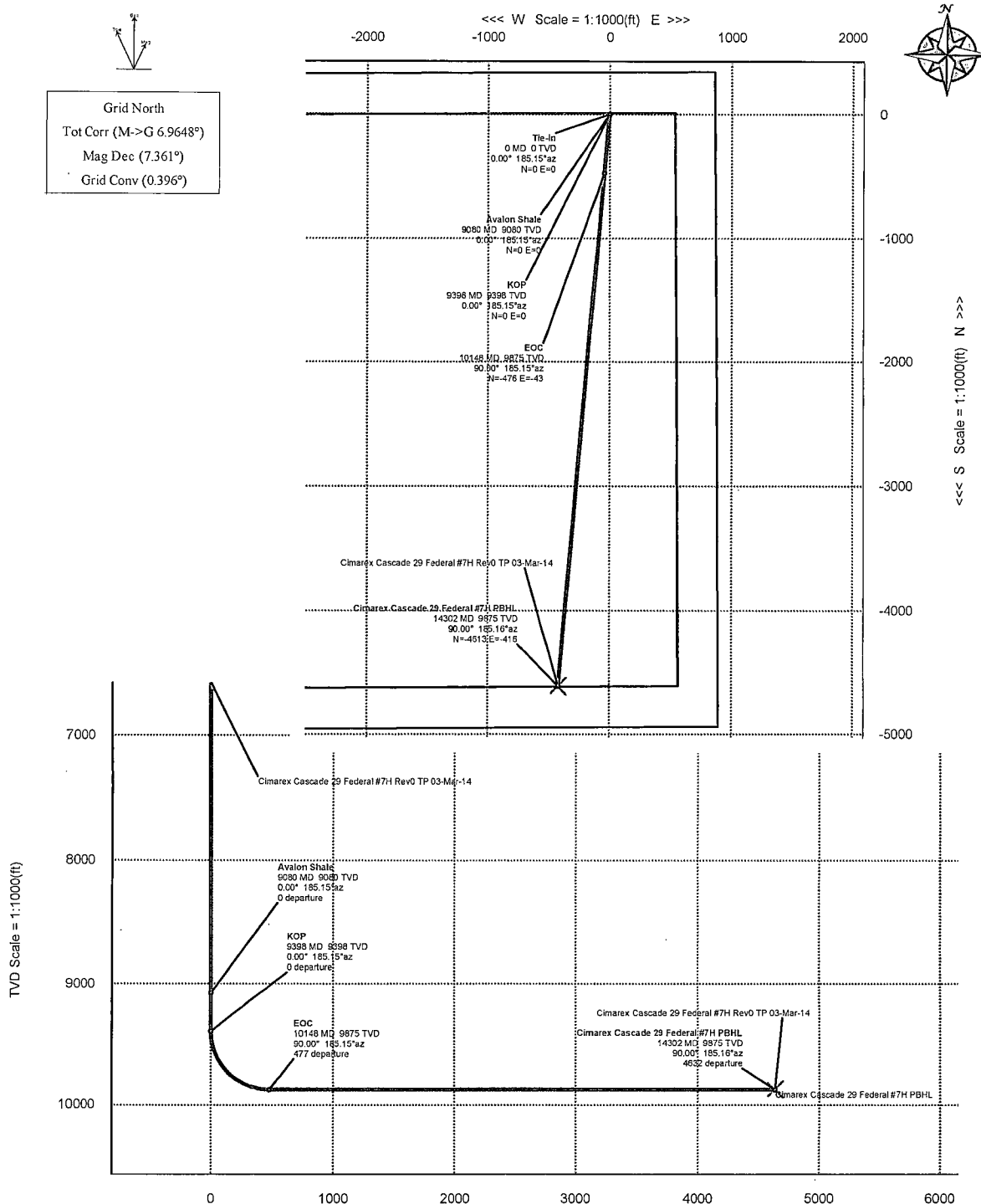
The proposed well will be tested and potential as **Oil**



Cimarex

PATHFINDER
A Schlumberger Company

WELL	Cascade 29 Federal #7H	FIELD	NM Lea County (NAD 83)	STRUCTURE	Cimarex Cascade 29 Federal #
Magnetic Parameters	Model: 30504 2013	Dip: 59.933°	Date: March 03, 2014	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet
		Mag Dec: 7.361°	FS: 48253.41T	Lat: N 32 5 28.406	Longitude: W 103 35 18.816
				Northings: 403183.70 NUS	Eastings: 771940.42 EUS
				Grid Conv: 0.3967	Scale Fact: 0.9997000
				Measurements	Set: Cascade 29 Federal #7H
					Plan: Cimarex Cascade 29 Federal #7H Rev0 TP03-Mar-14



Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+) / S(-)	E(+) / W(-)	DLS
Tie-In	0.00	0.00	185.15	0.00	0.00	0.00	0.00	
Avalon Shale	9080.00	0.00	185.15	9080.00	0.00	0.00	0.00	0.00
KOP	9397.54	0.00	185.15	9397.54	0.00	0.00	0.00	0.00
EOC	10147.54	90.00	185.15	9875.00	477.46	-475.54	-42.86	12.00
Cimarex Cascade 29 Federal #7H PBHL	14301.85	90.00	185.16	9875.00	4631.78	-4613.05	-416.11	0.00

Cimarex Cascade 29 Federal #7H Rev0 TP 03-Mar-14 Proposal Report

(Non-Def Plan)

Report Date: March 03, 2014 - 03:28 PM
Client: Cimarex
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Cascade 29 Federal #7H / Cascade 29 Federal #7H
Well: Cascade 29 Federal #7H
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Cascade 29 Federal #7H Rev0 TP 03-Mar-14
Survey Date: March 03, 2014
Tort / AHD / DDI / ERD Ratio: 90.010 ° / 4631.777 ft / 5.781 / 0.469
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 6' 28.40646", W 103° 35' 18.81643"
Location Grid N/E Y/X: N 403783.700 ftUS, E 771940.400 ftUS
CRS Grid Convergence Angle: 0.3959 °
Grid Scale Factor: 0.99997

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 185.154 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: Ground level
TVD Reference Elevation: 3396.000 ft above MSL
Seabed / Ground Elevation: 3396.000 ft above MSL
Magnetic Declination: 7.361 °
Total Field Strength: 48253.426 nT
Magnetic Dip Angle: 59.993 °
Declination Date: March 03, 2014
Magnetic Declination Model: BGGM 2013
North Reference: Grid North
Grid Convergence Used: 0.3959 °
Total Corr Mag North->Grid North: 6.9648 °
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
Tie-In	0.00	0.00	185.15	0.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	N/A
	100.00	0.00	185.15	100.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	200.00	0.00	185.15	200.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	300.00	0.00	185.15	300.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	400.00	0.00	185.15	400.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	500.00	0.00	185.15	500.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	600.00	0.00	185.15	600.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	700.00	0.00	185.15	700.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	800.00	0.00	185.15	800.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	900.00	0.00	185.15	900.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	1000.00	0.00	185.15	1000.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	1100.00	0.00	185.15	1100.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	1200.00	0.00	185.15	1200.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	1300.00	0.00	185.15	1300.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	1400.00	0.00	185.15	1400.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	1500.00	0.00	185.15	1500.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	1600.00	0.00	185.15	1600.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	1700.00	0.00	185.15	1700.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	1800.00	0.00	185.15	1800.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	1900.00	0.00	185.15	1900.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	2000.00	0.00	185.15	2000.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	2100.00	0.00	185.15	2100.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	2200.00	0.00	185.15	2200.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	2300.00	0.00	185.15	2300.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	2400.00	0.00	185.15	2400.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	2500.00	0.00	185.15	2500.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	2600.00	0.00	185.15	2600.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	2700.00	0.00	185.15	2700.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	2800.00	0.00	185.15	2800.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	2900.00	0.00	185.15	2900.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	3000.00	0.00	185.15	3000.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
	3100.00	0.00	185.15	3100.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	3200.00	0.00	185.15	3200.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	3300.00	0.00	185.15	3300.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	3400.00	0.00	185.15	3400.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	3500.00	0.00	185.15	3500.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	3600.00	0.00	185.15	3600.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	3700.00	0.00	185.15	3700.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	3800.00	0.00	185.15	3800.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	3900.00	0.00	185.15	3900.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	4000.00	0.00	185.15	4000.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	4100.00	0.00	185.15	4100.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	4200.00	0.00	185.15	4200.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	4300.00	0.00	185.15	4300.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	4400.00	0.00	185.15	4400.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	4500.00	0.00	185.15	4500.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	4600.00	0.00	185.15	4600.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	4700.00	0.00	185.15	4700.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	4800.00	0.00	185.15	4800.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	4900.00	0.00	185.15	4900.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	5000.00	0.00	185.15	5000.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	5100.00	0.00	185.15	5100.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	5200.00	0.00	185.15	5200.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	5300.00	0.00	185.15	5300.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	5400.00	0.00	185.15	5400.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	5500.00	0.00	185.15	5500.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	5600.00	0.00	185.15	5600.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	5700.00	0.00	185.15	5700.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	5800.00	0.00	185.15	5800.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	5900.00	0.00	185.15	5900.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	6000.00	0.00	185.15	6000.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	6100.00	0.00	185.15	6100.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	6200.00	0.00	185.15	6200.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	6300.00	0.00	185.15	6300.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	6400.00	0.00	185.15	6400.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	6500.00	0.00	185.15	6500.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	6600.00	0.00	185.15	6600.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	6700.00	0.00	185.15	6700.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	6800.00	0.00	185.15	6800.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	6900.00	0.00	185.15	6900.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	7000.00	0.00	185.15	7000.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	7100.00	0.00	185.15	7100.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	7200.00	0.00	185.15	7200.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	7300.00	0.00	185.15	7300.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	7400.00	0.00	185.15	7400.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	7500.00	0.00	185.15	7500.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	7600.00	0.00	185.15	7600.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	7700.00	0.00	185.15	7700.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	7800.00	0.00	185.15	7800.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	7900.00	0.00	185.15	7900.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	8000.00	0.00	185.15	8000.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	8100.00	0.00	185.15	8100.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	8200.00	0.00	185.15	8200.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	8300.00	0.00	185.15	8300.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	8400.00	0.00	185.15	8400.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00
	8500.00	0.00	185.15	8500.00	0.00	0.00	0.00	403783.70	771940.40	N 32° 6' 28.41"	W 103° 35' 18.82"	0.00	0.00	0.00

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
Avalon Shale	8600.00	0.00	185.15	8600.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	8700.00	0.00	185.15	8700.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	8800.00	0.00	185.15	8800.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	8900.00	0.00	185.15	8900.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	9000.00	0.00	185.15	9000.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	9080.00	0.00	185.15	9080.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	9100.00	0.00	185.15	9100.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	9200.00	0.00	185.15	9200.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	9300.00	0.00	185.15	9300.00	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
	9397.54	0.00	185.15	9397.54	0.00	0.00	0.00	403783.70	771940.40	N 32 6 28.41	W 103 35 18.82	0.00	0.00	0.00
KOP	9400.00	0.30	185.15	9400.00	0.01	-0.01	0.00	403783.69	771940.40	N 32 6 28.41	W 103 35 18.82	0.01	185.15	12.00
EOC	9500.00	12.30	185.15	9499.22	10.95	-10.91	-0.98	403772.79	771939.42	N 32 6 28.30	W 103 35 18.83	10.95	185.15	12.00
	9600.00	24.30	185.15	9593.99	42.29	-42.11	-3.80	403741.59	771936.60	N 32 6 27.99	W 103 35 18.86	42.29	185.15	12.00
	9700.00	36.30	185.15	9680.17	92.64	-92.26	-8.32	403691.44	771932.08	N 32 6 27.49	W 103 35 18.92	92.64	185.15	12.00
	9800.00	48.30	185.15	9754.01	159.81	-159.17	-14.35	403624.54	771926.06	N 32 6 26.83	W 103 35 19.00	159.81	185.15	12.00
	9900.00	60.30	185.15	9812.26	240.87	-239.89	-21.62	403543.81	771918.78	N 32 6 26.03	W 103 35 19.09	240.87	185.15	12.00
	10000.00	72.30	185.15	9852.39	332.26	-330.92	-29.82	403452.79	771910.58	N 32 6 25.13	W 103 35 19.19	332.26	185.15	12.00
	10100.00	84.30	185.15	9872.64	430.00	-428.27	-38.60	403355.45	771901.80	N 32 6 24.17	W 103 35 19.30	430.00	185.15	12.00
	10147.54	90.00	185.15	9875.00	477.46	-475.54	-42.86	403308.18	771897.54	N 32 6 23.70	W 103 35 19.35	477.46	185.15	12.00
	10200.00	90.00	185.15	9875.00	529.92	-527.79	-47.57	403255.93	771892.83	N 32 6 23.19	W 103 35 19.41	529.92	185.15	0.00
	10300.00	90.00	185.15	9875.00	629.92	-627.38	-56.54	403156.34	771883.86	N 32 6 22.20	W 103 35 19.52	629.92	185.15	0.00
	10400.00	90.00	185.15	9875.00	729.92	-726.98	-65.52	403056.75	771874.88	N 32 6 21.22	W 103 35 19.64	729.92	185.15	0.00
	10500.00	90.00	185.15	9875.00	829.92	-826.57	-74.50	402957.15	771865.90	N 32 6 20.23	W 103 35 19.75	829.92	185.15	0.00
	10600.00	90.00	185.15	9875.00	929.92	-926.17	-83.48	402857.56	771856.93	N 32 6 19.25	W 103 35 19.86	929.92	185.15	0.00
	10700.00	90.00	185.15	9875.00	1029.92	-1025.77	-92.46	402757.97	771847.95	N 32 6 18.26	W 103 35 19.97	1029.92	185.15	0.00
	10800.00	90.00	185.15	9875.00	1129.92	-1125.36	-101.43	402658.37	771838.97	N 32 6 17.28	W 103 35 20.09	1129.92	185.15	0.00
	10900.00	90.00	185.15	9875.00	1229.92	-1224.96	-110.41	402558.78	771829.99	N 32 6 16.29	W 103 35 20.20	1229.92	185.15	0.00
	11000.00	90.00	185.15	9875.00	1329.92	-1324.55	-119.39	402459.19	771821.01	N 32 6 15.31	W 103 35 20.31	1329.92	185.15	0.00
	11100.00	90.00	185.15	9875.00	1429.92	-1424.15	-128.37	402359.59	771812.03	N 32 6 14.32	W 103 35 20.42	1429.92	185.15	0.00
	11200.00	90.00	185.15	9875.00	1529.92	-1523.75	-137.35	402260.00	771803.05	N 32 6 13.34	W 103 35 20.54	1529.92	185.15	0.00
	11300.00	90.00	185.15	9875.00	1629.92	-1623.34	-146.33	402160.41	771794.07	N 32 6 12.35	W 103 35 20.65	1629.92	185.15	0.00
	11400.00	90.00	185.15	9875.00	1729.92	-1722.94	-155.32	402060.82	771785.09	N 32 6 11.37	W 103 35 20.76	1729.92	185.15	0.00
	11500.00	90.00	185.15	9875.00	1829.92	-1822.53	-164.30	401961.22	771776.11	N 32 6 10.38	W 103 35 20.87	1829.92	185.15	0.00
	11600.00	90.00	185.15	9875.00	1929.92	-1922.13	-173.28	401861.63	771767.13	N 32 6 9.40	W 103 35 20.99	1929.92	185.15	0.00
	11700.00	90.00	185.15	9875.00	2029.92	-2021.73	-182.26	401762.04	771758.14	N 32 6 8.41	W 103 35 21.10	2029.92	185.15	0.00
	11800.00	90.00	185.15	9875.00	2129.92	-2121.32	-191.24	401662.45	771749.16	N 32 6 7.43	W 103 35 21.21	2129.92	185.15	0.00
	11900.00	90.00	185.15	9875.00	2229.92	-2220.92	-200.23	401562.85	771740.18	N 32 6 6.44	W 103 35 21.32	2229.92	185.15	0.00
	12000.00	90.00	185.15	9875.00	2329.92	-2320.51	-209.21	401463.26	771731.20	N 32 6 5.46	W 103 35 21.43	2329.92	185.15	0.00
	12100.00	90.00	185.15	9875.00	2429.92	-2420.11	-218.20	401363.67	771722.21	N 32 6 4.47	W 103 35 21.55	2429.92	185.15	0.00
	12200.00	90.00	185.15	9875.00	2529.92	-2519.70	-227.18	401264.08	771713.23	N 32 6 3.49	W 103 35 21.66	2529.92	185.15	0.00
	12300.00	90.00	185.16	9875.00	2629.92	-2619.30	-236.16	401164.48	771704.24	N 32 6 2.50	W 103 35 21.77	2629.92	185.15	0.00
	12400.00	90.00	185.16	9875.00	2729.92	-2718.90	-245.15	401064.89	771695.26	N 32 6 1.52	W 103 35 21.88	2729.92	185.15	0.00
	12500.00	90.00	185.16	9875.00	2829.92	-2818.49	-254.14	400965.30	771686.27	N 32 6 0.53	W 103 35 22.00	2829.92	185.15	0.00
	12600.00	90.00	185.16	9875.00	2929.92	-2918.09	-263.12	400865.71	771677.29	N 32 5 59.55	W 103 35 22.11	2929.92	185.15	0.00
	12700.00	90.00	185.16	9875.00	3029.92	-3017.68	-272.11	400766.12	771668.30	N 32 5 58.56	W 103 35 22.22	3029.92	185.15	0.00
	12800.00	90.00	185.16	9875.00	3129.92	-3117.28	-281.10	400666.52	771659.31	N 32 5 57.58	W 103 35 22.33	3129.92	185.15	0.00
	12900.00	90.00	185.16	9875.00	3229.92	-3216.87	-290.08	400566.93	771650.33	N 32 5 56.60	W 103 35 22.45	3229.92	185.15	0.00
	13000.00	90.00	185.16	9875.00	3329.92	-3316.47	-299.07	400467.34	771641.34	N 32 5 55.61	W 103 35 22.56	3329.92	185.15	0.00
	13100.00	90.00	185.16	9875.00	3429.92	-3416.06	-308.06	400367.75	771632.35	N 32 5 54.63	W 103 35 22.67	3429.92	185.15	0.00
	13200.00	90.00	185.16	9875.00	3529.92	-3515.66	-317.05	400268.15	771623.36	N 32 5 53.64	W 103 35 22.78	3529.92	185.15	0.00
	13300.00	90.00	185.16	9875.00	3629.92	-3615.25	-326.04	400168.56	771614.37	N 32 5 52.66	W 103 35 22.90	3629.92	185.15	0.00
	13400.00	90.00	185.16	9875.00	3729.92	-3714.85	-335.02	400068.97	771605.39	N 32 5 51.67	W 103 35 23.01	3729.92	185.15	0.00
	13500.00	90.00	185.16	9875.00	3829.92	-3814.44	-344.01	399969.38	771596.40	N 32 5 50.69	W 103 35 23.12	3829.92	185.15	0.00
	13600.00	90.00	185.16	9875.00	3929.92	-3914.04	-353.00	399869.79	771587.41	N 32 5 49.70	W 103 35 23.23	3929.92	185.15	0.00
	13700.00	90.00	185.16	9875.00	4029.92	-4013.63	-362.00	399770.19	771578.42	N 32 5 48.72	W 103 35 23.35	4029.92	185.15	0.00

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')		Longitude (E/W ° ' '')		Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
	13800.00	90.00	185.16	9875.00	4129.92	-4113.23	-370.99	399670.60	771569.43	N 32	5 47.73	W 103 35	23.46	4129.92	185.15	0.00
	13900.00	90.00	185.16	9875.00	4229.92	-4212.82	-379.98	399571.01	771560.43	N 32	5 46.75	W 103 35	23.57	4229.92	185.15	0.00
	14000.00	90.00	185.16	9875.00	4329.92	-4312.42	-388.97	399471.42	771551.44	N 32	5 45.76	W 103 35	23.68	4329.92	185.15	0.00
	14100.00	90.00	185.16	9875.00	4429.92	-4412.01	-397.96	399371.83	771542.45	N 32	5 44.78	W 103 35	23.80	4429.92	185.15	0.00
	14200.00	90.00	185.16	9875.00	4529.92	-4511.61	-406.95	399272.24	771533.46	N 32	5 43.79	W 103 35	23.91	4529.92	185.15	0.00
	14300.00	90.00	185.16	9875.00	4629.92	-4611.20	-415.95	399172.64	771524.47	N 32	5 42.81	W 103 35	24.02	4629.92	185.15	0.00
Cimarex Cascade 29 Federal #7H PBHL	14301.85	90.00	185.16	9875.00	4631.78	-4613.05	-416.11	399170.80	771524.30	N 32	5 42.79	W 103 35	24.02	4631.78	185.15	0.00

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	14301.852	1/100.000	30.000	30.000	SLB_MWD-STD	Original Hole / Cimarex Cascade 29 Federal #7H Rev0 TP 03-Mar-

Drilling 8-3/4" hole
below 9 5/8" Casing

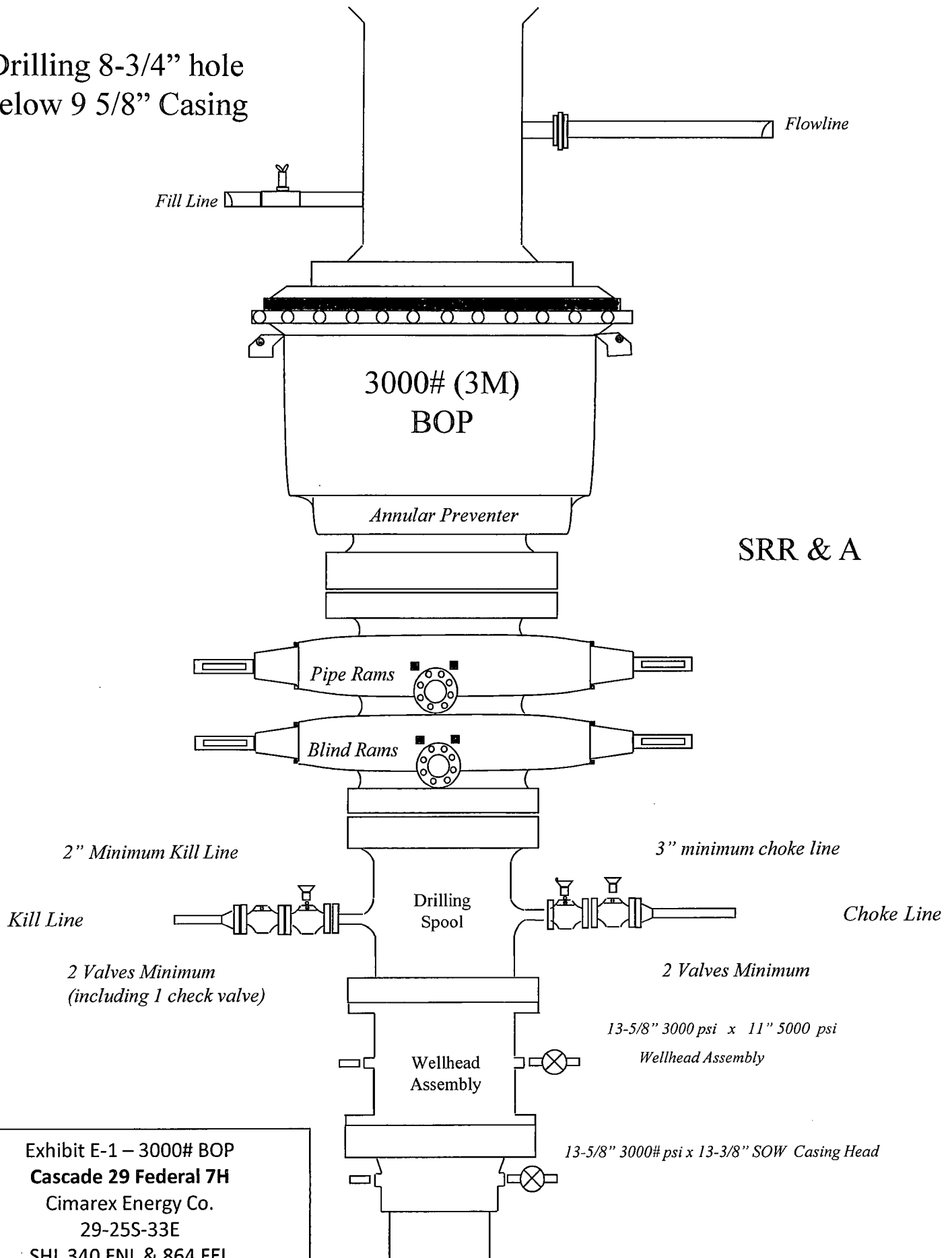
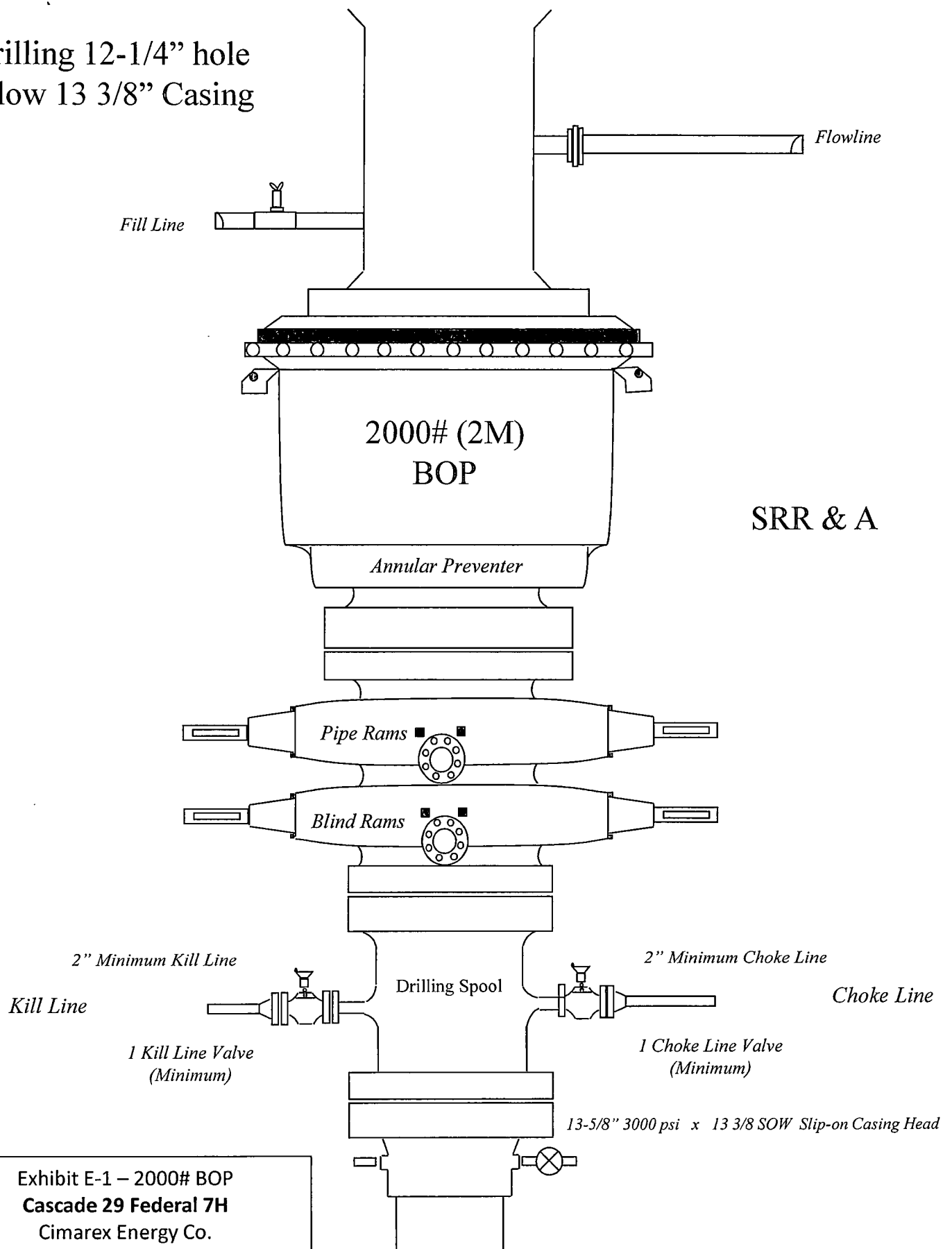


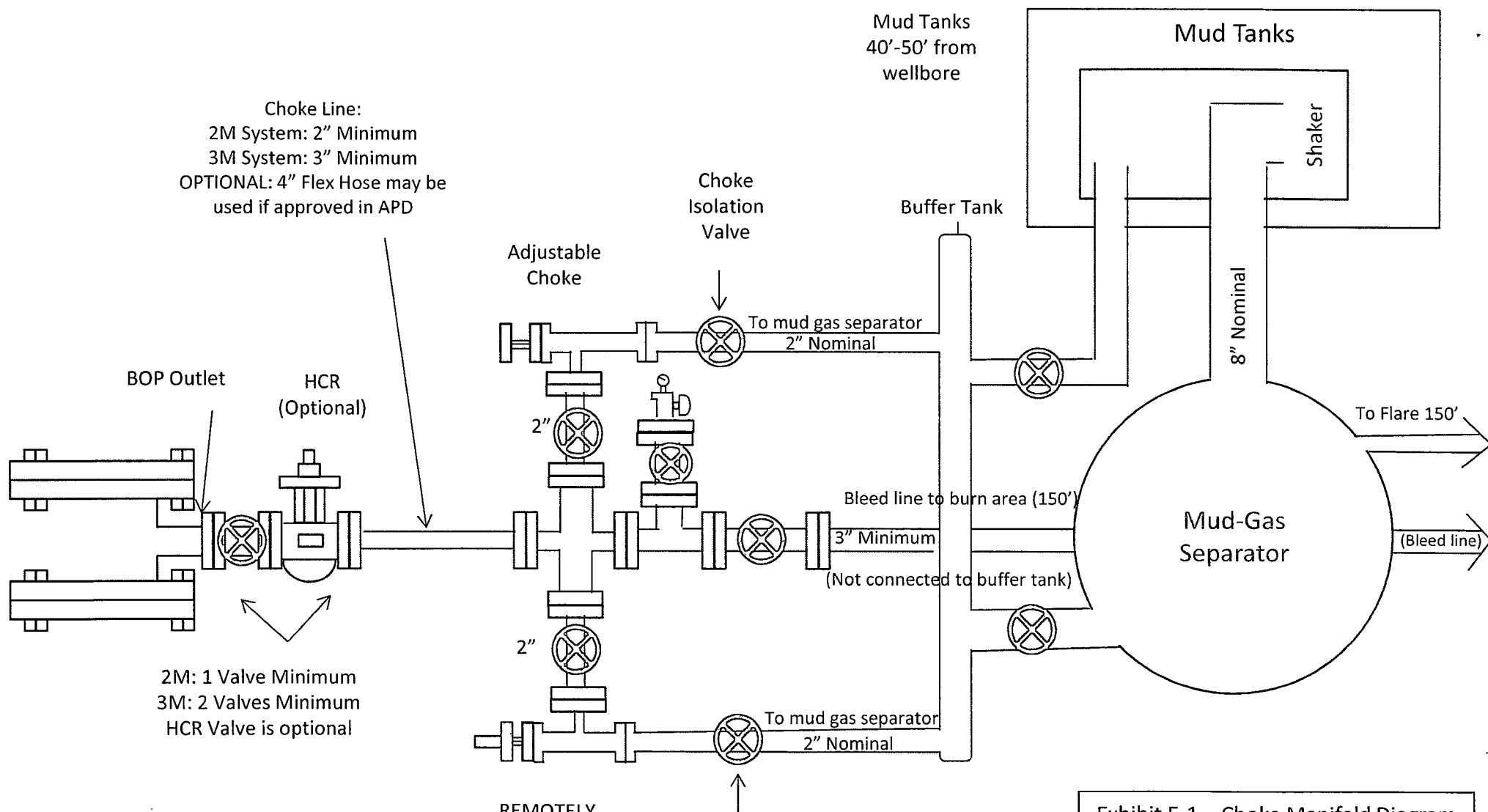
Exhibit E-1 – 3000# BOP
Cascade 29 Federal 7H
Cimarex Energy Co.
29-25S-33E
SHL 340 FNL & 864 FEL
BHL 330 FSL & 1310 FEL
Eddy County, NM

Drilling 12-1/4" hole
below 13 3/8" Casing



SRR & A

Exhibit E-1 – 2000# BOP
Cascade 29 Federal 7H
Cimarex Energy Co.
29-25S-33E
SHL 340 FNL & 864 FEL
BHL 330 FSL & 1310 FEL
Eddy County, NM



Drilling Operations Choke Manifold 2M/3M Service

Exhibit E-1 – Choke Manifold Diagram
Cascade 29 Federal 7H
 Cimarex Energy Co.
 29-25S-33E
 SHL 340 FNL & 864 FEL
 BHL 330 FSL & 1310 FEL
 Eddy County, NM

Exhibit F-1 – Co-Flex Hose Hydrostatic Test

Cascade 29 Federal 7H

Cimarex Energy Co.

29-25S-33E

SHL 340 FNL & 864 FEL

BHL 330 FSL & 1310 FEL

Eddy County, NM



Midwest Hose
& Specialty, Inc.

INTERNAL HYDROSTATIC TEST REPORT

Customer:

Oderco Inc

P.O. Number:

odyd-271

HOSE SPECIFICATIONS

Type: Stainless Steel Armor
Choke & Kill Hose

Hose Length: 45'ft.

I.D. 4 INCHES

O.D. 9 INCHES

WORKING PRESSURE

TEST PRESSURE

BURST PRESSURE

10,000 PSI

15,000 PSI

0 PSI

COUPLINGS

Stem Part No.

OKC

OKC

Ferrule No.

OKC

OKC

Type of Coupling:

Swage-It

PROCEDURE

Hose assembly pressure tested with water at ambient temperature.

TIME HELD AT TEST PRESSURE

ACTUAL BURST PRESSURE:

15 MIN.

0 PSI

Hose Assembly Serial Number:

79793

Hose Serial Number:

OKC

Comments:

Date:

3/8/2011

Tested:

A. Jaime Serna

Approved:



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

Customer: Houston

Pick Ticket #: 94260

Hose Specifications

Hose Type
C&K

I.D.
4"

Working Pressure
10000 PSI

Length
45'

O.D.
6.09"

Burst Pressure
Standard Safety Multiplier Applies

Verification

Type of Fitting
41/1610K

Die Size
6.38"

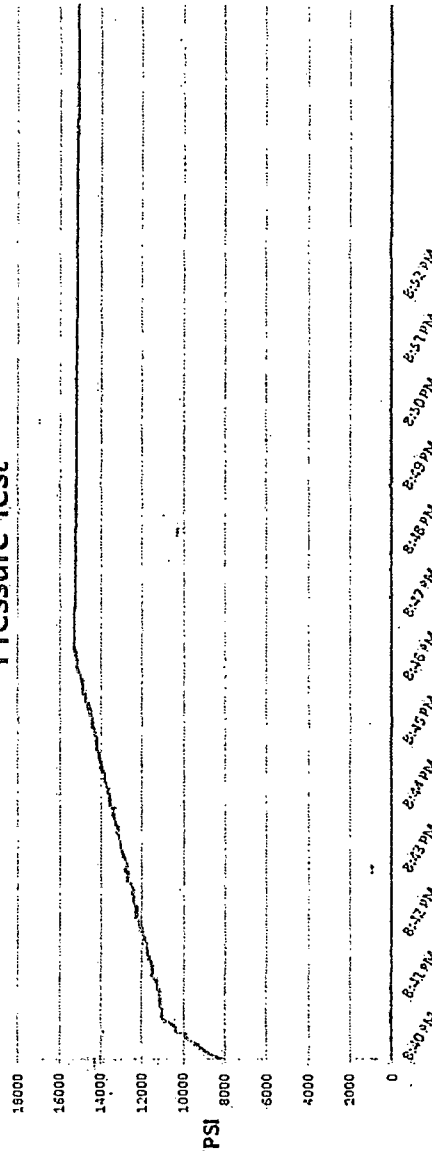
Hose Serial #
5544

Coupling Method
Swage

Final O.D.
6.25"

Hose Assembly Serial #
79793

Pressure Test



Test Pressure
15000 PSI

Time Held at Test Pressure
11 Minutes

Actual Burst Pressure

Peak Pressure
15483 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Zac McConnell

Approved By: Kim Thomas

[Signature]

[Signature]

March 3, 2011

Exhibit F-1 - Co-Flex Hose Hydrostatic Test
Cascade 29 Federal 7H
Cimarex Energy Co.
29-25S-33E
SHL 340 FNL & 864 FEL
BHL 330 FSL & 1310 FEL
Eddy County, NM

Exhibit F-2 – Co-Flex Hose
Cascade 29 Federal 7H
Cimarex Energy Co.
29-25S-33E
SHL 340 FNL & 864 FEL
BHL 330 FSL & 1310 FEL
Eddy County, NM



Midwest Hose
& Specialty, Inc.

Certificate of Conformity

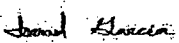
Customer:		PO
DEM		ODYD-271
SPECIFICATIONS		
Sales Order	Dated:	
79793	3/8/2011	
We hereby certify that the material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards Supplier: Midwest Hose & Specialty, Inc. 10640 Tanner Road Houston, Texas 77041		
Comments:		
Approved:		Date:
		3/8/2011



Exhibit F -3- Co-Flex Hose
Cascade 29 Federal 7H
Cimarex Energy Co.
29-25S-33E
SHL 340 FNL & 864 FEL
BHL 330 FSL & 1310 FEL
Eddy County, NM

Specification Sheet Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium components. The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, hammer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermiculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

Working Pressure:	5,000 or 10,000 psi working pressure
Test Pressure:	10,000 or 15,000 psi test pressure
Reinforcement:	Multiple steel cables
Cover:	Stainless Steel Armor
Inner Tube:	Petroleum resistant, Abrasion resistant
End Fitting:	API flanges, API male threads, threaded or butt weld hammer unions, unbolt and other special connections
Maximum Length:	110 Feet
ID:	2-1/2", 3", 3-1/2", 4"
Operating Temperature:	-22 deg F to +180 deg F (-30 deg C to +82 deg C)

Exhibit F – Co-Flex Hose

Cascade 29 Federal 7H

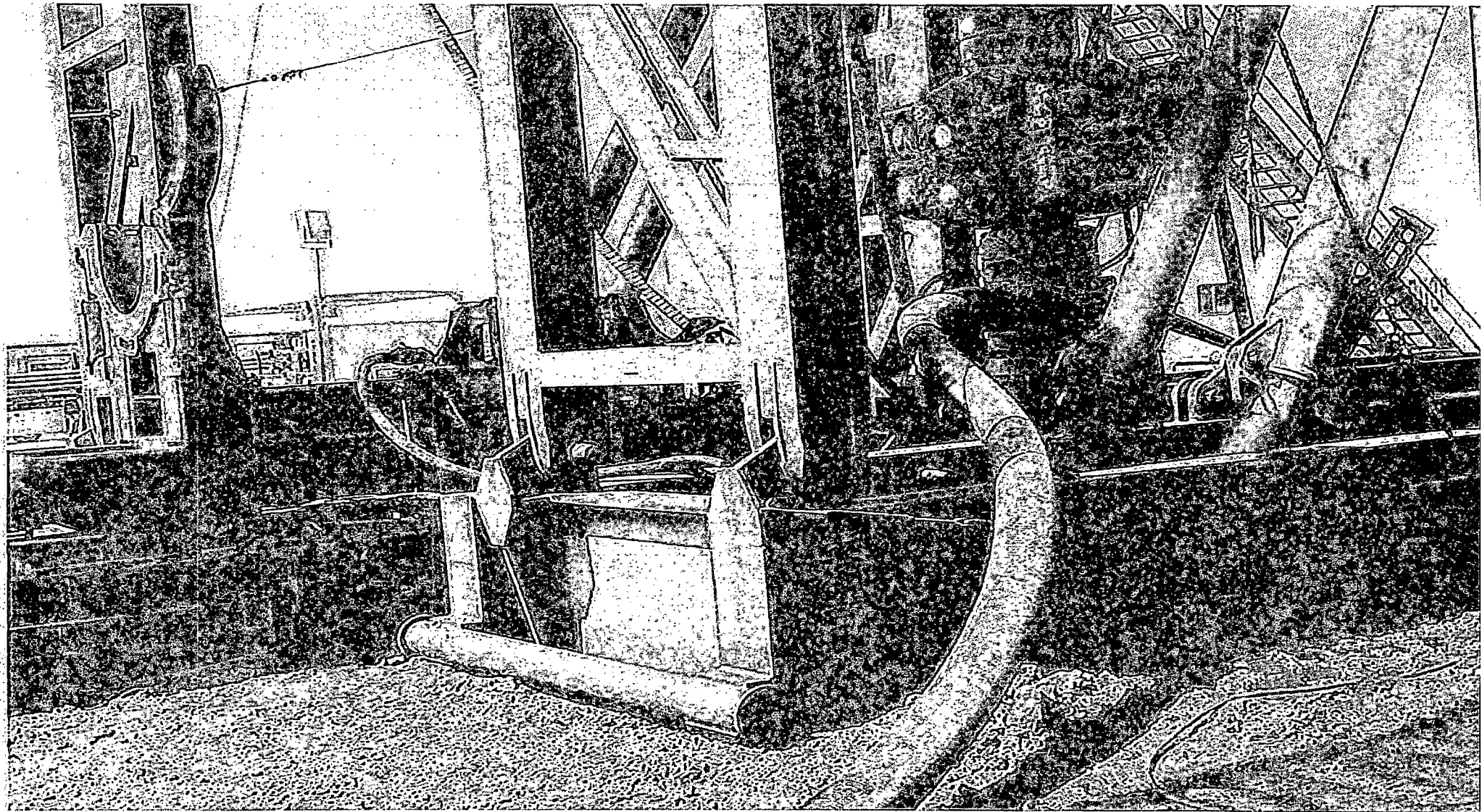
Cimarex Energy Co.

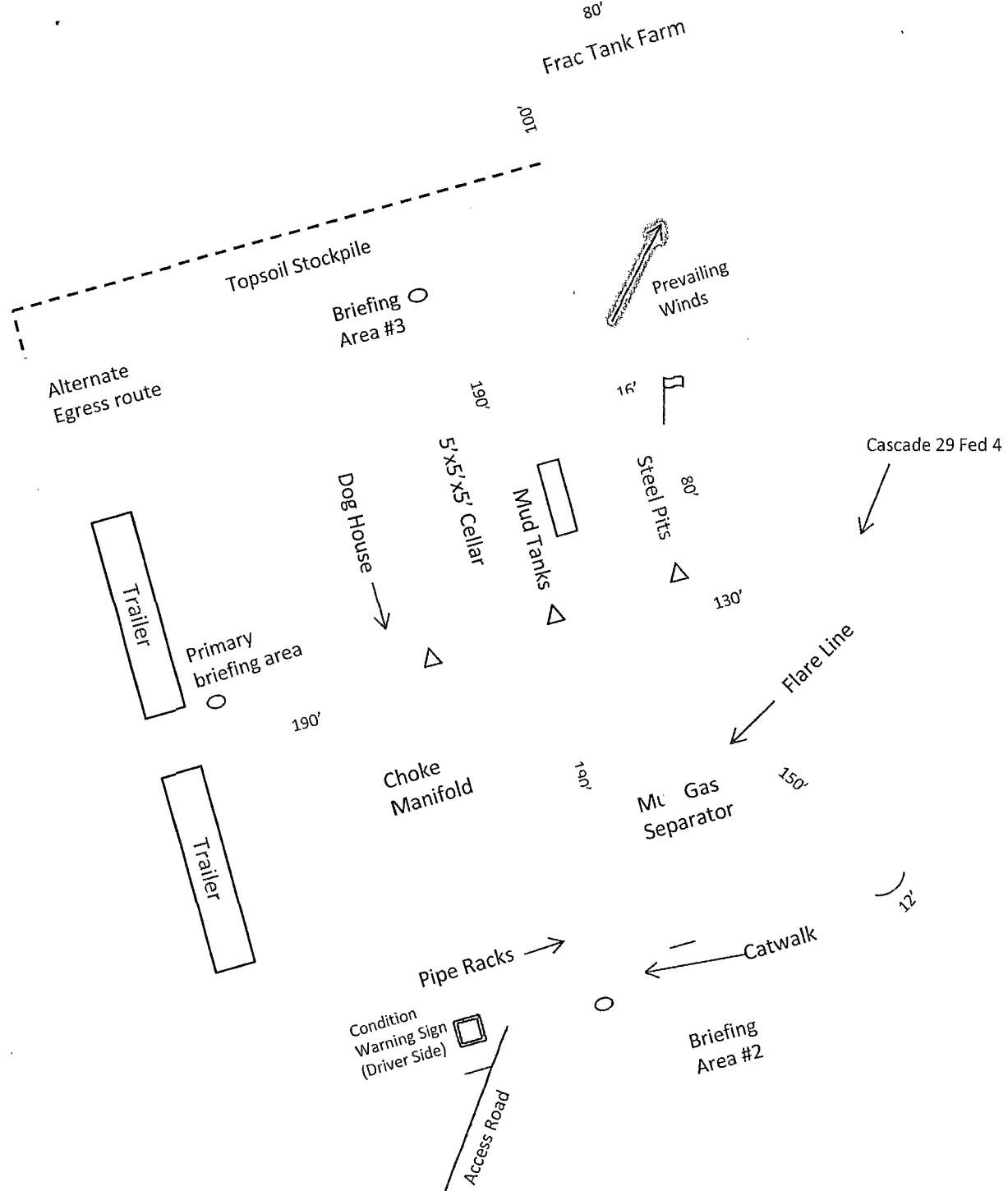
29-25S-33E

SHL 340 FNL & 864 FEL

BHL 330 FSL & 1310 FEL

Eddy County, NM





Wind Direction Indicators
(wind sock or streamers)



• H2S Monitors
(alarms at bell nipple and shale shaker)



Briefing Areas

N



Exhibit D – Rig Diagram
Cascade 29 Federal 7H
 Cimarex Energy Co.
 29-25S-33E
 SHL 340 FNL & 864 FEL
 BHL 330 FSL & 1310 FEL
 Eddy County, NM

Operator - Land Owner Agreement

HOBBS OCD

Company: Cimarex Energy Co.

AUG 08 2014

Proposed Well: Cascade 29 Federal 7H

RECEIVED

Federal Lease Number: NMNM026394

Please be advised that Cimarex Energy Co. has an agreement with the surface owner, listed below, concerning entry and surface restoration after completion of drilling operations at the above described well.

Brinninstool XL Ranch, LLC

Chris Brinninstool

P.O. Box 940

Jal, NM 88252

575-225-2870

After abandonment of the well, all pits will be filled and levelled and all equipment and trash will be removed from the well site. No other requirements were made concerning restoration of the well site.

3/6/2014

Date

Paula Brunson

Signature

Paula Brunson