

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTNM OIL CONSERVATION
ARTESIA DISTRICTFORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010SUNDRY 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.

RECEIVED

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM81586
2. Name of Operator OXY USA INCORPORATED Contact: DAVID STEWART E-Mail: david_stewart@oxy.com		6. If Indian, Allottee or Tribe Name
3a. Address 5 GREENWAY PLAZA STE 110 HOUSTON, TX 77046-0521	3b. Phone No. (include area code) Ph: 432.685.5717	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 22 T24S R29E SENE 1415FNL 155FEL		8. Well Name and No. CEDAR CANYON 23 FEDERAL 4H
		9. API Well No. 30-015-43281-00-X1
		10. Field and Pool, or Exploratory PIERCE CROSSING
		11. County or Parish, and State EDDY 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 Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

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 recompleat 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 recompleat 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.)

OXY USA Inc. respectfully requests approval for the following changes to the approved APD:

1. Move Surface Location to a multi-well pad to accommodate skidding the rig.
2. Amend horizontal lateral - NSL to be filed
3. Amend casing/cementing/mud programs
4. Propose to run the wellhead through the rotary prior to cementing surface casing.

Proposed TD - 16317'M 8982'V

1. Amended C-102 and plats attached

New - SL 1352 FNL 195 FEL SENE Sec 22 - BHL 1415 FNL 2460 FWL SENW Sec 24
Old - SL 1415 FNL 155 FEL SENE Sec 22 - BHL 1700 FNL 2460 FWL SENW Sec 24

Follow existing COA's NRS per [Signature] 10-27-15

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Eng OK Carls 10/26/15

Copied for record
[Signature] NMOC 10/20/15

14. I hereby certify that the foregoing is true and correct. Electronic Submission #321082 verified by the BLM Well Information System For OXY USA INCORPORATED, sent to the Carlsbad Committed to AFMSS for processing by LINDA DENNISTON on 10/26/2015 (16LD0097SE)	
Name (Printed/Typed) DAVID STEWART	Title REGULATORY ADVISOR
Signature (Electronic Submission)	Date 10/22/2015

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By [Signature]	For FIELD MANAGER	Date 11/9/15
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 BLM-CARLSBAD FIELD OFFICE

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 **

Additional data for EC transaction #321082 that would not fit on the form

32. Additional remarks, continued

2. Amended Directional Plan attached

3. Amended casing/cementing/mud programs

a. Surface Casing

10-3/4" 45.5# J-55 BT&C new csg @ 0-440', 14-3/4" hole w/ 8.4# mud
Coll Rating (psi)-2090 Burst Rating (psi)-3580
SF Coll-10.94 SF Burst-1.40 SF Ten-6.11

b. Intermediate Casing - Deep

7-5/8" 29.7# L80 BT&C new csg @ 0-8132', 9-7/8" hole w/ 9.4# mud
Coll Rating (psi)-4790 Burst Rating (psi)-6890
SF Coll-5.00 SF Burst-1.31 SF Ten-2.19
Setting depth will be +/- 100' of approved depending on how formation tops affect planned KOP.
DVT/ACP to be set @ +/-3050', if cement circulates to surface on 1st stage, cancelation cone will be dropped.

c. Production Casing

5-1/2" 20# P-110 USF new csg @ 0-8950'M, 6-3/4" hole w/ 9.2# mud
Coll Rating (psi)-11100 Burst Rating (psi)-12600
SF Coll-2.69 SF Burst-1.22 SF Ten-2.05
4-1/2" 13.5# P-110 BT&C new csg @ 8950-16316'M, 6-3/4" hole w/ 9.2# mud
Coll Rating (psi)-10670 Burst Rating (psi)-12410
SF Coll-2.42 SF Burst-1.23 SF Ten-2.15

Collapse and burst loads calculated using Stress Check with anticipated loads, see attached for design assumptions

Cement program modifications detailed below.

a. Surface - Circulate cement to surface w/ 550sx PP cmt w/ 2% CaCl₂, 14.8ppg 1.35 yield, 500# CS in 6.50hr, 150% Excess.

b. Intermediate - Circulate cement to surface w/ 1094sx Tuned Light (TM) system cmt w/ 3#/sx Kol-Seal + .125#/sx Poly-E-Flake + .8% HR-601, 10.2ppg 3.05 yield, 500# CS in 15.07hr, 125% Excess followed by 150sx Super H cmt w/ 3#/sx salt + .1% HR-800 + .3% CFR-3 + .5% Halad(R)-344 + 2#/sx Kol-Seal, 13.2ppg 1.65 yield, 500# CS in 12.57hr, 15% Excess.

Contingency 2nd Stage - Circulate cement to surface w/ 480sx HES light PP cmt w/ 5% Salt + .1% HR-800, 12.9ppg 1.87 yield, 500# CS in 12.44hr, 75% Excess followed by 182sx PP cmt, 14.8ppg 1.33 yield, 500# CS in 6.31hr, 125% Excess.

c. Production - Cement w/ 1063sx Super H cmt w/ 3#/sx salt + .1% HR-800 + .3% CFR-3 + .5% Halad(R)-344 + 2#/sx Kol-Seal, 13.2ppg 1.65 yield, 500# CS in 12.57hr, 50% Excess. Estimated TOC @ 7276'.

Description of Cement Additives: Calcium Chloride, Salt (Accelerator); CFR-3 (Dispersant); Kol-Seal, Poly-E-Flake (Lost Circulation Additive); Halad-344 (Low Fluid Loss Control); HR-601, HR-800 (Retarder)

The above cement volumes could be revised pending the caliper measurement.

Mud Program

Depth	Mud WT	Vis Sec	Fluid Loss	Type
0-440'	8.4-8.8	28-38	NC	FW Gel
440-3050'	9.8-10	28-32	NC	NaCl Brine
3050-8132'	8.8-9.6	38-50	50-75cc/30min	EnerSeal (MMH)
8132'-TD	8.8-9.4	28-100	NC	Oil Based Mud

Remarks: The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation. Oxy proposes to drill out the 10-3/4" surface casing shoe with a saturated brine system from 440-3050', which is the base of the salt system. At this point we will swap fluid systems to a high viscosity mixed metal hydroxide system and will drill with this system to the intermediate TD @ 8132'. We are also proposing to change the production mud system back to a oil based mud system.

District I
 1025 N. French Dr., Hobbs, NM 88240
 Phone: (575) 393-6161 Fax: (575) 393-6700
 District II
 811 S. Fort St., Artesia, NM 88210
 Phone: (575) 748-1283 Fax: (575) 748-4730
 District III
 1000 Van Hook Road, Alamogordo, NM 87110
 Phone: (505) 334-6178 Fax: (505) 334-6170
 District IV
 1230 S. St. Francis Dr., Santa Fe, NM 87505
 Phone: (505) 476-3468 Fax: (505) 476-3461

State of New Mexico
 Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

Form C-102
 Revised August 1, 2011
 Submit one copy to appropriate
 District Office

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-43281	Pool Code 916473	Pool Name Pierce Crossing Bone Springs, E.
Property Code 315018	Property Name CEDAR CANYON "23" FEDERAL	Well Number 4H
OGRID No. 116696	Operator Name OXY USA INC.	Elevation 2942.4'

Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
H	22	24 SOUTH	29 EAST, N.M.P.M.		1352'	NORTH	195'	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
F	24	24 SOUTH	29 EAST, N.M.P.M.		1415'	NORTH	2460'	WEST	EDDY

Dedicated Acres 240	Joint or Infill Y	Consolidation Code	Order No. NSL to be filed.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

				OPERATOR CERTIFICATION I hereby certify that the information furnished herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order hereafter entered by the division. <i>[Signature]</i> 10/22/15 David Stewart Sr. Reg. Adv. david.stewart@oxy.com	
SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. NEW MEXICO OCTOBER 12, 2015 15079 TERRY J. BIRD 10/20/2015 15079				HO/ 151012WL-a (Rev. A) (X)	

OXY USA Inc.
Cedar Canyon 23 Federal

Casing Design Assumptions:

Burst Loads

CSG Test (Surface)

- Internal: Displacement fluid + 70% CSG Burst rating
- External: Pore Pressure from section TD to surface

CSG Test (Intermediate)

- Internal: Displacement fluid + 70% CSG Burst rating
- External: Pore Pressure from the Intermediate hole TD to Surface CSG shoe and MW of the drilling mud that was in the hole when the CSG was run to surface

CSG Test (Production)

- Internal: Fresh water displacement fluid + 80% CSG Burst rating
- External: Pore Pressure from the well TD the Intermediate CSG shoe and MW of the drilling mud that was in the hole when the CSG was run to surface

Gas Kick (Surface/Intermediate)

- Internal: Gas Kick based on Pore Pressure or Fracture Gradient @ CSG shoe with a gas 0.115psi/ft Gas gradient to surface while drilling the next hole section (e.g. Gas Kick while drilling the production hole section is a burst load used to design the intermediate CSG)
- External: Pore Pressure from section TD to previous CSG shoe and MW of the drilling mud that was in the hole when the CSG was run to surface

Stimulation (Production)

- Internal: Displacement fluid + Max Frac treating pressure (not to exceed 80% CSG Burst rating)
- External: Pore Pressure from the well TD to the Intermediate CSG shoe and 8.5 ppg MWE to surface

Collapse Loads

Lost Circulation (Surface/Intermediate)

- Internal: Losses experienced while drilling the next hole section (e.g. losses while drilling the production hole section are used as a collapse load to design the intermediate CSG). After losses there will be a column of mud inside the CSG with an equivalent weight to the Pore Pressure of the lost circulation zone
- External: MW of the drilling mud that was in the hole when the CSG was run

Cementing (Surface/Intermediate/Production)

- Internal: Displacement Fluid
- External: Cement Slurries to TOC, MW to surface

Full Evacuation (Production)

- Internal: Atmospheric Pressure
- External: MW of the drilling mud that was in the hole when the CSG was run

Tension Loads

Running CSG (Surface/Intermediate/Production)

- Axial load of the buoyant weight of the string plus either 100 klb over-pull or string weight in air, whichever is less

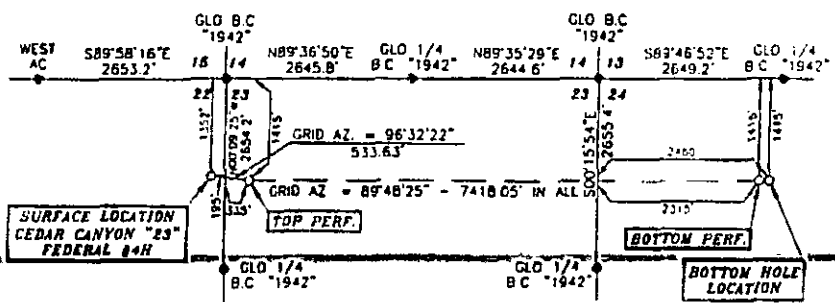
Green Cement (Surface/Intermediate/Production)

- Axial load of the buoyant weight of the string plus the cement plug bump pressure (Final displacement pressure + 500 psi)

Burst, Collapse and Tensile SF are calculated using Landmark's Stress Check (Casing Design) software.

Location

SECTIONS 22, 23, & 24, TOWNSHIP 24 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY
NEW MEXICO



Base of Bearings - GPS Coordinate Measurements
NAD 83 Zone 12N North American Datum of 1983

DRIVING DIRECTIONS:
FROM THE INTERSECTION OF U.S. HWY.
#285 AND BLACK RIVER VILLAGE ROAD IN
MALAGA, GO EAST ON COUNTY ROAD #720
FOR 0.8 MILES. TURN LEFT ON COUNTY
ROAD #745 (HARROUN ROAD) AND GO
NORTH FOR 1.0 MILES. TURN RIGHT AND GO
EAST/NORTHEAST FOR 2.1 MILES. TURN
RIGHT ON DOG TOWN ROAD AND GO
SOUTHEAST FOR 1.3 MILES. TURN LEFT ON
CALICHE ROAD AND GO EAST/SOUTHEAST
FOR 2.1 MILES. CONTINUE SOUTH FOR 1.6
MILES. TURN LEFT AND GO NORTHEAST
THEN SOUTHEAST FOR 1.0 MILES. TURN
LEFT AND GO NORTH FOR 0.1 MILES. TURN
RIGHT AND GO EAST FOR 0.1 MILES. TURN
LEFT AND GO NORTH/NORTHEAST FOR 0.1
MILES. TURN LEFT ON PROPOSED ROAD AND
GO NORTH FOR 16.7 FEET TO LOCATION.



SURVEYORS CERTIFICATE

I, TERRY J. ASEEL, NEW MEXICO PROFESSIONAL SURVEYOR
NO. 15079, DO HEREBY CERTIFY THAT I CONDUCTED AND AM
RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS
TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND
BELIEF, AND MEETS THE "MINIMUM STANDARDS FOR
SURVEYING IN NEW MEXICO" AS ADOPTED BY THE NEW
MEXICO STATE BOARD OF REGISTRATION FOR
PROFESSIONAL ENGINEERS AND SURVEYORS

Terry J. Aseel 10/13/2015
Terry J. Aseel, N.M. R.P.L.S. No. 15079

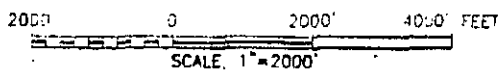
Aseel Surveying



P.O. BOX 393 - 310 W TAYLOR
HOBBS, NEW MEXICO - 575-393-7146

LEGEND

5 DENOTES FOUND MONUMENT AS NOTED



OXY USA INC.

CEDAR CANYON "23" FEDERAL #4H LOCATED
AT 1352' FNL & 195' FEL IN SECTION 22,
TOWNSHIP 24 SOUTH, RANGE 29 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO

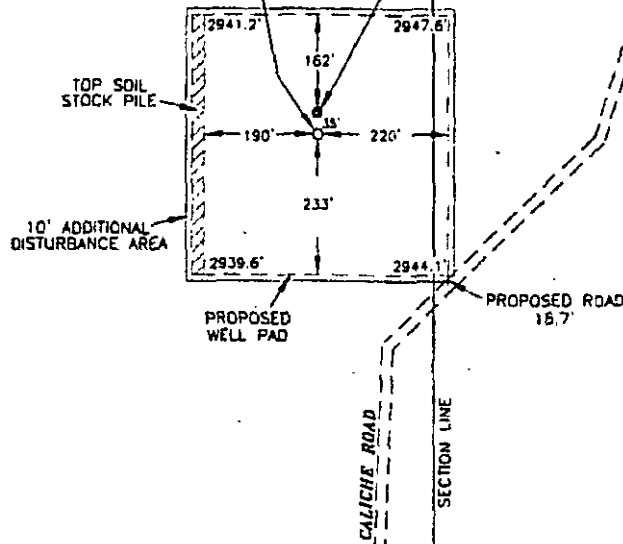
Survey Date: 10/12/15	Sheet 1 of 1 Sheets
W.O. Number: 151012WL-a	Drawn By: KA Rev:
Date: 10/13/15	151012WL-a Scale: 1"=2000'

Site Plan

OXY USA INC. CEDAR CANYON "23" FEDERAL #4H SITE PLAN

CEDAR CANYON
"23" FEDERAL #4H
ELEV. 2842.4'
(NAD 27)
LAT. = 32.2063839°N
LONG. = 103.8638948°W

CEDAR CANYON
"23" FEDERAL #5H



RIVERBEND
FED. #5



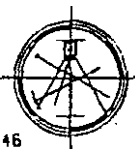
SURVEYORS CERTIFICATE

I, TERRY J. ASEL, NEW MEXICO PROFESSIONAL SURVEYOR NO. 15079, DO HEREBY CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND MEETS THE "MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO" AS ADOPTED BY THE NEW MEXICO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND SURVEYORS.

Terry J. Asel 10/13/2015
Terry J. Asel, N.M. R.P.L.S. No. 15079

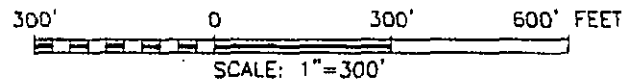
Asel Surveying

P.O. BOX 393 - 310 W TAYLOR
HOBBS, NEW MEXICO - 575-393-9146



LEGEND

- ▨ - DENOTES STOCK PILE AREA
- - DENOTES PROPOSED WELL PAD
- - DENOTES PROPOSED ROAD



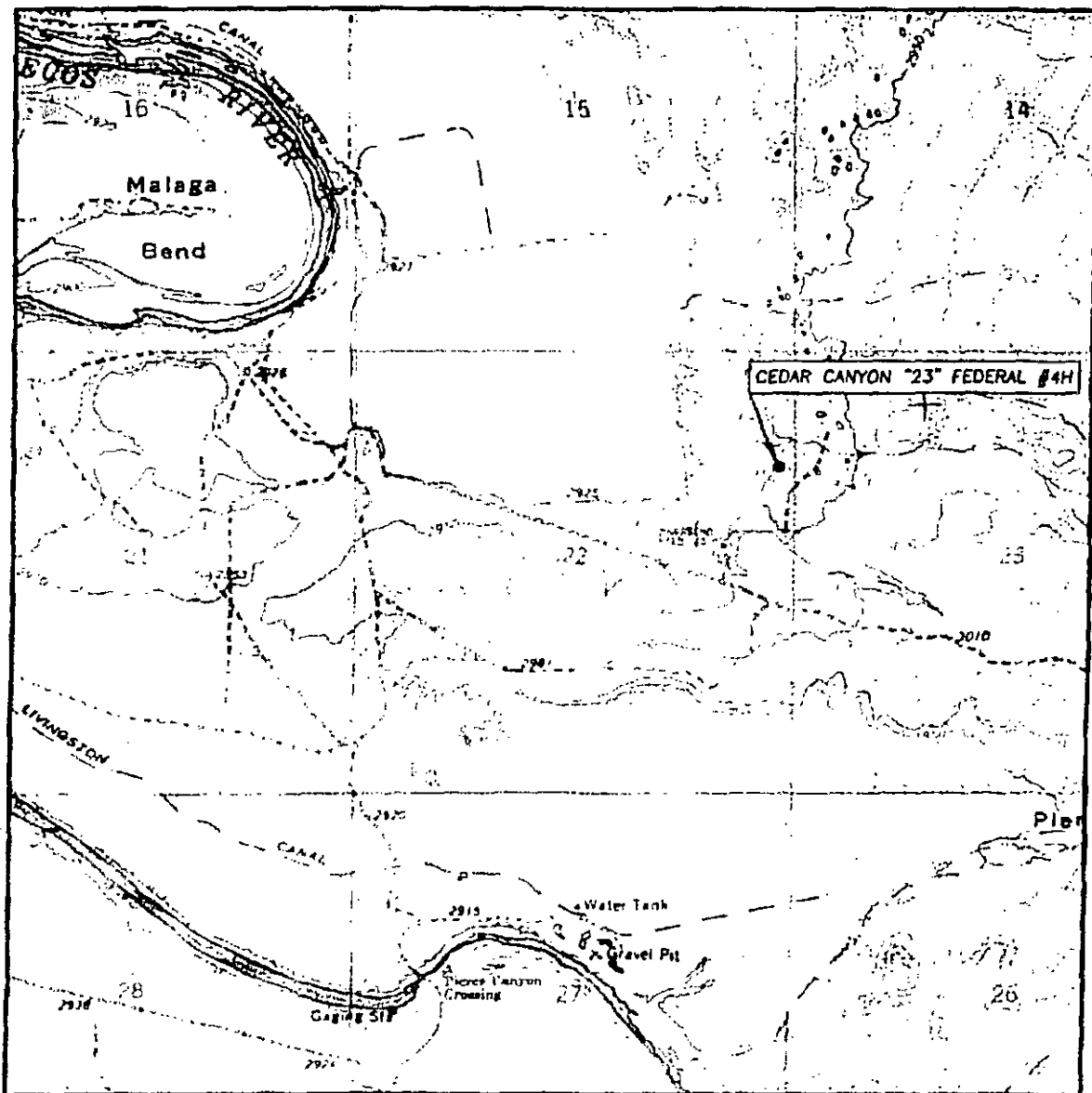
OXY USA INC.

CEDAR CANYON "23" FEDERAL #4H LOCATED
AT 1352' FNL & 195' FEL IN SECTION 22,
TOWNSHIP 24 SOUTH, RANGE 29 EAST.
N.M.P.M., EDDY COUNTY, NEW MEXICO

Survey Date: 10/12/15	Sheet 1 of 1 Sheets
W.O. Number: 151012WL-a	Drawn By: KA Rev:
Date: 10/13/15	151012WL-a Scale: 1"=300'

LUM

LOCATION-VERIFICATION-MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'

SEC. 22 TWP. 24-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1352' FNL & 195' FEL

ELEVATION 2942.4'

OPERATOR OXY USA INC.

LEASE CEDAR CANYON "23" FEDERAL #4H

U.S.G.S. TOPOGRAPHIC MAP
PIERCE CANYON, N.M.

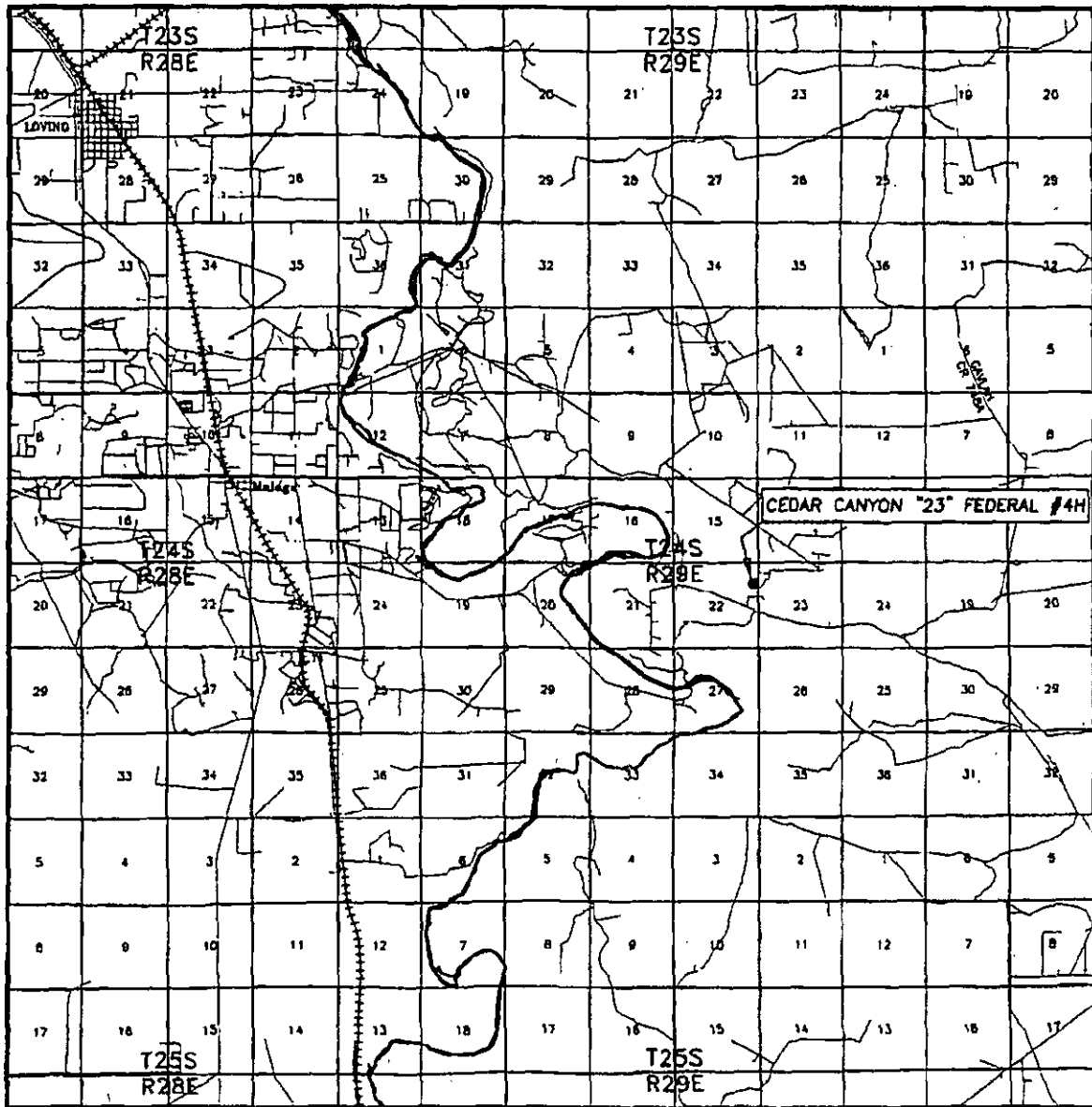
Asel Surveying

P.O. BOX 393 - 310 W TAYLOR
HOBBS, NEW MEXICO - 575-393-9146



VM

VICINITY MAP



SEC. 22 TWP. 24-S RGE. 29-E
 SURVEY N.M.P.M.
 COUNTY EDDY
 DESCRIPTION 1352' FNL & 195' FEL
 ELEVATION 2942.4'
 OPERATOR OXY USA INC.

SCALE: 1" = 2 MILES

Asel Surveying

P.O. BOX 393 - 310 W. TAYLOR
 HOBBS, NEW MEXICO - 575-393-9146



LEASE CEDAR CANYON "23" FEDERAL #4H

DIRECTIONS FROM THE INTERSECTION OF U.S. HWY. #285 AND BLACK RIVER VILLAGE ROAD IN MALAGA, GO EAST ON COUNTY ROAD #720 FOR 0.8 MILES, TURN LEFT ON COUNTY ROAD #745 (HARROUN ROAD) AND GO NORTH FOR 1.0 MILES, TURN RIGHT AND GO EAST/NORTHEAST FOR 2.1 MILES, TURN RIGHT ON DOG TOWN ROAD AND GO SOUTHEAST FOR 1.3 MILES, TURN LEFT ON CALICHE ROAD AND GO EAST/SOUTHEAST FOR 2.1 MILES, CONTINUE SOUTH FOR 1.6 MILES, TURN LEFT AND GO NORTHEAST THEN SOUTHEAST FOR 1.0 MILES, TURN LEFT AND GO NORTH FOR 0.1 MILES, TURN RIGHT AND GO EAST FOR 0.1 MILES, TURN LEFT AND GO NORTH/NORTHEAST FOR 0.1 MILES, TURN LEFT ON PROPOSED ROAD AND GO NORTH FOR 16.7 FEET TO LOCATION.

DP-1



Schlumberger

Oxy Cedar Canyon 23 Fed. 4H Rev0 MA 13Oct15 Proposal Geodetic Report (Non-Del Plan)

Report Date: October 14, 2015 - 08:45 AM
Client: OXY
Field: NM Eddy County (NAD 27)
Structure / Slot: Oxy Cedar Canyon 23 Fed. 4H / Oxy Cedar Canyon 23 Fed. 4H
Well: Oxy Cedar Canyon 23 Fed. 4H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Oxy Cedar Canyon 23 Fed. 4H Rev0 MA 13Oct15
Survey Date: October 13, 2015
Tie / AHD / ODI / ERD Ratio: 102.921 / 7957.306 h / 8.173 / 0.588
Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 12' 23.01813", W 103° 57' 50.02130"
Location Grid N/E Y/X: N 439002.030 NUS, E 614267.050 NUS
CRS Grid Convergence Angle: 0.1969°
Grid Scale Factor: 0.99982405
Version / Patch: 2.8.572.0
Survey / DLS Computation: Minimum Curvature / Lutzinski
Vertical Section Azimuth: 90.258° (Grid North)
Vertical Section Origin: 0.000 N, 0.000 H
TVD Reference Datum: RKB
TVD Reference Elevation: 2968.900 ft above MSL
Seabed / Ground Elevation: 2942.400 ft above MSL
Magnetic Declination: 7.285°
Total Gravity Field Strength: 998.468 mgals (0.80665 Gauss)
Gravity Model: GARM
Total Magnetic Field Strength: 48297.809 nT
Magnetic Dip Angle: 60.059°
Declination Date: October 13, 2015
Magnetic Declination Model: HDGM 2015
North Reference: Grid North
Grid Convergence Used: 0.1969°
Total Corr Mag North-Grid: 7.0885°
North: 7.0885°
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Inc (ft)	Adm Grid (ft)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/room)	Northing (NUS)	Easting (EUS)	Latitude (N/S, °)	Longitude (E/W, °)
SP1	0.00	0.00	105.89	0.00	-2968.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	100.00	0.00	105.89	100.00	-2868.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	200.00	0.00	105.89	200.00	-2768.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	300.00	0.00	105.89	300.00	-2668.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	400.00	0.00	105.89	400.00	-2568.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	500.00	0.00	105.89	500.00	-2468.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	600.00	0.00	105.89	600.00	-2368.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	700.00	0.00	105.89	700.00	-2268.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	800.00	0.00	105.89	800.00	-2168.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	900.00	0.00	105.89	900.00	-2068.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	1000.00	0.00	105.89	1000.00	-1968.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	1100.00	0.00	105.89	1100.00	-1868.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	1200.00	0.00	105.89	1200.00	-1768.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	1300.00	0.00	105.89	1300.00	-1668.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	1400.00	0.00	105.89	1400.00	-1568.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	1500.00	0.00	105.89	1500.00	-1468.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	1600.00	0.00	105.89	1600.00	-1368.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	1700.00	0.00	105.89	1700.00	-1268.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	1800.00	0.00	105.89	1800.00	-1168.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	1900.00	0.00	105.89	1900.00	-1068.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	2000.00	0.00	105.89	2000.00	-968.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	2100.00	0.00	105.89	2100.00	-868.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	2200.00	0.00	105.89	2200.00	-768.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	2300.00	0.00	105.89	2300.00	-668.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	2400.00	0.00	105.89	2400.00	-568.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	2500.00	0.00	105.89	2500.00	-468.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	2600.00	0.00	105.89	2600.00	-368.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	2700.00	0.00	105.89	2700.00	-268.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	2800.00	0.00	105.89	2800.00	-168.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	2900.00	0.00	105.89	2900.00	-68.90	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	3000.00	0.00	105.89	3000.00	31.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	3100.00	0.00	105.89	3100.00	131.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	3200.00	0.00	105.89	3200.00	231.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	3300.00	0.00	105.89	3300.00	331.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	3400.00	0.00	105.89	3400.00	431.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	3500.00	0.00	105.89	3500.00	531.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	3600.00	0.00	105.89	3600.00	631.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	3700.00	0.00	105.89	3700.00	731.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	3800.00	0.00	105.89	3800.00	831.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	3900.00	0.00	105.89	3900.00	931.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	4000.00	0.00	105.89	4000.00	1031.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	4100.00	0.00	105.89	4100.00	1131.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	4200.00	0.00	105.89	4200.00	1231.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	4300.00	0.00	105.89	4300.00	1331.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	4400.00	0.00	105.89	4400.00	1431.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	4500.00	0.00	105.89	4500.00	1531.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	4600.00	0.00	105.89	4600.00	1631.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
	4700.00	0.00	105.89	4700.00	1731.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
4800.00	0.00	105.89	4800.00	1831.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02	
4900.00	0.00	105.89	4900.00	1931.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02	
Madge 2"/100	5000.00	0.00	105.89	5000.00	2031.10	0.00	0.00	0.00	0.00	439002.03	614267.05	N 32 12 23.02	W 103 57 50.02
DLS to 7" inc	5100.00	2.00	105.89	5099.99	2131.08	1.68	0.47	1.68	2.00	439001.56	614268.73	N 32 12 23.01	W 103 57 50.00
	5200.00	4.00	105.89	5197.84	2230.94	8.73	-1.19	8.72	2.00	439000.14	614273.77	N 32 12 23.00	W 103 57 48.84
	5300.00	8.00	105.89	5299.45	2330.55	15.13	-4.24	15.11	2.00	438997.70	614282.18	N 32 12 22.99	W 103 57 48.85
	5350.24	7.00	105.89	5348.37	2380.47	20.81	-5.78	20.58	2.00	438996.25	614287.83	N 32 12 22.98	W 103 57 48.78
	5400.00	7.00	105.89	5398.76	2429.86	26.48	-7.42	26.43	0.00	438994.61	614293.48	N 32 12 22.94	W 103 57 49.71
	5500.00	7.00	105.89	5499.01	2529.11	38.22	-10.72	38.17	0.00	438991.31	614305.22	N 32 12 22.91	W 103 57 49.58
	5600.00	7.00	105.89	5597.26	2628.36	49.97	-14.02	49.81	0.00	438988.02	614317.96	N 32 12 22.88	W 103 57 49.44
	5700.00	7.00	105.89	5696.52	2727.62	61.73	-17.31	61.53	0.00	438984.72	614328.70	N 32 12 22.84	W 103 57 49.30
	5800.00	7.00	105.89	5795.77	2826.87	73.49	-20.61	73.29	0.00	438981.42	614339.44	N 32 12 22.81	W 103 57 49.17
	5900.00	7.00	105.89	5895.02	2926.12	85.24	-23.91	85.13	0.00	438978.13	614350.18	N 32 12 22.78	W 103 57 49.03
	6000.00	7.00	105.89	5994.28	3025.38	97.00	-27.20	96.88	0.00	438974.83	614360.92	N 32 12 22.75	W 103 57 48.89
	6100.00	7.00	105.89	6093.53	3124.63	108.75	-30.50	108.62	0.00	438971.53	614371.66	N 32 12 22.71	W 103 57 48.76
	6200.00	7.00	105.89	6192.79	3223.89	120.51	-33.80	120.34	0.00	438968.23	614382.40	N 32 12 22.68	W 103 57 48.62
	6300.00	7.00	105.89	6292.04	3323.14	132.26	-37.09	132.10	0.00	438964.94	614393.14	N 32 12 22.65	W 103 57 48.49
	6400.00	7.00	105.89	6391.29	3422.39	144.02	-40.39	143.84	0.00	438961.64	614403.88	N 32 12 22.61	W 103 57 48.35
	6500.00	7.00	105.89	6490.55	3521.65	155.78	-43.69	155.58	0.00	438958.34	614414.62	N 32 12 22.58	W 103 57 48.21
	6600.00	7.00	105.89	6589.80	3620.90	167.53	-46.99	167.32	0.00	438955.05	614425.36	N 32 12 22.55	W 103 57 48.08
	6700.00	7.00	105.89	6689.05	3720.15	179.29	-50.28	179.08	0.00	438951.75	614436.10		

DP-4

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSB (ft)	VSEC (s)	NS (ft)	EW (ft)	DLS (1/1000)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ° '")	Longitude (E/W ° ° '")
Survey Program:													
Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size	Casing Diameter (in)	Survey Tool Type		Borehole / Survey				
	1	0 000	26 500	1/100 000	30 000	30 000	SLB_UNKNOWN-Depth Only		Original Borehole / Dry Cedar Canyon 23 Fed. 4H Rev0 MA 13Oct15				
	1	26 500	16316.778	1/100 000	30 000	30 000	SLB_UNKNOWN		Original Borehole / Dry Cedar Canyon 23 Fed. 4H Rev0 MA				

DP-3

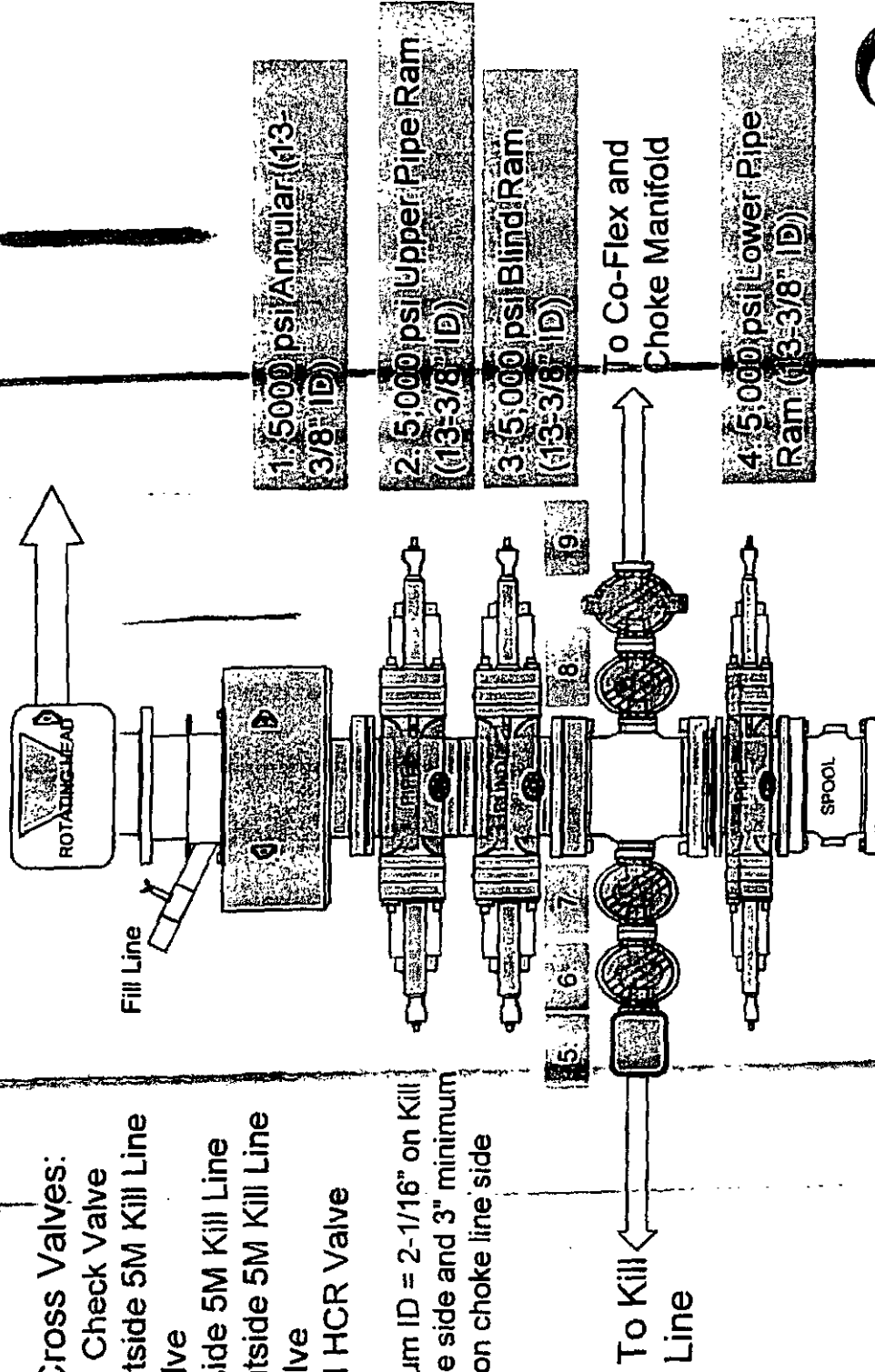
Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (s)	N3 (ft)	EW (ft)	DLS (ft/100ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
Drop 27100 DLS to Vertical	6874.89	7.00	105.69	6862.83	3893.73	199.85	-58.05	199.60	0.00	438945.99	814468.03	N 32 12 22.48	W 103 57 47.70
	6900.00	8.50	105.69	6887.57	3918.67	202.69	-58.05	202.44	2.00	438945.99	814468.03	N 32 12 22.48	W 103 57 47.70
	7000.00	4.50	105.69	6887.11	4018.21	211.84	-58.44	211.67	2.00	438942.58	814476.70	N 32 12 22.42	W 103 57 47.58
	7100.00	2.50	105.69	7086.92	4118.02	217.82	-61.09	217.55	2.00	438940.94	814484.59	N 32 12 22.41	W 103 57 47.49
	7200.00	0.50	105.69	7186.88	4217.98	220.35	-61.80	220.08	2.00	438940.23	814487.11	N 32 12 22.40	W 103 57 47.46
Hold Vertical	7225.12	0.00	105.69	7212.00	4243.10	220.46	-61.83	220.18	2.00	438940.20	814487.22	N 32 12 22.40	W 103 57 47.46
	7300.00	0.00	105.69	7286.88	4317.98	220.46	-61.83	220.18	0.00	438940.20	814487.22	N 32 12 22.40	W 103 57 47.46
	7400.00	0.00	105.69	7386.88	4417.98	220.46	-61.83	220.18	0.00	438940.20	814487.22	N 32 12 22.40	W 103 57 47.46
	7500.00	0.00	105.69	7486.88	4517.98	220.46	-61.83	220.18	0.00	438940.20	814487.22	N 32 12 22.40	W 103 57 47.46
	7600.00	0.00	105.69	7586.88	4617.98	220.46	-61.83	220.18	0.00	438940.20	814487.22	N 32 12 22.40	W 103 57 47.46
	7700.00	0.00	105.69	7686.88	4717.98	220.46	-61.83	220.18	0.00	438940.20	814487.22	N 32 12 22.40	W 103 57 47.46
	7800.00	0.00	105.69	7786.88	4817.98	220.46	-61.83	220.18	0.00	438940.20	814487.22	N 32 12 22.40	W 103 57 47.46
	7900.00	0.00	105.69	7886.88	4917.98	220.46	-61.83	220.18	0.00	438940.20	814487.22	N 32 12 22.40	W 103 57 47.46
	8000.00	0.00	105.69	7986.88	5017.98	220.46	-61.83	220.18	0.00	438940.20	814487.22	N 32 12 22.40	W 103 57 47.46
	8100.00	0.00	105.69	8086.88	5117.98	220.46	-61.83	220.18	0.00	438940.20	814487.22	N 32 12 22.40	W 103 57 47.46
Casing Point	8123.12	0.00	105.69	8186.88	5141.10	220.46	-61.83	220.18	0.00	438940.20	814487.22	N 32 12 22.40	W 103 57 47.46
	8200.00	0.00	105.69	8186.88	5217.98	220.46	-61.83	220.18	0.00	438940.20	814487.22	N 32 12 22.40	W 103 57 47.46
KOP - Build 97100 DLS Curve	8223.52	0.00	105.69	8210.39	5241.49	229.48	-61.83	220.18	0.00	438940.20	814487.22	N 32 12 22.40	W 103 57 47.46
	8300.00	6.88	89.81	8286.09	5317.79	225.05	-61.81	224.77	8.00	438940.22	814491.80	N 32 12 22.40	W 103 57 47.41
	8400.00	15.88	89.81	8384.62	5415.72	244.78	-61.75	244.49	8.00	438940.29	814511.52	N 32 12 22.40	W 103 57 47.18
	8500.00	24.88	89.81	8478.27	5509.37	279.58	-61.60	279.28	8.00	438940.40	814548.31	N 32 12 22.40	W 103 57 48.77
	8600.00	33.88	89.81	8565.31	5598.41	328.57	-61.47	328.30	8.00	438940.57	814595.32	N 32 12 22.40	W 103 57 48.20
	8700.00	42.88	89.81	8643.62	5674.72	390.60	-61.26	390.33	8.00	438940.78	814657.35	N 32 12 22.40	W 103 57 45.48
	8800.00	51.88	89.81	8711.26	5742.36	484.11	-61.01	483.84	8.00	438941.03	814730.85	N 32 12 22.40	W 103 57 44.83
	8900.00	60.88	89.81	8768.56	5797.68	547.30	-60.73	547.03	8.00	438941.31	814814.04	N 32 12 22.40	W 103 57 43.86
	9000.00	69.88	89.81	8808.17	5839.27	638.11	-60.42	637.85	8.00	438941.61	814904.85	N 32 12 22.40	W 103 57 42.50
	9100.00	78.88	89.81	8835.07	5868.17	734.32	-60.10	734.06	8.00	438941.94	815001.05	N 32 12 22.40	W 103 57 41.48
	9200.00	87.88	89.81	8848.58	5877.68	833.55	-59.76	833.29	8.00	438942.27	815100.27	N 32 12 22.40	W 103 57 40.33
Landing Point @ 88 g1° inc	9211.42	88.91	89.81	8848.90	5878.00	844.98	-59.72	844.70	8.00	438942.31	815111.69	N 32 12 22.40	W 103 57 40.19
	9300.00	88.91	89.81	8848.58	5879.68	833.53	-59.42	833.27	0.00	438942.81	815200.25	N 32 12 22.40	W 103 57 39.18
	9400.00	88.91	89.81	8850.48	5881.58	1033.50	-59.09	1033.25	0.00	438942.95	815300.22	N 32 12 22.40	W 103 57 38.00
	9500.00	88.91	89.81	8852.38	5883.48	1133.48	-58.75	1133.23	0.00	438943.02	815400.19	N 32 12 22.40	W 103 57 36.84
	9600.00	88.91	89.81	8854.28	5885.38	1233.46	-58.41	1233.21	0.00	438943.08	815500.17	N 32 12 22.40	W 103 57 35.67
	9700.00	88.91	89.81	8856.18	5887.28	1333.44	-58.08	1333.19	0.00	438943.08	815600.14	N 32 12 22.40	W 103 57 34.51
	9800.00	88.91	89.81	8858.08	5889.18	1433.42	-57.74	1433.17	0.00	438944.30	815700.11	N 32 12 22.40	W 103 57 33.34
	9900.00	88.91	89.81	8859.98	5891.08	1533.40	-57.40	1533.16	0.00	438944.63	815800.09	N 32 12 22.40	W 103 57 32.18
	10000.00	88.91	89.81	8861.88	5892.98	1633.38	-57.06	1633.14	0.00	438944.97	815900.06	N 32 12 22.40	W 103 57 31.02
	10100.00	88.91	89.81	8863.78	5894.88	1733.36	-56.73	1733.12	0.00	438945.31	816000.03	N 32 12 22.40	W 103 57 29.85
	10200.00	88.91	89.81	8865.68	5896.78	1833.34	-56.39	1833.10	0.00	438945.64	816100.01	N 32 12 22.40	W 103 57 28.69
	10300.00	88.91	89.81	8867.58	5898.68	1933.31	-56.05	1933.08	0.00	438945.98	816199.98	N 32 12 22.40	W 103 57 27.53
	10400.00	88.91	89.81	8869.48	5900.58	2033.29	-55.72	2033.06	0.00	438946.32	816299.95	N 32 12 22.40	W 103 57 26.36
	10500.00	88.91	89.81	8871.38	5902.48	2133.27	-55.38	2133.04	0.00	438946.66	816399.93	N 32 12 22.40	W 103 57 25.20
	10600.00	88.91	89.81	8873.28	5904.38	2233.25	-55.04	2233.02	0.00	438946.99	816499.90	N 32 12 22.40	W 103 57 24.04
	10700.00	88.91	89.81	8875.18	5906.28	2333.23	-54.70	2333.01	0.00	438947.33	816599.88	N 32 12 22.40	W 103 57 22.87
	10800.00	88.91	89.81	8877.08	5908.18	2433.21	-54.37	2432.99	0.00	438947.67	816699.85	N 32 12 22.40	W 103 57 21.71
	10900.00	88.91	89.81	8878.98	5910.08	2533.19	-54.03	2532.97	0.00	438948.00	816799.82	N 32 12 22.40	W 103 57 20.54
	11000.00	88.91	89.81	8880.88	5911.98	2633.17	-53.69	2632.95	0.00	438948.34	816899.80	N 32 12 22.40	W 103 57 19.38
	11100.00	88.91	89.81	8882.78	5913.88	2733.15	-53.35	2732.93	0.00	438948.68	816999.77	N 32 12 22.40	W 103 57 18.22
	11200.00	88.91	89.81	8884.68	5915.78	2833.12	-53.02	2832.91	0.00	438949.02	817099.74	N 32 12 22.40	W 103 57 17.05
	11300.00	88.91	89.81	8886.58	5917.68	2933.10	-52.68	2932.88	0.00	438949.35	817199.72	N 32 12 22.40	W 103 57 15.89
	11400.00	88.91	89.81	8888.48	5919.58	3033.08	-52.34	3032.86	0.00	438949.69	817299.69	N 32 12 22.40	W 103 57 14.73
	11500.00	88.91	89.81	8890.38	5921.48	3133.06	-52.01	3132.86	0.00	438950.02	817399.66	N 32 12 22.40	W 103 57 13.56
	11600.00	88.91	89.81	8892.28	5923.38	3233.04	-51.67	3232.84	0.00	438950.37	817499.64	N 32 12 22.40	W 103 57 12.40
	11700.00	88.91	89.81	8894.18	5925.28	3333.02	-51.33	3332.82	0.00	438950.70	817599.61	N 32 12 22.40	W 103 57 11.24
	11800.00	88.91	89.81	8896.08	5927.18	3433.00	-50.99	3432.80	0.00	438951.04	817699.58	N 32 12 22.40	W 103 57 10.07
	11900.00	88.91	89.81	8897.98	5929.08	3532.98	-50.66	3532.78	0.00	438951.38	817799.56	N 32 12 22.39	W 103 57 9.91
	12000.00	88.91	89.81	8899.88	5930.98	3632.96	-50.32	3632.77	0.00	438951.71	817899.53	N 32 12 22.39	W 103 57 7.74
	12100.00	88.91	89.81	8901.78	5932.88	3732.93	-49.98	3732.75	0.00	438952.05	817999.51	N 32 12 22.39	W 103 57 6.58
	12200.00	88.91	89.81	8903.68	5934.78	3832.91	-49.65	3832.73	0.00	438952.39	818099.48	N 32 12 22.39	W 103 57 5.42
	12300.00	88.91	89.81	8905.58	5936.68	3932.89	-49.31	3932.71	0.00	438952.73	818199.45	N 32 12 22.39	W 103 57 4.25
	12400.00	88.91	89.81	8907.48	5938.58	4032.87	-48.97	4032.69	0.00	438953.06	818299.43	N 32 12 22.39	W 103 57 3.09
	12500.00	88.91	89.81	8909.38	5940.48	4132.85	-48.63	4132.67	0.00	438953.40	818399.40	N 32 12 22.39	W 103 57 1.93
	12600.00	88.91	89.81	8911.28	5942.38	4232.83	-48.30	4232.65	0.00	438953.74	818499.37	N 32 12 22.39	W 103 57 0.78
	12700.00	88.91	89.81	8913.18	5944.28	4332.81	-47.96	4332.63	0.00	438954.07	818599.35	N 32 12 22.39	W 103 56 59.60
	12800.00	88.91	89.81	8915.08	5946.18	4432.79	-47.62	4432.62	0.00	438954.41	818699.32	N 32 12 22.39	W 103 56 58.44
	12900.00	88.91	89.81	8916.98	5948.08	4532.76	-47.28	4532.60	0.00	438954.75	818799.29	N 32 12 22.39	W 103 56 57.27
	13000.00	88.91	89.81	8918.88	5949.98	4632.74	-46.95	4632.58	0.00	438955.09	818899.27	N 32 12 22.39	W 103 56 56.11
	13100.00	88.91	89.81	8920.78	5951.88	4732.72	-46.61	4732.56	0.00	438955.42	818999.24	N 32 12 22.39	W 103 56 54.95
	13200.00	88.91	89.81	8922.68	5953.78	4832.70	-46.27	4832.54	0.00	438955.76	819099.21	N 32 12 22.39	W 103 56 53.78
	13300.00	88.91	89.81	8924.58	5955.68	4932.68	-45.94	4932.52	0.00	438956.10	819199.19	N 32 12 22.39	W 103 56 52.62
	13400.00	88.91	89.										

5M BOP Stack

Mud Cross Valves:

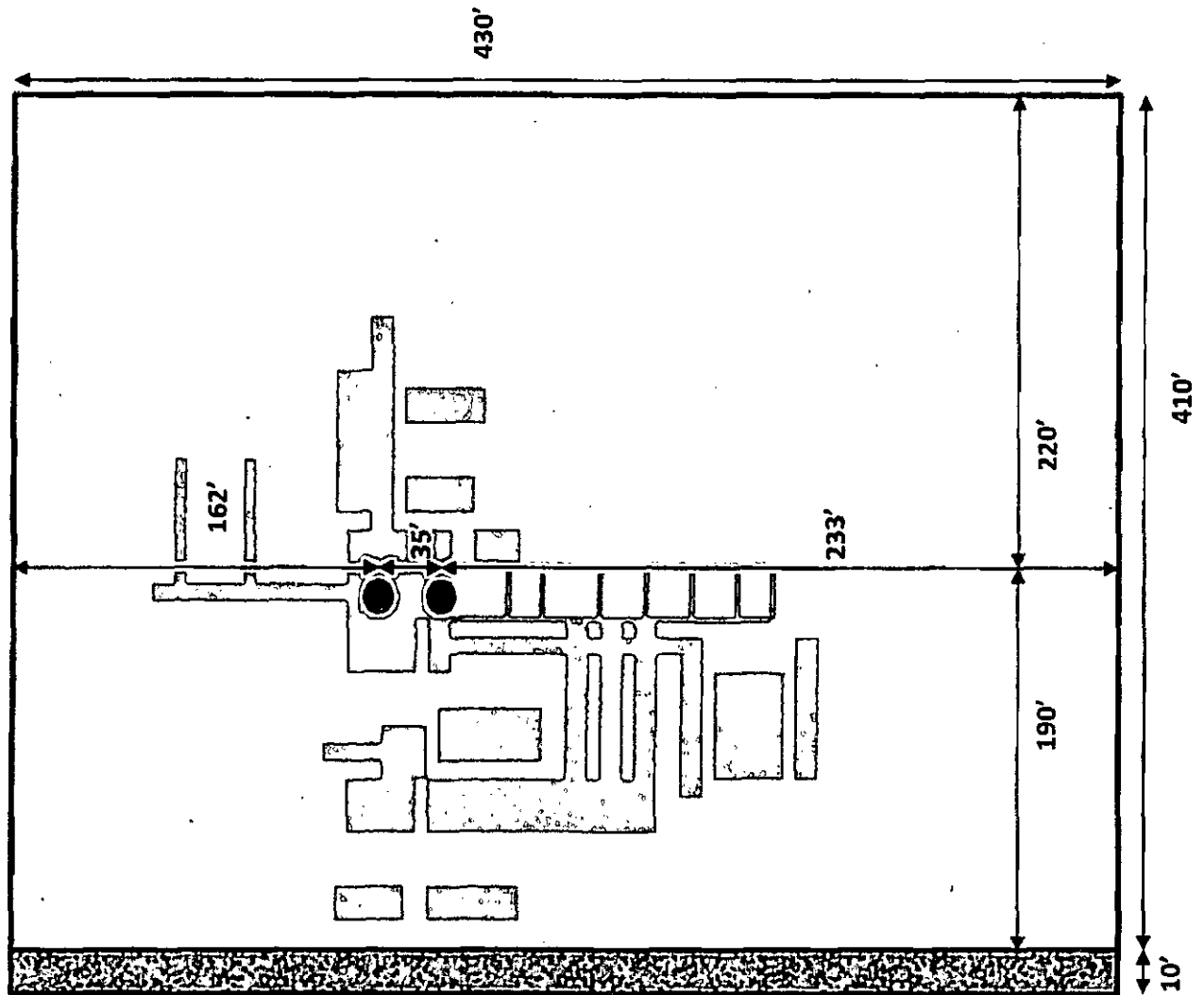
5. 5M Check Valve
6. Outside 5M Kill Line Valve
7. Inside 5M Kill Line Valve
8. Outside 5M Kill Line Valve
9. 5M HCR Valve

*Minimum ID = 2-1/16" on Kill Line side and 3" minimum ID on choke line side

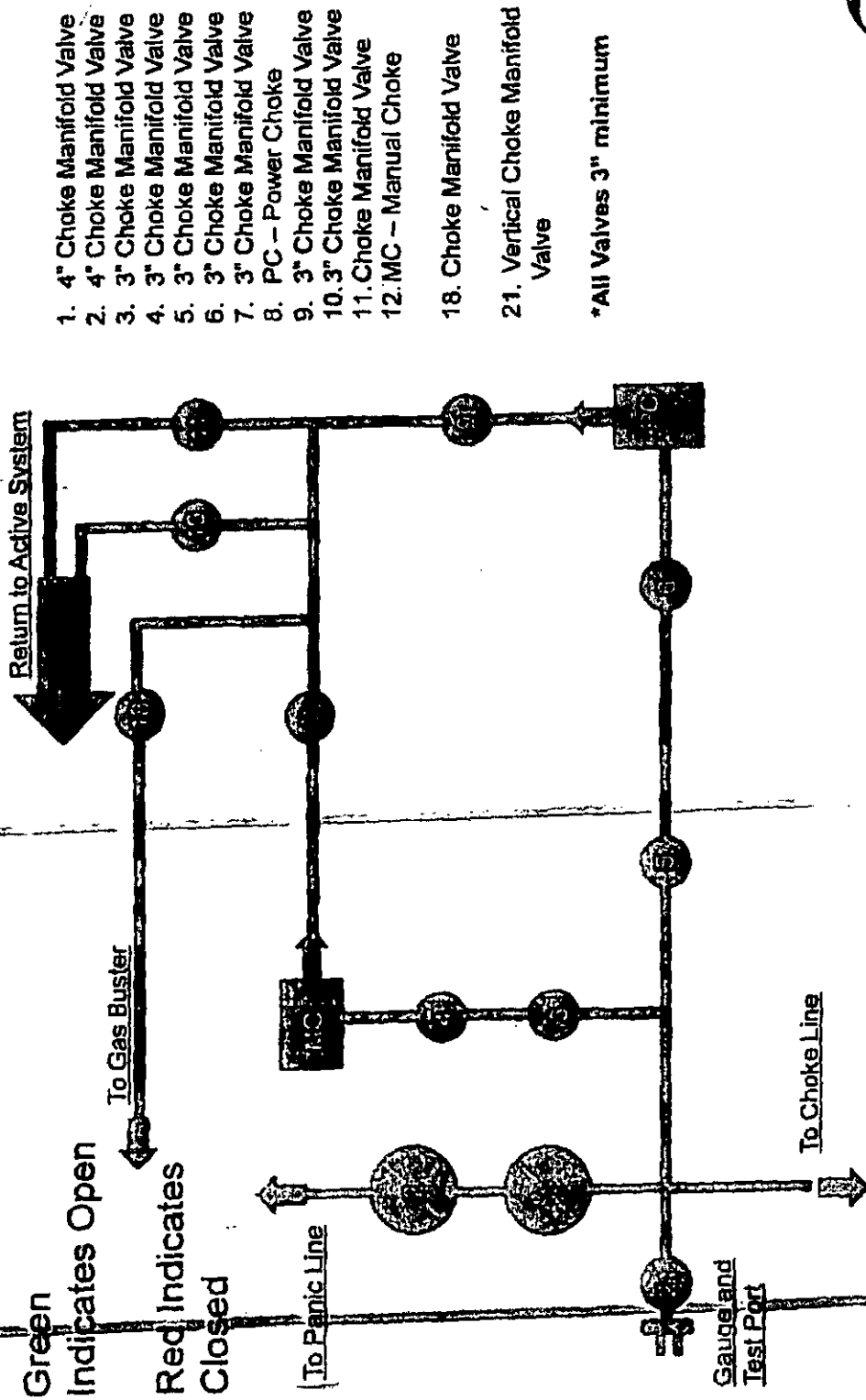


Pad Site Overall Rig Layout Cedar Canyon 23 Fed 5H and 4H Pad

Pad Layout



5M Choke Panel

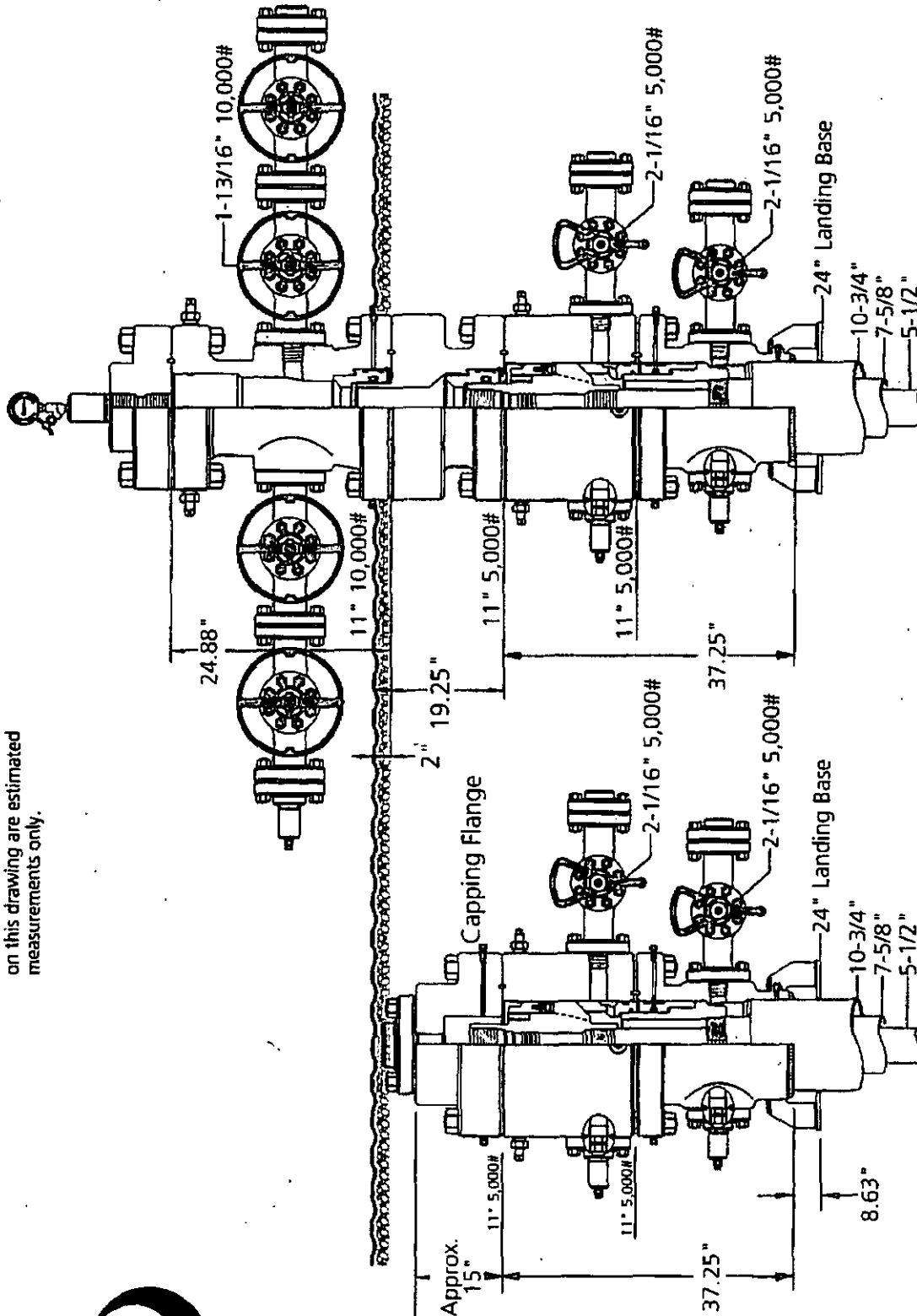


Wellhead

Note: Dimensional information reflected on this drawing are estimated measurements only.

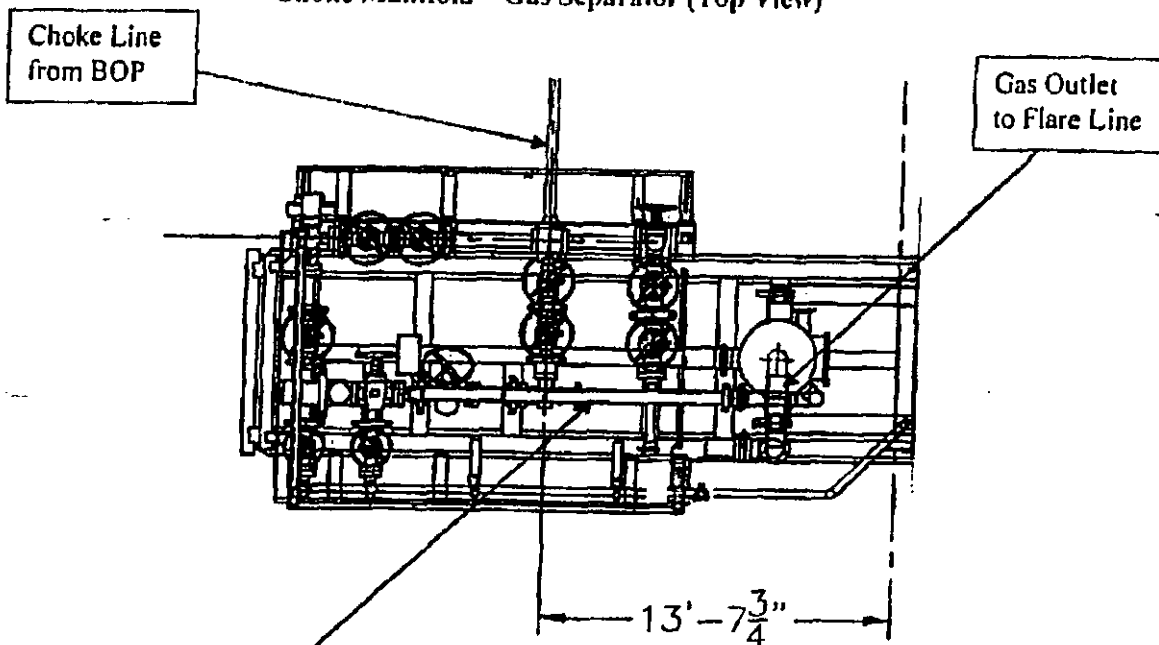


11" 10K MBS w/ 5.5" Mandrel

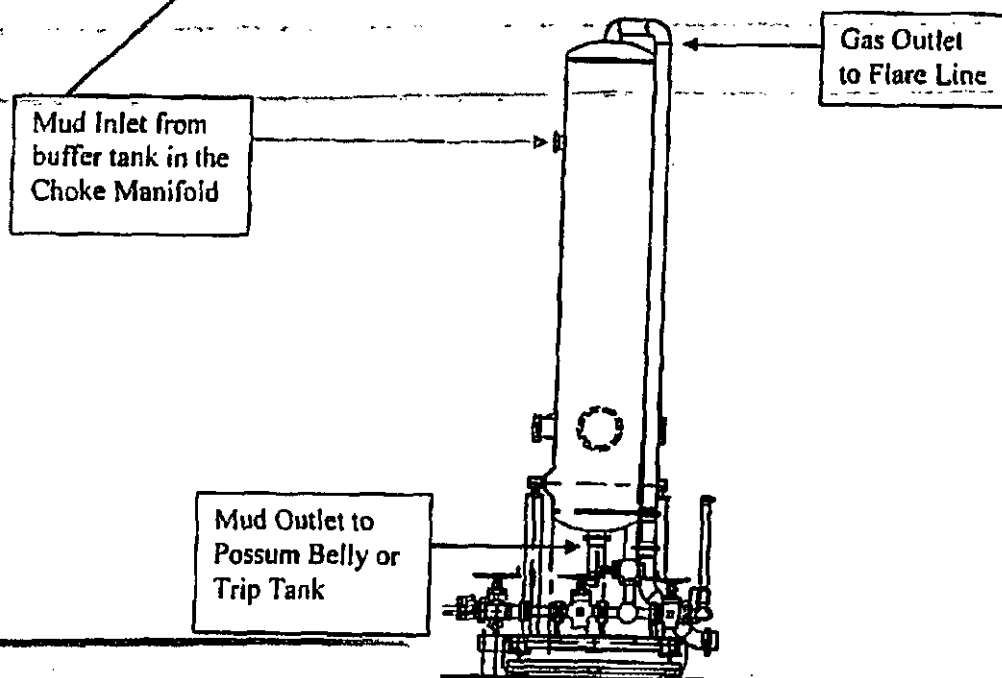


Jeanette	8-5-15	#	J-9579-4
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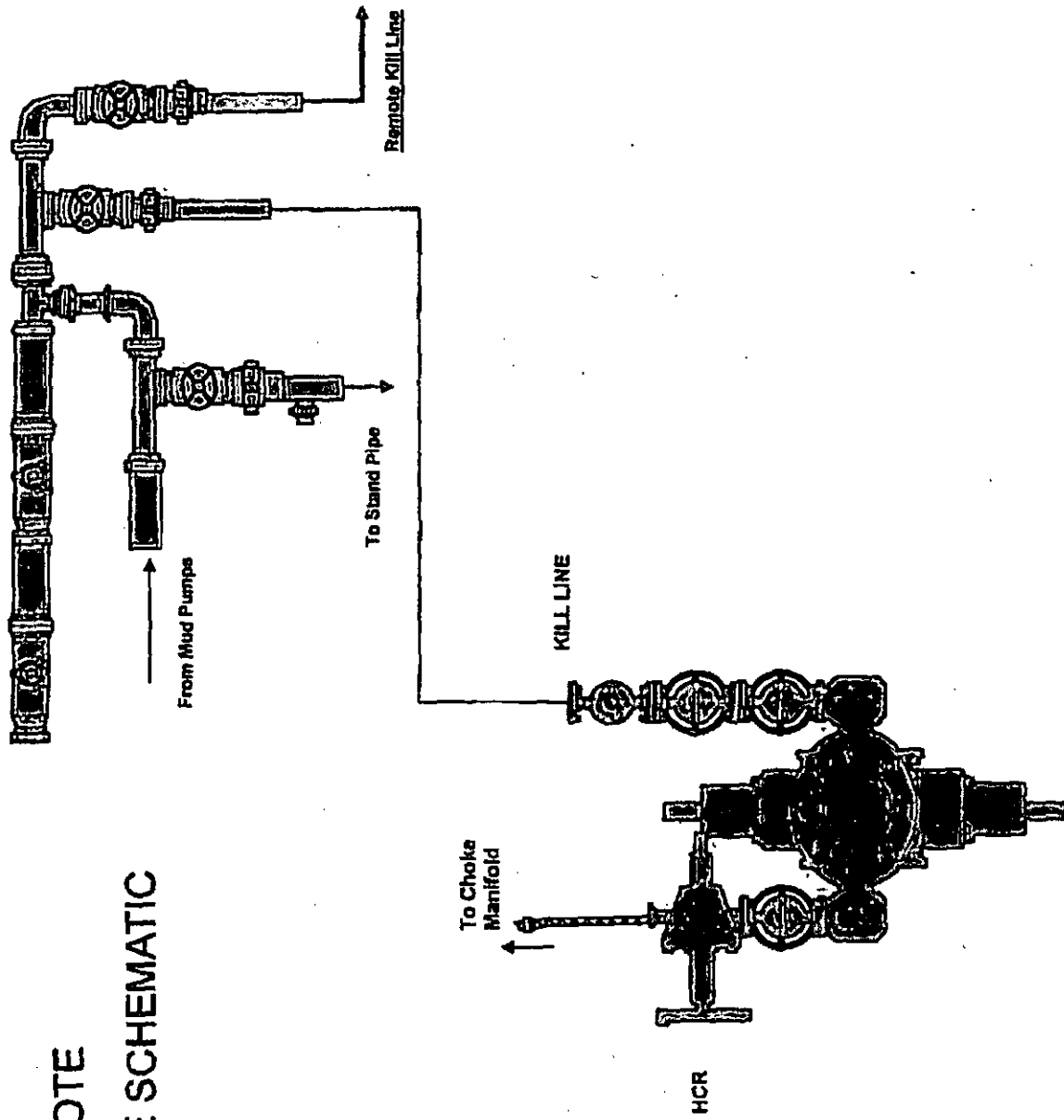
Choke Manifold – Gas Separator (Top View)



Choke Manifold – Gas Separator (Side View)



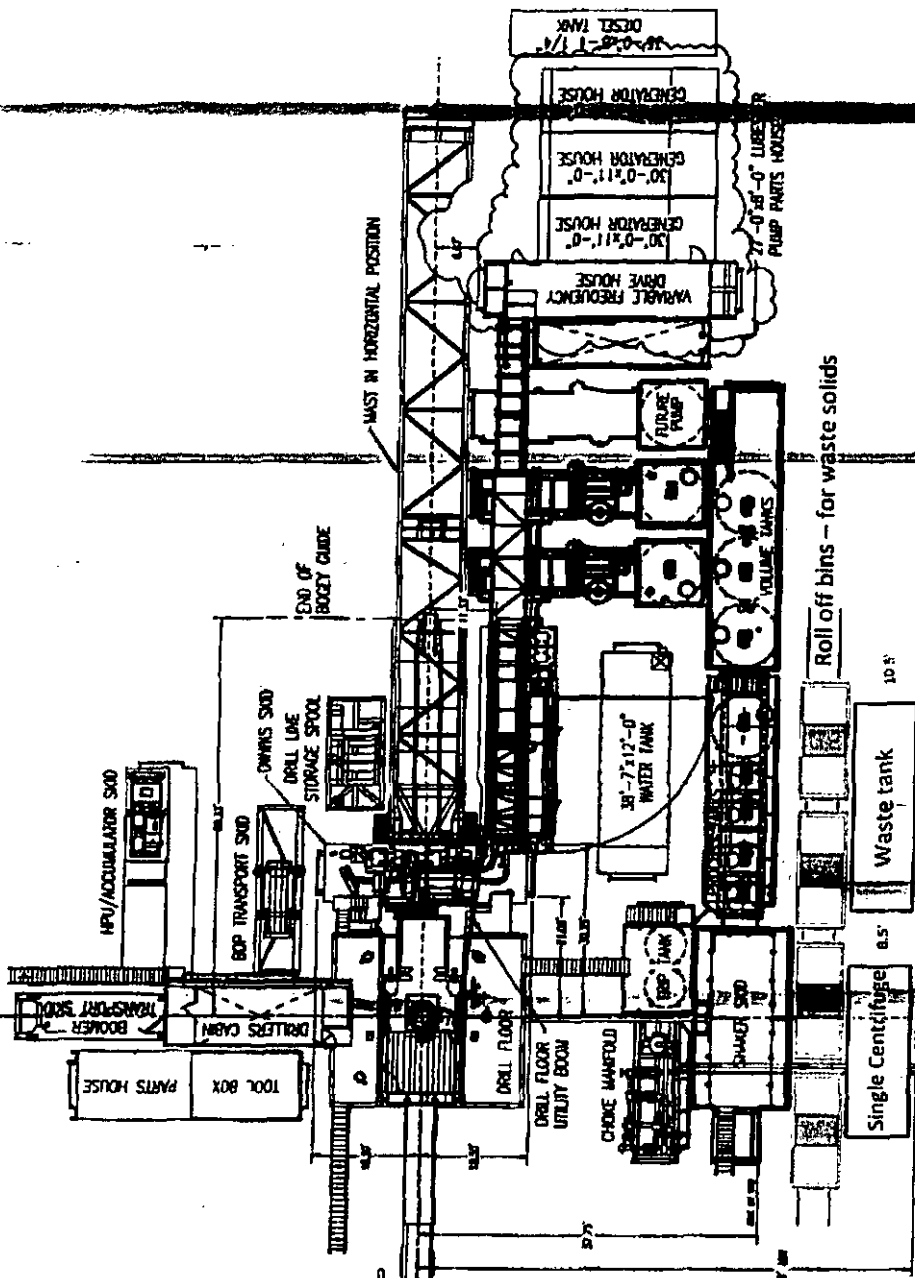
10M REMOTE KILL LINE SCHEMATIC



Closed Loop - 1

Oxy Single Centrifuge
Closed Loop System - New
Mexico Flex III

May 28, 2013

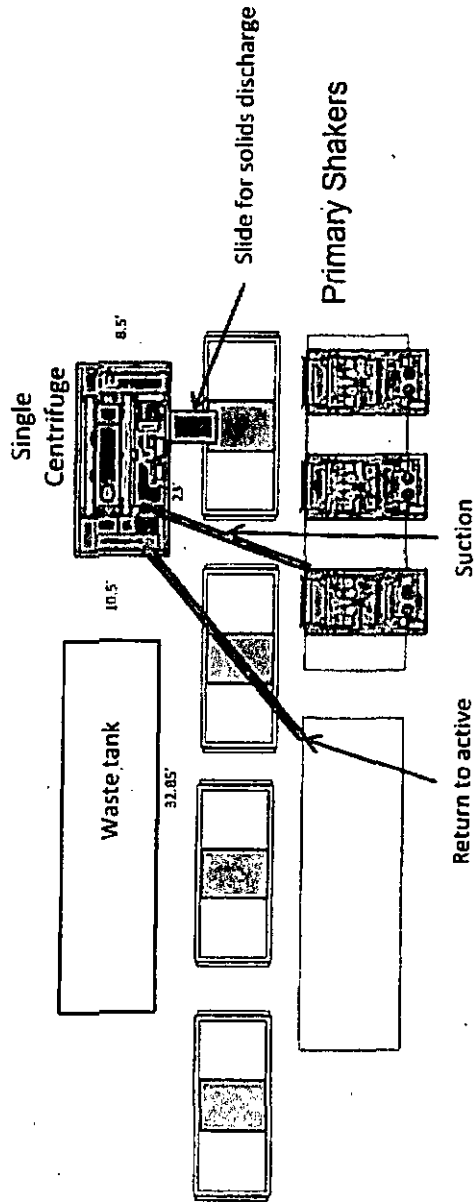


Roll off bins - for waste solids

Waste tank

Single Centrifuge

Oxy



Oxy Single Centrifuge
Closed Loop System – New
Mexico Flex III
May 28, 2013

CL-2

NOV 16 2015

**PECOS DISTRICT
CONDITIONS OF APPROVAL**

RECEIVED

OPERATOR'S NAME:	OXY USA Inc
LEASE NO.:	NM81586
WELL NAME & NO.:	Cedar Canyon 23 Fed Com 4H
SURFACE HOLE FOOTAGE:	1352'/N & 195'/E Sec. 22
BOTTOM HOLE FOOTAGE:	1415'/N & 2460'/E Sec. 24
LOCATION:	Section 24, T. 24 S., R. 29 E., NMPM
COUNTY:	Eddy County, New Mexico

A. CASING

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. (For surface casing the BOP can be nipped up after the cement has reached 500 psi compressive strength.)

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Medium cave/karst

Possible water flows in Castile and Salado.

Possible lost circulation in Rustler, Salado and Delaware.

1. The 10 3/4 inch surface casing shall be set at approximately 440 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. If salt is encountered, the operator shall set the casing 25' above the salt.

- 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.

Formation below the 10-3/4" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

The 7-5/8 inch intermediate casing must be kept liquid filled while running into hole to meet minimum BLM requirements for collapse.

2. The minimum required fill of cement behind the 7-5/8 inch intermediate casing is:

a. First stage to DV tool:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

Operator has proposed a contingency DV tool at 3075'. If operator circulates cement on the first stage, operator is approved to inflate the ACP and run the DV tool cancellation plug and cancel the second stage of the proposed cement plan. If cement does not circulate, operator will inflate ACP and proceed with the second stage.

b. Second stage above DV tool:

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

Formation below the 7-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

3. The minimum required fill of cement behind the 5-1/2 x 4-1/2 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.

CRW 103015